

City of Tallahassee Substation 12 Reliability Project

Reciprocating Internal Combustion Engine (RICE)

Engineering and Design Project Profile



Client: City of Tallahassee

Project: Substation 12 Reliability Project

Location: Tallahassee, Florida

RICE Supplier: Wärtsilä

RICE Model: 20V34SG

RICE Size: 18 MW (2x9 MW)

Fuel: Natural gas



Schedule Milestones:

- **Preliminary engineering and permit support** January 2015
- **Award RICE contract** September 2016
- **Start construction** July 2017
- **RICE commercial operation** Q3 2018



Description:

Sargent & Lundy's scope of services for the City of Tallahassee, Florida's (the City) Substation 12 RICE project:

- **Development of Conceptual Design.** Sargent & Lundy worked closely with the City to develop a conceptual design of the new RICE facility located on the site of a former storm water collection pond, which was dewatered and filled, adjacent to one of the City's substations. Site plot plans and general arrangement drawings were developed to locate the RICE units and balance-of-plant (BOP) equipment in a manner that optimizes constructibility, noise emissions, site cut-and-fill, and access



for operations and maintenance. A capital cost estimate, project schedule, and supporting functional drawings (P&IDs, electrical single-lines, etc.) were also developed during this phase of the project.

- **Permitting Support.** Sargent & Lundy provided information to support the City's preparation of permits, as well as the information needed by a specialized consultant tasked with the evaluation and mitigation of noise emissions from the facility to the maximum extent practical. This aspect of the project is critical given its proximity to a hospital in the vicinity.
- **Detailed Engineering, Design, and Procurement.** Sargent & Lundy will perform the project management, administration, procurement, and detailed engineering and design services for BOP items. This includes the award of the RICE equipment contract, which encompasses all major reciprocating engine and auxiliary equipment, e.g., selective catalytic reduction (SCR) systems to reduce nitrogen oxide (NO_x) emissions, exhaust ductwork, and stacks. Sargent & Lundy work scope also includes preparing and administering complete specification packages for BOP equipment and construction labor, as well as the detailed design of mechanical/electrical/control processes, BOP interconnects, civil works, and transmission and distribution interface to the adjacent substation.
- **Construction Management and Commissioning.** Sargent & Lundy's team of construction management and commissioning specialists will provide civil/structural, electrical/I&C, and mechanical expertise to support project construction through startup/commissioning. This team will manage the execution of all construction contracts and ensure that the installed systems and equipment are in compliance with contractual obligations, including cost and schedule. The team will work closely with the installation contractor to provide support through the project precommissioning, commissioning, and integrated plant testing phases to place the facility components, equipment, subsystems, and systems into an initial operation.

Sargent & Lundy Contact:

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