



HPIES RDU Unit



## CONTROL UPGRADES FOR GAS TURBINES

### Rolls Royce Avon 1535™ Gas Turbine Controls Upgrade

#### Problem

National Gas operates three Rolls Royce Avon 1535™ Gas Turbines at its Peterborough site, and one Rolls Royce Avon 1535™ Gas Turbine at its Kings Lynn site. The units are employed in a mechanical drive (gas compression) application. The current control systems are HSDE “Digicon Series 3” that were installed in the early 1990’s.

National Gas decided to investigate options to upgrade the control packages as the age of the existing control systems was increasing their susceptibility to obsolescence issues, they were non-compliant with National Gas’ latest HSE policies, and affected overall package reliability and supportability.

After consultation, National Gas decided to engage HPI Energy Services (HPIES) to conduct a site survey to determine the options for control system upgrades.

#### The HPI Energy Services Solution

The site survey determined that an upgrade replacement of the Control System would resolve the issues associated with the legacy systems. HPIES submitted its proposal to supply a Replacement Digicon Unit (RDU) to National Gas, for approval. In total National Gas opted for 3 RDU’s, one each for Peterborough and Kings Lynn sites, with the third unit being utilised as a spare.

HPIES’ specialist engineers fast tracked the design, manufacture and installation to result in a project timeline of just 3 months from initial survey to final commissioning of both units.

#### KEY BENEFITS

By closely coordinating with National Gas, HPIES was able to offer its support, engineering and manufacturing facilities to conduct the work in the UK, liaising closely with the client during the process.

This solution offered a number of cost and convenience benefits to National Gas including:

- Successful conclusion and job safely completed without utilising the OEM, offering a quicker and more cost-effective solution.
- The Modular design allows the system to fit into a similar space envelope as the existing HSDE system.
- Interfaces directly to the existing connectors thus avoiding field wiring changes.
- Allen Bradley offers worldwide technical support and ‘off the shelf’ spare parts for the CompactLogix & Flex I/O hardware thus reducing obsolescence issues - the advanced diagnostics provided by the RDU allows faults to be identified quickly thus enhancing trouble shooting.
- The easy access to the RDU modules allows on-site replacement of parts.
- All configuration is resident within the controller software, therefore no in-depth knowledge of Flex I/O or CompactLogix hardware is required to undertake maintenance or replacement.
- The hardware and software is proven worldwide and is running on a wide range of gas turbine applications.
- The Flex I/O environmental specifications meet or exceed those of the HSDE system.
- Independence – survey, design and manufacture conducted by an experienced team independent of the OEM.

To see how HPI Energy Services can help you, please call us on +44 (0)1522 519944 or email [info@hpienergy.com](mailto:info@hpienergy.com)