

European Solar and Energy Storage Solutions

American Samoa solar energy power generation



Overview

American Samoa is the United States' southernmost territory and the only U.S. territory south of the equator. It lies just east of the international date line and is part of the Samoan Islands chain in Polynesia in the southern Pacific Ocean. The Samoan Islands chain includes both American Samoa and the much larger.

American Samoa does not produce or refine crude oil and depends on imported petroleum products.²⁹ Refined petroleum products, primarily diesel fuel used for electricity generation and.

Because it is an isolated island group, American Samoa must produce all the electricity it consumes. The territory has almost 50 megawatts of total electricity generating capacity.³⁸ Diesel generators supply more than nine.

¹ Pacific Basin Development Council, 2021 U.S. Pacific Islands Comprehensive Economic Development Strategy (Guam, American Samoa, the Commonwealth of the Northern Mariana.

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American Samoa is less than 1,000 miles south of the equator and has abundant solar energy resources. ^{63, 64} In 2021, solar power accounted for about 11% of American Samoa's electricity generating . Is American Samoa a renewable country?

American Samoa's energy sector relies almost entirely on imported fossil fuels, although renewables represent a small but growing power system contribution. The territory possesses substantial solar energy resources, as well as wind and biomass resource potential.

How much solar power does American Samoa have?

In 2021, solar power accounted for about 11% of American Samoa's electricity generating capacity. American Samoa is less than 1,000 miles south of the equator and has abundant solar energy resources.

What is the energy goal for American Samoa?

In 2016, the American Samoa Renewable Energy Committee set a goal to meet 50% of American Samoa's energy from renewable energy resources by 2025 and 100% by 2040, primarily with solar energy. In 2021, per capita electricity consumption in American Samoa was about 70% less than the U.S. average.

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 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).

Where does American Samoa get fuel?

Fuel for American Samoa comes from Singapore with Busan, South Korea as an alternate provider if needed. In the case of fuel disruption, Pacific Energy prioritizes serving ASPA to ensure power and water treatment services are not interrupted (Pacific Energy representative, personal communication, August 9, 2023).

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American Samoa: Unlocking Renewable Energy Potential

This factsheet provides a high-level overview of American Samoa's power and transportation sectors - as well as territorial policies, challenges, and opportunities related to renewable energy, energy efficiency, and resilience.

Island In American Samoa Fully Powered By Solar

Energy Storage is a major challenge for the renewable-energy industry. With sufficient storage, when the sun isn't shining or wind isn't blowing, intermittent power generation wouldn't be such an issue. a small island in American Samoa, now gathers enough solar energy for 24/7 power, thanks to a microgrid project completed in November



Samoa: Energy Country Profile

This interactive chart shows per capita electricity generation. What share of the country's energy consumption comes from solar power? Low-carbon energy can come from nuclear or renewable technologies. How big of a role do renewable technologies play? Samoa: Energy intensity: how much energy does it use per unit of GDP?

HOW A PACIFIC ISLAND

CHANGED FROM DIESEL TO 100% SOLAR POWER

The island of Ta'u in American Samoa now boasts a solar microgrid from Tesla's SolarCity, which shifted the entire island's energy generation from 100 percent diesel fuel to 100 percent solar. (The island's population varies with the season but usually falls between 200 and 600 people.) yet this island has managed to achieve a



SolarCity and Tesla: Ta'u Microgrid

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. now hosts a solar power and battery storage-enabled microgrid that can supply

USDA Invests \$35.5M in American Samoa Solar Projects to ...

5 ???· Also in American Samoa, Mana Solar LLC plans to use a \$23.5 million investment to develop a 13.4-megawatt community solar and battery energy storage system. This will provide power to approximately 2,500 households on Tutuila Island, meeting nearly 12% of their energy needs with renewable energy.



2023-2024 Energy Baseline Report: American Samoa

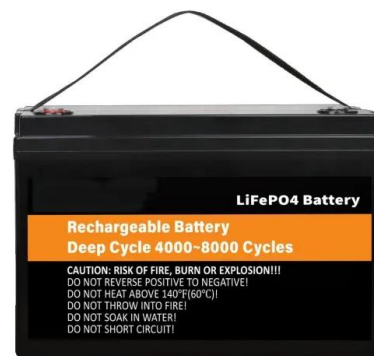
substantial solar energy resources, as well as



wind and biomass resource potential. Planned renewable power projects include utility-scale solar photovoltaic (PV), wind, and battery storage systems. The American Samoa Power Authority (ASPA) is the territory's public utility and

American Samoa Territory Energy Profile

In 2016, the American Samoa Renewable Energy Committee set a goal to meet 50% of American Samoa's energy from renewable energy resources by 2025 and 100% by 2040, primarily with solar energy. In 2022, per capita electricity consumption in American Samoa was about 30% of the U.S. average.



American Samoa Energy Strategies

There are a number of power generation options potentially available to American Samoa, such as diesel, heavy fuel oil, liquefied natural gas, modular nuclear, and renewable energy technologies including solar, wind, biomass, waste-to-energy, and geothermal.

SAMOA ENERGY SECTOR PLAN

Figure 1-1 Samoa's Installed Power Capacity (MW) in 2022 Renewable Energy Status As of 2022, total installed capacity of the renewable energy plants in Samoa was 31.61 MW. Overall, hydro power plants account for 15.64 MW (or 50%), solar accounts for 14.67 MW (or 46%), wind contributes for around 0.55 MW, while

biomass is approximately 0.75 MW.



USDA Invests \$35.5M in American Samoa Solar Projects to ...

5 ???· HILO, Hawaii, Dec. 16, 2024 - USDA Rural Development State Director Chris Kanazawa today announced \$35.5 million in total investments to Banana Solar LLC, and Mana Solar, LLC, both located in American Samoa. The projects will help develop renewable energy systems to provide power for people on Tutuila Island and support community efforts to rely on ...

Tesla, SolarCity Powering entire Island of Ta'u in American Samoa ...

SolarCity in a blog notes that Ta'u 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, providing a cost-saving alternative to diesel, removing the hazards of power intermittency and making outages a thing of the past.. The microgrid of 1.4 megawatts of solar ...



USDA Invests \$35.5M in American Samoa Solar Projects



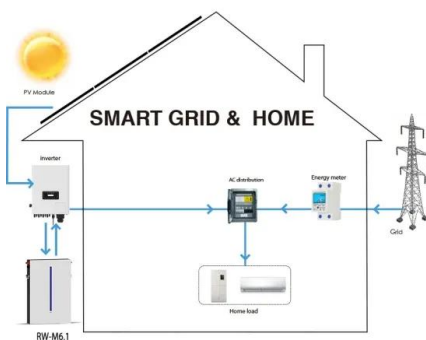
to Deliver

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Understand low-carbon energy in American Samoa through Data ...

To increase low-carbon electricity generation, American Samoa can look to successful examples globally. Countries like Greece, Chile, the Netherlands, and Australia have significantly incorporated solar power into their energy mix, with solar contributing between 19% and 22% of their electricity. These examples illustrate the effectiveness of

Ta'u: An Island Using 100% Renewable Energy

This vast solar farm amounts to 1.4 megawatts

of power generation capacity.[2] Six megawatt-hours of battery storage and load balancing systems enable the microgrid to store excess energy for deployment when the sun isn't shining.[3] As a result, the island can stay powered for three full days with no sunlight.



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American Samoa: Unlocking Renewable Energy Potential

In 2022, the average electricity price for residential customers in American Samoa was approximately 45 cents/kilowatt-hour (kWh) - almost three times the U.S. average of 15 cents/kWh. Renewable energy represents a small



but growing power system contribution, although American Samoa relies almost entirely on imported fossil fuels.

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