



GreenNY

New York State Environmental Excellence Awards Office of Parks, Recreation and Historic Preservation

Case Study on the Solar Energy Program

Summary

The New York State Office of Parks, Recreation and Historic Preservation (Parks) uses clean renewable energy wherever feasible in their 214 facilities across the state. Solar power is a substantial part of Parks renewable energy portfolio, thus the development of Parks Solar Program. Parks first identified maintenance staff that could potentially be trained on solar installations. By training in-house staff, Parks has saved significant costs of labor versus hiring a contractor. Parks reached out to Alfred State University and Hudson Valley Community College to provide training to their staff. Additionally, Parks worked with the CSEA Partnership to provide funding for the training programs. Parks then applied to the New York State Energy Research and Development Authority (NYSERDA) for all of their trainees to receive the “Solar Contractors” designation. This designation allows trained employees to receive rebates for each watt of electricity installed. As of this date, Parks is the only state agency to have NYSERDA registered solar contractors that qualify for rebates. As a result, the Sustainability Office at Parks developed a business model that would cut the cost of solar installation between 50-75%. Today, Parks is one of the leading proponents and users of renewable energy boasting twelve solar installations in seven of our eleven regions.

Benefits

Today, the nine in-house installations at Parks generate a total of 178,158 kWh. This number is expected to be quadrupled by the end of 2015. To date, 135 Tons of CO₂ have been offset as a result of the solar installations. Over the life of the installations, 3,150 tons of CO₂ will be offset. Additionally, less ground disturbance (trenching) is required for new electrical line runs versus off grid solar poles.

About the Solar Energy Program

- The goal of the Parks Solar Program is to design systems that benefit the environment, reduce dependence on grid connected power, and to install solar panels at a cost significantly cheaper than grid connected power.
- Parks accomplishes solar installations using in-house staff providing solar and solar thermal certification training to maintenance staff. To date, Parks has 20 trained solar installers and 24 solar thermal installers.

Key Metrics

- Parks generates approximately 214,339 kWh of clean, renewable energy annually. This number will increase as solar installations increase.
- At the current level of solar installation, Parks has prevented 3,040 tons of CO₂ from entering the atmosphere over the life of the solar panels.

About the New York State Environmental Excellence Award

The New York State Environmental Excellence Award is given by the Department of Environmental Conservation in recognition of outstanding innovative and sustainable projects or programs and unique partnerships that are improving and protecting New York State’s environmental resources and contributing to a stronger economy.





Highlights

- In Niagara Falls State Park, school kids are brought to the solar roof to learn about solar panels and how they connect to the grid. Participants are issued a “Junior Solar Installer” badge at the end of the demonstration.
- The Fort Niagara Solar Installation Project is currently the largest state employee installed solar array in New York State.
- Each solar installation has monitors that are in plain sight to park visitors showing solar production at each installation.

Funding

- By installing solar panels at approximately \$1.85 per watt compared to the average contractor installation of \$4.90 per watt. The warranty period for solar panels is 25 years equaling a payback of approximately 10 years, therefore, Parks will receive ~15 years of free electricity per installation.
- The success of the Solar Program, has allowed Parks to increase their solar installation budget from 1.5 million dollars to 3 million dollars. Demonstrating a tremendous commitment that will lead to Parks leading solar generation in the State.
- With the current solar installations, Parks will save approximately \$159,000 in electric bills annually. This number will continue to grow exponentially as solar installations continue at sites across the state.

A Model of Excellence

- Parks has developed a Solar Program business model that not only makes installing renewable energy systems affordable but also profitable.
- News of the success of the Parks Solar Program business model is spreading and being easily replicated by other state agencies.
- The solar equipment contract that Parks worked to get on state contract tremendously simplified the process for purchasing solar equipment for New York State agencies. The solar installation trainings are developed and any agency, or private company, can use it to get NYSERDA certificate.
- Several agencies, including the Department of Environmental Conservation and the Office of Children and Family Services, have contacted Parks about replicating their Solar Program business model at their agency.
- Many of the Parks staff trained on solar installations have solar at their homes and the homes of their families and friends allowing them to take the training they received at Parks and incorporate it into their personal lives. Having trained 39 employees in solar and solar thermal installation, the morale is high amongst trained staff as they feel they are not only making a cultural change within the Park system but also learning new skills and applying those skills to their personal lives. Going forward, trained Parks staff will train new staff.



**Department of
Environmental
Conservation**

**Parks, Recreation
and Historic Preservation**