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September 18, 2017

Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Petition no. 1312
Candlewood Solar LLC

To: Council Members

The following is my review of the above referenced project in regards to certain elements of the project.

Erosion Control:
When such a large area is logged and left exposed there is a great risk of substantial erosion. A detail plan is required with strict observance to it. Due to the large area of soils that are shallow to bedrock there is an increase potential for erosion when these shallow soils are disturbed. With construction activity disturbing the soils a rainfall event has the potential of saturating the soils and on sloped areas have the soil wash away. This potential is expected to increase when large areas are disturbed. Removal of stumps in the solar panel area can cause the ledge to be uncovered therefore allowing rainwater to flow under the soil and eroding it.

During construction, the soils under the solar panels will be disturbed until vegetation finally grows. A plan needs to be developed that will detail what actions are needed to prevent erosion. A detail sequence of construction needs to be part of any erosion control plan. Due to the large area of soils to be disturbed and the nature of those soil a long-term detailed erosion control plan needs to be developed. It should include how vehicles will access the panels and long-term maintenance of the site. The current plan does not allow one to determine if the project can be safely constructed without a major potential for substantial erosion in my opinion

Erosion Control Plan Review:

While I realize these plans are not for construction on a project this size additional detail and planning should be required to identify any major issues that need study and to assure the feasibility of the project.

1. I did not see a phasing plan that accurately outlined the proposed phases. If one has not been presented it should be required.

2. The plan has phases being stabilized and then being redisturbed. As presented it appears that once an area is stabilized in Phase I it is then proposed to be disturb in Phase III. The applicant should consider installing the solar arrays as soon as the area is prepped for them to avoid disturbing the area again. Areas smaller than 4.9 acres as should be considered especially on sloped areas.
3. The plan calls for the possibility of importing topsoil. This opens the door for invasive species to spread to the site. The plan needs to address this issue. Additionally, the plan needs to note where invasive species may be located on site and how to eradicate them and to manage them to keep them from spreading.
4. The planting season is normally in the spring and fall because it is very difficult to get grass to grow in the summer. Also keep in mind that once established the grass will be redisturbed to install the solar panels. The plan will allow seeding in the summer which is not recommended. It would be expected that it would be very difficult to maintain the grass especially during the installation of the solar panels.
5. There is no inspection of the swales proposed on a year-round basis during construction. additionally, prior to forecasted rain they should be inspected. This would identify any problem areas that may fail and repairs could be made.
6. What will prevent the calcium chloride used for dust control to get to the lake and water courses?
7. The plan talks about the need for washing trucks but is insufficient on how and where it will be accomplished.
8. The rip rap inlet and outlet detail assumes one size fits all pipe sizes. Also, there is no depressed area to reduce velocity as is normally on such a detail.
9. Due to the scale of the overall site plan the location of proposed erosion controls cannot be seen, if they are there. Having them on this plan would help in evaluating the overall concept of the erosion control plan. The location of sediment traps is a critical part and need to be integrated into the erosion control plan. The location of soil stockpiles also need to be shown
10. The grades along the route of the power connection to the grid are steep. A detail erosion control plan both during construction and for the long term should be required. It would be expected that the area would be subject to periodic inspection how this will occur needs to be explained. Also, what plans are there to prevent illegal use of this area by ATV drivers which can cause sever erosion problems?
11. The overall site plan shows the permanent gravel access roads going approximately perpendicular to the contours. How will the drainage from these roads be handled on a long-term basis?

It is my opinion that the proposed plan is inadequate and that a detail plan be required due to the size and complexities of the site. A detailed plan may create a higher confidence level that the site can remain stable during construction. The presence of large areas of shallow bedrock creates difficulties in installing and maintaining erosion controls. These same soils increase the potential of major erosion events when the soils are disturbed in the shallow bed rock areas. My concern is the siltation of Candlewood lake and the affected wetlands and water courses in the ae of the proposed construction.

Stormwater Management:

The written stormwater management plan needs to be expanded so the average person can better understand it. While time did not permit me to review the drainage calculations I am surprised that the overall site plan does not show any stormwater detention basins and the written plan is silent on this issue. When you cut down forests and plant grass small increases in stormwater flow are expected. When solar panels are added the runoff from these impervious surfaces will further increases flows. While I am aware that there will be grass under the panels they will still affect the calculations (cause an increase in flow). Additionally, the access roads also will increase flows.

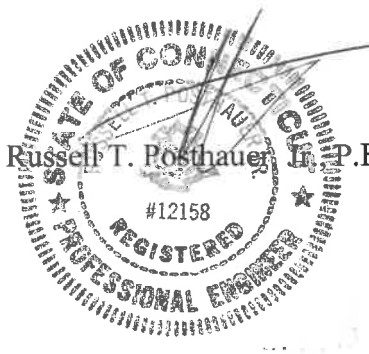
In section 2.5.2 the stormwater plan indicates they are limiting land disturbance. This statement ignores the fact that they are clearing and grubbing (including stump removal) approximately 73 acres, part of which is occurring on steep slopes.

My review of the grades indicates that the southern portion of the project will be visible from the houses across the lake, mine included, and Candlewood Springs beach. The ridge line that the developer has indicated will shield the project fades away to the south. While at the distance it will probably be hard to disguise the individual panels the loss of trees along the middle ridgeline and east and west slopes can be expected to be a scar on the hill side.

I recently had an opportunity to fly around Rutland Vermont in a small plane. As we flew I kept noticing flashes of light from the ground. These flashes were from the solar panel arrays below the plane. My concern after seeing this is that during day my neighbors and I will be seeing intense light coming from the mountain side, again disturbing the beauty of the hillside and our quality of life. This can also affect the value of my home.

While I am not an expert on plants I have been a Professional Engineer for 35 years and have 40 years' experience representing developers before Inland Wetland Commissions. What I have learned is that when trees are cut and the amount of sunlight that enters a wetland or other area is increased the existing vegetation changes and the opportunity for invasive species is greatly increased. A detail plan should be required to address this issue.

It is my opinion that substantial additional information is required to determine the suitability of developing this site for solar panels. I respectively ask that the Council require a full application so the project can be thourghly reviewed.



Russell T. Posthauer, II, P.E.

RUSSELL T. POSTHAUER, JR., P.E.
PRESIDENT

Profile

Over forty (40) years of diverse experience in the engineering design and construction of a vast array of site and building projects. Project involvement has included but not been limited to corporate and commercial facilities, residential subdivisions affordable housing projects, active adult communities, multi-unit housing, industrial and commercial complexes and municipal projects.

Currently co-chairman of the State of Connecticut, Department of Public Health's Housatonic Water Utility Coordinating Committee. Previously was a member of a court appointed committee to resolve road issues as part of judicial proceedings. Past president of Candlewood Springs Tax District and a corporation that owns a community water system. Chairman of the New Milford Building Code Board of Appeals.

Project Experience

- **President – CCA,** 2013 to the present. Responsible for the day to day operations of the company.

  Vice President - CCA, 1982 to 2013. Responsible for residential and large sanitary systems, subdivisions, drainage projects, industrial and commercial site plans, road design, cost estimates and project reports.

- **Project Engineer - Kennel-Delaney Associates, P.C.**, 1977 to 1982. Responsible for road design, subdivisions, sanitary systems, multi-family housing, industrial/commercial site plans and urban system projects.

- **Assistant to the Public Works Director - Town of New Milford**, 1976 to 1977. Supervised road repair projects and coordinated personnel, equipment and supplies.

Education

Bachelor of Science in Civil Engineering
University of Connecticut, 1974

Registration

Professional Engineer (P.E.)
Connecticut, Vermont, New York

Professional Affiliation

American Society of Civil Engineers
Connecticut Chapter, American Society of Civil Engineers
American Water Works Association

STATE OF CONNECTICUT
SITING COUNCIL

PETITION NO. 1312 - Candlewood Solar LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 20 megawatt AC (26.5 megawatt DC) solar photovoltaic electric generating facility located on a 163 acre parcel at 197 Candlewood Mountain Road and associated electrical interconnection to Eversource Energy's Rocky River Substation on Kent Road in New Milford, Connecticut.

SEPTEMBER 19, 2017

AFFIDAVIT OF Russell T. Posthauer, Jr., P.E.

I, Russell T. Posthauer, Jr., P.E., the undersigned, being duly sworn, do depose and say:

1. I am over the age of eighteen and believe in the obligations of an oath.
2. I reside at 224 Candlewood Lake Road North, New Milford, Connecticut.
3. I am the author of the pre-filed written testimony attached as well as my resume. I believe the facts contained therein are true and accurate the best of my knowledge and belief.

FURTHER the deponent sayeth not.

Subscribed and sworn to before me this19th day of September 2017.

_____, Commissioner of the Superior Court/Notary Public.

My commission expires: 1-31-2021.