



September 2013

Connecticut Combined Heat and Power Programs

Combined heat and power (CHP), also known as cogeneration, is the generation of electricity and heat from a single fuel source. Many businesses and institutions have utilized CHP to reduce their energy costs. Several programs have recently been announced to facilitate the deployment of CHP in Connecticut.

CEFIA PILOT PROGRAM

In July, the Clean Energy Finance and Investment Authority (CEFIA) released a rolling Request for Proposal (RFP) for its CHP Pilot Program (CEFIA Pilot Program). This rolling RFP replaces CEFIA's original CHP program RFP, which had a specific submission deadline. CEFIA will administer the CEFIA Pilot Program, which currently has \$5 million in funding available. CEFIA's closing date for accepting applications is February 27, 2015.

Applicants may select one, or a combination, of the following funding options:

- Grant Option (funding cannot exceed 80 percent of project cost)
- Loan Option
- Power Purchase Agreement (PPA) Option (funding cannot exceed 80 percent of project cost)

Funding for selected projects may vary based on the specific technology, efficiency, and economics of the installation but will not exceed the equivalent of \$450 per kilowatt (KW) of nameplate-rated capacity per project.

The funding's intent is to enable applicants to achieve a reasonable "payback" during the life of a project, with a fair and reasonable return on investment, compared with purchasing the equivalent amount of power from the utility. CEFIA plans to place an emphasis on evaluating the financial feasibility of each proposed installation as well as the applicant's ability to complete construction in a timely manner. To that end, CEFIA intends to recommend only those projects that (1) use commercially available generation technologies; (2) have already achieved substantial progress in permitting and site control; (3) require minimal investment from CEFIA; (4) are ready for deployment; and (5) are installed at sites that have taken advantage of available energy efficiency incentive programs. Projects requiring no, or little, direct subsidy will rank higher in preference than those requiring the most direct subsidy. Funding is contingent upon the execution of a Financial Assistance Agreement (FAA) with CEFIA, which must be accepted "as is," except for technical revisions or project-specific revisions required due to special features of a particular project. Funding is also contingent upon a project reaching the in-service date within 18 months of FAA execution.

Minimum eligibility requirements for the CEFIA Pilot Program include the following:

- Projects must be at commercial, industrial, or institutional facilities
- Projects must have a nameplate capacity of 5 megawatt (MW) or less
- Projects must use a commercially available CHP system to generate power
- Projects must be located in either Connecticut Light & Power's (CL&P) or United Illuminating's (UI) service territory

In addition to meeting the minimum eligibility requirements, projects must also be in the development phase and may not already be under construction. Also, eligible projects must operate as a base load system; offer warranties, spare parts, and service agreements commensurate with their commercial status; provide a full manufacturer's warranty to cover major components of the generating system, balance of plant, and inverter against breakdown or degradation in electrical output for a minimum of one year for all equipment; and secure delivery of natural gas or other appropriate fuel on a long-term basis (i.e., at least one year).

Furthermore, if a project is a seasonal, temporary, or limited-use facility, close scrutiny will be made for high value and visibility. The electricity production from the CHP unit should not exceed 100 percent of the average load demand for the facility, based on the past 12 months' usage data. Any capacity above this amount will not be eligible for CEFIA financial support. If a project anticipates significant excess energy, then the incentive will be calculated on the proportion of the project's capacity that does not result in excess production. The CHP system's combined efficiency must be 50 percent or greater.

Projects that have already received a grant from CEFIA under past solicitations for CHP projects are not eligible under the CEFIA Pilot Program. Projects receiving incentives from the CEFIA Pilot Program will not be eligible to participate in any future Zero Emission Renewable Energy Credit (ZREC) or Low-Emission Renewable Energy Credit (LREC) program solicitations.

Projects meeting the CEFIA Pilot Program's minimum requirements will be evaluated by CEFIA for financial support based on the following: (1) project economics, (2) deployment of the eligible resource/technology, (3) probability of project completion and project feasibility, and (4) public and unique ratepayer benefits. CEFIA will also review total project costs, including all of the following:

- All installation costs
- Gas/fuel usage costs
- Local contracted gas/fuel prices
- Annual service and maintenance costs
- Avoided costs based on CHP thermal availability
- Avoided electricity savings at the project's location

The evaluation timeframe will differ depending on the funding option utilized. For grants and PPAs, the evaluation timeframe will be 20 years whereas the evaluation timeframe for loans will be 15 years.

DEEP GRANT PROGRAM

The Department of Energy and Environmental Protection (DEEP) has also established the CHP Grant Program (DEEP Grant Program) to encourage the installation of CHP systems in Connecticut. CHP projects that were not yet constructed as of October 1, 2011, will be eligible to apply for inclusion. To qualify, CHP projects must meet all of the following:

1. Have a nameplate capacity of one MW or less
2. Be located within the CL&P or UI service territories
3. Reduce energy costs at an amount equal to or greater than the amount of the installation cost of the CHP system within 10 years of installation
4. Have an operating efficiency level of at least 50 percent and contribute at least 20 percent of energy output to electricity and at least 20 percent of energy output to thermal energy

Selected projects will be awarded a fixed capital grant of \$200 per kilowatt (KW) of nameplate capacity. Completion of the project must be achieved within two years of grant approval or the awarded capital may be reduced or rescinded.

Any project qualifying for the DEEP Grant Program will be ineligible to participate in the CEFIA Pilot Program, the ZREC/LREC Program, and other similar programs subsidized by CL&P and UI ratepayers. However, selected projects may still be eligible for additional financial incentives such as the following:

- The low-interest loan program (loans of \$1 million or more, at a subsidized interest rate that is one percent below the applicable rate or no more than the prime rate)
- The sale of Renewable Energy Certificates (RECs) (eligible projects may qualify for RECS, which can be sold in the wholesale energy market)
- The waiver of natural gas distribution charges (certain distribution charges may be waived for eligible projects that use natural gas supplied by Connecticut Natural Gas, Southern Connecticut Gas, or Yankee Gas Services)
- The elimination of electric backup rates and demand ratchets
- Other CEFIA programs (except CEFIA Pilot Program)

DEEP PILOT PROGRAM

Pursuant to Section 59 of Public Act 13-298, DEEP has also announced it will establish a pilot program (DEEP Pilot Program) to promote CHP systems by limiting the demand charge utilities impose. The DEEP Pilot Program will support up to 20 MW of aggregate nameplate capacity on a first-come, first-served basis.

A qualifying project must be a CHP system that provides commercial, industrial, or residential facilities with both electrical generation and heat output; has a nameplate capacity of between 500 and 5,000 KW; is placed into service between January 1, 2012, and January 1, 2015; and is not eligible under the CEFIA Pilot Program or CEFIA's condominium renewable energy grant program. Qualifying projects must become operational within one year of selection or their capacity may be offered to other qualifying projects.

A qualifying project will be eligible to participate in the DEEP Pilot Program for 10 years from the time the project is placed in service. A qualifying CHP project selected to participate in the DEEP Pilot Program will not be required to pay the demand charges pursuant to the distribution demand-ratchet provision of firm service due to an outage of such project. If a selected project experiences an outage lasting for less than three hours, then no demand charge will be assessed. If a selected project experiences an outage of longer than three hours, then a demand charge based on daily demand pricing, pro-rated from standard monthly rates, will be incurred. Any electric customer with a qualifying project that participates in the DEEP Pilot Program will be allowed to aggregate all electric meters on the same premises as the qualifying project and billable to such customer.

DEEP is currently establishing the parameters of the program and receiving public comments until September 13, and is expected to issue a final determination by October 28, 2013.

STREAMLINED CHP PERMITTING

Depending on the specific characteristics of a particular CHP project, an individual air emissions permit from DEEP, which can take six to nine months, may be required. However, DEEP recently announced a new "permit-by-rule" that can be used in lieu of the requirement to obtain an individual permit.

Eligibility to use the permit-by-rule is limited to CHP systems that commence construction on or after June 27, 2013 (the effective date of the permit-by-rule regulation), have a design system efficiency of at least 55 percent, and have a nameplate capacity of less than 10 MW. In addition, the aggregate nameplate capacity for the CHP system and all other fossil fuel-fired electricity generation units located at the same premises (excluding emergency generators) must, at the time of construction, be less than 10 MW. The CHP system must also meet the following further criteria:

- Have potential emissions of 15 tons or more per year of any individual air pollutant
- Not be a new "major stationary source," a "major modification" of an existing "major stationary source," or a newly constructed or reconstructed "major source of federal hazardous air pollutants" (These terms have specific and sometimes complex definitions elsewhere in DEEP's air regulations.)

To maintain coverage under the permit-by-rule, the CHP system must comply with all applicable provisions of the permit-by-rule. Here are some key requirements:

- Actual system efficiency shall not be less than 55 percent per each consecutive 12-month period, except during a period of startup, shutdown, or malfunction, or as allowed by DEEP during performance testing
- Generally, only natural gas may be used as fuel, except in a combustion turbine when Ultra-Low Sulfur Diesel (ULSD) may be used as an auxiliary fuel within certain limits
- Any stack associated with the CHP system must meet certain minimum height requirements (10 meters or, if greater, a figure calculated by a regulatory formula based on the maximum width or height of certain nearby buildings)
- The CHP system must comply with specified annual emissions limitations, as demonstrated through periodic performance testing or continuous monitoring

The permit-by-rule also specifies additional monitoring, record keeping, and reporting requirements.

For more information, please contact:

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