

Kiwanis Ice Arena



"Never in my wildest imagination would I have thought our energy costs would decrease to the degree they have and never did I realize the tremendous reduction in environmental impacts. We are also constantly getting positive remarks on the quality of our ice. Without the incentive from NYSERDA I am certain many of the improvements made would not have been possible."

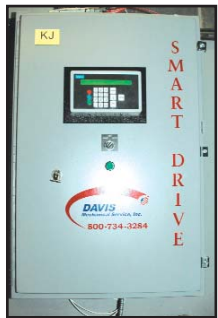
- Greg Chorvas,
Superintendent of Parks
and Buildings,
Town of Saugerties



High efficiency brine chiller



Reverse osmosis water demineralizer for ice making



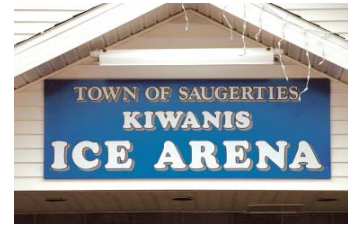
Smart Drive: variable speed pumping system

Kiwanis Ice Arena Project

Town of Saugerties, Ulster County

Background

The Kiwanis Ice Arena is located within the Cantine Veteran's Memorial Complex in the Town of Saugerties, New York. The full size ice rink is fully enclosed and is open from mid-September through March. The facility contains heated bleachers, locker rooms, restrooms, a concession area, and provides skate and equipment rentals as well as skate sharpening. The Town contacted the New York State Energy Research and Development Authority (NYSERDA) to assist it in reducing energy usage, reducing greenhouse emissions, and upgrading the ice rink at the complex.



Recommendations

The Town of Saugerties applied to NYSERDA for technical assistance and funding for the Kiwanis Ice Arena through the **New York Energy SmartSM** New Construction Program. Science Applications International Corporation (SAIC), an energy services company, provided a technical assistance study of the rink, prepared a design assistance report, and recommended the following measures:

- The installation of a high efficiency brine chiller,
- The installation of an infrared ice temperature monitoring system that accurately measures the ice temperature,
- The installation of a Smart Drive pumping system that reduces pumping requirements and energy usage. The Smart Drive technology uses a variable speed motor on the Brine pump and a 7-day programmable ice temperature scheduler, and
- The installation of a reverse osmosis demineralization machine (Clear Ice) that removes minerals from the water. The result is lower refrigeration costs due to the higher freezing temperature of the demineralized water.

Initiatives and Results

With **\$49,961** in incentives provided by NYSERDA for the installation of the recommended measures, the Kiwanis Ice Arena will realize an estimated \$25,000 in annual energy savings.

Also, the mechanical systems in the Kiwanis Ice Arena were replaced and a 7,640 square foot locker room/concession/and rest room area was constructed.

New York Energy SmartSM

All **New York Energy SmartSM** programs are funded by a System Benefits Charge (SBC) paid by electric distribution customers of Central Hudson, Con Edison, NYSEG, Niagara Mohawk, Orange and Rockland, and Rochester Gas and Electric. NYSERDA, a public benefit corporation established by law in 1975, administers SBC funds and programs under an agreement with the Public Service Commission.

New York Energy SmartSM programs are designed to lower electricity costs by encouraging energy efficiency as the State's electric utilities move to competition. The programs are available to electric distribution customers (residential, commercial, institutional, and industrial) who pay into the SBC.