Turboden, Mitsubishi Power delivering 29-MW geothermal expansion in Philippines

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Mitsubishi Power and a sister company have received an order to deliver power generation equipment and support for a geothermal plant in the Philippines.

Italy-based Turboden, a part of the parent Mitsubishi Heavy Industries group, will supply a 29-MW binary cycle power generation system for the geothermal plan in Palayan, Luzon Island. Mitsubishi Power will provide the local support.

The key component of Turboden's product is its ORC (organic rankine cycle) power system, which will be added to the existing 120-MW facility owned and operated by Bac-Man Geothermal, a subsidiary of EDC. Completion and operation startup is expected by the end of 2022.

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The new system will generate power making effective use of brine, which until now has merely been returned to a re-injection well. By replacing power in the power grid now derived from fossil fuels, etc., the new installation will enable reduction of CO₂ emissions derived from steam power.

Geothermal accounts for about 14 percent of the Filipino power generation resource mix. Coal is more than 40 percent, while natural gas and hydro are close to 24 and 12 percent, respectively.

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Demand for electric power is expanding in the Philippines in tandem with GDP growth, and proactive measures are underway to introduce renewable energies. Thanks to its numerous volcanic islands, the Philippines ranks fourth worldwide in volume of geothermal resources, after the United States, Indonesia and Japan. The country also ranks third, after the United States and Indonesia, in geothermal power generation capacity.

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