



Yabucoa, 1 gas turbine



Palo Seco, 2 gas turbines

At a glance

3 TM2500 GEN8 gas turbines



Palo Seco and Yabucoa sites

- 85MW OF TOTAL POWER GENERATION
- APR ENERGY ANTICIPATED NEED FOR EMERGENCY POWER, AND HAD TURBINES STAGED IN REGION IF NEEDED
- 60MW PLANT COMMISSIONED 17 DAYS AFTER CONTRACT SIGNATURE
- POWER-DENSE TURBINES STABILIZED FRAGILE POWER GRID
- FUEL-FLEXIBLE TURBINES CAN SWITCH TO CLEANER, LOWER-COST NATURAL GAS WHEN AVAILABLE

Challenges

- ALL OF THE ISLAND'S ELECTRICITY KNOCKED OUT BY HURRICANE MARIA
- WIDESPREAD DAMAGE TO INFRASTRUCTURE
- NEED FOR RAPID SOLUTION TO PROVIDE GENERATING CAPACITY AND STABILIZE FRAGILE GRID

Background

On September 20, 2017, Puerto Rico took a direct hit from Hurricane Maria, a massive storm with sustained winds of 155 mph when it made landfall. By the time Maria spun away from Puerto Rico, the entire island was thrown into darkness, with its aging distribution, transmission and generation infrastructure left devastated. Experts predicted that it could be six months before power would be fully restored. Recognizing the likelihood for severe damage even before the hurricane made landfall, APR Energy contacted federal and Puerto Rican authorities in mid-September to make them aware of the company's readiness if emergency power was required.

Solution

Weeks after Hurricane Maria, more than 90% of Puerto Rico residents still lacked electricity. On October 12, the U.S. Army Corps of Engineers and its federal contractor Weston Solutions hired APR Energy to rapidly install and operate two mobile turbines at the Palo Seco power plant near San Juan. Mobile turbine technology was favored over smaller diesel reciprocating engines for its high-power density, significantly lower emissions and ability to stabilize the grid – reducing risk of blackouts. By the end of October, and just 17 days after contract signature, both units became fully operational, completing one of the fastest installations ever for mobile gas turbines.

Soon after the Palo Seco plant became operational, on November 7, APR Energy was awarded a separate contract to install a TM2500 mobile gas turbine at the Yabucoa power plant in southeast Puerto Rico, generating 25MW of emergency power. The Yabucoa plant became fully operational 30 days later, adding much-needed stability to the ailing grid.

Outcome

APR Energy demobilized the mobile gas turbines installed at the Palo Seco power plant in March 2019. The turbines successfully helped to stabilize the power grid in the wake of the hurricanes and contributed to the critical electricity restoration provided to thousands of homes, hospitals, schools and businesses. By having the units fully operational just 17 days after contract signature, the team achieved one of the fastest installations ever completed for mobile gas turbines. The accomplishment proves that APR Energy's fast-track power generation solution is possible at a rapid pace for large-scale projects.