Source California

Energy Services

Your Source for Powerful Solutions

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Cogeneration Systems
Poway Unified School District

LOCATION:

San Diego, California

PROJECTS & SERVICES:

- Project Management
- Engineering Design
- Construction Oversight
- Quality Control/Quality Assurance
- Startup Services Including Tuning

PROJECT OVERVIEW:

Source California Energy Services, Inc. (SCES) provided turnkey design, procurement, construction and commissioning of two cogeneration systems each at Rancho Bernardo High School and Mount Carmel High School for the Poway Unified School District located in the San Diego, California, area.

The scope of supply included engineering and construction of the entire project, from inception to completion, as a turnkey package on the site. SCES furnished all labor, materials, equipment and other facilities required to design-build and commission two complete cogeneration facilities including procurement of bulk material.

For both of the CHP installations at the two high schools, SCES provided a complete design and secured the various permit and agency approvals. Documents crated included equipment schedules, major equipment arrangement drawings, 1-line and 3-line diagrams of electrical interconnections, control logic diagrams, piping & instrument diagrams (P&IDs), piping conduit and cut sizing and routing, civil details, support and mounting details and plan and elevation views of aesthetically sensitive areas.

At completion of the construction, SCES performed piping flushes, pressure testing and loop testing. Startup, source testing, commissioning, warm-up and other activities were performed to ensure reliable operation. SCES coordinated the design and installation with the utility (SDG&E), Regional Air District (SDAQMD) and other supporting agencies and third-party testing companies. A checkout list leading to "Release to Operations" was used to facilitate the transition through construction completion, startup and commissioning to release of the system for normal operation.

Major equipment installed (typical for each school):

- Two (2) ENI 85 Induction 480 VAC, Outdoor Model CHP Generator Sets
- Dump Radiator Module sized for 1.5 MMBTU with VFD and 3-Way Valve
- P&F Heat Exchanger sized for 1.5 MMBTUh
- Pulse style Gas Meters (1/unit)
- Beckwith M-3410 Protection Relays with cabinets, UPS, and CTs for each phase.