

ALBANY COUNTY HOCKEY FACILITY



THE BACKGROUND

Solar-electric power is generated from the conversion of sunlight into electricity through a photovoltaic (PV) or solar cell. Photovoltaics provide Power NaturallySM and reliably. While the initial system cost can be considerable, NYSERDA has introduced an innovative program to make PV systems

more affordable

and to encourage new PV installations through qualified system installers.

THE STORY

The Albany County Hockey Facility, located in the Town of Colonie, opened in 1991. It houses an Olympic-size refrigerated ice sheet and is open 10 months a year, averages over 110 hours of activity per week, and is visited by more than 100,000 people annually. The facility hosts a variety of recreational and competitive skating events, offers a food concession, meeting room, and provides skate rental and sharpening services. Camps and training schools; youth, adult, high school and college hockey; access to educational institutions such as athletic leagues for educational activities; and public skating are all part of the facility's activities .

Albany County officials opted to install a 40 kW photovoltaic (PV) system to offset the building's electricity use thereby reducing electricity costs. The system helps reduce the building's peak load,

augment grid integrity, and increase renewable energy awareness through education and site promotion. In addition to installing the 40 kW PV system, the County implemented several other energy conservation measures including a new dehumidifier, replacement of domestic water heaters, replacement of corridor lighting, refrigeration system repairs, installment of an advanced master utility meter, and installation of a new automatic fill system used by Zambonis for ice re-surfacing.

"I'm pleased to partner with NYSERDA on this exciting project," said Albany County Executive Mike Breslin. "The new solar energy system at our Hockey Facility will save electricity and protect our environment while saving Albany County taxpayers money. I look forward to continuing to work with NYSERDA to educate others about the benefits of renewable energy sources."

**For more information call 1-866-NYSERDA
or log on to www.PowerNaturally.org**

Thanks to the NYSERDA Photovoltaic Incentive program, places like the Albany County Hockey Facility can install affordable PV systems. It's part of NYSERDA's commitment to help make New York State more energy efficient.

THE TEAM

- **NYSERDA:** funding and coordination of this PV project, and 11 other municipal PV projects, is a result of the settlement of a lawsuit by the New York State Office of the Attorney General (OAG) against the Virginia Electric Power Company (VEPCO). www.PowerNaturally.org
- **SAIC:** Assisted Albany County in system specifications, assessing system impacts on building electrical and structural components, and provided technical coordination. www.saic.com
- **ETM Solar Works:** Installed the PV system. www.etmsolar.com

THE SYSTEM

The 40 kW DC PV system is comprised of 240 PV modules, each producing 175 watts of power. It was installed on a west-facing, sloped, standing-seam roof.

Six, 6 kW inverters convert the electricity to alternating current to be used in the building. The total AC power is estimated at 32.5kW.



THE SAVINGS

The estimated annual output of the Albany County Hockey Facility PV system is **40,300 kWh** enough to offset the facility's lighting load. Because the PV system shades the roof, the County expects to save an additional 24,300 kWh in reduced cooling demand.

Emissions of CO₂ will be **reduced by 43,900 pounds annually.**