

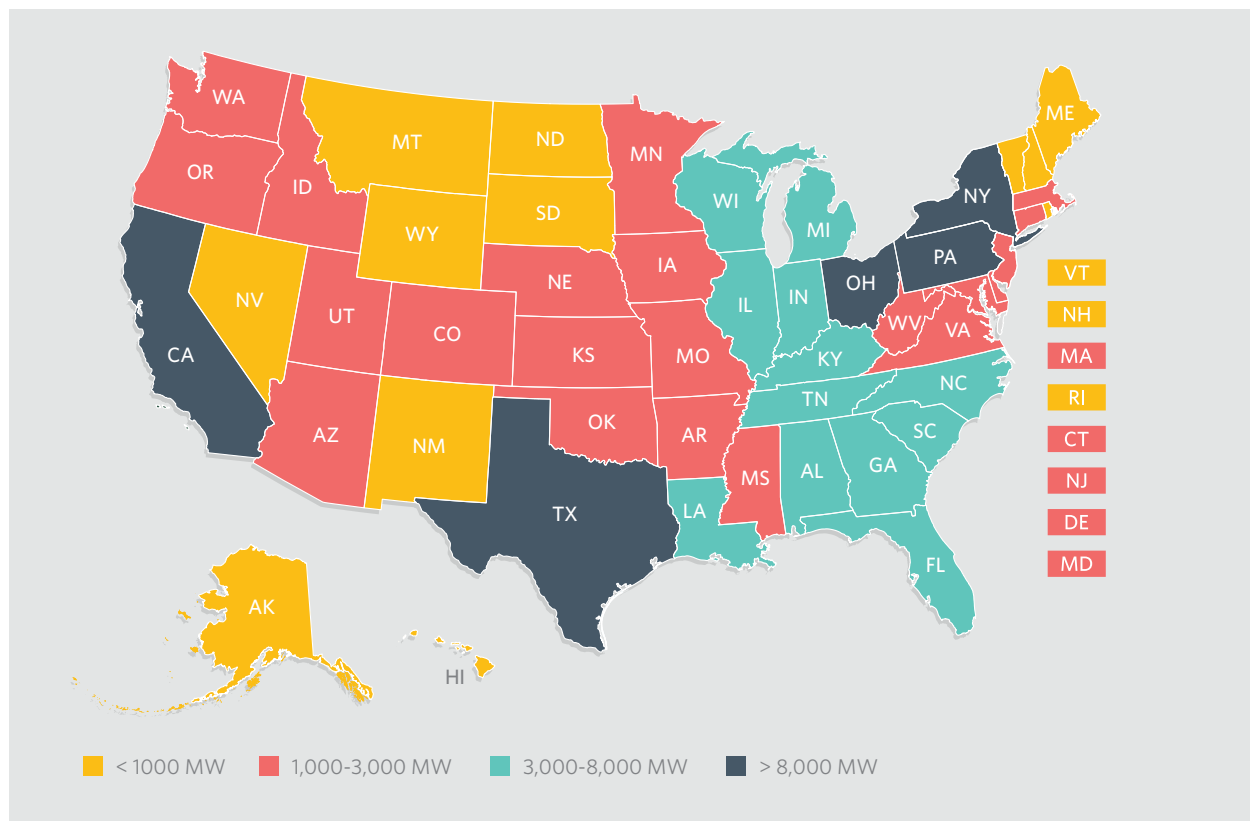


Industrial Energy Efficiency in Maryland

Overview

Combined heat and power, or CHP, technologies provide reliable electricity, mechanical power, or thermal energy by capturing heat that is wasted during electricity generation. District energy takes heat from a CHP system to heat or cool entire complexes such as a university campus, office park, or downtown area. Waste heat to power, or WHP, has been used to capture heat released during industrial processes and turn it into electricity. These on-site technologies allow businesses to achieve energy efficiencies of up to 80 percent. Technologies such as CHP and WHP represent tremendous potential to reduce energy consumption in Maryland's industrial sector, saving manufacturers money and creating energy businesses and jobs.

CHP Technical Potential



Source: U.S. Department of Energy

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State and regional statistics

Maryland currently has 28 CHP sites across the state with a total generating capacity of 726 megawatts (MW).

Source: U.S. Department of Energy

Manufacturing makes up 91 percent of Maryland's goods exports, accounts for 5.8 percent of the total gross state product, and employs nearly 4 percent of the nonfarm workforce.

Source: National Association of Manufacturers

Maryland's industrial sector consumed 8.3 percent, or 116.8 trillion British thermal units, of the total energy used statewide in 2013.

Source: U.S. Energy Information Administration

As of January 2015, Maryland's industrial sector electricity prices were 38 percent higher than the U.S. average.

Source: U.S. Energy Information Administration

Maryland added six new CHP sites in 2014, for a total of 14 in the past 10 years. An additional 11.8 gigawatts of technical potential exist in the state.

Sources: U.S. Department of Energy and U.S. Department of Energy's CHP Technical Assistance Partnerships: Mid-Atlantic

State policies support industrial energy efficiency

The EmPOWER Maryland Energy Efficiency Act requires utilities to implement programs to reduce per capita electricity consumption and peak demand by 15 percent by 2015 from 2007 levels. Both CHP and WHP projects are eligible for these initiatives.

Source: U.S. Environmental Protection Agency

A variety of financial incentives are available to project developers in Maryland. Four utilities—Baltimore Gas & Electric, Delmarva Power, First Energy (Potomac Edison), and Pepco—offer their customers financial incentives for CHP. The Maryland Energy Administration is offering grants through 2016 for CHP systems to owners of health care facilities and publicly owned wastewater treatment facilities and has an energy conservation improvement loans program for which CHP projects are eligible. Additionally, the state's clean energy production tax credit includes waste heat recovery.

Sources: American Council for an Energy-Efficient Economy and U.S. Environmental Protection Agency

The state's small generator interconnection rules for power systems up to 10 MW were established in 2007, went into effect in 2009, and specifically allow for CHP.

Source: American Council for an Energy-Efficient Economy

Under Maryland law, all utilities, including investor-owned utilities, electric cooperatives, and municipal utilities, with systems that generate electricity using fossil-fueled (for micro-CHP) and renewably fueled CHP systems are eligible for net metering.

Source: U.S. Environmental Protection Agency

CHP improves energy security

Reducing strain on the electrical grid with energy-efficient technologies increases power reliability during electrical outages due to extreme weather and other causes.

Maryland experienced 2,221 minutes—equal to 37 hours—of power outages in 2014. Almost 166,000 residents were affected by the 50 blackouts.

Source: Eaton Corp.

Examples of CHP Facilities in Maryland

| City | Facility | Application | Year operational | Capacity (kW) | Fuel type |
|--------------|--------------------------------|-----------------|------------------|---------------|-------------------------|
| Baltimore | Inner Harbor East | Wholesale trade | 2004 | 2,100 | Natural gas/ propane |
| Baltimore | Millennium Inorganic Chemicals | Chemicals | 2000 | 10,500 | Natural gas/ propane |
| Brandywine | Brandywine Commerce Center | Chemicals | 1996 | 230,000 | Natural gas/ propane |
| Owings Mills | Solo Cup Co. | Pulp and paper | 2001 | 15,000 | Natural gas/ propane |

Source: U.S. Department of Energy

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For further information, please visit:

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