

CHEC Minutes from October 20th, 2023 Meeting with Sunergy Solutions (SS)

Attendees: Carol Sullivan, Bernie Volz, and Selectmen Representative Richard Drenkhahn. Energy Committee member Michael Rich was absent with notice. Chris Sheldon, representing Sunergy Solutions, also attended.

Carol called the meeting to order at 10:15 a.m.

The purpose of this Center Harbor Energy Committee meeting was to ask Solar Contractor Sunergy Solutions questions about their Proposal for a Solar Array to power Center Harbor's Municipal Building. The following are the questions asked by the CHEC, answers from Chris Sheldon of Sunergy Solutions and related comments. Chris explained that he originally wrote a proposal for a larger solar array than we asked for in our RFP, to allow for future expansion. He then revised the proposal according to our specifications.

Questions, Answers and Comments

1. We hope to qualify for a \$10K rebate from the NH Department of Energy - see [Commercial & Industrial Solar Incentive Program from NH Department of Energy](#). Do you have any concerns regarding whether your proposal would fail to qualify or your company would not accept any requirements.

SS is familiar with all the requirements for obtaining a rebate from both the NH DOE Commercial and Industrial Solar Incentive Program and the Inflation Reduction Act (IRA). With the IRA rebate, in order to achieve the extra 10% above the 30%, the Act requires the equipment be US-made. SS is trying to use US manufactured equipment wherever possible. However, this requirement is currently unable to be fulfilled since neither US-made inverters nor panels are available at this time. Although they are not US made, they are US sourced. It is estimated to take three to five years to move manufacturing to the U.S. (Thus it may be possible to use them in another Sunergy project in progress in Antrim, NH.) Racking and ground screws are US-made. The purpose of this requirement is that even though not all equipment is currently available as US-made, this Act is trying to encourage an increase in the use of renewable energy, also involving encouraging manufacturers to

step up and provide US-made equipment. Prevailing wages will be paid to electricians. If prevailing wages are needed for other sub-contractors, SS will deal with this when the time comes.

2. There is no mention related to our ability to be able recover at least 30% of the cost using the PV Direct-Pay option available through the Inflation Reduction Act (IRA). For panels (and inverters) manufactured in the United States, we could reach as high as a 40% rebate. No mention of whether you will meet Prevailing Wage and Apprenticeship Programs as may be required under the IRA for Direct Pay?

See answer to Question 1 above.

3. What is the height of the proposed fence? Is there a gate and lock?

There is an illustration of the fence in the proposal. SS will use whatever fencing that Center Harbor requests. SS proposes using a 6' tall fence to surround the array, consisting of 6' wood posts and agricultural mesh wire with plastic coating. There will be two gates with locks. SS will review plans with the Center Harbor Fire Department and Building Inspector.

4. Are the 3" or 4" ground screws sufficient to hold down this racking system (sufficient to prevent sinking further into the ground and to prevent wind uplift)? According to the manufacturer, these screws are appropriate for 2-4 soil classification. Do we know what our soil classification is?

SS will use IronRidge Schedule 40 Pipe, bolts and screws. These extend into the ground to 15" below the frost line (approximately 81" long). They are 2 - 3" diameter. In SS's experience, this racking system should be fine for the most stringent of conditions. Sunergy tries to avoid doing bore-hole tests except on multi-million dollar projects. These screws, along with the racking system should be able to withstand winds up to 125 mph. SS had one installation in Massachusetts with higher winds. In cases like this it is possible to fortify the racking with Spread footing. These screws can be unscrewed in the future if need be. The project will receive a structural engineering stamp.

4 a. Where are inverters located?

The SMA inverters (designed for commercial application - 480 Volt) will be bought by Sunergy Solutions and installed for our service. They are “string” inverters and are hung on the back of a panel row. .

5. What is the proposed height of the low and high end of the panels from the ground?

Low end will be 18 - 24” from the ground. High end will be 6 - 7’.

6. Why are you using a 30 degree module tilt? Would 35 not be better (for dropping snow and improved efficiency in winter)? Though it may require more distance between the rows and increase the length (area covered) of the fence?

The difference between the 30 and 35 degree is very small. They are about 98% similar. There is about 6 to 7 feet between rows. In the spacing plan, SS wanted to provide extra space in case Center Harbor wants to expand in the future.

7. . What monitoring of the system is included? What other options exist?

The solar data acquisition system (Power Dash - cellular modem in box), costs a few dollars a month is also located on the back of one row of panels. It monitors and reports performance and provides alerts. As stated in the proposal, Sunergy Solutions will connect the internet service, but will not pay for Internet Service.

Carol adjourned the meeting at the Municipal Building at around 11:00 a.m.

The Energy Committee then drove to see one Sunergy Solution completed solar array project at 182 Meeting House Rd, Bedford, NH. There we also met with Rob Raffa, owner of Sunergy Solutions and the owner of the residential home where this project is located. This project is ground-mounted and was paid for by the owner, not financed through Sunergy.

We inspected the fence at this project which is similar to what SS has proposed to us for Center Harbor. We saw one spot where the fence had caved in due to a tree dropping on the fence. No solar panels or other equipment were damaged.

We also observed panel racks (not the same as ones we will have but close). In this project, micro-inverters were used. Instead of micro-inverters, we will have full sized string inverters. The space between rows looked to be larger than the 6' to 7' we will have - closer to 15'.

We asked whether panels for our project would be bifacial, which absorb solar arrays on both sides and which should add to the power a project can generate. These panels are being used on this Bedford NH project and can be used for our Center Harbor Project. Chris does not think bifacial panels add a lot of power.

P.S. I reviewed this proposal for discussion of maintenance and am including my findings here:

25 year workmanship warranty of PV system. 2 years of PV system maintenance. Long-term maintenance contract for PV system to be negotiated separately.

Respectfully submitted, Carol Sullivan