E.ON
London England

*E.ON's Cranbrook
Energy Centre*

Boiler at Cranbrook Energy Station

About E.ON

Around five million people in the UK get their electricity and gas from E.ON. This makes E.ON one of the UK's leading power and gas companies.

In 2010, as part of E.ON's ongoing pledge to look for ways to make energy cleaner, more secure and more affordable, E.ON established its new Community Energy business unit with a mission to generate and distribute renewable heat and power, serving both business and residential customers through localised district heating networks. By producing heat close to where it's needed, such schemes are able to deliver more efficient and lower carbon energy.

Project Summary

E.ON embarked on a project with ICONICS, delivered by Cougar Automation (a certified Gold partner of ICONICS),

to allow E.ON to visualise and control its regional Energy Centres in one front-end, 64-bit solution from its brand new central control room in the heart of London.

Currently, E.ON is responsible for more than 30 'Community Energy Centres'. Energy Centres are the commercial structures that supply heat and hot water to respective local communities (businesses, schools, homes; pretty much every building that requires heat in a community) and electrical power back to the Grid. Some of these Energy Centres use energy efficient gas-fired combined heat and power (CHP) units. Others use carbon neutral wood-chip biomass-fuelled boilers.

The business challenges for E.ON and its operations team were based around remotely monitoring and controlling the separate Energy Centres. With as many different building management systems (BMS) and versions of software/hardware as there were sites, and only one engineer actively managing them, E.ON urgently needed real-time visibility and control of all of their Energy Centres. The business need for real-time visibility was only heightened by E.ON's plans to roll out an additional ten Energy Centres per year.

Using a wide variety of control systems from multiple vendors, E.ON's engineers were suffering from typical control and data system dissonance. To prioritise maintenance alarms, or to change set-points across different sites, the small operations team would have to toggle between many different systems; costing time, money and impacting system reliability.

Benefits of the System

Andrew Dann, Asset Integrity Engineer at E.ON, said, "We

were operating multiple types of control systems across a fleet of over 20 sites around London and the UK. The SCADA functionality across these disparate systems was poor compared to what we now have with ICONICS. We never thought we could deploy our existing asset schematics geo-spatially with such impressive results. The tools that ICONICS has to offer allow us to automate the monitoring of the performance and efficiency of our sites and identify areas of concern that can be targeted to eliminate waste and improve both our environmental and commercial performance. In addition, this has reduced the workload of our control room operators substantially.

We now have a state of the art centralised control room,

and Silverlight technology, the E.ON application was delivered by Cougar Automation; principally, the Cougar Coventry office. The project was delivered on time and in line with the functional specification document supplied by E.ON. Cougar Automation, experts in the delivery of control systems, were well trained and supported by ICONICS and thus made the project delivery a total success.

Rick Johnson, Sales Manager of Cougar Automation in Coventry, said, "The delivery of this project was a true partnership with ICONICS, who provided invaluable technical support, training and joint system development. Cougar Automation are now delivering the additional

Cranbrook Energy Centre

Engineer at Cranbrook Energy Centre

in the centre of London, offering a central monitoring solution to our clients."

The concept of Geo-SCADA was important for E.ON, as the company has Energy Centres up and down the country, generating heat and power for communities from Southampton to Newcastle to London and Exeter, yet with no consistent system to control or visualise them all. Now, E.ON can visualise 29 of its existing 34 sites, changing set points, turning plant off and on whilst trending data all from one system. The remaining five and future development sites will be live in the near future.

Built upon ICONICS' GENESIS64, as well as Microsoft's Windows Presentation Foundation (WPF)

sites and providing 24/7 support on the system as installed. We have found that working with E.ON and their positive engagement and feedback really makes for a motivated project team."

Conclusion

ICONICS and Cougar have worked closely with E.ON to make this project a success. E.ON realized savings with the ability to react to potential problems in real-time. With ICONICS, E.ON reduces their trips to remote generation plants, and is enabled with centralized data collection.