

Evaluation of Viability for Natural Gas Fired Combined Heat and Power Projects in Florida

Florida Public Utilities Company

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CHP Background / Project Introduction

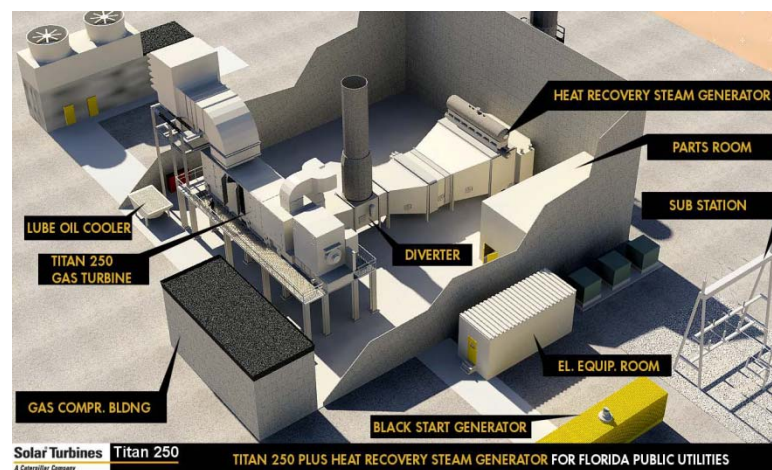


- FPU electric retail rates are close to the highest in Florida
 - Base rates are among the lowest.
 - Fuel rates are the highest.
- FPU Wholesale Purchase Power Agreements (PPA)
 - Energy Prices range from \$95 - \$100 per MWH
- Existing Industrial Customers
 - Produce energy well below the wholesale PPA rates
 - Steam requirements constrained
 - Additional energy possible with steam constraint eliminated
- Customer Requests
 - Reduction in total rates possible with PPA reduction
 - Electric reliability improvements during storms
 - Produces positive impact on environment



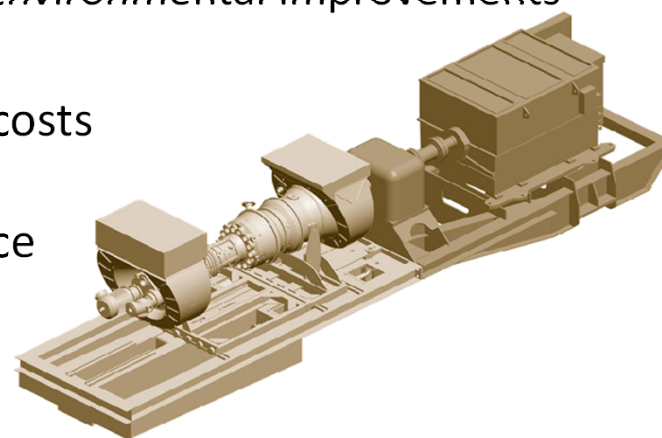
Next Steps

- Assemble an experienced team of professionals to review the engineering, financial and environmental aspects
 - Determine Objectives
 - Gather Information
 - Identify Projects
- Review of all CHP Technology – One size does “NOT” fit all
 - Turbine – lower efficiency, higher electrical and thermal output
 - Reciprocating Machine - higher efficiency, lower electrical and thermal output
- Analyze the electrical and thermal loads and match with the appropriate CHP technology
 - Electrical Load
 - Steam and Waste Heat Requirements
 - Load Profiles
 - Offsite Sales

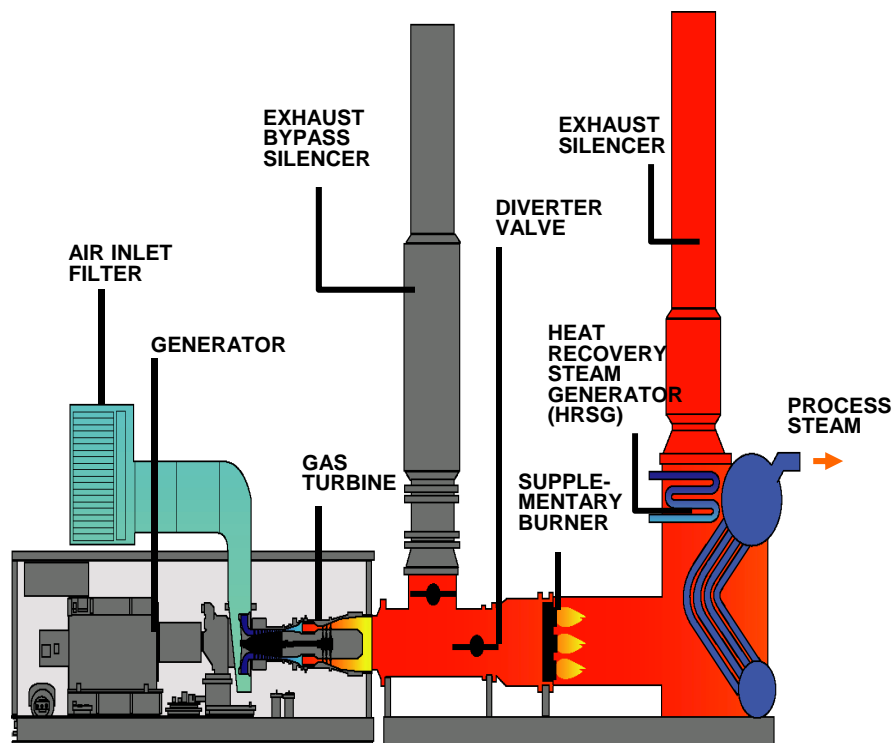


Next Steps

- Evaluate Electric Utility and Natural Gas Utility requirements
 - Interconnection Requirements – Voltage, Pressure, Costs
 - Natural Gas and Electric Cost Factors
 - Electricity Sales
- Investigate regulatory, environmental and permitting issues
 - Existing Contracts, Tariffs, State Electric Reliability Compliance Standards
 - FERC, FPSC, DEP, EPA, Local Governments
- Financial Modeling
 - Multi-year sensitivity analysis using appropriate ROI/ROE
 - Ownership Structure – private, utility, joint ownership
 - Consider design, construction, operating, and maintenance cost
 - Factor in tax, revenue stream, productivity, investment benefits
 - Intangible benefits related to reliability, security, environmental improvements
- Risk Mitigation Strategies
 - Fuel supply/costs, electricity costs, equipment costs
 - Construction delays, economy downturn
 - Construction overruns, unexpected maintenance



Conclusions



- Cover all your bases
 - People and Technology
 - Analyze load and utility requirements
 - Investigate regulatory, environmental, permitting issues
- Model, model and more modeling
 - Consider multiple project financial model scenarios
 - Initial and long term cost
 - Includes cost benefits
 - Quantify intangible benefits
 - Mitigate risks to the extent practical
- Win - Win – Win outcomes are possible
 - Owners Can Benefit
 - Investors Can Benefit
 - Even Utilities Can Benefit