

## Wind turbine to charge solar batteries American Samoa

Can solar power power the island of Ta'u?

The island of Ta'u in American Samoa, located more than 4,000 miles from the West Coast of the United States, now hosts a solar power and battery storage-enabled microgrid that can supply nearly 100 percent of the island's power needs from renewable energy.

Does American Samoa have a geothermal energy plan?

The 2016 American Samoa Energy Action Plan identifies some geothermal resources, but none of these are viable for commercial electricity generation. The 2016 plan instead emphasizes the development of wind and solar power (Ness, Haase, and Conrad 2016). American Samoa is exploring opportunities for both offshore and onshore wind power generation.

How much solar power does American Samoa have?

Of the 5 MW of ASPA's grid-connected solar PV capacity, 4.1 MW is utility scale and 900 kW is distributed across rooftops. American Samoa's smaller islands are moving toward a combination of solar, batteries, and diesel generators.

How much does electricity cost in Samoa?

Average U.S. and American Samoa Electricity Prices (2022) ASPA rates are down slightly as of January 2024--approximately \$0.41/kWh for residential and commercial customers and \$0.38/kWh for industrial customers. ASPA's total energy rates include a renewable energy flat rate charged at \$0.002/kWh across all service types (ASPA 2024).

Does Maui have a solar-energy microgrid?

Now, the island runs on a completely renewable microgrid that meets 100% of residents' energy needs through solar power and battery storage. In 2016, the founders of Maui, Hawaii-based company Mana Pacific helped design and implement Ta'u's solar-energy microgrid composed of over 5,300 solar panels.

Does Samoa have an emergency energy conservation plan?

1979: The U.S. "Emergency Energy Conservation Act of 1979" requires the submission of an emergency energy conservation plan by each state or territory (Public Law 96-102, as amended). American Samoa adopted its Emergency Energy Conservation Plan in 1982 (see Chapter 5, Annex A of ASCA 12 for plan details).

This report provides recent energy baseline data for the territory of American Samoa. Located roughly between Hawaii and New Zealand, American Samoa is the only U.S. territory in the southern hemisphere and faces similar climate and energy resilience challenges as other Pacific

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One notable example is the island of Ta'u in American Samoa, which installed a microgrid with solar panels and battery storage, supplemented by a wind turbine. This project has significantly reduced the island's reliance on diesel generators, leading to cleaner and more reliable energy supply.

To generate the power, SolarCity installed over 5,000 solar panels at one end of the island. These produce a massive 1.4 megawatts of power, enough to keep the lights on across the entire island.

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Mott MacDonald has supported RENOVA, Inc. in its 50% acquisition of American Samoa Hybrid Wind Project. Located on Tutuila Island in the Pacific Ocean, the American Samoa Hybrid Wind Project will feature a 42MW onshore wind farm and a 40MWh battery energy storage system.

The territory possesses substantial solar resources and wind and biomass resource potential. Planned renewable power projects include utility-scale solar photovoltaic (PV) and wind generation with battery storage systems.

The island nation of Samoa is continuing its effort to convert from diesel-reliant powerplants to 100% renewable energy with the help of Tesla's scalable Powerpack battery storage solution.

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