

Mad River Valley Energy Series

Presented by the Mad River Valley Planning District with support from the Vermont Energy Climate Action Network

Part 2 of 5: Residential and Community Solar Projects

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Big Picture Theater, Waitsfield, VT

Summary by Vickie Trihy

Photovoltaics 101, presented by Gaelan Brown

There are several advantages to using solar powered energy. It lowers electric bills, increases home value, costs less over time when tax incentives are factored in, and provides clean energy.

Solar powered energy is becoming more affordable as federal and state programs continue to provide tax credits and rebates, low-cost financing is available, and the cost of the systems themselves is going down. Because most solar installations have no moving parts, maintenance costs are low as well—panels can be expected to last twenty-five years, and the inverter should work for fifteen years before it must be replaced. To power a typical home requires 400 square feet of available roof or ground space, and for hot water only 100 square feet is sufficient. Facing directly south is ideal, but a southeast or southwest orientation will work, although output will be lower. The panels must be unshaded between 9am and 3pm.

Some site considerations to keep in mind: For a roof-mounted system, if the roof is old it should probably be replaced before installation of a solar energy system, to avoid having to remove and reinstall it. Trees that would shade the panels between 9am and 3pm need to be trimmed or removed. If roof space is insufficient, a ground-mounted system may be a good option.

Panels can be fixed, adjustable or designed to track the sun during the day. Systems with moving parts will cost more over time, as these wear out more quickly.

Mad River Valley Energy Network, presented by Peter Boynton

This grass roots organization was formed to explore the Valley's options for generating its own energy in a manner that reflects the community's values and is harmonious with the landscape. Currently its members are looking into establishing a solar farm in the Valley. Members of the community could purchase a fraction of this large installation, which would enable people who

don't have a good location for installing solar energy at their own homes to benefit from locally produced, reliable and inexpensive power.

Siting the project out of the scenic viewshed is a key consideration. The group is currently has a site in mind on land owned by Sugarbush Resort, and they have been working successfully with the state to pass legislation that would remove legal barriers to this type of project. They plan to survey the community to determine interest in subscribing, gather more detailed information on project costs, work out the legal and tax aspects, and secure funding. If all goes well, they envision having an installation in place and generating power by August 2012.

VPIRG Solar Communities Program, presented by James Moore, director of Vermont Public Interest Research Group (VPIRG) Clean Energy Program

VPIRG has established a Solar Communities Program to demystify and streamline the process for home and business owners to go solar, and make it more affordable. In selected communities, the program organizes enough people for big groups discount from a solar energy company, and the company handles the permitting and paperwork. A financial partner agrees to provide low-cost financing with no closing costs. The solar Communities Program is scheduled to expand to the broader Mad River Valley towns in 2012. The program currently operates in Moretown, Duxbury & Waterbury as well as 5 other communities in VT.