

Process Description

The TTS project team will engineer, design, fabricate, furnish, and deliver all materials necessary to convert the combustion turbine to dual (natural gas and No. 2 oil) fuel operation. The work scope described below details the process as well as the various requirements.



Prepare Work Plan and Schedule

A work plan and schedule will be prepared and delivered to the Engineer and Contracting Officer including:

- Purchaser approval of various documents
- Milestones withhold points
- Delivery and installation sequences
- Activities as they relate to each other



Engineering

TTS supplies all design engineering required to perform the dual fuel conversion. Drawings and necessary documents are prepared and submitted including:

- Master drawing list
- P&ID arrangement drawings
- Connection drawings
- Schematics
- I/O points
- Logic diagrams
- Manufacturing and inspections procedures
- Replacement parts ID drawings
- Complete parts list of material furnished



Scope of Supply

- Fuel Gas Metering and Throttling Skid
- Fuel Oil Pump Clutch
- Interconnecting Piping (Skid to Manifold)
- Fuel Gas Manifold
- Flex Hoses
- Dual Fuel Nozzle Assemblies
- Heat Tracing and Insulation
- Gas Purge System
- Liquid Fuel Purge System
- Atomizing Air Bypass System
- Hydraulic Trip Oil System Interface
- Hazardous Gas Detection System
- Controls Modification
- Operation and Maintenance Manuals
- On-site Training
- Delivery
- Painting/Coating



Checkout and Calibrate Systems

Equipment installed and modifications made to existing systems are checked for proper function and calibration.



Oversee Initial Startup

TTS oversees the initial start-up of the combustion turbine after modifications are complete. The customer is responsible for the operation of the units.



Pre-conversion Testing

Testing is intended to verify that the equipment installed operates in a safe, reliable, and continuous manner, and that it meets performance requirements and targets on oil for heat rate and power output.



Documentation

TTS closes out the project by supplying initial and spare parts lists, compliance documents with various federal standards, and inspection and quality assurance documentation.