

**Micronics – Centrica - Application Note:**

**Centrica Energy use Micronics Clamp-On Flow Measurement to monitor water usage**

Power stations are heavily regulated and one key measurement is the volume of water being used at any one time. This includes river water for cooling and normal water for steam generation. Excessive use incurs considerable fines. Centrica Energy, part of the British Gas Group, own and run Killingholme Power Station in North Lincolnshire which is a combined gas turbine (CCGT) power station which began operation in 1994. It can send out over 3,000GWh of energy annually when the station is running at full load. At present the station runs a two shift system, which means they switch on and off twice a day allowing a competitive station with low losses. The station uses fresh water which is then conditioned for steam generation. 200 gallons of water can be used daily, through a 4 inch pipe from a mains water system. A flow meter is required to measure the volume metric flow rate which enters the storage tank; normal flow rate can be near 100 meters cubed per hour. The original meter broke down in 2011 and was found to be obsolete; a new flow meter was fitted in April 2013.

Jon Dixon, Centrica's Control Instrument Technician determined that to avoid costly and disruptive downtime in the plant the replacement flow meter would have to be easy to fix without any need to break into the system. He compared suppliers and found that the Micronics Ultraflow 3000 offered the best value for money and its operation has proved exceptional. It uses non-invasive ultrasonic sound transmission and detects liquid flow velocity inside closed pipes; it is simple to operate and gives accurate measurements. Jon explains how the meter works: **“When ultrasound is transmitted between the transducers, the speed at which the sound travels through the liquid is accelerated slightly by the velocity of the liquid through the pipe. When ultrasound is transmitted in the opposite direction, the flow of the liquid causes the transmitted sound to decelerate. The subsequent time difference is directly proportional to the flow velocity in the pipe.”**

There are considerable opportunities to use Ultraflow throughout Centrica's network and in similar applications in other industries, including in the Building Services, Energy Management, Power Generation, Chemical, Pharmaceutical, Petrochemical and Food industries, where all that is required is to set up the product and calibrate it. It renders the use of mechanical meters unnecessary and is an excellent alternative to cutting pipes. It offers simple, low cost flow measurement from outside the pipe meaning that there is no interruption to process and no downtime whilst the flow meter units are installed. Micronics Ltd is a UK based company established for nearly 30 years with customers in over 40 countries.

For further information on this project or the Micronics range call Micronics on +44(0)1628 810456, or visit [www.micronicsflowmeters.com](http://www.micronicsflowmeters.com).

Ends

**Note to Editor: For further information or images to support this release call David Leigh on 01579 321750 or email [DBL@leighandersonassociates.com](mailto:DBL@leighandersonassociates.com)**