



Brooklyn, Kings County

4C Foods Corporation operates a major food processing plant in Brooklyn, New York. The plant encompasses over 150,000 sq. ft. and employs 150 personnel. The main plant shift operates approximately 5 to 6 days per week circa 12 hours per day.

The electric, thermal and cooling load profile characteristics make 4C Foods an ideal site for a Combined Heat and Power (CHP) plant, due to its food drying process that requires the concurrent need for both heat and electricity. CHP systems provide on-site electrical generation and use the heat from the generation equipment to provide cooling and/or heating for the building. Increasing CHP penetration will raise productivity in industry, lower regional energy costs, strengthen energy security, enhance consumer choice, reduce price risks for end users, and provide environmental benefits.

4C Foods Corp. installed and demonstrated a CHP system of generators fueled by natural gas, consisting of two 150 kW and one 80 kW; one 130-ton waste-heat-driven absorption chiller; and Balance of Plant (BOP) including a system to provide recovered heat in the form of process heat for drying of foodstuffs, comfort heating and comfort cooling. The CHP system is grid-connected.

This project is forecasted to provide peak load reduction of approximately 435 kW and results in over \$190,000 in annual net energy savings for the host-site facility. It is forecasted that approximately 85% of the engine's rejected heat will be beneficially used.

Many food processing facilities are good candidates for CHP systems because of extended hours of use and their energy profiles. 4C Foods, due to its location in the central commercial area of Brooklyn, serves as an excellent demonstration site for a successful CHP implementation.

Benefits Include:

- Energy savings
- Successful use of waste heat
- Cost Savings

Results to Date:

- Project is fully operational

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Industrial R&D – Distributed Generation as Combined Heat and Power
SBC funded



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