



Alfred State College Alfred, New York Green Workforce Training—Solar

SCHOOL

Alfred State College is a public technical college with 3,700 students, located in Alfred, New York.

ABSTRACT

Alfred State College and the US National Arboretum joined together for a five-year cooperative agreement focused on assisting the Arboretum in its goal to "go green" by incorporating alternative energy sources on its grounds and to assist in one of the Arboretum's mission statement goals of education. As part of the agreement, Alfred State College and the National Arboretum will continue with additional solar powered systems to augment the electric needs for other areas at the Arboretum. Excess power generated will be fed into the local power grid.

GOALS AND OUTCOMES

Goals

This project was designed to collect solar energy from the sun, store it, and invert it into utility (grid) quality 120 Volt AC energy. This energy would then power an irrigation control module linked to a satellite high above the earth. This system provides needed irrigation to a research field where tree growth patterns are studied from within an urban environment.

The project involved the design and installation of a 1 Kw Photovoltaic (PV, solar electric) system with battery storage. The students were to design a system that provided the required energy to supply power to the nursery within a specific budget and prepare lessons to teach the technology to workshops' participants.

Accomplishments and Outcomes

Five students enrolled in Alfred State College's Electrician, Computer and Robotics Technician Department, accompanied by Assistant Professor Jeffrey Stevens, spent their recent spring break in Washington, DC, conducting a four-day workshop that resulted in the installation of a 1 kw solar array that will power an irrigation system at the National Arboretum. This irrigation control module linked to a satellite high above the earth. This system provides needed irrigation to a research field where tree growth patterns are studied from within an urban environment. The USNA consists of over 400 acres of both garden and forested land where botanical research is conducted. The site is just over 5 miles from the White House, located in the heart of Washington, DC.



ENGAGEMENT AND SUPPORT

Employer and Other School Partnerships

The partnership between Alfred State College and the US National Arboretum began last June when the college was invited to participate in the second annual Bio Energy Awareness Days (BEAD II) sponsored by the United States Department of Agriculture's Research, Education, and Economics Agency. At that time, Alfred State College caught the attention of Joseph Dunn, then-USDA deputy secretary for research, education and economics, as it highlighted workforce development in renewable energy through organic agriculture and hydroponics with LED lights, and biodiesel reactor, photovoltaic, and wind energy. As a result, ASC and the US National Arboretum committed to a five-year cooperative agreement focused on assisting the Arboretum in its goal to "go green" by incorporating alternative energy sources on its grounds and to assist in one of the Arboretum's mission statement goals of education.

Education and Community Outreach

The students taught a solar workshop, attended by folks from all walks of life and levels of experience, offered participants not only lectures on theory, but actual hands-on experience in the design, installation, and implementation of the photovoltaic system which proved to be less costly than the installation of traditional electrical wiring.



A video entry was submitted to Chill Out: Climate Action on Campus documenting the program. <http://www.youtube.com/watch?v=1iGPxxztnDw>

CONTACT INFORMATION

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MORE ABOUT YOUR SCHOOL

Campus Sustainability History

Alfred State College students are doers, not bystanders. The college is ideal for purposeful, action- and goal oriented individuals. ASC students get a head start on their careers, as our programs, teaching methods, and in the field experiences provide intensive, hands-on, usable, real-world learning. Our graduates are well-prepared and work-ready. Employers marvel how ASC graduates are able to hit the ground running.

Alfred State's ongoing commitment to sustainability includes a commitment to reduce its carbon footprint by 50 percent over the next five years and incorporating green technologies into select curriculums. You can read more about ASC's sustainability initiatives at <http://www.alfredstate.edu/sustainability/sustainability-at-alfred-state>

Image credits: Alfred State College