

CASE STUDY – OTAY LFG-TO-ENERGY FACILITY EXPANSION EPC SERVICES

ESI provided full Engineering, Procurement, and Construction (EPC) Contractor Services for a 3.2MW expansion of an existing landfill gas-to-energy facility. ESI was responsible for all portions of the facility engineering design including integration with the existing Cooper Superior engines at the site. Construction management and startup was expedited to meet a very tight schedule.



UNIQUE CHALLENGE

In order to capitalize on expiring federal grants for LFG-to-energy projects, the project had to be designed and built under an incredibly tight timeframe. ESI was able to complete the project in just 6 months from the start of engineering to export of power to the grid, an incredible accomplishment.

ESI's experience in engineering and construction of over 50 similar facilities played a critical role in ESI being able to meet the project schedule. Because of our knowledge base, we were able to parallel track engineering, permitting, and equipment lead times on the front end of the project. Then when it came to construction, ESI was able to build the facility in less than 70 days from shovel in the ground to power export. This would not have been possible without ESI's meticulous attention to detail, knowledge of the steps needed to complete the project, and our ability to coordinate/manage multiple trades and equipment suppliers at once.

PROJECT OVERVIEW

LOCATION:

OTAY LFGTE Facility
Chula Vista, California

OWNER:

Energy Power Partners

Completion:

July 2013

EQUIPMENT:

2 Caterpillar G3520C
Engine/Generators

CAPACITY:

3.2 MW expansion
10.7 MW Total Facility Capacity

SCOPE OF WORK:

- Turn-key design
- Demolition
- Utility interconnection
- Building renovation
- Mechanical systems
- Electrical systems
- Advanced SCADA systems
- Construction oversight
- Startup coordination

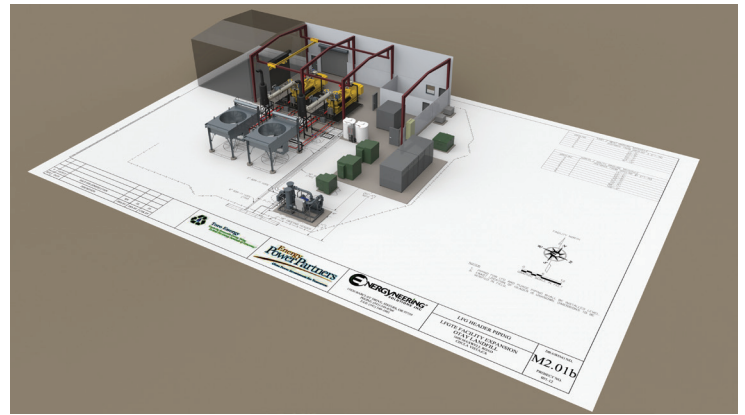
EXCELLENCE IN ENGINEERING DESIGN

In addition to meeting the tight schedule, the Otay LFGTE Facility Expansion is a standout example of ESI's excellence in engineering design for gas-to-energy facilities. The expansion was designed to maximize operational capacity including such items as:

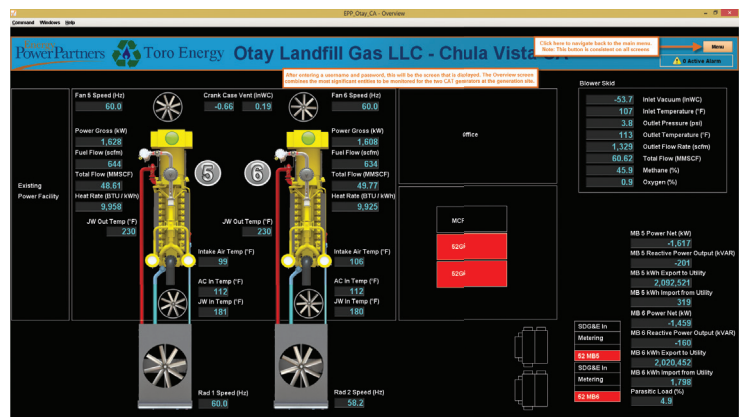
- ESI supplied SCADA System for data tracking, operator callout, remote monitoring, and automated reporting,
- Integrated overhead cranes for engine maintenance,
- Simple but elegant lube oil and coolant systems designed for rapid drain/fill of consumables,
- Elevated platforms around the engines to assist in maintenance access,
- Custom built blower skid with controls integration into the facility controls.



Engine Installation – Less than 70 days from shovel in the ground to exporting power to the grid!



Full Engineering Services- Process, Mechanical, Electrical, and Controls



The project included an ESI designed state-of-the-art SCADA system, remotely accessible, with integrated operator callout system and automated reporting.



The completed interior of the facility