



FAQs: Power Purchase Agreements (PPAs)

What is a Power Purchase Agreement?

The School Building Committee proposes to provide solar photovoltaic (solar PV) panels for the school building project using a financing tool called a Power Purchase Agreement (PPA). Most public solar PV installations in Massachusetts are funded using a PPA including the Wayland and Lincoln/Sudbury school parking lot solar PV panels and the Sudbury and Lexington landfill solar PV panels.

Under a PPA, the school selects a solar PV developer through a competitive bid process or from a list of developers pre-approved through a competitive state procurement process. The solar PV developer designs, builds, owns, and manages solar PV equipment installed on the school and over the school parking lots.

Most PPA contracts run for 20 years. During the 20-year contract, the solar PV developer uses the electricity generated by the school panels to provide electricity to the school at a pre-negotiated price. The price per kWh is determined by the developer's project costs, State and Federal tax incentives, and the State's SMART solar PV program credits. Current PPA contracts are providing Solar PV generated electricity below the cost of electricity delivered by and purchased from Eversource.

Key contract provisions include opt out or buy out opportunities for the school, equipment maintenance, an end of contract school ownership or end of contract equipment removal.

Why did SBC decide to procure solar PV with a PPA?

SBC chose to procure solar PV with a PPA for two reasons:

- 1. The original PV design did not produce enough solar electricity to get the school to net zero energy consumption.**

The design development team conservatively estimated that the school buildings and parking lots could support PV panels capable of generating up to 632,860 kWh, which was not enough to completely offset the estimated energy consumption of the highly efficient renovated school. After the June town meeting, the team hired a solar consultant whose advanced solar PV design model could generate up to 1,527,180 kWh. The larger number of PV panels in the new design was beyond the budget approved at the June town meeting.

- 2. The cost per watt of Solar PV procured for the PPA option would be significantly lower than the cost per watt of Solar PV installed as part of the school building project or as a separate Town project.**

The Town Administrator commissioned the Town's solar PV owner's agent, Beacon Integrated Solutions (Beacon), to compare the financial ramifications of two approaches to developing solar PV for the school:

- Provided as part of the school building project
- Developed by the Town as a standalone PPA project

Beacon estimated that if done as a standalone PPA project, the cost per watt of installed PV panels would be 25-35% less than if installed as part of the school building project, due primarily to lower overhead.

Beacon then compared the long-term financial benefit of funding the potential Solar PV installation as part of the school building project using 4% bonds or through a PPA. Beacon's analysis included preliminary industry standard assumptions about the system size, design, credits, incentives, current and future electricity rates, and construction costs. Beacon estimated that over a 30-year lifetime, a PPA approach to the solar project would yield roughly \$1.3million more money for the town than direct purchase of the system.

What are the solar PV PPA next steps?

Solar PV is a critical piece of the school building project's net zero energy use goal. With a yes vote for the school building project and a yes vote for a Solar PPA, the design development team will make the school project "solar PV ready" and, in parallel with this work, the school will proceed with solar PV contract procurement with the Town's assistance.

The Town Administrator will reactivate the **Solar PV Task Force** that includes representatives from the Selectmen, Finance Committee, Conservation Committee, Green Energy Committee, and Planning Board. It will be supported by the Town's solar PV owner's agent. The Task Force will assist the school through the procurement selection, contract review, and construction management process.