Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

Daniel C. Esty, Commissioner

March 13, 2013

Robert Stein, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RE: 5.0 MW Photo-voltaic Generating Facility
GRE 314 East Lyme LLC
East Lyme, Connecticut
Petition No. 1056

Dear Chairman Stein:

Staff of this department has reviewed the above-referenced petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need will be required for the proposed 5.0 MW photo-voltaic generating facility proposed for a site at 40 and 44 Grassy Hill Road and 89 Walnut Hill Road in East Lyme. A field review of the site was conducted on March 5, 2013. Based on these efforts, the following comments are offered to the Council for your use in this proceeding.

GRE 314 East Lyme LLC proposes to construct a photo-voltaic generating facility employing 17,500 PV panels, more or less, on a 75.67-acre site southeast of the intersection of Grassy Hill and Walnut Hill Roads, predominantly on former agricultural land situated on Pigeon Hill. The limits of the proposed photo-voltaic array field were not marked on the property at the time of the DEEP field review.

The Antares Solar Field, as the GRE 314 East Lyme proposal is called, is one of two solar generating facilities of 5.0 MW each producing zero emissions Class I renewable energy which were selected by DEEP pursuant to section 127 of Public Act 11-80. As described in Appendix A of the petition, these two projects were selected from twenty-one proposals which were submitted for consideration under this solicitation.

Site Description

The proposed project site is mostly atop a drumlin ridge with stone walls separating the agricultural portion of the site into four fields arranged north to south. The two northernmost

fields have been hayed or mowed to maintain them in an open state, while the southern two fields are beginning to revert. The southernmost field supports a dense band of multifloral rose along its western edge and abundant milkweed from last growing season in the interior of the field. Perk test pipes are also evident, mostly in the eastern portion of the field. Multifloral rose is more uniformly established across the second southern field.

The solar array field would be located in the two southerly fields and will extend slightly into the wooded area west of these fields and more substantially into the forested area to the south. In the absence of stakes or other markers, the exact extent of the southerly incursion into the woods, in particular, was not precisely determined during the DEEP field review.

No homes are visible to the south or east from the portion of the host property upon which the solar panels would be sited. Homes north of the site, which include one farmhouse on the north side of Grassy Hill Road and three homes in wooded settings north of the eastern lobe of the host property which extends east of the wetlands traversing the property (Wetland D), would be well removed from the areas of the solar panel array and would be screened by topography (for the home on Grassy Hill Road) or by forest vegetation (for the three homes to the northeast).

Several homes west of the host property would be much closer to the photo-voltaic panels. The most northerly home on the west side of the host property, which is the home at 40 Grassy Hill Road, is owned by the project applicant and is well north of the footprint of the solar panel array. The next proximal home on the west side, situated at 95 Walnut Hill Road, is located approximately 50 feet from the stone wall at the northwestern corner of the array field, and about 130' from the nearest solar panel, as scaled from the site plan. A narrow band of trees at the stone wall will provide modest screening to the backside of the perimeter fence around the panel array.

Among the other homes along the western boundary of the Antares Solar Field project, the two that appear most susceptible to visual impact are those at 85 Walnut Hill Road and at 14 Mountain View Road. The former will have the array field to both its north and east sides. The latter is the easternmost and highest elevation home on Mountain View Road. Although it possesses ample vegetative screening between it and the open fields at present, much or most of this screening will be removed, according to sheet GU-0 of the site plans.

The existing access road from Walnut Hill Road, which departs from just south of 65 Walnut Hill Road, begins with a very steep climb followed immediately by a very steep drop. The difficulties with using this road for access to the proposed solar farm are very evident. After making a right angle turn to the north, this existing road passes a multiplicity of small, derelict structures and enclosures which are the structures shown on sheet EC-3 of the Erosion Control and Demoltion Plan as marked for demolition. The most substantial of these is a small, one story home or clubhouse to the west of this access road. Others include a wooden storage shed, several dilapidated open air enclosures which probably served as animal pens, and a satellite dish and its stand. A camper unit formerly mounted on a pick-up truck, a debris pile near the one story home, and a scattering of cinder blocks are also found on the southern portion of the property.

The proposed new access road from Walnut Hill Road to the solar farm will depart via the property at 89 Walnut Hill Road. There is a vacant house which appears to date from at least the Federal Period if not the colonial era on this property very close to the road. Page 16 of the applicant's petition notes that a review of the project's historical impact has been requested from the State Historic Preservation Office, a review which presumably would center on this structure. At the time the petition was submitted, a response from the SHPO had not been received. This house is not indicated as being slated for demolition according to sheet EC-2 of the Erosion Control and Demolition Plan and would not directly conflict with the proposed location of the new access road. The alignment of the new access road was not walked during the DEEP field review.

Wetland and Drainage Comments

The setbacks from the limits of construction activities to the nearest receiving wetland (Wetland D), are ample. Sheet GU-0 shows a 100' buffer is maintained from the limit of development to the boundary of Wetland D throughout the eastern edge of the solar farm.

DEEP Inland Water Resources staff performed a cursory review of the drainage plans for the solar farm and found the proposed drainage measures to be reasonable. As noted on page 7 of the Stormwater Management Plan, the post-development peak stormwater discharges from the project site will be reduced from present conditions under the 2, 10 and 100-year storms.

The proposed detention basins, if also used to handle construction runoff in addition to post-construction runoff, should be cleaned after the construction activity is completed to make sure that their full volumes of detention capacity remain available after construction. Following completion of construction and performance the basin maintenance mentioned above, the maintenance schedule laid out in Appendix F, the Operations and Maintenance Plan, is reasonable to provide effective on-going handling of stormwater flows. DEEP recommends that adherence to the O&M Plan be incorporated as a condition of any Council approval of this project and that the reports of the specified inspections be provided to the Council to verify that the on-going inspection and maintenance activities contemplated in Appendix F are being carried out.

The grading plans for the solar farm include some steep slopes on the western and southwestern corners of the project. The use of permanent turf reinforcement matting and the fact that there is little drainage area to contribute runoff to these slopes on the western edge of the project render these 2:1 slopes acceptable.

Natural Diversity Data Base

The petition lists two Natural Diversity Data Base species as potentially occurring at the project site. As indicated on page 23 of Exhibit D, these are Henry's elfin, a butterfly which is a state species of special concern, and American chaffseed, which is both a state endangered and federally endangered species. Though the petition mentions that surveys for these two species were conducted on the site, DEEP does not have survey reports as of the writing of these comments. We have requested, as of March 6, that copies of the reports be provided to us.

Of the two potentially occurring species, American chaffseed (*Schwalbia americana)* is the more critical because it is both state and federally endangered and is not common anywhere

in its range. Indeed, in Connecticut, reports of this species from 1902 and 1913 at a location near the project site constitute the only reported occurrence of American chaffseed on record. The plant prefers pastures, roadways or openings in woods. Should this plant be found on the project site, its endangered status would require that a mitigation plan to avoid impact to this species be developed. Though the petition indicates that American chaffseed was not found on the project site, we cannot concur with that conclusion until the have the survey report and can assess the survey methodology and the credentials of the naturalist who performed the survey.

Farmland Status

Although the host site for the Antares Solar Field is currently supporting only limited agricultural use (assuming the northern fields are being hayed instead of merely moved), the Council should solicit the input of the Connecticut Department of Agriculture concerning the proposed use of farmland for the subject proposal. As of the date of the submission of these DEEP comments, there is no indication on the Council's webpage for Petition 1056 that the Department of Agriculture has submitted any comments on this petition. We do note that Agriculture Commissioner Reviczky was given notice of this petition.

General Comments

The following questions and comments largely mirror those raised in DEEP's comments on Petition 1042 for the Somers Solar Center.

The petition (page 19) notes the need to register this facility under DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities. As the disturbed area for this project will exceed 10 acres, the general permit and a stormwater pollution control plan must be submitted to DEEP. The proposed facility does not meet the definition of an industrial activity under the General Permit for Discharge of Storm Water Associated with Industrial Activity and therefore will not require registration for its stormwater during its operational phase under this latter permit.

The petition does not discuss the procedure for cleaning the solar panels. We assume that periodic cleaning of the 17,500 solar panels will be necessary. What procedure and what materials will be involved in this cleaning? How often is cleaning anticipated to be necessary? Similarly, weed and vegetation control around the panels and perhaps beneath the panel mountings will be required periodically. Will this be done by purely mechanical means or will herbicides be used to control vegetation?

Lastly, though the petition does not contain any graphic representation of the panels to be installed at the project site, we assume the panels are mounted on some type of mounting supports. To what extent can precipitation drain between panels and infiltrate underlying soil? What type of surface will exist under and between the panels? Will it be the grass cover now present in the fields, after removal of the multifloral roses, or will it be a gravel cover? What surface will be left in those areas now occupied by forest cover? Relatedly, are there are procedures for snow removal for the arrays or is melting sufficient to avoid the need for separate snow removal activity?

Miscellaneous Petition Commentary

At the end of the first paragraph on page 7 of the petition, mention is made of spacious forest cover to the south and west of the project site. This likely should have referred to spacious forest cover south and east of the project. As the petition notes in that paragraph, there are residential properties to the west of the site.

The statement is made on pages 16 and 17 that one benefit of the project is the protection of open space and the preservation of habitat from suburban development and fragmentation. While these benefits may be realized on the half of the property which will not be covered by the solar panels, it is misleading to make this statement as though it applies to all 75+ acres of the site. Those areas within the fenceline of the solar array will certainly be extensively altered from their current state and will retain little if any habitat value.

At the southern edge of the southernmost field, there is a remnant metal gate, no longer connected to any fencing, with the initials NAWA on the gate facing the field. The lack of any residential structure behind the gate gives the impression that NAWA in an abbreviation for an organization, as opposed to a family name. Can the applicant shed any light on what type of organization NAWA was or what use it made of the property? Did NAWA maintain the animal enclosures that are found on the south end of the host property?

Thank you for the opportunity to review this petition and to submit these comments to the Council. Should you, other Council members or Council staff have any questions, please feel free to call me at (860) 424-4110.

Respectfully yours,

Frederick L. Riese

Frederick L. Riese
Senior Environmental Analyst

cc: Commissioner Dan Esty
Stephen Reviczky, Dept. of Agriculture