

City of Cambridge
Climate Protection Action Committee

Recommendation to the City Manager on Solar Energy

Recommendation to increase use of and support more installation of solar energy in Cambridge

Climate Protection Goal & Objective: D.8

Runs on renewable and non-fossil fuel energy sources: Increase the portion of community-wide electricity use that is supplied by renewable sources to 20 percent by 2020

Background

- By 2020, the Massachusetts Renewable Portfolio Standard is expected to increase the required contribution of Class I renewable energy generation, which includes solar, to the Commonwealth's electricity supply to 15%. Therefore, at least 15% of Cambridge's electricity is expected to come from renewable sources by 2020.
- Under Cambridge's climate protection goals and objectives adopted by the City Council, the City aims to obtain 20% of its electricity from renewable sources by 2020. The City also has set a goal to obtain five percent of its municipal electricity demand from on-site solar photovoltaic systems.
- The City desires to go beyond 20% to move Cambridge toward being a net zero emissions community.
- The cost of solar photovoltaic technology has plunged in recent years and government incentives are strong. The Commonwealth has a new solar loan program and solar renewable energy certificates (SREC) bring significant financial support to solar installations. The 30 percent federal tax credit runs through 2016 and it is unclear if there will be any future tax credits after 2016.
- Property Assessed Clean Energy (PACE) is a concept that uses the property tax process to manage financing of renewable energy installations. The key advantage is that it allows the financing to ride with the property instead of the loan recipient. Massachusetts currently has a law that authorizes local PACE programs, but none have been established due to the lack of financing. In 2014, Senator Brian Joyce proposed legislative amendments to restructure the law that would model a Massachusetts PACE program somewhat on Connecticut's successful program. It would have authorized MassDevelopment to issue micro-bonds to finance installations and encourage the private financial institutions to participate. The legislation was approved by the Senate but was not acted upon by the House of Representatives.
- In 2014, the state Legislature approved a law establishing renewable thermal credits similar to SRECs that will provide an incentive for technologies including solar hot water, ground source heat pumps, and others. DOER is authorized to establish a program which may be in place by summer 2015.
- Solar energy is Cambridge's primary option for renewable energy generation within the city's borders.

- Within Cambridge, the Mapdwell Solar System platform provides detailed, desktop solar feasibility assessments for virtually every rooftop.
- Because most residents of Cambridge are renters, they have limited access to the benefits from solar energy. Other options are not readily available. In addition, many residents live in buildings that are not suitable for solar due to building orientation, shading, and other factors.
- Under Massachusetts law, renewable energy generation is eligible for virtual net metering within the load zone where the generation asset is located. This allows Cambridge rate payers to benefit from solar installations outside the boundaries of the city.
- Community shared solar is a new concept that could make solar available to residents, including renters, who live in buildings that do not or cannot host solar energy systems.
- Community solar is subject to the State's net metering cap, of which two thirds is already interconnected/reserved or pending, severely limiting opportunities for community solar projects.

Recommendations

Support the aggregation of off-takers for solar net metering credits.

- Electricity consumers can be aggregated to purchase net metering credits generated by solar and wind energy projects, particularly outside the city limits. Purchasing net metering credits is a way to support the deployment of renewable energy within the regional electric grid. The net metering credits can also help ratepayers reduce their utility costs. CPAC recommends that the City support the aggregation of "net metering off-takers" by providing guidance and convening meetings.

Develop short-term solar PV installation targets and craft initiatives to meet them

- The Net Zero Task Force has developed long range recommendations for solar deployment in Cambridge. The City should develop short-term targets and organize initiatives to achieve them. For instance, the City could set a goal that in a particular year, the community will work to install X megawatts of solar.
- Community campaigns could be organized by community organizations, possibly on the "solarize" model (i.e., group purchasing for better prices) or through solar cooperatives such as those set up in other cities.
- The City should also engage with solar installers, financial institutions, the Inspectional Services Department, and others to participate and coordinate. The City could pre-qualify installers to help customers make choices.
- The City should regularly track solar installations in Cambridge and issue an annual status report to focus on attention on progress and goals.

Facilitate Community Shared Solar

- Identify sites within the city that are large enough to host community shared solar systems.
- Identify and work with owners of multiple properties who could install solar PV systems that generate excess capacity on one property that could be virtually net metered to other properties.

Actively Advocate for Legislation that Supports Solar Deployment

- The City should work with the Sustainability Compact, the business community in general, and others to campaign for the passage of the PACE bill sponsored by Senator Joyce.

- Support Bill S. 1757 “An Act relative to clean energy resources” to double the Renewable Portfolio Standard.
- Support legislation to increase or remove the State net metering cap, “S1664: An Act Improving Neighborhood Solar and Net-Metering in the Commonwealth”.

Promote Solar Thermal Installations

- The City should provide guidance and tools to facilitate the installation of solar thermal systems to take advantage of the forthcoming financial incentive.

July 2015