

# STILLWATER

## geothermal solar hybrid power plant

FALLON, NV



The PV solar facility is the first major solar project in the region, making Enel's Stillwater plant the first hybrid geothermal/solar plant in the United States. The main scope of work includes the following activities:

- Detailed engineering for electrical, civil, mechanical, structural and controls
- Procurement of materials
- Construction, assembly and installation of the materials and equipment
- Testing, commissioning and start-up field services of the equipment
- Engineering, procurement, installation and testing of the Supervisory Control and Data Acquisition System (SCADA)
- Licenses for any software package provided
- Design, connection and synchronization of the medium voltage system to the transmission grid of the plant with the existing 60 kV interconnection line
- Site preparation, civil work, fencing and labeling
- Drawings of completed as recorded facilities (as-built) documents
- Safety Plan and procedure for the project
- Handling, storage, care, custody and control of materials and equipment
- Procurement and Installation of two meteorological stations
- Obtaining the Building Permit, Dust Permit, SWPPP, Fire System and Alarm System Permits, OSHA Installation Permit and a Nevada PV Installers License
- Operation procedure and training for Owner's employees



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The ENEL Green Power 26.2MW Solar Plant project is located in Churchill County, Nevada adjacent to the existing Enel Green Power North American Stillwater Geothermal Power Plant. The project site covers an area of 198 acres previously used for agricultural purposes. The site elevation is approximately 3,900 ft and is a basically flat area. Once complete the PV plant will be directly connected to the medium voltage electricity network (60 kV) using the same interconnection point as the existing geothermal plant.

Bombard acted as the prime contractor on the project, managing civil, structural, and electrical engineers, an architect, earthwork, fencing, and foundation contractors. Although Bombard enlisted the help of these partners, the majority of the plant was constructed by Bombard’s IBEW local electricians. This power plant is the first of its kind in the world, integrating an existing 65 Megawatt geothermal facility and the solar PV plant through the same utility interconnection point. The geothermal plant operation was not interrupted during the construction of the solar PV plant.

This project had an accelerated timeline, having broke ground in July of 2011 and was completed in Spring of 2012. Besides their vast experience, Bombard was chosen to construct this project because their staffing abilities allow them to complete a project of this size in a relatively short amount of time.



*“Bombard is a company to be relied upon from the start of a project through punch out.”*

*-William Price  
Vice President, Engineering & Construction  
Enel Green Power North America*

## ENVIRONMENTAL BENEFITS

ANNUAL KWH OF ENERGY PRODUCED	44,098,609
BARRELS OF OIL OFFSET, LIFETIME	1,593,517
EQUIVALENT MATURE TREES PLANTED	2,661,897
SMOG EMISSIONS REDUCTION, LBS	2,824,870
ACID RAIN EMISSIONS REDUCTION, LBS	5,876,093
GALLONS OF WATER	769,596,120
GREEN HOUSE REDUCTION, LBS	1,112,564,394
CAR MILES NOT DRIVEN, LIFETIME	1,390,900,236

## PROJECT DATA

CLIENT	Enel Green Power North America
ACRES	200
SIZE	26.2MW
CONSTRUCTION VALUE	Undisclosed
COMPLETION DATE	2012

