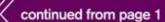
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ESB hosts EPRI International Innovation Conference in Dublin



ESB AND VODAFONE TO INVEST €450 MILLION IN 100% FIBRE BROADBAND NETWORK

>> 'Fibre-to-the-building' technology to deliver world-leading speeds



SUBJECT TO EUROPEAN Commission approval, the 50:50 joint venture will begin rolling-out the new network across Ireland in the coming months, with the first customers able to avail of 100% fibre broadband from the start of 2015. The initial phase of the project is expected to be fully rolled-out by the end of 2018, with scope for a second phase under the joint venture.

While the ESB and Vodafone joint venture will build and manage the network, open access will be offered to all telecoms operators in Ireland on a wholesale basis. This means that other operators can resell the fibre product to their customers, helping to stimulate the development of new services and boosting retail competition in the broadband market for all Irish consumers and businesses.

Vodafone was selected as ESB's joint venture partner following a competitive tender process. Vodafone has 200,000 fixed broadband customers in Ireland and over 8.5 million across Europe. In February, Vodafone was recognised by the FTTH Council Europe for its 'outstanding contribution' to fibre-to-the-home adoption in Europe through its fibre roll-outs in Portugal and Spain.

Commenting on the announcement, former Minister for Communications,



Anne O'Leary, Vodafone Ireland CEO, with Pat Rabbitte, former Minister for Communications, Energy and Resources and Pat O'Doherty, Chief Executive ESB.

Energy and Natural Resources, Pat Rabbitte said: "The National Broadband Plan underlines Government's commitment to delivering high-speed broadband services to rural Ireland, with fibre as a core element. Complementing Government investment in rural areas, will be commercial investment in more densely populated areas, offering competitive high speed services over multiple technology platforms. This announcement by ESB and Vodafone to create a joint venture company to deliver up to one gigabit of broadband speeds in 50 locations nationwide is a very exciting step in ensuring that regional towns can enjoy similar levels of connectivity to our cities, benefiting local business and helping to attract investment."

Pat O'Doherty, Chief Executive of ESB, said: "This innovative ESB-led initiative is a major milestone for Ireland as the fibre broadband network will be a key enabler for a knowledgebased, services-led economy that will help to attract investment to Ireland. This fibre infrastructure will use ESB's existing electricity infrastructure, maximising the use of state assets to the benefit of Irish society. Over the last ten years ESB has invested over €6 billion in its electricity network infrastructure nationally, ensuring it is one of the most robust and modern electricity networks in the world thus enabling the delivery of this new fibre broadband network. From the rural electrification of Ireland, to the development of the smart grid and our telecoms expertise, ESB will continue to pioneer strategic, infrastructure developments that positively impact the economy and offer new competitive services to our customers."

Anne O'Leary, Vodafone Ireland CEO, added: "Vodafone has the best mobile network in Ireland and now this joint venture will bring the best broadband service to Ireland. With the number of devices per household anticipated to almost double over the next four years and more bandwidthhungry services being developed, this new broadband service will enable a whole range of new services to be offered to Irish customers in the future from entertainment, security, teleworking to web-based gaming or home automation. Vodafone is delighted to partner with ESB to make Ireland the first European country to roll-out nationwide fibre-to-thebuilding broadband on electricity infrastructure, making a hyper-connected future a reality for hundreds of thousands of Irish people and businesses."

The cutting edge of technology

>> Aaron O'Reilly, ESB Telecoms, explains why FTTB is such a ground-breaking project

UNTIL THE LATE 1980'S, telecommunications networks around the world were designed primarily to support phone calls (telephony). This was achieved by installing copper wiring from the local telephone exchange directly into homes and businesses. Two things happened to change all of this, the widespread availability of personal computers and the development of the internet.

Early access to the internet was provided through what are now referred to as narrowband or dial-up technologies. Any of the first internet users will remember the dial-up modems and the sound of data being sent over the copper wiring as audible tones. Since then technology has moved on greatly and there has been an enormous growth in the volume of information that we produce and consume in the form of webpages, images and videos. This growth has driven lots of technological advancements in relation to how data is transmitted over the copper wires, we're now on the third generation of equipment used to provide

internet access in this way.

However, over the last number of years copper wiring has become a bottleneck for internet access. There are a number of ways that this causes problems for the end user when accessing the internet over copper the main one being distance from the telephone exchange. This is where fibre optic cable comes in.

Fibre optic cable has been used by telecommunications providers for the last four decades to provide the main trunk links between regional telephone exchanges and for inter-



Aaron O'Reilly, ESB Telecoms.

national links. It is the fastest, most reliable method of transferring information. It works by sending pulses of light along a strand of optical fibre within a cable as opposed to copper wires which use electrical pulses. Fibre optic cable can work over much longer distances and is less susceptible to degradation and interference which are issues with copper cable.

It has become clear over the last 10 years that the only future proof method of supporting the growth in new broadband services is through the use of fibre optic cable. It will cater for both the volume of information and the high speeds required. Fibre to the Building will mean removing all infrastructure bottlenecks between the content that an end user might want to access and the multimedia devices that they use everyday at home or for work. It will put Ireland at the cutting edge of information technology.