FIFTEEN ROPE FERRY ROAD WATERFORD, CT 06385-2886

April 12, 2020

Ms. Melanie Bachman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Petition 1347A Town of Waterford Comments and Interrogatories.

Dear Ms. Bachman,

The Town of Waterford has reviewed materials submitted to the Connecticut Siting Council for the following petition:

> **PETITION NO. 1347A** – GRE GACRUX LLC petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 16.78-megawatt AC solar photovoltaic electric generating facility located at 117 Oil Mill Road and associated electrical interconnection to Eversource Energy's existing substation at 325 Waterford Parkway North in Waterford, Connecticut.

The Town acknowledges that the proposed footprint of solar installation has been reduced from the previous Petition. However, significant questions remain about local impacts of this project due to the size of facility, the location and terrain, the aggressive construction timetable, and the potential impacts to the sensitive environmental resources receiving the runoff from this project.

The Town's review of Petition No. 1374A focuses on integration of the project with surrounding land uses, environmental impacts, mitigating damage to local roads, questions concerning property assessment, and decommissioning. This review also includes comments concerning statements made in the Petition and supporting documents.

For clarification, the consultant team met with the Town in October of 2019 and provided a broad overview of the reduction in the proposed area of the solar arrays, informed the Town of an intent to discuss PILOT options, and verbally reviewed the additional studies conducted by the project consultants. No plan information, documentation or supplemental information was provided for Town review or comment at that meeting. The Town of Waterford was informed of the motion to re-open and modify the petition on January 24, 2020 by the Connecticut Siting Council.

The proposed development site is located in Waterford's lowest density residential district (RU-120). Adjacent developed properties consist of single family homes to the west along Oil Mill Road. Undeveloped properties adjacent (east and south) to the project are zoned industrial. Undeveloped property to the north of the site is zoned low density residential. The nearest developed industrial parcels are several thousand feet east of the project site. Land zoned for multifamily use is located

almost 4,000 feet to the east of the property. The Waterford Plan of Conservation, Preservation, and Development references future rural development at this location.

The project benefits statement on page 18 of the Petition states that the project will "foster the re-development and re-use of underutilized industrial property." This is not correct. The project location is not currently used or zoned as industrial and has been in forested cover since 1934 aerial photographic record. Further, page 24 of the Petition incorrectly characterizes existing land uses that abut this site. The commercial uses identified occur along Cross Road and Hartford Turnpike (Rte. 85), and do not abut 117 Oil Mill Road. The parcel lies in the middle of a large forested block extending north from the I-95 frontage road (Parkway North).

Page 26 of the petition notes the project will be screened from much of the surrounding area due to existing development, topography and intervening vegetation. This is not entirely accurate. The project is proposed on a high local elevation contour 240. During a recent field walk with Waterford staff, the applicant and their agents, the buildings associated with Waterford Commons (elevation contour 200) were evident more than 1 mile east from the site perimeter. No existing development occurs adjacent to the parcel that would provide a visual screen of the facility. The project clearing limit extends to the northeastern property boundary with no on-site forest vegetation screening and extends close to the southwestern property line with minimal tree canopy between basins #9 and #10. The applicant should not take credit for intervening vegetation on property not under their control. Additional on-site screening should be considered in these areas.

The project benefits statement in the Petition states "… the local community will benefit from a negotiated tax agreement that will provide additional revenue for the life of the Project." There has been no formal presentation to the Town on this proposal and no agreement currently exists. The Town will review a proposal when one is presented. The Town requests the following information relative to property tax assessment:

1. Have any studies, surveys or analyses been conducted to determine the potential impact on property values for those properties proximate to such a utility scale solar facility? If so, what is the scale and direction of those impacts if any?

2. What is the expected addition to the Grand List at the completion of the project?

3. At the conclusion of the land lease what is the anticipated impact to the subject's property value? Will the land be restored to its original condition and use?

Access to the site is from Oil Mill Road. The width and condition of this local road is generally insufficient to support heavy truck traffic during construction and decommissioning. In places, the paved width of the road is only 16 feet. Existing center line markings further reduce the width of each travel lane. The current pavement condition index is in the range of reclaiming the road. The following comments and questions are provided relative to both temporary and long-term impacts to Oil Mill Road:

4. The current pavement condition index is in the range of reclaiming the road. A simple overlay of the road will not be acceptable, either before or after the site has been completed. The Town recommends clear documentation of road conditions by the project team prior to the start and at the conclusion of any activity on site and asks that the Siting Council require full reclamation of the section of Oil Mill Road used to access the project site. A road condition survey should

also be required prior to decommissioning, and any anticipated damage from heavy truck traffic at that time should be addressed.

5. The current width of the road is not suitable for truck traffic. The road should be widened to provide an 11 foot clear lane in each direction with a double yellow centerline for a total paved width of 24 feet. If this is not feasible within the existing right of way, it should be widened to the maximum extent possible and require any truck travel on Oil Mill Road to have an escort vehicle for each load warning oncoming traffic of an approaching vehicle that will be over the center line. How will this issue be addressed?

6. Heavy and repeated vehicle loads will further deteriorate the supporting base of the road causing rutting and the failure of the surface course. This will impact the ability of the town to engage in proper winter operations of removing snow and preventing ice buildup on this section Oil Mill Road. How will this issue be mitigated?

7. This project will require a new pole line, with larger diameter poles able to support 3 phase infrastructure. The AASHTO standard (A Guide for Accommodating Utilities Within Highway Right of Way) states the setting of the new poles should be outside of the clear zone as practicable to the right of way line. Please provide additional information about how this standard will be addressed. The Town recommends new pole installation along the ROW line or securing easements for the poles from the abutting property owners to relocate the poles outside of the clear zone.

8. The access road to the site shall provide the proper site line distances in both directions and should include a paved apron surface and be graded to prevent any water from discharging onto the Town roadway. Will these issues be addressed?

9. Please indicate where MUTCD approved signage will be installed with proper foundations warning of a construction entrance.

10. To minimized damage to local roads, construction vehicle access to the site should only use Parkway North and the section of Oil Mill Road to limit the damage to other local roads. How will construction traffic be controlled to limit damage?

The following comments and questions are relative to environmental and stormwater impacts of this project. These comments in many cases repeat the concerns previously expressed by the Town regarding the project's potential impact to off-site wetlands and watercourses.

11. The revised project involves approximately 75 acres of land clearing and soil disturbance for construction within the upper watershed of Stony Brook and Oil Mill Brook. Stony Brook and Oil Mill Brook are designated as Class A watercourses and are also designated as fully supporting aquatic life. Field bioassessment surveys completed in 2014 and 2105 verified the presence of native trout in both Stony Brook and Oil Mill Brook and diverse ecologically sensitive, in-stream invertebrate community. These are high quality surface waters in the Town of Waterford. The proposal involves a significant disturbance in the contributing watershed area of these streams. Maintaining conditions in the tributary watersheds that support the biodiversity and water quality in these streams is a critical concern of the Town. Impacts to hydrology, temperature regimes and increased sediment loading adversely impact the water quality and aquatic habitat.

The petition does not address the quality and sensitivity of these receiving waters and wetlands nor evaluate the potential impacts to the receiving streams and aquatic habitats from construction and post-construction run-off from the proposed development.

12. Erosion of disturbed soil and slopes, and potential failure of the stormwater basins located along the project perimeter with resultant significant sediment impacts to downgradient wetland resources are of critical concern. Basins level spreaders on the easterly side of the project discharge to steep slopes and rock outcrops upgradient of Stony Brook. Stormwater discharged from the level spreaders to these steep slopes is not anticipated to dissipate, but to result in concentrated flows that will cause downgradient soil erosion and sediment impacts to the wetlands and watercourses. The terrain and proximity to property boundaries does not provide opportunity to attenuate run-off, nor to correct or abate sediment discharges should they occur.

13. The Wetland and Biological Assessment document submitted with the petition [Appendix H, Davison report 2018] recommends promoting infiltration of run-off to "help to ensure" there are no thermal impacts to downstream resources and to design the stormwater management system so there is no increase in peak run-off flows or total run-off volume discharging from the site. The petition documents do not provide information regarding the design, capacity or the effectiveness of the proposed stormwater management system components to infiltrate run-off, attenuate potential thermal impacts, total run-off volumes, and sediment and nutrient discharge to adjacent properties and the receiving wetlands within Stony Brook and Oil Mill Brook.

14. The revised plans indicate the sediment basins will be permanent stormwater basins but do not provide details on how these sediment basins will be converted to stormwater ponds, stormwater infiltration basins or sand filters as identified in the hydrology report and plan detail sheet C-6.2. Basin design details are not consistent with the 2004 CT Stormwater Quality Manual for sand filters and no details are provided for stormwater ponds or infiltration basins. Basin function and performance in the attenuation of post-construction pollutant and thermal loadings is not supported in the petition documents.

15. The wetland and biological assessment report (Appendix H) identifies the parcel as part of a core forest area in the Town of Waterford and notes that the resulting clearing of approximately 90 acres will render the site largely uninhabitable for forest-dwelling birds. Impacts of this habitat disturbance are also noted to affect core forest habitat on adjacent properties due to the relative location of the project in the central portion of the forest tract and the resultant forest fragmentation. This impact is not mitigated by this proposal.

16. The property was authorized for a timber harvest in accordance with the Waterford Inland Wetlands and Watercourses regulations and zoning regulations as an agricultural activity, not as a site clearing approval. The timber harvest occurred over an 8-9 month period between January and September 2018. The Town required that the haul routes, landing areas, and harvest areas are stabilized and seeded at completion of the timber harvest in accordance with the forestry best management practices.

    The petition states the applicant is "committed to cleaning the project site from recent timber harvesting activities". The brush, branches and wood chips left on the forest floor and haul roads are considered best management practices for forest harvest activity to return carbon to

the soil, provide shelter for seed germination and provide microhabitats for species. What "cleaning" measures are proposed, where proposed, and what level of soil and substrate disturbance will result in areas outside the proposed solar array footprint?

17. The petition notes that 45 acres of project area have been harvested by owner and the initial project phase will involve "minor additional clearing as required for project". The 45 acre harvest area was not a clear-cut operation and did not involve removal of tree stumps, understory stumps or root masses. The initial project phase will involve cutting, clearing and grubbing 75 acres of land.

18. What are the proposed seed mixtures for the solar array area and the low maintenance ground cover areas and the anticipated time for seed germination and vegetative cover establishment?

19. The estimated construction sequence will not provide a full growing season between seed application and initiation of solar array construction. If clearing and grubbing begins in June as proposed, seed establishment and grass cover will have only July through October to occur before frost, with a shorter duration for areas cleared and grubbed later in the initial phase. There are no water sources on the site for irrigation to help grass establishment through the summer dry period. It is likely there will be large areas of sloping land with poor vegetative cover to protect soils against erosion and reduce sediment movement.

20. Low impact development site design and construction measures are necessary on this site to dissipate and reduce run-off volumes and control sediment prior to reaching the sediment basins and project perimeter. Failure of the basin embankments and outlet control is of great concern on this project.

21. To what extent and in what location does the project lease area extend beyond the limit of work delineated on the site plans?

22. Will the contractor and/or applicant's responsibility for site stabilization and impacts to site resources extend beyond the limit of work? This is of importance as the stormwater basins will discharge to recently harvested woodland soils, wetland buffer areas and timber haul routes. These areas may be more susceptible to soil erosion from the increase in volume and duration of run-off over existing conditions, and may require erosion control measures and soil stabilization efforts.

23. What is the estimated volume and type of materials to be exported from the construction site e.g. soil, stumps, rock.? Where are temporary stockpile or laydown areas proposed?

24. What grading and stabilization work is required for the existing culverted access road to the site from Oil Mill Road to support the anticipated construction traffic? Existing sideslopes at the wetland crossing are relatively steep. What temporary and permanent sediment controls are proposed? Will additional wetland fill be required?

25. Design specifications for the proposed stormwater pond, infiltration basin and sand filter basins and how these conform to CT Stormwater Quality Manual 2004 are not provided.

26. The use of proposed infiltration areas as construction sediment basins is not a recommended practice per the CT Stormwater Quality Manual due to loss of pore space and infiltration capacity of the substrate from accumulated fine sediments. How will proposed infiltration areas be protected? Will infiltration basins be field tested for capacity prior to planting?

27. A construction sequence narrative on how and at what point in the construction the sediment basins are converted into stormwater basins is not provided. Sequence details should address removal of accumulated sediment, installation of infiltration media and growing media, seeding/planting details and timing, monitoring locations or ports for infiltration basins and stormwater ponds, and temporary soil stabilization material within the basin until vegetation has re-established.

28. The O&M plan (Appendix C) does not identify what maintenance items are to be inspected at a minimum and what corrective actions are to be taken to maintain the stormwater basins, basin outlets and diversion swales post-construction. The O&M plan does not address maintenance and inspection requirements for the different basins identified as stormwater ponds, sand filters and infiltration basins. Failure to maintain and monitor performance of these stormwater controls will result in loss of infiltration, water quality treatment and functionality of the stormwater system.

29. Appendix B Stormwater report p 2 states the "quality of stormwater run-off leaving the Site will be improved compared to existing". How does the proposed development of 75 acres of forested headwater watershed result in cleaner stormwater run-off compared to existing conditions? What pre- and post-construction pollutant loading levels were used and what analysis performed to support this statement?

30. Slope lengths of 300-500 ft. in length are proposed upgradient of the sediment basins. Explain why temporary sediment traps, diversion swales, mulch berms or other run-off control and soil stabilization measures are <u>not provided</u> within the solar array areas to implement sediment and run-off control measures closer to the source of potential erosion?

31. Basin 1 test pits indicate basin will be excavated to ledge at contour 190. What depth and type substrate and growing medium will be provided? Will basin be over-excavated into ledge? This is identified as a stormwater basin pond. How will this sediment basin be converted to a stormwater pond?

32. Basins 2 and 3 discharge to slopes in the northeastern portion of the site where narrow trails occur, as indicated on the property survey sheets, and continue onto adjacent properties. These trails are highly erodible. What measures will be taken to stabilize these areas and prevent discharge from the stormwater basin channelizing and eroding these trails and carrying sediment off the site to downgradient wetlands?

33. Basin 3 is an impoundment at grade with a 4- 6 ft. high fill embankment downgradient of a 500 ft. length flow path. Failure of the fill embankment during heavy rain events will discharge sediment onto steep terrain upgradient of Stony Brook with no access to remediate sediment deposition.

34. Basin 4 is constructed with a 4 ft. high fill impoundment at the southeast corner where the outlet is located. Steep slopes and an intermittent watercourse of wetland 2 occur approximately 100 ft downgradient of the level spreader outlet. Failure of this fill embankment will discharge sediments to wetland 2 and steep slopes tributary to Stony Brook.

35. Basin 5 is constructed with a 4-6 ft. high embankment fill in an area of seasonal high groundwater, and downgradient of a 500 ft. flow path. Failure of this fill embankment will discharge sediments to wetland 2 and steep slopes tributary to Stony Brook.

36. Basin 16 is constructed with a 250 ft. length embankment fill approximately 6 ft. in height. Failure of this basin will result in sediment impacts to wetland 1. Additional stabilization measures and perimeter controls to contain sediment and stabilize this embankment should be included. Additional temporary sediment traps should be installed upslope within the contributing drainage area of the array to reduce erosion and sediment loss, and reduce slope length.

37. How will sediment basin outlets and level spreaders be replaced with permanent stormwater outlets? What is the anticipated degree of disturbance to the fill embankment for restoration or replacement of the outlet controls and level spreaders?

38. Temporary sediment basin 16A is not indicated on the erosion and sediment control plans. Where does the diversion swale noted on plan sheets C-5.3 and C-5.5 discharge?

39. The carbon debt analysis should factor into the debt a 60-80 year time period following decommissioning of the site for loss of sequestered carbon by a mature temperate hardwood forest until a mature hardwood forest is re-established on the project site.

40. Reforestation should be required for site restoration as part of the project decommissioning.

Sincerely,

Abby Y. Piersall

Abby Y. Piersall, AICP
Planning Director