

Mohawk Valley News

Clark Energy Center

NEW YORK POWER AUTHORITY COMMUNITY NEWSLETTER • SPRING 2006

CLARK HELPS KEEP NORTH COUNTRY TURBINES SPINNING

At the Canadian border, the Power Authority's St. Lawrence-FDR Power Project's 16 turbines have a total of 352 wicket gates, essential to the production of 800 megawatts of electricity. In midstate Marcy, they take quiet satisfaction in helping to make that generation possible.

The gates—think of them as a ring of Venetian-blind slats, installed vertically around each of 16 turbines—control the volume of St. Lawrence River water rushing through them. The turbines spin, and the resulting hydropower produces vital electricity for New York State.

Venetian blinds—except that those are 70-ton turbines, close to 20 feet in diameter. The “slats” are 10 feet long, and weigh more than two tons apiece.

“They’re original equipment, installed in the late 1950s as an integral part of NYPA’s first power project, and have more than four decades of almost nonstop use,” said Bill Bordiuk, mechanical maintenance supervisor at the Clark Energy Center (CEC) in Marcy. “They



Above, after 40 years of service, a two-ton wicket gate is secured for upgrading.

Left, freshly painted white gates stand ready as a new turbine is slowly lowered into position at NYPA's St. Lawrence-FDR hydroelectric project on the Canadian border.



need upgrading and now's the right time.”

Bordiuk refers to a complex project well under way: the multiyear life extension and modernization program to replace or refurbish the major elements of each of the St. Lawrence project's turbines. The work, initiated in 1997, is

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Envirothon Focus: Managing Water Resources

By now, Oneida County high schoolers know if it's spring, it's Envirothon time. NYPA's Clark Energy Center has helped sponsor the spirited annual outdoor competition since the mid-1990s, and this year the action's set for Verona State Park on Oneida Lake on May 10. Students from Camden, New Hartford, Clinton, Waterville, Proctor and Whitesboro high schools and Oneida County BOCES will compete.



Oneida County students take Envirothon competitions seriously. The best will compete at SUNY Oswego May 24-25.

“This is one of our most enjoyable associations,” said Carol Rodino, regional community relations manager for NYPA. “The students work as a team, emphasizing group problem solving and hands-on experience to complete test questions and exercises right on the spot, not in a classroom. It's tough competition; New York State teams have placed in the top 10 teams nationally since the first state event in 1991.”

Directed by the state Soil and Water Conservation District, envirothons in more than 50 counties test students' understanding of Empire State-specific natural resource issues, and build on their desire to learn more about real close-to-home environmental questions.

Teams of five compete for the county title by demonstrating problem-solving abilities in aquatics, forestry, soils, wildlife and this year's special issue, water stewardship in a changing climate.

County winners move on to the state Envirothon at SUNY Oswego on May 24-25, and the state winner will go on to the 2006 North American Canon Envirothon at the University of Manitoba in Winnipeg, Manitoba. ♦

MVN NOTES

NYPA Observes 75th Anniversary

NYPA is marking its 75th anniversary during 2006 with a variety of activities designed to generate awareness among employees and the public about NYPA's history and current role in New York



State's energy picture.

A week-by-week listing of key dates in Power Authority history is being posted on

NYPA's web, www.nypa.gov, for internal and external audiences. The listings go back to NYPA's creation in 1931 and before, and include milestones such as completion of power projects and key legislation, as well as anecdotal developments. The Power Authority is the largest state-owned electric utility in the nation.

During the year a book will be produced outlining NYPA's history from its inception to the present. They include significant investments in energy-efficiency projects and clean energy technologies. There also will be a video with historical footage of the Power Authority's development over the years.

The Clark Energy Center (CEC) in Marcy is not quite as old. The 150-

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Wicket Gates

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about half done, mostly by world-class suppliers for this highly specialized technology. But restoration and refinishing of one key component, the wicket gates, is being handled by mechanics at CEC, more than 170 miles south.

“Headquarters asked if we could help one of our key generating projects, rather than send the work outside,” said Bordiuk. To refurbish the gates in-house, Clark specialists installed a heavy-duty lathe and horizontal milling machine, or planer mill, that met the engineering criteria to do the work. This involves removal of decades of wear and the sleeving of the gate with new bushings to the appropriate dimensions.

The 40-year-old, 71,000-pound lathe and planer, purchased at a fraction of new equipment cost and seasoned through many years of duty, have proven more suitable for the demands of the 5,500-pound gates than would modern counterparts, said Bordiuk.

At St. Lawrence, each turbine is surrounded by 20 to 24 gates. CEC’s staff has completed seven units and will start work on the eighth by

midyear. “Not only have we delivered gates for the first seven units promptly and ready for service, but the crew’s efficiency improves over time,” said Bill Bouchey, technical training instructor, who provided hands-on training in the CEC machine shop.

The most recent wicket gates were completed in about 20 percent less time than for the previous turbine, he said, and turnaround time has been cut about 40 per cent since work began. “It’s important that we hold to delivery promises. These gates are the first components to be reassembled, so work must be completed before turbine assembly can proceed.”

Joe Michaels, senior mechanical engineer at NYPA’s Blenheim-Gilboa project, who contributed key engineering guidance, credits both inter-project and union-management cooperation for the success to date of the project. “St. Lawrence was willing to stay in house, CEC was able to convert part of our facility into a workshop. A core group of our staff went through instruction at an outside metalworking institute and extensive training right here from CEC’s Bill Bouchey, to acquire the knowledge necessary to do the work.” ♦

75th Anniversary

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or-so employees at the heart of NYPA’s power transmission facilities recently celebrated a quarter century of monitoring and dispatching electricity from NYPA’s 18 power projects and outside sources, including Canada. The CEC’s Energy Control Center (ECC) exchanges power generation data with the statewide transmission grid. The ECC’s dispatchers stay on top of the roller coaster of changing energy demand to ensure system reliability.

Marcy is also the home of NYPA’s 85-acre substation, where more than 100 energy professionals maintain the terminal of the state’s highest-voltage (765-kilovolt) transmission line, and direct power downstate to where it’s most needed. ♦

CALENDAR OF AREA EVENTS

The Clark Energy Center will sponsor or co-sponsor a number of Mohawk Valley events this spring and summer:

MAY 10

Oneida County Envirothon	Verona Beach State Park
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JUNE 7

Safety Day Camp	Boonville Fair Grounds
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JULY 9

Boilermaker Road Race	Utica
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JULY 16

Erie Canal Canoe Clasic	Lock 20, Marcy
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Maynard F.D. Recognizes Clark Support

The Maynard Fire Department’s staff is trained to respond immediately to any life/safety emergencies at nearby Clark Energy Center in Marcy. It’s been that way for more than 20 years, and recently Department President Jared Pearl said “thank you” to Clark and the Power Authority for two decades of support.

Dave Neary, safety, health and fire protection administrator, said NYPA depends on the backup support and professional advice from Maynard and other regional fire and rescue squads to reinforce the Power Authority’s emphasis on safety.

In related ceremonies, the department honored Clark employee and Maynard firefighter Paul LeBron, and his EMT partner Jeff Kopec, for quick action to restore a man’s failed heart-beat last year in Utica. In the photo below, LeBron, left, and Kopec examine a thermal-imaging camera, permitting vision in smoky environments, purchased with a NYPA donation. ♦



Maynard Fire Department President Jared Pearl, left, presents plaque to NYPA’s Dave Neary recognizing the Power Authority’s support.



Mohawk Valley News

Mohawk Valley News is produced by the New York Power Authority to update our neighbors on activities at our Clark Energy Center in Marcy.

If you have comments or suggestions, please contact Carol Rodino, community relations manager, at 315-792-8511, or by email at carol.rodino@nypa.gov.

To our readers: We occasionally receive requests for tours of the Clark Energy Center. While we would like to comply, security concerns prevent us from allowing members of the public to tour our facilities. Thank you for your understanding. ♦