Dear Lyme,

The Lyme Planning Board will present a comprehensive Solar Energy Systems (SES) Zoning Amendment to Lyme voters at the March 2023 Town Meeting. Before drafting the final language for the amendment the Board would like voter feedback on a few key issues. Please email your comments to <u>zoning@lymenh.gov</u> or by mail to: Zoning Administrator, P.O. Box 126, Lyme, NH 03768 June 20, 2022.

Note that the guidelines and regulations described below would not apply to roof mounted solar energy systems. Roof mounted SES would be allowed everywhere in town and would only need a zoning permit and approval from the zoning administrator, like all other construction projects.

The Board believes that ground mounted systems (both fixed and tracking) require more careful consideration in the Zoning Ordinance. The Board proposes to divide ground mounted SES into two categories, small and large, based on the installation footprint.

Small Solar Energy Systems (SES):

The Board estimates a Small SES as panel area up to 2,000 square feet which is about 40 kilowatt (kw) in capacity. This category is intended to cover residential systems and small group net metered projects. The Board believes these projects should be allowable with minimal regulatory hassle. Small SES could be located anywhere in Lyme, subject to the existing zoning regulations applicable to any other structure.

For context, a 10kw array provides enough electricity for an average family of 4. An electric vehicle charging station would require an additional 4kw of capacity, so an average family of 4 with 2 electric vehicles would require about 18kw of solar capacity. The layout permitted for a small SES should easily cover typical residential applications and some small group projects.

In terms of size and visual impact, a single 10kw array covers about 400 square feet. A 40kw array would likely require additional rows of panels, and might cover as much as 4,000 square feet when including the area between each row of panels. For comparison, a doubles tennis court is 2,800 square feet, a basketball court is 4,700, and the new Lyme Fire Station is 5,600. Photo 1 shows a 10kw array. Photo 2 shows a 5kw "Tracker" array.



Photo 1: Two ground mounted arrays that provide a total of about 10kw of power.



Questions for Lyme voters:

- 1. Should small SES as defined above be allowable in your neighborhood and everywhere in town?
- 2. Is 40kw a reasonable size limit for this category in terms of energy needs?
- 3. Is 40kw a reasonable size limit for this category in terms of visual impact?
- 4. Do you think an 18 foot height restriction is appropriate for small SES?

Photo #2: A 5kw "Tracker", maximum 18 ft tall.

Large Solar Energy Systems:

Large SES are defined as panel area greater than 2,000 and less than 20,000 square feet. This category is intended to cover large group net metered projects and possible commercial applications that could provide up to about 400kw of capacity. For context, a 400kw system might take up as much as an acre of land, about half the size of the Town Common. Large SES might also require significant upgrades to power lines, including larger and taller poles with more transmission lines.

The Board believes that projects of this scope require additional regulatory oversight due to potential safety concerns, site impacts, and the need for abutter input. Applicants proposing large SES projects would be required to obtain a Conditional Use Permit from the Planning Board. Approval for such a project would require public hearings and input from abutting landowners and the general public. Additional regulations for large SES might include, but are not limited to: setbacks, visual buffers and screening, spacing of rows, minimal environmental disruption, fencing, and a decommissioning plan.

To protect forestland and historic downtown areas, the Board believes large SES projects are appropriate in only the Rural and Commercial zoning districts. Furthermore, these projects would not be allowed on Town Scenic Roads (Acorn Hill Rd., Breck Hill Rd., Highbridge Rd., Washburn Hill Rd., Pico Rd., River Rd. North, and parts of Orfordville Rd.)

Questions for Lyme voters:

- 1. Is 400kw an appropriate size limit for this type of project?
- 2. Should the large SES require Conditional Use Permit and public hearings?
- 3. Are the geographic restrictions appropriate?
- 4. Is an 18 foot height restriction appropriate for large SES?

Thank you so much for your consideration and input. Please email comments to to <u>zoning@lymenh.gov</u> or by mail to: Zoning Administrator, P.O. Box 126, Lyme, NH 03768 by June 20, 2022.