

Combined Heat & Power (CHP)

WHAT IS CHP?

CHP is a clean and efficient approach to generating power and thermal energy from a single fuel source. CHP systems provide at least a portion of a facility's electrical load and capture waste heat from hot exhaust gases for use in space heating, cooling, domestic hot water, dehumidification and/or process heating. To learn more about CHP, visit the U.S. DOE and EPA websites:

[CHP Deployment | Department of Energy](#)

[Combined Heat and Power \(CHP\) Partnership | US EPA](#)

NEW CHP OFFERING

The Combined Heat and Power (CHP) is intended to:

- Assess the economics of site specific CHP opportunities
- Stimulate the implementation of CHP projects by ComEd customers
- Conventional or Topping cycle CHP systems, as well as Waste Heat-to-Power (WHP) or Bottoming cycle CHP systems are eligible

AVAILABLE INCENTIVES

Qualified projects are eligible to receive the following:

- 50 percent of feasibility assessment cost up to \$25,000
- 50 percent of interconnection fee up to \$25,000
- Production Incentive: \$0.07 per eligible kWh based on review of 12 months of metered data and capped at \$2,000,000. See example on the back page.

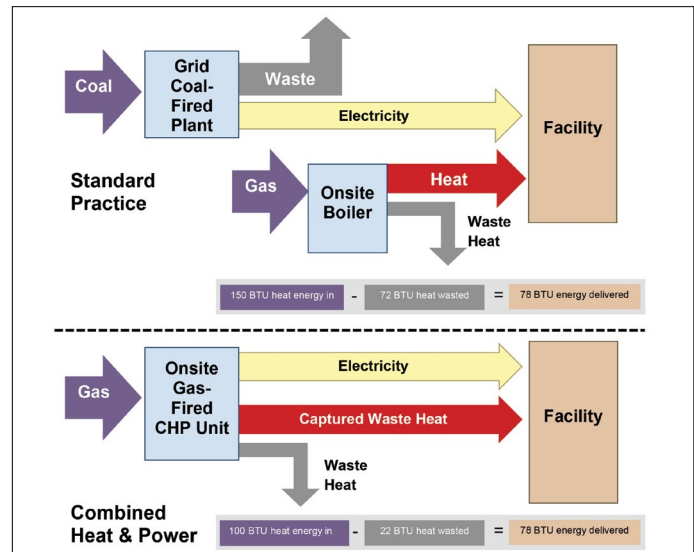
CALCULATION METHODOLOGIES

CHP efficiency and kWh calculation methodologies are available in the Illinois Technical Reference Manual (TRM). The latest version is available at the following website:

<http://www.ilsag.info/technical-reference-manual.html>

ELIGIBILITY REQUIREMENTS

- Program incentives are available to all non-residential customers who are ComEd service delivery customers contributing to the Energy Efficiency and Demand Response Adjustment (Rider EDA) and receive their electricity over ComEd wires, regardless of retail electric supplier. Funds are limited and subject to availability.
- CHP feasibility assessment and interconnection fee incentive are available to customers with a peak demand of ≥ 1 MW.
- The production incentive of \$0.07/eligible kWh is available to C&I customers of any demand class.



- CHP feasibility assessments and projects must be pre-approved
- CHP feasibility assessments must be used to study one of the following:
 - o The viability of a new topping or bottoming cycle CHP installation
 - o The rehabilitation of an existing system that has been idle for at least three years
 - o An existing engine or combustion turbine system that is not presently outfitted with heat recovery capability that can be converted to a CHP system
- Newly designed and constructed conventional or topping cycle CHP systems must have annual fuel use efficiencies of at least 60 percent Higher Heating Value (HHV) with at least 20 percent of the system's total useful energy output in the form of useful thermal energy. These systems will have a net zero annual export of power to the grid.
- Public entities, such as government buildings, municipal facilities and public schools, are not eligible under this program and should refer to the Illinois Department of Commerce and Economic Opportunity (DCEO) Program (www.illinoisenergy.org) for incentive opportunities.
- **CHP service providers** are available to assist with applications and perform assessments. For customers considering a contractor not on the list, please contact ComEd.

EXAMPLE PRODUCTION INCENTIVE CALCULATION

The following example involves a CHP project that is eligible for the production incentive, has a 1,000 kW generating capacity, and operates 24x7 (8,760 hours per year) at full capacity. Based on the guidelines outlined in this document and the Illinois TRM, Table 1 indicates incentive amounts for a conventional (or topping cycle) system. Table 2 indicates incentive amounts for a waste heat-to-power, (or bottoming cycle) system. Note that both tables take into account the required 12 months of post-commissioning runtime and illustrate that eligible kWh is the product of the annual system efficiency and kWh produced for the site in the first 12 months post-commissioning. For details on the calculation methodology, visit the Illinois TRM as referenced on front page.

TABLE 1: TOPPING CYCLE CHP EXAMPLE CALCULATION

ANNUAL SYSTEM EFFICIENCY (HHV)	PARTICIPATING NATURAL GAS UTILITY	COMED PRODUCTION INCENTIVE CALCULATION	COMED PRODUCTION INCENTIVE PAID TO CUSTOMER	INCENTIVE VALUE IN TERMS OF INSTALLED kW
60%	N/A	$65\% \times 8,760,000 \text{ kWh} \times \$0.07/\text{kWh}$	\$398,580	\$399/kW
65%	N/A	$70\% \times 8,760,000 \text{ kWh} \times \$0.07/\text{kWh}$	\$429,240	\$429/kW
67%	Yes*	$70\% \times 8,760,000 \text{ kWh} \times \$0.07/\text{kWh}$	\$429,240	\$429/kW
67%	No	$72\% \times 8,760,000 \text{ kWh} \times \$0.07/\text{kWh}$	\$441,504	\$442/kW
70%	Yes*	$70\% \times 8,760,000 \text{ kWh} \times \$0.07/\text{kWh}$	\$429,240	\$429/kW
70%	No	$75\% \times 8,760,000 \text{ kWh} \times \$0.07/\text{kWh}$	\$459,900	\$460/kW

*Note: When a site's natural gas utility is participating in the CHP incentive program outlined in the Illinois TRM, a CHP project will be eligible for additional incentives from the natural gas utility.

TABLE 2: BOTTOMING CYCLE CHP EXAMPLE CALCULATION

ANNUAL SYSTEM EFFICIENCY (HHV)	PARTICIPATING NATURAL GAS UTILITY	COMED PRODUCTION INCENTIVE CALCULATION	COMED PRODUCTION INCENTIVE PAID TO CUSTOMER	INCENTIVE VALUE IN TERMS OF INSTALLED kW
N/A	N/A	$100\% \times 8,760,000 \text{ kWh} \times \$0.07/\text{kWh}$	\$613,200	\$613/kW

CONTACT US

More information on CHP or other offerings, applications and incentives can be found at ComEd.com/BizIncentives. Questions? Call 855-433-2700 or email BusinessEE@ComEd.com.