

From The Morning Call

**Alternative electricity company testing the water
Harnessing pressure in the pipes may generate profits for the city.**

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Of The Morning Call
May 13, 2005*

After decades of providing water to more than 100,000 people, Bethlehem Authority may soon be getting into the business of selling electricity. A New York-based startup company has approached authority officials with a revolutionary new method to use excess water pressure in Bethlehem's system to create electricity that would be pumped into the regional power grid. Rentricity, formed in the wake of the 2001 terrorist attacks, believes that attaching "miniturbines" to the water system's Allen Township transmission lines can create enough electricity to power about 160 homes and raise about \$100,000 a year, according to David Brong, Bethlehem's Water and Sewer Resources director. "It's a very young industry, but it's kind of an exciting idea," Brong said. "We think it has real potential."

That's exactly what Frank Zammataro was thinking after he was bombed out of his Broadway office on Sept. 11, 2001. As a Wall Street executive relocated outside the city after the attack, he kept looking out the window of his new temporary office at a 30-story water tower across the street, wondering how much water pressure was being created when the water left that tank. That's when he and Rentricity co-founder Al Spinell decided to start a business that turned that excess water pressure into electricity. Bethlehem, for example, has 52 miles of transmission lines that carry its water from its reservoirs in Carbon and Monroe counties into the 33,000 homes and businesses in 11 municipalities in the Bethlehem area. However, on the way, valves are used to reduce the water pressure before it reaches the customers. Until now, the energy created by reducing the water pressure has always simply burned off as excess heat. Rentricity officials want to attach a small turbine to two different pressure-reducing valves to channel the excess heat into the turbines to create electricity. The energy from those valves in Allen Township can continuously create about 175 kilowatts of power that can be resold for 6 cents to 8 cents per kilowatt, Zammataro said Thursday.

So far, Rentricity has three projects in Connecticut and Rhode Island, and has begun to expand into Pennsylvania. "The whole idea grew out of 9/11," Zammataro said. "Our first site goes live next month, and we've already started on two others." And with 52 miles of transmission lines, Bethlehem's electricity-making system could grow, he said. But first things first, and that means negotiating a deal with Bethlehem. Rentricity, using government grants and its own capital, would design and install all the equipment. For that, it would get a cut of the sales, which could start at \$80,000 to \$100,000 a year, but could grow if Bethlehem has other pressure-reducing valves that can be fit with the turbines. The project would take about 11 months, Zammataro said. Exactly how much would go to the authority, and how much would go to Rentricity or even if the authority is willing to do it has yet to be determined. But there's little question that authority officials are intrigued. "It's actually very exciting," said Authority Executive Director Steven Salvesen. "Definitely worth pursuing."

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