
Forbes

Big Apple Gambles on Clean Heat and Power

By William Pentland
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The prospect of massive rate hikes over the next three years has convinced many residents of New York City that small is not only beautiful but also makes good business sense.

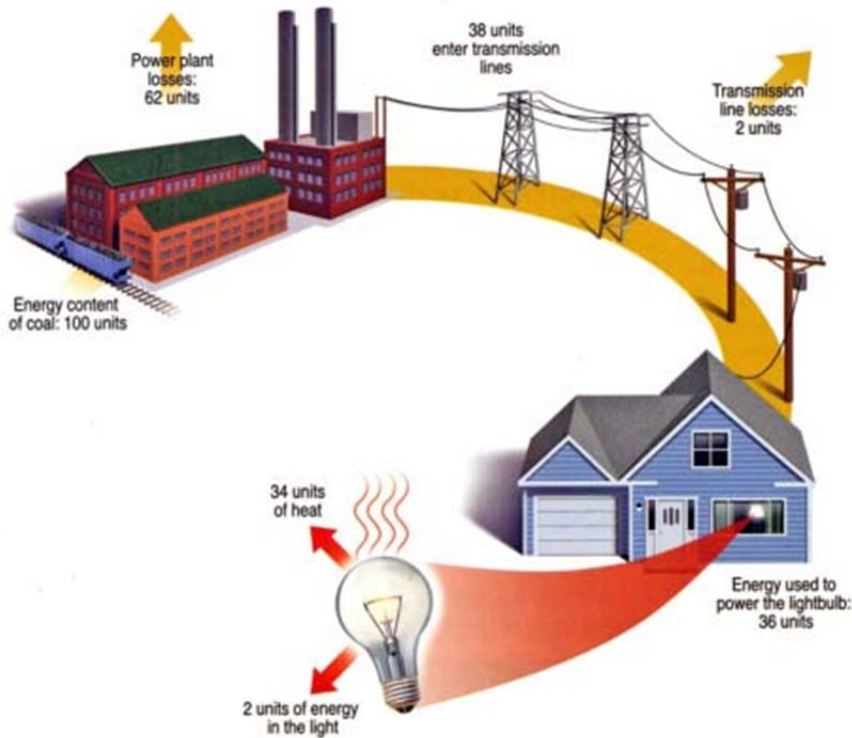
The [New York State Energy Research and Development Authority](#) (NYSERDA) announced plans to invest nearly \$20 million in clean heat and power generation (CHP) projects at hospitals, supermarkets and multi-family housing facilities in New York City. NYSERDA pays between 30% and 50% of the cost of a CHP project, depending on whether and to what extent the project provides collateral public benefits. For example, hospitals can provide a “place of refuge” during a disaster.

CHP, often called “cogeneration,” is the most compelling clean-energy technology most people never knew existed. It works like so: the first part of the system burns natural gas or biomass feedstock to produce electric power. The second part of the system captures heat wasted during the first part, which usually sneaks up the chimney or otherwise vanishes unnoticed, and uses it to provide space heating or hot water. This wildly simple solution is also enormously powerful.

For every two units of electricity provided to consumers through the conventional power generation and delivery system, as much as 98 units are wasted along the way. In other words, although the scale of losses varies depending on a range of factors, the U.S. uses only 2% of the power produced and delivered via the conventional electricity grid.

By contrast, CHP reduces the amount of energy wasted by an order of magnitude. Since power from CHP is generated on-site, CHP avoids transmission losses that typically result from moving electricity over power lines. Furthermore, by capturing and reusing energy that would otherwise be lost in waste-heat, CHP improves overall efficiency by double digits.

Unlike some clean-energy technologies (e.g. solar photovoltaics), CHP does not depend heavily on government largesse to walk the chalk in de-regulated electric power markets like those in New York State. The proof is in the pudding on this point: every dollar of public-sector funds received by these projects was being matched by nearly four dollars in private-sector investment toward buying and installing the systems that generate on-site electricity and use waste-heat created during generation.



“Combined heat and power is a technology that has huge potential to reduce the strain on the state’s electric grid in New York, and NYSERDA is proud to support it,” said Francis J. Murray Jr., President and CEO of NYSERDA. “CHP will help reduce air pollution in the state’s most densely-populated areas, and will also help conserve our limited fossil fuel resources and increase the nation’s energy self-sufficiency.”

The selected projects represent more than 22,000 kilowatts (kW) of new generation capacity. All projects will be capable of operating during a power outage. The projects selected for funding in New York City include:

- The Intrepid Sea, Air and Space Museum – 400 kW, \$4.6 million. NYSERDA funding: \$2 million.
- The Churchill, a multifamily residence, 300 E. 40th St. – 150 kW, \$975,000. NYSERDA funding: \$487,700.
- Silver Towers, a multifamily residence, 620 West 42nd St. – 300 kW, \$1.5 million. NYSERDA funding: \$750,000
- Jefferson Towers, a multifamily residence, 700 Columbus Ave. – 100 kW, \$786,000. NYSERDA funding: \$393,000.
- Chelsea Mercantile Condominium, 252 7th Ave. – 200 kW, \$1.2 million. NYSERDA funding: \$619,000
- Women’s Housing and Economic Development Corp’s Urban Horizons, a multifamily residence, 50 E. 168th St. – 75 kW, \$565,000. NYSERDA funding: \$282,000.
- Roosevelt Landing, a multifamily residence, Roosevelt Island – 300 kW, \$1.7 million. NYSERDA funding: \$875,000.
- The 60 E. 8th St. Condominium – 200 kW, \$1.4 million. NYSERDA funding: \$686,000.
- The New York Palace Hotel, 455 Madison Ave. – 780 kW, \$5.6 million. NYSERDA funding: \$2 million.
- Montefiore Medical Center, Bronx – 990 kW, \$3 million. NYSERDA funding: \$1.5 million.
- Seaside Plaza, a multifamily residence, Father Capodana Blvd., Staten Island – 100 kW, \$575,000. NYSERDA funding: \$287,000.
- Concord Court, a multifamily residence, 55 Bowen St., Staten Island – 100 kW, \$565,000. NYSERDA funding: \$282,000.
- Whole Foods Market, Yonkers (two sites) – 314 kW, \$1.4 million. NYSERDA funding: \$709,000.