

Energy Snapshot

Haiti

This profile provides a snapshot of the energy landscape of Haiti, an independent nation that occupies the western portion of the island of Hispaniola in the northern Caribbean Sea. Haiti's utility rates are roughly \$0.35 U.S. dollars (USD) per kilowatt-hour (kWh), above the Caribbean regional average of \$0.33 USD/kWh. Like many island nations, Haiti is highly dependent on imported fossil fuels for electric generation—roughly 85% of its electricity is produced from the combustion of petroleum-based fuels. This leaves the country vulnerable to global oil price fluctuations, which directly impact the cost of electricity. Haiti also faces challenges in terms of lack of grid access, reliability of electricity service, and the prevalence of wood and charcoal fuels for home energy consumption.

Population ¹	9,997,000
Total Area	27,750 sq. km
Gross Domestic Product (GDP)	\$18.54 billion USD
Share of GDP Spent on Fuel and Imports	Electricity – Unknown Total – 4% ²
GDP Per Capita	\$1,800 USD
Urban Population Share	57.4%

Electricity Sector Data

The electric utility for Haiti is Electricité d'Haïti (EDH). Though EDH technically holds monopoly rights for the provision of electricity, it contracts for power from a number of independent power producers (IPPs).⁴ The country's



Haiti's Renewable Energy Goals:³

- 30% reduction in energy intensity by 2030
- 50% of electricity from renewable sources by 2020
- 50% electrification rate by 2020.

Government and Utility Overview

Government Authority	Ministry: Ministry of Public Works, Transport and Communication	
	Key Figure: Minister Jacques Rousseau	
Designated Institution for Renewable Energy	Office of Energy Security, Ministry of Public Work, Transport and Communication	
Regulator	None	
Utility	Name: Electricité d'Haïti	Government-Owned

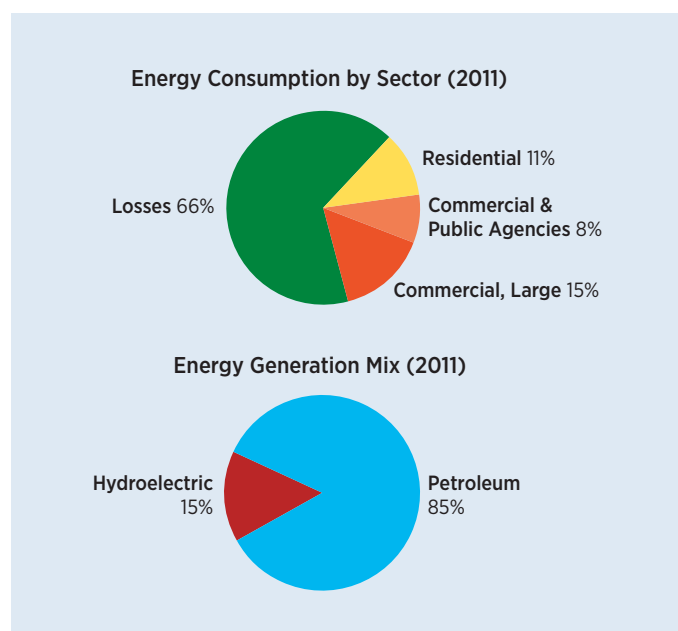
nameplate installed capacity is nearly 400 megawatts (MW), although equipment age and condition limit the available capacity from those units to 244 MW.⁴ The country does not have a single centralized transmission and distribution system but rather 10 isolated regional grids, all operated by EDH.⁵ It also lacks an interconnection with the Dominican Republic,

Electricity Sector Overview

Total Installed Capacity (2011) ⁷	244 MW	
Peak Demand	250–500 MW (est.)	
Total Generation (2011)	875 gigawatt-hours	
Renewable Share (2011)	15%	
Transmission & Distribution Losses (2011)	66%	
Electrification Rate (2010)	25%	
Average Electricity Tariffs (USD/kWh) ⁸	Residential	\$0.28
	Commercial	\$0.37
	Industrial	\$0.39
	Public Authorities	\$0.37
	Public Lighting	\$0.37

its neighbor to the east with which it shares the island of Hispaniola. Several studies have suggested that such a link would be technically feasible, although political and energy security concerns in Haiti have forestalled that option.^{4,5}

The electricity sector in Haiti faces numerous challenges. First, it has a very high rate of losses, with almost two-thirds of the electricity produced failing to reach a paying customer. Roughly 70% of those system losses, or 46% of all energy produced, are due to non-technical factors including energy theft and the inability of EDH to effectively bill customers and collect payment.⁴ Second, Haiti has one of the lowest electrification rates in the world, with 12.5% of the population using an official grid connection and an equal number connecting illegally for a total electrification rate of 25%.⁴ In the past, illegal connections and artificially low rates charged to official customers have driven EDH to require an annual operating subsidy of \$170 million from the Haitian government.⁶ Additionally, those customers may only receive electricity between 5 and 15 hours per day.⁴

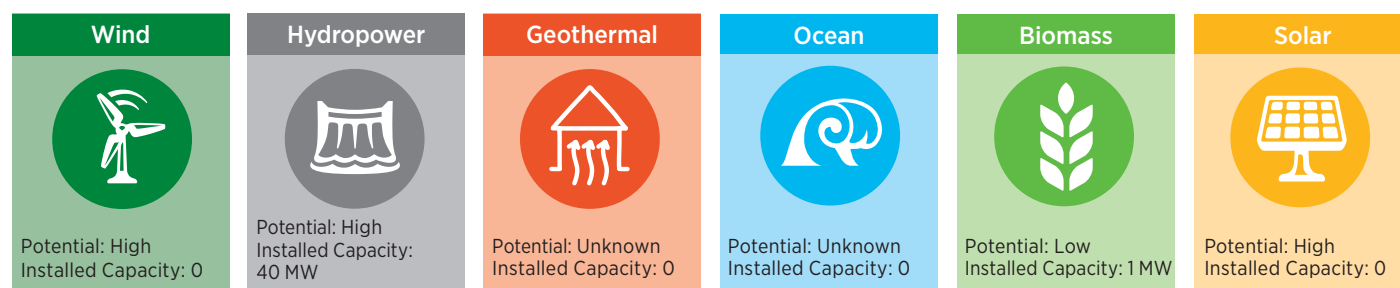


Existing Policy and Regulatory Framework³

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

● In Place ■ In Development

Renewable Energy Status and Potential^{4,10}



Clean Energy Policy Environment

Haiti's clean energy policy environment has yet to be defined. Responsibility for energy policy and implementation is fragmented between many government bodies that have direct or indirect influence on the energy sector. This diffusion of responsibilities stems in part from the lack of a single agency wholly focused on energy issues. Among the agencies responsible for energy policy are the Ministry of Public Works, Transport, and Communications, and the Bureau of Mines and Energy. Since 2006, these two agencies have been working with EDH to develop a national energy policy, with the most recent draft released in 2012. However, as of this publication it still has not been implemented.³

The current draft of the proposed national energy policy also sets several energy goals for Haiti to be achieved by the year 2020, including reducing energy intensity of the economy by 30% and increasing the portion of electricity generated from renewable sources to 50%.³ Recognizing the widespread deforestation caused by household reliance on wood and charcoal fuels and the overall lack of access to electricity, the draft would seek to raise the electrification rate to 50% by 2020.³ To enable greater adoption of renewable energy, the draft national energy plan also calls for the completion of nationwide wind, solar, and hydroelectric resource assessment maps.⁴

Energy Efficiency and Renewable Energy Projects

To date, Haiti's renewable energy development has been limited to a number of small hydroelectric installations. Despite having a total installed hydroelectric capacity of 62 MW, the operational capacity is only 40 MW due to out-of-service turbines or reduced water flow rates due to accumulation of silt.⁴ There have been a number of small-scale solar projects, including the distribution of home solar lights and an off-grid solar system at a teaching hospital near Port-au-Prince.⁹ However, there has not yet been any significant adoption of grid-tied solar systems, whether at the customer or utility scale.

Opportunities for Clean Energy Transformation

Haiti faces many challenges in its transition toward clean energy, such as its aging electrical infrastructure, lack of clear governance in the energy sector, and the poverty faced by many of its citizens. However, these obstacles also suggest that the impact of increased adoption of clean energy will be felt far beyond the electricity system. For example, instead of simply replacing diesel electricity generation with wind or solar, Haiti could displace the combustion of wood and charcoal fuels that make up 77% of primary energy use in Haiti and the cooking fuel in 93% of households.⁴ This shift would create huge benefits in term of respiratory health, public safety, economic productivity, and environmental preservation.

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.



¹ All information in this table is from the CIA World Factbook, unless otherwise noted; <https://www.cia.gov/library/publications/the-world-factbook/geos/ha.html>.

² <http://stat.wto.org/StatisticalProgram/WSDStatProgramHome.aspx?Language=E>.

³ http://www.bme.gouv.ht/energie/Declaration%20de%20politique%20energetique_ebauche9.pdf.

⁴ http://www.worldwatch.org/system/files/Haiti-Roadmap-English_0.pdf.

⁵ http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2011/02/27/000356161_20110227233101/Rendered/PDF/594590ESW0WHIT1icity0Supply0Options.pdf.

⁶ <http://www.usaid.gov/haiti/energy>.

⁷ All information in this table is from the Haiti Sustainable Energy Roadmap, unless otherwise noted; http://www.worldwatch.org/system/files/Haiti-Roadmap-English_0.pdf.

⁸ <http://www.edh.ht/tarif.php>.

⁹ <http://www.theguardian.com/global-development/2013/dec/17/haiti-solar-power-sustainable-electricity-solution>.

¹⁰ [http://www.worldwatch.org/system/files/nPhase%201%20C-SERMS%20Summary%20for%20Policymakers%20\(1\).pdf](http://www.worldwatch.org/system/files/nPhase%201%20C-SERMS%20Summary%20for%20Policymakers%20(1).pdf).