Powering Growth…

…Generating Stability
Frame6B Major Overhaul – Oct/Nov 2012

Perform Major Overhaul of Frame 6 gas turbine (PG6541) at approximately 50,000 hours

- Replace 1\textsuperscript{st} stage buckets, nozzles and shrouds
- Replace 2\textsuperscript{nd} stage buckets and shrouds
- Replace 3\textsuperscript{rd} stage buckets, nozzles and shrouds
- Inspect and clean compressor, CO2 ice blasting finish with hand clean
- Replace compressor R1 blades
- Support DRM Technologies to remove and install shim pinning modification on compressor stator
- Support inspection of generator
- Inspect auxiliary gear box
- Inspect load gear
Failure

Rotor rebuild was complete
Rotor was installed
Internal Alignment had been completed
Contractor was setting up coupling for alignment
Noticed problem with #2 bearing shims
Gas Turbine at time of Overhaul

Total Hours: 178,688
Hours since last overhaul: 50,133
Heat Rate at shutdown: 12,800
Power at shutdown: 38 MW

Issues at shutdown:
• Many proximity probes OOC
• Trips during shutdown after breaker open during warmdown
• High heat rate
• Field grounds
What was noted – right side shim block fallen and blocking bearing housing
More pictures of shim blocks – shifted right side shim
More pictures of shim blocks – Broken right side bolt
More pictures of shim blocks – left side
How it was fixed – disassemble blocks to free bearing housing
How it was fixed
Measure right side gap and also check internal alignments on buckets and compressor blades
Manufacture new shim plate
Install new shim plate with break protection