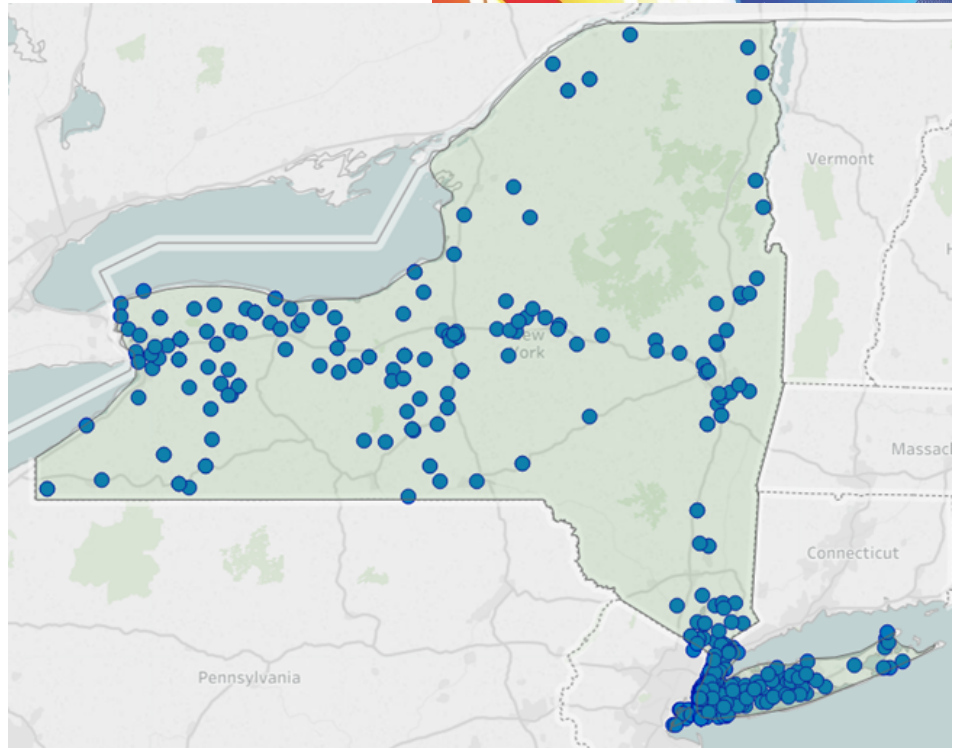


The State of CHP: New York



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



Map of current CHP installations in New York. Illustration from ICF.

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

CHP Project Profiles

The New York-New Jersey CHP TAP has compiled information on certain illustrative CHP projects in New York. 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>.

New York-New Jersey CHP Tech. Assistance Partnership

For assistance with questions about specific CHP opportunities in New York, please consult with the New York-New Jersey CHP TAP by visiting nynjchptap.org or contacting the TAP director.

New York Existing CHP

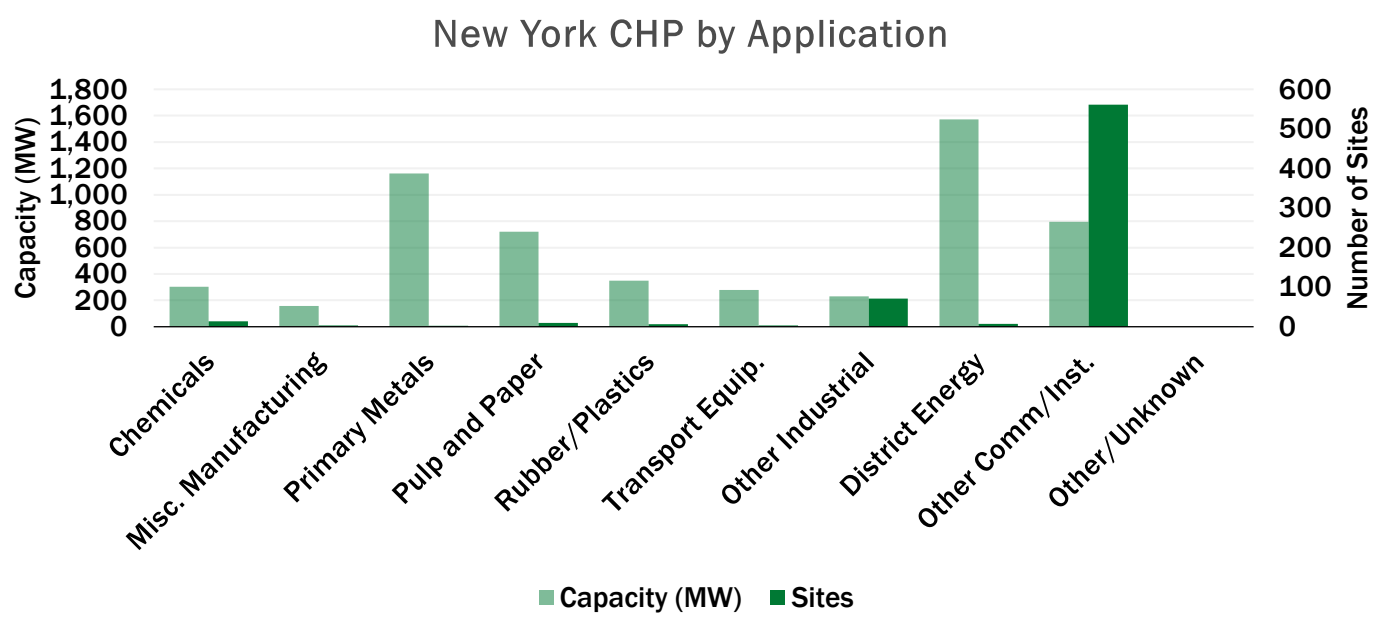
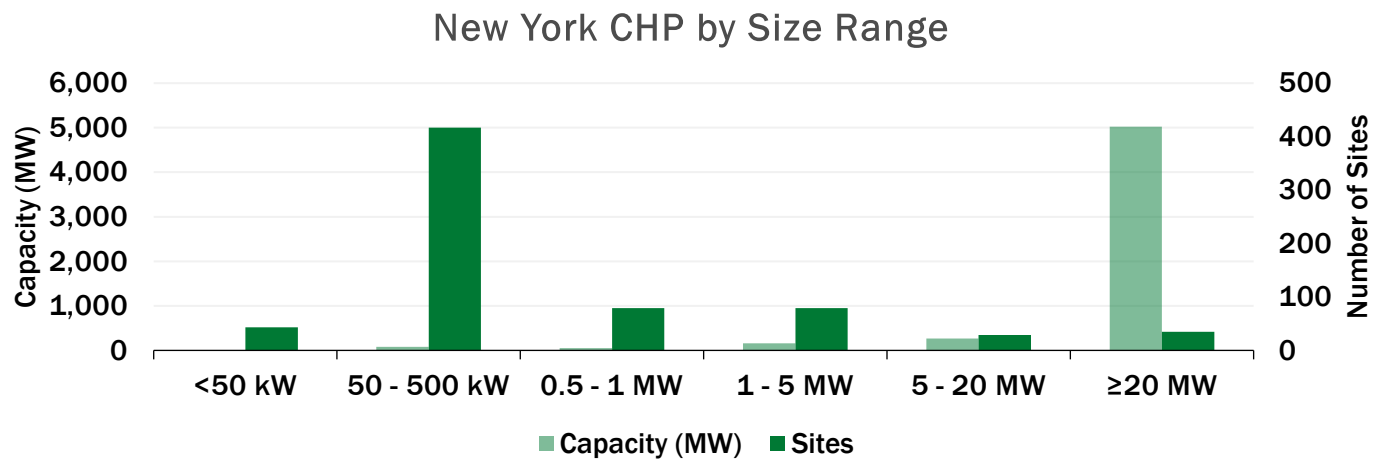
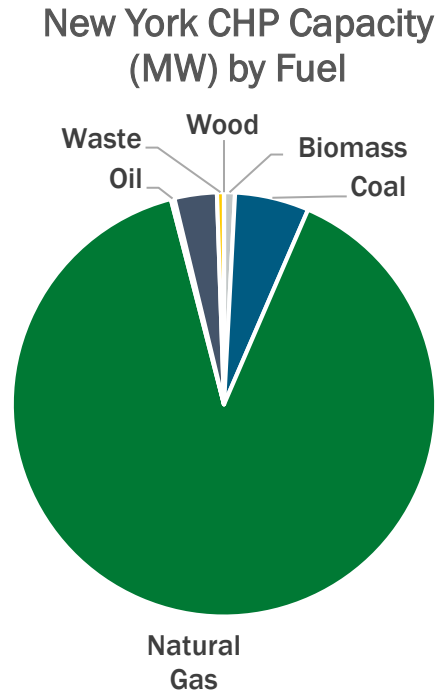
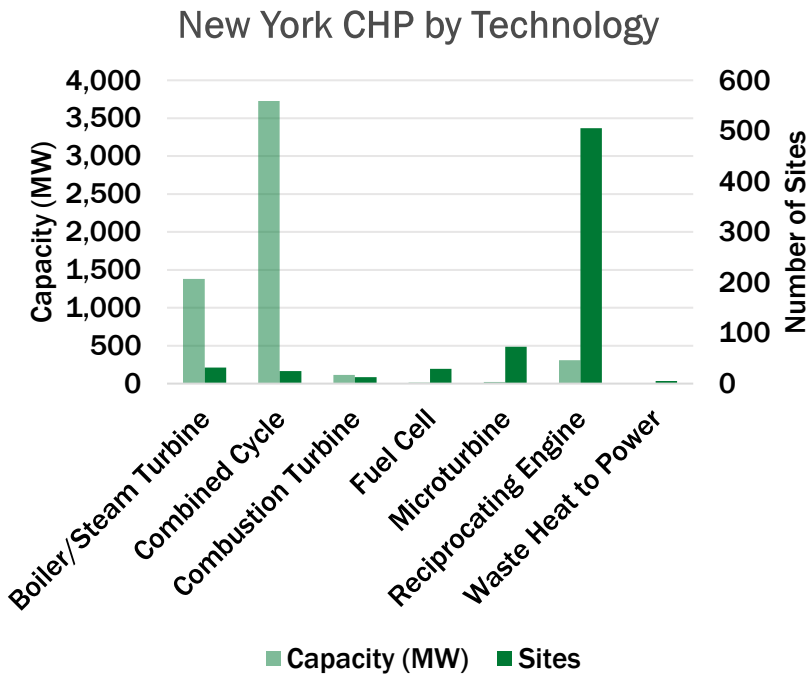
Sector	Sites	Capacity (MW)
Industrial	75	3,133
Commercial/Institutional	571	2,368
Other	36	71
Total	682	5,572

New York-New Jersey CHP TAP Director

Tom Bourgeois

- Pace University
- tbourgeois@law.pace.edu
- 914-422-4013





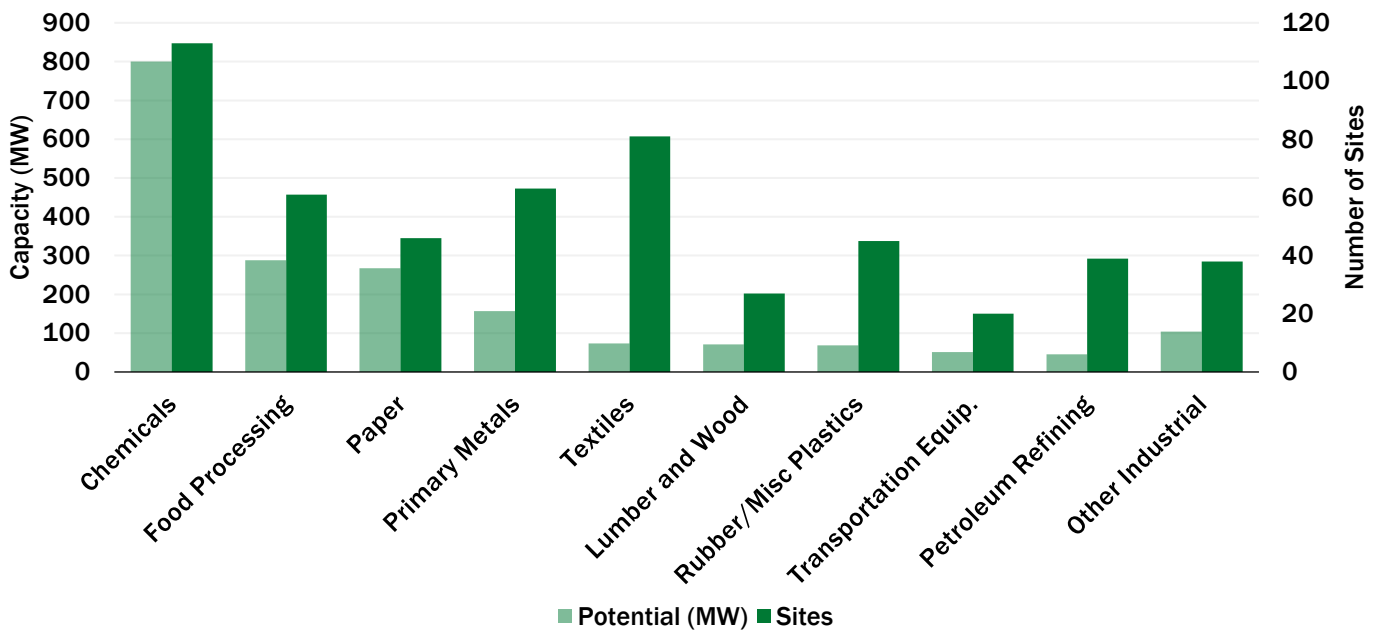
New York: Technical Potential for New CHP Installations

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](#).

New York CHP Technical Potential

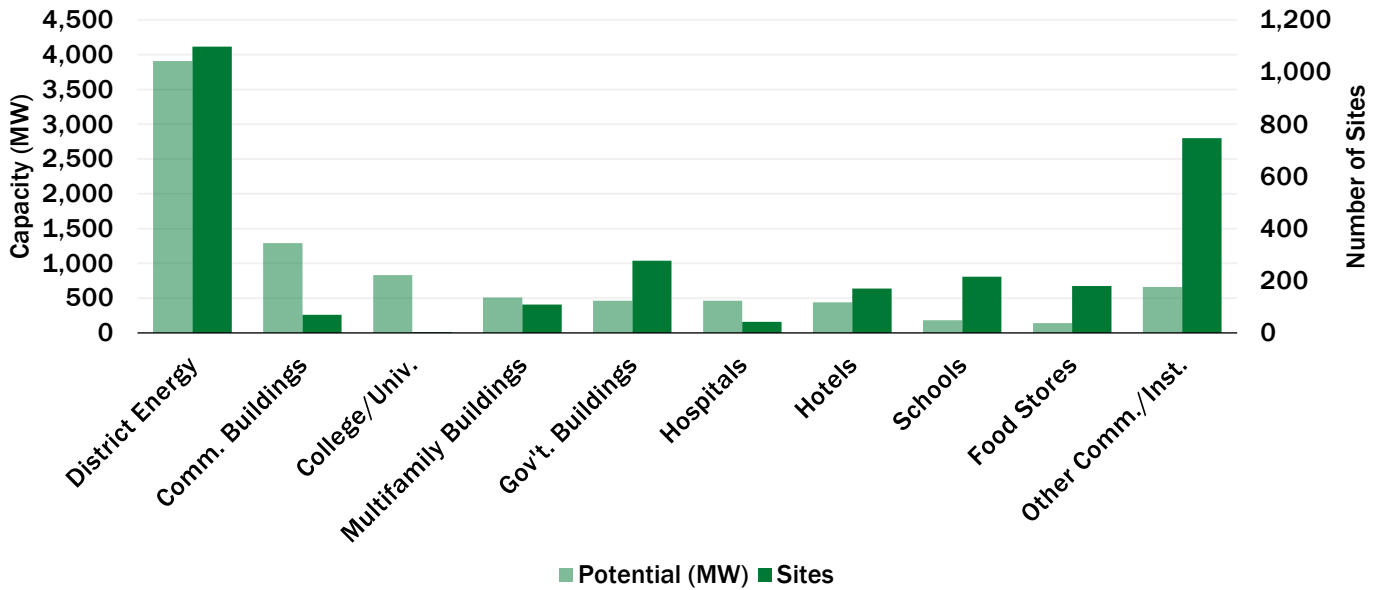
Sector	Potential Sites	Potential MW
Industrial	2,078	1,927
Commercial/Institutional	14,819	4,981
Total	16,897	6,908

New York 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	251	44	62	45	88	174	38	369	6	168	445	800
Food Processing	350	63	50	36	52	111	9	78	0	0	461	288
Paper	86	20	28	21	51	120	7	49	1	57	173	267
Primary Metals	40	10	17	12	12	26	7	78	1	29	77	157
Textiles	107	19	29	24	14	24	1	8	0	0	151	74
Other Industrial	645	102	61	40	59	141	6	57	0	0	771	341
Total	1,479	257	247	178	276	597	68	640	8	255	2,078	1,927

New York 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	3,487	174	1,743	697	697	418	0	0	0	0	5,927	1,290
College/Univ.	172	35	30	21	86	217	22	221	7	338	317	831
Multifamily Buildings	1,653	124	523	262	125	125	0	0	0	0	2,301	510
Government Buildings	387	61	53	37	49	94	17	161	1	112	507	464
Hospitals	38	11	35	26	139	318	15	107	0	0	227	462
Other Comm./Inst.	5,073	720	252	169	200	373	14	122	5	3,948	5,544	5,333
Total	10,810	1,125	2,636	1,211	1,296	1,544	68	604	13	497	14,823	8,891

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>

New York: 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.

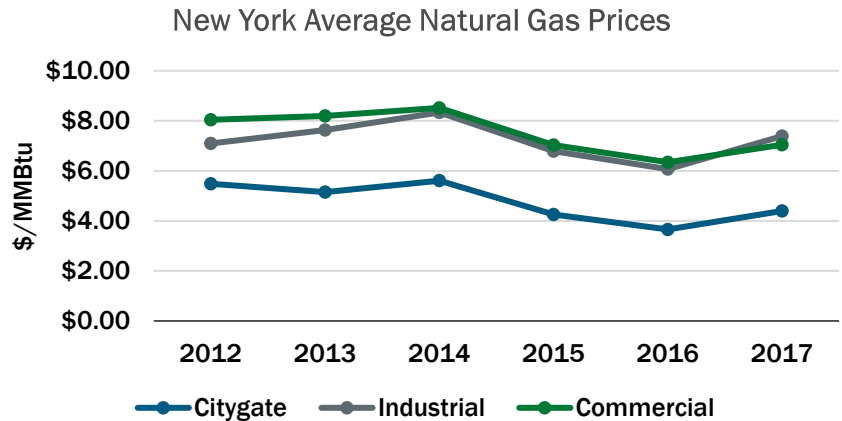
New York Natural Gas Prices

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.

New York Average Gas Prices (\$/MMBtu) - 2017

Sector	NY Price	U.S. Price
Citygate*	4.40	4.26
Industrial	7.39	4.20
Commercial	7.04	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.

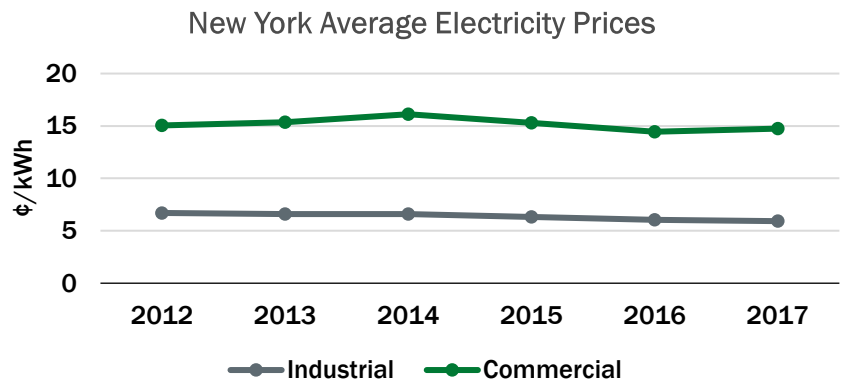


New York Electricity Prices

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

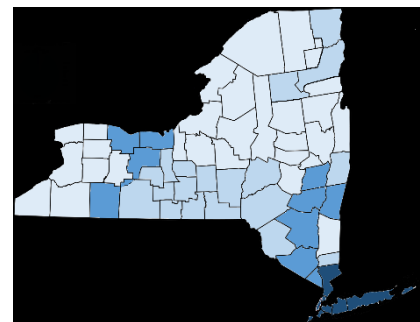
New York Average Electricity Prices (¢/kWh) - 2017

Sector	NY Price	U.S. Price
Industrial	5.92	6.88
Commercial	14.75	10.66



New York Average Delivered Electricity Prices by Utility

Utility	Industrial Price (¢/kWh)	Commercial Price (¢/kWh)	Average Price (¢/kWh)
PSEG Long Island	-	18.75	18.75
Con Edison of New York	17.18	19.73	18.45
Central Hudson Gas & Electric	10.41	12.89	11.65
Rochester Gas & Electric	10.90	12.26	11.58
Orange & Rockland Utilities	7.18	14.65	10.91
New York State Electric & Gas	6.56	10.27	8.41
National Grid	5.78	9.73	7.76



- National Grid
- New York State Electric & Gas
- Hudson / Rochester / Orange & Rockland
- PSEG Long Island / Con Edison