

Uniper Holford Gas Storage Wellhead Control Panels



Client:

E.On (Uniper Energy Storage UK)

Location:

Middlewich, Cheshire, UK

Project Background

Proserv (formerly known as Weatherford's) built eight Single Well Control Panels for a Zone 2 hazardous area in 2010 for E.On who are now owned by Holford Gas Storage Ltd., part of Uniper Energy Storage UK. Holford Gas Storage Facility is a salt-cavern underground gas storage complex situated in Byley, near Middlewich in Cheshire, UK.



Photo of the first wellhead pad being tested

At the Holford gas storage site, each of the eight storage caverns has a dedicated wellhead with associated control equipment, one wellhead control panels, per cavern. This aligns with the facility being designed around eight wells drilled to access the salt caverns. The panels regulate injection and withdrawal of gas, managing valve actuation and flow rates.

Findings

After fabrication, the service team based in Great Yarmouth successfully completed the installation and commissioning of all eight wellhead control panels at the Holford Gas Storage facility. Each panel was integrated with its corresponding salt cavern well, enabling precise control of gas injection and withdrawal operations. The work included mounting, cable routing, functional testing, integration with site SCADA systems, and verification under site-specific operating conditions.



General view of a wellhead pad

Each year, the team conducts a scheduled planned maintenance routine on the panels to ensure their continued safe and reliable operation.

Scope of Work - Onshore (Proserv Great Yarmouth)

Each year, Proserv undertakes scheduled maintenance on the eight wellhead control panels at the Holford Gas Storage facility. The maintenance process is methodically structured to ensure thoroughness and efficiency: maintenance is performed on one panel at a time, ensuring focused attention and minimising operational disruption. Each panel undergoes a detailed inspection and servicing routine, which includes:

- Initial inspection
- Suction strainer maintenance
- Filter element change
- Accumulator pre-charge
- Pump start / stop pressure switches calibration
- Pressure switches / transmitters re-calibration
- Relief valve calibration and seal repair

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Single Wellhead Control Panel

- De-isolation and pressurisation
- Flowline pilot calibration
- Hydraulic supply fluid sampling
- Housekeeping

This structured approach ensures the continued safe and efficient operation of the wellhead control panels, aligning with industry best practices and regulatory standards.

Results

The annual maintenance of the wellhead control panels at the Holford Gas Storage facility results in several key outcomes:

Enhanced Operational Reliability: Regular servicing ensures that each panel operates within specified parameters, reducing the risk of unexpected failures and maintaining consistent performance.

Extended Equipment Lifespan: Scheduled maintenance helps identify and address wear and tear early, prolonging the functional life of the panels and associated components.

Compliance with Safety Standards: Routine checks and calibrations ensure that the panels meet safety and regulatory requirements, supporting the facility's adherence to industry standards.

Documentation and Reporting: Each maintenance cycle generates detailed reports, providing a record of activities performed, issues addressed, and any recommendations for future action, aiding in transparent operations and future planning.

These outcomes collectively contribute to the Holford facility's role as one of UK's most flexible underground gas storage assets, capable of rapid response to daily fluctuations in gas demand.