



CASE STUDY: Waupaca High School Student-Championed Solar Panels Turn 11 Years Old

PROJECT SUMMARY

Waupaca High School's solar project, championed by students, faculty, and community members, was intended to reduce the energy costs for the school as well as create an educational tool for teachers.

The campaign was initially kicked off by three students: Alex Goke, Erin Gates, and McHailey Johnson. In addition to involving the school's Green Team in the effort, the students also received help from various community members. The students wrote grants, met with community leaders, and presented their objective to various civic and government groups.

District Administrator, David Poeschl said of the project, "Student interaction with community members and the school board was also a big part of the success of this project. Both students and community members worked together and learned from each other as this project evolved to the point of presenting it to the school board for final approval."

The Green Team also spearheaded a fundraising campaign. Donations ranged in size from \$20 to \$10,000.

The Green Team received a \$4,150 grant from the Community Foundation for the Fox Valley to be used specifically for monitoring, as well as a \$5,000 grant from the Waupaca Area Community Foundation. In all, they raised more than \$30,000 in donations.

These donations were supplemented with large grants from Focus on Energy as well as Wisconsin Public Service (WPS), each valued at \$32,747. The combinations of grants and donations covered 1005 of the project's total cost of \$93,900.

After determining the roof of the school, built in 2000, was not an ideal installation location, the system was installed as a ground-mounted array by Northwind Solar in the Winter of 2011, saving the school around \$3,350 annually in energy costs.

ABOUT WAUPACA HIGH SCHOOL

The School District of Waupaca is located in beautiful Waupaca, WI, and home to over 2,200 students in grades 4K-12. The Waupaca High School educates about 700 students in grades 9-12.



Photo: Waupaca High School Green Team yearbook photo 2011; this is the team that followed through with the project after the initial team members graduated.

PROJECT PARTNERS:





SYSTEM AT A GLANCE

- **Commissioned:** November, 2011
- **System Size:** 17.28kW DC
- **Solar Installer:** Northwind Solar
- **Total Billed System Cost:** \$93, 900
- **Cash Grants, Rebates, Incentives Value:** \$65,494
- **Cost/Watt:** \$ 5.43
- **Year 1 performance:** 21,831 kWh
- **10 Year Electric Savings:** \$33,495
- **25-Year IRR:** 11.3%
- **Array Tilt and Azimuth:** 38 pitch, 180 azimuth
- **Racking:** Pro Solar Products
- **Modules:** (72) MAGE Solar 240 watt monocrystalline modules
- **Inverters:** (72) Enphase M215 Microinverters
- **Monitoring:** Enphase Envoy

10 Years Later: Waupaca Student Reflects on Solar Project

SUCCESSSES

- We had tremendous community support and fundraising.
- We showed productive student and faculty collaboration.
- The solar panels were installed.

FAILURES

- One of our inteded outcomes was to have a continued renewable energy curriculum at Waupaca High School, but this never came to fruition.
- The solar panels are minimal. Installing more solar panels or finding other renewable energy sources is necessary for the high school campus.

WHAT YOU'D DO DIFFERENTLY

- Reflecting on the project after 10 years, I would have pushed harder for the district to adopt a clean energy goal. This would have bolstered our project and sparked further renewable energy installations in the district.
- We should have pushed the district to adopt

a renewable energy curriculum so the solar installation could be used as a tool for students to learn about the climate crisis, renewable energy, and community organizing.

RESOURCES I FOUND MOST HELPFUL

- I found that it was really important to talk to everyone about why our solar project was important. We started out talking to people about the idea and that's how we got community members to come to our meetings. Talking about your project always connects you to more resources.
- Staying positive. My peers were not always understanding; the global climate crisis was a niche subject, almost taboo. My advice to others would be to find a supportive team and use them to bolster your positivity and work ethic.

—McHailey Johnson, Green Team Member



Learn more and access resources at:
midwestrenew.org/solar-on-schools