Automated equipment upgrade

Innovative thinking and tried and tested procedures ensure a successful control system upgrade and refurbishment whilst on line.

The Langeled pipeline is one of the largest underwater gas pipelines in the world and is a strategic asset. The gas comes ashore in the UK at Centrica’s new Langeled Receiving Facility (LRF), Easington. From there it is transported to market delivery points in the UK.

The existing terminal’s Main Control Room (MCR) had outdated facilities for staff and ageing control systems. A new gas pipeline and receiving station had been built and the burden on the existing control system and control room was considerable. There was a need for it to be replaced and its facilities (the control room) enlarged and upgraded. The new equipment from the receiving station had to be integrated into the MCR while it was still on line. Clearly, the gas flow could not be stopped.

ABB used hot cutover methods to achieve this.

Solution

We integrated equipment from the new receiving station into the MCR which, prior to this, had only run Centrica Storage plant. We took the novel step of setting up a temporary control room in an adjacent corridor. This let us carry out work in the main control area, while allowing the operators to continue managing the plant. Carrying out a 24 hour cutover procedure, we installed a new control console for the LRF. This was integrated with the existing control consoles onto a new desk.

We designed and supervised this work and conducted all the related reviews to ensure a safe, efficient cutover. Our procedures and expertise are based on our tested methods of delivering automation upgrade projects on many operating plants.

Timing was critical to ensure that the work was completed and commissioned so that it would fit into the overall pipeline project. There were no plant outages during the installation and commissioning work, which meant we met the required project milestone.
Benefits
- Control room was upgraded and refurbished safely and successfully
- Achieved whilst plant on line. No expensive, extended shutdown necessary
- Fitted in with operational (business) requirements
- Less risk than a cold cutover, there were no post shutdown start up issues
- No loss of production
- Optimum risk mitigation: each part of hot cutover is reversible