

The State of CHP: New York



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. For help with questions about specific CHP opportunities in New York, please consult with the [Northeast CHP Technical Assistance Partnership](#).

Installed CHP

CHP Technical Potential

CHP Economics

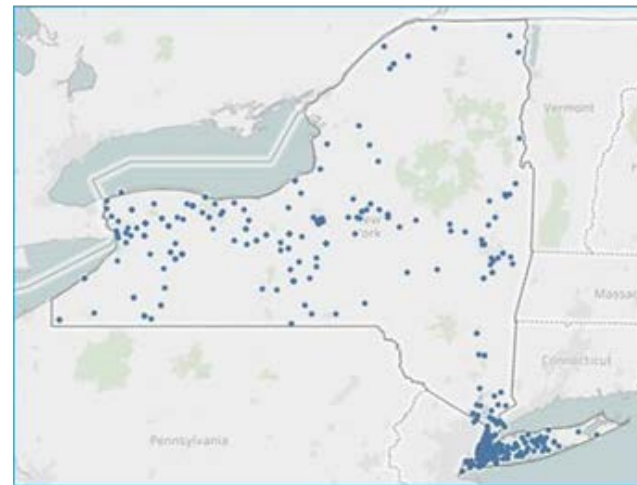
CHP Partners

New York Installed Base of CHP

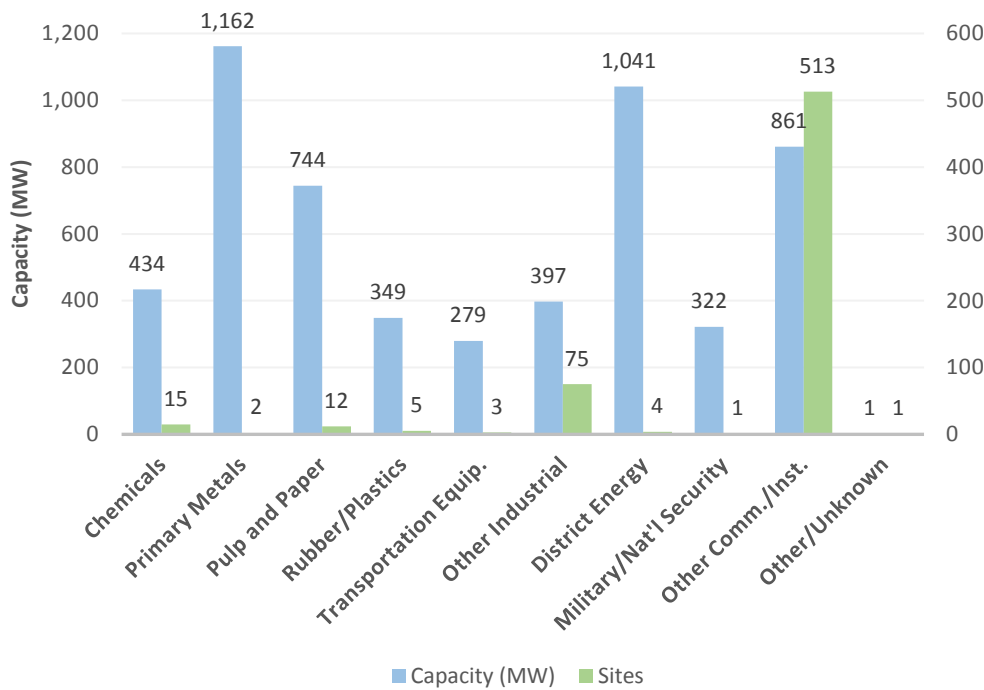
[U.S. DOE Combined Heat and Power Installation Database](#)

Sector	Installations	Capacity (MW)
Industrial	78	3,295
Commercial/Institutional	518	2,225
Other	35	72
Total	631	5,591

The Northeast CHP Technical Assistance Partnership 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](#).

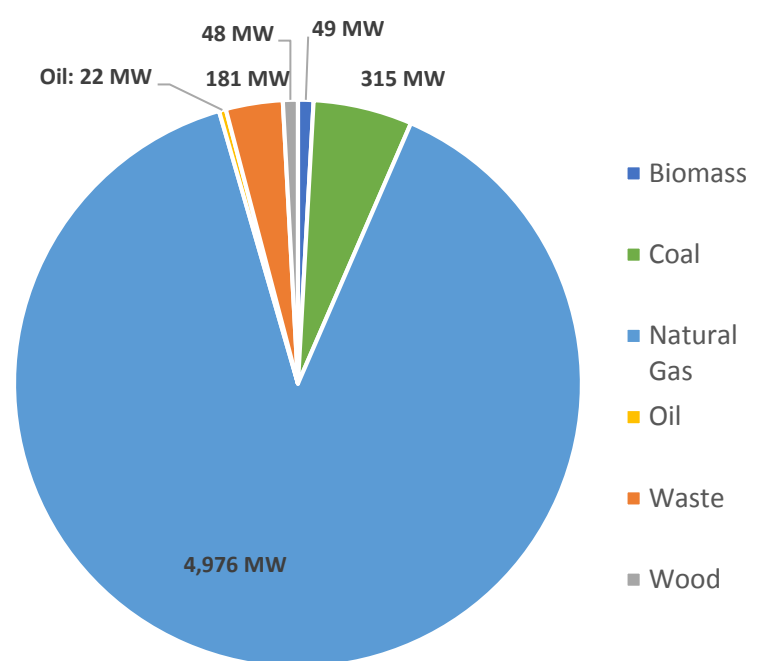


New York CHP by Application



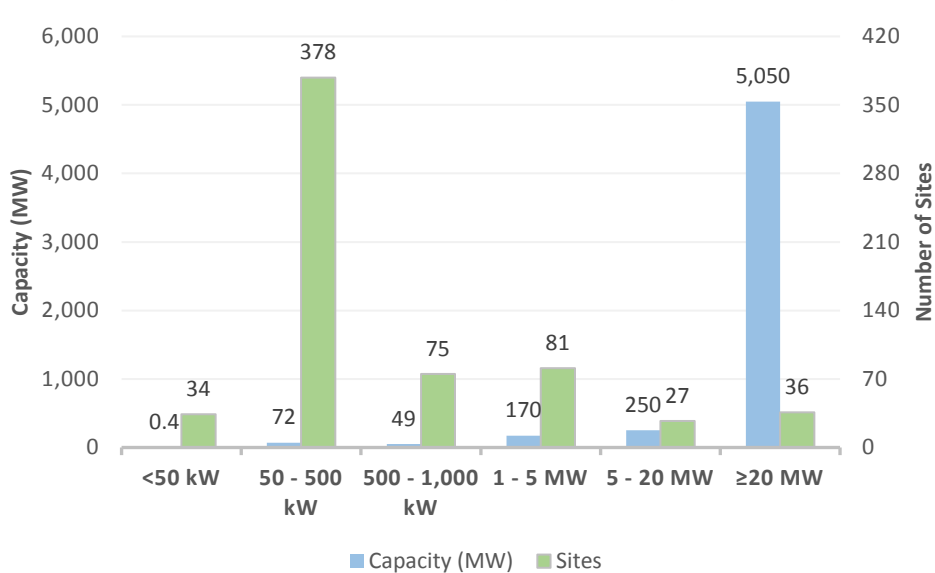
Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

New York CHP Capacity (MW) by Fuel Type



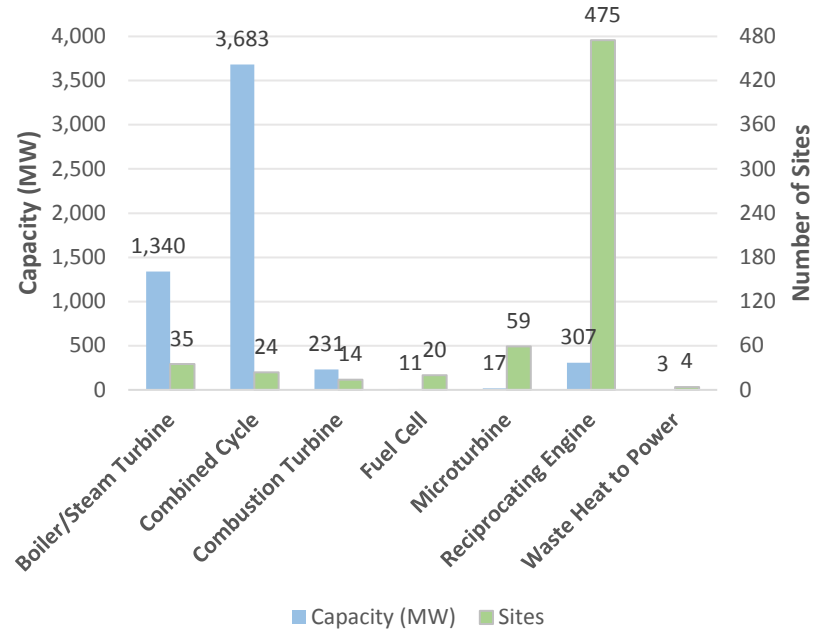
Source: DOE CHP Installation Database (U.S. installations as of Dec. 31, 2016)

New York CHP by Size Range



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

New York 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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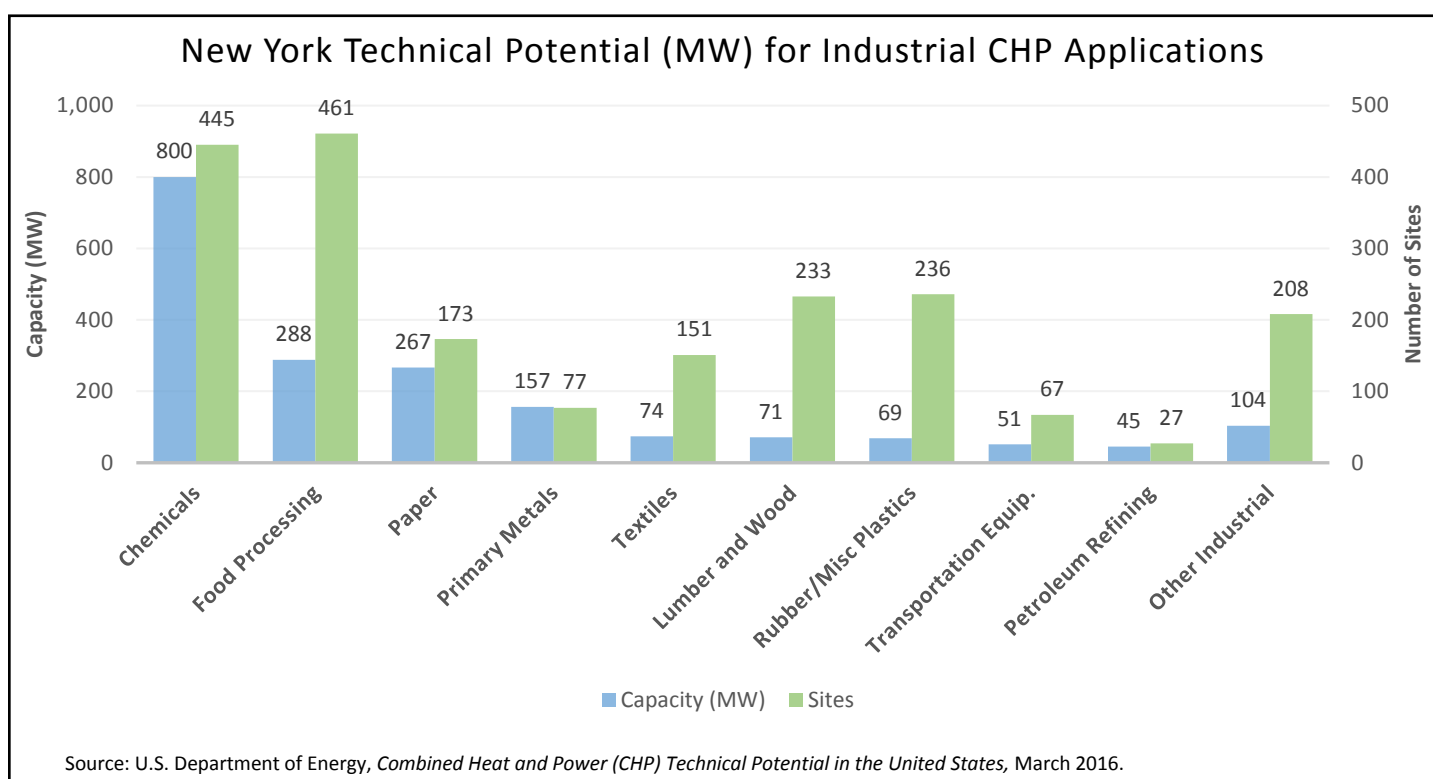
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New York Technical Potential for New CHP Installations

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

Sector	Potential Sites	Potential Capacity (MW)
Industrial	2,078	1,927
Commercial/Institutional	14,823	8,891
Total	16,901	10,818

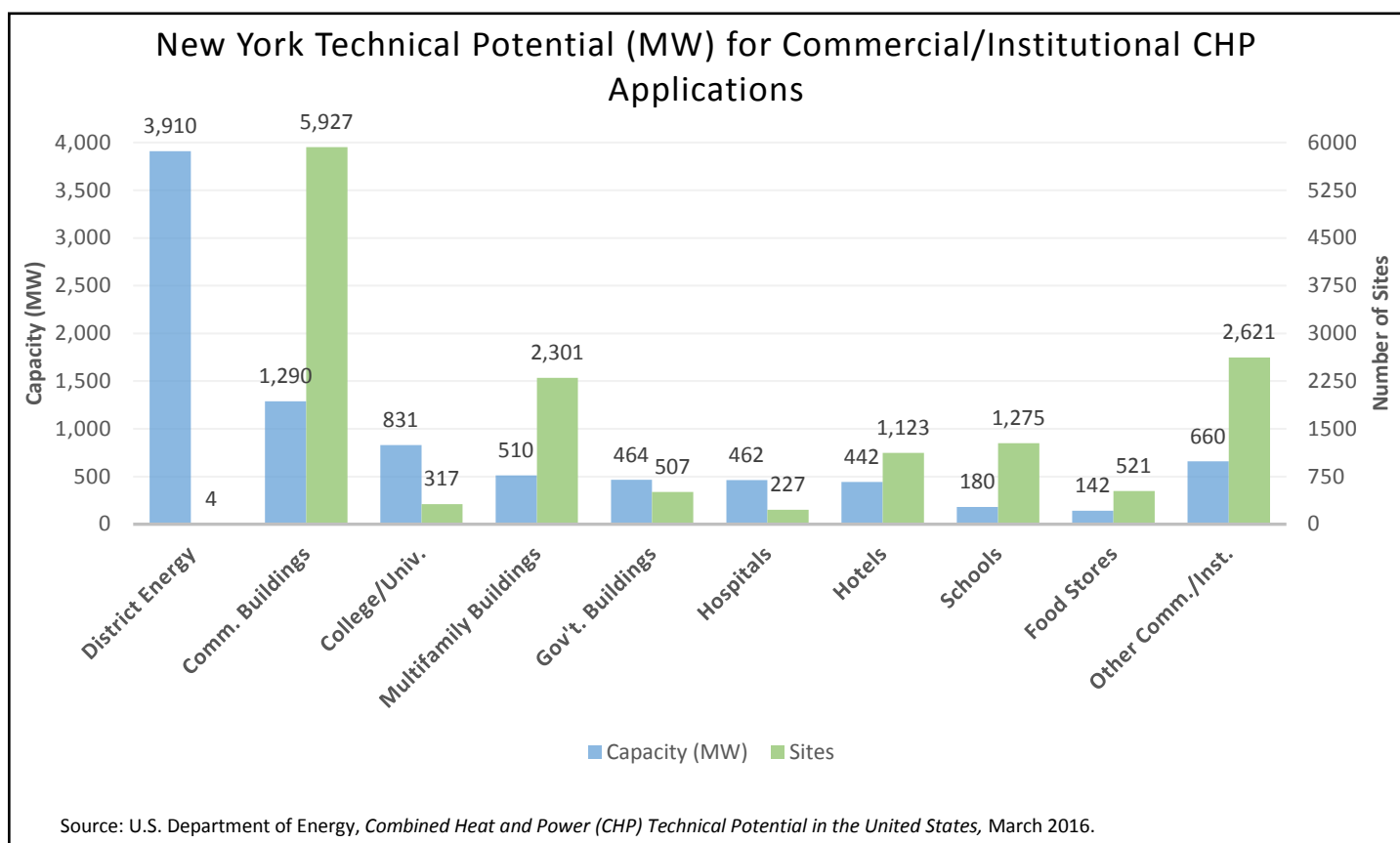


Source: U.S. Department of Energy, *Combined Heat and Power (CHP) Technical Potential in the United States*, March 2016.

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
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

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
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

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

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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.

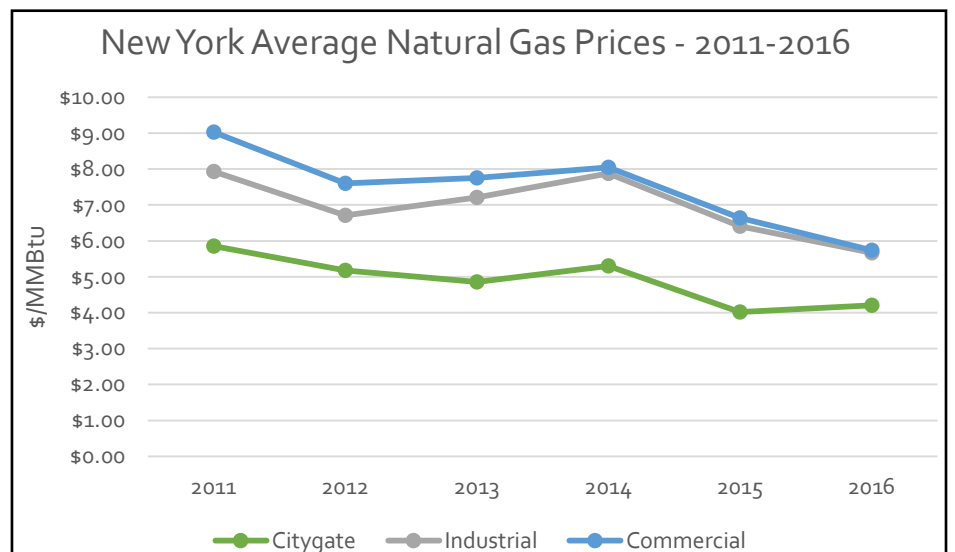
New York Natural Gas Prices

New York Average Gas Prices - 2016

Sector	NY Price (\$/MMBtu)	U.S. Price (\$/MMBtu)
Citygate*	4.21	3.75
Industrial	5.67	3.39
Commercial	5.74	7.22

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



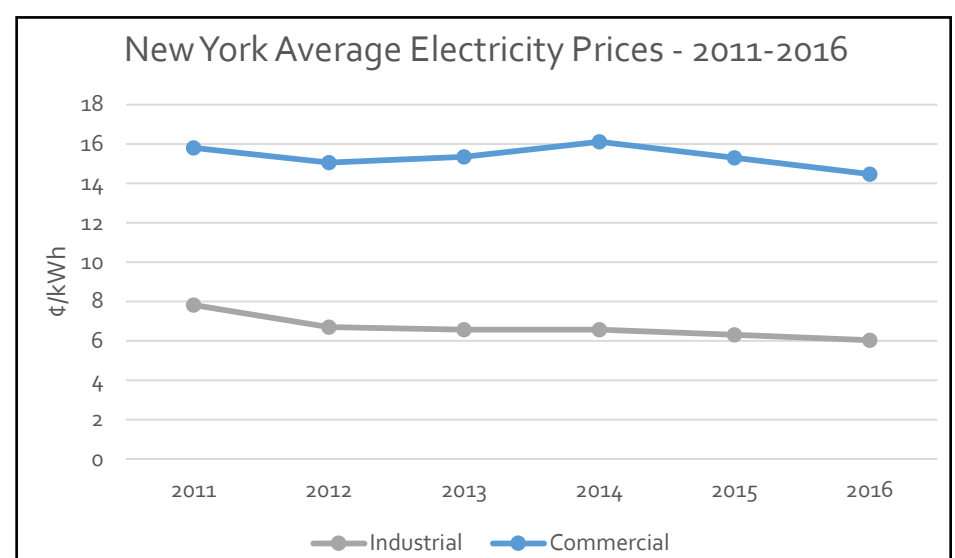
New York Electricity Prices

New York Average Electricity Prices - 2016

Sector	NY Price (¢/kWh)	U.S. Price (¢/kWh)
Industrial	6.04	6.75
Commercial	14.47	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.



New York Average Delivered Electricity Prices by Utility

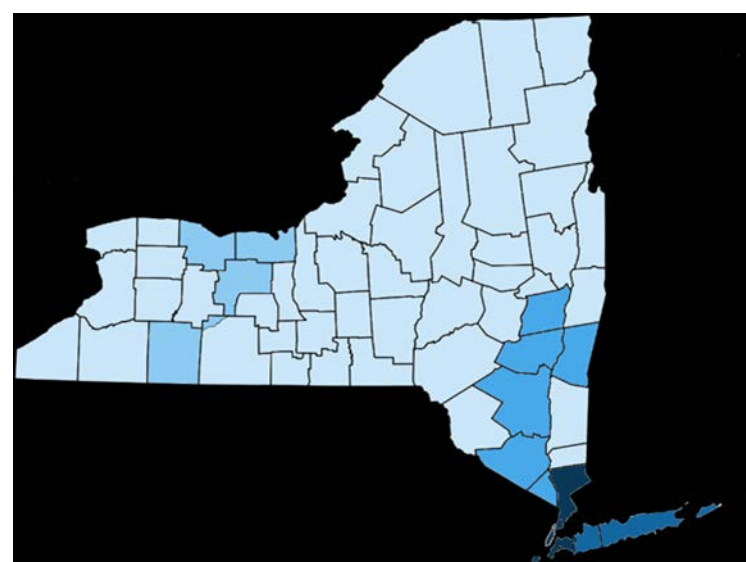
Utility	Industrial Price (¢/kWh)	Commercial Price (¢/kWh)	Average Price** (¢/kWh)
Con Edison of New York	16.70	20.57	18.64
PSEG – Long Island	-	17.46	17.46
Central Hudson Gas & Elec	10.92	13.94	12.43
Orange & Rockland Util	8.73	15.29	12.01
Rochester Gas & Electric	10.50	12.31	11.41
NY State Electric & Gas	7.21	11.41	9.31
National Grid	6.35	10.89	8.62

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.

New York Electricity Prices – Heat Map



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

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CHP Technical
Potential

CHP Economics

CHP Partners

Department of Energy CHP Partnerships

Northeast CHP Technical Assistance Partnership



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

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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](#).

- Bath Electric Gas and Water
- Long Island Power Authority
 - National Grid
 - NYC Mayor's Office
 - NYSERDA
 - PSEG Long Island

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