STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
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VIA ELECTRONIC MAIL

October 29, 2021

TO: Service List dated August 19, 2021

FROM: Melanie Bachman, Executive Director MAB

RE: **DOCKET NO. 505** – Haddam Quarter Solar, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 2.8-megawatt-AC solar photovoltaic electric generating facility located south of Haddam Quarter Road and north of Johnson Lane, Durham, Connecticut and associated electrical interconnection.

Comments have been received from the Connecticut Department of Energy and Environmental Protection on October 28, 2021. A copy of the comments is attached for your review.

MB/RDM/lm

c: Council Members

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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October 28, 2021

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RE: 2.8-MW Solar Photovoltaic Generating Project
Louth Callan Renewables
Haddam Quarter Solar LLC
Durham, Connecticut
Docket No. 505

Dear Members of the Connecticut Siting Council:

Staff of this department have reviewed the above-referenced application for a Certificate of Environmental Compatibility and Public Need for the construction of a 2.8-MW solar generating facility north of Johnson Lane in Durham. In addition, a field review of the site was conducted on October 22, 2021. The department also conducted a pre-application meeting with the applicant and its representatives on October 7, 2021. Based on these efforts, the following comments are offered to the Council for your consideration in this proceeding.

As in other recent DEEP comments concerning photovoltaic generating facilities, we note that the construction of facilities such as that proposed in this application will aid in the achievement of Connecticut's vision for a more affordable, cleaner, and more reliable energy future for the ratepayers of Connecticut. Bringing more zero carbon energy projects on line is instrumental in furthering this vision as these resources help diversify the regional fuel mix, and they aid in implementing the policy of the 2020 Integrated Resources Plan and Governor Lamont's Executive Order No. 3 to achieve a 100% zero-carbon electric sector by 2040. Developing grid-scale renewables is also imperative to the state's success in achieving its statutory goal of reducing carbon emissions by 45% below 2001 levels by 2030 and by 80% below 2001 levels by 2050.

Site Description

The proposed facility will occupy approximately 10.9 acres of a 49-acre parcel. Although the legal address of the parcel is 0 Haddam Quarter Road, the facility site lies in the southernmost portion of the larger parcel and is situated immediately north of Johnson Lane, the road from which the project site is accessed. Most of the project site is an approximately flat field. The exception is a steep mound in the northeastern corner of the project site. The flat portion of the site supports a fairly dense and mostly uniform population of weeds as much as five feet tall. The soil is a pebbly to boney red soil supporting no grass cover, only the weeds, and resembles in color and

consistency the underlying Portland arkose bedrock from which it is derived. Though the application speaks of the site as covered by prime farmland soils, a walk of the site could lead one to believe that its previous topsoil had been removed from the site. More likely, as no such soil removal is mentioned in the application, the soil appearance reflects, as discussed on page 22 of the Environmental Assessment (Attachment 9 of the application), an intermixing of sand and gravel outwash deposits and glacial till, along with materials derived from the underlying arkose bedrock. It does not show much of an organic layer and the vegetative mix currently on the site would not lead one to think the soils are prime farmland soils.

In contrast, the mound landform in the northeast corner of the project site supports an extremely dense and well-established grass cover with occasional multifloral rose and poison ivy and, on the southeastern corner of the top of the mound, a stand of raspberry bushes. The steepest slopes off the mound are to the northwest and west sides.

The farm road alluded to in the visual simulations section at the very end of the application is hardly worthy of mention, at least as far as the portion of it on the project site itself is concerned. The road virtually disappears as soon as it departs from Johnson Lane. The farm road shows signs of recent use north of Hersig Brook. It is accessed from Haddam Quarter Road and is well established from that road to and through the forested wetland corridor along Hersig Brook. After crossing the wetland corridor, the road turns east and fades out after rounding the base of the mound landform on its northern and then eastern sides. Hersig Brook itself is 3-4' wide in its natural channel but about 6' wide right at the farm road crossing, which is made on the bed of the stream without benefit of any crossing structure.

North of Hersig Brook, an electric distribution line on wooden poles crosses the property in an east-west direction following the watercourse. Dense grass cover is well established in this northern field. The barn mentioned in the environmental assessment is just off Haddam Quarter Road and is in an advanced state of disrepair/collapse. The small shed mentioned in the environmental assessment is a very modest, 3-sided structure in much better condition.

The row of trees along the north side of Johnson Lane will be cleared to prevent shading impacts on the proposed array. Most of the trees in this wooded strip are 15" dbh or less though a few are 24" dbh or greater including some red maple, hickory and sugar maple. The hickories are prominent in the mix though they are not listed in the description of this forested strip on page 11 of the environmental assessment. The wooded strip also unfortunately sports a very ample crop of oriental bittersweet, along with poison ivy, and also Japanese knotweed, the latter not listed in the page 11 list of invasives.

Stormwater Management

Construction projects involving five or more acres of land disturbance, including this one, require either an individual NPDES discharge permit from DEEP or they may register for coverage under the Department's General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (DEEP-WPED-GP-015).

As mentioned earlier, the applicant participated in a pre-application meeting with DEEP staff on October 7, 2021. Two issues were discussed. For the Natural Diversity Data Base, there are no current hits for the proposed site but it was recommended that the applicant check with NDDB staff again shortly before the Stormwater Permit submission as the NDDB files do get

periodically updated with new records, so a last minute check is advised to make sure that the site remains free of any recorded occurrences of listed species.

Consuming much more of the discussion at the pre-application meeting were stormwater issues. The applicant's team noted that some slopes on the mound landform reach as much as 25%. Typically, the Stormwater Program looks to see slopes at grades of no more than 10%. Placing solar panels on these steep slopes may require the submission of an individual permit rather than the general permit. If this site and project are approved by the Siting Council, DEEP Stormwater staff would need to make this determination once the project approaches final design. The possibility of flattening the mound to reduce slopes to a range of 5-10% was discussed conceptually. More investigation will be required to see if this is feasible. The Stormwater Program, as a requirement of reviewing this project as a General Permit, will expect to see one full growing season incorporated into the project schedule for vegetation and stabilization of the site before construction of the solar facility commences. An Individual Permit would likely have more stringent requirements. Registration under the Stormwater General Permit or application for, and issuance of, an Individual Permit would need to occur before any earthwork occurs on the site.

The fact that, due to the circular nature of the mound, many of the rows of solar panels will run across, rather than parallel to, elevation contours, is also an erosion concern given the slopes in this area. Not discussed at the pre-application meeting but possibly worth investigating to address this issue could be a concentric rings orientation of the panel rows on this section of the solar farm.

Visibility of the Facility

Visibility of the proposed facility would be limited to residences along Johnson Lane. From the site, the home at 102 Johnson Lane, immediately west of the host property, is clearly visible from almost all of the site. The only other home visible from the site is 111-111A Johnson Lane which is just marginally visible from the western portion of the site. Beside the home at 102 Johnson Lane, the only other home on the north side of the proximal stretch of Johnson Lane is that at 236 Johnson Lane, just east of the project site. A significant amount of forest screening will remain between the home and the facility so that views of the project from this site are unlikely. The homes along the south side of Johnson Lane sit at higher elevations than the road and the project site. However, all of these homes are well set back from the road and are on heavily wooded lots and, with the possible exception of the home at 111-111A Johnson Lane, which may have some marginal view of the facility, these other homes are sufficiently removed from and screened from the facility that they will not have views of it. Though the intervening trees between the facility site and these homes (Nos. 105R, 125, 155, 155R and 207) are deciduous, the number and density of the trees will preclude any views of the solar farm from these homes. Additionally, it is noted that some vegetative screening is planned along the more visible portions of the project's perimeter.

Wetland Buffers

There is a corridor of forest wetlands along Hersig Brook north and northeast of the project site. Appendix I of the stormwater general permit requires wetland buffers of 100' from a wetland to any solar panels, and 50' from a wetland to any construction disturbance. Buffers may be reduced by no more than 50% if certain conditions are met, including that no part of the buffer may exceed a 15% grade. The Haddam Quarter Solar application states that generally a wetland buffer of 80' will be maintained, though only a 50' buffer will be provided in one area. Further,

the limits of disturbance for project construction will be as close at 35' from the nearest wetland in one area on the eastern end of the project. Wetland buffer widths were not discussed during the pre-application meeting of October 7. As some or even all of the sub-100' buffer widths likely occur in the northeastern and eastern portions where the steeper slopes of the mound landform could increase the potential for erosion from site development activities, the issue of sufficient buffer widths and wetland protection will be an important one in the Stormwater registration or permit process, as the case may be.

Thank you for the opportunity to review this application and to submit these comments to the Council. Should you, other Council members or Council staff have any questions, please feel free to contact me at (860) 424-4110 or at frederick.riese@ct.gov.

Respectfully yours,

Frederick L. Riese

Frederick L. Riese
Senior Environmental Analyst

cc: Commissioner Katie Dykes