ENERGY TRANSITION INITIATIVE
Islands

Energy Snapshot

Commonwealth of the Northern Mariana Islands

This profile provides a snapshot of the energy landscape of the Commonwealth of the Northern Mariana Islands (CNMI), a commonwealth in political union with the United States that is located in the northern Pacific Ocean. CNMI's electricity rates for residential customers range from $0.19 to $0.33 U.S. dollars (USD) per kilowatt-hour (kWh), above the average U.S. residential rate of $0.13 USD/kWh.[1,2] Like many island communities, CNMI is highly dependent on imported fossil fuels (nearly 100% of CNMI's electricity is generated using heavy fuel oil), leaving it vulnerable to global oil price fluctuations that directly impact the cost of electricity.

Population	51,483[3]
Total Area	464 sq. km
Gross Domestic Product (GDP)	$733 million USD
Share of GDP Spent on Fuel and Imports	Electricity – 8.2%[4] Total – Unknown
GDP Per Capita	$13,600 USD
Urban Population Share	89.3%

CNMI's Renewable Energy Goal:
• 20% by 2016

Government and Utility Overview

Government Authority	**Ministry:** Energy Division, Executive Branch	
	Key Figure: Delegate Gregorio Sablan	
Designated Institution for Renewable Energy	CNMI Energy Task Force	
Regulator	Commonwealth Public Utilities Commission	
Utility	**Name:** Commonwealth Utilities Corporation	Public Utility

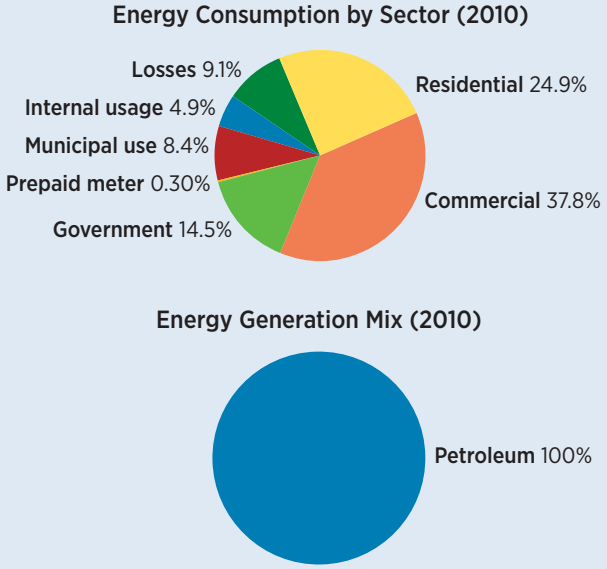
Electricity Sector Data

The Commonwealth Utilities Corporation (CUC), a publicly owned utility, operates power generation and distribution services on the three most-populated islands of Saipan, Tinian, and Rota. The CUC has a power purchase agreement with a private power provider for a power plant on the island of Tinian.[5] CUC has four rate structures: (1) a graduated residential rate, (2) a commercial rate, (3) a government rate, and (4) a non-conforming rate; residential customers are on an inverted block rate starting at $0.19 USD/kWh.

The CUC has an installed generation capacity of 94.5 megawatts (MW) and a base load of 45.2 MW with a total consumption of 287,942 megawatt-hours (MWh). Currently, nearly 100% of generation comes from fuel oil. Several small renewable projects have been installed on government and school buildings, including solar photovoltaics (PV) with 74.5-kilowatt (kW) capacity and small wind turbines with 144-kW capacity.[4]

Electricity Sector Overview

Total Installed Capacity (2010)[6]	94.4 MW	
Peak Demand (2011)	52.2 MW	
Total Generation (2010)	288 gigawatt-hours	
Renewable Share (2010)	0%	
Transmission & Distribution Losses (2010)	9.1%	
Electrification Rate	Unknown	
Average Electricity Tariffs (USD/kWh)[1]	**Residential**	$0.19
	Commercial	$0.31
	Government	$0.32



Clean Energy Policy Environment

CNMI's Renewable Portfolio Standard (RPS), adopted in 2006 via Public Law 15-23, originally set renewable energy targets at 10% of net electricity sales by the end of 2008, increasing to 80% by 2014, but the target was subsequently amended to 20% of net electricity sales by the end of 2016.[7] The RPS also requires government departments to help the CUC and developers locate potential renewable energy sites, assist in planning and permitting, and publish a list of sites for potential renewable energy development every two years.[8]

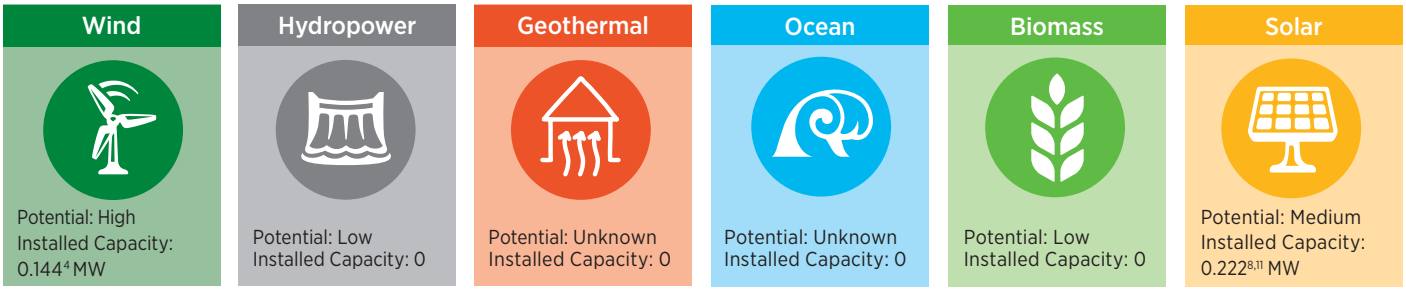
CNMI also created a net energy metering policy that permits residential and commercial systems under 100 kW until 30% of CUC's peak demand has been met.[9] A variety of renewable technologies are eligible. Customers receive a credit at the retail rate for excess production; the credit rate drops to 50% of the retail rate for remaining excess generation after the 12-month billing cycle.[9] The net metering program was augmented in 2015 under Public Law 18-75, which obligated the utility to prioritize the interconnection of distributed generation at health and educational facilities due to the impact of high electricity costs on those facilities.[10]

Existing Policy and Regulatory Framework

Renewable Energy	
Feed-in Tariff	
Net Metering/Billing[9]	●
Interconnection Standards[9]	●
Renewables Portfolio Standard/Quota[7]	●
Tax Credits	
Tax Reduction/Exemption	
Public Loans/Grants	
Green Public Procurement	
Energy Efficiency	
Energy Efficiency Standards	
Tax Credits	
Tax Reduction/Exemption	
Public Demonstration[5]	●
Restrictions on Incandescent Bulbs	
Appliance Labeling Standards	
Targets	
Renewable Energy[7]	●
Energy Efficiency	

● In Place ■ In Development

Renewable Energy Status and Potential[8]



In 2010, the CNMI Energy Task Force was created by executive order to develop a strategic energy plan and oversee the implementation of the plan's constituent strategies. In 2012, the CNMI Energy Task Force developed the *Commonwealth of the Northern Mariana Islands Strategic Energy Plan*, which was adopted in March 2013 with energy efficiency and renewable energy as the focus of the plan.[5] In 2013, through a partnership with the U.S. Department of the Interior's Office of Insular Affairs and the U.S. Department of Energy's (DOE's) National Renewable Energy Laboratory, the CNMI Energy Task Force created an Energy Action Plan that focuses on near-term strategies for increasing energy efficiency and renewable energy technologies, and decreasing reliance on electricity generation from fossil fuels.[5]

Energy Efficiency and Renewable Energy Projects

Between 2009 and 2011, CNMI installed several small-scale solar PV and wind projects, including a 165-kW PV system and 2.4-kW wind system at Saipan Southern High School, a 2.86-kW PV system and 3.7-kW wind turbine at the Energy Division Demonstration Center,[11] and a 54-kW PV system at American Memorial Park.[8] The renewable energy systems at Saipan Southern High School generate enough energy to meet the school's total energy demand, while Energy Division's systems cover 40% of the center's energy consumption. Other small renewable energy projects were installed at 10 other schools through the Public School System Green Energy Project, a program funded by DOE's State Energy Program.[11]

The CNMI Energy Division also completed a street light conversion project in 2011 that replaced 1,225 streetlights with energy-efficient LEDs in Saipan, Tinian, and Rota.[11]

Opportunities for Clean Energy Transformation

CNMI has sufficient wind and solar potential to make a significant shift toward clean energy, although land scarcity, potential impacts on threatened bird species, and typhoon-level winds may complicate siting of wind turbines.[4] Because CNMI lies on active volcanic formations, geothermal energy potential is being explored.[4] In the policy and regulatory realm, CNMI still has tools at its disposal to reach its sustainable energy goals and decrease dependence on fossil fuels. Implementing the high-priority, short-term strategies outlined in CNMI's 2013 Energy Action Plan, such as demand-side management, outreach to government and commercial sectors, and waste-to-energy power generation, would be significant steps toward achieving these goals.

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] http://www.cucgov.org/wp-content/uploads/2015/03/Electric-Charges-Rates-030115.pdf.

[2] http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_03.

[3] All information in this table is from the CIA World Factbook, unless otherwise noted. https://www.cia.gov/library/publications/the-world-factbook/geos/cq.html.

[4] http://www.eia.gov/state/print.cfm?sid=CQ.

[5] http://www.nrel.gov/docs/fy13osti/59193.pdf.

[6] All information in this table is from the CNMI Initial Technical Assessment Report, unless otherwise noted. http://www.nrel.gov/docs/fy11osti/50906.pdf.

[7] http://www.cnmilaw.org/pdf/public_laws/18/pl18-62.pdf.

[8] http://www.nrel.gov/docs/fy11osti/50906.pdf.

[9] http://programs.dsireusa.org/system/program/detail/5556.

[10] http://www.cnmilaw.org/pdf/public_laws/18/pl18-75.pdf.

[11] https://www.naseo.org/members-state?State=NMI.

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