

The State of CHP: Nevada



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

Installed CHP

CHP Technical Potential

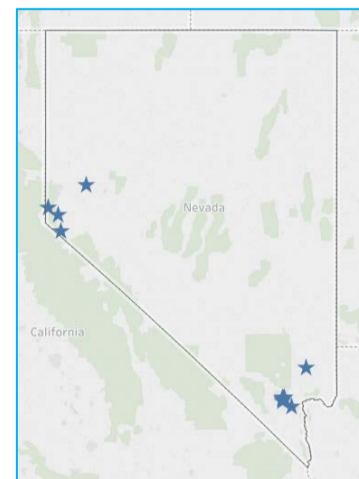
CHP Economics

CHP Partners

Nevada Installed Base of CHP

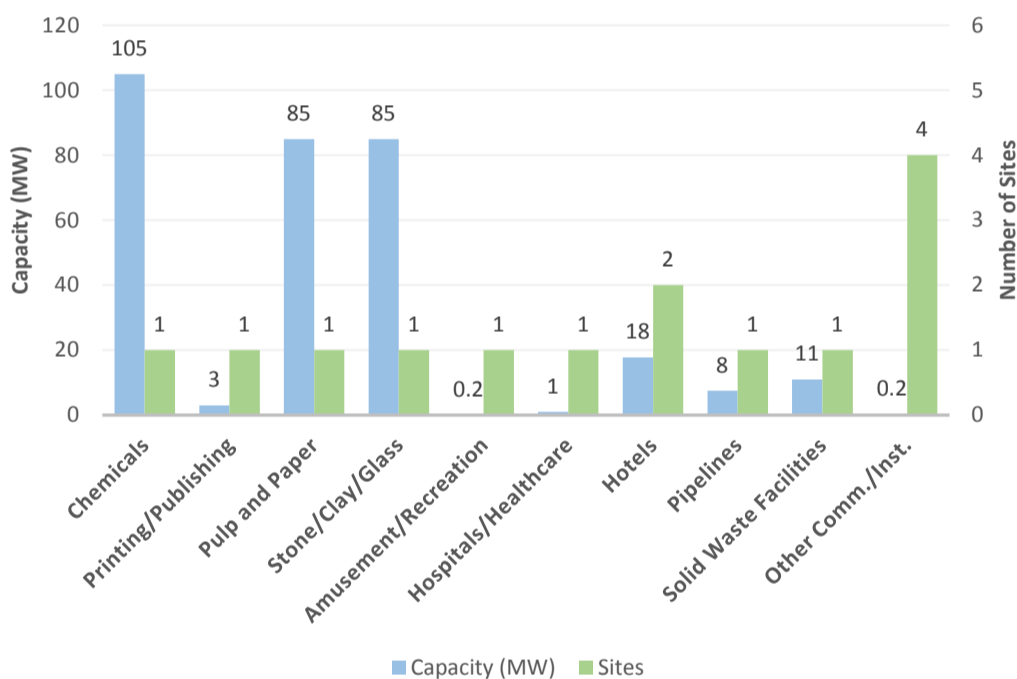
[U.S. DOE Combined Heat and Power Installation Database](#)

Sector	Installations	Capacity (MW)
Industrial	4	278
Commercial/Institutional	10	37
Other	0	0
Total	14	316



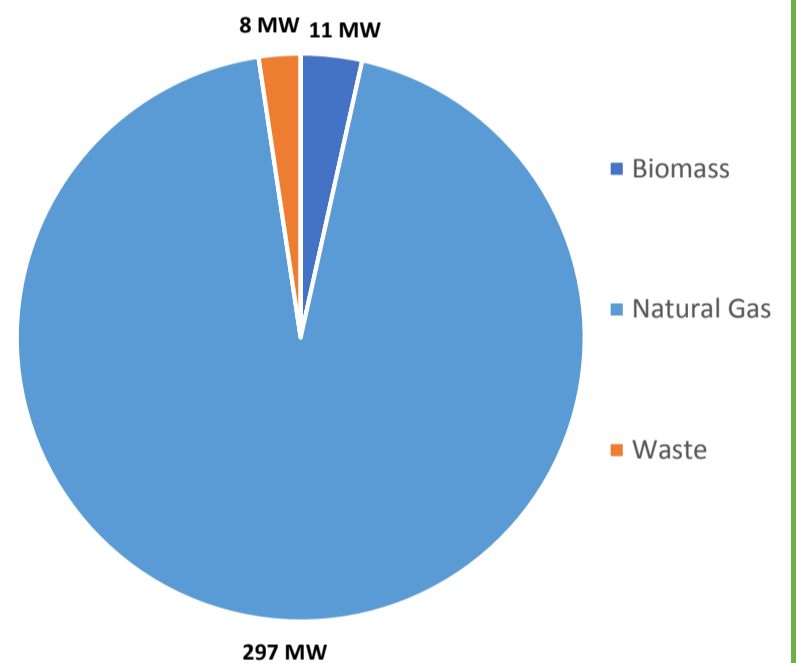
The Pacific CHP Technical Assistance Partnership has compiled information on certain illustrative CHP projects in Nevada. You can access these by visiting the Department of Energy's [CHP Project Profiles Database](#).

Nevada CHP by Application



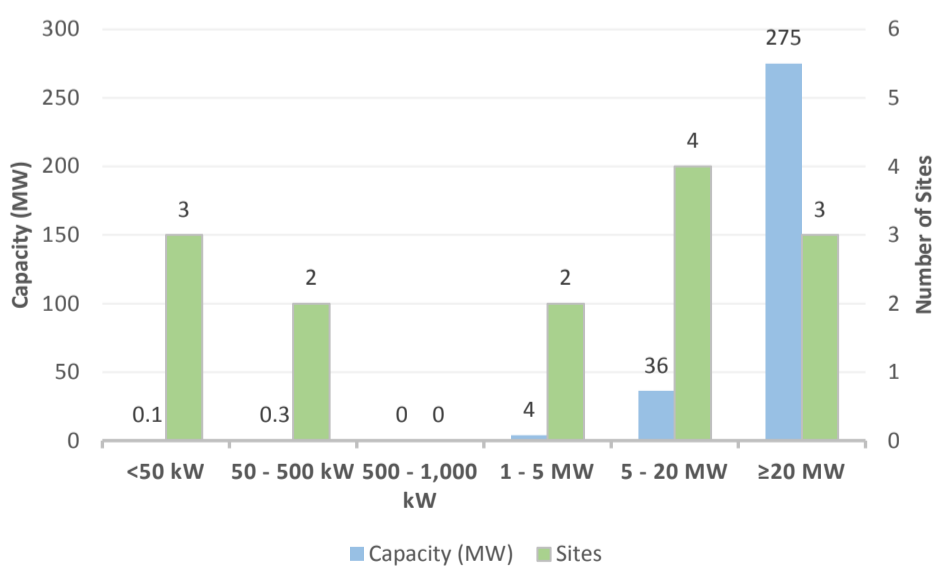
Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

Nevada CHP Capacity (MW) by Fuel Type



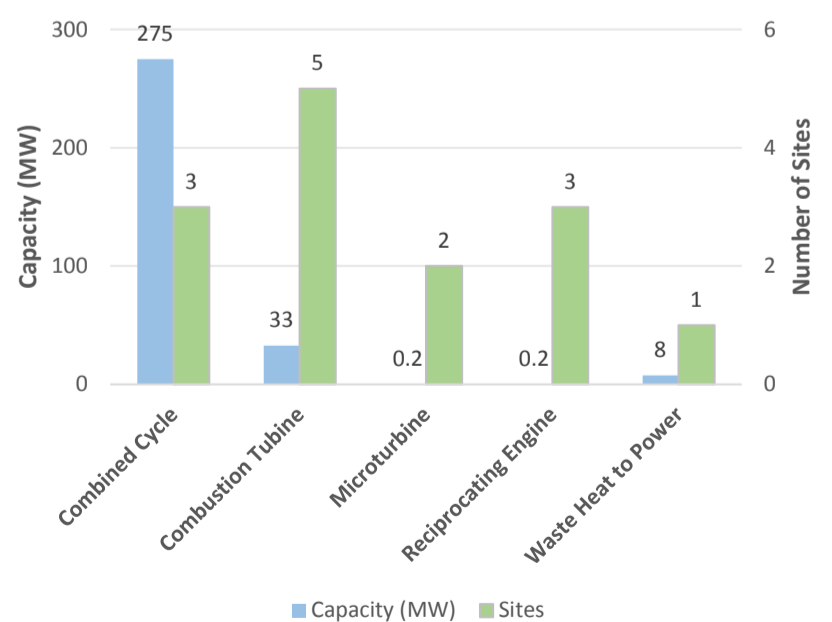
Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

Nevada CHP by Size Range



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

Nevada 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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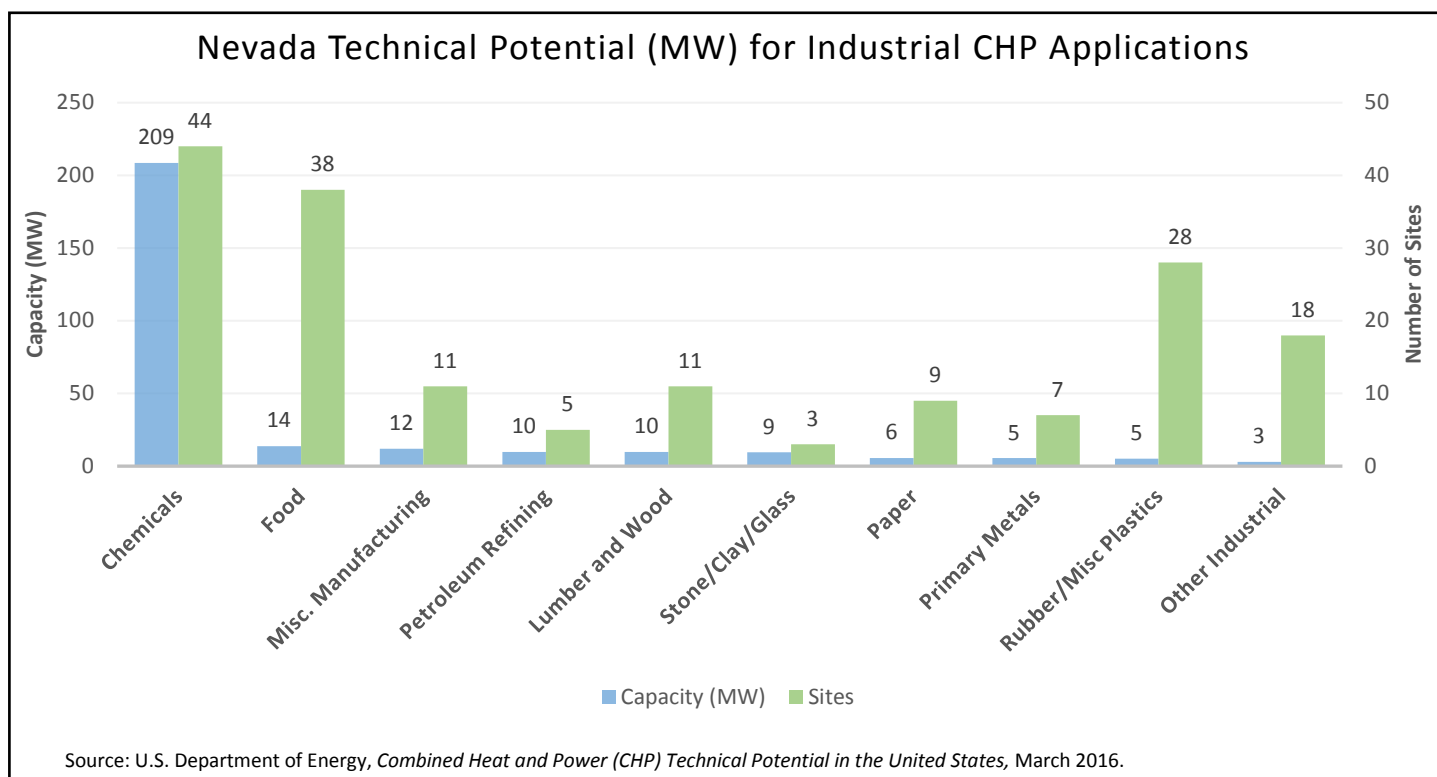
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Nevada Technical Potential for New CHP Installations

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

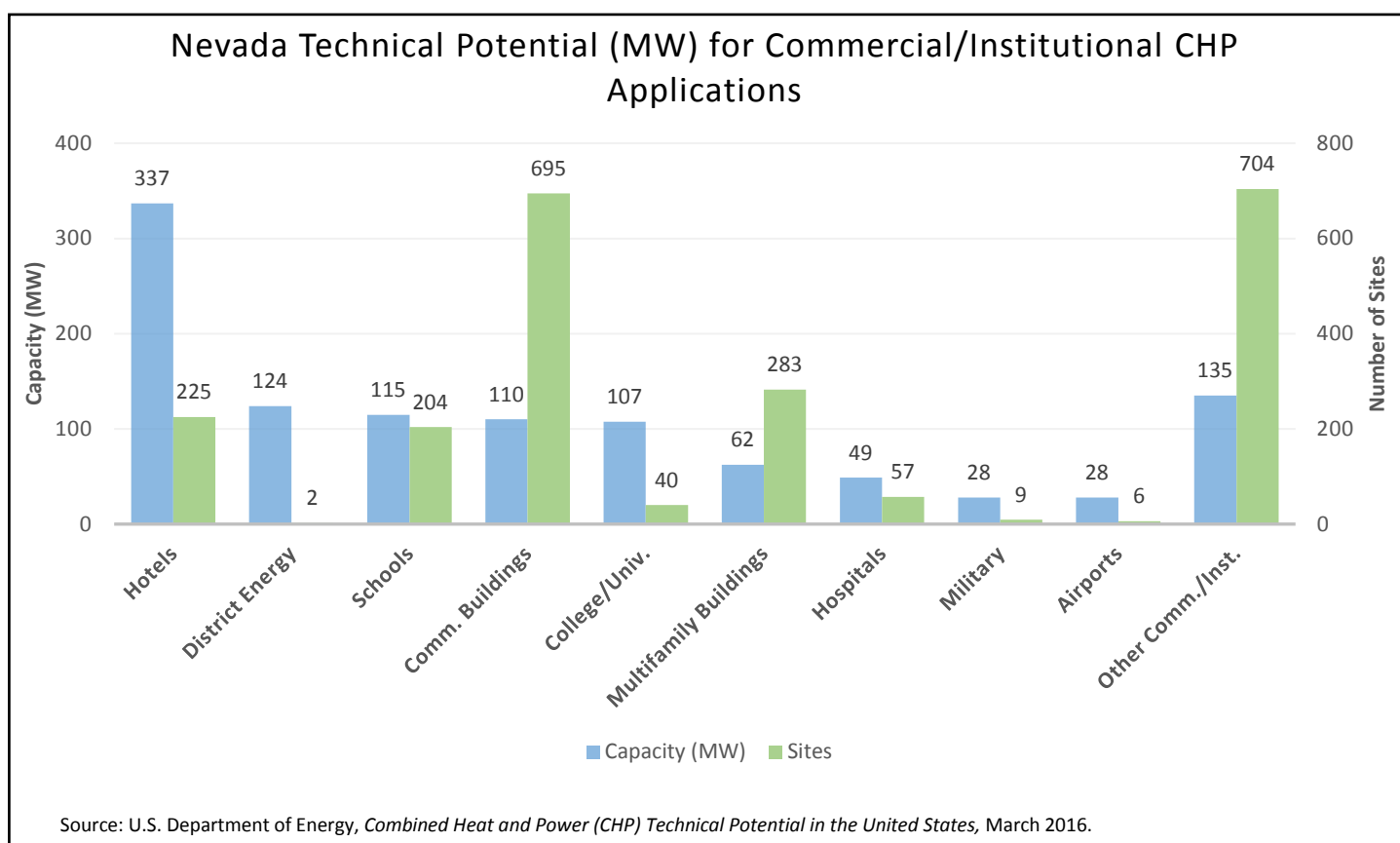
Sector	Potential Sites	Potential Capacity (MW)
Industrial	174	283
Commercial/Institutional	2,225	1,095
Total	2,399	1,378



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	26	4	6	4	6	11	3	16	3	174	44	209
Food	31	5	3	3	4	6	0	0	0	0	38	14
Misc. Manufacturing	7	1	1	1	2	5	1	5	0	0	11	12
Petroleum Refining	0	0	2	1	3	9	0	0	0	0	5	10
Lumber and Wood	7	1	1	1	2	3	1	5	0	0	11	10
Other Industrial	52	9	6	4	7	16	0	0	0	0	65	29
Total	123	21	19	13	24	49	5	26	3	174	174	283

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
Hotels	134	18	26	16	45	116	19	162	1	25	225	337
Schools	117	40	57	38	30	36	0	0	0	0	204	115
Commercial Buildings	502	25	154	62	39	23	0	0	0	0	695	110
College/Univ.	30	5	0	0	7	20	0	0	3	82	40	107
Multifamily Buildings	199	15	72	36	11	11	0	0	0	0	283	62
Other Comm./Inst.	702	99	32	21	38	70	3	26	3	148	778	363
Total	1,684	202	341	173	170	276	22	187	7	256	2,225	1,095

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

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Nevada 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.

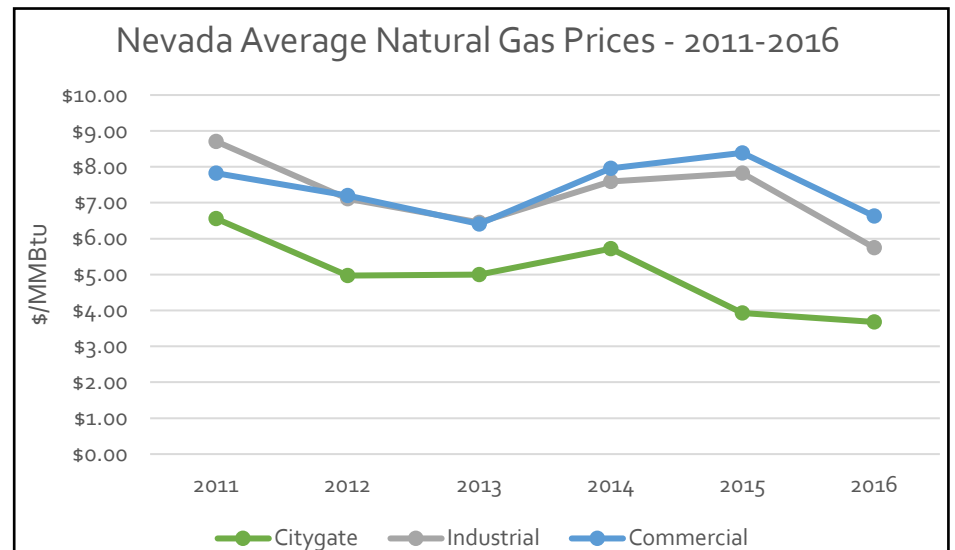
Nevada Natural Gas Prices

Nevada Average Gas Prices - 2016

Sector	NV Price (\$/MMBtu)	U.S. Price (\$/MMBtu)
Citygate*	3.68	3.75
Industrial	5.75	3.39
Commercial	6.63	7.22

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



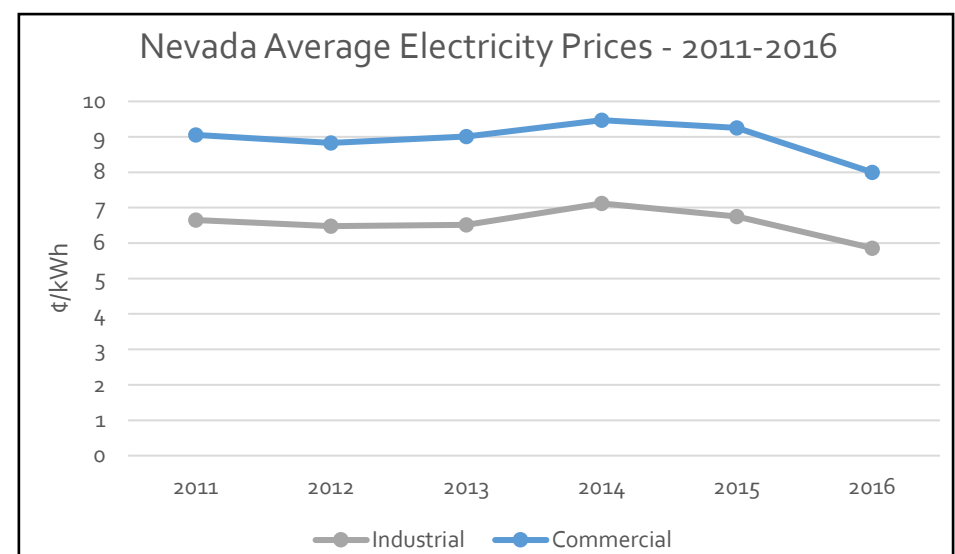
Nevada Electricity Prices

Nevada Average Electricity Prices - 2016

Sector	NV Price (¢/kWh)	U.S. Price (¢/kWh)
Industrial	5.86	6.75
Commercial	8.00	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.



Nevada Average Delivered Electricity Prices by Utility

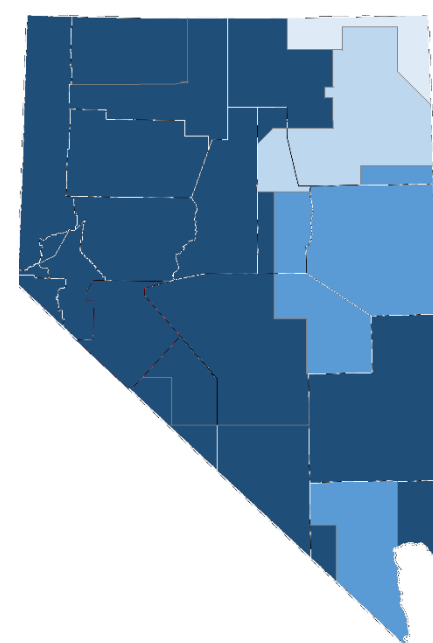
Utility	Industrial Price (¢/kWh)	Commercial Price (¢/kWh)	Average Price** (¢/kWh)
Overton Power District 5	9.74	9.49	9.62
Valley Electric Assn.	9.58	9.29	9.43
NV Energy (Northern)	8.40	9.90	9.15
NV Energy (Southern)	5.89	9.27	7.58
Mt Wheeler Power	6.07	8.05	7.06
Wells Rural Elec Coop	4.28	8.33	6.30
Raft Rural Elec Coop	5.19	6.38	5.78

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.

Nevada Electricity Prices – Heat Map



- Raft Rural Elec Coop
- Wells Rural Elec Coop
- NV Energy (Southern) / Mt Wheeler Power
- Overton Power / Valley Electric Assn. / NV Energy (Northern)

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CHP Technical
Potential

CHP Economics

CHP Partners

Department of Energy CHP Partnerships

Pacific CHP Technical Assistance Partnership



U.S. DEPARTMENT OF ENERGY CHP Technical Assistance Partnerships

PACIFIC

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Email: gene.kogan@energycenter.org

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 Nevada.

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.



U.S. DEPARTMENT OF ENERGY
CHP Technical Assistance Partnerships