



At a glance

1 TM2500 gas turbine



- RELIABLE POWER FOR MILITARY RESEARCH, DEVELOPMENT AND TESTING
- LOW-EMISSION GENERATION MEETS STRICT ENVIRONMENTAL REQUIREMENTS
- OPERATIONAL ONE MONTH AFTER ON-SITE ARRIVAL OF TURBINE

Challenges

- IMMEDIATE POWER NEED DUE TO DELAYS WITH PERMANENT PLANT
- LIMITED FOOTPRINT FOR TURBINE, BALANCE OF PLANT
- RIGOROUS U.S. EMISSIONS REQUIREMENTS

Background

After serving as an important shipyard for nearly 200 years, The Navy Yard in Philadelphia has been transformed into a large industrial park. While many of the U.S. Navy’s activities at the shipyard ended in 1990s, the department maintains an inactive ship maintenance facility and conducts some engineering activities at the site – including equipment testing by the Naval Surface Warfare Center (NSWC). In 2016, construction and installation delays on a permanent 20MW plant at NSWC prompted the Navy to solicit bids for an auxiliary power unit that could meet the demands of its energy-intensive testing activities.

Solution

In February 2017, APR Energy USA was awarded a contract by the U.S. Navy to supply 20MW of continuous power to support research, development and testing activities at the Naval Surface Warfare Center. In mid-March, APR Energy’s aeroderivative mobile gas turbine arrived by ship from the Canary Islands at the Port of Philadelphia – along with a winter storm that dumped more than a foot of snow on the region. Despite the severe weather, the turbine was on site at NSWC the following day, and installation began immediately. Over the next three weeks, the APR Energy team prepared to commission the plant, installing a demineralized water system to reduce emissions and connecting the turbine to The Navy Yard’s natural gas system.

Outcome

In mid-April, the 20MW auxiliary power unit became operational, meeting the U.S. Navy’s aggressive delivery schedule. Running on clean natural gas and equipped with a 31-foot-tall exhaust stack, the plant meets strict U.S. emissions requirement, while delivering 20MW of continuous power to support important and secure military equipment testing. After successfully fulfilling its original temporary power project, APR Energy was awarded an Operations and Maintenance Contract to continue ongoing power generation services.