

Switchgear revamping Qatar Fertiliser Company (QAFCO), Qatar



Project at a glance

Customer: QAFCO, Qatar

Segment: Chemical

Commissioning: 2015

ABB products: Circuit-breakers retrofit based on HD4 roll-in solution; protection relay retrofit utilizing the Relay Retrofit Program and Relion® 615 series relays

Customer challenge

QAFCO identified the need to maximize production and plant efficiency at the QAFCO3 sub-plant.

The customer requested ABB's support and expertise in accessing switchgear conditions, identifying risks and defining retrofit priorities based on life-cycle management (LCM) status in order to extend the lifetime of the switchgear. Particular focus was dedicated to three strategic 11kV ABB Univer C air-insulated switchgear units, which had been installed more than twenty years ago by ABB (Dalmine factory, Italy).

QAFCO identified the following priorities of the project:

- Minimize the duration of the sub-plant shutdown
- Ensure relentless execution to respect a very tight schedule

ABB solution

ABB provided the right solution to meet the customer's needs by proposing selective revamping for the following equipment:

- 91 HA circuit breakers retrofitted with HD4 series
- 21 SPACOM relays retrofitted with Relion® 615 series

Project

The project execution also required:

- Wiring amendment in the low voltage compartment as per customer specifications
- Preparation of a detailed method of statement

ABB offers a full range of roll-in retrofit solutions based on the latest technologies for HA circuit-breaker replacement. Thus the existing breakers were replaced with new HD4 breakers without any electrical or mechanical modifications.

To replace selected SPACOM relays with minimum downtime, ABB proposed the Relay Retrofit Program, which provides dedicated tools and accessories for efficient engineering, installation and testing when relays are replaced.

QAFCO achieved substantial savings in terms of time and resources as the breaker and relay replacement process was faster and more reliable than with standard approaches.

Customer benefits

- Minimum impact on plant operation
- Short implementation time for replacement
- Significant lifetime extension
- Improved operator safety
- Improved performance
- Extensive support through ABB expertise
- Latest-generation devices designed according to newest technologies and standards

About the project

QAFCO was set up in 1969 as a joint venture between the government of Qatar and a number of foreign shareholders. The country's first large-scale venture in the petrochemical sector, QAFCO was established with a view to diversify the economy and utilize the nation's enormous gas reserve. After successfully implementing several expansion projects over the past three decades, the company has evolved into a world-class fertilizer producer. Seventy-five percent of QAFCO is now owned by Industries Qatar (IQ) and 25 percent by Yara Netherland. QAFCO expressed complete satisfaction with ABB service in every project phase (engineering, installation and commissioning activities). QAFCO appreciated ABB's professional and efficient support from the project tendering to project completion.



The existing SPACOM relays



Relay Retrofit Program cutting tool



New Relion® 615 series protection relays

For more information, please contact the Service department at:

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