

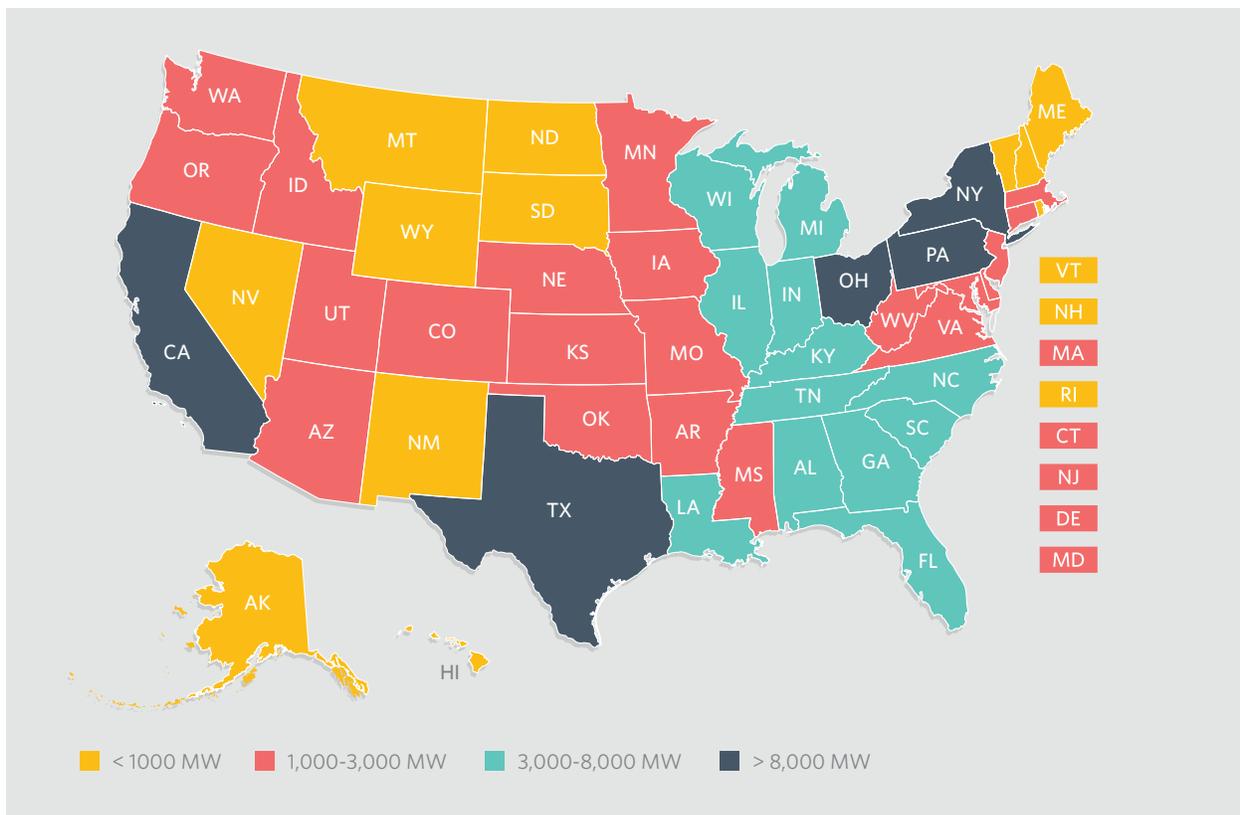


Industrial Energy Efficiency in Louisiana

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. More recently, a process called waste heat to power, or WHP, has been used to capture heat released during industrial processes that convert raw materials into products. 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 Louisiana'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

Louisiana is a leader in manufacturing, with a strong and growing manufacturing sector. Manufacturing accounts for 23.4 percent of the state's total gross product and employs 7.4 percent of the workforce. The output from manufacturing in Louisiana was \$59.3 billion in 2013.

Source: National Association of Manufacturers

Louisiana's industrial energy use ranks second nationwide. Industrial energy use accounts for 67.4 percent of the state's total energy consumption.

Sources: U.S. Energy Information Administration Rankings and U.S. Energy Information Administration Louisiana Profile

Louisiana has 65 CHP sites across the state, with a total generating capacity of over 6,100 megawatts.

Source: U.S. Department of Energy

Louisiana has the potential to increase its CHP capacity. Its large industrial output makes the state well-suited for future CHP projects.

For example, Louisiana has the potential to deploy 3 to 8 gigawatts of CHP—one of the highest rates in the country. However, it has not capitalized on this opportunity. From 2005 to 2010, the state ranked 45th in new CHP projects and in total installed capacity.

Sources: U.S. Department of Energy and American Council for an Energy-Efficient Economy

State policies support industrial energy efficiency

In 2010, Louisiana established the Renewable Energy Pilot Program to determine whether a renewable portfolio standard is suitable for the state. The program has two major components under which only WHP systems can qualify: the research component and the request for proposal component.

Source: U.S. Environmental Protection Agency

Louisiana has adopted rules for the interconnection of net-metered systems, including CHP. The rules apply to investor-owned utilities and electric cooperatives (but not municipal-owned utilities) and allow for renewably fueled systems to net meter and interconnect. As a result, CHP systems using renewable fuels such as solar, wind, hydroelectric, geothermal, or biomass are eligible for standardized interconnection.

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 that result from extreme weather and other causes. In 2012, Hurricane Isaac caused power outages for more than 900,000 people in New Orleans and the surrounding areas. The hurricane also caused one of the five most significant reported power outages in the U.S. that year. Of the 2.6 million people who lost power after Hurricane Katrina in 2005, 890,000 were in Louisiana. It took utilities 23 days to restore electricity to 75 percent of Louisiana's population that was without power. In 2014, Louisiana had 1,740 minutes of power outages, or 29 hours without power.

Sources: Blackout Tracker and U.S. Department of Energy

CHP can play a role in keeping Louisiana's critical infrastructure running during a storm and its aftermath. In 2012, the Louisiana Legislature passed a resolution requiring the Department of Natural Resources and the Public Service Commission to implement CHP systems to increase and maintain stability and reliability in the state's critical facilities.

Source: American Council for an Energy-Efficient Economy

Louisiana also has some of the nation's highest potential CHP capacity at federal sites (greater than 37 megawatts).

Source: U.S. Department of Energy

Examples of Newly Installed CHP Facilities in Louisiana

City	Facility	Application	Year operational	Capacity (kW)	Fuel type
Lake Charles	LyondellBasell	Chemicals	2011	30,000	Natural gas
Garyville	Evonik Industries Garyville plant	Chemicals	2011	4,500	Natural gas
Centerville	Enterprise Products LP	Refining	2004	4,500	Waste
Geismar	BASF Corporation Geismar facility	Chemicals	2002	80,000	Natural gas

Source: U.S. Department of Energy

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For further information, please visit:

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