January 29, 2009 Meeting
Members present: Dick Ames, Harry Young, Margaret Dillon, Ed Suprenant.
Absent: Doug Clayton, Doug Starr, Bonnie Mitchell, Rob Stephenson, Andy Jones.
Guest: Sarah Harpster, consultant to Clean Air-Cool Planet
The Committee approved Steve Dark of Millipore as a new Committee member.
Harry Young presented an update on the Streetlight Committee's work. The Committee has accepted Police Chief Oswalt's recommendation for retention of 10 of the 96 lights that had been initially identified the Committee for removal. The Committee is recommending that the remaining 86 lights be replaced with 70 watt full-cutoff metal halide fixtures. The Committee is scheduled to review its recommendations with the Board of Selectmen on Monday March 2. [Note: Due to snow, the review meeting with the Selectmen took place on March 3.]
Sarah Harpster reported on Clean Air Cool Planet's program to support local energy committees. She encouraged our Committee to complete its baseline energy assessment, preferably using 2005 data (to provide a baseline comparable to other towns) and will send a excel program to Dick Ames which will facilitate this work.
The Committee reviewed the RFP that has recently been issued by the Public Utilities Commission for projects that will be funded by the new Greenhouse Gas Emissions Fund, a product of New Hampshire's participation in the auctioning of renewable energy credits through the Regional Greenhouse Gas Initiative. The Committee agreed to ask Jaffrey to proceed with a proposal for funding of building energy audits and building energy improvements. In this connection, Margaret Burnham reported that she is scheduled to do a comprehensive energy audit on 3/20 of the Town Offices building, and that this could serve as a model for other energy audits. Margaret also reported on the new International Energy Conservation Code, which includes much stronger provisions for tight and well insulated building envelopes.
Dick Ames presented information on Solar Photovoltaic systems, reported that a 5.1 KW system installed on his roof last June has worked well, proving to be an economically excellent long range investment. He also discussed with the Committee the possibility of installing a large Solar PV system on available open space at the Recycling Center to help meet the 1.4 megawatt hours per year electric power demand of the new water treatment facility (and also to help meet the recycling center's electric power requirements.) [Note: Dick Ames' follow-up memo to the Selectmen on the Solar PV and Building Energy Audit proposals is included at the end of these minutes.]
Dick Ames presented and discussed a memorandum dated 1/29/09 with information on policy, regulatory, funding and other developments of interest. A copy of this memorandum has been circulated to all Committee members.
The next meeting was scheduled for 7 PM, Thursday, March 26, 2009, at the Town Library.
Respectfully submitted by Richard Ames
[See below for follow-up memo to Selectmen.]

Memorandum
To: Members of the Town of Jaffrey Board of Selectmen
From: Richard Ames, Chair, Town of Jaffrey Energy Committee
Re: Energy Savings Opportunities:
- Building Energy Audits & Renovation, and
- Solar PV on Land at the Recycling Center
Date: March 4, 2009
I write to bring to your immediate attention two separate but possibly linked opportunities that could result in significant cost and energy savings for the Town of Jaffrey.

Building Audits and Energy-Saving Renovation

On February 27, 2009, I sent the attached e-mail to Town Manager Michael Hartman, who I understand has been ill and is now on a long-planned vacation. Since time is of the essence, and since I am told that the Board of Selectmen's authorization is needed for work on this project to go forward, I am now bringing this directly to your attention. My e-mail proposed that Jaffrey respond to the DPU's Greenhouse Gas Emissions Reduction Fund RFP with a proposal for funds to support professional energy audits of Jaffrey's building inventory. The request could also seek funds for implementation of the audit findings. All of this is fully explained in the attached e-mail. The potential for cost and energy savings is considerable. Time to act on this is very short since the funding request must be submitted by March 23, 2009. Funds to examine the Solar PV option discussed below could also be included in this proposal. I can help get this proposal done after I get back from a trip that starts tomorrow and ends on March 11, and I am sure that other Energy Committee members would be willing to help as well.

Solar PV on Recycling Center Property

Solar PV Systems for Municipalities In general: An increasing number of municipalities around the country are establishing solar photovoltaic (PV) collectors to meet in part their need for electric power. They are doing this through "power purchase agreements" (PPAs). In a PPA, a private company installs and owns the PV system pursuant to a long-term contract with a municipality. The company takes advantage of the huge federal tax incentives that are currently available (30% refundable investment tax credit and 5 year accelerated depreciation deduction) and supplies the municipality with all of the electricity produced by the system. Renewable Energy Credits (RECs) may also be sold to further reduce costs. The municipality then gets electricity at a guaranteed price that is below the current utility price and that goes up each year at a rate that is almost certainly less than the erratic and high inflation that will predictably characterize utility pricing. So, the municipality gets a good deal for its electricity with no up-front capital outlay. And, of course, by converting to a clean energy source, the municipality makes a major contribution to greenhouse gas emission reduction efforts. Options for the municipality to purchase the solar system after the write-off period are often built into these PPAs.

Solar PV System for Jaffrey the Opportunity: The estimated electricity usage at the upgraded water treatment plant is about 1,442,000 KWhs/year. This reflects a huge power requirement and the purchase of electricity for it will be hugely expensive. The recycling center (which also must have significant electricity usage) and its wide open land that once was used for land fill is immediately adjacent to the treatment plant. The open land appears to be a very good solar site. The available square footage appears to be sufficient to support a very large installation, sufficient to provide at least a substantial portion of the electricity used by the treatment plant and recycling center. Solar PV works well in Jaffrey. I know this because last summer I installed a 5.1 KW roof-top system (quite large by residential standards) that is producing at a rate that will exceed 5000 KWhs/year, and possibly reach 6000 KWhs/year. My system has proven itself as an economically excellent long-term investment. This will likely be true for Jaffrey as well. For all of these reasons, I think Jaffrey should aggressively investigate this solar PV opportunity.

Solar PV System for Jaffrey Questions to Explore: There are many questions which Jaffrey will need to explore as it investigates the viability of this solar PV opportunity. Does the land at the recycling center have a good solar exposure and orientation? Is it sufficiently stable to support a framework for the PV system? Are there hazardous waste problems that preclude its use? Is there a better site? How will the interconnection with the PSNH grid work (net metering appears to be unavailable for systems above 100 KWs)? Is there an alternative to the PPA in which PSNH would build and own the PV system? Are there legal obstacles that stand in the way of a NH municipality entering into a PPA? Is the alternative of direct ownership of the PV system by Jaffrey financially viable, given that Jaffrey might be able to use Clean Renewable Energy Bonding authority to finance the project at no interest costs to the town, but would not be able to use the federal income tax credits and write-offs that can be accessed through a PPA?

What should the terms of a PPA be? Are there providers who would respond to a proposal to build and operate such a system? Are there other federal or state grants or rebates that could help to reduce the capital cost of this project?

How to Pursue this Project?: The Energy Committee and I would welcome an opportunity to discuss this project with the Selectmen and to help find answers to the above questions.

Information about PPA Solar PV Projects: I attach articles about two Solar PV municipal PPA projects in Massachusetts. A very good comprehensive treatment of these projects is "Solar Photovoltaic Financing: Deployment on Public Property by State and Local Governments", that was put out as a technical document in May 2008 by the National Renewable Energy Laboratory (NREL) and is available at the www.nrel.gov website. I understand that a new, updated report from NREL will be out very soon. I also have copies of other informative treatments of the municipal solar PV question.

I hope that we can work together on these projects.