

# Where Change Is Tradition

By Jeanne LaBella



**Jamestown's Samuel A. Carlson Electric Generating Station and the Board of Public Utilities Operations Center sit on the banks of the Chadakoin River.**

Utility decisions to build electric generating capacity are difficult. The capital investment is enormous and cannot be made without incurring long-term debt. The prospect of additional environmental regulations introduce uncertainty and threaten to raise costs beyond budgeted levels. Permitting, land use, transmission and the need to manage a large construction project all contribute to the complexity of the decision. These factors are weighed against the need to provide low-cost, reliable electricity for existing customers and to develop an infrastructure that will spur local economic growth.

The Jamestown Board of Public Utilities in New York knows all this. It has been in the electric generating and delivery business since 1891. It has evaluated and made those difficult decisions on multiple occasions, with no regrets. Today it is, once again, evaluating a major capital investment—\$450 million—to secure local electricity supplies and to position the city as a leader in the crusade to alleviate greenhouse gas emissions.

When David Leathers, general manager

of Jamestown BPU, reflects on the utility's greatest accomplishments in its 119-year history, he points to decisions made in the 1940s, '50s and '60s to continue investing in electric generating facilities.

"We are one of the few municipal utilities in New York state to own our generation," Leathers said. "That has served this community very, very well. We have fuel diversity. This has led to rate stability and reliability. Those were great decisions. They are never easy."

Steve Kulig has worked for Jamestown BPU for 35 years and is the lead technical person on the utility's project to build a plant with state-of-the-art carbon capture and sequestration capabilities. He agrees with his boss's assessment of the utility proudest accomplishments.

"Our biggest accomplishment is going with change, not resisting it," he said. In the 1980s, Jamestown BPU installed a district heating system that today supplies steam heat to 73 customers, including schools, a hospital and a retirement community. The

utility's wastewater plant uses leading edge technology. The responsibilities of maintaining a generating plant over several decades present large challenges, he said, "especially when you have a fiduciary responsibility to your customers, which is not always there for investor-owned utilities."

The vast majority—80 to 90 percent—of electricity delivered to Jamestown BPU customers comes from the New York Power Authority's Niagara Power Project. But the city's local generating resources, the Samuel A. Carlson Electric Generating Station, a 49-MW coal-fired plant, and its 43-MW LM6000 gas turbine, can supply almost all of the city's electricity needs, if needed.

On Aug. 14, 2003, when a tree branch in Ohio fell on a First Energy power line, plunging the northeastern United States and parts of Canada into a blackout, Jamestown fired up its gas turbine and, with that energy and output from its coal plant, fed its entire system and exported power to neighboring areas, said Kyle Joesel, power plant manager.

The capital project on the Jamestown

BPU drawing board today is the New York Oxy-Coal project, a circulating fluidized-bed boiler with carbon capture and sequestration. The 50-MW plant would burn coal and biomass to create an oxygen/carbon-rich byproduct that would facilitate removal of nearly all of the carbon dioxide that would otherwise be emitted when the fuel is burned, said Kulig.

Flue gas created by the combustion process would be cleaned and compressed to 2,000 pounds. "It is a supercritical fluid at that point," Kulig said. The fluid then would be transported by pipeline to an injection site. "Right now we are looking at a site in the southwest quadrant of the county," he said.

By burning not only coal, but also biomass, the oxy-coal technology has the potential to become a carbon-negative power plant, said Leathers. Moreover, the oxy-combustion process eliminates all other regulated emissions, including sulfur dioxide, nitrogen oxide, particulate matter and mercury, he said. Future oxy-coal combustion plants could lead to a coal plant that would not need a stack, he said.

The technology has been used in Spain and Germany. The Jamestown project would be its first use in the United States.

The CFB combustor would give Jamestown maximum fuel flexibility, allowing the utility to use the lowest-price fuel, Kulig said. The utility today burns coal produced in mines 100 miles away from Jamestown, in northwestern Pennsylvania.

The project has no more enthusiastic supporter than Jamestown Mayor Sam Teresi. "We see this project as the next logical extension, the next chapter in our storybook tale that is the history of Jamestown in the energy business," Teresi said.

The city's 119 years as a public power community have brought tremendous value to the community, the mayor said. "We have an opportunity to chart and control our own destiny, as opposed to being at the beck and call of a faraway investor-owned utility. From the standpoint of price, reliability, retained profits and local jobs, I think the wisdom and genius of that has proven itself out over the ages here," he said.

"Friends of mine who live outside of our territory and who are fans of free enterprise like to chide me about government enter-

## ISO: The Terminator

The New York Independent System Operator (NYISO) is the federally recognized regional transmission organization created, ostensibly, to facilitate competition in the wholesale electricity market.

To David Gustafson, electric and gas resource manager for the Jamestown BPU, the ISO is a large organization of committees and working groups that meet and meet and meet to address the individual interests of the participants.

While Jamestown BPU owns a base load coal plant and a gas turbine for peaking power, in the world of the NYISO, it is not a "generator."

"Our mission is to serve our native load.

The generators' mission is to make money and maximize profits," he said. "There has not been enough of a view to prioritize customers. New leadership at the NYISO appears to be trying to correct this problem. There are always lots of meetings going on. We don't have the staff to go to all of the many ISO meetings."

The large companies that can spare individuals to attend meetings can drive their own agendas, he said.

"Competition is an admirable goal," Gustafson said. But he thinks members of the ISO committees strive to bend the market rules to advance their own interests. "Too many people are trying to fine-tune rules. It's very complicated and very hard for a small system to keep up with those changes," he said.

"I call it the 'Terminator' model. In the 'Terminator' movie, computers took over everything. Here, economic theory is taking over. Economic theory is going to create the solution for reliability and cost of electricity. We are placing a lot of faith in economic theory that is sometimes driven by selfish motives."



**"Our mission is to serve our native load. The generators' mission is to make money and maximize profits," says BPU Electric and Gas Resource Manager David Gustafson.**



**"I wouldn't want to be mayor of this city if we didn't have public power," says Mayor Sam Teresi, left. David Leathers, right, a veteran of the automotive industry, has been general manager of Jamestown BPU since 2008.** Photo by Jon Elder

prises and claim that the private sector can do anything better than government,” Teresi said. He describes himself as also a fan of free enterprise, but cannot resist asking his friends: “Would you rather have your electric bill or my electric bill?”

Jamestown BPU’s service territory includes all of the city and a few areas outside of the city limits. The utility is surrounded by National Grid, which charges 14.5 cents per kWh for electricity, compared to Jamestown’s 6.5 cents.

“We see this [oxy-coal project] as just building on what those who walked before us started in this community,” Teresi said. “It would be a bit of a dereliction of our duties if we didn’t continue to forge ahead.”

Jamestown has nearly a dozen partners for the project. The New York State Energy Research and Development Authority has contributed more than \$8 million to support design work, geological testing, permitting and development of a state regulatory structure governing property rights for sequestration and indemnification.

The project began as a straightforward installation of a circulating fluidized-bed



**Jamestown BPU staff members include (front): Mike Anderson, business manager; Steve Kulig, project lead; David Leathers, general manager; Frank Galeazzo, IT manager. Rear: Chris Rodgers, T&D manager; Kyle Joesel associate power plant supervisor; Rebecca Robbins, communications coordinator; Julie Breen, secretary to the board; David Gustafson, electric and gas resource manager; and Daniel Reynolds, energy efficiency coordinator.** Photo by Jon Elder

boiler, with a capital cost of \$145 million, said BPU General Manager David Leathers. Local citizens expressed concerns about the large capital investment. The much larger in-

vestment for the oxy-coal project will not go forward unless the U.S. Department of Energy contributes clean coal research funds. The utility has applied to DOE for funding under the agency’s Clean Coal Power Initiative program.

Jamestown and New York state officials hope to secure a commitment of DOE funds this year. Federal funding would cover half of the capital costs and Jamestown would operate the project as a DOE demonstration site for three years before moving to full commercial operation.

“It’s a fine line for a small municipal utility like us to take on a project like this, which is really cutting edge. We still need to maintain our low rates and reliability for our customers,” said Kulig.

The local business community, the utility board, the City Council and elected officials statewide support the project.

In the 11 years before he was elected mayor of Jamestown, Teresi was director of economic development and planning on the city staff.

“One of the important tools in our arsenal has always been and I hope always will be our high-quality, low-cost electricity. That was always a leading punch for us and it still is and I’m not sure I would want to be mayor of this city if we did not have public power in this community.” ■

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