



Press  
Release

**Enel - Media Relations**

T +39 06 8305 5699  
F +39 06 8305 3771  
ufficiostampa@enel.com

[enelgreenpower.com](http://enelgreenpower.com)

## **ENEL GREEN POWER BRINGS ONLINE WORLD'S FIRST INTEGRATED GEOTHERMAL AND BIOMASS PLANT IN TUSCANY**

- *Enel Green Power has completed the construction of a plant fuelled by locally sourced forest biomass that supplements the output of the Cornia 2 geothermal power plant*
- *With 5 MW of additional capacity, the system will add more than 30 GWh of output per year, avoiding the annual emission of 13,000 tonnes of CO<sub>2</sub>*

**Rome, July 27<sup>th</sup>, 2015** - Enel Green Power has brought online the world's first biomass plant used to heat geothermal steam at the Cornia 2 geothermal power plant, which is located in Castelnuovo Val di Cecina in Tuscany. The project will increase both the energy efficiency and the power output of the geothermal cycle.

The existing geothermal plant has been joined by a small power plant fuelled by virgin forest biomass sourced from within a radius of 70 km of the facility: using the biomass, the steam entering the power plant is heated from an initial temperature of between 150° and 160° Celsius to 370°-380° Celsius, increasing the net electricity generation capacity thanks to both the increased enthalpy of the steam and the improved efficiency of the cycle, the latter of which is due to lower moisture levels during generation.

*"The integration of different technologies is a major step forward for the future of renewable energy," said Enel Green Power CEO **Francesco Venturini**. "This plant, like our Stillwater facility in the United States, which combines the continuous generation capacity of medium-enthalpy, binary cycle geothermal technology with solar thermodynamic, and the Fontes Solar facility in Brazil, which integrates solar photovoltaic with wind while also using a stand-alone solar photovoltaic plant to reduce the consumption of Apiacas hydro plant construction site, will enable the optimisation of results and represents a replicable model that opens up new local energy, economic and employment opportunities."*

Enel Green Power invested more than 15 million euros in the project. The new plant is technologically innovative because it has close to zero impact on the environment, enhances an existing industrial plant and maintains the total renewability of both the resource and the cycle, combining two renewable resources in a system with potential for future international development.

The new 5 MW facility is expected to increase the geothermal plant's output by more than 30 GWh per year while avoiding the annual emission of over 13,000 tonnes of CO<sub>2</sub>. There will also be a substantial impact on employment, with an additional 35 to 40 direct and indirect jobs in sourcing the local biomass being generated.

Other benefits include the efficient use of agricultural and agro-industrial by-products, the optimal maintenance of forest resources with the consequent reduction in hydrogeological risk, the sustainable development of energy crops and the production of significant levels of cogenerated heat.



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***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 and Africa. With a generation capacity equal to approximately 32 billion kWh in 2014 from water, sun, wind and the Earth's heat – enough to meet the energy needs of more than 11 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. As of today, the company has an installed capacity of more than 9,800 MW from a mix of sources including wind, solar, hydropower, geothermal and biomass. The company has about 740 plants operating in 15 countries.*

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