

Government

## Case Study: William G. Mennen Sports Arena

**CHALLENGE** Significantly reduce energy costs by implementing a non-traditional PPA model that would leverage availability of low-cost municipal funding and federal tax credits; find a solar developer to work within the uncommon financial structure

**SOLUTION** SurePath™ Solar power purchase agreement with Tioga Energy

- BENEFITS**
- Reduce energy costs: *price of electricity will be approximately 35% less than that of local utility*
  - Eliminate ownership responsibilities: *operation upkeep and poor performance issues avoided*
  - Hedge against rising utility costs: *low-cost, fixed priced energy supports better cash flow management*
  - Create local green jobs: *local/state economy sustained and community good will generated*

**HIGHLIGHTS** Tioga helped facilitate a first-of-its kind financing program ("the Morris Model") in which taxable bonds were issued to finance the solar program

### PROJECT SUMMARY

New Jersey's Morris County wanted to implement a renewable energy program and recognized that it made sense to work through a private third-party PPA provider in order to take advantage of federal tax incentives. Due in part to the unfolding 2009 financial crises, however, the available financing was limited and relatively expensive, greatly reducing the overall cost savings the County believed it could achieve.

Instead, the County proposed issuing a county-guaranteed bond to finance the project. Through this highly innovative program, which Tioga Energy helped refine and facilitate, Tioga will use the funds raised through the bond to build the project, repaying the bond using proceeds from the sale of electricity and environmental attributes (SRECs). Bond investors will have the additional security of the full faith and credit guaranty of Morris County. This structure allows Tioga to maintain the tax ownership of the investment and provides access to low cost of capital available in the public markets, by way of Morris County's "AAA" credit rating.

***"Tioga's willingness to work with us to refine this financing structure was essential for the success of our pilot program. Together we developed an ingenious model for affordable solar energy that can serve as the blueprint for other local governments."***

– William Chegwidan, Deputy Director, Morris County Freeholders

The result is a 3.22 MW project pilot encompassing 14 local schools and five municipal buildings that will provide solar energy at 35% below the local utility cost with a combined cumulative savings of \$3.8 million over 15 years. During that time, 51,500 megawatt-hours (MWh) of clean energy will be generated. The first system to get underway, at the William G. Mennen Sports Arena, has a generating capacity of 1.57 MW. Covering three rooftops plus elevated solar structures shading more than 500 parking spaces, it will produce 30% of the facility's electricity.



**Shine Baby Shine!** Mennen Sports Arena's solar energy system will produce electricity at a rate 35% below that of the local utility.

### Project Summary

#### LOCATION

William G. Mennen Sports Arena  
Morris County Park Commission  
Morristown, NJ

#### EPC PARTNER

SunDurance Energy  
South Plainfield, NJ

#### INSTALLATION TYPE

Rooftop and parking lot solar structures

#### SYSTEM SIZE

1.57 MW

#### SOLAR ARRAY

6838 Yingli 230 watt PV panels

#### ONLINE DATE

Under construction

#### FIRST YEAR POWER GENERATION

1.8 Million kWh  
30% of the Arena's electricity produced by solar

#### ENVIRONMENTAL BENEFITS

Annual CO2 reduction equivalency of 1.2 million vehicles miles not traveled

**TIOGA ENERGY** enables commercial, government and non-profit organizations to reduce energy costs while lowering carbon emissions. Through its SurePath™ Solar power purchase agreement (PPA), Tioga owns and operates renewable energy systems that provide organizations a hedge against energy price volatility and accelerate their access to clean energy without any capital outlay.