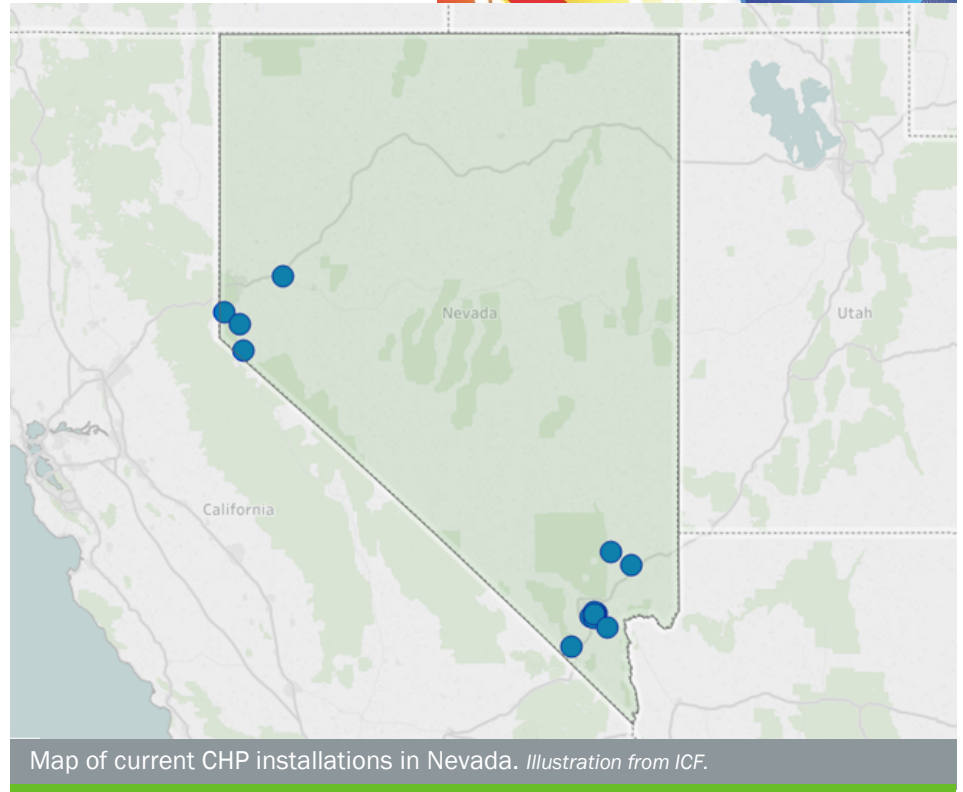


The State of CHP: Nevada



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



Nevada: 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 Nevada, and can be accessed by visiting <https://doe.icfwebservices.com/chp>.

CHP Project Profiles

The Western CHP TAP 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 at <https://betterbuildingssolutioncenter.energy.gov/chp/chp-project-profiles-database>.

Western CHP Technical Assistance Partnership

For assistance with questions about specific CHP opportunities in Nevada, please consult with the Western CHP TAP by visiting wchptap.org or contacting the CHP TAP director.

Nevada Existing CHP

Sector	Sites	Capacity (MW)
Industrial	4	278
Commercial/Institutional	11	38
Other	0	0
Total	15	316

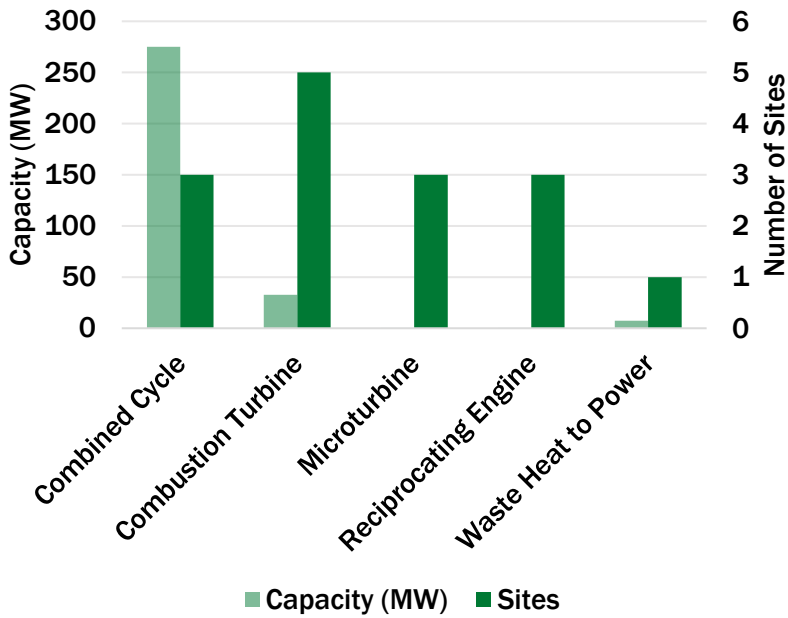
Western CHP TAP Director

Carol Denning

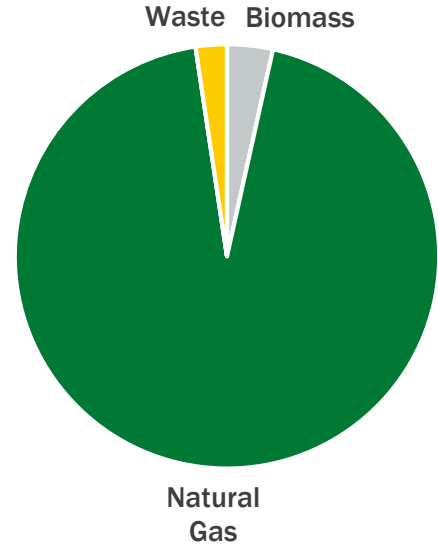
- Center for Sustainable Energy
- carol.denning@energycenter.org
- 530-513-2799



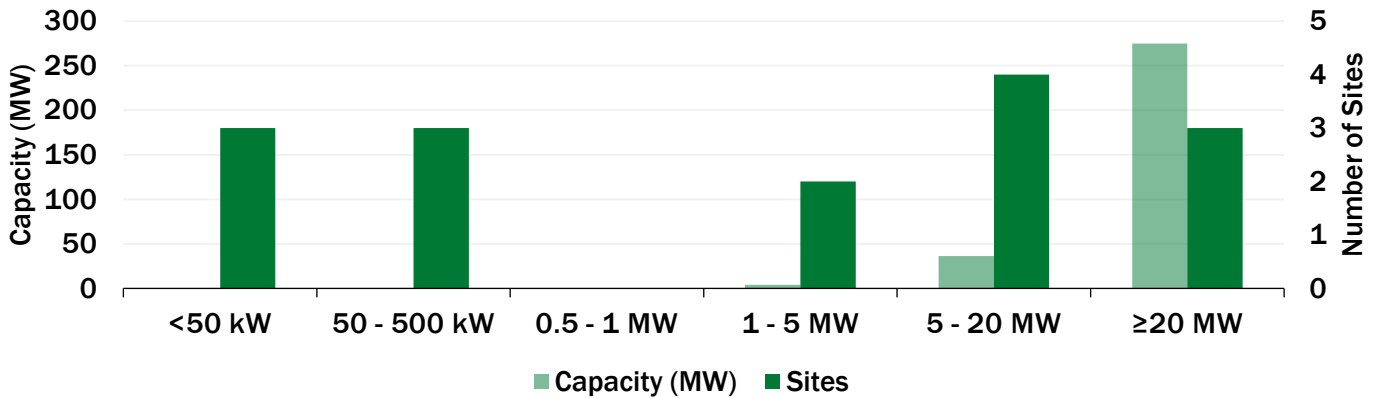
Nevada CHP by Technology



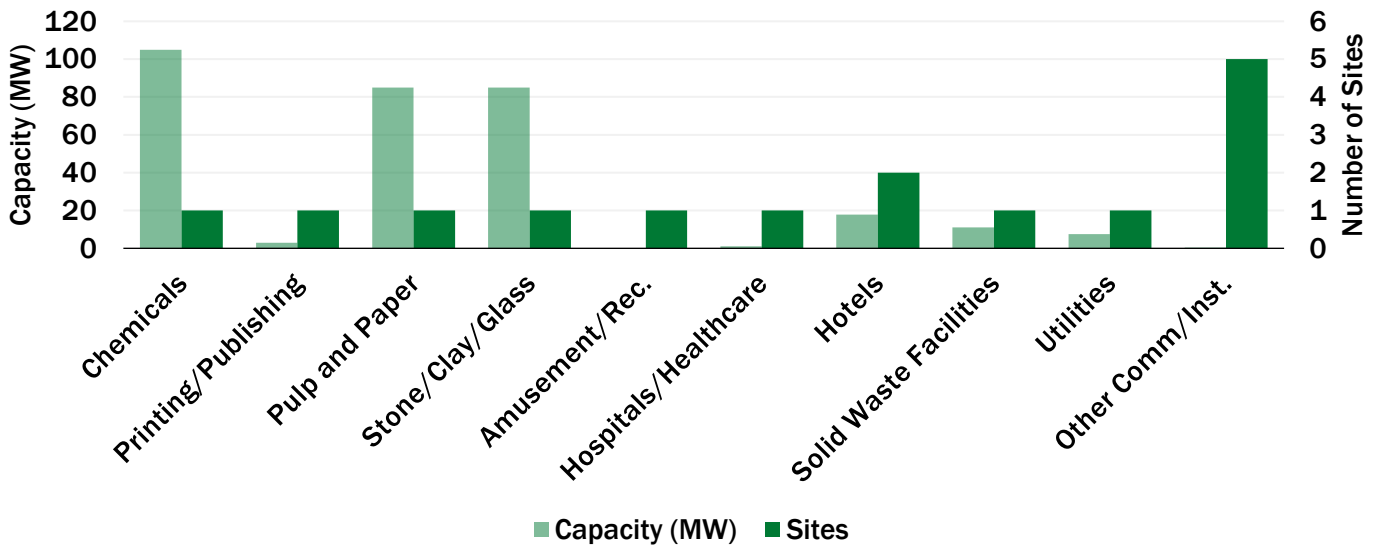
Nevada CHP Capacity (MW) by Fuel



Nevada CHP by Size Range



Nevada CHP by Application



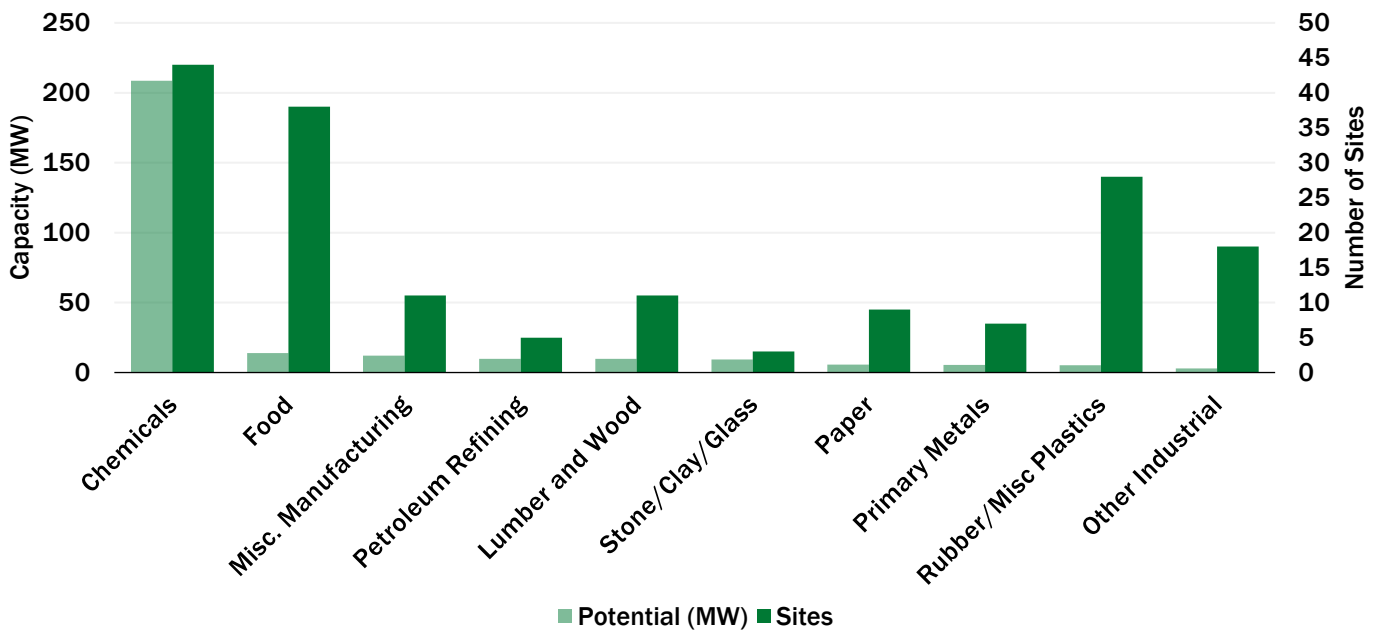
Nevada: Technical Potential for New CHP Installations

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](#).

Nevada CHP Technical Potential

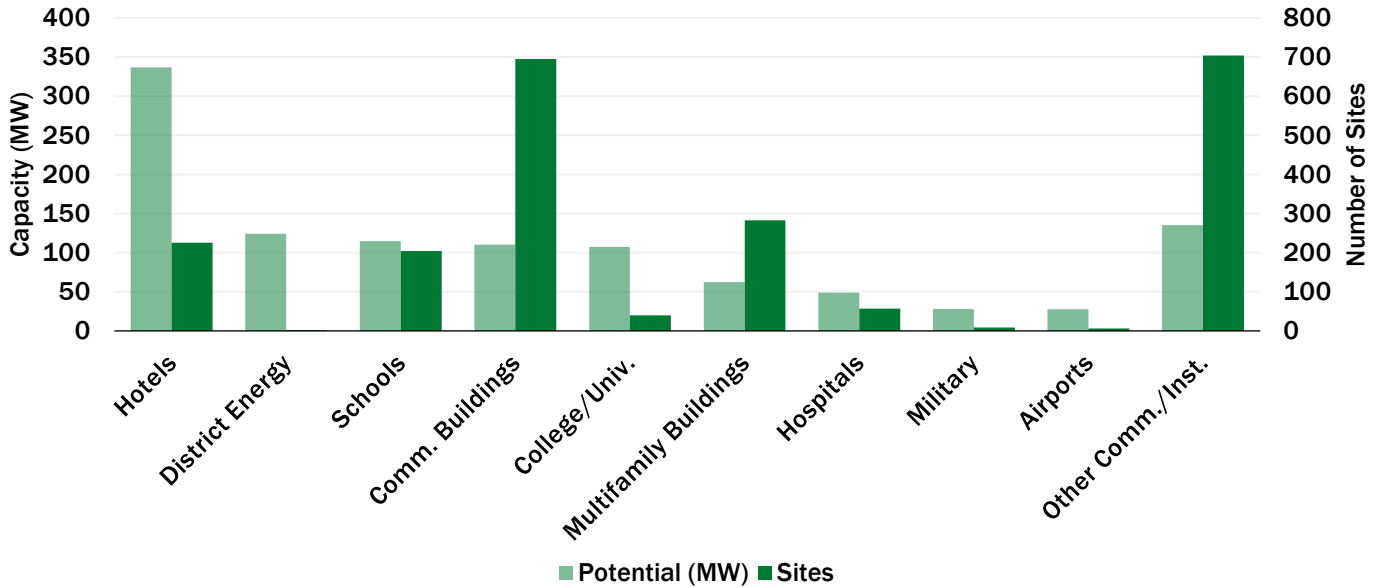
Sector	Potential Sites	Potential MW
Industrial	174	283
Commercial/Institutional	2,223	971
Total	2,397	1,254

Nevada 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	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

Nevada 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
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

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>

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.

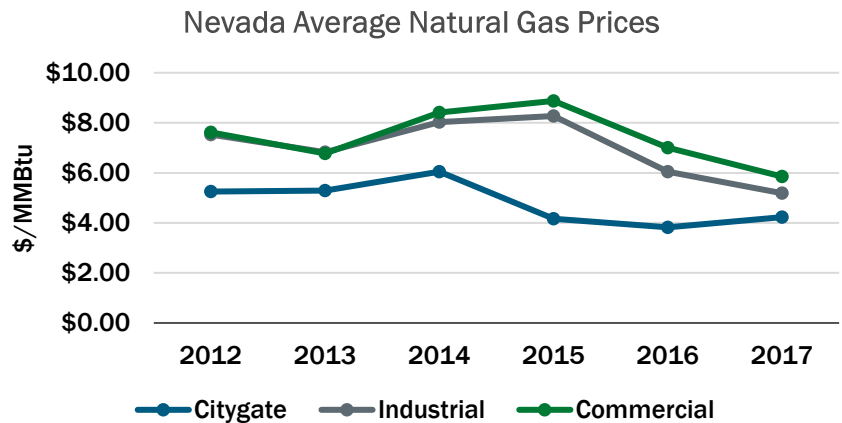
Nevada Natural Gas Prices

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 Average Gas Prices (\$/MMBtu) - 2017

Sector	NV Price	U.S. Price
Citygate*	4.23	4.26
Industrial	5.19	4.20
Commercial	5.85	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.

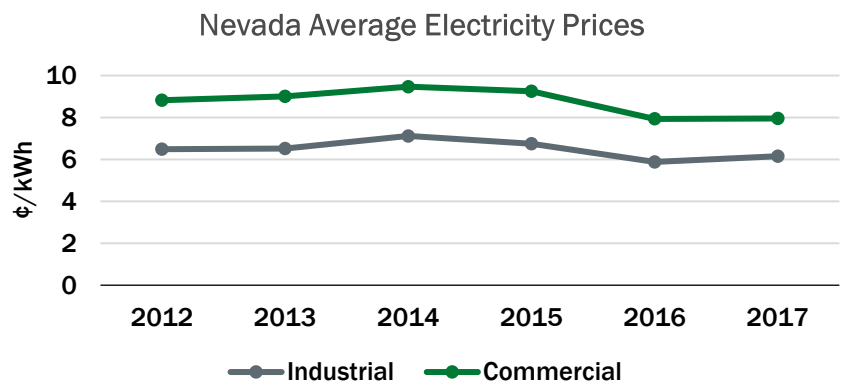


Nevada Electricity Prices

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

Nevada Average Electricity Prices (¢/kWh) - 2017

Sector	NV Price	U.S. Price
Industrial	6.15	6.88
Commercial	7.96	10.66



Nevada Average Delivered Electricity Prices by Utility

Utility	Industrial Price (¢/kWh)	Commercial Price (¢/kWh)	Average Price (¢/kWh)
Valley Electric Assn.	9.59	18.75	14.17
Overton Power District 5	8.48	9.78	9.13
NV Energy (Southern)	7.79	9.26	8.53
Mt. Wheeler Power	6.10	7.95	7.03
NV Energy (Northern)	5.12	8.09	6.60
Wells Rural Elec Coop	4.66	8.54	6.60
Raft Rural Elec Coop	5.16	5.42	5.29

