



NRG Long Beach Generation Facility

MPR Re-powers NRG Long Beach Generation Facility Providing Critical Power to Southern California

CHALLENGE

In December 2006, NRG initiated a \$100 million emergency re-powering project to restore the Long Beach Generating Station to commercial operation. The specific objective was to re-power four of seven combustion turbines, which had been idled since 1998, prior to August 1, 2007 in order to meet the summer peak generation period. The project was faced with many unique challenges, including:

- The facility would have to employ the best available control technology for air emissions.
- The facility could not use existing seawater systems for plant cooling.

SOLUTION

MPR, as Project Engineer provided oversight of all engineering efforts for the re-powering project. MPR performed system evaluations, identified risks, and made recommendations to define the project scope. MPR led the design process to resolve all structural issues, modify gas compressor systems, and prepared the designs for the new cooling water system, combustion turbine generator inlet fogging, and distributed control systems. MPR also managed the budget and effectively managed costs by reuse of existing equipment when possible.

RESULTS

MPR delivered and enabled NRG to meet its promise to provide critical power to Southern California. The project was completed in 3.5 months and all project success criteria were satisfied including:

- Air emissions control systems performed to meet all permit requirements.
- Improved facility control was achieved with a new distributed control system.
- Capacity demonstration tests were completed four days early, and there were no delay charges.
- Generator output was sufficient to earn the full contract capacity payment for each unit.
- Budget objectives were met.

A heat wave hit Southern California in August 2007, after the plant commissioning, and peaking power was available when it was critically needed.

