

HEART OF THE CORAL TRIANGLE

The Southeastern Pacific (known as Melanesia) is a subregion of Oceania extending from New Guinea in the western side of the eastern Pacific to the Arafura Sea. Melanesia includes the four independent countries of Vanuatu, Solomon Islands, Fiji, and Papua New Guinea, as well as French New Caledonia and others. The more than 2,000 Melanesian islands have rich natural resources and live mostly off subsistence farming and fishing, tourism, and exports of palm oil, coffee, and sugar.

HYDROPOWER

Most of the islands depend on fossil fuels for electricity. While countries like New Caledonia or Fiji have an almost 100% electrification rate, Papua New Guinea and the Solomon Islands are striving to improve electricity access, with only about 54% and 62%, respectively.

Papua New Guinea formed the Papua New Guinea Electrification Partnership to increase electricity access up to 70% by 2030. The initiative will support hydropower investments to tap a potential of about 45,000 MW.

Fiji has an installed capacity of 187 MW from three hydropower plants. The vast rivers of the mountainous country are ideal for development of small hydropower.

ANDRITZ HYDRO IN SOUTHEASTERN PACIFIC

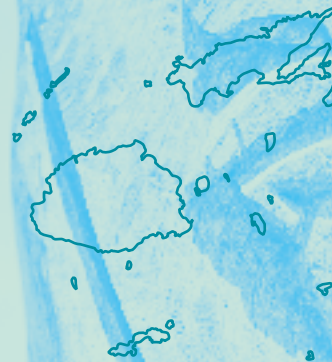
ANDRITZ has been active in the region for many years and has installed and/or rehabilitated numerous units in Papua New Guinea. It is also the OEM supplier for Waiola, the largest hydropower complex in Fiji.

Waiola, Fiji: The Monasavu-Waiola hydroelectric scheme is Fiji's largest storage reservoir, impounding 133 million m³ of water on the Nanuka River. The turbines at the Waiola plant produce about 80 MW of energy, half of the island's needs.

After almost 40 years of continuous operation, Energy Fiji Limited (EFL) decided to carry out the 'Waiola Mid-Life Refurbishment Project'. In 2016 and 2017, ANDRITZ received two contracts for refurbishment of the electro-mechanical equipment. The scope of supply of both contracts comprised design, manufacturing, installation and commissioning of four new spherical valves and four new turbines and governors. Both contracts include hydraulic systems and accessories. Commissioning of the first unit was successfully completed in December 2019, installation and commissioning work for the remaining three units will be completed in 2020.

AUTHOR

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SOUTHEASTERN
PACIFIC

GENERAL FACTS

Population: **10,719 million**

Installed hydro capacity: **425 MW**

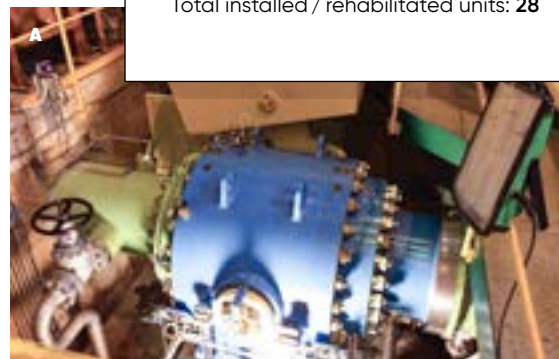
Hydropower under construction: **67 MW**

Technically feasible annual hydropower potential per year: **47,712 GWh**

ANDRITZ Hydro:

Total installed / rehabilitated capacity: **215 MW**

Total installed / rehabilitated units: **28**



A Monasavu-Waiola complex, Nanuka River, Fiji, 80 MW
B Rouna II, Rouna hydro cascade, Laloki River, Papua New Guinea, 39.5 MW