

# E.ON UK Monitors Treated Water Usage Using Emerson's Smart Wireless Network

## BENEFITS

- Reduced time and cost compared with installing new wiring: Fourteen transmitters took less than 8 hours to install and configure, compared to a wired solution which would have taken between 1-2 weeks
- Additional flow data accurately monitors and measures water usage
- Wireless network operates reliably despite environment of large turbines and vast amount of metal piping and walkways



## CHALLENGE

E.ON UK, one of the UK's leading integrated power and gas companies, wanted to optimize its treated water usage at the Kingsnorth 1940MW dual-fired generating facility located on the Medway Estuary in Kent, UK. To do this, E.ON staff needed a means to accurately monitor and measure it to enable trending and analysis.

The high cost of wiring associated with a conventional cabled solution and a desire to embrace the very latest networking technology, led E.ON to evaluate wireless technologies that could meet their needs.

The turbine hall at Kingsnorth is around 500m long and presents a difficult working environment for wireless as it houses large turbines, vast amounts of metal piping and a number of metal walkways that could interfere with the wireless signal.

## SOLUTION

Fourteen Rosemount® wireless transmitters have been installed to provide access to flow percentage readings from the new non intrusive ultrasonic flowmeters monitoring different sections of the turbine hall. The Rosemount wireless transmitters are transmitting flow measurement data every fifteen seconds to an Emerson Smart Wireless Gateway, situated in the main administration building on the other side of the road from the turbine hall. Using Ethernet, the data is sent from the gateway to Emerson's AMS® Suite predictive maintenance software which manages the wireless transmitters, and uses its OPC server to import the flow data into the data historian.

***“We have great confidence in the technology. The self-organizing network provides redundant routes for the data to pass back to the gateway. The resulting wireless mesh network delivers high reliability.”***

**Simon Lark**  
Assistant Project Engineer, E.ON UK

### RESULTS

Using Emerson's Rosemount wireless transmitters, E.ON is now able to collect additional flow measurement data from new flowmeters installed throughout the turbine hall to accurately monitor and measure treated water usage thus allowing trending and analysis.

The fourteen transmitters took around two hours to configure and then less than six hours to fully install within the plant. In contrast a wired solution would have taken between one and two weeks to complete.

An environment of large turbines and vast amount of metal piping and walkways would not be suitable for a line of sight wireless solution, but Emerson's Smart Wireless self-organizing technology encountered no problems in terms of routing data back to the gateway or reliability of connection.

*"We were initially a little skeptical of the claims made for wireless especially considering the environment we would be placing it in. But installation was quick and easy and we just switched them on and they all worked."*

**Chet Mistry**  
Team Leader, E.ON UK



*Emerson's Rosemount wireless transmitters provide access to flow percentage readings from nonintrusive ultrasonic flowmeters.*

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