



Brazil Combined Cycle Power Project—Owner's Engineer

MPR Supports Fast Track Gas Conditioning System Installation

CHALLENGE

MPR Associates was selected to be an owner's engineer for a combined cycle power plant in Brazil. In addition to the typical MPR owner's engineer role to provide technical and commercial oversight of the contractor's engineering, procurement and construction activities, MPR was requested to manage the fast-track design and installation of a \$40M gas conditioning system. The system was needed when it was recognized late in the project that the natural gas, provided from Bolivia via pipeline, did not meet the gas turbine specifications. The client also determined that there was a significant local market for Natural Gas Liquids (NGL) that could be extracted from the pipeline gas. Therefore, the project was to be designed to extract NGL products to specification and to enable loading of tank trucks for delivery of the products.

SOLUTION

MPR managed the project including permitting, preparing technical specifications and bid packages, qualifying vendors, evaluating proposals, and negotiating contracts. MPR specified a system that would operate in full recirculation mode in order to accommodate gas turbine transients, including turbine trips, without shutting down. After award of the contract to the selected vendor MPR performed design reviews; performed on-site construction, start-up and turnover monitoring; specified and witnessed factory and plant acceptance testing and performed independent evaluations of critical design and construction issues. MPR recognized early in the project that the primary gas conditioning system with full NGL production capacity would not likely be available for combined cycle plant startup. Accordingly, MPR recommended and implemented a novel gas filtration technology solution in a backup system that was considered by MPR to be more certain to be available to support combined cycle plant startup.

RESULTS

The backup gas filtration system was provided in time to deliver in-specification gas to support combined cycle plant startup; thereby avoiding costly contract liquidated damages. Later the primary gas conditioning system was commissioned and successfully met its design requirements.

