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## CASE STUDY

### SATCOMS HELP WELSH ELECTRICITY PROVIDER STAY CONNECTED

by Chris Watts

International satellite communications provider NSSL is assisting the Welsh electricity company E.ON to remain in contact with all of their remote facilities. The E.ON power plant is located in Aberystwyth, Wales. However, the hydroelectric plant and the wind



farms, which generate the power, are located in areas with no GSM (Global System for Mobile communication) coverage. As a result, E.ON maintenance staff make use of three Iridium hand-held satellite phones (satphones) in order to 'hop' from job-

to-job. The satphones are also used to call for support, should anyone get lost in the Welsh countryside or encounter a medical emergency. Certainly this scenario challenges the generally held belief that satcoms are only used commercially in economically underdeveloped regions, such as Africa.

NSSL is an independent service provider that offers satellite communications solutions and is one of the top Inmarsat service providers worldwide. NSSL advised E.ON to use Iridium satellite phones for communication with the maintenance teams at the wind farms and the hydroelectric plant. Specifically:

- Wind Farm: E.ON has two wind farms located in Rheidol (12 miles away from the power plant) and Cefn Croes (96 miles away in distance). Both of the wind farms are in extremely isolated regions with no GSM coverage
- Hydroelectric plant: The physical hydroelectric plant only covers a small geographical space. However, the water catchment's tributaries and aqueducts, which lead into the main reservoir, and all remote monitoring equipment, occupy an area of some 160sq kilometers. These water pathways must remain unblocked. To ensure their critical flow is unobstructed, E.ON fields a mobile staff of 10 maintenance professionals who patrol this entire area. They use the Iridium satphones to remain in contact with the main station control room.

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E.ON purchased three Iridium 9505A satellite phones. Their cost was £750 per unit. The Plant Manager at E.ON explained why they decided to purchase the satphones, "The Iridiums are truly fantastic. They are small, light, and extremely rugged, making them perfect for the inhospitable

Welsh countryside." He went on to say, "The phones serve two functions. First, they ensure we can keep in contact with our maintenance staff wherever they are, which is very important from a safety point of view. Secondly, the phones have allowed our staff to 'call in' at the beginning and end of a job, meaning we can maintain a log of staff locations, and direct them to other jobs without them having to return to base. Obviously, this is a much more time and environmentally friendly approach."

Danielle Edwards, Product Marketing Manager at NSSL commented: "E.ON's use of satellite phones really challenges the misconception that satcoms are only used in places like Africa, Asia, and Antarctica. The reality is that 70 percent of the earth's surface is without GSM service. There are big coverage gaps in major industrialized nations such as the UK and USA. These gaps can be served by satellite solutions such as those provided by NSSL."

**About NSSL**

NSSL, established in 1969, offers a wide range of communication services, as well as extensive experience with systems integration and application development. The company's focus is on the maritime, government, energy, media, finance and corporate sectors, providing voice, data and broadband solutions anywhere in the world.

The company website: [www.satcom-solutions.com](http://www.satcom-solutions.com)

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