

Plainfield Energy Committee Annual Report 2019

The Plainfield Energy Committee (PEC) continues to work with the state Department of Environmental Resources which administers our town's Green Community (GC) Designation grant of \$137,525, which we earned in February 2017. After installation of Light Emitting Diode (LED) lighting upgrades at town hall, the Hallock Building, and the public safety complex exterior in 2018, \$115,076 of the grant remains available, held by the state.

The designation grant may be spent on solar installations, but possible future competitive grants cannot, so there is reason to spend the remaining designation grant money on solar. Doing so will not disadvantage our town in applying for competitive grants. In consulting with the building committee, it was decided that the safety complex and highway garage roofs could not support the additional load. The front roof of the Hallock Building was considered but also ruled out for structural concerns and because of possible snow slides in front of the town offices and library.

Finally it was concluded that the picnic pavilion would be the best location for a roof-mounted solar photovoltaic (PV) system. This would cost an estimated \$35,000, including structural re-enforcement, for an approximate 8 kilowatt (kW) direct current (DC) system with a payback of about 12.8 years,

With the expansion of the police department in Hathaway Hall it seems appropriate to consider PV on that building. Although the south roof might have to be re-shingled and re-enforced, the estimated cost of a 13 kW DC PV system would be about \$50,000.

Panels on that roof could provide electricity for charging stations for police cruisers. In addition GC funds could be used for the difference in price between a conventional internal combustion cruisers and electric vehicles.

The PEC facilitated Net Metering Credits (NMC) subscriptions of 25 kW each from three community solar PV systems, saving our town about 15% of

its electric expenses while supporting non-carbon energy generation.

The Nexamp Large-Scale Community Solar 2.76 megawatt (MW-DC) west of Union Street is complete. For people who have not been able to have solar at their residences, community solar is an option to support non-carbon energy while saving 15% on your electric bill, directly deposited into your account. For more information go to the PEC's page on the town web site, <https://plainfield-ma.us>, or talk to a PEC member.

Before the Industrial Age, starting about 1750, there were about 280 parts per million (ppm) of carbon dioxide (CO₂), the main greenhouse gas that causes global heating, in Earth's atmosphere. By 1958 there were 315 ppm. In April 2018 it exceeded 410 ppm. By April 2019 the CO₂ had increased to 414.4 ppm. These increases in CO₂ levels correlate with increases in Earth's atmospheric temperature. July 2019 was the hottest month in history, and 2019 was the second hottest year ever recorded. Extreme weather events, caused by this global heating, cost the United States about \$400 billion in 2018, a year in which there were 14 separate billion-dollar plus disasters in the U.S. alone. We have much to do if we are to keep Earth from heating past the point where it becomes uninhabitable.

The PEC meets the 2nd Wednesday of each month at 7 pm at town hall.

Respectfully submitted,

Tim Walter, Chair
Conrad Liebenow, Vice Chair
Steve Bushway, Secretary
Judy Williams
Renee Schmitt