

WAREHAM Solar By-Law Study Committee
MINUTES OF THE MEETING
Wednesday, October 13, 2021
Place: Room 27
54 Marion Road
Wareham, MA 02571

1. CALL MEETING TO ORDER

The meeting was called to order by Chairperson McHale at 3:02 P.M.

2. ROLL CALL

Members Present: Nancy McHale (Chairperson)
Christopher Conti
Jacqui Nichols
Carl Schulz (Clerk)

Members Absent: Linda Rinta
Ronald Besse

Also present: Ken Buckland, Director of Planning
Zak Farkes, Borrego Solar

3. GUEST – SOLAR INDUSTRY EXPERT

Background on Mr. Farkes:

Mr. Farkes is a developer of Solar projects. He has broad industry experience. He works with land owners who see solar projects as a way to increase the value of their property in Towns that support those programs. He has done several projects in Wareham, all with Borrego Solar and AD Makepeace, as well as projects in the surrounding communities.

Commentary:

Mr. Buckland opened by asking Mr. Farkes for his input on why Wareham has seen significantly more solar development than the surrounding communities (this is based on input from DOER).

Mr. Farkes posited that Wareham is a very large community with a lot of open space. Further, much of that open space is owned by a relatively few land owners who see solar as a way to increase revenue (value) from that land while retaining long-term ownership of their property.

Mr. Buckland followed up with a question about how changes in the solar programs at the state level will affect solar projects going forward.

Mr. Farkes discussed the SMART program which is the state incentive program under which he develops projects:

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- SMART is in its fourth iteration. Stated out a Commonwealth Solar, Phase 2 was called SREC (sp?), Phase 3 was called SREC2 (sp?), Phase 4 was called SMART. We are now moving into the 2nd phase of SMART.
- Key factor for the 2nd phase is the “Publication Date”. In the summer of 2020 DOER “promulgated” the 400 megawatt review. This was a failsafe in the program which allowed them the “hit pause” on the program and evaluate feedback. Based on the feedback the program has been adjusted and “drastically reduced” the areas in which Mr. Farkes can develop projects.
- The adjustment / change was accomplished by putting in a “subtractor” for projects developed on certain types of land or dis-incentives certain types of projects.
- Mr. Farkes’ opinion was that the objective of this change was to move developers such as himself from creating projects in undeveloped land (forests, agriculture, etc) into developed land (roof tops, canopies, landfills).
- This is in effect NOW. The Publication Date established this. Projects created before the Publication Date (April 15, 2020) can proceed under the previous rules. There are grandfathering provisions.
- This change is going to drastically reduce the projects he is willing to do.

Action: We need to understand the Publication Date.

Mr. Schulz asked why we have not seen many solar projects in developed areas as this was already established as a right in Wareham.

Mr. Farkes discussed barriers to successful projects in developed areas:

- The first issue is scale. Roof tops, parking lots, etc. do not offer areas to develop large projects (< 100 kilowatts). Much of his costs are not related to the size of the project (negotiating with Utilities, contracts with land owners, permitting, etc) and therefore smaller generation projects and less (or not) profitable.
- Land owners do not want to work with him on these types of projects. A solar project creates a 20-year commitment for the land-owner. Few are reluctant to forgo future alternative development opportunities for that long. They feel that they can generate more value / revenue in other ways. They also expect significantly higher rents for their roof tops, parking lots, ...
- Parking lots in particular bring addition costs to the land owner, snow removal is more costly, loss of parking spaces, parking lot needs to be redesigned
- Land owners of open space properties are calling him all the time to look for ways to generate revenue streams to protect their properties for future generations of their families. He is not getting calls from commercial owners.
- Another issue is the suitability of the existing roofs to add solar. Many existing buildings could not add solar without structural changes. This is another cost which changes the

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value of the project. Roof age is a consideration. The solar project is a 20-year lease ... depending on the roof age the cost of adding a new roof adds to the cost of a solar project.

Ms. McHale asked about impact of future technology on projects.

Mr. Farkes responded:

- Projects are costed out as 20-year projects. There are no specific plans to swap out panels or other components mid-project. However, contract provisions do allow for it. Decision to swap out technology would be made on a cost-benefit basis. Project breakeven usually begins after year six-seven-eight or so.
- Battery storage – SMART regulations require a battery for all projects >500kilowatts. Inclusion of a battery is the solution to the number one issue with alternative energy projects – “Intermittency”. Generation is not consistent throughout the day and with varying weather. Is the power going to be there when you need it. Batteries allow a smoothing of putting current on the grid. Projects are sized so that they generate more power than can be put out on the grid. Excess is stored in the battery and released during periods of lower generation. These are sized at about 5 megawatts and last about 4-5 hours. These produce 20-25 megawatt hours of power.
- Standalone storage – a “big battery”. Next thing that is coming. 400-600 megawatt hours of power. 6 acres of stacked shipping containers. Need to be sited near access to transmission lines on the grid.
 - o These should probably have their own bylaw.
 - o These may be so big and complicated that the state may be the permitting authority.
 - o Generally a response to off-shore wind. Vinyard Wind is a massive project that is very likely to happen.

Ms. McHale asked about “good” vs. “bad” projects.

Mr. Farkes responded:

- “Good” projects are ones that he can present and have evaluated against a clear set of criteria. He can go in ahead of time and have a reasonable understanding of the issues with siting and permitting. This requires bylaws that clearly outline the criteria.
- “Good” projects allow him to site them and allow for distance and screening to minimize aesthetic impact on neighbors. “Out-of-site – Out-of-mind”.
- “Bad” projects are those that negatively impact the town ...

Mr. Schulz asked for input on how we can change or improve our existing bylaw based on Mr. Farkes experience as well as an understanding of our town.

Mr. Farkes responded:

WAREHAM Solar By-Law Study Committee
MINUTES OF THE MEETING
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- Craft a bylaw that “empowers” the various boards in town who must rule on these projects.
- If the goal of the bylaw is to incentivize “good” projects – good must be clearly defined and the board has to have some subject control to interpret – the bylaw needs to allow for mitigations under the board control.
 - o Plymouth is an example of a very restrictive bylaw which does not allow for mitigating / solutioning.
 - o Carver may be an example of a good bylaw.
- Tree clearing is currently the significant issue.
- Sand / gravel removal is an issue. This is not an issue for the solar company ... it is a revenue stream for the land owner.
- One of the most valuable things to a project developer is “certainty”. That comes in the form of a clear, unambiguous bylaw.

Ms. Nichols asked if Mr. Farkes was seeing an increase in requests for dual use projects over cranberry bogs.

Mr. Farkes responded:

- The recent changes in SMART law (in addition to driving towards developed areas) are driving him to “science projects”.
- Floating solar – any land owner with a “man-made” pond ... cranberry owners are a good example. Not a lot of sites ... hard to do at scale.
- Agricultural Canopies – dual use over farm land. They are hard. DOER is still revising standards, expectations. There are shading considerations. DEP – bogs are still wet lands ... wet lands protection act.
 - o Discussion about galvanized steel supports vs. treated telephone poles.
 - o CCA (treatment for poles) is a known toxin.
 - o Electricity and water are not naturally a good mix.

General Comments:

- In general Utility Companies are not pushing these projects. They are the number one “opponent”.
- Massachusetts has been a primary driver up until now.
- Individual land owners who are looking for additional revenue streams drive these projects. Over the past several years solar has become an option to monetize under-valued land.
- In general projects are getting bigger. The fixed costs are pretty much the same for big or small projects.
- Restrictions, conditions, requirements in the Wareham Business Overlay District create a barrier to doing solar projects.
- MEPA studies show that there are net benefits of solar over carbon sequestration.

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- Issue with some tree clearing with current projects was based on the distinction between Pine Barrens and General wooded area.
- The bylaw passed over the summer did not include a grandfather clause protecting permitted projects. Massachusetts has a specific law that says unless there is a specific grandfather clause then there is NO grandfathering.
- A 7' foot fence is considered a structure according to code.

Action: We need to understand the barriers to doing solar projects in the Business Overlay District.

Action: Ken to send MEPA tradeoff studies.

4. Minutes to Approve

MOTION: Made and seconded to approve the Minutes of the September 22, 2021 meeting of the Solar By-Law Study Committee.

VOTE: (4-0-0)

5. ADJOURNMENT

MOTION: Motion made and seconded to adjourn the meeting at 4:30 PM.

VOTE: (4-0-0)

6. NEXT MEETING

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Note: The meeting originally scheduled for November 24th has been rescheduled for November 17th from 3:00 – 4:30.

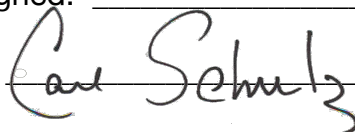
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Date Signed

By Carl Schulz, Nov 15, 2021 at 05:05

Date signed: _____

Attest: _____



Clerk Wareham Solar Study Committee

Date copy sent to Town Clerk: _____

Date Submitted

By Carl Schulz, Nov 15, 2021 at 05:06