Lesson Learned
Combustion Turbine Failed to Start due to Cold Hydraulic Oil Reservoir

**Primary Interest Groups**
Generator Owners
Generator Operators

**Problem Statement:** CT failed to start due to the trip of the heater breaker on the hydraulic oil reservoir during the February 2011 Southwest Cold Weather Event

**Details:** While attempting to start this CT, the unit failed to start because the hydraulic oil in the startup package torque converter was too cold to allow the unit to spool up quickly enough to satisfy control system speed permissive. Subsequent investigation revealed that a heater breaker had tripped causing the fluid to quickly cool below acceptable temperatures in the very cold weather.

**Corrective Actions:** The status of the breaker in question is being evaluated for inclusion in the plant control system so that its status can be monitored and alarms can be established if the breaker is tripped.

**Lesson Learned:** The CT is located remotely at a site that is not manned around the clock. The unit control system is linked to other generation sites that are manned around the clock for alarm monitoring purposes. Additional alarming schemes could improve the availability of the unit in cold weather.

**For more information please contact:**

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This Lesson Learned was prepared by the SPP Registered Entity that experienced the event. Company specific identifiers were removed to maintain confidentiality.