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July 6, 2020

VIA ELECTRONIC MAIL

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Petition No. 1401 - Revity Energy, LLC petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for a 12.25-megawatt AC solar PV facility located at 424 Snake Meadow Road, Plainfield, Connecticut

Dear Attorney Bachman:

Enclosed please find Revity Energy, LLC's responses to the Council's June 22, 2020 interrogatories in connection with the above-described petition.

I certify that a copy hereof has been furnished on this date via electronic mail and/or first class mail, postage prepaid, to all parties, intervenors and participants of record for this petition as of this date.

Please feel free to contact me with any questions concerning this submittal at (203) 772-7787.

Very truly yours,



Bruce L. McDermott

Enclosures

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Interrogatory CSC-2-43

Revity Energy LLC

Witness: Ryan Palumbo

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Q-CSC-2-43: Which criteria does Revity Energy, LLC (Revity or Petitioner) consider in its site selection process? Explain.

A-CSC-2-43: Key attributes for site selection include, but are not limited to, the following:

- a) Cleared land
- b) Disturbed earth such as gravel pits and sand operations
- c) Earth quality (lack of ledge)
- d) Locations that efficiently located for Interconnection
- e) Consistent topography (preferably gradual inclines from north to south)
- f) Isolation from residential areas

Interrogatory CSC-2-44

Reivity Energy LLC

Witness: Serdar Soytok

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Q-CSC-2-44: Referencing page 13 of the Petition, please describe what is meant by an 82.42% performance ratio.

A-CSC-2-44: The performance ratio ("PR") is an important metric in the PV industry, and it is often used as a contractual condition / warranty when commissioning a PV system or for the verification of the annual yield.

The PR is the ratio of the energy effectively produced (used), with respect to the energy which would be produced if the system was continuously working at its nominal standard test conditions ("STC") efficiency. The PR is defined in the IEC EN 61724.

In grid-connected systems, the available energy is E_{Grid} . The energy potentially produced at STC conditions is equal to $(\text{GlobInc} * P_{\text{nomPV}})$, where P_{nomPV} is the STC installed power (manufacturer's nameplate value). This equivalence is explained by the fact that at STC (1000 W/m², 25°C) each kWh/m² of incident irradiation will produce 1 kWh of electricity.

For a grid-connected system: $\text{PR} = E_{\text{Grid}} / (\text{GlobInc} * P_{\text{nomPV}})$

The PR includes the optical losses (Shadings, IAM, soiling), the array losses (PV conversion, ageing, module quality, mismatch, wiring, etc) and the system losses (inverter efficiency in grid-connected, or storage/battery/unused losses in stand-alone, etc).

Unlike the "specific energy production" indicator, expressed in [kWh/kWp/year], PR is not directly dependent on the meter input or plane orientation. This allows the comparison of the system quality between installations in different locations and orientations.

Interrogatory CSC-2-45

Reivity Energy LLC

Witness: Tony Morreals

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Q-CSC-2-45: Referencing page 9 of the Petition, Reivity notes that there would be six 2,500 kilovolt-ampere (kVA) service transformers. Referencing Appendix H of the Petition, Noise Assessment, it indicates that there would be seven transformers. Please clarify if it is six or seven. If it is six, would such noise analysis (that accounts for seven) be conservative?

A-CSC-2-45: The project, as currently proposed, will have seven (7) padmounted transformers: five (5) 2,000-kVA, (1) 1,500-kVA, and (1) 1,000-kVA. The noise analysis was still conservative due to the size of the transformers used in that study versus the actual.

Interrogatory CSC-2-46

Revity Energy LLC

Witness: Tony Morreals

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Q-CSC-2-46: Would the interconnection occur at Fry Brook Substation or on the 23-kV distribution circuit?

A-CSC-2-46: The interconnection process is ongoing. Eversource will determine the exact point of interconnection, but Revity's current proposal is interconnection to a new 23-kV feeder that Eversource will install from the Fry Brook Substation to the project site.

Interrogatory CSC-2-47

Reivity Energy LLC

Witness: Mike Libertine

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Q-CSC-2-47: Referencing the Federal Aviation Administration Determinations of No Hazard to Air Navigation submitted on April 28, 2020, Solar Point Nos. 1 through 24 and HP are based on a solar panel height of 10 feet above ground level, consistent with page 45 of the Environmental Analysis. However, page 20 of the Petition notes that the "The Project...will not exceed a height of approximately 12 feet above ground." Please explain.

A-CSC-2-47: The final height above grade for the panels will be 10'. The submission to the FAA included heights for objects at the project site up to 22' above grade in order to be conservative.

Interrogatory CSC-2-48

Revity Energy LLC

Witness: Ryan Palumbo

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Q-CSC-2-48: Referencing the response to Council interrogatory 14, does Revity have any concerns about flooding potentially impacting access to the solar facility?

A-CSC-2-48: Historically, flooding occurred occasionally in this area as a result of beaver activity. However, the animals and their dam were removed years ago and flooding has not been an issue since.

Interrogatory CSC-2-49

Revity Energy LLC

Witness: Mike Libertine

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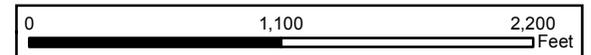
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Q-CSC-2-49: Referencing page 16 of the Environmental Assessment of the Petition, for Vernal Pool No. 1 within Wetland No. 5, would it be possible to install a culvert in the bifurcated (former) contiguous wetland? If not, explain why.

A-CSC-2-49: While it would be possible to install a culvert within the existing access road, providing hydrologic connectivity between Wetlands 5 and 1, Revity does not consider it a feasible option. The existing access road bifurcating these wetlands has existed since sometime prior to 1934 (based on Fairchild Aerial Survey dated 1934, see Attachment CSC-2-49). Both Wetlands 1 and 5 have developed independently over the past 86+ years as separate wetland resources. As such, connecting these wetlands may have unanticipated negative consequences including dewatering of one of the resources, flooding, and habitat cover changes; any of which may dramatically affect wildlife populations utilizing these unique habitats as well as resulting in a loss of the functions and values currently provided by these wetlands. Furthermore, the costs and efforts to permit and construct a new wetland crossing between Wetlands 1 and 5 could be prohibitive to the Project. Most importantly, the activity would result in an increase in direct wetland impacts that may ultimately not have any benefit to these wetlands.



Source: Fairchild Aerial Survey 1934



Interrogatory CSC-2-50

Revity Energy LLC

Witness: Mike Libertine

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- Q-CSC-2-50: Referencing page 34 of the Petition, Section i, Wetland Protective Measures, it specifically references Wetland Nos. 1, 3, 4, 6, 7, and 8 where clearing requirements are minimized in areas proximate to these wetlands. Please explain the protective measures that would be implemented for Wetland No. 9 and Vernal Pool No. 2.
- A-CSC-2-50: The same protective measures specified in Section I, Wetland Protection Measures for Wetland Nos. 1, 3, 4, 6, 7, and 8 will be implemented for Wetland No. 9/Vernal Pool No. 2. The areas surrounding Wetland No. 9/Vernal Pool No. 2 have been previously disturbed and significantly degraded, and are now dominated by exposed sand and gravel with sparse herbaceous and scrub/shrub vegetation. These conditions are not optimal habitat characteristics for species using wetlands/vernal pools. Limited clearing of the scrub/shrub vegetation adjacent to this wetland resource is required to facilitate construction of the Project.

Interrogatory CSC-2-51

Revity Energy LLC

Witness: Mike Libertine

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Q-CSC-2-51: Can a 100-foot buffer be employed around Wetland No. 9 to further reduce impacts? Explain.

A-CSC-2-51: Wetland 9 is located at the toe of the slope on the eastern side of the gravel pit floor. It was created as a result of the large-scale grading and soil removal associated with gravel extraction and processing. In order to control water discharging from the eastern hillside into the pit floor, diversion and collection channels were created on the eastern slope. The 100-foot areas adjacent to Wetland 9 consist of existing disturbed and degraded surfaces associated with the gravel mining operation resulting in sand/gravel surfaces with sparse vegetation. As such, establishing a 100-foot buffer by eliminating arrays in this area would not improve the quality of the buffer habitat to this wetland resource. The proposed establishment of grasses/herbaceous material within the Project area will provide improved buffer habitat quality to Wetland 9. Furthermore, if succession to more established dense scrub/shrub or early successional forest vegetation was promoted within this buffer, more profound negative consequences may result to the pool's hydrology; as increased transpiration rates caused by establishing vegetation will reduce contributing flows to the pool, and may shorten its hydroperiod, ultimately making it no longer suitable for any amphibian breeding. As such, establishment of a 100-foot buffer to Wetland 9 would not likely result in a significant benefit to the functions and values provided by the wetland resource.

Interrogatory CSC-2-52

Reivity Energy LLC

Witness: David Russo

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Q-CSC-2-52: Referencing the response to Council interrogatory 31, Reivity notes that it has met with the Department of Energy and Environmental Protection (DEEP) Stormwater Division on two occasions and is awaiting any comments from DEEP. On which dates did Reivity meet with DEEP Stormwater Division? Since those meetings, did Reivity receive any additional comments? Explain.

A-CSC-2-52: Reivity met with DEEP on September 11, 2019 and on November 19, 2019.

Since those meetings, Reivity has not received any additional comments.