



# CASE STUDY: Solar on Cashton Elementary School

## PROJECT SUMMARY

Cashton School District understands the importance of supporting community investment in renewable energy generation to conserve valuable land and environmental resources. In the Spring of 2020, Khris Kleba, Cashton School District bookkeeper, first began researching the potential for solar investment for the district and started reaching out to other schools with solar installations to learn from their journey to solar. As the potential for solar became a real possibility for Cashton, additional key decision-makers participated in project planning, including the Cashton District Administrator, Cashton Director of Buildings and Grounds, and members of the Cashton Board of Education. To develop a fiscally sound plan, the District partnered with Legacy Solar Co-op. Legacy provided assistance with evaluating the two main vendor proposals, providing a tax financing structure and educating the parties on how others have used this kind of arrangement to reduce the up-front cost to the school, and high level project management.

During the project planning phase, the determination was made to install the array on the roof of the building due to limited green space. The array was sited on the roof of Cashton Elementary to maximize energy production from the southernmost part of the building and the roof section being the newest, having received a new fused rubber roof the summer prior to the solar array installation.



## ABOUT CASHTON SCHOOL DISTRICT

Cashton School District is located in the West Central part of Wisconsin and has been in existence since 1860, with a current enrollment of 626 students. The Village of Cashton houses a distribution center and an office building for Organic Valley, the largest farmer-owned organic food cooperative in the United States. The Cashton area is also home to the largest and one of the oldest continuous Amish communities in Wisconsin. Additionally, the area surrounding Cashton has one wind farm and two separate solar array farms.

## PROJECT CONTACT

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## SYSTEM AT A GLANCE

**Commissioned:** August 2021

**Electric Utility:** Village of Cashton

**System Size:** 61.42 kW DC

**Expected Annual Performance:** 81,664 kWh

**Solar Installer:** Olson Solar Energy

**Total Billed System Cost:** \$103,776.00

**Cash Grants, Rebates, Incentives:** \$38,993.51

**Cost/Watt:** \$1.29

**Cost/Watt Excluding Cash Grants:** \$1.69

**Y1 Electric Savings:** \$5,477

**25 Year Electric Savings:** \$166,585

**25 Year Cash Flow:** \$141,660.63

**25 Year IRR:** 3.89%

**Array Tilt and Azimuth:** Tilt: 10°; Azimuth: 181°

**Racking:** Unirac Solarmount

**Modules:** 166 Philadelphia Solar Bifacial 370w

**Inverters:** Enphase Energy IQ7a (240)

\*Total System Cost excludes the 30.71 kW Solar on Schools in-kind grant value estimated at \$12,284

In May of 2021, roughly one year after Mr. Kleba began researching solar, the Board of Education formally approved the system design and proposed installation from Olson Solar Energy in Onalaska, WI. The 61.42 kW system is expected to meet roughly 24% of the building's annual electricity usage. Looking long-term, the District views this project as a springboard to future District solar installations. There have been discussions to add a second installation on the elementary school and develop a much larger project at the middle school/high school which uses roughly 150% more electricity than the elementary building.

The District plans to use this installation to promote solar within the student body, the surrounding community, and to other school districts. Internally, Cashton has an Environmental Science high school class that has incorporated the solar array into its curriculum with the assistance of UW-Stevens Point KEEP program, giving students a real life scenario and interactive education to renewable energy. The District is also utilizing TV screens throughout the building, incorporating the array production and "fun facts" into the scrolling screenshots on the TVs that students and visitors view when they enter the building.

## ENVIRONMENTAL BENEFITS

In the first year the 61.42 kW DC system will offset CO2 emissions equivalent to:



Electrical usage of 6.6 homes



136,947 miles driven by an average passenger vehicle



60,228 pounds of coal burned

## PROJECT PARTNERS



## HELPING WISCONSIN SCHOOLS GO SOLAR

The Couillard Solar Foundation Solar on Schools program is managed by Midwest Renewable Energy Association (MREA). The initiative educates schools on the benefits of solar energy, provides resources to simplify the project development process, and offers grants to lower the upfront cost of solar.

**Learn more at:**  
[midwestrenew.org/solar-on-schools](http://midwestrenew.org/solar-on-schools)