

CHEC 9/29/23 Meeting with Barrington Power

CHEC Minutes from September 29, 2023 Meeting with Barrington Power (BP)

Attendees: Carol Sullivan, Bernie Volz, Michael Rich and Selectmen Representative Richard Drenkhahn. Ted Vansant, representing Barrington Power also attended.

Carol called the meeting to order at 9:02 a.m.

The purpose of this Center Harbor Energy Committee was to ask Solar Contractor Barrington Power 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 Ted Vansant of Barrington Power and related comments.

Questions, Answers and Comments

1. We hope to qualify for a \$10K rebate from 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.

BP is aware of all the requirements for obtaining a rebate from the NH DOE Commercial and Industrial Solar Incentive Program as well as the requirements for a rebate from the Inflation Reduction Act (IRA). They have helped previous clients apply for these Rebates successfully. Center Harbor needs to pre-register before applying for these rebates. These rebates require that 40% of the equipment be US-made. US-made inverters are not available, but panels and racking should amount to 40% of the cost. Although there is 90% chance Center Harbor will get the money, we should be aware that sometimes the money runs out later in the year, so the availability of money depends on our timing. Based on BP's experiences, state legislators will go after that money to use for other purposes. Clean Energy NH has experience defending this money.

2. What is NHEC's rate Code for upgraded service (N21/N22?)

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Center Harbor's current rate code is B32 - General Multiphase. With installation of solar, the rate will probably move to N27 or N28. However the CHEC should talk to our Coop Representative to verify, since our demand is not essentially changing. There may be an NHEC fee .

3. Fence: Why an 8-foot high fence? Would a 6-foot be possible? How would it impact total product cost? Any more details on the "agricultural fence"? Is this a chain-link fence or something less "substantial"?

The fence surrounding the array will be 8' tall, consisting of 8' posts and agricultural mesh wire with plastic coating. 8' fences are standard for deer. Code for these fences is 7'. Eight feet is more commonly available.

4. How are the PV panel racks anchored to the ground (sufficient to prevent sinking further into the ground and to prevent wind uplift)? BP will use stake/screws that are 8' long below ground and 8' high above ground. They are 3" diameter. BP works with data from a professional engineering firm that has wind information from every town in the country. They should be able to screw in these large screw/poles depending on the environmental situation. If ledge and/or cobble are found, then they will pre-drill holes and put crushed stone in them to stabilize the screw/poles.

5. Where are inverters located?

The inverters are hung on the back of one row of panels. Barrington Power will buy and install inverters that match our service. (As previously stated, at this time, US-made inverters are not available.) Panels will generate DC power, then send it to the inverter which changes it to AC. BP's electrician will upgrade the electric system coming in from NHEC, then tie in to that. This proposed array will generate more power during the year than we need. We could potentially do Net Metering to provide a discount on electricity to other town buildings.

6. Will some equipment be located on the outside (west) wall of the Fire Department or is any space inside the Fire Department needed?

No equipment will need to be located on the outside or inside of the Fire Department..

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7. Is any maintenance included and for how long?

The recommended annual basic maintenance package conducted by BP would cost approximately \$1,000 per year.

8. Where will the proposed solar data acquisition system be located and what is required to connect it to the web?

The solar data acquisition system is also located on the back of one row of panels. As stated in the proposal, Barrington Power will connect the internet service, but will not pay for Internet Service. .

9. Proposal says 35-degree tilt angle, but monthly production report seems to have been run with 20-degree array tilt? Which is it and perhaps a new PVWatts Calculator run needs to be provided? And that may also change 25-year projected annual production data in the proposal?

In BP's proposal response, PVwatts was run with 20% tilt, not the 35% per proposal. Using 35% does result in more power production throughout the year. Ted, while agreeing that run was incorrect, believes in the original ~132 MWh and not the higher ~149 MWh and so he'd prefer to stick to the 132 value as they have more confidence in that number given their experience with other arrays. If we produce more, so much the better for us.

10. Explain the difference between Union and prevailing wages - what Union wages are we likely to expect? Are prevailing and/or Union wages required by the Inflation Reduction Act in 2024?

In government contracting, a prevailing wage is defined as the hourly wage usual benefits and overtime, paid to the majority of workers, laborers and mechanics within a particular area. This usually the union wage. BP's price includes an additional \$17,000 cost for prevailing wage to all employees working on a project - which is a requirement for the Town to be eligible for the Direct Pay provision under the IRA.

11. Why do we need prevailing wage & apprenticeship requirements? Projects <1MW can get the base credit of 30% without (>1MW has these requirements). There's info at

<https://www.whitehouse.gov/cleanenergy/clean-energy-tax-provisions/> which doesn't seem to mention the system capacity.

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Also see

https://www.democrats.senate.gov/imo/media/doc/inflation_reduction_act_of_2022.pdf and search for “13101”.

See # 10 above.

12. If prevailing wages are not needed, do we get credit from the proposal amount?

See above. BP stated that we do need to do prevailing wages for rebates from the Inflation Reduction Act (IRA)

Carol adjourned the meeting at the Municipal Building at 10:10 a.m.

The Energy Committee then drove to see three of Barrington Power’s completed solar array projects. The projects included Holderness School, Plymouth NH (460 kW completed in Fall 2020), Profile High School in Bethlehem, NH (344 kW, completed in Fall 2021) and Bethlehem Elementary School also in Bethlehem (140 kW completed in Spring 2023). All three of these projects were PPA -financed through Barrington Power.

We inspected fences at all three schools that were similar to what Barrington Power has proposed to us for Center Harbor. We also observed panel racks (not same as ones we will have but close), location of inverters and logging gear (solar data acquisition system), power connection (to buildings), maintenance (moving/pruning).

We learned that now, most ground-mounted solar arrays use panels that are bifacial which absorb solar arrays on both sides which adds to the power a project can generate. These panels are being used on the Bethlehem Elementary School Array and are proposed to be used by Barrington Power for our Center Harbor Project if the contract is awarded to them.