Cummins Enables Smooth Extraction of Gas from Largest Gas Field in Abu Dhabi

The Bab Gas Compression Facility, part of the Thamama gas network, extracts gas from the Bab Gas Field, the largest onshore gas field in Abu Dhabi spanning 1,200 square kilometres. Estimated to handle 1.8 billion standard cubic feet of gas or condensate per day, with extraction capacity to eventually increase to 25 trillion cubic feet, the facility plays a vital role in fuelling the UAE’s gas sector and economy.

Construction of the facility started in 2010 and was completed in February 2013. Given the magnitude of the facility, there were many different contractors involved in its construction. The Engineering, Procurement and Construction (EPC) contract for the project was awarded to SK E&C in 2009.

With a high risk of incurring significant economic losses in the event of a power outage, there is a critical need for a reliable continuous power supply that is ready 24/7, 365 days a year to continue powering the facility should the main utility fail. In addition, the continuous power system has to be designed and commissioned in a timely manner, and must be capable of working seamlessly with other equipment or peripherals involved in the project.

Continuous Power

Case History
Bab Gas Compression Facility

Where: Habshan, Abu Dhabi, UAE

What: 3.6MW of continuous power, comprising three units of enclosed C2000DS diesel generator sets powered by QSK60G3 engines with a PowerCommand® Digital Master Control 300 paralleling system integrated with switchgear.

Purpose: To install a reliable continuous power system for the BAB Gas Compression Facility that is readily available 24/7, 365 days a year.

Primary Choice Factors:
- Cummins reputation and market leadership position - associated with high quality, reliable products and outstanding service
- Ability to deliver within short turnaround time
- Excellent after-sales service and support

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Providing world-class continuous power

SK E&C engaged the expertise of Cummins Sales & Services Korea (CSSK), a distributor for Cummins to provide the continuous power system, on the back of the company’s reputation for high quality products and outstanding after-sales service support.

Cummins designed a system capable of providing up to 3.6MW of continuous power, consisting of three enclosed C2000D5 diesel generator sets with the ability to withstand harsh environmental conditions. These diesel generator sets are powered by QSK60G3 engines, and interface with microprocessor-based Cummins PowerCommand® Digital Master Control 300 Paralleling System, integrated with switchgear.

As the only manufacturer to offer fully integrated power systems, Cummins PowerCommand® microprocessor-based controls are capable of integrating diesel generator sets and digital master controls with switchgear into a complete system, utilizing common communications protocols for seamless integration and enhanced reliability. These are essential requirements for this oil and gas project to ensure a high degree of design and performance control for reliable and efficient operation.

A collaborative and proactive approach

This project saw the Cummins team work alongside SK E&C and other contractors to design a continuous power system that can integrate seamlessly with the other components and equipment of the facility.

Beyond the design and installation of the system, CSSK also provided a team of engineers to see to the prompt resolution of any issues. Due to the size and complexity of the facility, various external complications arose, jeopardizing the completion of the overall project. The CSSK team of engineers proactively dealt with the issues efficiently and effectively, working closely with the various project contractors and also within the Cummins network.

“One of our biggest concerns was the tight deadline demanded of the entire project and we are committed to do our part in ensuring that the facility was completed on schedule. Our team practised a strategy of strong internal communications during the course of the project, with on a weekly basis with Cummins Singapore to leverage relevant expertise,” said Jim Lee, CSSK Power Generation Team EPC Manager. “We also partnered closely with various site contractors to address integration issues.”

“We are very pleased with our partnership with Cummins Sales & Service Korea. The proactive and collaborative attitude the company took played an integral part in the timely completion of the facility,” said Shawn Moon, Procurement Senior Manager from SK E&C. “In fact, we have nominated CSSK as an excellent partner and look forward to partnering with them again on future projects.”

For more information about Cummins integrated power systems, contact your local Cummins distributor or visit power.cummins.com.