

Powering a Brighter Future for Edison High

Smart solar cuts costs, funds academic programs

C2 Energy Capital's rooftop and canopy solar project in Minneapolis, MN won the 2020 Smart Energy Decisions National Innovation Award in Onsite Renewable Energy and was a finalist for Intersolar's Smarter E 2020 Award. Learn more about this installation and how SolarEdge inverters contributed to its success.



"We care about the long-term success of our clients' projects. We chose SolarEdge for their ability to meet NEC rapid shutdown codes, high quality, and exceptional safety record in the market. SolarEdge products maximize energy production while protecting our customers from the pitfalls of non-MPPT solutions." –

Candice Michalowicz Co-Founder and Managing Member, C2 Energy Capital

Background

Spend Less on Energy, More on Education

According to National Renewable Energy Laboratory (NREL), U.S. school districts spend more than six billion each year on energy, and most schools could potentially redirect 25% of their operating costs by being smarter about their usage. By investing in energy efficiency and solar, schools such as Edison High School in Minneapolis, MN, can better fund classrooms, increase teacher support, and staff additional learning opportunities for renewable energy.

"An energy-efficient school district with 4000 students can save as much as \$160,000 a year in energy costs" – US Department of Energy

The Challenge

Costly Overhead. Budget Cuts.

When the Minneapolis School District (MPS) began exploring solar energy solutions for Edison High School, it was incurring high operating expenditures – mostly as a result of rising utility bills. It needed to reduce energy spend and focus on investing in personnel resources, infrastructure, and educational equipment. A large upfront capital investment in solar was daunting, and highly unlikely to receive board approval. Given the school's size and energy consumption, a system that could make a significant impact meant spending hundreds of thousands of dollars. In addition, MPS wasn't eligible for the 30% Federal Investment Tax Credit (ITC) due to their 501(c)-3 nonprofit status.

The Solution

C2 Energy Capital Power Purchase Agreement (PPA)

To reduce utility bills and make the Edison High School campus sustainable, C2 Energy Capital successfully proposed a solar Power Purchase Agreement (PPA). C2 Energy owns, operates, and maintains the solar system and sells 100% of the energy generated to the school district at a fixed price for the 25-year term. This scenario lets MPS buy renewable energy from C2 Energy at a lower price than the utility, without requiring any up-front capital costs. And with the help of Sundial Solar, a leading EPC provider in Minnesota, C2 Energy proposed a rooftop and carport solar design using SolarEdge inverters and power optimizers.

Benefits

Improved STEM Curriculum. Energy Awareness.

Not only is Edison High School able to lower its electric bill, it has incorporated renewable energy learning programs into its STEM curriculum using the new PV system as an educational tool.

Other benefits to this project include:

- Reduced carbon footprint
- Participation in a growing league of schools that contribute to healthier community environments
- Allocation of energy savings to employee resources, continued learning, and robust academic programs

The solar canopy is part of a Sustainability Plaza, providing shade for covered events, and includes two EV charging stations to provide free daytime EV charging for faculty. The canopy is co-located with a community garden and greenhouse. The central location of the array offers an educational opportunity to students for an up-close view of photovoltaic solar.

MPS' solar energy project has reinforced the school's leadership within the district, while serving as a model "green campus" for the state and providing inspiration for the next generation of renewable energy leaders.

"Minneapolis Public Schools is dedicated to creating an environment where students have the opportunity to gain a well-rounded education. The addition of this solar project demonstrates how forward-thinking projects can reduce our budget, and also broaden students' knowledge."

- Ed Graff, MPS Superintendent



Investor Insight

An Award-Winning Solution, Built to Last

SolarEdge's module-level optimization maximizes energy production from a solar installation by constantly tracking the maximum power point of each individual module. For C2 Energy, that means they can deliver more electricity to their customers; and for MPS, that means they can save more money.

SolarEdge's advanced module-level monitoring capability also allows C2 Energy to ensure optimal system performance without requiring frequent site visits.

"We are very proud to win the 2020 Smart Energy Decisions Innovation Award and to be a finalist for the Intersolar Smarter E Award. Both are tremendous honors, and we believe that using SolarEdge power optimizers and PV inverters contributed to the success of the project. They are field-proven and built for high performance – providing more reliable operations with a lower risk of having to replace inverters early."- Candice Michalowicz, Co-Founder and Managing Member, C2 Energy Capital

Bottom line? SolarEdge products and solutions not only make it easier to meet performance guarantees, they also inspire customer confidence and peace of mind with their industry-leading warranty and by exceeding NEC safety code and grid requirements.



Installation Details:

- Minneapolis, Minnesota
- 480.5 kW PV System
- SE33.3KUS X 12, SE20KUS X1 SolarEdge Inverters
- P730 X 487, P505 X 272 SolarEdge Power Optimizers
- PPA Term: 25 years
- Projected Year-1 Energy Production: 601,400 kWh

Environmental Savings:

This PV system produces energy equivalent to:



1,055,121 miles driven in a passenger car



49 homes energy use for 1 year



555 acres of US forests in 1 year



468,527 pounds of coal burned

About SolarEdge:

SolarEdge is a global leader in smart energy, delivering innovative commercial and residential solutions that power our lives and drive future progress. Leveraging world-class engineering and worldwide experience, SolarEdge developed a ground-breaking intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. As a result of this and other innovations, today SolarEdge is the world's #1 solar inverter company in revenue with millions of systems installed in 133 countries. SolarEdge addresses a broad range of smart energy market segments through its PV, storage, EV charging, battery, UPS, and grid service solutions.

Visit www.solaredge.com to learn more.

Environmental Savings Source: EPA.Gov Calculator