

Cavendish Considers Solar

The Town of Cavendish purchases electricity from Green Mountain Power for the municipal services of water pumping and filtration, sewage treatment, the transfer station and town offices. In 2013 these cost \$43,826. To stabilize costs and to protect against projected increases, The Cavendish Energy Committee recommends a town owned, 150 Kw (AC) solar installation.

Why solar? Photovoltaic panels convert sunlight into electricity, which is sent to GMP through the power grid in an arrangement known as net metering. While the town does not actually keep the energy generated by the panels, our bill is credited for that energy at the same rate that we pay to purchase power. In addition the town receives an additional six cents per kilowatt-hour from GMP as incentive, further reducing the cost. In this way Cavendish contributes to the state's goal of 90% renewable energy by 2050.

System details: The 624 panels will be professionally installed and securely fenced in. They will be located out of sight on the south side of the sewer treatment plant. The panels have a 25-year warranty; the inverters (which change the power from DC to AC) are warranted for at least 10 years and the whole system will continue to provide power for some time beyond 25 years. The town and the installer will have the capability to monitor the system's functions 24/7; the town will carry insurance, and will establish a self-funding maintenance account although this solid state solar installation will have no moving parts and therefore will require little maintenance. Also, the state will impose a \$636 tax each year for the education fund.

Payment plan: Taking advantage of current low interest rates, the town will float a 20-year bond for up to \$450,000 to pay for the panels and their installation. Unlike other bonds the town has used and successfully paid off, this bond will require no new taxes. The solar system will cover most of the town's GMP energy bill, and the cost of paying off the bond will be less than that energy bill. In other words, the credit received for self-generation of solar power will more than offset the bond payments. There is already money in the budget to cover the GMP bill if we do nothing, and that money can instead be used to make the annual bond payment. A town vote on issuing the bond is scheduled for Aug 26th.

Common Questions:

Why only 150 Kw? A larger installation would breach a legal threshold and require the town to pursue a very costly Act 250 permit. We already have a permit to build the 150 Kw (AC) installation.

Why GMP? A solar installation can only apply to one power provider's territory. GMP serves Cavendish. Since Ludlow Electric serves Proctorsville village, the installation in Cavendish cannot directly benefit any town facilities such as the school in Proctorsville. However, indirect benefits would accrue to the school from the reduced costs to the water and sewer facilities. Proctorsville residents will receive the same benefits as Cavendish residents.

What happens during a power outage? The system will be hooked to GMP transmission lines and will not function during a power outage. So if the grid goes down, we will be without power.

What are the risks? It is impossible to predict changes to solar legislation or to solar markets. We also cannot predict changes in technology. We cannot foresee the effects of inflation or cost increases, although it is widely reported that electricity costs will rise. (For one example, law now mandates that we will receive the 6 cents solar incentive for 10 years if we act before 12/31/14. We cannot know what the legislature might do to that amount or time span in the future.) Of course, if part of the system fails there would be a loss of power and therefore a loss of solar credits, and there may be associated repair costs.

Are other towns buying their own systems? Warren, Vermont and Waitsfield, Vermont have already floated bonds to do the same project, but we are among the leaders. Many other Vermont towns are installing solar PV panels. The energy committee investigated third party ownership but found that the benefits of town ownership are substantially superior.

What about degradation of the panels over time? Yes, panels lose their efficiency over time, however the loss is in the order of 0.75% per year. After 25 years the panels would still produce over 120 Kw (AC) of power.

The benefits: For no additional cost the town will improve its infrastructure. Electricity for essential town services such as water, fire hydrants, sewer, transfer station, recycling and town office will cost significantly less if the town moves forward with this plan. Industry experts predict an annual rate increase of 3.78% for electricity. The solar installation will provide cost containment by protecting us against these price increases. After 20 years, when the bond is fully paid off, the town will receive electricity almost cost free.

Please bring your concerns, queries and questions to your energy committee. We look forward to hearing from you.