

## UPPER VALLEY AQUATIC CENTER CASE STUDY

### ABOUT UVAC

The Upper Valley Aquatic Center is a 501(c) (3) nonprofit organization with a mission to deliver a diverse range of high quality fitness and aquatic programs accessible to all members of the Upper Valley community.

This 48,000 square foot facility houses an 11 lane, 25 meter x 25 yard competition pool, a separate warm-water instructional pool, indoor Splash Park with lazy river, water features and 110-foot water slide.



### PROJECT SUMMARY

In May 2017, Norwich Solar Technologies completed a net-metered, 500-kilowatt solar photovoltaic project in Hartford, Vermont for the 37,500-square-foot Upper Valley Aquatic Center (UVAC).

Feeding into Green Mountain Power's electricity network, this build is projected to save the UVAC a substantial amount on electricity annually.

## SYSTEM SPECIFICATIONS

### SYSTEM CAPACITY

- 500 kW-AC

### TYPE OF SYSTEM

- Ground Mounted

### PRODUCTS

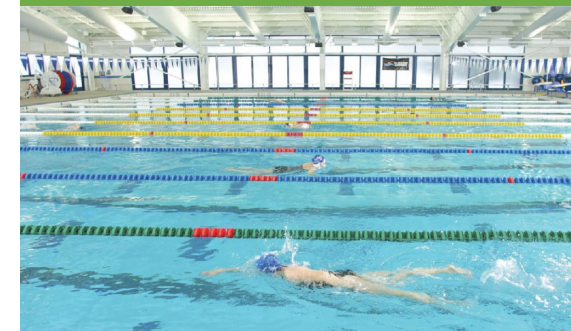
- 2,184 REC 335 Twinpeak 72 Series Solar Panels
- 14 CPS Inverters

### COMMISSIONING DATE

- May 23, 2017

### LOCATION

- Hartford, Vermont





## HOW BUSINESS DOES SOLAR

### ENVIRONMENTAL & COST SAVINGS AT A GLANCE



Money spent by UVAC  
on Solar Array:

**\$0**



Estimated CO<sub>2</sub> Offset  
in 30-Years:

**20,000,000 LBS**



Estimated Savings Over  
the First 20 Years:

**> \$800,000**

*\* Estimate based on marginal emission rates for the New England regional grid as of 2011 (the most recent data available).*

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### NORWICH SOLAR TECHNOLOGIES SCOPE

The UVAC solar PV array was designed, developed, financed, engineered, constructed, and will be maintained by Norwich Solar Technologies. The array is owned by New Energy Equity and electricity used to provide solar net metering credits to UVAC, who then pays a reduced rate for the solar power. UVAC has the option to buy the solar array at a reduced price after six years of operation.

### PRODUCTION STATISTICS

The solar installation will provide approximately 1,000,000 kWh each year, equivalent to carbon emissions from burning 7,400,000 lbs. of coal, or 20,000 barrels of oil, or 1 million gallons of gasoline.

Net-metering value of 30-year system generation ~\$5,000,000

- **EZ-PV Solar Photovoltaic system size: 731,640 Watts DC (500,000 Watts AC); 2184 solar panels; south facing at 35 degrees**
- **Net-metering value of estimated 30-year system generation ~\$5,000,000**
- **Estimated savings off first-year electric bill: >\$25,000**
- **Estimated first-year system generation 900,000 kWh**
- **Estimated 30-year system generation 25,000,000+ kWh**
- **Net-metering value of estimated first-year generation \$141,000**

The PV array site also serves as grazing pasture for sheep from nearby Sunrise Farm, eliminating the need for mowing.

