



“Welsh Water”

Welsh Water is the sixth largest of the ten regulated water and sewerage companies in England and Wales. It is responsible for providing over three million people with a continuous, high quality supply of drinking water and for taking away, treating and properly disposing of wastewater.

DCS Migration

Historically, Welsh Water has relied on an installed base of PLCs and DCS, many of which contained ageing control systems from a variety of different manufacturers. Given the age of these systems they had gradually become maintenance intensive, with high reactive spends required to keep the systems functioning normally. A risk assessment carried out at several of Welsh Water’s treatment plants also determined that the high failure rates associated with the outdated control systems placed an unacceptable risk on water quality compliance and that in order to be able to adopt new, advanced information technologies, the systems would need to be replaced.

Working closely with Siemens Automation and Drives, Welsh Water decided to implement a fully planned migration strategy across a number of plants. For some this involved simply replacing the HMI and leaving the I/O until another time, whilst for others it involved replacing the whole system.

Dave Lowe, Capital Projects manager, Welsh Water commented:

“Migration was not a decision we took lightly. However, following the plant assessment, it was clear that the risk associated with the old systems was just too high for us to continue. Having recently signed a framework agreement with Siemens to be our PLC/DCS supplier, we decided to go one step further and migrate the systems to a common PCS 7 platform.”

DCS Migration is a fundamental part of Siemens’ strategy for supporting new and existing customers. Simatic PCS 7 not only handles process engineering tasks in primary manufacturing, but also the automation of all secondary, upstream and downstream processes, such as wastewater treatment, the distribution of power to a production location and even control of critical building management. PCS7 offers modular, open architecture, making it possible to operate a plant cost effectively and efficiently. It is completely flexible and scaleable and, as such, can be used to control small applications or large plant configurations.

Initially nervous of changing the systems, Welsh Water’s management team now agrees that the Siemens PCS7 solution is first class, offering many benefits and advantages that could not be achieved with the outdated systems. These benefits include a state of the art, reliable system which is continually being enhanced and improved by Siemens A&D, increased functionality and the possibility of escalating plant data through MES for SAP data capture. By standardising the control system Welsh Water has also benefited from less spares holding, less software and more focused training. This also enables operators to become more mobile between sites as they are familiar with the technology in all plants.

Dave Lowe commented: “We are now enjoying the benefits of the new system at several plants and will apply the lessons we have learnt to the remaining plants as they come online. The success of any project undertaken is based on our ability to do so without jeopardising water quality and with the help and expertise of Siemens this has certainly been a success.”

Case study