



## Benefits of Installing

# Solar Parking Canopies

at the Medfield Public Schools



Schools have custody over the largest buildings/ areas that can be used for solar in Medfield

Save money and stabilize future expenses

Canopies protect vehicles and pedestrians from snow, rain, and sun

Help counteract climate anxiety and improve mental health

Off-set energy use in the schools

A representative photo of a solar canopy in another town. Medfield's design is being finalized.

Reduce greenhouse gas emissions

Create a visible reminder that the schools intend to be part of a climate solution

## Frequently Asked Questions

### Why should we add solar canopies in the school parking lots?

**1.** Solar array installations align with the Town's broader energy strategy and goals as cited in the 2022 Town of Medfield Climate Action Plan (TOMCAP), 2020 Townwide Master Plan, 2019 Municipal Vulnerability Plan, etc.

**2.** There is a statewide utility incentive called the SMART Program. Under the program, public entities and parking canopy projects qualify for additional funding; therefore, the schools can maximize incentive rate and capture the additional savings. Parking canopy structures have a higher incentive in the SMART Program than rooftop panels.

**3.** The SMART Program is a declining block program meaning it is "first come, first serve." Currently there is available capacity, but if we wait, we may lose the opportunity.

**4.** Most of the school roofs are nearing their end-of-life, so it does not make financial or logistical sense to install new arrays on the roofs at this time. Blake Middle School's solar system will incorporate some rooftop solar on the new section of the roof. In order for Medfield Public Schools to capture the incentives, the primary focus is to add solar canopies in the parking lots. Solar arrays on other school roofs will be considered when feasible.

**5.** School buildings are the highest energy consumers of all the town-owned buildings due to their size and function. Therefore, adding renewable energy will make the largest impact in terms of greenhouse gas reduction and cost savings.

**6.** Solar installations will provide educational opportunities aligned with STEM curriculum; help counteract climate anxiety and improve mental health in children of all ages.

### How much will this cost?

The installer pays for 100% of the construction costs

and maintenance. Medfield would enter into a Power Purchase Agreement (PPA) with the installer, which is the most common type of agreement for public entities because the municipality does not need to make the capital investment. The municipality purchases the power generated by the solar systems at the PPA rate, and thereby stabilizes future electricity costs.

### How much power will the arrays generate?

Power generation depends on the final design, but based on preliminary estimates, adding solar canopies at the High School and Middle School would cover approximately 65-70% of those schools' annual energy needs. Canopies at Memorial School may actually generate more power than consumed annually.

### What are the yearly cost savings?

At this time, the projects are being finalized by Solect Energy, the vendor that the town is working with on this project. They are also the firm that installed the DPW solar array, a PPA project. The PPA rate and anticipated savings for the school canopies will be determined by the final project scope, engineering, and SMART incentives. The rates will be finalized for each location before the School Committee moves forward with the projects. With future electricity costs expected to rise, Medfield Public School's savings from solar should continue to increase over the term.

### Will it increase taxes? Will it take away from other school and community needs?

No. There will be no effect on taxes. This project, and funding for this project, is completely separate from any school or community programs. There will be no impact on residential electric bills.

### Will this project affect the school budget?

Yes! There are no costs to the school for installation, maintenance, and servicing of the units. Through the PPA agreement, the Medfield Public Schools will save money on electricity. Those savings can be reallocated to educational purposes.

### Will excess power be credited back to the schools?

Yes. The system will be a behind-the-meter system meaning that the panels will produce energy to be consumed by the building first and then excess power is exported to the grid. In the event that there is excess solar generated during a month, the town will receive the credits for the excess generation on the monthly billing statement.

### What safety and security measures will be included?

As a part of the design, we will include LED lighting under the canopies. The possible use of security cameras will be evaluated with Medfield Public Schools. The panels and inverters are mounted high on the steel columns, which helps prevent vandalism and damage.

### Will the solar canopy affect parking?

Canopies protect vehicles and pedestrians from snow, rain, and sun. Final engineering has not been completed but it is expected that there will be minimal infringement on parking spaces, if any at all. The canopies will allow adequate clearance for fire trucks and snow removal equipment.

### What is the implementation timeline for this project?

Medfield Energy Committee has proposed a period of community outreach to educate the community about this project during the spring of 2023. From start to finish, the implementation process (including permitting, contracts, etc.) takes approximately two years. The goal is for the bulk of the construction to occur during the summer months to minimize interference with normal school day activities.