

## ENEL GREEN POWER INAUGURATES TRIPLE RENEWABLE HYBRID PLANT IN THE US

- *Award-winning Stillwater facility is the first plant in the world to combine the continuous generating capacity of medium enthalpy, binary cycle geothermal power with solar photovoltaic and solar thermal*
- *Research findings between March and December 2015 confirm that the integration of a 2 MW solar thermal facility with a 33.1 MW geothermal plant increased overall output at Stillwater by 3.6% on production from geothermal only*
- *This is the first time empirical data from a commercial hybrid plant validates a theoretical hybrid model*
- *Stillwater paves the way for the deployment of hybrid solutions at other sites around the world*

**Fallon/Rome, March 29<sup>th</sup>, 2016** – Italian Prime Minister Matteo Renzi, Enel CEO Francesco Starace, Enel Green Power CEO Francesco Venturini and Nevada Governor Brian Sandoval today attended the inauguration of Enel Green Power's Stillwater renewable hybrid facility in Fallon, Nevada. Stillwater is the world's first power plant to combine medium enthalpy, binary cycle geothermal, solar thermal and solar photovoltaic technologies at the same site. The event was also attended by the Director of the National Renewable Energy Laboratory (NREL) Dr. Martin Keller, U.S. Senator Dean Heller, US. Representative Mark Amodei and other U.S. national, state and local dignitaries.

*"Stillwater showcases the pioneering technology innovation of Enel Green Power that is making us so successful in working with governments and business partners around the world to tackle environmental issues and climate change through renewable energy,"* said Enel CEO **Francesco Starace**. *"The lessons we are learning at this advanced geothermal-solar facility will be key to the development of other hybrid plants throughout the world. We will continue to invest in new technological solutions to maximise existing assets and support further growth, maintaining innovation and operational efficiency as a key driver of our strategic plan."*

By combining generation technologies of different profiles at one production site, energy availability is increased and energy intermittency reduced. Geothermal and solar (thermal and photovoltaic) are complementary, meaning that production from solar is higher during the sunniest and hottest days of the year, when the thermal efficiency of the geothermal plant is lower. The increased delivery of power during peak hours also enables a more load-following production profile. At the same time, sharing existing infrastructure enables costs-savings and reduction of the plant's environmental impact per unit of energy produced and delivered.



In addition, research findings between March and December 2015 confirm that the combination of a 2 MW solar thermal facility with a 33.1 MW geothermal plant increased overall output at Stillwater by 3.6% compared with production from geothermal only. These findings were bolstered by the results of a study of the integration of geothermal and solar thermal. This is the first time empirical data from a commercial hybrid plant validates a theoretical hybrid model. This work was performed under the framework of the Cooperative Research and Development Agreement (CRADA) with the National Renewable Energy Laboratory (NREL) and Idaho National Laboratory (INL), under the oversight of the U.S. Department of Energy Geothermal Technologies Office.

The Stillwater hybrid facility received the Geothermal Energy Association Honors award for “Technology Advancement” four times in 2012, 2013, 2014 and 2015.

The Stillwater plant began operation in 2009 with the completion of the geothermal plant. Since then, the site has served as a hub of innovation for Enel Green Power (EGP). Making the most of its international reach, resources and partners, EGP looked to its own diverse renewable portfolio and the most advanced facilities in the world for more resourceful and innovative ways to maximise plant operations and output.

In 2012, the company added a 26.4 MW solar PV unit to the geothermal plant – at the time one of the largest PV systems of its kind in the United States. In 2015, the company developed a solar thermal system to operate in conjunction with the existing Stillwater geothermal power station. By combining three renewable sources at the same location for the first time, EGP was able to fully capitalise on already installed assets, creating a more efficient and productive overall plant.

**Enel Green Power** is the Enel Group company fully dedicated to the international development and management of renewable energy sources, with operations in Europe, the Americas, Africa and Asia. With a generation capacity that corresponds to approximately 34 billion kWh in 2015 from water, sun, wind and the Earth’s heat – enough to meet the energy needs of more than 15 million households – Enel Green Power is a world leader in the sector thanks to its well-balanced generation mix that provides generation volumes well over the sector average. The company has an installed capacity of close to 10,500 MW from a mix of sources including wind, solar, hydropower, geothermal and biomass, and has more than 710 plants operating in 16 countries.

**Enel Green Power in North America** - Enel Green Power operates in North America through Enel Green Power North America, Inc. (EGPNA), which owns and operates over 100 plants in 21 U.S. States and two Canadian provinces. As of today, the company has a total installed capacity of more than 2,500 MW. Such a capacity base is diversified across four generation technologies, namely wind, geothermal, solar and hydro.

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