




At a glance

3 TM2500 gas turbines



- STATE-OF-THE-ART MOBILE GAS TURBINES
- ISLAND MODE AS SOLE POWER SOURCE
- BUILT-IN REDUNDANCY FOR RELIABILITY
- CUSTOMIZED FILTRATION, COMPRESSION

Challenges

- NEED TO ENSURE UNINTERRUPTED SUPPLY OF POWER FOR MAJOR CHEMICAL FACILITY
- UNCERTAIN NATURAL GAS QUALITY AND PIPELINE SUPPLY PRESSURE
- FIRM PROJECT DEADLINE DESPITE MULTIPLE CHANGE ORDERS, CUSTOMS DELAYS

Background

During the early planning stages of a large-scale polyethylene plant, the Egyptian Ethylene and Derivatives Company (ETHYDCO) – the country’s largest public/government company – considered procuring electrical power from a nearby refinery. That plan, however, was scrapped at a late stage of project development, putting ETHYDCO at risk of having a completed chemical facility without a supporting power plant or connection to the grid. In 2015, ETHYDCO selected APR Energy to provide an interim, fast-track power solution using its state-of-the-art mobile gas turbines until a contemplated 70MW combined-cycle gas turbine plant can be constructed.

Solution

APR Energy’s turnkey solution features three GE aeroderivative mobile dual-fuel turbines running on clean-burning natural gas, together with the associated balance of plant. As standard with its full-service package, APR Energy’s contract includes design, installation and commissioning work for the plant, as well as managing operation and maintenance. While the chemical facility requires approximately 30MW of generating capacity from the turbines – which have an individual ISO rating of 20-25MW – ETHYDCO requested that APR Energy operate three turbines simultaneously to provide the redundant capacity to ensure uninterrupted power. The project also required APR Energy’s engineers to design customized filtration and gas compression solutions – patents pending – to enable the turbines to run on the local supply of natural gas and to accommodate pipeline gas compression of just 70-80 psi. Despite numerous customer change requests and importation delays at customs, APR Energy successfully completed the plant, within the required 90-day timeframe.

Testimonial

“Due to our need for a reliable and cost-efficient natural gas solution, we believe that APR Energy’s mobile gas turbines were the best fit to meet our critical electricity needs. We have been impressed with the speed and flexibility APR Energy has demonstrated in delivering our unique project requirements on time, and appreciate the responsiveness its people have shown during every stage of the process.”

ETHYDCO Chairman, Abd-el Rahman Zeid