

Minutes of Planning Board Meeting  
Town of Whately, MA  
Town Hall Auditorium, Chestnut Plain Road  
March 10, 2020

Members Present: Don Sluter, Nicholas Jones, Judy Markland, Sara Cooper  
Members Absent: Tom Litwin

Attending:

Donna Wiley, Chair, Historical Commission, 184 Chestnut Plain Rd.  
Christopher Kellogg, 163 Chestnut Plain Rd.  
Neal Abraham, 184 Chestnut Plain Rd.  
Ann Futter Lomeli, 7 Claverack Rd.  
Luke Strzegowski, 39 Laurel Mountain Rd.  
Catherine Wolkowicz, 161 Chestnut Plain Rd.  
Jennifer Kellogg, 163 Chestnut Plain Rd.  
Roberta Reardon, 188 Chestnut Plain Rd.  
Sharron Meunier, 32 Chestnut Plain Rd.  
Jim and Jan Golonka, 6 State Rd.  
Joyce Palmer-Fortune, 152 Westbrook Rd.  
Nathaniel Fortune, 152 Westbrook Rd.  
Emma Golonka, 178 Chestnut Plain Rd.  
Rebecca Jones, 185 Chestnut Plain Rd.  
Dan Denehy, 330 Haydenville Rd.

- I. Call to Order, 6:33 p.m.  
The meeting was not recorded.
- II. Approval of 2-25-2020 Meeting Minutes  
Postponed to next meeting

While waiting for the 6:45 p.m. public hearing starting time, Nicholas Jones mentioned a big metal building being constructed on State Road. He stated that building inspector James Hawkins told him the building will include a landscaping business that will occupy part of a garage, and that it complies with the town bylaws. Nicholas said that Mr. Hawkins told him he would look at it if the planning board objected to the project, but noted that when he read the bylaw himself, he found that James Hawkins' opinion made sense. It was mentioned that such projects should have site plan reviews. Don moved to remind the project owners by letter that business usage should occupy no more than 50% of the floor area, and the board approved the writing of the letter.

- III. At 6:45 p.m. Don opened the public hearing to discuss proposed changes to the Whately zoning bylaws. Nicholas gave the Powerpoint presentation, copies of which were available to those in attendance.

The Board is proposing revisions to the current zoning requirements for Large-Scale Ground-Mounted Solar facilities in Sections 171-8 Table of Use Regulations, 171-28.5 Solar Electric Generating Facilities, and 171-37 Terms Defined.

It is also proposing a change to the Prohibited Use section of section 171-28.4 Aquifer Protection District to prohibit the storage of manure outside structures designed to prevent contaminated runoff in Zone I, Zone II, Zone III and the Interim Wellhead Protection Area (IWPA).

Addressing the regulation of solar facilities, Ann Futter Lomeli stated her objection to the construction of lithium ion battery units (for the storage of power generated by solar panels) in residential zones. She referred to a 2-4-20 letter regarding problems with such batteries, submitted to the zoning board of appeals by Neal Abraham in connection with the proposed Chestnut Plain Solar project. She talked about the possibility of water supply contamination through leaks, and also noted that South Korea has had many battery fires whose cause remains unknown. Arizona had a large explosion and fire last fall, she said, which hospitalized firefighters. Fighting such fires also consumes huge amounts of water, she said. Without venting, there is risk of buildup resulting in explosions, she said, and with venting there is risk of pollution. All of this goes against the aim of the bylaws, she concluded.

Fire Chief John Hannum agreed that large amounts of lithium ion batteries onsite pose problems, stating that it is a real hazard to put these in a building since, sooner or later, the building will blow up. He noted that it could be necessary to entirely flood the building to put out the fire. This could require pouring on water for twelve hours, he said, noting that millions of gallons would be needed and they would flood large areas.

Donna Wiley, another abutter to the proposed Chestnut Plain Solar project, stated that large scale lithium batteries have only existed since 2016, that only manufacturers' information is available, and that no scholarly scientific work yet exists.

Ann Lomeli referred to the planning board's February 11, 2020 meeting, noting that someone else had mentioned worries about perforations in the ground from the solar panel arrays. She said the prime reason for the batteries is to enable power transmission to the grid at night to increase profits, and said she wants a delay on accepting this part of large scale solar. She favors the prohibition of such installations over the entire aquifer, she said.

Nat Fortune said there are different opinions about batteries. It is reasonable to ask for a proven track record, he said, noting that water is not the first choice for lithium fires – maybe carbon dioxide or other substances would be better. He reminded those present that gas stations are required to have fire suppression systems. He noted the possibility of mandating limits on acreage and outputs to make the batteries safer, saying that in ten years we will be putting such things in our homes, but we need the correct scale. He said solar array problems are not as bad as those caused by other types of energy sources, which can produce mercury pollution, etc. He suggested that as batteries smooth the fluctuations of load supply and demand (load balancing), they may help to eliminate the need for ugly equipment on top of utility poles. He stated that we have a chance to do it right by asking *how* we can get the right scale, and the fire suppression we need, without the bad consequences.

Christopher Kellogg described the size of the battery units as being like that of a freight container on a ship. Nat Fortune said he thinks batteries of that size are unnecessary, citing a 350mW *wind* array that still couldn't avoid outages before a 100mW battery was installed to work with it. Together they solved the outages, and at a reduction of the power output that saved a lot of money. He suggested using the same figures that California and Australia are using for wind. Chris Kellogg noted that the current Chestnut Plain solar site plan application includes a very large battery storage facility and that this is the current norm.

Neal Abraham said that there are technical issues beyond the planning board or zoning board of appeals, and suggested having developers pay for engineers hired by the town. He agreed that newer types of batteries, said to be safer and more recyclable, would be worth investigating but added that there hasn't been much study of them yet. There are unknown risks, he said, some minuscule and some dangerous. To justify the batteries in the bylaws ignores this, he said. If literature mentions lithium ion batteries in one place and some other type elsewhere, how can you tell what you're approving, he asked. He concluded that we need some really expert advisers to *specify* a safe choice.

Nicholas commented that if the bylaw is too specific it will be outdated quickly, but the planning and zoning boards need to be on top of this knowledge.

Nat Fortune suggested requiring a fire suppression system that doesn't use water. Fire Chief John Hannum commented that water is his backup system. Judy Markland asked about requiring supplementary equipment / fire suppression system to give the fire department more ammunition. Don suggested requiring a "bulletproof" battery – not dangerous – of any type used.

Neal Abraham explained that lithium ion fires are intensely hot and wondered what could contain them, adding that they melt metal. The container can't just be a box, he said, but must be designed imaginatively. He stated that toxins are emitted from the hot batteries before they explode. It's a huge job, he said, and we need to line up experts with good track records – the question is how to do that. We can't say we're ready for the next project until we have such experts, he added.

Donna Wiley commented that the biggest issue is how to re-write in order to avoid applications that are weak without excluding good companies with good approaches. Ann Lomeli suggested a possible moratorium on batteries.

Nat Fortune referred to the draft Solar Bylaws Revision document handed out at tonight's meeting. He cited page 4, Section 171-28.5 C (2) (a) *viii*, printed in red, which requires a document that provides:

"Information on the location and type of any poles, transformers or other electrical components required by the utility to support the proposed solar facility including electrical equipment upgrades outside the facility to allow the site to connect to the grid including any necessary tree trimming. The list of abutters shall include abutters to this new or upgraded equipment."

Mr. Fortune said he thinks it is unreasonable and impossible for utilities to comply with this. Christopher Kellogg said he thinks it is doable.

Judy Markland cited Section 171-28.5 C (2) (a) x, which requires:

*“A detailed impact study for the Utility Interconnection”*

Judy suggested combining both the *viii* and x citations.

Christopher Kellogg said that current zoning bylaws haven't been enforced, stating that townspeople get the details later on, but need them up front. Discussion then covered different interpretations of the language, and Mr. Kellogg asked whether the town could get a commitment from Eversource regarding what they can tell us up front, from their own usual way of practicing. Judy Markland said that the board will work on that.

Neal Abraham concurred, saying we should ask Eversource what they can do earlier. Nat Fortune suggested asking what information they can supply at the time of application versus what they can tell us after substantial design. Nicholas Jones commented that we can ask for a lot and later, if they can't do it, the planning board can withdraw the requirement. It was suggested to call the required study *preliminary*. Christopher Kellogg commented that it was better to keep the term, *detailed* study. It might delay a project for some months, he said, but you'll learn more about what you're being asked to approve.

Luke Strzegowski noted that the Table of Use has always referred to 10 kW AC and the draft proposal changes it to 10 kW DC. He told the board that DC capacity is the industry standard and it's what his system was built to. The board said they would fix that, and thanked him for the information.

Judy Markland asked about the fee paid to the Community Preservation Open Space account. She also mentioned Town Administrator Brian Domina's comments regarding the draft bylaw revisions, specifically the height of solar installation screen plantings, saying that Brian wants ten feet. Dan Denehy suggested 6 – 12 inches higher than the panels. Judy said her attitude is that the bylaw specifies a minimum and the planning board can go higher.

It was noted by Neal Abraham that a solar facility generates kW (kilowatts), while battery storage is measured as kW x hours (kilowatt hours). He suggested requiring that kilowatt hours of batteries can't exceed 25% of the designed production of the facility. Christopher Kellogg asked about the containment basin under the battery, saying it *can't* contain it, but if it burns in excess of 12 hours – then what?

Neal Abraham commented on the proposed Aquifer Protection District Revision, noting that those not in compliance with the changes to manure containment requirements will need sufficient time to become compliant. Nicholas noted that any existing noncompliance is effectively grandfathered.

At 8:25 Don informed the attendees that the board would take no more comments from the floor, and closed the public hearing.

The board discussed changes to the wording. It was proposed not to allow any solar battery that isn't going to be safe, but it was also noted that there is no history and a year won't make much difference. Also, it was noted that lithium *iron*, not lithium *ion*, is the newer technology that companies are using. A question was asked: How can we keep the ground usable once stuff sinks into it during fire fighting? It was also noted that if we don't allow batteries, it will mean *no* solar and that's bad. Don proposed that the board do more research and get together again on March 24, 2020.

The board discussed and approved the following changes to the language of the proposed bylaw changes.

1. Change all references to kW<sub>AC</sub> to kW<sub>DC</sub>;
2. Page 4, to insert a reference to a detailed impact study for the utility connection into paragraph viii and delete paragraph x.;
3. Page 6, in paragraph (4) to change the wording from "The list of abutters shall include abutters to this new or upgraded equipment." to "The list of abutters shall include abutters within a 300' radius of these changes."
4. Page 8, No. (8) Impact on Agricultural and Environmentally Sensitive Land  
To change -  
 "For every acre of land assessed under the provisions of MGL Chapter 61, 61A or 61b..."  
to  
 "For every acre of land assessed under the provisions of MGL Chapter 61 or 61A..."

IV Planning Board Mail  
 The board reviewed the mail.

V. At 9:07 p.m. the board voted to adjourn.

*Documents Reviewed (kept in the Planning Board files)*

1. An 11-page document titled, "Draft Zoning Changes (2/24/20)"
2. A 6-page document showing the slides comprising the presentation given at tonight's meeting, titled,  
 Proposed Zoning Bylaw Revisions  
 Public Hearing  
 March 10, 2020

Mary McCarthy  
 Secretary  
 Planning Board  
 Town of Whately, MA