

Northern Mariana Islands Territory Energy Profile

Northern Mariana Islands Quick Facts

- The Commonwealth of the Northern Mariana Islands (CNMI) meets nearly all of its energy demand through importing petroleum products, including 22 million to 24 million gallons of diesel fuel annually to run the islands' five electricity generating plants.
- Diesel fuel surcharges on electricity in CNMI have ranged from 24 to 48 cents per kilowatthour in recent years, bringing the average electricity price as of January 2012 to 36 cents per kilowatthour.
- The Commonwealth Utilities Corp., CNMI's public utility, is focusing on waste gasification, geothermal, solar, and wind technologies to reduce the need for petroleum-fired electricity generation.
- Nearby volcanoes make CNMI – particularly the islands of Pagan and Saipan – unique in Micronesia in having abundant geothermal energy potential, and CNMI has excellent resources for both wind and solar power.
- CNMI enacted a Renewable Portfolio Standard requiring 80 percent of net electricity sales to come from renewable energy resources by 2015.

Data

Economy

Population and Northern Mariana Islands Industry	United States	Period
Population	--	310.2 million
Energy Intensity	--	7,505 Btu per 2005 U.S. dollar

Reserves & Supply

Reserves	Northern Mariana Islands	United States	Period
Crude Oil	--	NA	2012
Natural Gas Reserves	--	NA	2012
Recoverable Coal	--	260,551 Million Short Tons	2008

Production	Northern Mariana Islands	United States	Period
Total Energy	--	75 Quadrillion Btu	2010
Crude Oil	--	5,652 Thousand Barrels/Day	2011
Natural Gas - Marketed	--	24,036 Billion cu ft	2011
Coal	--	1,094,336 Thousand Short Tons	2011

Capacity	Northern Mariana Islands	United States	Period
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Crude Oil Refinery Capacity (as of Jan. 1)	--	--	2012
Total Electricity Installed Capacity	--	1,039 million kW	2010
Net Electricity Generation	Northern Mariana Islands	United States	Period
Total Net Electricity Generation	--	4,112 Billion kWh	2010
Petroleum, Natural Gas, and Coal Net Electricity Generation	--	2,790 Billion kWh	2011
Total Electricity Generation from Renewable Sources	--	427 billion kWh	2010
» Hydroelectric	--	325 Billion kWh	2011
» Other Renewables	--	167 Billion kWh	2010
Production Facilities	Northern Mariana Islands		
Major Coal Mines	None		
Petroleum Refineries	None		
Major Non-Nuclear Electricity Generating Plants	Rota Power Plant (Commonwealth Utilities Corporation) ; Saipan Power Plant 4 (Commonwealth Utilities Corporation) ; Saipan Power Plants 1 & 2 (Commonwealth Utilities Corporation) ; Tinian Power Plant (Commonwealth Utilities Corporation)		
Nuclear Power Plants	None		
Imports & Exports			
Total Imports	Northern Mariana Islands	United States	Period
Crude Oil Imports	--	9,213 Thousand Barrels/Day	2010
Total Petroleum Product Imports	--	2,580 Thousand Barrels/Day	2010
» Motor Gasoline Imports	--	134 Thousand Barrels/Day	2010
» Jet Fuel Imports	--	98 Thousand Barrels/Day	2010
» Kerosene	--	2 Thousand Barrels/Day	2010

Imports			
» Distillate Fuel Imports	--	228 Thousand Barrels/Day	2010
» Residual Fuel Imports	--	366 Thousand Barrels/Day	2010
» Liquefied Petroleum Gas Imports	--	179 Thousand Barrels/Day	2010
» Other Petroleum Products Imports	--	1,572 Thousand Barrels/Day	2010
Natural Gas Imports	--	3,469 Billion cu ft	2011
Coal Imports	--	14,505 Thousand Short Tons	2011
Total Exports	Northern Mariana Islands	United States	Period
Crude Oil Exports	--	42 Thousand Barrels/Day	2010
Total Petroleum Product Exports	--	2,311 Thousand Barrels/Day	2010
» Motor Gasoline Exports	--	296 Thousand Barrels/Day	2010
» Jet Fuel Exports	--	84 Thousand Barrels/Day	2010
» Kerosene Exports	--	1 Thousand Barrels/Day	2010
» Distillate Fuel Exports	--	656 Thousand Barrels/Day	2010
» Residual Fuel Exports	--	405 Thousand Barrels/Day	2010
» Liquefied Petroleum Gas Exports	--	164 Thousand Barrels/Day	2010
» Other Petroleum Products Exports	--	705 Thousand Barrels/Day	2010
Natural Gas Exports	--	1,507 Billion cu ft	2011
Coal Exports	--	108,229 Thousand Short Tons	2011

Distribution & Marketing

Distribution Centers	Northern Mariana Islands
Oil Seaports/Oil Import Sites	Saipan ; Tinian ; West Harbor

natural Gas none
Market Centers

Major Pipelines None

Consumption

per Capita	Northern Mariana Islands	United States	Period
Total Energy	--	317 Million Btu/Person	2010
by Source	Northern Mariana Islands	United States	Period
Total Energy	--	98 Quadrillion Btu	2010
Total Petroleum Products	--	19,180.1 Thousand Barrels/Day	2010
» Motor Gasoline	--	8,992.7 Thousand Barrels/Day	2010
» Distillate Fuel	--	3,800.3 Thousand Barrels/Day	2010
» Liquefied Petroleum Gases	--	2,265.3 Thousand Barrels/Day	2010
» Jet Fuel	--	1,431.6 Thousand Barrels/Day	2010
» Kerosene	--	20 Thousand Barrels/Day	2010
» Residual Fuel	--	535 Thousand Barrels/Day	2010
» Other Petroleum Products	--	2,135 Thousand Barrels/Day	2010
Natural Gas	--	24,385 Billion cu ft	2011
Coal	--	1,003,066 Thousand Short Tons	2011

Carbon Dioxide Emissions

by Source From Consumption of	Northern Mariana Islands	United States	Period
Total Fossil Fuel Emissions	--	5,610 million metric tons	2010
CO2 Emissions From Consumption of Petroleum	--	2,351 million metric tons	2010
CO2 Emissions From Consumption of Natural Gas	--	1,274 million metric tons	2010
CO2 Emissions From Consumption of Coal	--	1,985 million metric tons	2010

Analysis

Resources and Consumption

The Commonwealth of the Northern Mariana Islands (CNMI) is a chain of 14 islands located in the North Pacific Ocean three quarters of the way from Hawaii to the Philippines. The total area of the islands is 184 square miles, about 2.5 times the size of Washington, D.C. The population totals about 85,000. The CNMI has a tropical marine climate with little seasonal temperature variation, a dry season from December to June, and a rainy season from July to October. The largest industry in the CNMI is garment production. Tourism employs about half of the work force and accounts for approximately one quarter of gross domestic product. Like the rest of the U.S. Pacific Islands, the CNMI has no conventional energy resources and meets nearly all of its energy needs with petroleum shipped in by tanker.

Petroleum

The CNMI ships in petroleum products to satisfy its energy demand. The petroleum products used include liquefied petroleum gas, motor gasoline, diesel fuel, and distillate fuel oil.

Natural Gas

The CNMI does not produce or consume natural gas.

Coal, Electricity, and Renewables

The CNMI does not produce or consume coal and generates very little electricity. In 2006, the overall peak load was approximately 60 megawatts. Electric power is provided by diesel-fueled electric power plants operating on the main islands of Saipan, Tinian, and Rota, with a total capacity of a little over 125 megawatts. There are also some small installations on a few of the outer islands. The CNMI has established a renewable portfolio standard that requires 10 percent of net electricity sales to be provided by renewable sources by 2010, with an ultimate goal of 50 percent of net electricity sales by 2030.

The ocean surrounding the Northern Mariana Islands has wind resources measured up to class 6 (up to 19.7 miles per hour at 50 meters above ground level) during December, January, and February, while wind resources on the islands themselves approach class 3 (up to 15.7 miles per hour at 50 meters above ground level). Wind speeds designated with a class of 3 or higher are suitable for most utility-scale wind turbine applications. One site in particular is being discussed as a potential trial site for turbine installation. A high school located on Saipan was chosen as the site for the CNMI's first public renewable energy system -- one 2.7-kilowatt wind turbine, nine 18-volt solar panels, and the technology to monitor the performance of both energy sources. That system was installed in February 2009 and will supply power to the school's main science laboratory, water pump, and other units.

Other Resources

Energy-Related Regions and Organizations

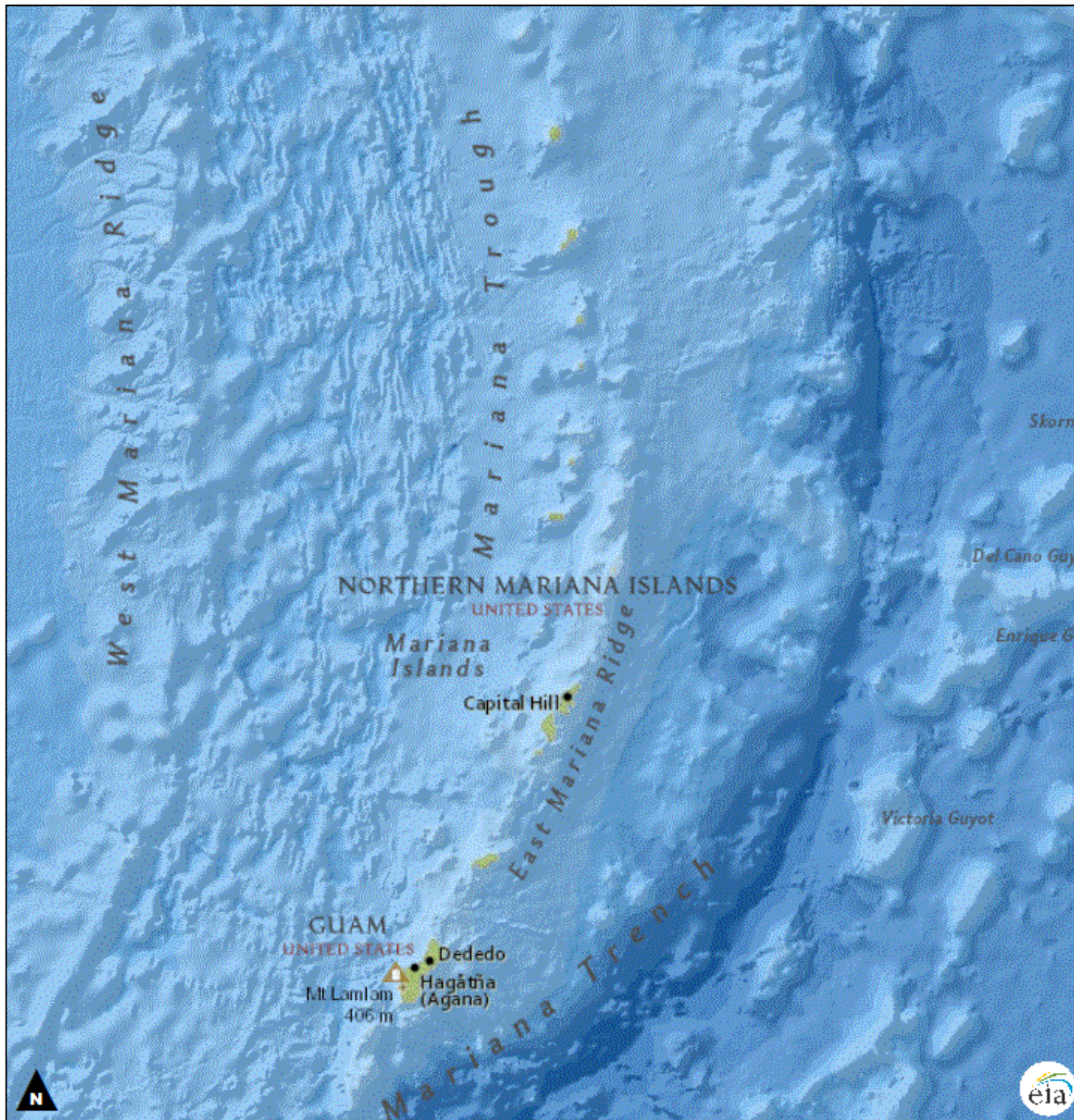
- [Petroleum Administration for Defense District \(PADD\): 7](#)

Other Websites

- [Energy Division, Commonwealth of the Northern Mariana Islands](#)
- [CNMI Department of Environmental Quality](#)
- [U. S. Department of the Interior, Office of Insular Affairs, Commonwealth of the Northern Mariana Islands](#)
- [Energy Division CNMI, Project Overview, Weatherization Assistance](#)
- [Alternative Energy Development Programs in the CNMI](#)
- [Alternative Fuels and Advanced Vehicle Data Center - Federal and State Incentives and Laws](#)
- [Benefits.Gov Energy Assistance \(107\)](#)
- [DSIRE - Database of State Incentives for Renewables and Efficiency](#)
- [National Association of State Energy Officials \(NASEO\)](#)
- [National Conference of State Legislatures \(NCSL\)-Issues and Research - News Highlights: Issues and Research](#)

- Energy

- [National Renewable Energy Laboratory \(NREL\)-Dynamic Maps, Geographic Information System \(GIS\) Data and Analysis Tools - Maps](#)
- [U.S. Geological Survey \(USGS\) Maps, Imagery, and Publications - Maps](#)
- [Bureau of Ocean Energy Management](#)
- [Commonwealth \(CNMI\) Utilities Corp.](#)
- [United States Department of Health and Human Services - Administration for Children and Families - Low Income Home Energy Assistance Program](#)



Grey Base: National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS,

0 20 40 80 Miles

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| ■ Mask | ⊕ Nuclear Power Plant | ▲ Petroleum Import Site |
| ▲ Surface Coal Mine | ● Other Power Plant | □ Petroleum Refinery |
| ▲ Underground Coal Mine | ⊙ Other Fossil Gases Power Plant | ▲ Liquefied Natural Gas Import/Export Terminal |
| 🌱 Biomass Power Plant | ⚙️ Petroleum Power Plant | ⬛ Strategic Petroleum Reserve |
| ⚙️ Coal Power Plant | ⬆️ Pumped Storage Power Plant | ⚙️ Natural Gas Transmission Hub |
| ⊙ Geothermal Power Plant | ☀️ Solar Power Plant | ⚡ Electric Transmission Line (≥345kV) |
| ⚙️ Hydro electric Power Plant | 🌪️ Wind Power Plant | — Natural Gas Pipeline |
| ⚙️ Natural Gas Power Plant | 🌲 Wood Power Plant | |

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