

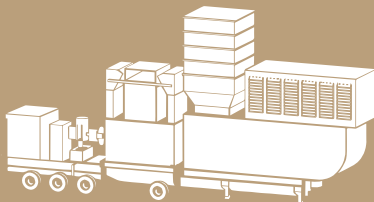


Challenges


- MASSIVE DAMAGE TO NUCLEAR POWER INFRASTRUCTURE FROM EARTHQUAKE, TSUNAMI
- FEARS OF RADIATION EXPOSURE, CONTINUED AFTERSHOCKS
- IMMEDIATE NEED FOR GENERATING CAPACITY TO SUPPLEMENT 21GW OF LOST OUTPUT

At a glance

203MW



5 gas turbines
+ Diesel power modules



- RAPID RESPONSE TO MASSIVE EARTHQUAKE
- AIRFREIGHT FOR IMMEDIATE AVAILABILITY
- 203MW TO ALLEVIATE LOAD SHEDDING, BLACKOUTS
- ALIGNED WITH ENVIRONMENTAL REQUIREMENTS
- PROJECT EXTENDED

Background

In March 2011, a 9.0-magnitude earthquake—one of the largest in recorded history—hit off the northeastern coast of Japan. As part of the earthquake and subsequent tsunami, Tokyo Electric Power Company (TEPCO) had to take down several generators, and multiple nuclear reactors suffered explosions as a result of hydrogen build-up within their containment buildings. In total, TEPCO lost nearly 21GW of its total capacity. Power needs for rebuilding and disaster recovery were immediate, with little time for construction or setup.

Solution

Following contract award from TEPCO, APR Energy installed a 203MW customized emergency power solution across two sites, Hitachinaka and Yokosuka. The solution consisted of five gas turbines that were airfreighted for immediate availability and diesel power modules, as well as all necessary transformers, consumables, mobilization to the port of entry, and supervision over electrical installation and fuel storage construction. APR Energy's turnkey approach included complete operational oversight and continued maintenance of the plant. APR Energy's state-of-the-art technology and operational plan ensured alignment with Japan's stringent environmental requirements.

Outcome

By July 1, 2011—only days after the last delivery of equipment arrived on site—both plants were fully operational, with the capacity to deliver up to 203MW of power to the TEPCO grid to alleviate load shedding and blackouts. Due to on-going concerns about nuclear energy and the potential for power shortages during the peak-demand winter season, TEPCO extended the contract at the Yokosuka site until 2013.