**B E T H L E H E M E N E R G Y C O M M I S S I O N**

***July 2, 2020 MEETING NOTES***

Attending: David Van Houten, Bruce Caplain, Mark Koprowski, Mary Lou Krambeer, Dan Crosby, Melissa Elander

**1. Mission and Vision Statements**

David read the mission and vision and suggested we review the wording so that it is clear and concise.

To Do: all review mission and vision prior to our next meeting – send suggestions to David

Mission: The Bethlehem Energy Commission was established for the study and planning of energy resources for the town. The commission will evaluate existing energy usage in the town and suggest possible improvements in energy efficiency and conservation, as well as potential clean renewable energy solutions in order to reduce expenses and increase self-reliance.

Vision: David proposed we create a vision. (For example – Energy use for buildings, transportation, industry, lighting, and other similar uses is consumed at a reasonable standard of efficiency. Energy supply for this usage comes from clean sources.)

**2. Election of Officers**

David Van Houten elected unanimously for a second term as BEC chair

Mary Lou Krambeer elected unanimously as BEC Communications Director

Thank you to Mark Koprowski for serving as BEC Secretary for the past year

**3. Minutes from our Last meeting**

Minutes from last meeting approved

**4. EPA portfolio manager**

Nicole McGrath is updating portfolio manager each month.

To Do: Dan will look at numbers periodically (monthly) and report to us.

SAU administers our school energy dollars. We discussed asking SAU office folks to adopt portfolio manager.

To Do: Melissa offered to set up portfolio manager for SAU.  Toni Butterfield is new SAU business manager.

To Do: Mark will ask Kim Koprowski to connect with Toni and introduce Melissa.

5. **Town Hall maintenance**.

To Do: Bruce will follow-up on the recent town hall walk-around. The Town will need to consider the maintenance budget to assure energy efficiencies are maintained (annual maintenance budget is $5000).

**6. Bethlehem water district** on hold due to Covid-19 priorities.

This is an important project as the water and wastewater plant uses $30,000 in electricity a year.

**7. Bethlehem Elementary School** roof energy efficiency project is stalled. Limitation to insulating the flat roof is weight of the snow load – recent engineering study says can't insulate the rood.  Perhaps we need to rethink the roof design with Dana Nute of Resilient Buildings Group which could be hired through a CDFA grant program ($ available to school districts in September). Steve Hoyt is new BES maintenance person we need to meet.

To Do: Mark, Mary Lou, Melissa, Bruce, and Dan will try to attend the next BES board meeting. Mary Lou will call principal Susan Greenlaw to ask if we can get on July 14 BES agenda -- give updates on roof & PV projects.

**8. Profile High School's solar project**

It took a mere 5 years to place the project in front of the voters. It passed, 91 to 6 votes, at 10:30 pm at the June 11, 2020 annual meeting. Wonderful presentation by Melissa Elander. Yay!!!  A huge thanks to all involved.

New maintenance person at Profile is Mike Charron.

To Do: Dan will welcome Mike to his new position at Profile and explain BEC’s work with the school.

**9. Other**

Community Power -- is an opportunity to buy a lot of green power. Essentially it's an opt-out energy system. Melissa explained that several NH towns are exploring this topic. So far it's happening on a town level, it may make sense to eventually do this as a region.  It's also happening in communities in CA and MA. Community Power requires an independent organization with by-laws etc.. We decided we'll let others work on this effort and figure out the many unique details.  There is an expert in the state now, Sam Golding who is trying to figure this out.  Mark said one drawback is community power may discourage individual solar installations on houses.

**10. PV in Bethlehem** -- One project, two parts.

Mark had looked at all municipal electric bills and then toured each building to determine solar options for the Town. His suggestion is to install a 210 kWh array behind the elementary school, this could cover all electricity costs at BES, Town Hall, and the library. A second installation is suggested, a 14 kWh array at the town garage. These would offer group metering and membership through Eversource.

*Please note: water/wastewater plant is a separate project.*

USDA currently has $ available to fund 35% of municipal solar projects. This is a first come, first serve funding opportunity, available until the dollars run out. It would make sense to start educating the town on this possibility and apply for the grant now to reserve our place in line for the grant now that we have a financial analysis of our Town electricity usage. Applying for the grant may be contingent on Town approval of additional funds. The PV project described above (one project, two parts) could attract a grant to cover 35% of costs ($472,000-$165,200 grant = $306,800 project cost). Town would need to figure out payment or financing. Payment preferable for maximum savings.  See page 3 initial project numbers.

BEC will need to figure out how to explain net metering and the impact of the PV project simply. Group net metering -- what would that look like for the Town? We would bank hours in summer and get credits that may be used during the rest of the year. Overages are charged by kWh.

David suggested we start with small presentations, then create proposal(s) to apply for USDA dollars. Library, school, and select boards need to be informed. The Town should probably take the lead.

To Do: Melissa will update Profile Power Point presentation.  She will circulate the emerging presentation.

To Do: Mary Lou will try to get on the July 14 BES or August 11 meeting.

**NEXT MEETING**

To Do: Mary Lou will survey folks for date of our next meeting.

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| **Town of Bethlehem - kWh\* Based electricity costs and solar savings** *(July 2020 estimate)* | | | | | | | | | | *Jul-20* | | |  |
| **Location** | **Annual kWh use** | | **$/ kWh** | | **Total cost for kWh\*** | | **Solar Savings $/kWh** | | **Solar Savings** | **Notes** | | |  |
| Highway garage | 16,498 | | $0.112 | | $1,848 | | $0.0975 | | $1,609 |  | | | $0.0975 |
| Other Town electric | 157,199 | | $0.112 | | $17,606 | | $0.0831 | | $13,063 |  | | | $0.0831 |
| School | 91,920 | | $0.112 | | $10,295 | | $0.0975 | | $8,962 | Higher $/kWh solar savings because  some energy used at time of production  savings because some energy used  at time of production | | | $0.1806 |
|  |  | |  | |  | |  | |  |  | | |  |
| Total annual kWh Cost no solar |  | |  | | $29,749 | |  | |  |  | | |  |
| **Savings from solar** |  | |  | |  | |  | | **$23,634** | This is the total of amount of  reduced costs for the school plus credits  on other town bills | | |  |
| Total annual kWh\* cost with solar |  | |  | |  | |  | | $6,115 |  | | |  |
| \*This only summarizes kWh based costs. There are other costs for electricity (ie. monthly fees and demand) | | | | | | | | | | | | |  |
| which solar does not impact. | | | |  | |  | |  | | |  |  |  |
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| SIMPLE PAYBACK | |  | |  | |  | |  | | |  |  |  |
| Total solar cost | | $472,000  ($165,200 grant  $306,200 town  Contribution) | |  | |  | |  | | |  |  |  |
| Annual savings | | $23,634 | |  | |  | |  | | |  |  |  |
| Simple payback (years) | | 20 | |  | |  | |  | | |  |  |  |