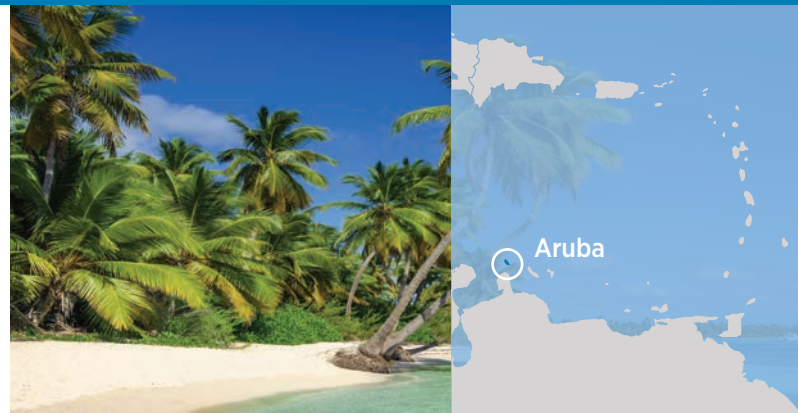


## Energy Snapshot

### Aruba

This profile provides a snapshot of the energy landscape of Aruba, an autonomous member of the Kingdom of the Netherlands located off the coast of Venezuela. Aruba’s utility rates are approximately \$0.28 per kilowatt-hour (kWh), below the Caribbean regional average of \$0.33/kWh. While Aruba has made significant progress toward diversifying its energy system, Aruba remains dependent on imported fossil fuels (more than 80% of the island’s electricity is generated using heavy fuel oil), leaving it vulnerable to global oil price fluctuations that directly impact the cost of electricity.



#### Aruba’s Renewable Energy Goal:

**100%** by  
**2020**

<b>Population</b>	111,000
<b>Total Area</b>	180 square kilometers
<b>Gross Domestic Product (GDP)</b>	\$2.808 billion U.S. dollars (USD)
<b>Share of GDP Spent on Fuel and Imports</b>	Electricity - 12% Total - 16%
<b>GDP Per Capita</b>	\$25,300 USD
<b>Urban Population Share</b>	46.8%

#### Government and Utility Overview

<b>Government Authority</b>	<b>Ministry:</b> Ministry of Finance, Communication, Utilities and Energy	
	<b>Key Figure:</b> Minister Mike de Meza	
<b>Designated Institution for Renewable Energy</b>	WEB Aruba N.V. (generation) and N.V. Elmar (distribution)	
<b>Regulator</b>	No domestic regulatory agency	
<b>Utilities</b>	<b>Name:</b> WEB Aruba N.V. and N.V. Elmar	Government-owned corporation

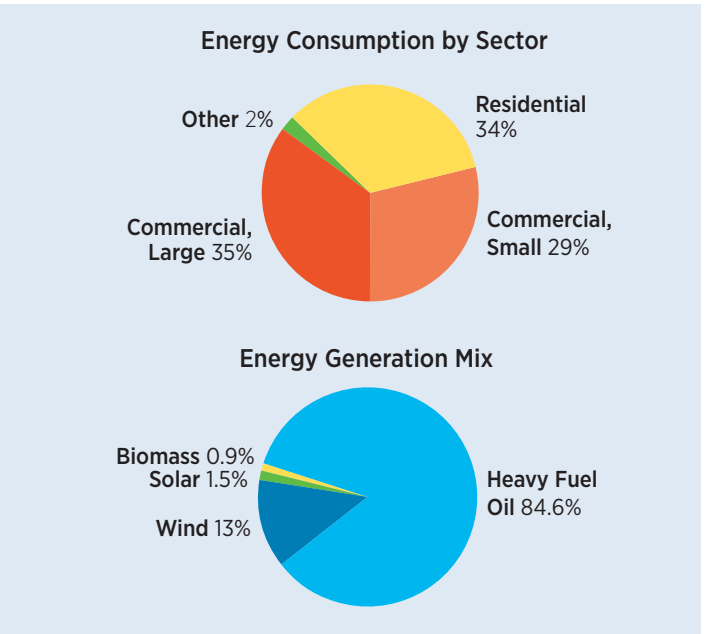
#### Electricity Sector Data

WEB Aruba is the power generation company on the island, and N.V. Elmar is the distribution company. Both are owned by the government-owned holding company, Utilities Aruba, but are independently managed. N.V. Elmar has four rate structures—residential customers are on an inverted block rate starting at \$0.25/kWh.

WEB Aruba has an installed generation capacity of 230 megawatts (MW) and an average load of 100 MW with a total annual consumption of 990 gigawatt-hours (GWh). Currently, about 13% of generation comes from a 30-MW wind project and 0.9% comes from waste-to-energy (WTE) biogas. An additional renewable capacity of 34 MW is planned or in progress.

## Electricity Sector Overview

<b>Total Installed Capacity</b>	230 MW
<b>Peak Demand</b>	125 MW
<b>Total Generation</b>	990 GWh
<b>Renewable Share</b>	15.4%
<b>Proposed/Planned Renewable Projects</b>	34 MW



## Clean Energy Policy Environment

In a 2011 document titled “The Green Gateway,” the Government of Aruba presented its plan for economic development, which included promoting clean energy. In 2012, during the Rio +20 United Nations Conference on Sustainable Development, the country announced its 100% renewable energy use by 2020 goal.

In order to reach that goal, Aruba has undertaken targeted efforts for integrating more renewables. In 2012, N.V. Elmar instituted a revised net metering policy. The new policy increases the maximum capacity to 10 kW for residential customers and 100 kW for other customers, and compensates system owners for surplus production.

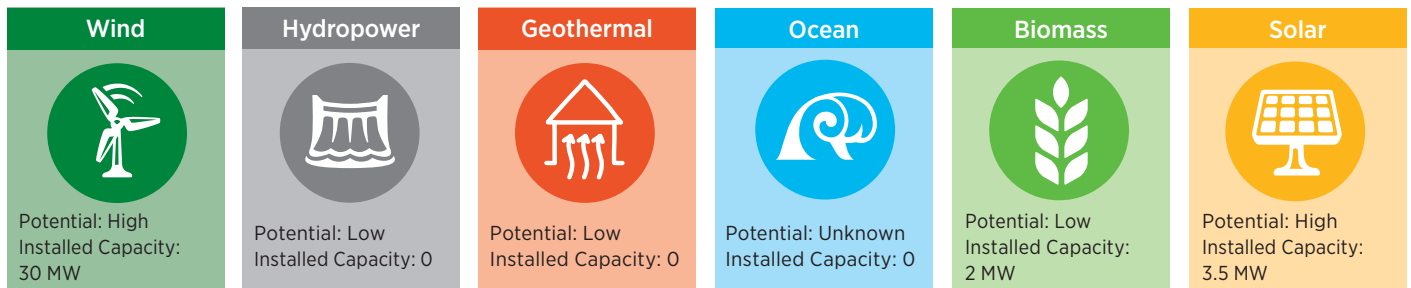
Lastly, import duties on wind turbines, solar panels, and electric cars and parts were recently reduced to encourage adoption of clean energy technologies.

## Existing Policy and Regulatory Framework

Renewable Energy	
Feed-in Tariff	
Net Metering/Billing	●
Interconnection Standards	
Renewables Portfolio Standard/Quota	
Tax Credits	
Tax Reduction/Exemption	●
Public Loans/Grants	
Green Public Procurement	●
Energy Efficiency	
Energy Efficiency Standards	
Tax Credits	
Tax Reduction/Exemption	●
Public Demonstration	●
Restrictions on Incandescent Bulbs	
Appliance Labeling Standards	
Targets	
Renewable Energy	●
Energy Efficiency	

● In Place ■ In Development

## Renewable Energy Status and Potential



## Energy Efficiency and Renewable Energy Projects

An energy demand reduction program is underway as the government continues to upgrade all public lighting with energy-efficient LED technology. Because 50% of Aruba's energy demand comes from cooling, the utility installed a pilot ice storage cooling system that makes ice at night when electricity costs are lower. The ice is then used the following day to cool buildings instead of traditional air conditioning.

Currently, Aruba gets 15.4% of its electricity from renewable sources. The island has sufficient renewable energy resource potential, with excellent technical potential for ocean, wind, and solar renewable energy generation.

The island's 30-MW wind project at Vader Piet produces 13% of Aruba's load requirements—an additional 26.4 MW of wind is slated to come online in late 2015.

WEB Aruba is hoping to add 3 MW to 6 MW to the biogas plant with a goal of using 70% of household waste.

A 3.5-MW airport solar project was completed in November 2014, but production data are not yet available. An additional 6 MW of solar capacity is planned for the residential and commercial sectors.

## Opportunities for Clean Energy Transformation

Aruba will depend heavily on variable wind and solar to reach its renewable energy goals. Developing a 100% renewable energy framework requires overbuilding capacity or integrating storage technologies to compensate for the variable nature of wind and solar.

WEB Aruba is researching ocean thermal energy conversion, geothermal power, and energy storage technologies. To leverage these resources, however, the island must address barriers, such as limited open land and steeply sloping seabed, to support new projects. Advanced technology, such as floating offshore wind turbines, and novel applications of commercial technology may be needed to reach the ambitious—but achievable—goal of 100% renewable energy for Aruba.

## Sources

The information provided in this fact sheet was developed using the following sources.

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## Energy Transition Initiative

This energy snapshot was prepared to support the Energy Transition Initiative, which leverages the experiences of islands, states, and cities that have established a long-term vision for energy transformation and are successfully implementing energy efficiency and renewable energy projects to achieve established clean energy goals.

Through the initiative, the U.S. Department of Energy and its partners provide government entities and other stakeholders with a proven framework, objective guidance, and technical tools and resources for transitioning to a clean energy system/economy that relies on local resources to substantially reduce reliance on fossil fuels.



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