

# Mass. city to get district heating, cogen. (Springfield, Massachusetts)

## Energy User News

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Mass. City to Get District Heating, Cogen.

DETROIT--ANR Venture Management Co. here has announced plans to develop a \$40 million, dual-fuel cogeneration-fired district heating system for Springfield, Mass.

The project is expected to heat and cool more than 40 buildings and generate 22.5 megawatts of electricity.

For the initial phase, the developers have preliminary commitments to connect the system to roughly 15 buildings.

These include the city hall, some apartment buildings, and the civic center, according to Ishai Olikier, district heating expert with Burns and Roe Co., Oradell, N.J.

Burns and Roe is designing the system. The developer, ANR Venture Management, is part of Coastal Corp., which owns interstate gas pipelines that serve the Midwest and Rocky Mountains.

The Quadrangle, a five-building museum and library complex, already has been retrofitted for connection to the district heating and cooling system.

The construction supervisor and eventual operator of the system will be Affiliated Resources Corp., Hartford, a subsidiary of Connecticut Natural Gas Corp.

Users can expect to cut energy costs by 15 to 25 percent, Olikier stated. The prospective Springfield customers have gas-fired and oil-fired boilers at present, according to Frank Stallwood, director of business development for ANR Venture Management.

The cogeneration system will consist of two combined-cycle gas-fired turbines with waste heat recovery systems and a steam turbine generator producing 34,000 pounds per hour of steam and 22.5 megawatts of power.

Steam from the cogeneration plant will be piped to a central production and distribution center near the City Hall Annex. Heat exchangers and absorption chillers sized between 3,000 and 5,000 tons will convert steam to hot or chilled water and pipe it to the buildings.

Equipment manufacturers have not yet been chosen.

The developer will supply users with thermal-unit meters to monitor consumption. The user must pay for whatever retrofits are needed to hook up to the district heating system, including the building's heat exchanger.

Costs range from \$20,000 for a building already heated by hot water to \$110,000 for a steam building.

Oliker said the reduction in energy costs will be enhanced by lower insurance and maintenance costs and by increased income-producing space if the boiler is removed, Oliker said.

Oliker said the developers have a letter of intent from Massachusetts Municipal Wholesale Electric Co. (MMWEC) to buy the electricity from the project. The buyback rate and terms have not been finalized, but Oliker said he expects the utility consortium to offer 6.5 cents per kwh for 20 years.

An MMWEC spokesman acknowledged that a levelized rate is envisioned but could not specify any buyback price.

Springfield's electricity comes from Western Massachusetts Electric Co., but that utility will not be the destination of the district heating system's electricity.

The MMWEC spokesman said his organization will be taking the buyback power because Western Massachusetts Electric did not want additional cogenerated power for itself.

MMWEC's total intake of cogenerated power will rise to 39.5 megawatts from 17 megawatts as a result of the Springfield deal.

The system, scheduled to begin operating in July 1989, will use nearly 2 billion cubic feet of natural gas, Stallwood said. No. 2 oil will be used as a backup, to be purchased from Belcher New England Inc. in Revere, he added.

According to Oliker, the city of Springfield may buy spot gas transported by Bay State Gas Company, Canton, Mass., the local gas utility.

Until Massachusetts Department of Public Utilities approves gas transportation rates, however, any gas would be purchased from Bay State itself.

Oliker speculated that the carriage gas would cost about \$3.00 per mmBtu.

A Bay State spokesman said that the company had the necessary volume for the project and was very interested, but had not yet discussed it with the city in any detail.