

## **Press Release 16. September 2008**

### **Study on fibre economics shows the prospects for fibre roll-out and the need for open networks**

A study released by WIK today shows for the first time how fibre investment and regulation affects the business cases for incumbents and entrants across six European countries.

The report on the 'Economics of next generation access', which assesses the viability of rolling out fibre networks, finds that the high cost of fibre installation is likely to limit deployment to more profitable urban areas and restrict the potential for duplication of fibre access lines by competitors. This is broadly true for all countries and regions examined in the report (Germany, Spain, France, Italy, Portugal and Sweden), with some exceptions, and is in line with studies carried out for regulators in the Netherlands, Belgium and Ireland.

Entrants may be first movers in the roll-out of fibre in special circumstances. However, the study shows that the business case for fibre investment is more favourable for incumbents due to their lower costs, greater scale and market position. Access to fibre networks is found to be a prerequisite for maintaining existing levels of competition.

Assessments of incumbent business models call in doubt the strategy of some incumbents to resist or set high barriers to offering access to competitors. The risk of investment can be lowered and returns can be made with lower shares of the retail market, if investors offer access to rivals, the study finds.

Proposals by Commissioner Reding to set a uniform 15% rate of return for fibre access are also challenged by the model. A return that is too low will limit investment, whilst an excessive return would undermine the degree of competition which is sensitive to the price of access. Such returns should therefore be strongly justified before being accepted by regulators.

Dr Karl-Heinz Neumann, Managing Director of WIK, concluded "Policy makers should aim for efficient investment so that infrastructure is rolled out profitably, with minimum risk for the economy and with a maximum reach. Our model results suggest that multiple replication of fibre networks is unlikely to be economically rational in most cases. Policy-makers should focus today instead on ensuring that fibre networks are designed to be open and future-proof.

"Regulators can best support these efforts by ensuring that the business plans of dominant fibre investors are transparent and by defining the terms for access to fibre as well as to ducts, so that access is available quickly at a price that rewards investors fairly but is compatible with competition."

Key findings are that:

- The costs of installing fibre lines are high. Rolling out fibre networks which are capable of speeds of 100Mbit/s or more costs €1,000-€2,000 per household in cities with higher costs in rural areas. Point to point architectures which can offer even greater speeds and are more open to competition cost less than 10% more than PON architectures. Full fibre installation (fibre to the home) is roughly five times more expensive than partial replacement of copper networks with fibre (fibre to the curb/VDSL).
- In no country is FTTH viable to all homes. France has best prospect of fibre roll-out – with viability to at least 25% households. If investors complement fibre to the home with fibre to the curb in some areas, more homes can be served with high speeds, eg 72% in Germany.
- Once fibre has been installed by a first mover, the prospects for replicating networks by competitors are very limited. To make a profit with fully effective duct access, a second entrant would typically need more than 35% of all households and businesses (not just broadband subscribers) to be connected even in cities. Access networks have traditionally been a bottleneck in fixed telecoms, and NGA does not appear to change these economics significantly.
- The first mover may be an entrant in specific areas where they enjoy exceptional benefits such as high market shares and ownership of ducts. However, normally the incumbent has lower costs and risks than other operators due to its existing ownership of buildings and infrastructure which may be fully or partly depreciated, access to capital, very high market shares, and is likely to be the only operator in a position to roll out on a widespread basis.
- Only with access to fibre networks are the business cases of existing mass-market broadband competitors and business service providers viable. Unbundling of fibre (fibre LLU and fibre SLU) allows competitors to operate by serving around 10% or more of all subscribers which is more compatible with a competitive outcome. Other forms of access such as bitstream are required for less densely populated areas and business service providers.
- The study finds that incumbents can improve their business case and lower their risk by offering access. Providing unbundled fibre loops to other players would reduce the critical retail market share for profitability for the investor as well as being compatible with competition. Conversely a market structure where the incumbent provides no access or only duct access would require high retail market shares and would tend to be concentrated.
- The study shows the importance of correctly estimating the allowed return on regulated fibre access on a case by case basis. A return that is too low would undermine the case for investment but a return that is too high results in higher prices for access and significantly weakens the prospects for competition.
- NGA investments are not necessarily always risky. If an incumbent has depreciated its copper network and already has the necessary market share required for profitability in fibre as shown in the model, upgrades may involve little or no risk.