



Tiger Bay Combined Cycle Power Plant Conversion to Cycling Operation

Location: Tiger Bay (Fort Meade), Florida, USA

Client: Florida Power Corp.

Gryphon Contact: Jim Noordermeer

Associate Firm J. Michael Pearson & Associates

Project Summary Conversion of an existing 225 MW PURPA-style combined cycle plant (ex Destech, purchased by Florida Power Corporation; one GE 7FA gas turbine generator and one 70 MW GE steam turbine generator) from base operating duty to cycling duty, remotely operated.

Project Services Gryphon provided the following services:

- Detailed reverse-engineering and testing of existing HRSG superheaters, drums and economizers; steam turbine generator; condenser and cooling water systems; high pressure and low pressure steam bypass dump systems; steam vent systems; high pressure and low pressure piping systems; fuel gas system; and water treatment system to identify and assess modifications required to allow plant to commence cycling duty.
- Engineering for the installation of an auxiliary steam system, HRSG and piping system drains, and high pressure and low pressure steam bypass dump system modifications to allow orderly plant startup.
- Design for the upgrade of the pressure deaerator system to mitigate economizer problems.
- Integrated assessment of starting pressure / temperature considerations for gas turbine generator, HRSG, and steam turbine generator including superheater low cycle fatigue and gas turbine generator rotor issues.
- Superheater attemperator redesign for gas turbine exhaust isotherm issues.



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