Asset Revitalization Initiative

Western New York Nuclear Service Center

Introduction

The Western New York Nuclear Service Center (Center) is a 3,300-acre complex located in southwestern New York State. The facility was created as part of a Federal government initiative to develop a commercial nuclear power reprocessing capability in the United States. In 1957, the U.S. Atomic Energy Commission (AEC) unveiled a program to encourage the private reprocessing of spent nuclear fuel. New York State became interested in the AEC privatization program as a way to promote industrial development within the State, and by 1961, acquired 3,300 acres in the town of Ashford in Cattaraugus County for the spent fuel reprocessing facility. Nuclear Fuel Services, Inc. (NFS) was licensed as the operator of the facility, and the New York State Atomic Research and Development Authority, a predecessor agency of the New York State Energy Research and Development Authority (NYSERDA), was licensed as the owner. The West Valley facility processed 640 tons of spent fuel, with 380 metric tons of that fuel coming from the N-reactor at Hanford. A combination of economic factors, technical challenges, and changing regulations led NFS to withdraw from reprocessing in 1976. In 1980, following complex negotiations between the State, Federal government, and NFS, Congress passed the West Valley Demonstration Project Act, requiring the Department of Energy (DOE) to conduct the West Valley Demonstration Project (WVDP) in cooperation with New York State.

Through three decades, DOE and NYSERDA have worked together with the local community in a unique partnership to address environmental and engineering challenges resulting from cold war-era policies and technologies. As the decommissioning work at West Valley proceeds, the agencies and the surrounding communities are working to identify the role the Center will have in the future of Western New York and the Nation.

Assets

The Center is located in northern Cattaraugus County, Town of Ashford, near the hamlet of West Valley. A small parcel of the Center (approximately 15 acres) is located in Erie County. The Center is located only 26 miles from the city of Buffalo, providing easy access to a multitude of services offered by the Greater Buffalo-Niagara metropolitan area. Since only 200 acres of the site were ever developed, significant property remains that has not been impacted by nuclear operations. The assets at the Center that can contribute to revitalization and reuse initiatives include:

Low-Cost Hydropower - Nearly 30,000 jobs in Western New York, with a combined annual payroll of more than $2 billion, are directly linked to New York Power Authority's (NYPA) low-cost Niagara hydropower allocations. The recipients of the power include some of the Niagara Frontier's largest employers, accounting for more than 70 percent of the manufacturing jobs in the region. Working with state and local economic development officials, NYPA targets its allocations of low-cost hydropower to help attract and retain major employers both upstate and downstate. In approving a new, 50-year license for the Niagara Power Project, members of the Federal Energy Regulatory Commission said they were ensuring that a valuable source of low-cost power for Western New York will continue operating for another half century with

improved environmental protections and recreational benefits that will be provided by NYPA. The allocation of low-cost power to a future Center reuse initiative would be at the discretion of NYPA, and would be subject to the specific requirements of any NYPA discount power program in effect at the time a reuse is proposed.

Tax Exempt Property – The entire 3,300-acre Center is presently owned by NYSERDA on behalf of the people of New York State, and as such, is currently exempt from property taxes. In some cases, municipalities offer property tax exemptions or reductions as an incentive for relocating or retaining a business in a particular area. While the tax exempt status of the Center could be an incentive for a business to locate on Center property, this issue would have to be evaluated by NYSERDA, Cattaraugus County, and the town of Ashford as part of the specific application for reuse of Center property at the time a reuse is proposed.

New York State currently provides a $500,000/yr Payment In-lieu of Taxes to the town of Ashford, West Valley Central School District and Cattaraugus County to offset property tax losses.

Highly Trained Workforce – The Center is one of the largest employers in Cattaraugus County, with over 300 employees working in a wide range of job categories. Many of these workers are highly trained in handling radioactive and hazardous materials, and site specialists have formal training and experience in engineering, chemistry, health physics, radiation protection, industrial safety, waste management, geology, hydrology, geomorphology, biology, public relations and more. In addition, the greater Buffalo-Niagara Region has a wide variety of skilled tradespeople available to meet any construction need the site may have related to carpentry, welding, iron working, grading, electrical, plumbing, bricklaying, steamfitting, etc.

Support from the Surrounding Community - The town of Ashford, Cattaraugus County, and Western New York have hosted the Center since the property was first obtained by the State in 1960. Many area residents either work at the site facilities, or have family, friends or neighbors who are employed there. The community supports the EM mission at the site, and is enthusiastic about identifying and evaluating future use opportunities that will keep the area vibrant and growing.

Secure Site - The entire 3,300-acre Center property is presently posted and secured. The outer perimeter of the Center is surrounded by barbed-wire fences, and the central 200-acre portion of the site is surrounded by an eight-foot chain-link fence topped with barbed wire. The WVDP portion of the Center is patrolled by a private security firm, and surveillance cameras have been installed to monitor critical and sensitive areas of the site. Both DOE and NYSERDA have formal agreements in place with the Cattaraugus County Sheriff's Department and the New York State Police to provide on-call law-enforcement assistance as needed. The WVDP also provides funding for a small, satellite office of the Cattaraugus County Sheriff's Department on the WVDP portion of the site.

Rail Service – Rail service to the Center is provided by the Buffalo and Pittsburgh Railroad. The Buffalo and Pittsburgh Railroad is part of an integrated regional rail operation that includes Rochester and Southern Railroad, and the South Buffalo Railway. Together they have direct connections to the two major U.S. railroads that service the east (CSX Transportation and

Norfolk Southern) as well as both of Canada's transcontinental railroads (Canadian National and Canadian Pacific).

U.S. Route 219 International Trade Corridor – The Route 219 Expressway provides close and easy access from the Center to the Nation's interstate highway system. The four-lane, divided expressway presently terminates at the Peters Road Exit, just two miles west of the site. From there, the highway extends northward and connects with the NYS Thruway (Interstate 90), approximately 25 miles from the site. The Route 219 Expressway was recently lengthened by about 3.5 miles and now ends right at the Center's doorstep. This improved infrastructure reduces travel time for trucks and passenger vehicles in all directions, including cross-border trips to Canada, the largest volume trading partner of the United States in the world.

Water Supply – The Center has its own reservoir and water treatment system that provides potable and facility service water for operating systems and fire protection. The reservoir system was created by constructing dams on Buttermilk Creek tributaries south of the Project Premises. Two interconnected reservoirs (north and south reservoirs) cover about 25 acres of land and contain approximately 560 million gallons of water. A pumphouse, located adjacent to the north reservoir, supplies water through an eight-inch pipeline. A clarifier/filter system provides treatment for incoming raw water, prior to transfer into a 475,000-gallon storage tank. Water pressure is furnished by two 250-gallon-per-minute pumps that supply water at a minimum pressure of 75 pounds per square inch. The raw water supply system has an installed capacity of approximately 400 gallons per minute or approximately 210 million gallons annually.

Sewage Treatment Plant - The Center has an on-site Sewage Treatment Plant that is used to treat sanitary and nonradiological, nonhazardous industrial wastewater generated by WVDP. It has a capacity of 40,000 gallons per day.

Electrical Service - Electrical power is transmitted to the Center via the National Grid USA distribution system. Power is supplied via a 34.5-kilovolt loop system. A feeder line from a 34.5-kilovolt switching station transmits power to the site substations where it is stepped down to 480 volts. Electricity from the 34.5-kilovolt line is routed to two 2,500-kilowatt-ampere transformers. The substation switchgears are interconnected through cables to provide back-feed capabilities in the event that any 34.5-kilovolt-to-480-volt substation transformer fails. The Center also receives electrical power from a separate 4,800-volt-to-480-volt rural distribution system.

Natural Gas - The National Fuel Company provides natural gas, the primary fuel used by Center facilities, through a six-inch supply line. Natural gas is distributed to on-site areas for heating purposes and is regulated at the points of use. Natural gas is not routed through areas that contain, or historically contained, radioactive materials.

Expansion Potential – The Center is ideally located for a wide range of possible uses. Located within easy reach of the services and resources of the Buffalo-Niagara Region, it is physically sited in a largely rural area, offering a remote location. The limited prior development provides ample space for new facilities as well as space to be retained as a security and safety buffer for site activities.

Off-site Office Facilities – The Ashford Office Complex (AOC) is located just 3.5 miles from the Center property. It is a modern office facility with 50,000 square feet of prime office space, T-3

high speed internet lines, secured entryways and 24-hour monitoring by WVDP security. The facility provides a comfortable, convenient space for workers who may not need to be located full time at the facility itself, while still providing easy access for those commuting to and from the site. The AOC provides separation of the support workforce from the site facilities to enhance the safety and security of site operations. There is also ample surrounding property for expansion of the facility, as needed, to accommodate support facility needs for operations at the Center.

Affiliations with Local Universities – The WVDP has long-time working arrangements with local universities, including the State University of New York at Buffalo and the State University College of New York at Fredonia. These organizations have provided research support for the construction of the WVDP's Permeable Treatment Wall and for evaluating the impact of long-term erosion to the site. Research activities by SUNY professors and students have been conducted in the field, and at laboratories both onsite and at the universities.

The assets available at the site and in the immediate area provide a strong foundation for a number of industrial and other reuse activities.

Past Successes of Reuse and Revitalization Initiatives

Over the last decade, DOE, NYSERDA, the regulatory agencies, and the community have been actively engaged in identifying and discussing the direction of site decommissioning efforts under the DOE EM program. As such, reuse and revitalization initiatives conducted at the Center to date are somewhat limited, but include:

- Town of Ashford Gravel Mine – The Town of Ashford Gravel Mine is a 20.26-acre facility, located in the southernmost portion of the Center. This reuse initiative provides the town with access to gravel deposits at the non-impacted southern part of the Center. The town uses the gravel on highway maintenance and repair projects throughout the town of Ashford. This activity demonstrated that non-nuclear industrial activities can be conducted at the Center, even while the Center remains under NYS ownership and U.S. Nuclear Regulatory Commission (NRC) regulation.

- Plutonium Storage Facility (PSF) - The PSF was used by NYS Atomic and Space Development Authority to store plutonium product before it was sent to the Federal government for the production of mixed-oxide fuel or weapons. The PSF operated under a separate NRC Special Nuclear Material (SNM) license. When reprocessing operations were terminated, the facility was no longer needed. The remaining special nuclear materials were removed, the building and equipment in it were surveyed, and the SNM license was terminated by the NRC. DOE leased the warehouse for reuse as part of the WVDP, and the facility was renamed the Bulk Storage Warehouse (BSW). DOE used the BSW for the next 25 years to store nonradioactive excess equipment. In 2009, DOE was done using the facility and returned the facility to NYSERDA for reuse.

- Deer Hunting Program – Each fall, NYSERDA sponsors a public deer hunting program at the Center. NYSERDA opens up approximately 2000 acres of the 3340-acre facility to all licensed hunters during the New York State hunting season. Since its inception in

1994, NYSERDA's program has attracted over 4800 hunters who have harvested over 960 deer.

- Additional Parcels of Center property – In response to requests by Cattaraugus County and the town of Ashford, small parcels of property (<5 acres each) have been deeded to the Cattaraugus County Highway Department and to the town of Ashford for town and county highway department activities.

Current and On-going Project Reuse and Revitalization Initiatives

Bulk Storage Warehouse – As described above, the BSW is the former Plutonium Storage Facility (PSF), and was used by DOE to store nonradioactive excess equipment after the SNM license for the facility was terminated. DOE vacated the building in 2009, and turned it over to NYSERDA for possible additional reuse. NYSERDA is currently working to determine whether the BSW can be released from the Part 50 license for the Center, which could broaden the possible reuse options for the warehouse.

Partial Site Release - In addition to evaluating the release of the BSW, NYSERDA is evaluating the release of approximately 200 acres of non-impacted property from the NRC Part 50 license. If released from the license, the property could be made available for a broader range of reuse options.

Vision / Potential Future Projects

As described above, discussions between the agencies and the community in regard to the future of the site over the last several years have generally focused on the direction of site decommissioning efforts under the DOE EM program. While discussions with the community on reuse and revitalization initiatives are just beginning, the community believes that the Center can be a long-term asset to the town of Ashford, Cattaraugus County, New York State and the Nation.

The involvement of DOE and NYSERDA at the Center brings opportunities for reuse since DOE and NYSERDA are two of the Nation's leaders in energy and environmental research, development and deployment. The assets available at the site, combined with the program opportunities offered by each agency, may provide opportunities for the site to play a role in the evaluation of clean energy and environmental management technologies. For example, under Section 3124 of the Defense Authorization Act of 2011, Congress recently authorized DOE to permit the establishment of Energy Parks at former defense sites to conduct a broad range of energy technology development, deployment, and demonstration projects. The Center could host an Energy Park to evaluate and demonstrate energy technologies in the northeast.

The Center may also play a role with the State University of New York at Buffalo's UB 2020 Plan. The prime objective of the UB 2020 plan is to advance SUNY Buffalo into the ranks of the Nation's leading public research universities. The ambitious plan for growth includes some 1,000 more faculty members, 10,000 more students and nearly 7 million square feet of additional space, all designed to achieve a new level of excellence.

To advance UB 2020 and become a model 21st-century public research university, SUNY Buffalo is investing in eight areas where existing faculty strengths, together with investment in world-class new hires and resources, will give the university a pre-eminent leadership role among its peers.

One of these eight areas is "Extreme Events: Mitigation and Response." Through its structural engineering and geohazard studies research, this program is working toward making our world a safer place through effective preparation and response to extreme events, both natural and manmade. Faculty specializing in this field played a significant role in the aftermath of the 2010 earthquake in Haiti, assessing damage to structures and collaborating with Haitian engineers and architects on how to construct buildings that are better able to withstand damage from future quakes. Combining the strengths of the existing programs at UB with areas of study and expertise at the Center (e.g., erosion prediction and mitigation, and nuclear facility safety) provides opportunities for research activities to be integrated with the day-to-day challenges of sensitive facility management. The Center can also serve as a classroom to provide students with the opportunity to develop and evaluate response and mitigation plans for nuclear facilities.

The Center is located in a beautiful natural setting, with deep-cut gorges, treed hillsides and small waterfalls. Portions of the Center provide opportunities for the development of parkland, hiking trails and other outdoor uses.

Challenges / Issues – and Suggested Departmental Actions to Address These Concerns

Challenges regarding reuse and revitalization activities include:

Reuse of WVDP Resources – Some of the assets identified above are currently being used by the WVDP. Additional evaluation is needed to identify an approach to allow the identified resources to be made available for reuse and revitalization of the Center.

Release of Property and Facilities from the NRC License – The entire Center is licensed by the NRC, and options being considered for reuse range from releasing property from the license and transferring property to private or other public entities, to reusing the property while it remains under NYS ownership and NRC regulation. NYSERDA is currently investigating the release of the BSW and approximately 200 acres of property from the NRC license. Because this will be the first time NYSERDA attempts to release property from the license, issues may arise that will delay or prevent property from being released.

Integration of DOE/NYSERDA Energy and Environmental Program Opportunities – As stated above, the agency partnership at West Valley brings together two of the Nation's leaders in energy and environmental research, development and deployment. The reuse opportunities provided by this relationship at the Center need to be further explored and developed.

Development of an Energy Park under Section 3124 of the DAA of 2011 - Section 3124 of the DAA authorizes DOE to permit establishment of Energy Parks on former defense nuclear facilities. Clarification would be needed as to whether the Center can participate in this program.