

The State of CHP: Mississippi



The information in this document provides a general overview of the state of CHP in Mississippi, with data on current installations, technical potential, and economics for CHP. For help with questions about specific CHP opportunities in Mississippi, please consult with the [Southeast CHP Technical Assistance Partnership](#).

Installed CHP

CHP Technical Potential

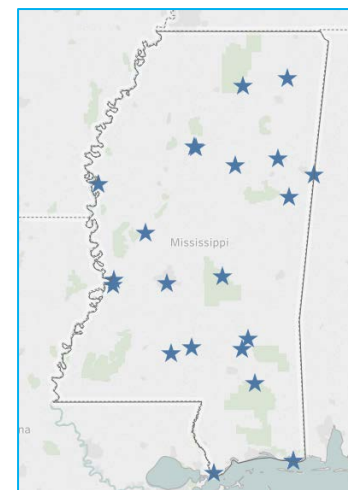
CHP Economics

CHP Partners

Mississippi Installed Base of CHP

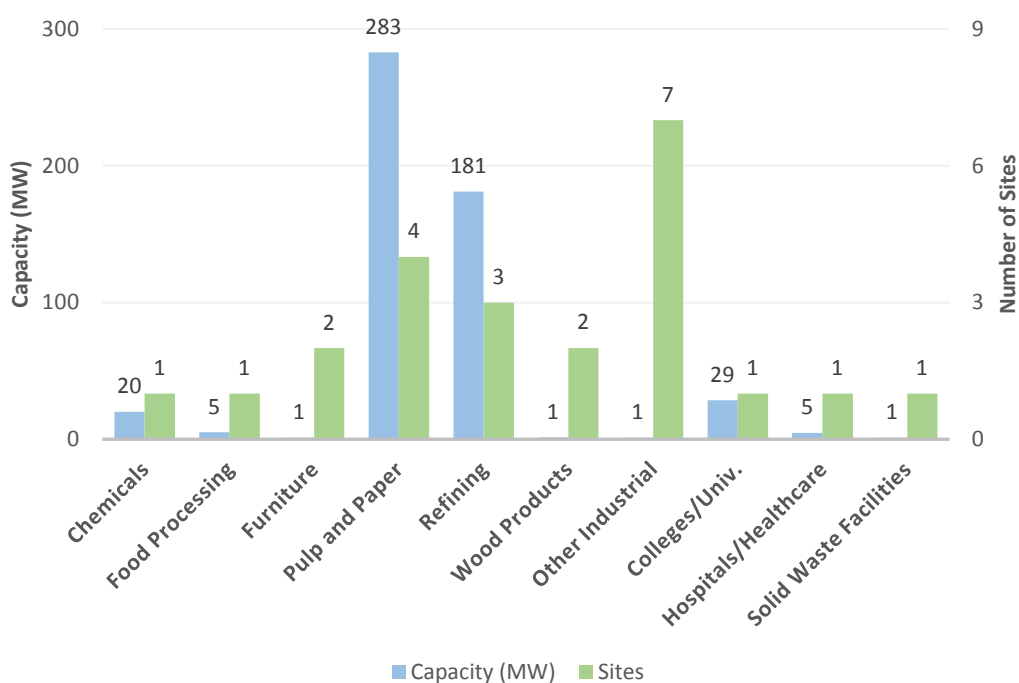
[U.S. DOE Combined Heat and Power Installation Database](#)

Sector	Installations	Capacity (MW)
Industrial	15	492
Commercial/Institutional	3	34
Other	5	0.3
Total	23	527



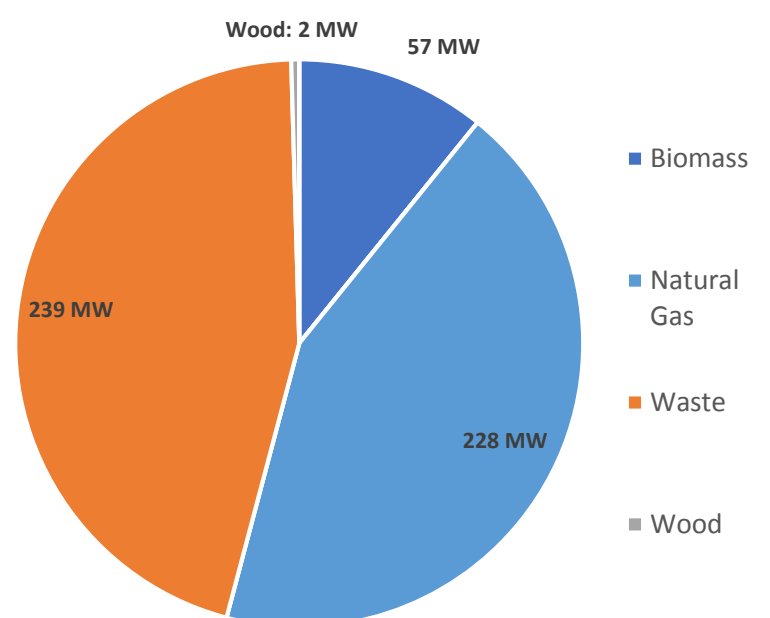
The Southeast CHP Technical Assistance Partnership has compiled information on certain illustrative CHP projects in Mississippi. You can access these by visiting the Department of Energy's [CHP Project Profiles Database](#).

Mississippi CHP by Application



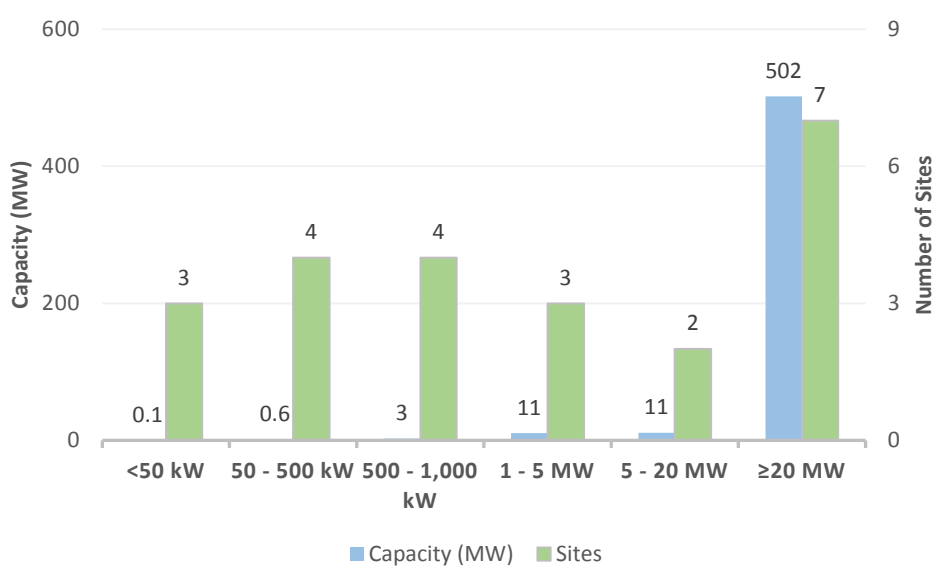
Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

Mississippi CHP Capacity (MW) by Fuel Type



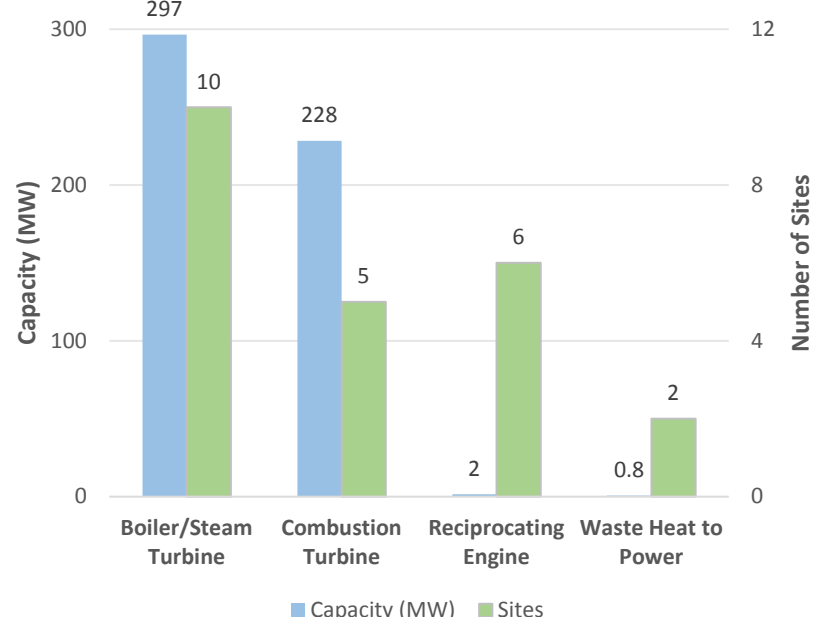
Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

Mississippi CHP by Size Range



Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

Mississippi CHP by Technology



Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

Combined Heat and Power (CHP) – sometimes referred to as cogeneration – is an efficient and clean approach to generating on-site electric power and useful thermal energy from a single fuel source.



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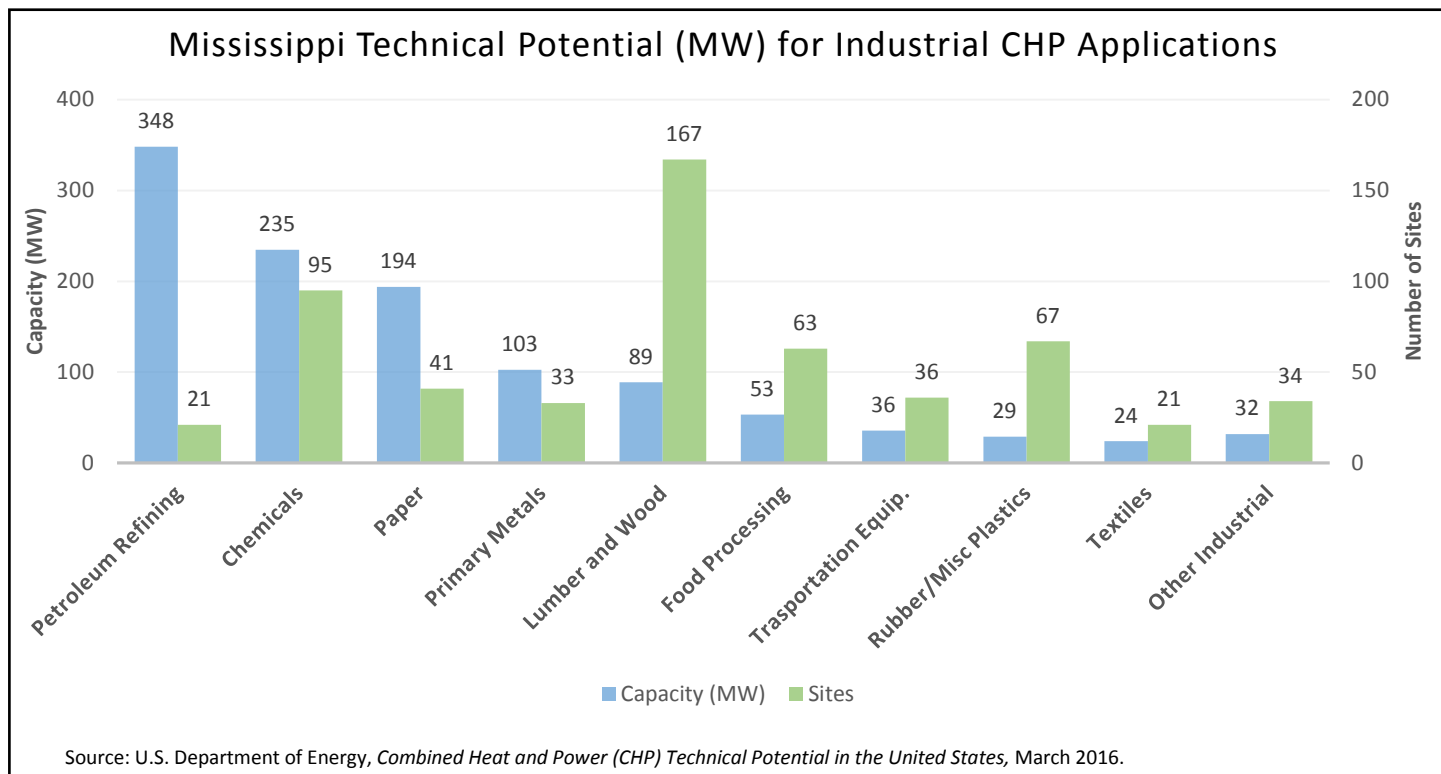
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Mississippi Technical Potential for New CHP Installations

U.S. DOE Analysis: Combined Heat and Power (CHP) Technical Potential in the United States

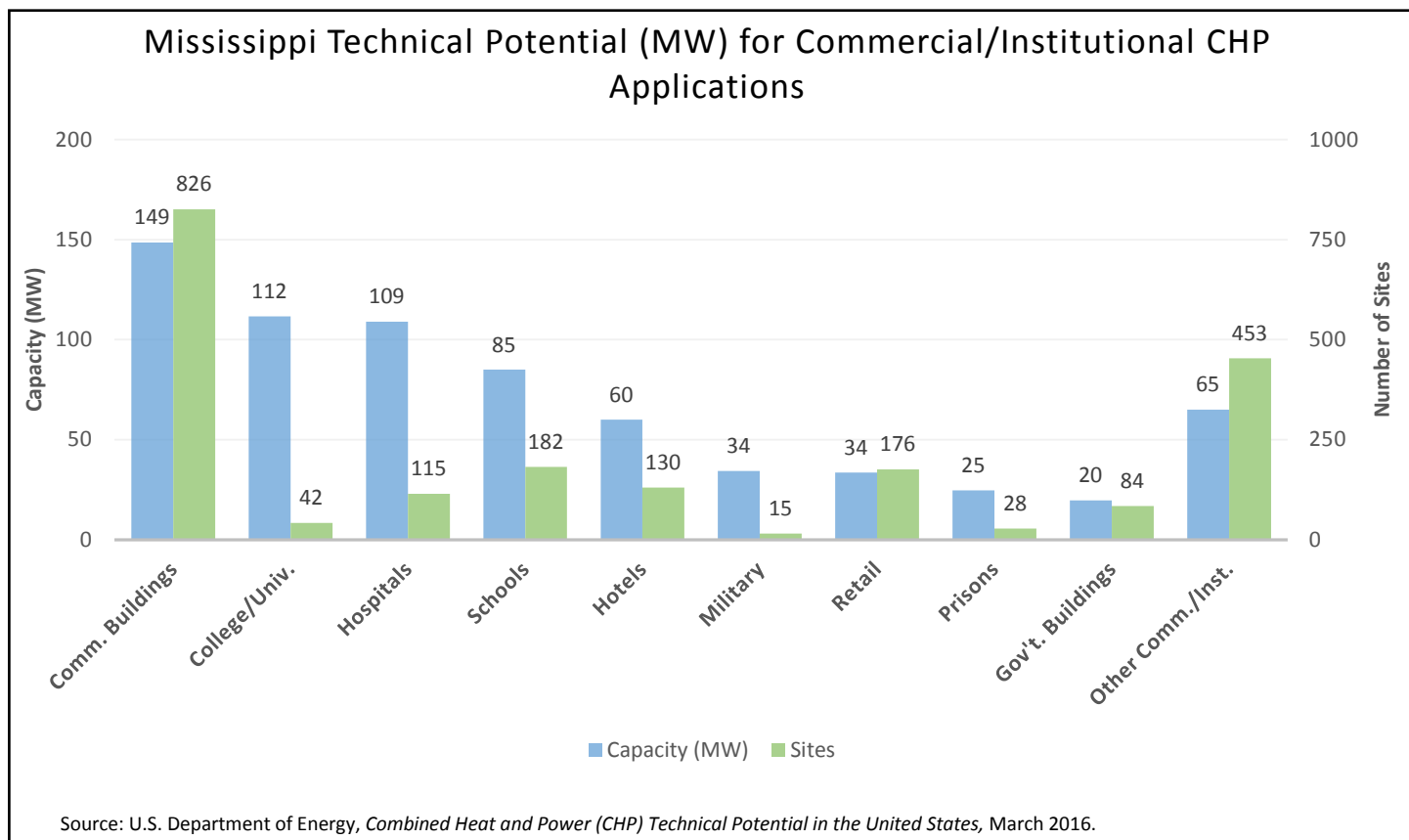
Sector	Potential Sites	Potential Capacity (MW)
Industrial	578	1,141
Commercial/Institutional	2,051	691
Total	2,629	1,833



Technical Potential by CHP Size Range for Top Five Industrial Sectors

Application	50-500 kW		0.5 - 1 MW		1 - 5 MW		5 - 20 MW		>20 MW		Total	
	Sites	MW	Sites	MW	Sites	MW	Sites	MW	Sites	MW	Total Sites	Total MW
Petroleum Refining	0	0	8	5	7	17	4	29	2	297	21	348
Chemicals	44	8	14	11	22	37	14	144	1	34	95	235
Paper	22	6	6	4	7	18	3	23	3	144	41	194
Primary Metals	16	3	5	3	9	25	1	12	2	60	33	103
Lumber and Wood	118	22	26	19	23	48	0	0	0	0	167	89
Other Industrial	160	29	23	15	31	62	7	67	0	0	221	174
Total	360	68	82	57	99	206	29	276	8	534	578	1,141

Source: U.S. Department of Energy, Combined Heat and Power (CHP) Technical Potential in the United States, March 2016.



Technical Potential by CHP Size Range for Top Five Commercial/Institutional Sectors

Application	50-500 kW		0.5 - 1 MW		1 - 5 MW		5 - 20 MW		>20 MW		Total	
	Sites	MW	Sites	MW	Sites	MW	Sites	MW	Sites	MW	Total Sites	Total MW
Commercial Buildings	551	28	220	88	55	33	0	0	0	0	826	149
College/Univ.	16	3	3	2	18	47	4	39	1	20	42	112
Hospitals	58	16	21	15	34	66	2	12	0	0	115	109
Schools	136	55	44	27	2	3	0	0	0	0	182	85
Hotels	111	12	4	3	13	25	2	21	0	0	130	60
Other Comm./Inst.	697	86	35	21	20	39	4	31	0	0	756	177
Total	1,569	198	327	157	142	213	12	103	1	20	2,051	691

Source: U.S. Department of Energy, Combined Heat and Power (CHP) Technical Potential in the United States, March 2016.

Combined Heat and Power (CHP) – sometimes referred to as cogeneration – is an efficient and clean approach to generating on-site electric power and useful thermal energy from a single fuel source.



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Mississippi CHP Economics

The most important indicators for CHP economics are electricity and gas prices. For most potential CHP installations, natural gas and electricity rates for host facilities will fall within the range of average commercial and industrial prices. Lower energy prices may be possible for large CHP applications.

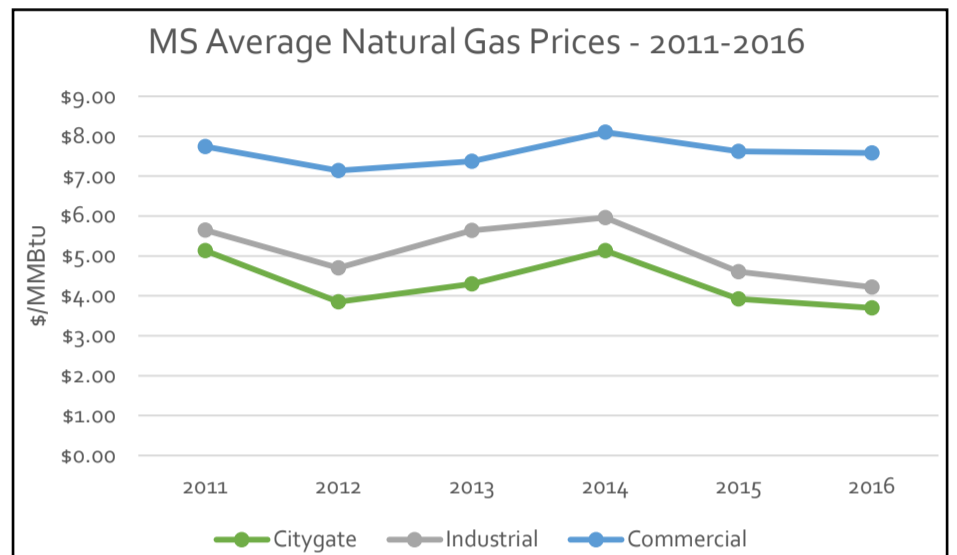
Mississippi Natural Gas Prices

Mississippi Average Gas Prices - 2016

Sector	MS Price (\$/MMBtu)	U.S. Price (\$/MMBtu)
Citygate*	3.70	3.75
Industrial	4.22	3.39
Commercial	7.58	7.22

Source: U.S. Energy Information Administration, "Natural Gas Prices", https://www.eia.gov/dnav/ng/ng_pri_sum_dcu_SMS_a.htm

The EIA industrial natural gas price is a full tariff rate, and most large consumers are purchasing gas commodities from marketers at a lower rate.



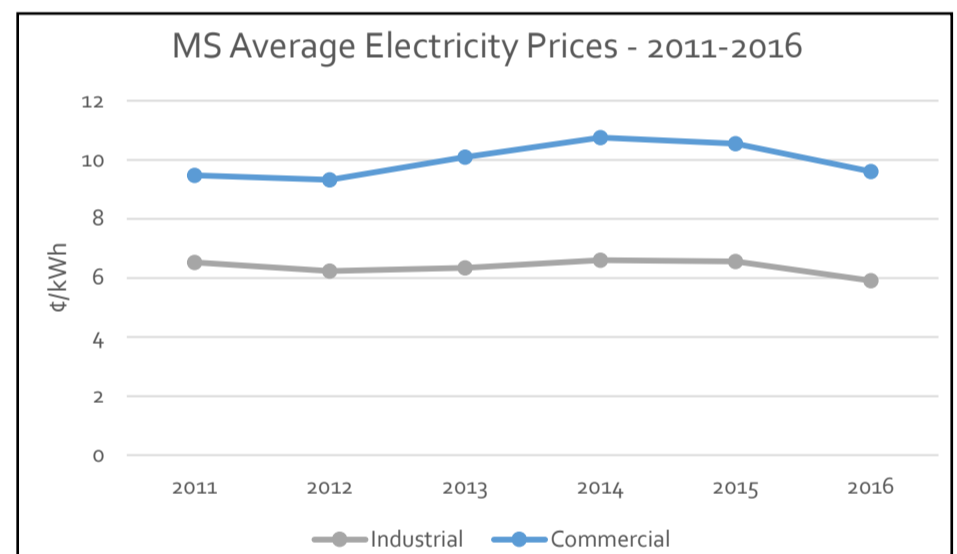
Mississippi Electricity Prices

Mississippi Average Electricity Prices - 2016

Sector	MS Price (¢/kWh)	U.S. Price (¢/kWh)
Industrial	5.91	6.75
Commercial	9.61	10.37

Source: U.S. Energy Information Administration, "Electricity Data Browser", <https://www.eia.gov/electricity/data.cfm>

Electricity rates can vary greatly by utility and facility size range. The rates below from EIA represent general averages; individual facility rates may vary.



Mississippi Average Delivered Electricity Prices by Utility

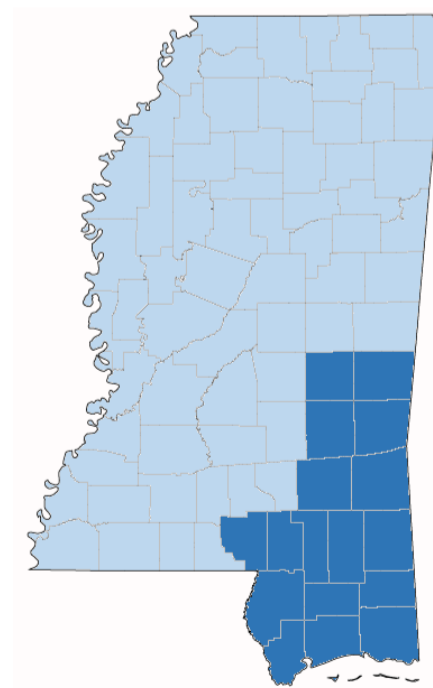
Utility	Industrial Price (¢/kWh)	Commercial Price (¢/kWh)	Average Price** (¢/kWh)
Mississippi Power Co	7.02	11.10	9.06
Entergy Mississippi	7.17	9.58	8.38

Source: U.S. Energy Information Administration, "Annual retail price of electricity by utility", <https://www.eia.gov/electricity/data.cfm>

*Citygate is a point or measuring station at which a distributing gas utility receives gas from a NG pipeline company or transmission system.

**Average of commercial and industrial electricity prices as reported by EIA.

Mississippi Electricity Prices – Heat Map



Legend:
■ Entergy Mississippi
■ Mississippi Power Co

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CHP Technical
Potential

CHP Economics

CHP Partners

Department of Energy CHP Partnerships

Southeast CHP Technical Assistance Partnership



U.S. DEPARTMENT OF ENERGY
CHP Technical Assistance Partnerships
SOUTHEAST

Southeast CHP TAP Director: Isaac Panzarella
Phone: 919-515-0354
Email: ipanzarella@ncsu.edu

CHP for Resiliency Accelerator

The U.S. DOE is collaborating with a group of cities, states, and utilities who are actively pursuing CHP as a consideration in resiliency planning for critical infrastructure in their jurisdictions. This has included defining resiliency, identifying critical infrastructure, and assessing CHP opportunities. This process is being documented in a Resiliency Planning Tool. For more information: [CHP for Resiliency Accelerator Website](#).

- Currently, there are no CHP for Resiliency Accelerator partners in Mississippi.

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U.S. DEPARTMENT OF ENERGY
CHP Technical Assistance Partnerships