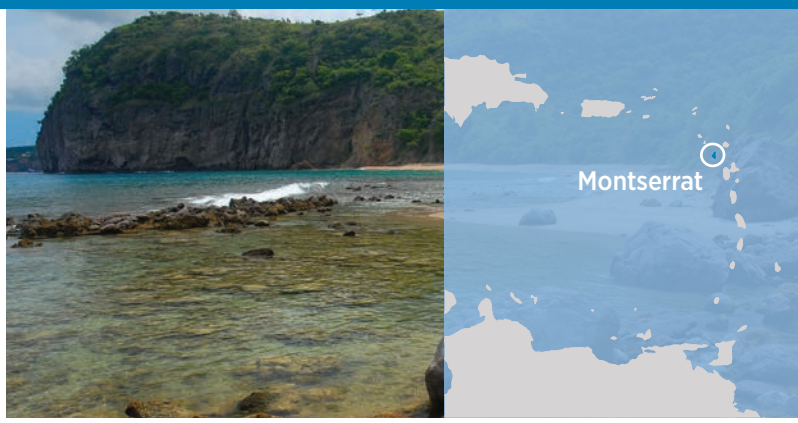
ENERGY TRANSITION INITIATIVE
Islands

Energy Snapshot
Montserrat

This profile provides a snapshot of the energy landscape of Montserrat, a British overseas territory located in the northern half of the Lesser Antilles. Montserrat's utility rates start at $0.53 per kilowatt-hour (kWh) for residential customers, which is above the Caribbean regional average of $0.33/kWh. Like many island nations, Montserrat is almost entirely dependent on imported fossil fuels, leaving it vulnerable to global oil price fluctuations that directly impact the cost of electricity.



Population[1]	5,215
Total Area[1]	102 sq. km
Gross Domestic Product (GDP)[2]	$58.879 million U.S. Dollars (USD)
Share of GDP Spent on Fuel and Imports	Electricity – Unknown Total[3] – 24.9%
GDP Per Capita[2]	$11,565 USD
Urban Population Share[2]	9%

Montserrat's Renewable Energy Goal:

None[4]

Government and Utility Overview

Government Authority	**Ministry**[4 5]: Ministry of Communications, Works, Energy and Labour	
	Key Figure[6]: Paul Lewis, Honourable Minister of Communications, Works, Energy and Labour	
Designated Institution for Renewable Energy[5]	Ministry of Communications, Works, Energy and Labour	
Regulator[5]	Ministry of Communications, Works, Energy and Labour	
Utilities[7]	**Name:** Montserrat Utilities Ltd.	Government-owned

Electricity Sector Data

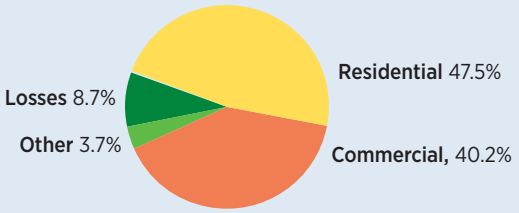
Montserrat Utilities Ltd. (MUL) was formed through the merger of the existing Montserrat Electricity Services Ltd. (MONLEC) and Montserrat Water Authority utilities in 1998.[8] Montserrat Electricity Services Ltd. generates, transmits, distributes, and supplies electricity to domestic, commercial, and industrial customers on the island.[9] Montserrat is completely dependent on fossil fuels for electricity generation and there are no independent power providers on the island, though they are permitted by law.[5] As per the Electricity Supply Act, customers pay a basic tariff and a fuel surcharge.[10] The basic tariff has remained unchanged since February 2001, while the fuel surcharge changes monthly and is calculated based on the average price paid for diesel in the previous month, the electricity unit sales in the previous month, and the current average price for fuel.[8]

Peak power demand is 2 megawatts (MW) for the island and electricity is generated using four diesel units, run by MUL with a total capacity of 6.22 MW in 2014. The utility plans to expand further to 7.72 MW by installing a new 1.5-MW diesel generator, which is slated for completion in 2015 and is funded by the United Kingdom's Department for International Development (DFID) and the Caribbean Development Bank.[5]

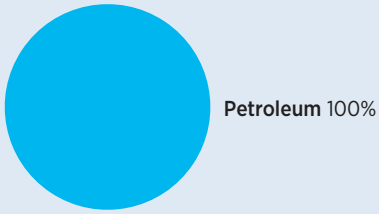
Electricity Sector Overview

Total Installed Capacity (2014)[5]	6.22 MW	
Peak Demand (2007)[5]	2 MW	
Total Generation (2014)[5]	10.89 gigawatt-hours (GWh)	
Renewable Share[1]	0%	
Transmission & Distribution Losses (2012)[2]	8.7%	
Electrification Rate[5]	99%	
Average Electricity Tariffs (USD/kWh)[10]	**Residential**	$0.53–$0.55
	Commercial	$0.55
	Industrial	$0.53

Energy Consumption by Sector (2014) [2, 5]



Energy Generation Mix[1]



Clean Energy Policy Environment

The Montserrat Sustainable Development Plan (SDP) aims to achieve long-term sustainable development of Montserrat from 2008 through 2020, with strategic goals focusing on economic management, human development, environmental management and disaster mitigation, governance, and population.[11] The SDP called for the establishment of a climate change adaptation, mitigation, and implementation plan as well as a national energy policy, which led to the development of the 2008-2027 Energy Policy of Montserrat (EPM) and the 2011 Climate Change Policy (CCP).[11]

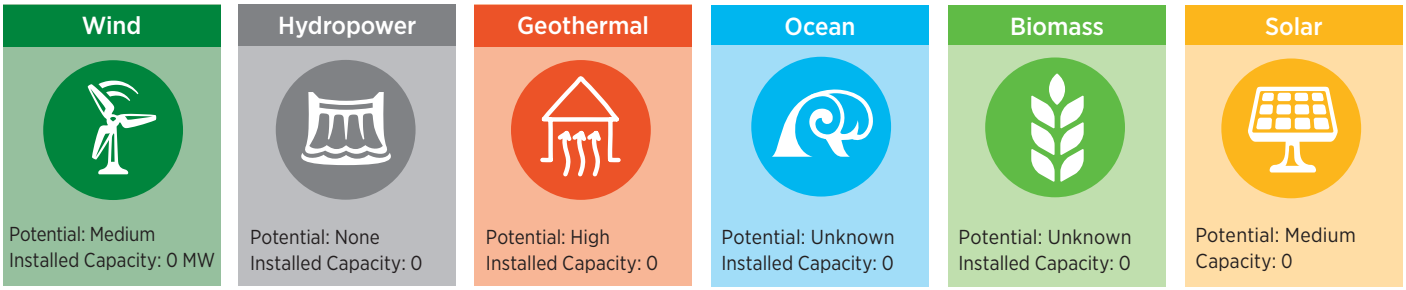
The EPM broadly defines a strategic path for Montserrat's carbon-resilient sustainable development and shows the country's commitment to renewable energy resources and enhanced energy efficiency, while the CCP provides a holistic view of sustainable development across different sectors.[11] In particular, the CCP emphasizes the impact of climate change in the country's agriculture, food security, fisheries, tourism, biodiversity, and finance sectors. The CCP also identifies energy security and independence through renewable energy as a key instrument to ensure increased climate resiliency and the wellbeing of its population.

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[12, 5]



The EPM focuses on five key areas for clean energy development over a 20-year period: (1) renewable energy, (2) energy efficiency, (3) fossil fuel alternatives, (4) the transportation sector, and (5) capacity development.[13] Highlights for renewable energy include exploring opportunities in geothermal and wind energy and solar water heaters. The EPM also recommends use of economic and financial measures, such as carbon trading, clean development mechanisms, tax holidays, tax credits, and loan funds for renewable energy integration.[13] Furthermore, the EPM encourages energy audits and replacing inefficient lighting systems. Human capacity development and a supportive legislative and regulatory environment are viewed as critical tools for implementing clean energy policy. The EPM recommends pilot studies to introduce independent renewable energy power producers and net metering policies given the small size of Montserrat's grid.[13]

Energy Efficiency and Renewable Energy Projects

There are currently no utility-scale, grid-connected renewable energy projects in Montserrat.[12] Montserrat lies in the trade wind belt and has sites that have 12-15 mph wind speeds for most of the year. In the late 1980s and 1990s MONLEC installed a 215-kilowatt (kW) demonstration wind project to utilize available wind.[14] However, the small wind farm later suffered damage during a hurricane and volcanic activity on the island. In total, the potential for commercial wind farms is estimated at 900 kW nominal capacity.[13] Geothermal power has an estimated potential of generating 16 GWh per year in Montserrat, amounting to roughly 150% of the island's annual energy demand.[15] The government and DFID have undertaken several feasibility studies and drilled test production wells for further exploration of the resource and its viability.

Opportunities for Clean Energy Transformation

Energy efficiency and renewable energy technologies present opportunities for Monserrat, and the government has taken action to encourage renewable energy integration and energy efficiency. Geothermal, wind, and solar energy potential on the island can reduce its current reliance on imported fossil fuels while moving toward a more sustainable and resilient energy system.

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] https://www.cia.gov/library/publications/the-world-factbook/geos/mh.html.

[2] http://unstats.un.org/unsd/snaama/resCountry.asp.

[3] Data from http://comtrade.un.org/data/ divided by 3.

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

[5] https://ec.europa.eu/europeaid/sites/devco/files/renewable_energies_and_green_policy_in_octs_annexes_2014_en.pdf.

[6] http://www.gov.ms/ministries-and-departments/ministry-of-communications-works-labour/.

[7] http://www.mul.ms/index.php/about/mul-mission.

[8] http://www.mul.ms/index.php/corporate-interface/mul-merger-outline.

[9] http://www.mul.ms/index.php/about.

[10] http://www.mul.ms/index.php/customer-interface/electricity-tariff.

[11] http://www.gov.ms/publications/SDP_MONTSERRAT.pdf.

[12] http://www.credp.org/Data/CREDP-GIZ_Interconnection_Report_Final_Oct_2013.pdf.

[13] http://finance.gov.ms/wp-content/uploads/2011/07/MontserratEnergyPolicy2008-2027.pdf.

[14] http://aceer.uprm.edu/pdfs/wind_energy_caribbean.pdf.

[15] http://documents.worldbank.org/curated/en/2013/06/17900017/got-steam-geothermal-opportunity-growth-caribbean.

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