

The State of CHP: Idaho



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

Installed CHP

CHP Technical Potential

CHP Economics

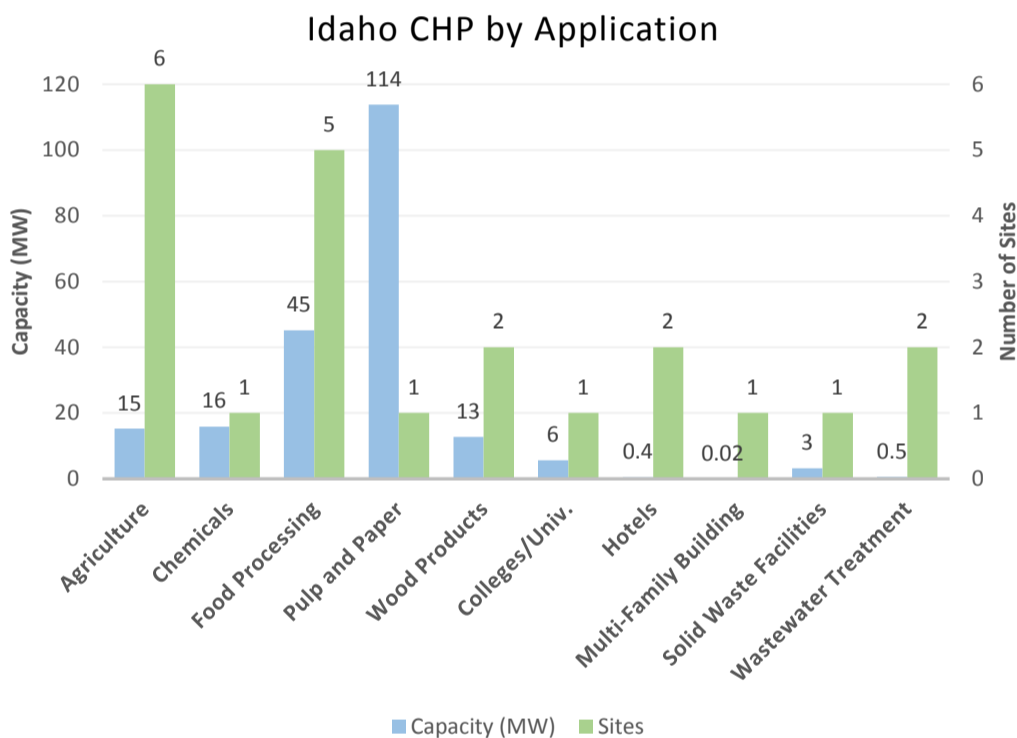
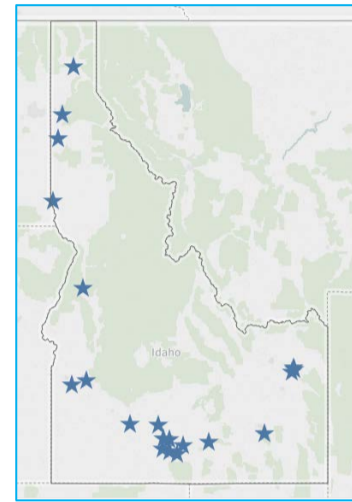
CHP Partners

Idaho Installed Base of CHP

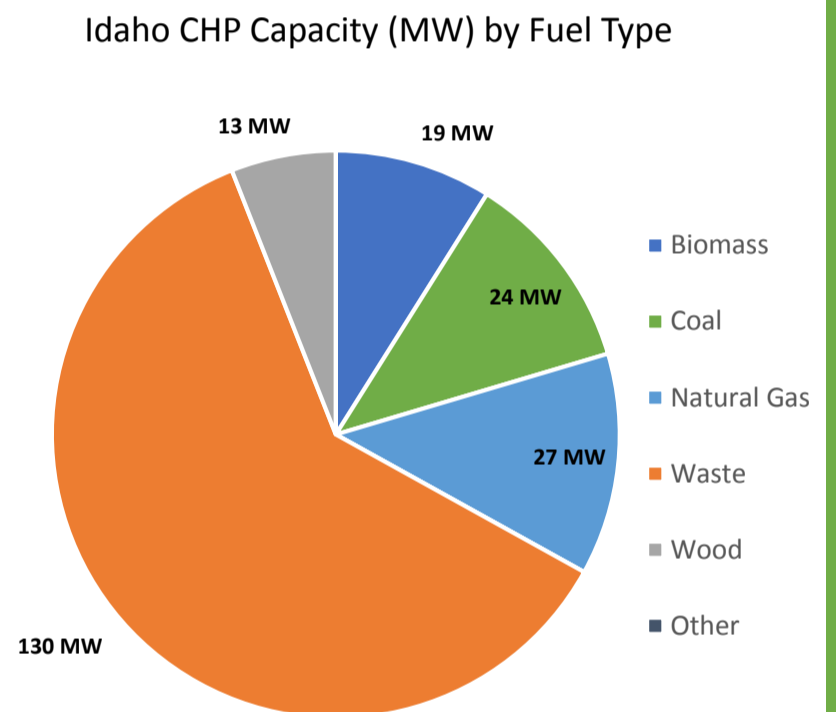
[U.S. DOE Combined Heat and Power Installation Database](#)

Sector	Installations	Capacity (MW)
Industrial	9	188
Commercial/Institutional	7	10
Other	6	15
Total	22	213

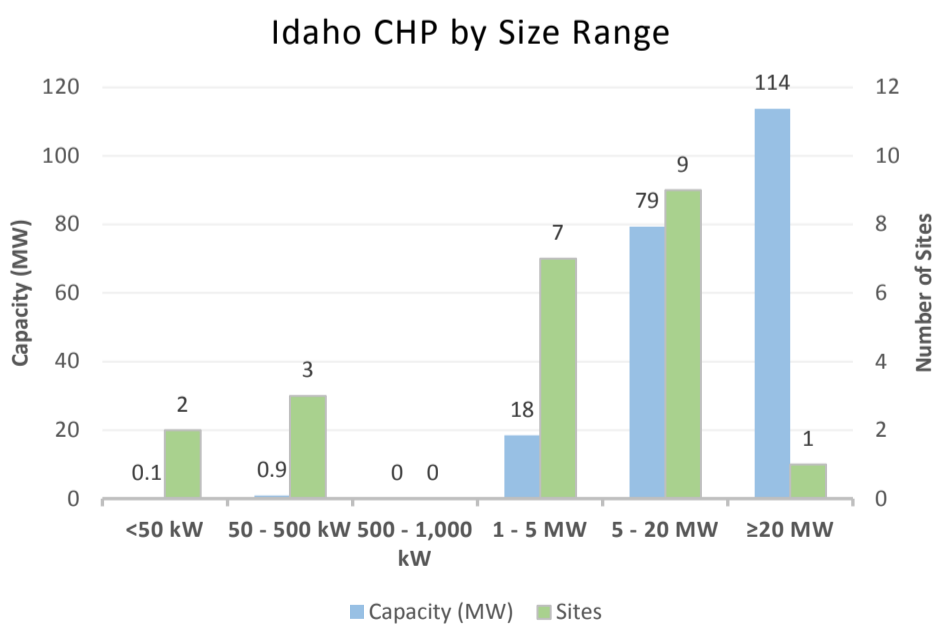
The Northwest CHP Technical Assistance Partnership has compiled information on certain illustrative CHP projects in Idaho. You can access these by visiting the Department of Energy's [CHP Project Profiles Database](#).



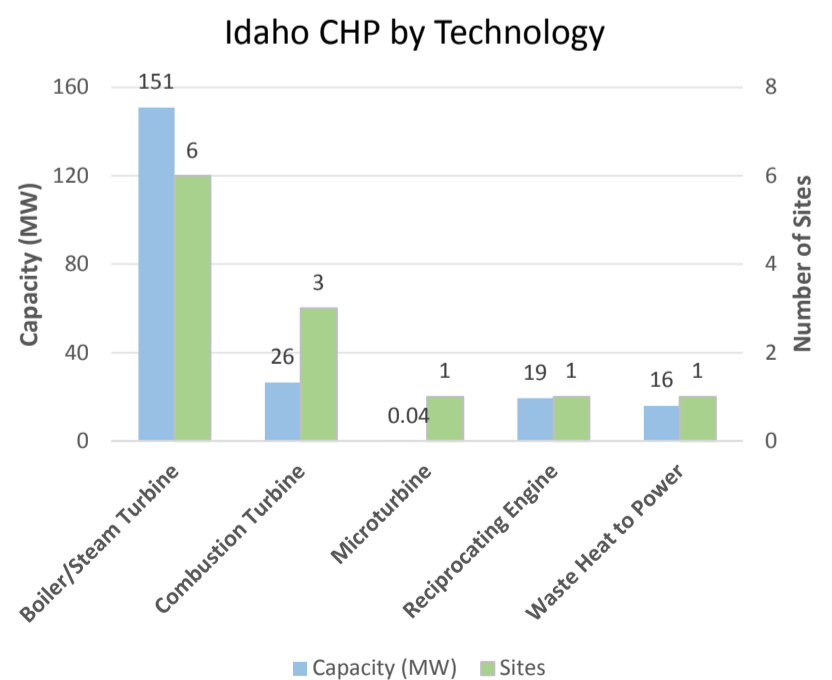
Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)



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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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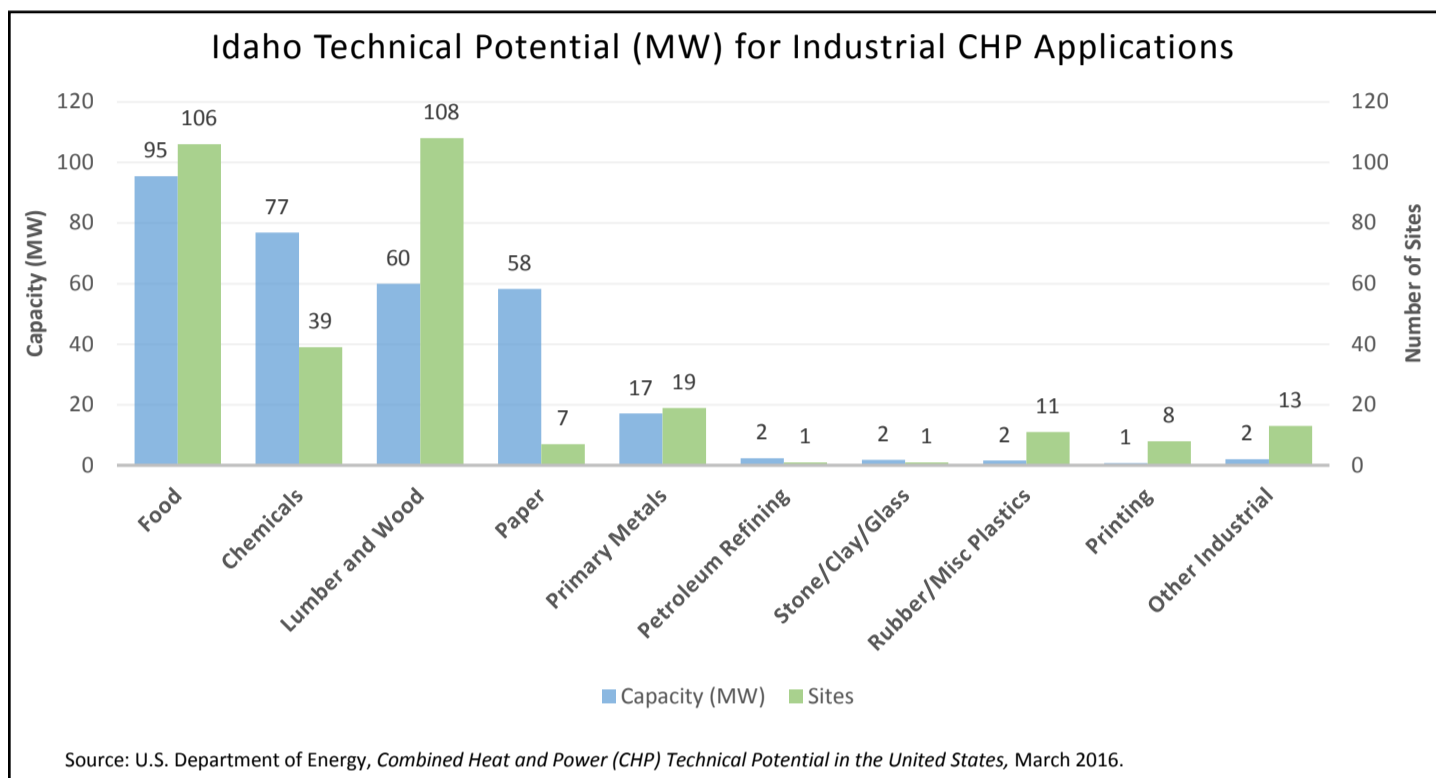
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Idaho Technical Potential for New CHP Installations

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

Sector	Potential Sites	Potential Capacity (MW)
Industrial	313	316
Commercial/Institutional	1,094	342
Total	1,407	658

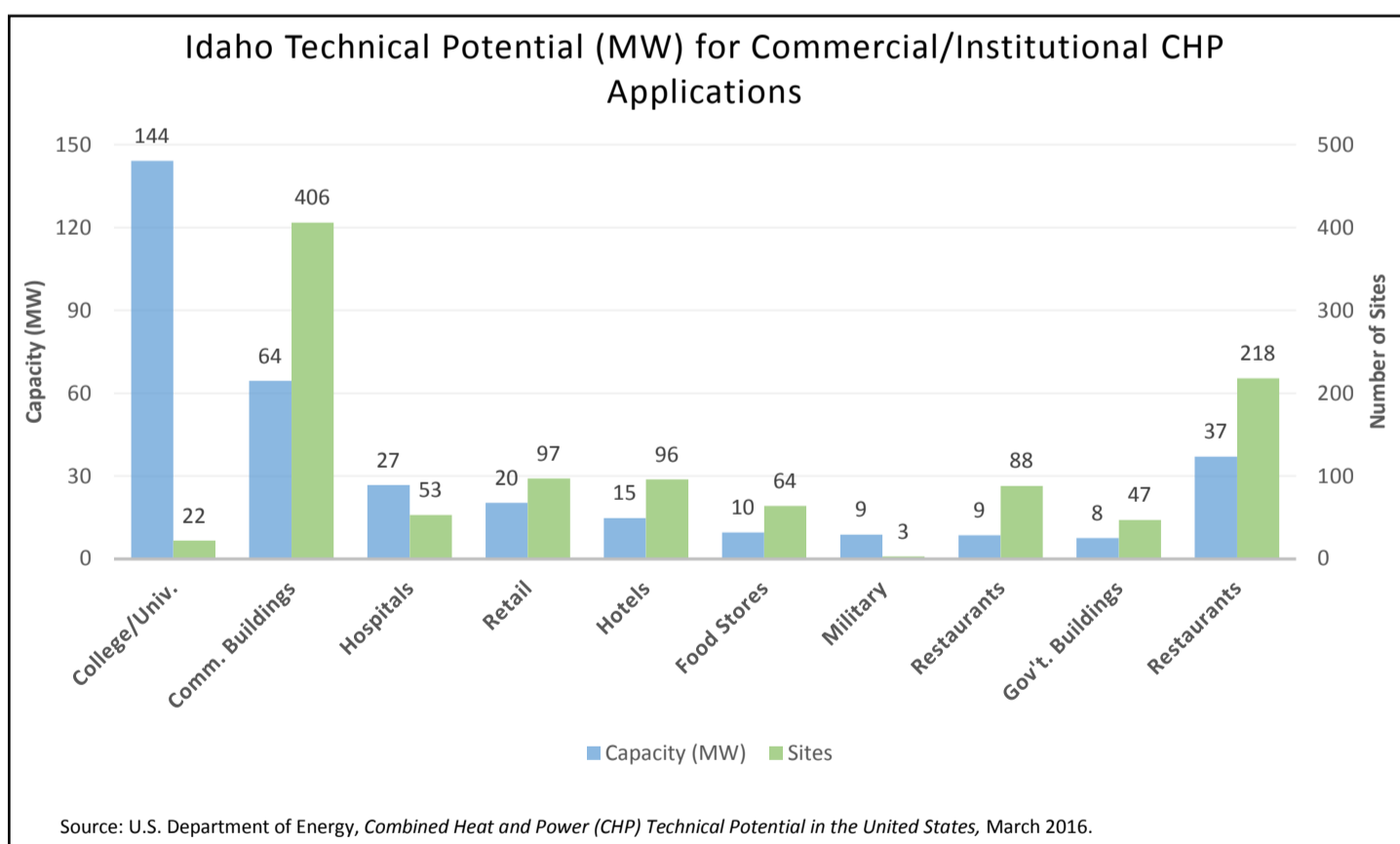


Source: U.S. Department of Energy, *Combined Heat and Power (CHP) Technical Potential in the United States*, March 2016.

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
Food	54	10	18	12	32	62	2	12	0	0	106	95
Chemicals	28	4	1	1	7	12	2	20	1	41	39	77
Lumber and Wood	77	13	15	10	15	30	1	7	0	0	108	60
Paper	4	1	1	1	0	0	1	16	1	40	7	58
Primary Metals	12	3	1	1	6	14	0	0	0	0	19	17
Other Industrial	32	5	0	0	2	4	0	0	0	0	34	9
Total	207	36	36	24	62	121	6	54	2	81	313	316

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.	12	2	0	0	5	12	2	33	3	97	22	144
Commercial Buildings	293	15	90	36	23	14	0	0	0	0	406	64
Hospitals	39	7	8	6	6	14	0	0	0	0	53	27
Retail	92	14	3	2	2	5	0	0	0	0	97	20
Hotels	90	10	4	2	2	2	0	0	0	0	96	15
Other Comm./Inst.	400	46	12	8	7	12	1	6	0	0	420	72
Total	926	94	117	54	45	58	3	39	3	97	1,094	198

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

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CHP Technical Potential

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Idaho 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.

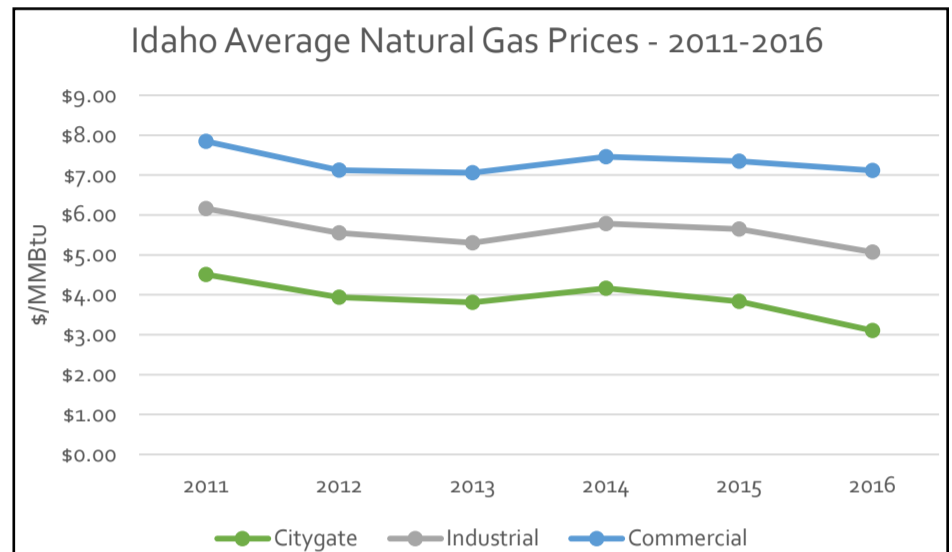
Idaho Natural Gas Prices

Idaho Average Gas Prices - 2016

Sector	ID Price (\$/MMBtu)	U.S. Price (\$/MMBtu)
Citygate*	3.10	3.75
Industrial	5.07	3.39
Commercial	7.11	7.22

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



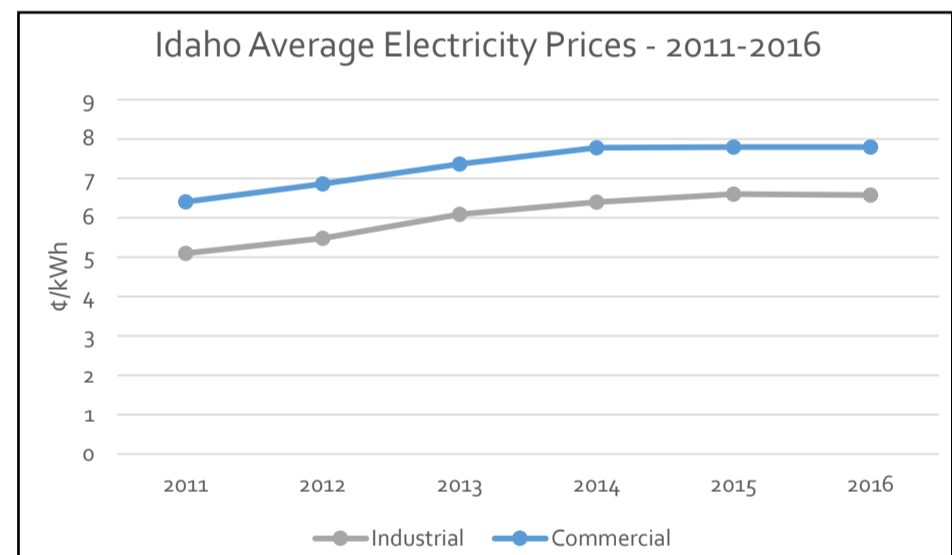
Idaho Electricity Prices

Idaho Average Electricity Prices - 2016

Sector	ID Price (¢/kWh)	U.S. Price (¢/kWh)
Industrial	6.58	6.75
Commercial	7.80	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.



Idaho Average Delivered Electricity Prices by Utility

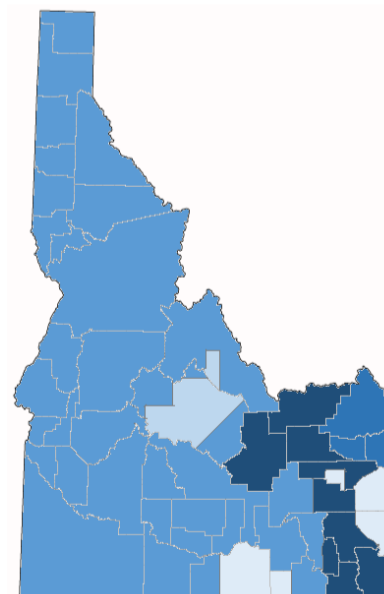
Utility	Industrial Price (¢/kWh)	Commercial Price (¢/kWh)	Average Price** (¢/kWh)
PacifiCorp	14.00	8.97	11.49
Fall River Rural Elec Coop	-	7.99	7.99
Avista Corp	5.90	9.06	7.48
Idaho Power Co	6.60	7.55	7.07
Northern Lights	3.66	10.40	7.03
Salmon River Elec Coop	5.32	6.63	5.97
City of Idaho Falls	4.67	6.07	5.37
Raft Rural Elec Coop	5.19	5.49	5.34
Lower Valley Energy	4.15	6.17	5.16

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.

Idaho Electricity Prices – Heat Map



- City of Idaho Falls / Raft Rural Elec Coop / Lower Valley Energy
- Salmon River Elec Coop
- Avista Corp / Idaho Power Co / Northern Lights
- Fall River Rural Elec Coop
- PacifiCorp

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CHP Technical
Potential

CHP Economics

CHP Partners

Department of Energy CHP Partnerships

Northwest CHP Technical Assistance Partnership



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

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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 Idaho.

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U.S. DEPARTMENT OF ENERGY
CHP Technical Assistance Partnerships