

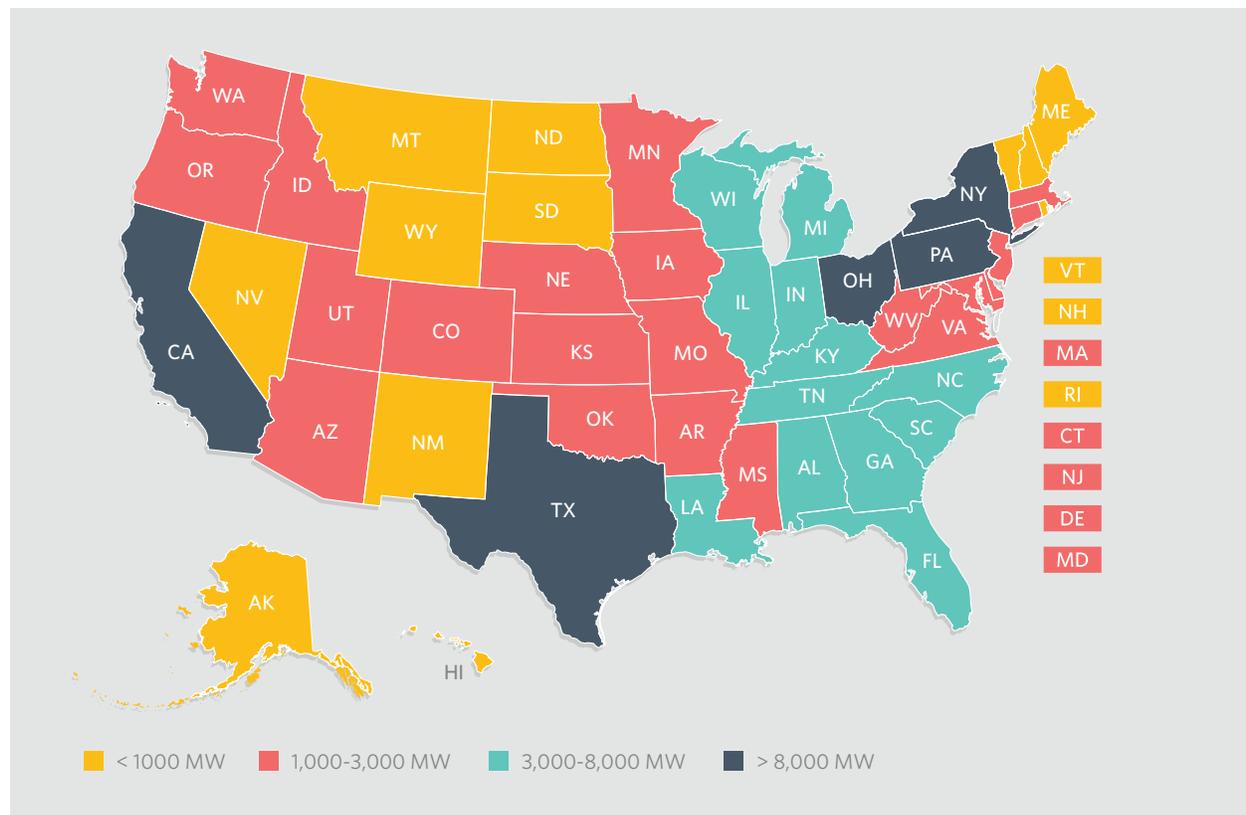


Industrial Energy Efficiency in Georgia

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 Georgia'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

Georgia ranks 14th in manufacturing as a percentage of gross state product, with manufacturing accounting for 11.55 percent of the state's gross state product.

Source: National Association of Manufacturers

Georgia's industrial energy use ranks 11th nationwide and is responsible for a quarter (26 percent) of Georgia's total energy consumption.

Sources: U.S. Energy Information Administration State Energy Data System Rankings and U.S. Energy Information Administration Georgia Profile

From 2005 to 2010, the state ranked 19th in new CHP sites and 35th in the total capacity of these new CHP installations, adding only four new CHP sites over those five years totaling 2.9 megawatts in capacity.

Source: American Council for an Energy-Efficient Economy

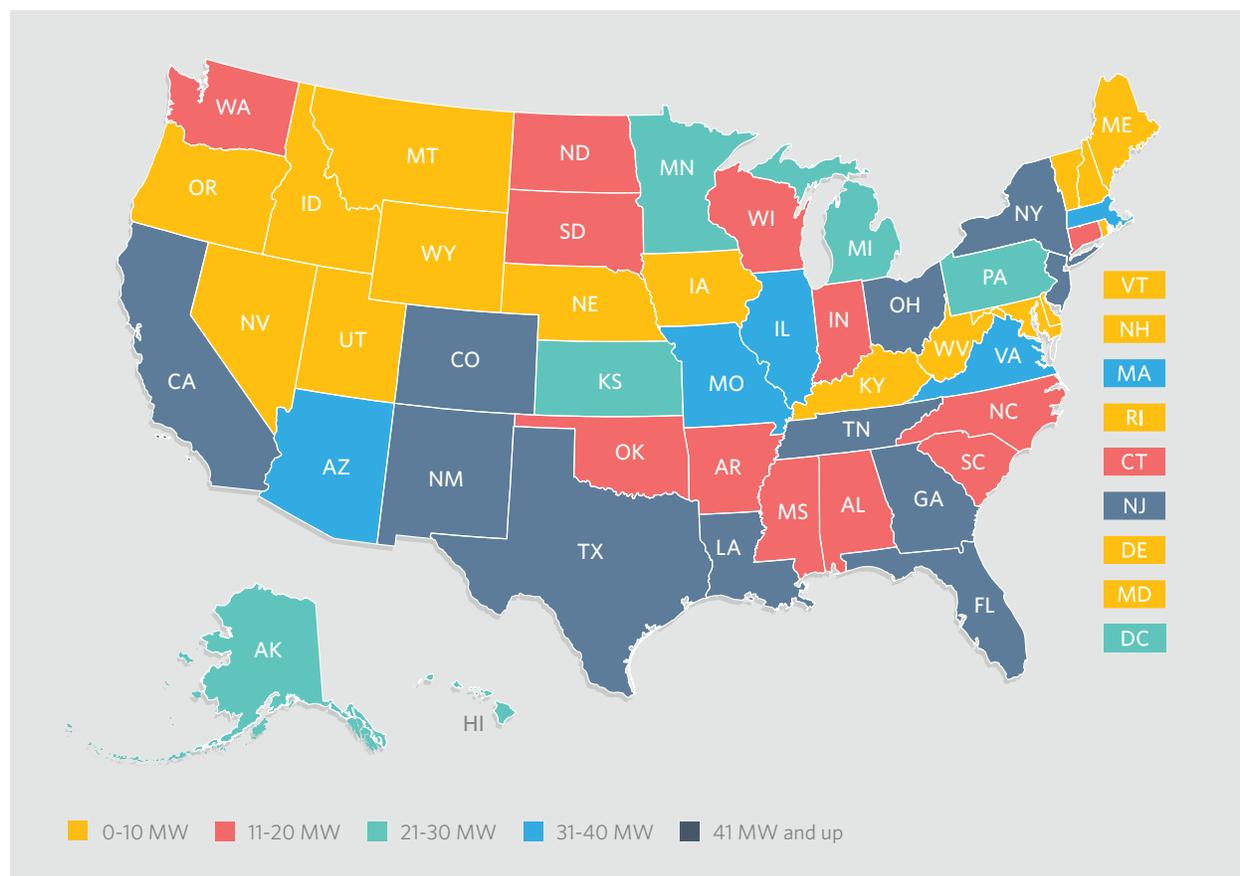
The CHP market in the South, however, is increasingly favorable. Manufacturers in the South lead the nation in on-site CHP generation. The South produces 20 percent of its industrial power needs from on-site CHP facilities.

Source: U.S. Energy Information Administration, Manufacturing Energy Consumption Survey, 2010

Manufacturers such as Coca-Cola recognize the ability of CHP to reduce energy consumption and save money. In 2012, Coca-Cola completed a 6.5-MW CHP facility at the company's Atlanta Syrup Plant. The CHP facility provides 100 percent of the Atlanta Syrup Plant's energy needs by generating electricity, steam, and chilled water.

Source: Mas Energy

Distribution of Potential CHP Capacity in Federal Sites



Source: Oak Ridge National Laboratory

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District energy can also help to reduce energy consumption in Georgia. In Atlanta, Veolia Energy's district energy network provides chilled water to 3 million square feet of conditioned space in the Atlantic Station building.

Source: Veolia Energy

State policies support industrial energy efficiency

In 2006, Georgia enacted legislation (House Bill 1018) creating an exemption for biomass materials from the state's sales and use taxes. The legislation encourages CHP technologies that utilize renewable biomass fuels.

Source: Georgia General Assembly

CHP improves energy security

Reducing strain on the electrical grid with energy-efficient technologies increases power reliability during electrical outages resulting from extreme weather and other causes. CHP is the cornerstone of a resilient energy infrastructure. CHP enables critical infrastructure such as hospitals, fire stations, police stations, and similar facilities to continue operations when the electrical grid goes down during a disaster.

Source: U.S. Department of Energy

In 2014, Georgia had the eighth-highest number of power outages caused by weather and falling trees. In addition, Georgia had 72 outages that affected over 300,000 people and lasted more than 30 hours.

Source: Blackout Tracker

Georgia also has some of the highest potential CHP capacity at federal sites in the country.

Source: Oak Ridge National Laboratory

Examples of Newly Installed CHP Facilities in Georgia

City	Organization	Facility	Application	Year operational	Capacity (kW)
Atlanta	Woodard & Curran, Coca-Cola	Coca-Cola facility	Food processing	2012	6,500
Conyers	Pratt Industries	Pratt Industries	Pulp and paper	2010	9,300
Warner Robins	Mid-Georgia Cogen LP	Frito-Lay facility	Food processing	1997	316,000

Source: U.S. Department of Energy

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For further information, please visit:

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