



Client: Star West Generation
Project: Arlington Valley Energy Facility – Gas Pipeline and Metering Project
Location: Arizona

Project Highlights

Natural Gas End-User: 577-MW combined-cycle power plant

Gas Usage:

- 1 Block (current): 125 mmscfd
- 2 Blocks (future): 250 mmscfd
- Minimum: 3.21 mmscfd

Supply Pressures:

- Existing supplier: 700 psig (op), 1,440 psig (MAOP)
- New supplier: 700 psig (op), 1008 psig (MAOP)

Schedule Milestones

Project Award	Engineering Complete	GWC/Award Construction Start	BOP/GWC Work Complete	New Gas Supplier Operational
2017	January 2018	January 2018	Spring 2018	Spring 2018

Description

The project scope requires the installation of a new gas supplier for the Arlington Valley Energy Facility, located in Arlington, Arizona. The Arlington Valley Energy Facility is a 2x2x1 combined-cycle plant supplying power to the Desert Southwest market. The plant's layout has reserved space for a second combined-cycle unit to be built. Design of the interconnection has accommodated the future expansion potential.

In 2017, S&L was awarded the contract to support negotiation and finalization of an Interconnection Agreement with Transwestern Pipeline Company (an Energy Transfer company), in addition to detailed engineering services, procurement support, and construction management services.

The gas pipeline addition project scope consists of integrating a second gas supplier with the plant's existing single natural gas supply. With the installation of a second gas supplier, the plant Owners requested the ability to blend gas supplies from both suppliers.

**Arlington Valley Energy Facility -
Gas Pipeline and Metering Project**
Detailed Engineering and Design, Procurement,
Construction Management, Startup/Commissioning



The project installed a new pressure-regulating skid, and associated process piping, dedicated to the new gas supply. This new pressure-regulating skid included two active control valves, each sized to provide sufficient gas volume for the existing plant to operate. Capacity for the future second plant would be provided by utilizing the second on-skid control valve. To accommodate blending, the existing pressure control skid was modified to replace the existing mechanically controlled pressure control valves with control valves tied to the distributed control system (DCS). New pressure and flow monitoring instrumentation was added to the system piping to allow controlled blending of the two gas supplies. The plant's control system was modified to accommodate control of the new skid and the replacement valves on the existing skid.

Sargent & Lundy's scope included the detailed engineering, physical design, construction management, and startup/commissioning management. Our construction management included oversight of the balance-of-plant (BOP) General Work Contractor (GWC) work, as well as monitoring the gas supplier's installation contractor.

Sargent & Lundy Contact

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