

MMR ENERGY COMMITTEE MEETING MINUTES

Date: 15 September 2009

Time: 1:30-3:30 pm

Location: Bldg 322, East Inner Road

Agenda:

- Spire Solar Presentation
- EPA funding for solar feasibility study
- NORESO energy program management
- MMR alternative energy planning policy review/discussion

Attendees: See attached distribution list

1. Rose Forbes (AFCEE) opened the meeting by welcoming the attendees and providing an overview of the agenda.
2. Spire Solar, located in Bedford MA, made a return visit to update the committee on their capabilities and some new information on a likely upcoming change in Solar Renewable Energy Certificates (SRECs). Spire Solar, previously Gloria Spire, provided company literature and a handout with example financial calculations. Representing Spire Solar were Stephen Hogan (CEO), George Smith (Consultant, Project Development), and David Hebert (Director of Public Policy and Corporate Sales).

David Hebert spoke about the new State program. The Department of Energy Resources (DOER) is in the process of writing regulations requiring that a percentage of the renewable energy used in Massachusetts be generated from solar as a means of stimulating development of solar power projects. This would potentially replace the current rebate-based programs from the State under the Renewable Energy Trust. The current requirements are spelled out in the Renewable Portfolio Standards (RPS) but they do not require that any percentage be from solar, just that a certain percentage of all energy used in the state be from renewable resources (wind, solar, biomass, etc). There is an alternative compliance fee that utility companies can pay if they do not distribute enough renewable energy to meet the RPS. That fee basically sets the upper value of the renewable energy credits (RECs) that all renewable energy projects receive. Under the proposed new system,

there would be a “carve out” from the total of renewable energy that would have to be from solar resources; and, there would be a separate, higher, alternative compliance fee for not distributing the required percentage. That would drive up the value of SRECs, making solar projects much more affordable and thereby encouraging growth. Currently RECs in MA are valued at around \$25 to \$80 per MWh; under the carve out, SRECs will be valued from \$350 to \$700 per MWh. MA DOER is planning on converting from the current rebate program to the SREC program by January 2010. Gov. Patrick’s goal for renewable energy from solar is 250 MW by 2017.

Also, the distribution companies are now allowed to build, own, and operate solar systems to produce power for the grid under the new Green Communities Act. So, the utility companies are starting to install solar fields. This could be done at MMR under a lease agreement with NSTAR if they are interested and if the base is interested. The incentive for the base to host such a system would come from lease payments charged to the system owner.

An example of a fixed-tilt 2 megawatt system was provided and discussed. Capital cost, which is often paid by the developer, would be about \$9 million. It would require about 9 acres. The landfill is just one potential location at MMR. The example assumes an electricity cost of \$0.135/kwh (which is lower than actual MMR cost by about 4 cents) and RECs valued at \$0.35/kWh (not the higher value expected if the solar carve out is enacted). The example shows a pay back (i.e. break even point) in about 6 years. It would also reduce carbon emissions from fossil fuel fired power plants by 1928 tons per year and power the equivalent of 233 single family homes.

3. Paul Marchessault from EPA spoke about the funding that EPA has available with the National Renewable Energy Lab (NREL) under a program to look at the use of restricted sites (i.e. landfills, brown fields, and contaminated sites). EPA has up to \$50,000 that they can spend under this program. A feasibility study is usually the first step in a project and this money could be used to help get an MMR solar project started. The money goes through NREL and they can contract who they need to complete the work. Representatives from Spire said that \$50,000 would be more than enough to do a feasibility study for a

solar installation at MMR. The funding can also be used for other tasks beyond the feasibility study stage, including design and permitting.

4. John Saams from NORESKO discussed energy savings performance contracts (ESPCs) and how they work (see attached for his powerpoint presentation). ESPCs provide a building owner with a way to make energy efficiency improvements with no up front capital. Basically, a property owner would consult with NORESKO to determine what improvements could be made to conserve and/or generate electricity in a building (or several buildings). NORESKO would assess the buildings and where energy could be saved, and what renewables could be installed on-site. This could include new lighting, insulation, new HVAC systems, solar panels, etc. NORESKO would provide an initial assessment for free with no obligations to the client. If the client is interested, NORESKO would then prepare a more detailed feasibility study with firm recommendations for energy savings. The client at that point has the choice to proceed with the improvements or not. If they go ahead, there is no cost for the feasibility study. NORESKO would assemble the necessary capital to make the improvements or install renewable energy and do the work at their own expense. The client would see a reduction in their utility bills but would pay the savings to NORESKO for a period of years agreed to by contract, which is how NORESKO gets paid for their work.

The client has no out of pocket expenses and gets the most energy efficient building possible. After the contract period is up and NORESKO has recovered their investment, the client gets the benefit of the savings in reduced utility costs. John pointed out that this is often not the most cost effective way for a client to do a project and reduce utility costs. It is better if they can fund projects with their own capital. But many organizations, including most government organizations, don't have access to the necessary capital so this is the best option. He compared the arrangement to owning versus renting a house.

NORESKO has existing IDIQ contracts with the Army Corps and DOE among other contracting avenues potentially available to MMR organizations.

5. Brian Nickerson of E&RC discussed the MMR Alternative Energy Policy that he put together for the JOG about a year and a half ago. Brian is moving from E&RC to FE soon and may no longer be the point of contact for the policy. Since the policy was developed,

the maps associated with the plan have become out of date. The difficulty of incorporating the airfield requirements (through FAA regulations) on a 2 dimensional map was discussed. Brian also questioned if there is an ongoing need for the policy. After some discussion, it was concluded that the policy remains a useful tool but might need some updating. All members of the committee are asked to review the current policy and come to the next meeting with suggestions for specific improvements, both to text and the figures. It is not the committee's policy, so the changes will be suggested to the JOG.

6. Please contact Paul Nixon at 508-968-5620 (paul.nixon@us.army.mil) or Rose Forbes at 508-968-4670 x 5613 (rose.forbes@brooks.af.mil) if you have any questions, comments, or suggestions about the minutes, next meeting's agenda or the MMR Energy Committee.