

# The State of CHP: Arkansas



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. For help with questions about specific CHP opportunities in Arkansas, please consult with the [Southeast CHP Technical Assistance Partnership](#).

Installed CHP

CHP Technical Potential

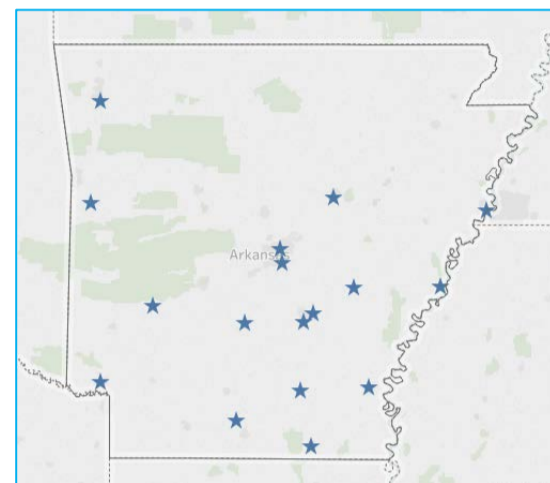
CHP Economics

CHP Partners

## Arkansas Installed Base of CHP

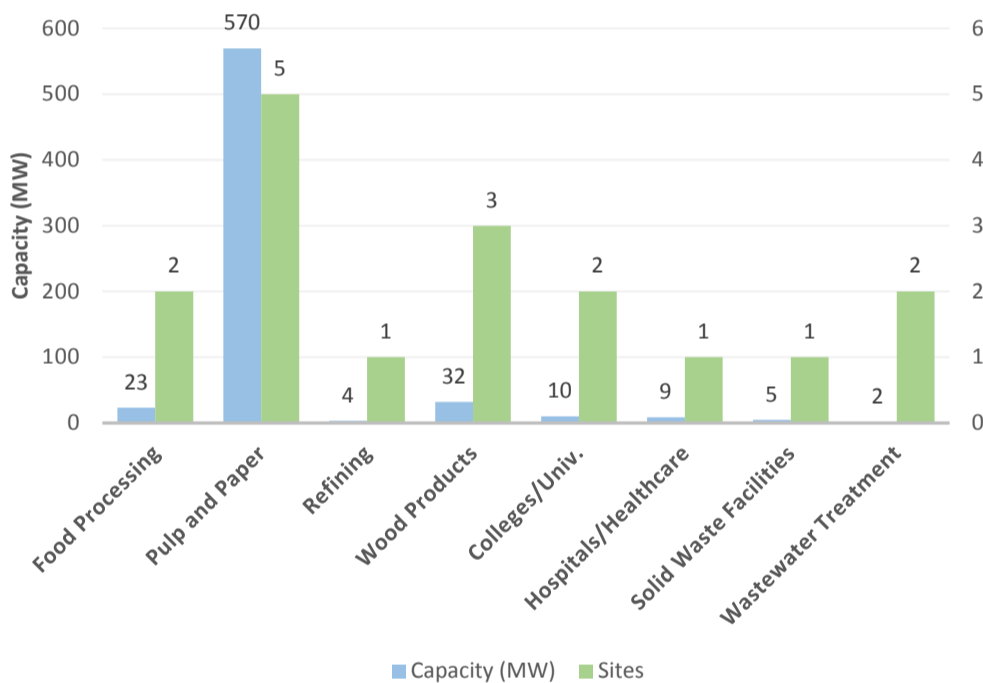
[U.S. DOE Combined Heat and Power Installation Database](#)

Sector	Installations	Capacity (MW)
Industrial	11	628
Commercial/Institutional	6	26
Other	0	0
<b>Total</b>	<b>17</b>	<b>654</b>



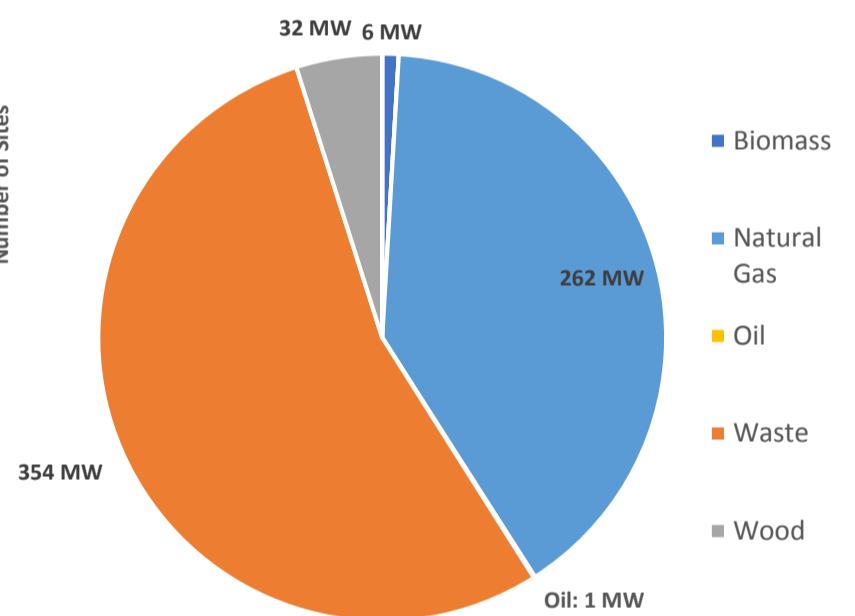
The Southeast CHP Technical Assistance Partnership has compiled information on certain illustrative CHP projects in Arkansas. You can access these by visiting the Department of Energy's [CHP Project Profiles Database](#).

Arkansas CHP by Application



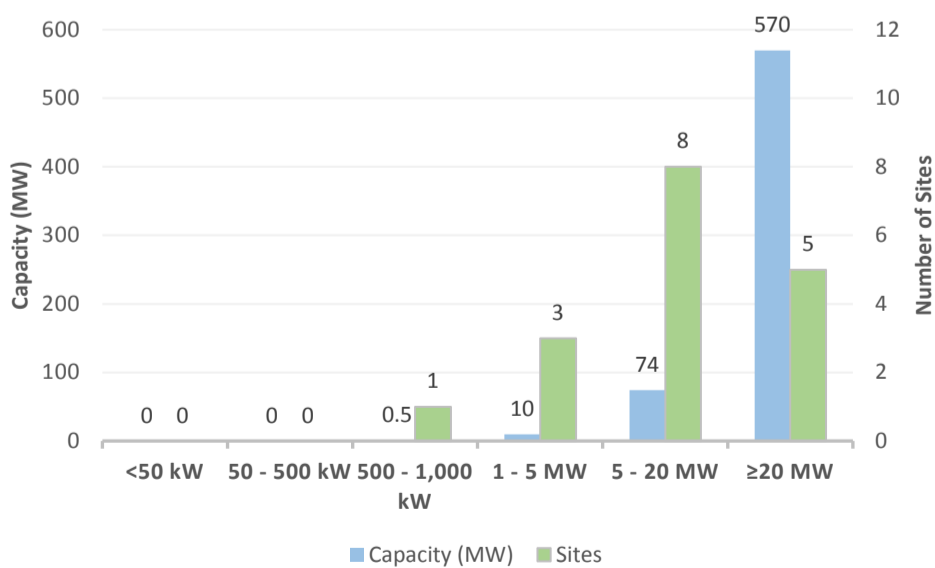
Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

Arkansas CHP Capacity (MW) by Fuel Type



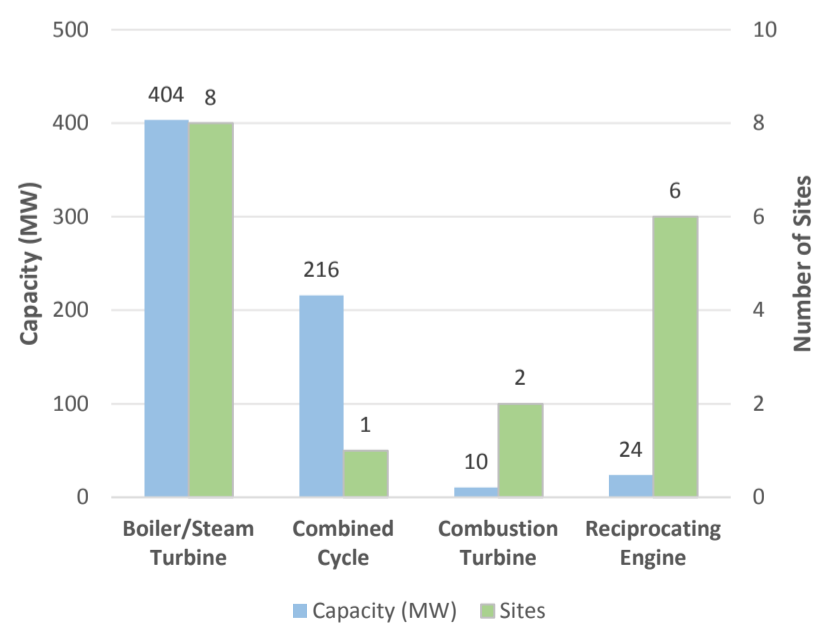
Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

Arkansas CHP by Size Range



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

Arkansas 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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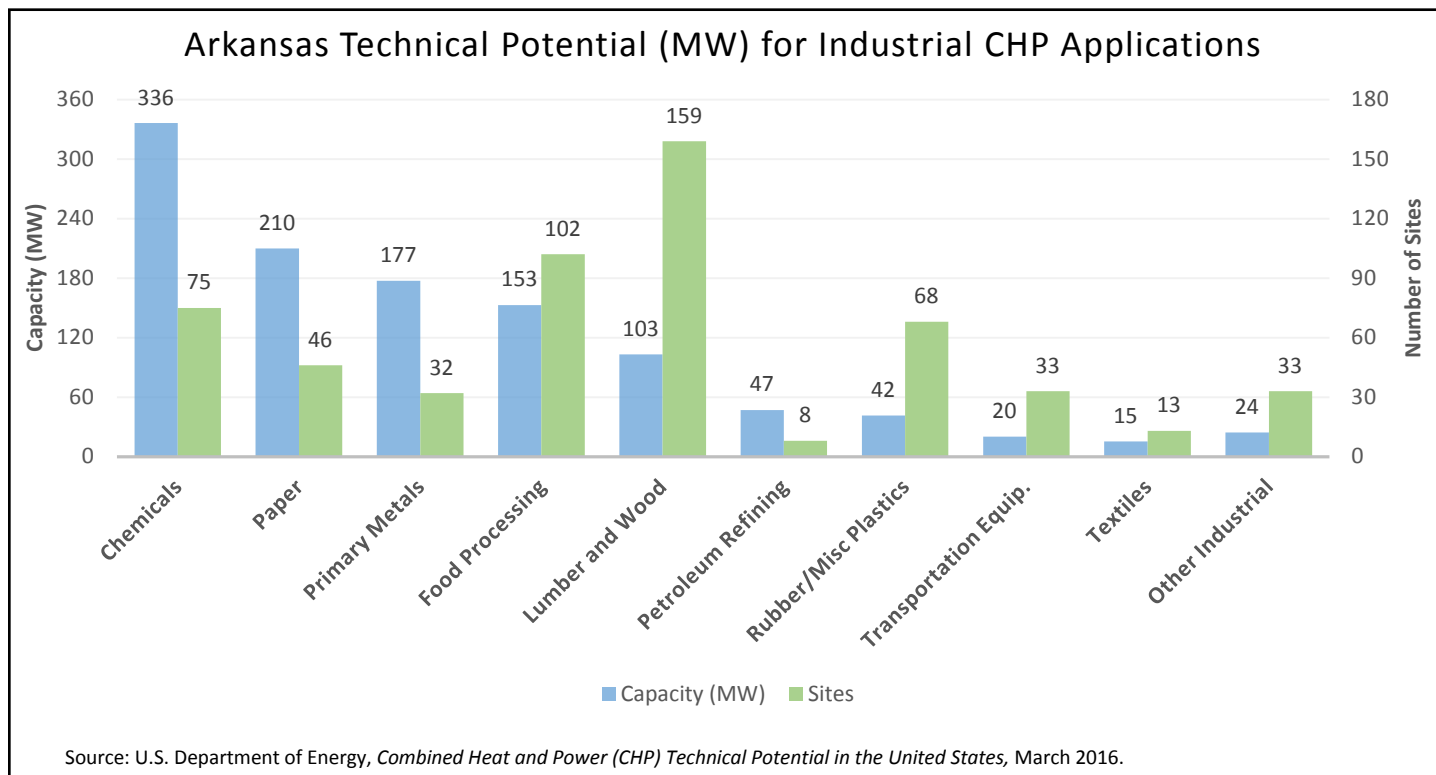
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## Arkansas Technical Potential for New CHP Installations

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

Sector	Potential Sites	Potential Capacity (MW)
Industrial	569	1,127
Commercial/Institutional	2,095	668
<b>Total</b>	<b>2,664</b>	<b>1,795</b>

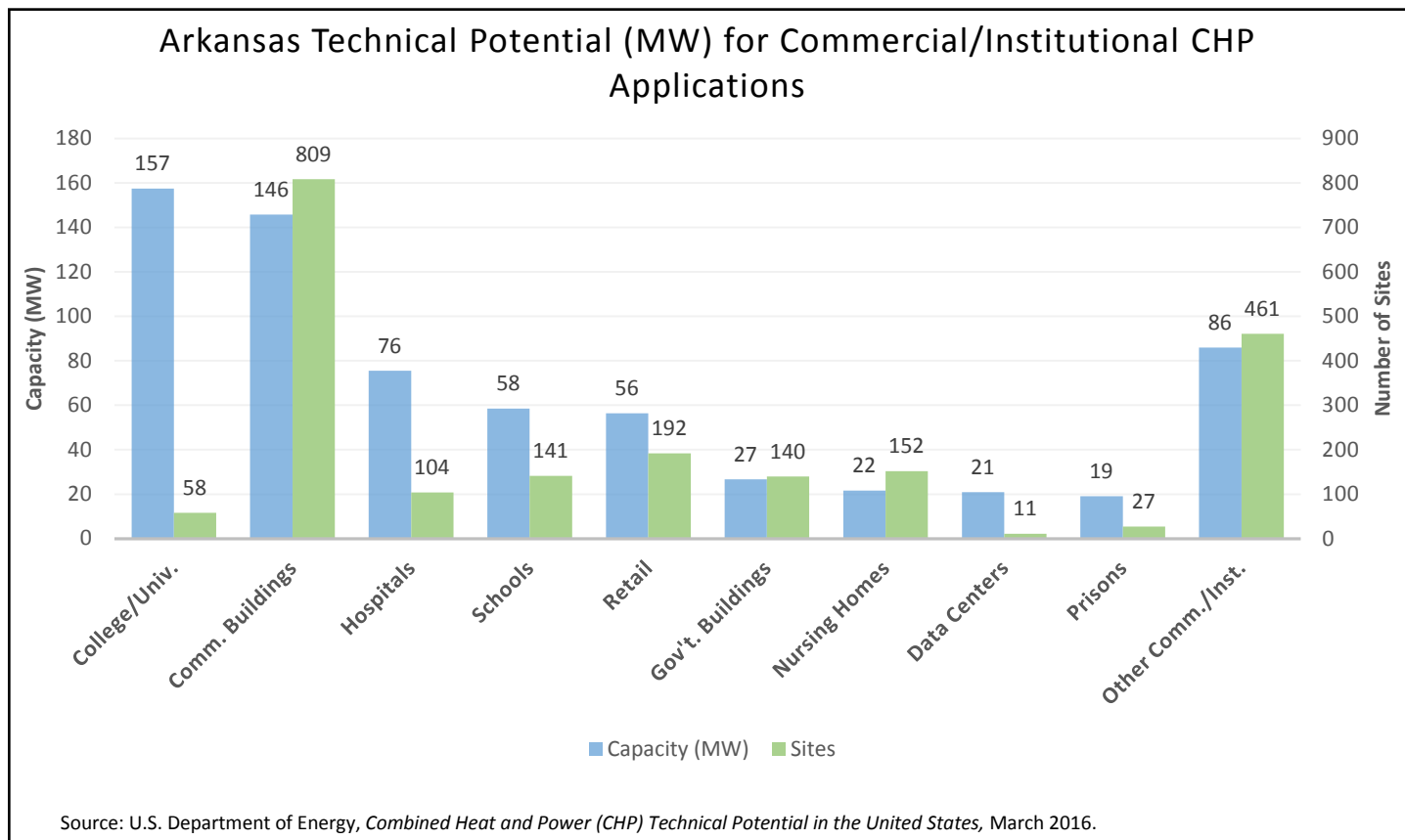


Source: U.S. Department of Energy, *Combined Heat and Power (CHP) Technical Potential in the United States*, March 2016.

### Technical Potential by CHP Size Range for Top Five 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
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
<b>Total</b>	<b>341</b>	<b>62</b>	<b>86</b>	<b>62</b>	<b>101</b>	<b>221</b>	<b>28</b>	<b>259</b>	<b>13</b>	<b>523</b>	<b>569</b>	<b>1,127</b>

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



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
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
<b>Total</b>	<b>1,645</b>	<b>199</b>	<b>318</b>	<b>153</b>	<b>120</b>	<b>172</b>	<b>10</b>	<b>98</b>	<b>2</b>	<b>46</b>	<b>2,095</b>	<b>668</b>

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

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## 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.

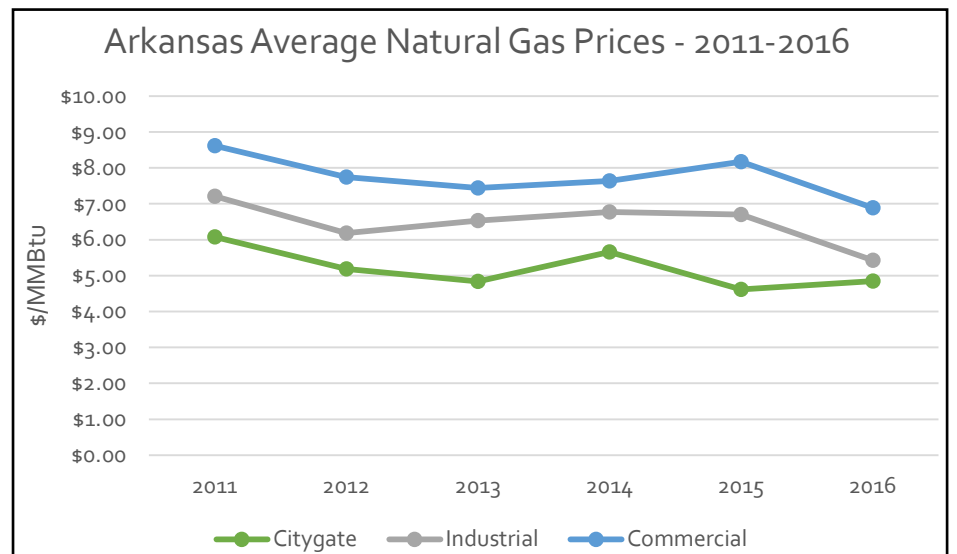
### Arkansas Natural Gas Prices

#### Arkansas Average Gas Prices - 2016

Sector	AR Price (\$/MMBtu)	U.S. Price (\$/MMBtu)
Citygate*	4.85	3.75
Industrial	5.43	3.39
Commercial	6.89	7.22

Source: U.S. Energy Information Administration, "Natural Gas Prices", [https://www.eia.gov/dnav/ng/ng\\_pri\\_sum\\_dcu\\_SAR\\_a.htm](https://www.eia.gov/dnav/ng/ng_pri_sum_dcu_SAR_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.



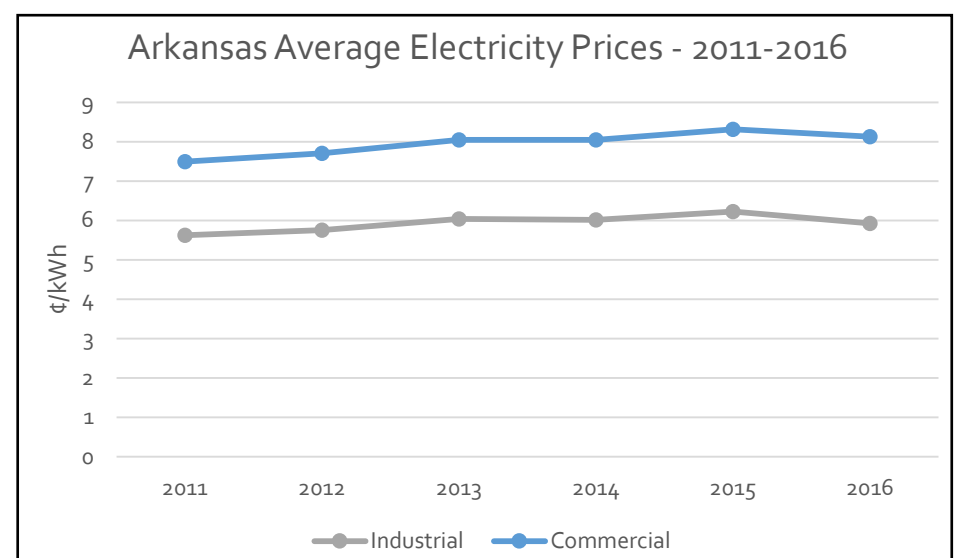
### Arkansas Electricity Prices

#### Arkansas Average Electricity Prices - 2016

Sector	AR Price (¢/kWh)	U.S. Price (¢/kWh)
Industrial	5.93	6.75
Commercial	8.13	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.



#### Arkansas Average Delivered Electricity Prices by Utility

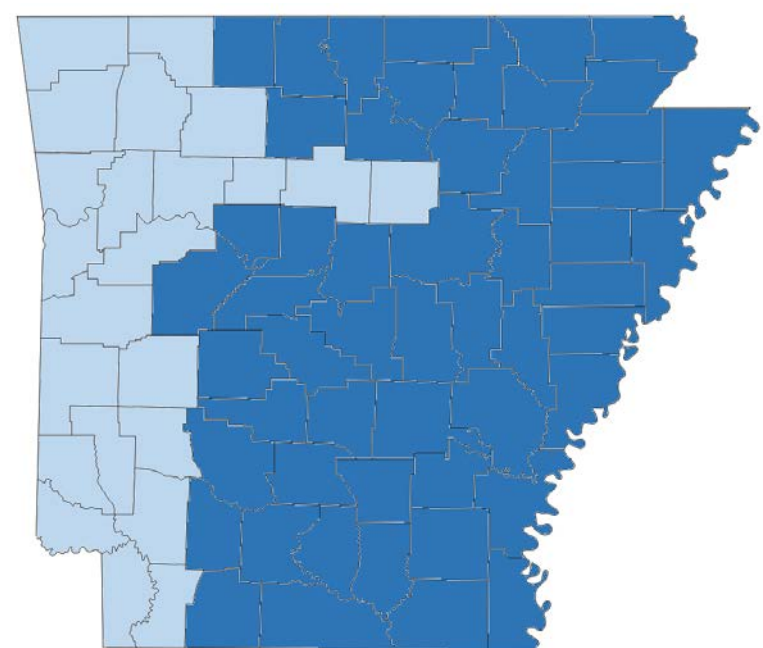
Utility	Industrial Price (¢/kWh)	Commercial Price (¢/kWh)	Average Price** (¢/kWh)
Entergy Arkansas	6.88	8.48	7.68
Southwestern Elec Power	5.52	7.07	6.30
Oklahoma Gas & Electric	5.16	5.88	6.02

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.

#### Arkansas Electricity Prices – Heat Map



Legend:  
■ Southwestern Electric Power / Oklahoma Gas & Electric  
■ Entergy Arkansas

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Potential

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## 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](mailto: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 Arkansas.

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