



# *Town of Belmont*

## **Belmont Middle and High School Building Committee**

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### **Building Committee Photovoltaic Fact List April 28, 2022**

1. Including photovoltaic (PV) in the project has been a priority component of the project since 2016 when the Building Committee was formed, and Belmont Citizens emphasized the commitment of the Town to sustainability solutions which must be a component of this project.
2. The Building Committee has reserved \$2.6 million as a budget for PV and Belmont will realize cumulative savings much higher than that over the next 20-30 years from the PV installation.
3. The Building Committee retained a PV design consultant in early 2022 to help maximize the value of PV for this project. The plan is to bring the PV package to bid in the summer of 2022, installing the PV during the spring of 2023, and completing and energizing it by the time the entire project is complete in August 2023.
4. The project PV goals are to maximize PV production on the new building roof with preliminary designs showing over 2,300 individual panels with a total rating of over 1.1 MWdc.
5. Predicted Annual renewable energy harvested on site is 1,300 MWh/yr which is approximately one third of the annual needs estimated at 4,000 MWh/yr.
6. This building is expected to achieve an EUI (Energy Usage Intensity) of 30.2 [kbtu/sf/yr] which is very efficient for a building of this size containing a field house and pool (2018 Commercial Building Energy Consumption Survey Median K-12 School EUI is 48.5).
7. PV represents one critical component of a larger sustainable design goal, ZNE (Zero Net Energy), and the Project is designed to achieve ZNE Class D which means that some renewable energy is harvested within the building footprint and the remaining is supplemented by purchased renewable energy certificates.
8. It takes a community to get this project over the ZNE finish line including;
  - The Building Committee, for implementing design components such as building orientation, window to wall ratio, sun shading, high performance building envelope, efficient MEP systems, geothermal wells, no fossil fuels, and a PV system;
  - The School Department, for establishing a program to achieve ZNE by setting policy and engaging the right guidance to operate the building;
  - The Building Occupants (administration, teachers, students, community users), for being aware of energy usage and striving to change typical habits to more energy-conscious behavior such as using less plug loads, adapting to warmer interior temperatures in the summer and cooler interior temperatures in the winter, and adopting proper window ventilation protocols;
  - The Belmont Community, for continuing to foster an awareness as a regional leader in energy change and to advocate for choices necessary to achieve project ZNE.
9. The Building Committee recently confirmed their commitment by voting unanimously to construct PV on the roof of the new building.
10. For further information contact the Building Committee at [bhs-bc@belmont-ma.gov](mailto:bhs-bc@belmont-ma.gov)