

High Electrical Efficiency Micro-Turbine Engine

Install CHP with service water heating using a 70 kW Ingersoll-Rand micro-turbine with heat recovery.

BACKGROUND

10 West 66th Street in Manhattan is a multi-family residential cooperative building. This 256-unit electrically heated and cooled high-rise was previously retrofitted with a computerized electrical sub-metering system utilizing carrier wave transmittal of information and a gas-fired hot glycol hallway heating system to replace 266 kW of electric heaters. The incorporation of combined heat and power (CHP) has long been considered, but shelved in the past by a relatively long payback period.

OBJECTIVE

This project seeks to demonstrate CHP in an urban residential cooperative. The demonstration will promote adoption of CHP by other residential cooperatives on a broader level.

DESCRIPTION

DSM Engineering Associates, PC seeks to demonstrate CHP at 10 West 66th Street using a 70 kW Ingersoll-Rand micro-turbine fitted with heat recovery for service water heating capabilities.

BENEFITS

Approximately 70 kW reduction in peak demand from the downstate electric grid. Net annual savings of \$34,000 per year for the housing cooperative. Establishment of a model of a higher-efficiency micro-turbine installation that may expedite future CHP adoption among residential cooperatives.

SCHEDULE AND STATUS

Project is underway.

Funding	Encumb to Date	Pending	Total Anticipated
DSM Engineering Associates, P.C.	\$176,725.00	\$0.00	\$176,725.00
NYSERDA	\$200,025.00	\$0.00	\$200,025.00
TOTALS	\$376,750.00	\$0.00	\$376,750.00

Manager	Borowiec, Joseph C.
Contracts	STD-6546
Contractors	DSM Engineering Associates, P.C.
Technologies	Cogeneration
Cities	Hauppauge, New York
Counties	New York, Suffolk