

Wind Power Feasibility Study



Client: SUNY Canton

Project Location: Canton, New York

The College of Technology at Canton is a two to four year coeducational residential college within the State University of New York (SUNY) system providing higher education programs concentrating on the technologies. GPI provided an analysis of the feasibility of installing wind turbines of 1,000 kW, 600 kW, and 250 kW. GPI met with SUNY Canton staff and gathered pertinent data to determine the potential wind power site locations. Then we evaluated data, assessed facility electricity requirements, evaluated how the proposed wind application would move SUNY toward compliance of Executive Order 111 renewable energy requirements. GPI determined energy savings and provided cost estimates in a final report.

After evaluating different sized wind turbines, the 1,000 kW unit with an estimated cost near \$2,000/kW was selected as most suitable for the site. Its size, efficiency and economics were best matched to the site electrical needs and wind profile. Economics for wind turbine projects in this class are largely affected by cost supports available such as renewable energy credits and grants. Another key factor is expected quantity of wind.

Beyond the economics, a wind turbine at an educational institution has value in fostering a culture of energy consciousness by seeing a green power application up close. Students could be involved in a real sense with the planning, testing and performance monitoring. In addition, the renewable-power procurement component of Executive Order 111 commits State Entities to purchase a significant portion of their electric power from clean, renewable generating sources. State Entities can fulfill their renewable-power procurement obligations through on-site generation of all renewable power requirements.