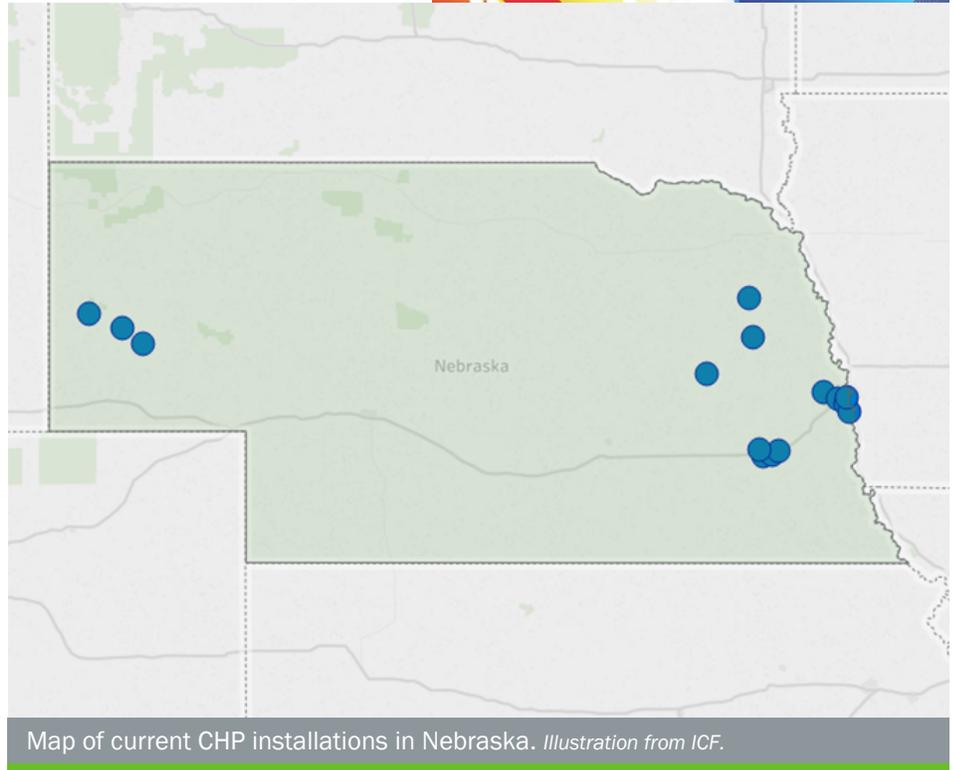


## The State of CHP: Nebraska



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 Nebraska, with data on current installations, technical potential, and economics for CHP.



### Nebraska: 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 Nebraska, and can be accessed by visiting [energy.gov/chp-installs](http://energy.gov/chp-installs).

#### CHP Project Profiles

The Central CHP TAP has compiled information on certain illustrative CHP projects in Nebraska. You can access these by visiting the Department of Energy’s CHP Project Profiles Database at [energy.gov/chp-projects](http://energy.gov/chp-projects).

#### Central CHP Technical Assistance Partnership

For assistance with questions about specific CHP opportunities in Nebraska, please consult with the Central CHP TAP by visiting [chptap.org](http://chptap.org) or contacting the CHP TAP director.

#### Colorado Existing CHP

Sector	Sites	Capacity (MW)
Industrial	5	81
Commercial/Institutional	9	25
Other	1	0.1
<b>Total</b>	<b>15</b>	<b>107</b>

#### Central CHP TAP Director

Cliff Haefke

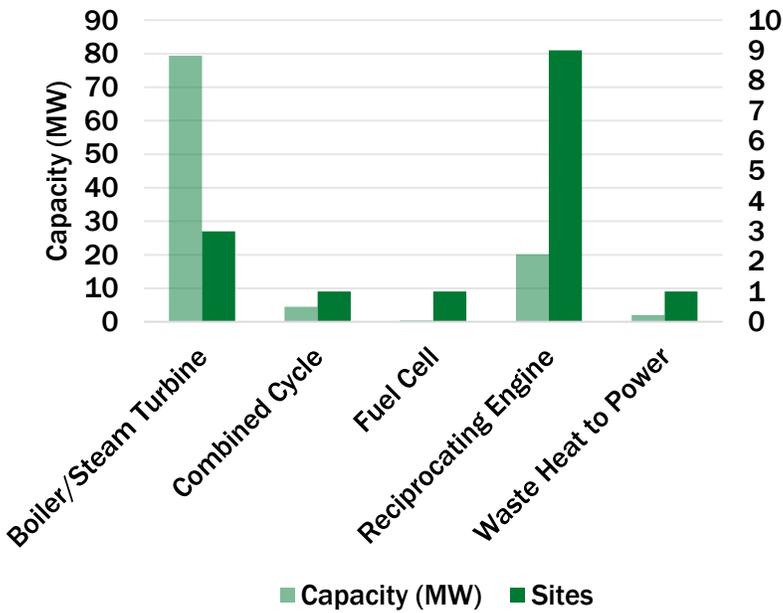
- University of Illinois at Chicago
- [chaefk1@uic.edu](mailto:chaefk1@uic.edu)
- 312-355-3476

CENTRAL

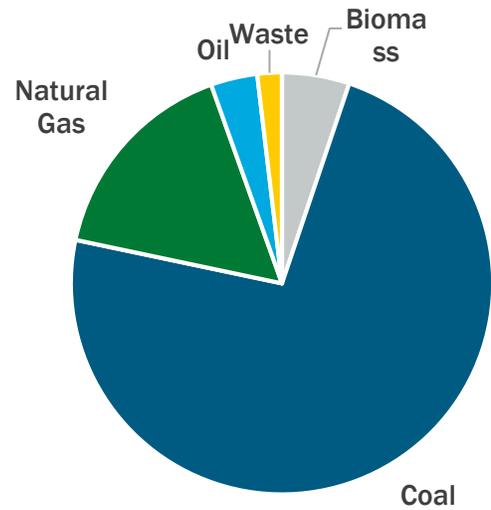


CHP  
TECHNICAL ASSISTANCE  
PARTNERSHIPS

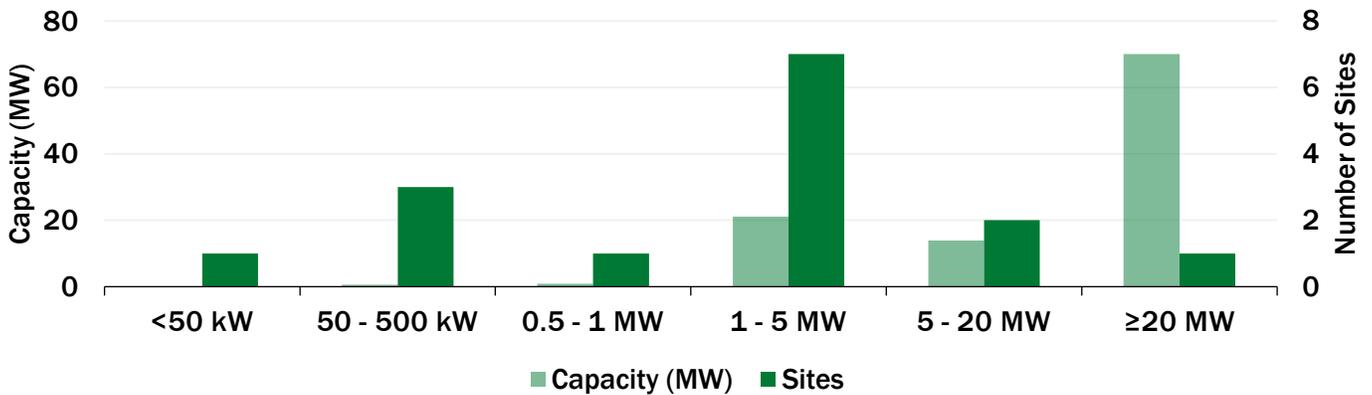
Nebraska CHP by Technology



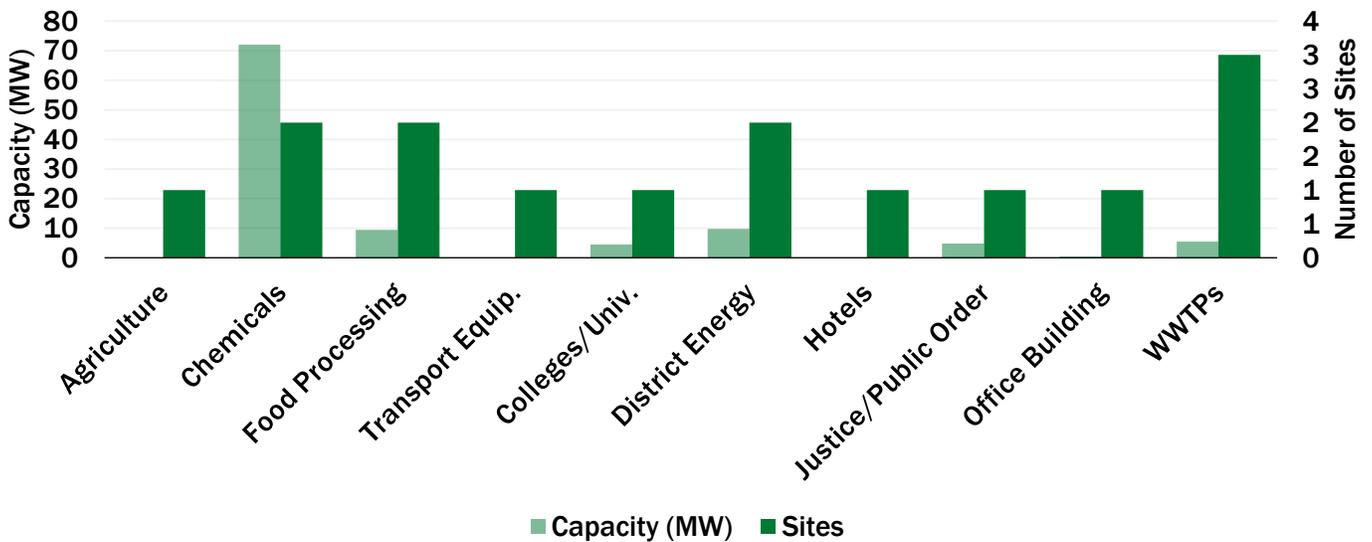
Nebraska CHP Capacity (MW) by Fuel



Nebraska CHP by Size Range



Nebraska CHP by Application



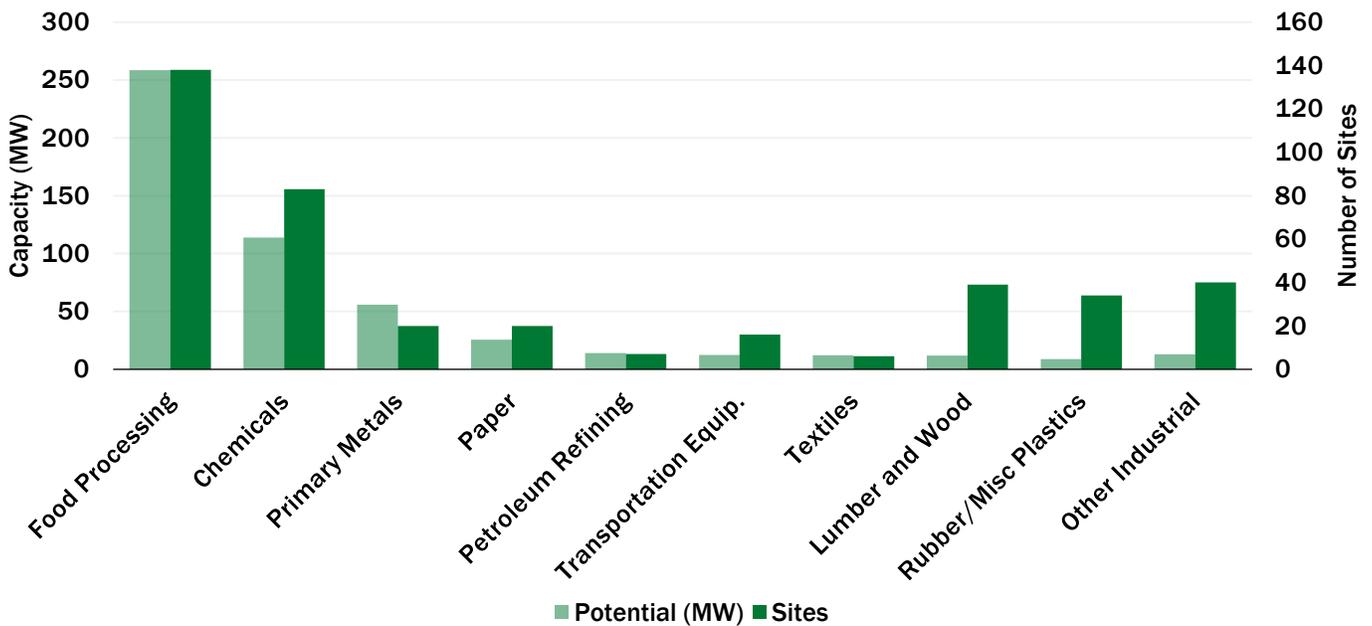
## Nebraska: Technical Potential for New CHP Installations

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. This report can be accessed at [energy.gov/chp-potential](http://energy.gov/chp-potential).

### Nebraska CHP Technical Potential

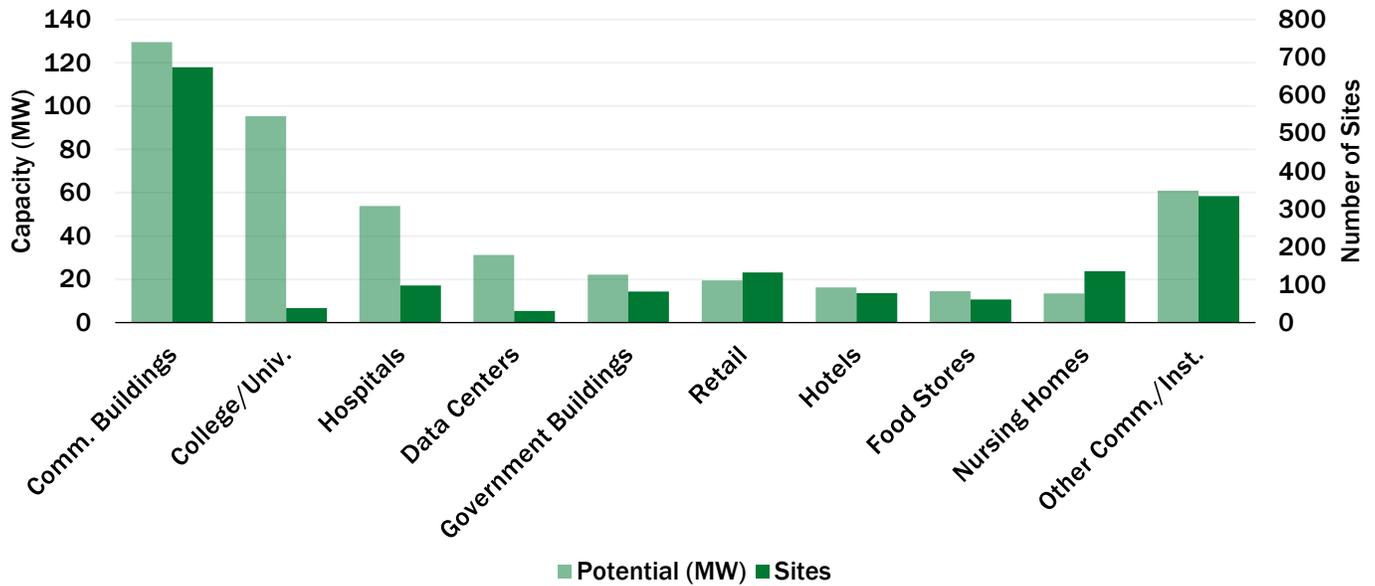
Sector	Potential Sites	Potential MW
Industrial	403	527
Commercial/Institutional	1,664	458
<b>Total</b>	<b>2,067</b>	<b>984</b>

Nebraska 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
Food Processing	82	17	14	10	26	56	15	138	1	37	138	258
Chemicals	41	6	6	5	32	81	4	22	0	0	83	114
Primary Metals	11	2	4	3	2	4	2	23	1	24	20	56
Paper	11	3	4	3	4	5	1	15	0	0	20	26
Petroleum Refining	0	0	0	0	7	14	0	0	0	0	7	14
Other Industrial	101	15	21	14	12	21	1	8	0	0	135	59
<b>Total</b>	<b>246</b>	<b>43</b>	<b>49</b>	<b>35</b>	<b>83</b>	<b>181</b>	<b>23</b>	<b>206</b>	<b>2</b>	<b>62</b>	<b>403</b>	<b>527</b>

## Nebraska 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
Commercial Buildings	431	22	189	76	54	32	0	0	0	0	674	130
College/Univ.	19	4	4	3	9	22	6	66	0	0	38	95
Hospitals	70	14	7	5	21	36	0	0	0	0	98	54
Data Centers	22	3	3	2	5	10	1	16	0	0	31	31
Government Buildings	73	9	5	4	3	4	1	5	0	0	82	22
Other Comm./Inst.	703	91	31	18	6	10	1	7	0	0	741	125
<b>Total</b>	<b>1,318</b>	<b>142</b>	<b>239</b>	<b>106</b>	<b>98</b>	<b>114</b>	<b>9</b>	<b>95</b>	<b>0</b>	<b>0</b>	<b>1,664</b>	<b>458</b>

### 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://betterbuildingsinitiative.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://betterbuildingsinitiative.energy.gov/accelerators/combined-heat-and-power-resiliency>

## Nebraska: 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.

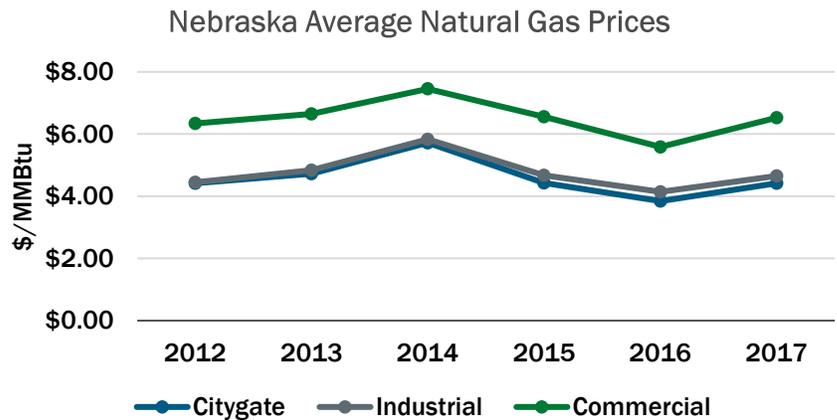
### Nebraska Natural Gas Prices

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.

#### Nebraska Average Gas Prices (\$/MMBtu) - 2017

Sector	NE Price	U.S. Price
Citygate*	4.42	4.26
Industrial	4.65	4.20
Commercial	6.53	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.

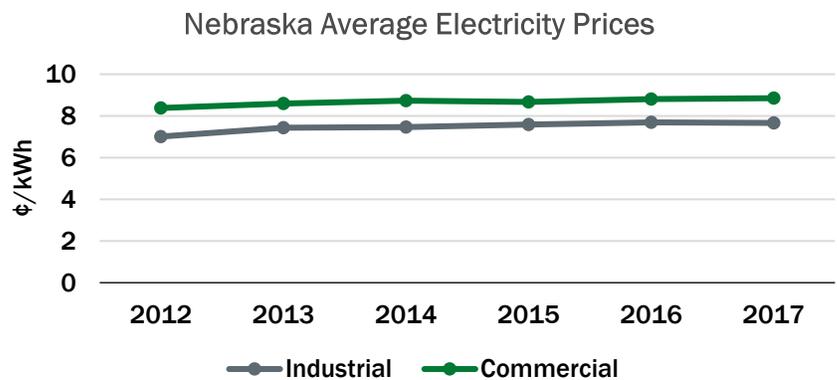


### Nebraska Electricity Prices

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

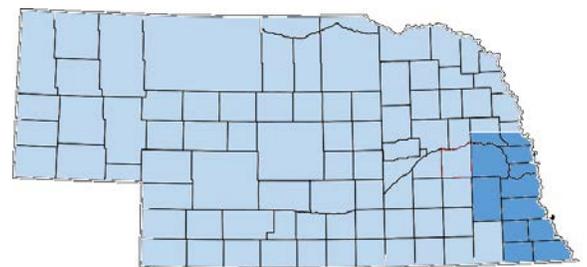
#### Nebraska Average Electricity Prices (¢/kWh) - 2017

Sector	NE Price	U.S. Price
Industrial	7.66	6.88
Commercial	8.85	10.66



#### Nebraska Average Delivered Electricity Prices by Utility

Utility	Industrial Price (¢/kWh)	Commercial Price (¢/kWh)	Average Price (¢/kWh)
Omaha Public Power District	6.32	8.84	7.58
Lincoln Electric System	6.83	7.74	7.29
NE Public Power District	5.22	8.49	6.85



- Nebraska PPD
- Lincoln Electric System / Omaha PPD