



# 22.8 MWe – LANDFILL GAS FUEL COMBINED CYCLE POWER PLANT

## Olinda Alpha Landfill

### OWNER

**Broadrock Renewables LLC**

### ENGINEERING, PROCUREMENT AND CONSTRUCTION DCO Energy

### SITE

**Olinda Alpha Landfill, Brea, California, U.S.A.**

### PRODUCT

**Four (4) Taurus 60 Gas Turbine Generator Sets**

### CUSTOMER VALUE

**Environmentally Friendly Renewable Energy Source**

The Olinda Alpha Landfill Gas-to-Energy Facility is among the largest projects of its kind in the United States. Located at the Orange County Waste Recovery Facility in Brea, California, it uses extracted landfill gas to power four (4) Taurus™ 60 combustion gas turbine generator sets, which produce electricity for sale to the City of Anaheim Public Utilities. The combined cycle system recovers turbine exhaust heat in four (4) steam generators to produce additional electricity, for a total plant capacity of 22.8 MWe. That's enough to power nearly 22,000 homes. The Olinda Alpha Project received the 2012 Power Plant of the Year award from the U.S. Environmental Protection Agency (EPA) Landfill Methane Outreach Program.

## **Solar<sup>®</sup> Turbines**

***A Caterpillar Company***

## 22.8 MWe Combined Cycle Power Plant



### PLANT DATA

Four (4) 5.7 MWe Taurus 60 Gas Turbine Generator Sets
Four (4) Single-pressure Heat Recovery Steam Generators
Condensing Steam Turbine
Siloxane Removal System With Carbon Polisher Two-stage Fuel Gas Compression System
Substation
NO <sub>x</sub> and CO Reduction Catalysts
Fuel: Landfill Gas

**IMPROVED AIR QUALITY**

**HIGHLY EFFICIENT**

**CREATIVE FINANCING**

**QUALIFIES FOR RENEWABLE ENERGY CREDITS (RECS) IN CALIFORNIA**

**INDEPENDENT OF THE GRID**

**LOCAL ECONOMIC GROWTH**



### OUR PRODUCTS AND SERVICES

Gas Turbine Generator Set Packages and Auxiliary Equipment
Startup and Commissioning
Operation and Maintenance Training
Extended Service Agreement

The EPA presented Broadrock Renewables, DCO Energy and Orange County, California, with a Landfill Methane Outreach Program Award, recognizing excellence in innovation and creativity, success in providing landfill gas energy, and achieving environmental and economic benefit. The plant reduces CO<sub>2</sub> emissions by 153,000 tons per year, equivalent to removing nearly 29,000 cars from the road. The project incorporates SCR and CO catalysts to minimize air pollutant emissions. The project was developed through public-private sector collaboration. It created more than 400 jobs, generates \$2.75 million in annual revenue for Orange County and saves 2.2 trillion Btu of energy each year.

Solar's Customer Services provides a comprehensive service agreement for the turbomachinery to ensure high reliability, availability and optimum performance. The Extended Service Agreement uses InSight System™ to determine required maintenance activities based on equipment condition. The agreement also provides all package replacement parts, emergency callout support, generator services and gas turbine overhaul. The Extended Service Agreement coverage results in more uptime, greater productivity and optimized life cycle.

**Solar Turbines Incorporated**

Tel: +1 619-544-5352

Mail: [infocorp@solarturbines.com](mailto:infocorp@solarturbines.com), Web: [www.solarturbines.com](http://www.solarturbines.com)

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