



# EXERGY



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# Turbomachinery INTERNATIONAL

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## RENEWABLES

### 4MW geothermal plant powering up Terceira Island in the Azores

By TMI Staff & Contributors · On November 22, 2017

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EXERGY took part today at the inauguration ceremony of the Pico Alto 4 MWe geothermal power plant held in the stunning scenery of the Terceira Island, in the Azores. The plant designed and built by EXERGY and the Portuguese company CME for EDA RENOVÁVEIS, owned by EDA, the Azores power utility company, is now in commercial operation providing green baseload electricity to meet the island's energy needs.

The 4 MW binary plant utilizes a geothermal high enthalpy resource, exploiting the heat available both in steam flow and geothermal brine. For this project located in a remote site, in the center of Terceira Island, 1,500 Km off Portugal mainland, the Consortium EXERGY – CME supplied a turnkey solution, including the engineering and construction of the gathering systems, the air cooled ORC unit equipped with EXERGY Radial Outflow Turbine and all balance of plant equipment.

The plant has reached the highest possible conversion efficiency producing up to 4.9 MW of electricity, with an average of 4.5 MW.

By means of Pico Alto geothermal plant, EDA Renováveis is now providing a sustainable and reliable source of electricity to more than 56,000 inhabitants of Terceira, meeting up to 10% of the island electricity needs. For the first 2-months of operation, the Pico Alto power plant have been providing a stable and reliable supply of 4 MW of electricity to the grid. Maintaining this high performance in 2018, the annual production of Pico Alto power plant will likely surpass the estimative made before the construction of the power plant. Thus, geothermal contribution will probably exceed 10% of the electricity needs of Terceira.