

ABB to provide wireless network for highest capacity onshore wind farm in the UK

Zurich, Switzerland, Aug 25, 2016 – Wireless communications system to provide enhanced site security for Pen y Cymoedd onshore wind farm

ABB is supplying a secure wireless communications system to connect closed-circuit television (CCTV) cameras at two new substations being supplied by ABB for the Pen y Cymoedd wind energy project, being developed in south Wales by Vattenfall, a leading European utility. The full 76-turbine development, for which ABB is also providing the grid connection and the related electrical transmission infrastructure, is due for completion later this year and will be the highest capacity onshore wind farm in England and Wales, delivering up to 228 megawatts.

The two new substations will step up the voltage from 33 to 400 kilovolt (kV), ready to feed into a new 400 kV National Grid substation. Pole-mounted CCTV cameras around the perimeter fences of both substation sites will be connected into a highly resilient wireless mesh network using ABB's wireless routers. The two sites will be linked by optical fiber and connected to a control station with a network video recorder to provide recording and monitoring.

"Our advanced wireless network solution will ensure that data is directed efficiently through intelligent routers to where there is capacity," said Massimo Danieli, Managing Director of ABB's Grid Automation business unit, a part of the company's Power Grids division. "This minimizes delays and gives customers real-time visibility and control of their assets and it is another example of ABB's Internet of things, Services and People approach – a key element of our Next Level strategy."

Physical and cyber security is critical for utility communication networks. ABB's wireless routers are designed to cope with almost any physical challenge, a necessity when routers are routinely installed in outdoor locations in the field. As the network grows, each smart router will automatically reconfigure itself, making expansion relatively simple. The mesh network design offers inherent reliability, as the network can handle any outage by redirecting data intelligently and seamlessly.

In addition to the wireless communication system, ABB is also supplying switchgear, transformers, and IEC 61850 compliant substation automation, control and protection equipment as part of the overall substation solution. ABB's state-of-the-art MicroSCADA control and Relion™ protection equipment, working in combination with a STATCOM (Voltage Source Converter based reactive power compensation) solution, will be used to control and regulate the output of the wind turbines to ensure they remain within National Grid's rigorous power quality standards.

ABB (www.abb.com) is a leading global technology company in power and automation that enables utility, industry, and transport & infrastructure customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in roughly 100 countries and employs about 135,000 people.

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