

Energy Snapshot Bahamas

This profile provides a snapshot of the energy landscape of the Commonwealth of the Bahamas—a country consisting of more than 700 islands, cays, and islets—of which only 28 are populated. Located north of Cuba, with the Turks and Caicos Islands to the southeast, the Bahamas has an average electricity cost of \$0.32 per kilowatt-hour (kWh), in line with the Caribbean regional average of \$0.33/kWh. Like many island nations, the Bahamas is almost 100% reliant on imported fossil fuels, leaving it vulnerable to global price fluctuations that directly impact the cost of electricity.



The Bahamas' Clean Energy Goal:

**30% by
2030**

| | |
|---|---------------------------------------|
| Population | 321,834 |
| Total Area | 13,880 square kilometers |
| Gross Domestic Product (GDP) | \$11.4 billion U.S. dollars (USD) |
| Share of GDP Spent on Fuel and Imports | Electricity – 4.59% Total – 11.35% |
| GDP Per Capita | \$32,000 USD |
| Urban Population Share | 84.3% |

Electricity Sector Data

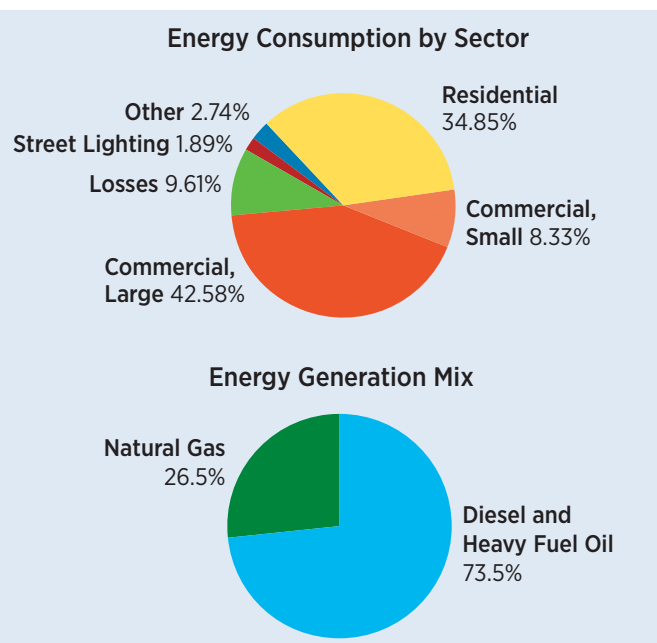
The Bahamas Electricity Corporation (BEC) controls 438 megawatts (MW) of generation capacity, while Grand Bahama Power Corporation (GBPC) controls the remaining 98 MW. Generation is currently fueled by all imported petroleum with a mix of diesel (56.5%) and heavy fuel oil (43.5%), totaling 1,930 gigawatt-hours (GWh) for the entire country. High generation costs have led to relatively high electricity tariffs, particularly for industrial consumers. The fuels used for generation result in potential electricity price volatility for all rate payers.

Government and Utility Overview

| | | |
|--|--|--|
| Government Authority | Ministry: Ministry of the Environment | |
| | Key Figure: The Honorary Kenred Dorsett | |
| Designated Institution for Renewable Energy | None | |
| Regulator | Utilities Regulation Competition Authority | |
| Utilities | Name: Bahamas Electricity Corporation | Government-owned corporation; currently in reform process, which will split the company into two companies |
| | Serves 95,000 customers in New Providence and the Family Islands, providing 85% of the electrical generation across the country. | |
| | Name: Grand Bahama Power Corporation | Public-private corporation including foreign-owned utilities |
| Serves 19,000 customers from the island of Grand Bahama from West End to Sweetings Cay. Majority-owned by Emera Inc. | | |

Electricity Sector Overview

| | | |
|---|---------------------------------|---------|
| Total Installed Capacity | 438 MW (BEC); 98 MW (GBPC) | |
| Peak Demand | 234 MW (BEC); 74 MW (GBPC) | |
| Total Generation | 1,641 GWh (BEC); 289 GWh (GBPC) | |
| Renewable Share | <0.1 % | |
| Transmission & Distribution Losses | 12.3% | |
| Electrification Rate | 100% (GBPC) 99.0% (Overall) | |
| Average Electricity Tariffs (USD/kWh) | Residential | \$0.316 |
| | Commercial | \$0.374 |
| | Industrial | None |



Based on average global generation costs for renewable technologies, electricity rates in the Bahamas offer an opportunity for renewable energy to diversify the fuel portfolio and reduce rate volatility.

The islands that comprise the Bahamas have moderate potential for variable renewables—wind and solar—but limited or no potential for baseload renewables such as hydropower or geothermal. Interconnecting the Bahamas’ 16 isolated island grids would be necessary to transport power generated from renewable energy across the country.

Clean Energy Policy Environment

The Government of the Bahamas has discussed plans to reform its energy sector through a partial-privatization of BEC and by introducing regulation-by-contract principles to meet the capacity for future growth, implementing more economically viable renewable energy sources, and modernizing the energy sector.

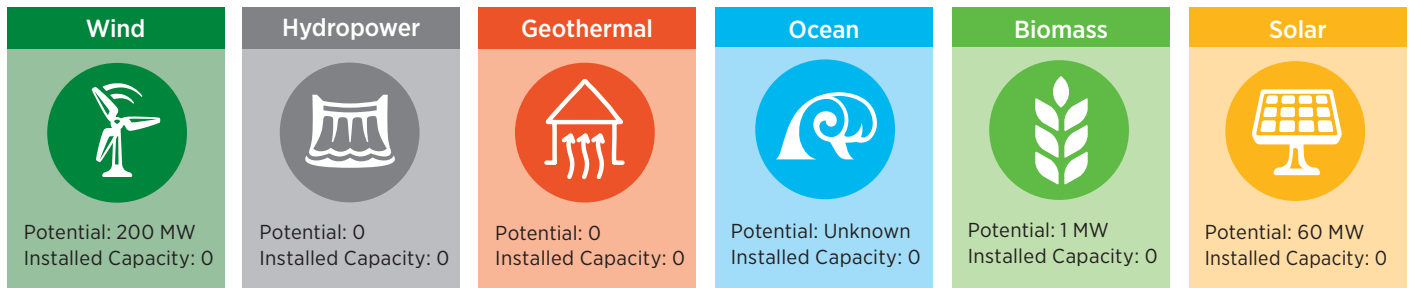
There has been effort made related to increasing energy efficiency in the country. As recommended in the Inter-American Development Bank (IDB) Country Strategy for the Bahamas, the benefits of energy efficiency were communicated to residents in low-income communities, and homeowners were offered incentives for installing energy-efficient lighting. In addition, a Bahamas National Energy Policy was established in response to IDB’s recommendations, which outlined standards for energy-efficient buildings.

Existing Policy and Regulatory Framework

| Renewable Energy | |
|-------------------------------------|----------------|
| Feed-in Tariff | In Development |
| Net Metering/Billing | In Development |
| 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 | In Place |
| Appliance Labeling Standards | |
| Targets | |
| Renewable Energy | In Place |
| Energy Efficiency | In Place |

● In Place ■ In Development

Renewable Energy Status and Potential



While renewable energy policies such as net metering and feed-in-tariffs have been debated, there are limited policy support mechanisms in place to drive the development of renewable energy projects in the Bahamas.

Energy Efficiency and Renewable Energy Projects

With energy-related costs estimated at 15% to 20% of annual operating budgets for small- and medium-sized hotels in the Bahamas, the Bahamian hotel industry launched a significant energy efficiency initiative in 2013 in partnership with the Government of the Bahamas to reduce energy-related costs. The initiative aims to conduct energy audits at participating hotels, recommend energy efficiency improvements, and develop financial proposals to obtain funding for implementation.

In terms of renewable energy, despite having resource potential, economic conditions for solar photovoltaics and solar water heaters, and efforts in 2008 and 2009 to introduce renewable energy, the market is still largely untapped. In 2008, the Government of the Bahamas incentivized solar technologies by reducing the import duties from 42% to 10%.

In 2009, GBPC explored wind and biomass resources and BEC considered 13 bids for renewable energy projects, but none have materialized yet and currently the Bahamas does not have any installed renewable energy. In the next decade, the Bahamas aims to have solar water heating systems on 20% to 30% of all households, which has the potential of adding 200 GWh of heat for water per year.

Opportunities for Clean Energy Transformation

According to preliminary assessments, wind and solar resources offer the greatest potential for renewable energy development in the Bahamas. The Bahamas has one of the strongest economies in the region with \$4.6 million being invested in the renewable energy sector between 2006 and 2012. However, the government indicated that it intends to delay any movement on renewable energy implementation until the BEC reform process is complete.

High and volatile electricity tariffs, specifically for industrial consumers, offer an opportunity for fuel savings from renewable energy installations once capital costs have been paid back. Reduction of electricity rates has been highlighted as a priority area by the government.

Because the Bahamas produces no fossil fuels, an increase in domestic energy production from renewables could reduce price volatility and the potential for supply disruptions, resulting in more self-sufficiency and stable energy costs over the long term.

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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**ENERGY
TRANSITION
INITIATIVE**

Islands

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