

## Tonga commercial microgrids

Masdar delivered the first large-scale renewable energy project on the island of Vava'u in the Kingdom of Tonga. The 512-kilowatt solar photovoltaic power plant produces enough energy to meet 17 percent of Tonga's annual electricity demand. The project also supplies nearly 70 percent of grid demand during peak hours.

The project is a significant step in the country's efforts to address long-term energy security. By generating 866 megawatts of clean energy each year, the Tonga plant replaces 280,000 liters of diesel fuel and reduces carbon dioxide emissions by 724 tonnes per year.

NIUAFO'OU, TONGA (14 October 2024) -- The Asian Development Bank (ADB) and the governments of Tonga and Australia commissioned the Niuafo'ou hybrid minigrid as part of the cofinanced Tonga Renewable Energy Project. The new grid will provide clean, reliable, and efficient electricity supply up to 24 hours per day to the people and businesses of Niuafo'ou.

Crown Prince Tupouto'a 'Ulukalala and Crown Princess Sinaitakala Tuku'aho led the commissioning ceremony. They were joined by ADB Senior Country Officer Balwyn Fa'otusia, Australian High Commissioner for Tonga Brek Batley and Tonga Minister for Meteorology, Energy, Information, Disaster Risk Management, Environment, Climate Change and Communication Fekita 'Utoikamanu.

"Tonga is obviously preparing for a renewable energy future by reducing dependence on fossil fuels and initiating projects like the Tonga Renewable Energy Project," said the Director of ADB's Energy Sector Group Keiju Mitsuhashi. "ADB will continue to support Tonga's energy transition ambition through accelerating renewable energy investment, and strengthening the transmission and distribution network."

The Tonga Renewable Energy Project funded the successful installation of battery energy storage system and modernized Tonga Power Limited's (TPL) central control center on Tongatapu, as well as the installation of solar photovoltaic plants and battery energy storage systems on 'Eua and Vava'u. The project is also constructing hybrid minigrid systems on eight outer islands in the Ha'apai and Vava'u Groups, as well as supporting TPL prepare a power purchase agreement for private sector funded investment to help achieve the government's target of 70% renewable energy penetration by 2025.

The Tonga Renewable Energy Project is cofinanced by ADB, Green Climate Fund, the governments of Tonga and Australia, and TPL. The \$12.2 million ADB financing is sourced from the Asian Development Fund, which provides grants to ADB's poorest and most vulnerable developing member countries. Total project cost is \$53.2 million.

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sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 69 members--49 from the region.

The Asian Development Bank (ADB) is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. It assists its members and partners by providing loans, technical assistance, grants, and equity investments to promote social and economic development.

His Majesty, King Tupou VI commissioned the Niuatoputapu Solar Hybrid System & Mini Grid on July 26, 2023. The project is part of the Outer Islands Renewable Energy Project (OIREP), which is a \$28 million initiative to promote renewable energy transition and reach 100% electricity accessibility in the outer islands of Tonga.

The Niuatoputapu project phase is an estimated \$6 million. It will provide 100% electricity accessibility to over 280 households on the island. The system is a hybrid of solar and thermal power, which will ensure a reliable and efficient supply of electricity, even during inclement weather.

The OIREP project is the longest standing energy project in Tonga. It is expected to be completed by the end of the year. The project is supported by the Asian Development Bank, the Government of Australia, the European Union, the Global Environment Facility, the Second Danish Cooperation Fund For Renewable Energy and Energy Efficiency, and the Government of Tonga.

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