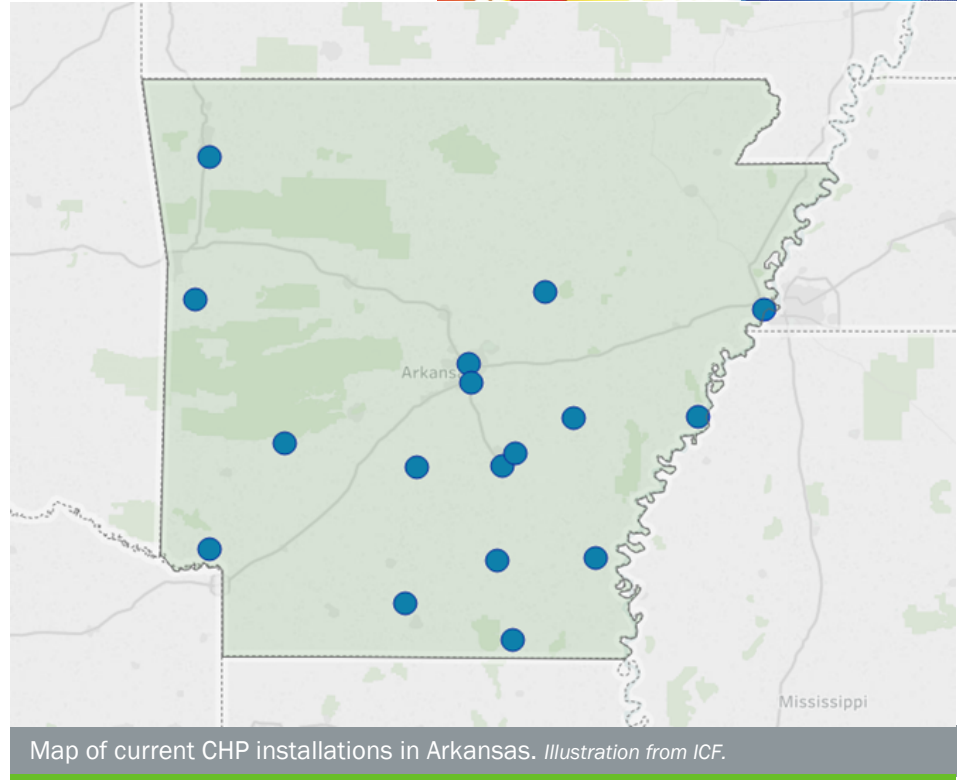


The State of CHP: Arkansas



Combined heat and power (CHP) – also 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. The information in this document provides a general overview of the state of CHP in Arkansas, with data on current installations, technical potential, and economics for CHP.



Arkansas: Installed CHP

U.S. DOE Combined Heat and Power Installation Database

The DOE CHP Installation Database is a data collection effort sponsored by the U.S. Department of Energy. The database contains a comprehensive listing of combined heat and power installations throughout the country, including those in Arkansas, and can be accessed by visiting <https://doe.icfwebservices.com/chp>.

CHP Project Profiles

The Southcentral CHP TAP has compiled information on certain illustrative CHP projects in Arkansas. You can access these by visiting the Department of Energy’s CHP Project Profiles Database at <https://betterbuildingsolutioncenter.energy.gov/chp/chp-project-profiles-database>.

Southcentral CHP Technical Assistance Partnership

For assistance with questions about specific CHP opportunities in Arkansas, please consult with the Southcentral CHP TAP by visiting scchtap.org or contacting the CHP TAP director.

Arkansas Existing CHP

Sector	Sites	Capacity (MW)
Industrial	11	628
Commercial/Institutional	6	26
Other	0	0
Total	17	654

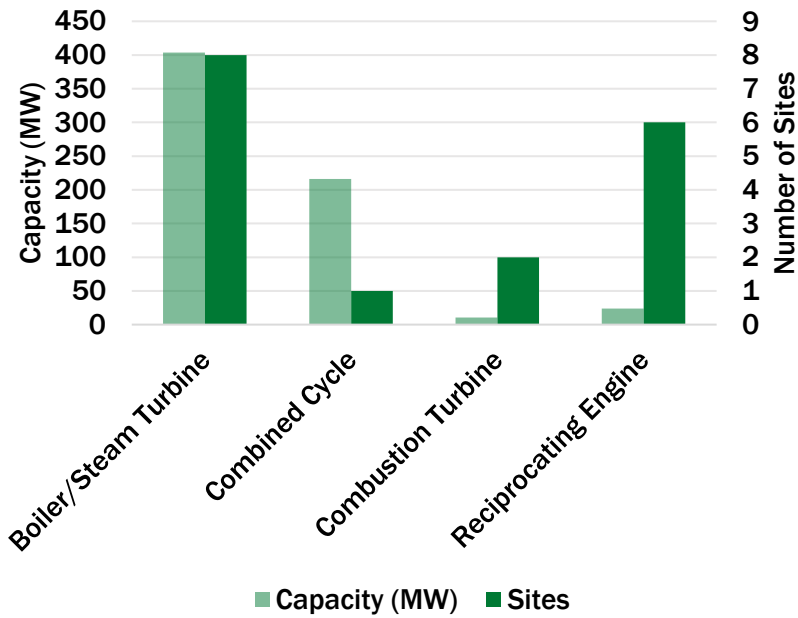
Southcentral CHP TAP Director

Gavin Dillingham, Ph.D.

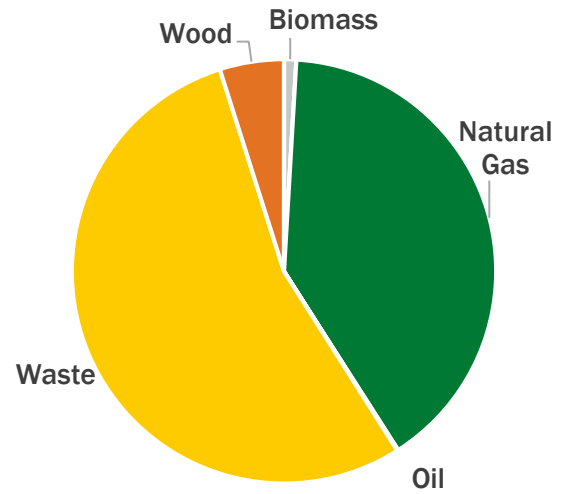
- HARC
- gdillingham@harcresearch.org
- 281-216-7147



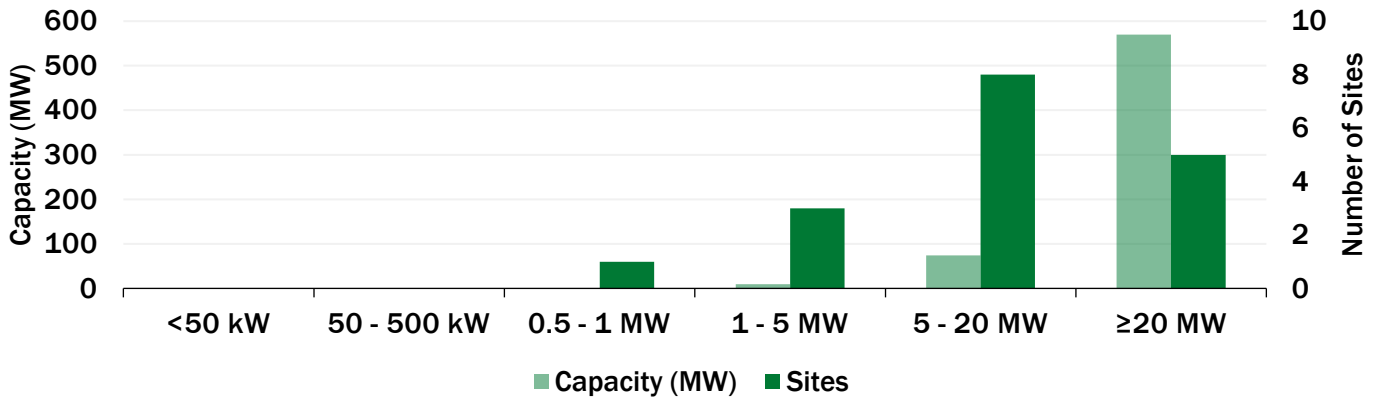
Arkansas CHP by Technology



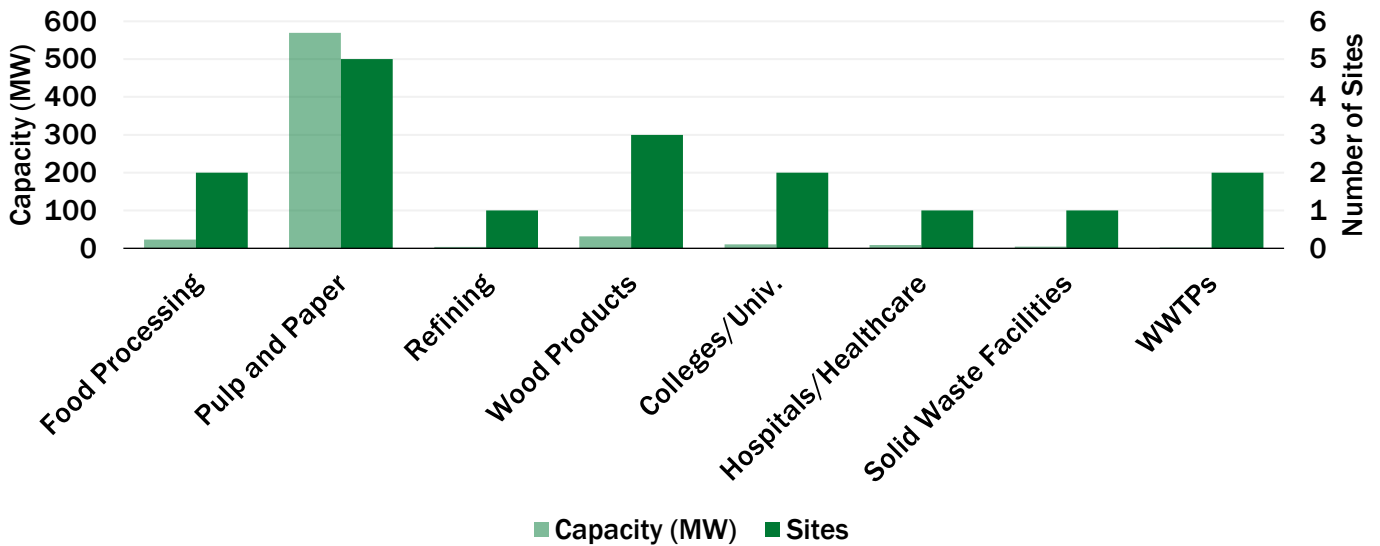
Arkansas CHP Capacity (MW) by Fuel



Arkansas CHP by Size Range



Arkansas CHP by Application



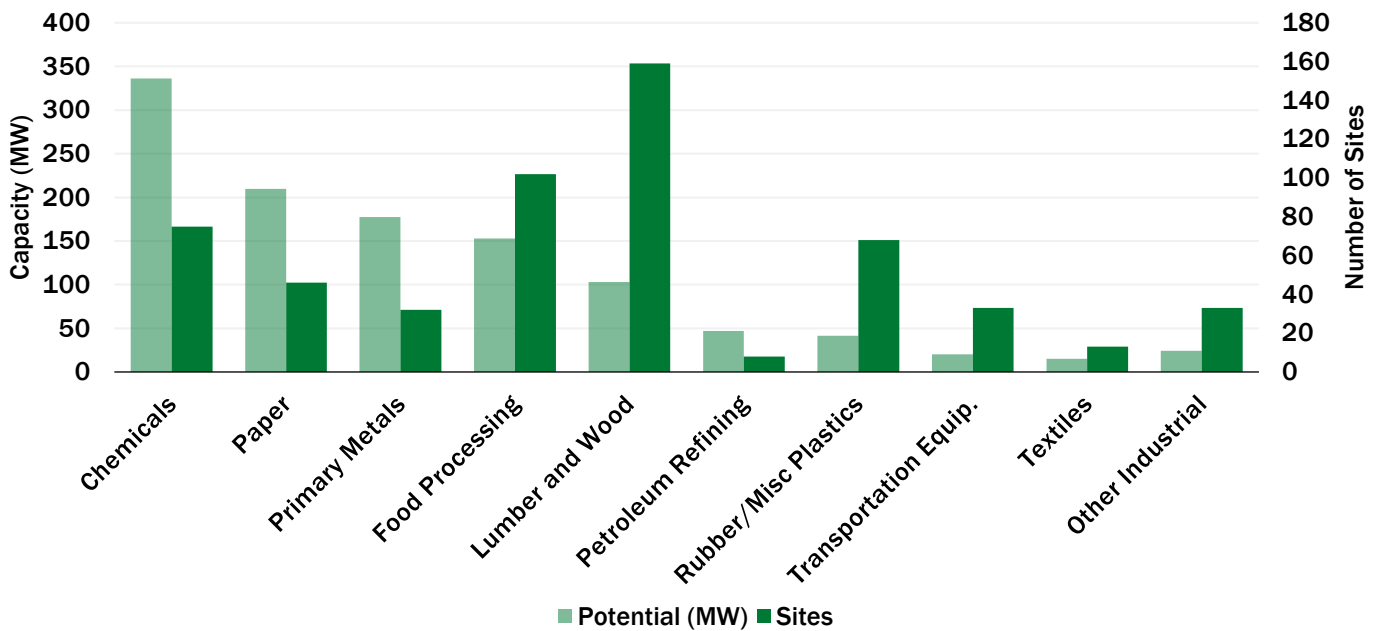
Arkansas: Technical Potential for New CHP Installations

The “Combined Heat and Power (CHP) Technical Potential in the United States” market analysis report provides data on the technical potential in industrial facilities and commercial buildings for “topping cycle” CHP, waste heat to power (WHP) CHP, and district energy CHP in the U.S. Read the report [here](#).

Arkansas CHP Technical Potential

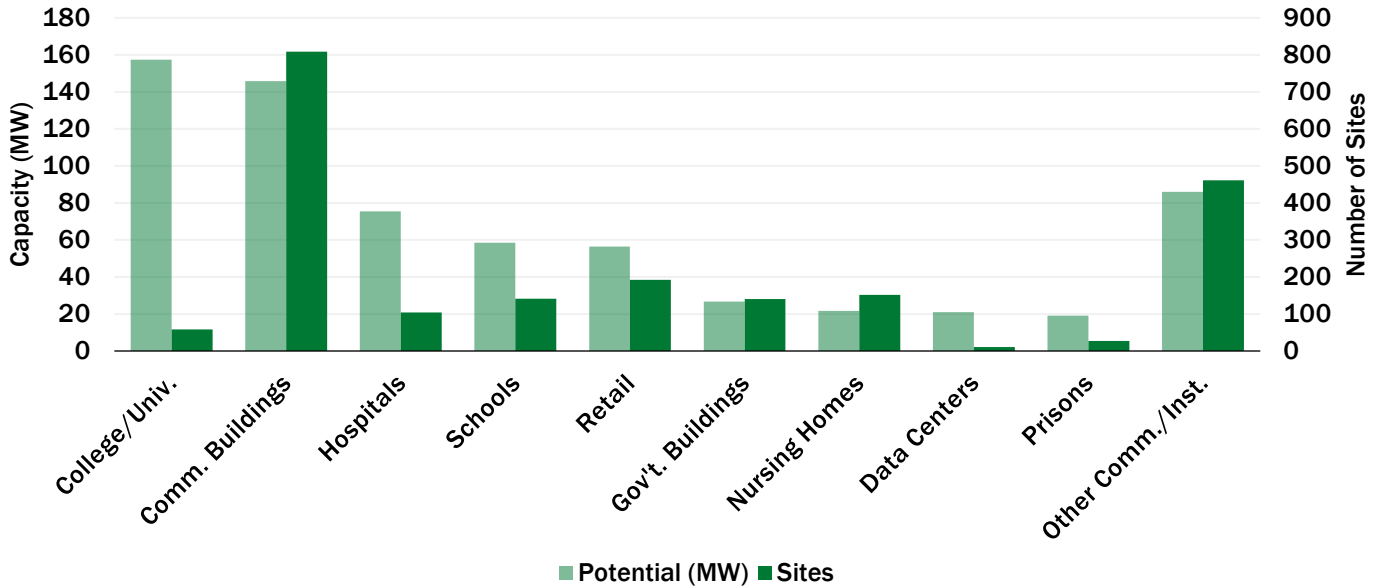
Sector	Potential Sites	Potential MW
Industrial	569	1,127
Commercial/Institutional	2,095	668
Total	2,664	1,795

Arkansas Technical Potential (MW) for Industrial CHP Applications



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
Chemicals	41	7	7	6	11	25	9	88	7	211	75	336
Paper	16	4	12	8	13	26	2	15	3	158	46	210
Primary Metals	17	4	6	5	3	6	4	35	2	127	32	177
Food Processing	52	12	15	11	29	67	6	64	0	0	102	153
Lumber and Wood	106	17	24	17	27	58	2	11	0	0	159	103
Other Industrial	109	18	22	16	18	40	5	46	1	28	155	147
Total	341	62	86	62	101	221	28	259	13	523	569	1,127

Arkansas Technical Potential (MW) for Commercial/Institutional CHP Applications



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
College/Univ.	25	5	11	7	14	43	7	76	1	25	58	157
Commercial Buildings	539	27	216	86	54	32	0	0	0	0	809	146
Hospitals	61	15	21	14	22	46	0	0	0	0	104	76
Schools	117	41	20	13	4	5	0	0	0	0	141	58
Retail	178	28	13	8	0	0	0	0	1	21	192	56
Other Comm./Inst.	725	83	37	24	26	45	3	22	0	0	791	174
Total	1,645	199	318	153	120	172	10	98	2	46	2,095	668

Department of Energy CHP Accelerators

Packaged CHP Accelerator

Standardized packaged CHP systems can reduce risk for both CHP users and suppliers by reducing design errors, limiting uncertainty about performance, shortening project development time, and reducing overall costs. Accelerator partners will validate the installation, performance, and economic and resiliency benefits of packaged CHP systems, evaluate the integration of new technologies and packaged CHP, and identify R&D challenges. For more information, visit <https://betterbuildingssolutioncenter.energy.gov/accelerators/packaged-chp>

CHP for Resiliency Accelerator

The U.S. DOE collaborated with cities, states, utilities, and other stakeholders who are actively pursuing CHP as a consideration in resiliency planning for critical infrastructure in their jurisdictions. This included defining resiliency, identifying critical infrastructure, and assessing CHP opportunities. This process was documented in the DG for Resilience Planning Guide and the CHP for Resilience Screening Tool. For more information, visit <https://betterbuildingssolutioncenter.energy.gov/accelerators/combined-heat-and-power-resiliency>

Arkansas: 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.

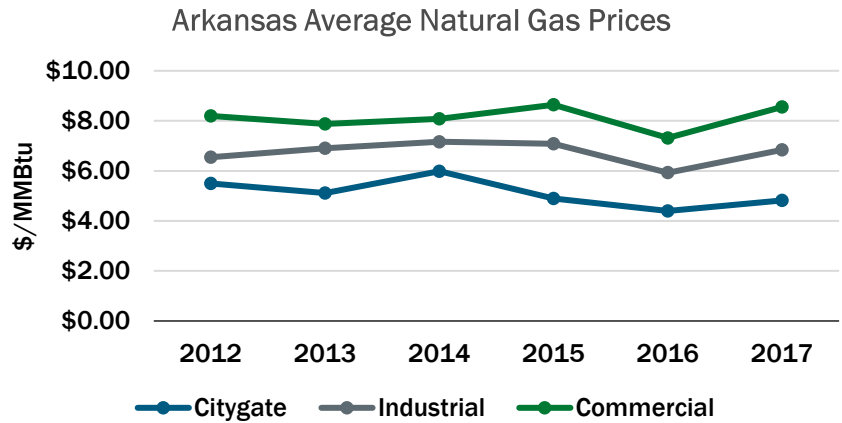
Arkansas Natural Gas Prices

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.

Arkansas Average Gas Prices (\$/MMBtu) - 2017

Sector	AR Price	U.S. Price
Citygate*	4.82	4.26
Industrial	6.84	4.20
Commercial	8.55	8.08

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

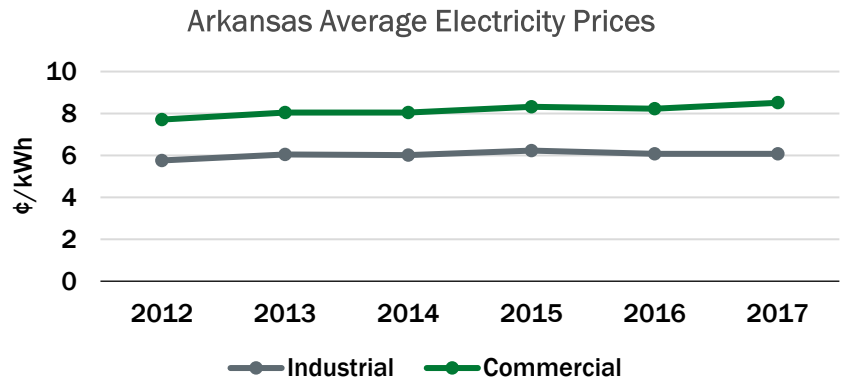


Arkansas Electricity Prices

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

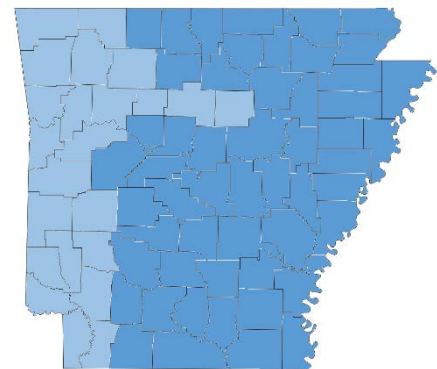
Arkansas Average Electricity Prices (¢/kWh) - 2017

Sector	AR Price	U.S. Price
Industrial	6.07	6.88
Commercial	8.51	10.66



Arkansas Average Delivered Electricity Prices by Utility

Utility	Industrial Price (¢/kWh)	Commercial Price (¢/kWh)	Average Price (¢/kWh)
Entergy Arkansas	6.22	8.41	7.32
Southwestern Electric Power	6.19	7.64	6.91
Oklahoma Gas & Electric	5.52	7.41	6.47



■ Southwestern Electric Power / OG&E
■ Entergy Arkansas