

September 20,2022

Re: The Solar Ordinance

From: Beth Olshansky

Dear Members of the Durham Planning Board,

First, I would like to thank Jim Lawson, the Energy Committee, and the Planning Board for their contributions to this evolving document. Since my last letter to the Planning Board in August, many weeks have past and the Town has received more input from residents and town committees. I see in Jim Lawson's recent letter to the Planning, he continues to graciously consider input with the overall intent on refining the document.

In that spirit, I offer a few overarching comments:

The Purpose Statement should remain a guiding principle.

Purpose. The purpose of this ordinance is to:

- a. Encourage the implementation of solar energy systems in accordance with the recommendations stated in the Energy Chapter of the 2015 Durham Master Plan;
- b. **Promote environmental sustainability while respecting the rural character and scenic landscape of Durham and the use of productive agricultural lands;** and
- c. c. comply with and support the State of New Hampshire's goal of developing clean, safe, renewable energy resources as provided for in the statutes referred to in 175-109.R.1 above.

While some on the Board have indicated their belief that solar installations should be mostly unregulated, that does not meet the objectives of the Purpose Statement. We are a community of residents with varying values and priorities and it is through our zoning that we try to find a balance—as the Purpose Statement reminds us in item b bolded above.

Solar is but one tool in our toolkit, not a silver bullet.

The 2022 Intergovernmental Panel on Climate Change Report, drafted by hundreds of top scientists from 195 countries and reviewed by thousands of additional experts, provides the most conclusive endorsement yet of **“Nature as a climate solution.”** **The 2022 report notes that “reducing the destruction of ecosystems, restoring them, and improving the management of working lands, like farms, are among the most effective options for mitigating carbon emissions.”** **Cutting down forests to install large solar systems is not the answer to climate change, nor is covering our farmland with solar panels.** Thus, our solar ordinance should protect our existing farmland and forests that already provide a working ecosystem. <https://www.conservation.org/priorities/stabilizing-our-climate-by-protecting-and-restoring-nature>

Protect our forests and farmlands

Recognizing the benefit of our forests, last week the USDA announced a \$30 million program to increase carbon storage within New England Forests to help mitigate the impacts of climate change. <https://www.mainepublic.org/environment-and-outdoors/2022-09-14/usda-grants-30-million-for-increased-carbon-storage-in-new-england-forests>

The IPCC report reminds us: **“But even if the world stopped using fossil fuels completely, we would fail to avert a worst-case scenario if we did not also reverse the destruction of ecosystems such as forests that absorb and store carbon.”** In other words: No matter what else we do to address climate change, if we don’t protect and restore our natural environment, we will fail to prevent catastrophic climate breakdown. To that end, Durham’s thoughtful consideration of protecting our natural environment (farmland and forests) while encouraging solar arrays in our built environment is right on target.

The Agricultural Committee has expressed concern about our limited agricultural lands being taken out of production by allowing the use of our farmland for large commercial solar installations. I share this concern. On PBS Weekend News 9/18/22, there was a reminder that agricultural practices, and specifically the use of cover crops, can significantly help with carbon sequestration. <https://www.pbs.org/newshour/show/how-farmers-are-using-cover-crops-to-absorb-carbon-emissions>, Thus another reason for not blanketing our fields with solar panels.

Strengths of the Current Draft Ordinance

The current version of the Solar Ordinance creates many opportunities for residential solar, creates clear-cut zones for commercial solar, and tries to thoughtfully lay out guidelines that honor the characteristics of our various districts.

I applaud the effort to move from “boilerplate” to an ordinance that represents Durham’s unique characteristics and values. One such example is the sensitivity and creative problem-solving used to address the unique situation of properties in which historic homes, built very close to the road, are also adjacent to fields (former farms). Item 4 b. (5) tries to address those specific circumstances of scenic fields that stretch along our roads within properties where the homes are built very close to the road. The recommendation for a 40-ft envelope around the house for solar installation in such properties is an effort to avoid installation of an array fairly close to the road (per 4c or 4d) in the middle of a scenic field (thus protecting our rural character as noted in the Purpose Statement). Below, I offer an alternative way to address this concern.

I suggest that we treat all fields, no matter the district, with a similar set of criteria in order to align with the Purpose Statement. That would require 100 ft. (actually, preferably 150-ft setback) and visually buffered from the road for all installations to be placed in a field if visible from the road. We have such recommendations of in sections 5, 6 and 7. Why not have these recommendations in residential zones where our few remaining fields comprise an important part of our rural character?

Another example of this sensitivity and striving for balance is that commercial “utility-scale systems” are to be permitted only in the commercial zones, ORLI and MUDOR, and even then, by Conditional Use. This allows the Planning Board to look at each proposal and require conditions that might mitigate the visual impact of such systems on pastoral viewsheds such as those along Mast Road. Here significant set-backs and visual buffering can be applied to mitigate the visual impact along this pastoral gateway.

The draft’s sensitivity to these systems’ potential visual impact is further demonstrated by its requirements for setbacks of at least 100 feet and buffering from other homes and the road. (I suggest that, in reality, 100 ft. is not very far. I would recommend seeing a minimum of 150 ft. as appears in section 4a.)

When questioned about why the draft ordinance would not allow such large commercial systems in the Rural and Residence Coastal zones, where there is more undeveloped land, Jim Lawson offers two reasons: 1) to avoid the temptation to cut down our forests to install solar as a commercial enterprise, thus reducing the environmental benefits that our forests provide in terms of carbon sequestration, and 2) to preserve the aesthetic, pastoral nature of these more rural areas of town. Here again, I applaud the draft’s sensitivity to Durham’s unique characteristics and values.

Suggestions for refinements to the current draft

Having had now many weeks to review the current Solar Ordinance Draft, should the PB be inclined to make substantive changes, here are a few I recommend:

- 1) Add a definition of **Commercial Agriculture** in this section, one that aligns with Farm and Farming in the Definitions section of our ZO: FARM OR FARMING: **An operation may be deemed a commercial farm where at least \$10,000 of agricultural products is produced and sold in a year.** The ordinance should say Commercial Agriculture and not Commercial Farm.
- 2) As recommended in Jim Lawson’s recent letter to the PB, remove solar systems from the WCOD and the SPOD as noted by the Conservation Commission.
- 3) Under Section 4a Single-Family or Duplex Residential Solar Energy System – accessory use, replace 1800 square feet with a kW measurement per property. Jim Lawson has suggested that 30 kW would be the recommended kW amount.
- 4) Should there be concern about item 4b (5) which establishes a 40-ft envelope for solar installation around a house (added to protect scenic fields in the R and RC zones), I would suggest instead, that in residential zones, if solar arrays are to be placed in fields, that they follow the guidelines of other field placements such as noted in 5c, 6b and 7b which currently requires a minimum of a 100 ft. setback. Again, 100 ft. is shorter than you think, thus I recommend a minimum of 150 ft. suggested in 4a and throughout the document where setback in fields are addressed.

5) Wherever the word “buffered” appears (5c, 6b, and 7b), add the word “visually” in front of it as in “visually buffered.” I believe this clarifies the intent.

6) In 5f, in order to be consistent with the rest of the ordinance in limiting commercial installations to commercial zones, please make the following edit:

“Where the nonresidential use is Commercial Agriculture, the system may be sized to generate up to 100 kW more than the projected annual energy needs of the Principal Use, and the Solar Energy System may function as a ~~Small Utility-Scale Solar Energy System~~ or Small Group Net Metering Host.” In keeping with the Purpose Statement, these large systems should also be visually buffered from public roads.

The reason for this refinement is to keep large commercial enterprises out of our residential zones. I see Small Group Net Metering Hosting as being a non-commercial application—though I believe such an installation should also be sensitive to what can be seen from the road.

7) I suspect there may be discussion about whether or not to keep the SE and CU designations. I favor keeping these because it allows for customizing installations to a particularly property where they otherwise might not meet the dual objectives of the Purpose Statement.

Thank you for your time and consideration.

Respectfully submitted,

Beth Olshansky
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