NEWS

Turboden to supply 14 MWe geothermal ORC unit to plant in New Mexico, U.S.

Turboden has been awarded a contract for the delivery of a 14 MWe geothermal ORC unit to the Lightning Dock geothermal plant by Cyrq Energy in New Mexico, U.S.

Turboden, a group company of Mitsubishi Heavy Industries (MHI), leader in Organic Rankine Cycle (ORC) turbogenerators for distributed power generation employing renewable sources and waste heat, signed an order with Cyrq Energy Inc. for the supply of an ORC turbogenerator, that exploits geothermal brine from existing geothermal wells, for the production of electricity.

Lightning Dock Geothermal HI-01 is located in the Animas Valley of southwest New Mexico, in Hidalgo County.

In 2013, a first 4 MWe plant was manufactured to deliver electricity to Public Service Company of New Mexico, with plans to further enlarge it to 10 MW. However, due to performance difficulties related to availability and efficiency of the existing plant, the second phase of the development was never completed. In 2017 Lightning Dock Geothermal – a company that belongs to Cyrq Energy – chooses Turboden as geothermal solutions provider to design and supply a new plant, more efficient, that can guarantee the awaited results.

The solution of a single axial turbine proposed by Turboden allows to increase the nominal output to 13.7 MWe and off design up to 15.2 MWe.

The expected energy produced is 91.6 GWh and the turbine isentropic efficiency is about 90% (including all the stage losses). The plant design has been conceived to maximize the yearly production according to site ambient conditions, with an expected derating of the efficiency of 1% during summer operation, and 4% during winter operation.

The plant is currently under construction and it is planned to be in operation in the first quarter of 2019.

Source: Release by email