

## Pine Bush ENergy CHP Demo Project

Installation and Demonstration of a CHP System at the Avila Senior Living Center

### BACKGROUND

The Avila Senior Living Center ("Avila") is a new retirement community under construction in Albany, New York (located on Washington Avenue Extension behind the Teresian House Nursing Home and adjacent to the Albany Pine Bush Preserve). When completed Avila will have 128 one and two bedroom apartments, and 24 cottage homes. Designated for active seniors, the complex will also include a "town center" building, offering dining swimming pool, fitness center, hair salon, and other amenities. The project is being developed by the Teresian House Housing Corp. in affiliation with the Roman Catholic Diocese of Albany.

### OBJECTIVE

The design, installation and commissioning of a CHP System at the Avila Senior Living Center in Albany, New York.

### Description

Pine Bush Energy, LLC with a NYSERDA award in the amount of \$700,000 shall design, install and operate a 1,170 kilowatt Combined Heat and Power System ("CHP") at the Avila Senior Living Center. The System will consist of two (2) natural gas input Ingersoll-Rand 250S Microturbines rated at 250 kW each and two (2) Jenbacher J 208 GS C86 lean burn internal combustion engines with oxidation catalysts rated at 335kW each and Balance of Plant (BOP). The units will be interconnected with the local electric utility grid for standby power and will provide all of the site's heating and cooling energy needs. In the event when power from the utility is lost, the CHP System will be capable of operating in a stand alone (islanded) mode supply power to the facility. The plant will be housed in the mechanical room of the new facility. The CHP System is expected to achieve a overall system efficiency of 74% (32% electrical efficiency and 42% thermal efficiency).

### BENEFITS

The proposed CHP project will reduce the emission of criteria pollutant associated with the burning of fossil fuels. Approximately 25% less fossil fuel (compared to a non-CHP solution) will be used in supplying the facility's thermal and electricity requirements. The installation of the CHP System at Avila will also avoid local utility distribution system upgrades and provide the availability of strategic services with a reliable energy supply to respond

The project is expected to yield excellent technology transfer and publicity opportunities with the demonstration of the newly introduced Ingersoll-Ra

<b>Funding</b>	<b>Encumb to Date</b>	<b>Pending</b>	<b>Total Anticipated</b>
NYSERDA	\$700,000.00	\$0.00	\$700,000.00
Pine Bush Energy LLC	\$1,769,050.00	\$0.00	\$1,769,050.00
<b>TOTALS</b>	<b>\$2,469,050.00</b>	<b>\$0.00</b>	<b>\$2,469,050.00</b>

<b>Manager</b>	Borowiec, Joseph C.
<b>Contracts</b>	STD-7868
<b>Contractors</b>	Pine Bush Energy LLC
<b>Cities</b>	Albany
<b>Counties</b>	Albany