



Gas Pipeline Control System Upgrade

To secure gas supply security to Tasmania an ambitious plan was required to update the entire telemetry system.

Industry
Energy

Sector
Gas

Project

- The Tasmanian Gas Pipeline (TGP) is a 734km subsea and onshore natural gas pipeline system, transporting bulk gas from Victoria to Tasmania delivered by a combination of 22 metering and control stations.
- The asset is maintained by Zinfra Gas Services and monitored 24/7 by Taylor Worley Power Services (TWPS).
- TGP conducted a risk assessment and identified the pipeline monitoring hardware had reached the end of its serviceable life and the software required upgrading to bring it up to standard.
- TGP required an experienced contractor to perform the upgrade and to coordinate with Zinfra and TWPS to ensure that gas supply was not interrupted.
- Cromarty was engaged by TGP to conduct the works.



Solution

The project included:

- Updating the functional descriptions for each site and all system drawings.
- Rewriting the RTU code for the new RTU platform.
- Upgrading the Honeywell Experion SCADA to the latest version and implementing new SCADA graphics.
- Restructuring the communication systems while still maintaining system visibility.
- Establishment of cloud hosted servers and migration of physical servers to virtual environment.
- Installation of new RTUs at each site and recommissioning to the updated Experion SCADA.

Cromarty was then subsequently engaged to:

- Conduct metering validation between the new RTUs and the Experion Head End.
- Develop an alarm management framework and subsequently perform alarm rationalisation.
- Provide ongoing system maintenance and upgrades.
- Provide ongoing 24/7 technical support.

Outcome

The project was delivered successfully due to the active engagement of all stakeholders during the project. Emphasis was placed on planning the upgrades and changeovers to avoid any disruption in gas supply and as such loss of gas revenue. This was successfully achieved by a combination of risk workshops, trial cutovers to identify issues early, developing specific mitigation strategies and methodically cutting each site over individually.