STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
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April 2, 2019

Lee D. Hoffman, Esq.
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702

RE: **PETITION NO. 1339** – Wallingford Renewable Energy LLC declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 19.99 MW AC ground-mounted solar photovoltaic electric generating facility located on approximately 158 acres of 3 contiguous parcels consisting of the former Wallingford Landfill and 2 parcels owned by the Materials Innovation and Recycling Authority west of Pent Road and associated electrical interconnection to Wallingford Electric Division's Wallingford Substation in Wallingford, Connecticut.

Dear Attorney Hoffman:

At a public meeting of the Connecticut Siting Council (Council) held on March 28, 2019, the Council considered and approved the Development and Management (D&M) Plan submitted for this project on February 13, 2019, with the condition that a copy of the DEEP General Permit shall be submitted to the Council prior to construction. The Council also recommends that the ballast mounts not cut into the landfill cap and that approximately 6 inches of compost be placed on the stone check dams.

This approval applies only to the D&M Plan submitted on February 13, 2019 and supplemental data dated March 21, 2019. Requests for any changes to the D&M Plan shall be approved by Council staff in accordance with Regulations of Connecticut State Agencies (RCSA) §16-50j-62(b). Furthermore, the project developer is responsible for reporting requirements pursuant to RCSA §16-50j-62.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the Council's decision on the petition dated April 3, 2018, the D&M Plan dated February 11, 2019 and additional information received on March 21, 2019.

Enclosed is a copy of the staff report on this D&M Plan, dated March 28, 2019.

Thank you for your attention and cooperation.

Sincerely,

Melanie Bachman
Executive Director

MAB/MP/lm

Enclosure: Staff Report dated March 28, 2019

c: The Honorable William W. Dickinson, Jr., Mayor, Town of Wallingford
Kacie Hand, Town Planner, Town of Wallingford
Janis M. Small, Corporation Counsel, Department of Law, Town of Wallingford

The Honorable Curt B. Leng, Mayor, Town of Hamden
Dan Kops, Planning & Zoning, Town of Hamden
The Honorable Michael J. Freda, First Selectman, Town of North Haven
Laura Magaraci, Zoning Enforcement Officer, Town of North Haven
Joe Jordan, Wallingford Renewable Energy LLC

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Petition No. 1339
Wallingford Renewable Energy LLC
Development &Management Plan
Oliver Creek Road and Pent Road, Wallingford
Staff Report
March 28, 2019

On April 3, 2018, the Connecticut Siting Council (Council) issued a Declaratory Ruling to Wallingford Renewable Energy LLC (WRE), pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k, for the construction, maintenance, and operation of an approximately 19.99 megawatt (MW) alternating current (AC) solar photovoltaic electric generating facility located on approximately 158 acres of 3 contiguous parcels consisting of the former Wallingford Landfill and 2 parcels owned by the Materials Innovation and Recycling Authority (MIRA) west of Pent Road and associated electrical interconnection to Wallingford Electric Division's Wallingford Substation in Wallingford, Connecticut. In its Declaratory Ruling, the Council required WRE to submit a Development and Management Plan (D&M Plan). On February 13, 2019, WRE submitted its D&M Plan for this project. Copies of the D&M Plan were provided to the Towns of Wallingford, Hamden and North Haven[1] on or about February 13, 2019. No comments have been received to date. On March 8, 2019, the Council issued interrogatories to WRE. On March 21, 2019, WRE submitted responses to Council interrogatories.

Two parcels (MIRA Property), totaling 52 acres, are owned by MIRA. One parcel (Town Property), totaling 106 acres, is owned by the Town of Wallingford. All three parcels are located in the Town of Wallingford's Industrial District (I-40). The Town Property is located west of Pent Road and north of Ball Street. The MIRA Property is located immediately south of the Town Property and on the other side of Oliver Creek Road.

The Town Property consists of the Wallingford Landfill, a cleared grassy area, and forested lowland areas to the west, adjacent to the Quinnipiac River. Two electrical right-of-ways (ROW) traverse the Town Property. In 2002, the landfill was capped and closed in 2005. However, the Town of Wallingford continues to operate a resident drop-off area and bulky waste transfer station at the eastern side of the landfill (accessed by Pent Road), as well as a composting and mulch center on the north side of the landfill, accessible from John Street.

The MIRA Property is primarily used to control and monitor the leachate plume. An Algonquin natural gas pipeline ROW and an oil pipeline ROW currently extend through the western portion of the MIRA Property in a roughly north-south direction.

The Declaratory Ruling requires the following information to be included in the D&M Plan:

a. A final site plan including, but not limited to, final solar panel design, electrical interconnection, fencing and equipment pads;

The final site plan illustrates the site design, solar array arrangement, solar panel design, electrical interconnection, fencing, and equipment pads. The originally approved project was for approximately 56,000 solar photovoltaic panels at 390 Watts DC each for a total of about 21.8 MW DC or about 19.99 MW AC. However, since the approval, WRE has reduced its capacity as a result of the geotechnical investigation conducted at the site after the original Petition filing. The results of the geotechnical investigation determined that some of the steeper slopes of the landfill portion of the site were not useable. Thus, the total quantity of solar panels will be reduced to about 46,000 panels, known as the "revised configuration." Of that total, roughly 20,176 solar panels will be mounted using pile driven post rack systems, and roughly 25,688 solar

[1] The Towns of Hamden and North Haven are both located within 2,500 feet of the approved solar facility.

panels will be mounted using ballasted-mount post rack systems. See Section (b) for the ballast mount delivery process.

The panel size will be either approximately 395 W or 400 W, depending on the final vendor selection. WRE has provided specifications sheets for both, per the "final solar panel design" requirement. The revised capacity (conservatively based on 400 W panels) will be about 18.4 MW DC or about 16.70 MW AC.

WRE will utilize chain link fence approximately seven feet high, with a minimum of a six-inch wildlife gap underneath for all areas.

There would be three 13.8-kilovolt electrical interconnection points. Two will be in the vicinity of Ball Street, and one in the vicinity of South Cherry Street. Approximately five new wooden poles per point of interconnection (or a total of 15) will be installed to accommodate the interconnection. Such poles will be approximately 45 feet high. An additional 105 wooden poles will be required within the site. A system impact study has been performed to show that (up to) 20 MW AC output can be accommodated. No expected modifications need to be performed at Wallingford Substation that would necessitate a future filing.

b. Plans for ballast mount delivery to site or plans to pour concrete on-site;

All ballast blocks will be pre-cast and manufactured off-site. The fabrication of the ballast blocks will commence in roughly mid-April. Beginning in mid-May, approximately six truckloads of ballast blocks will be delivered daily (or about 108 ballast blocks per day). Full delivery will take about 41 days. Each truck will be a 40-foot flatbed trailer. Such trailer trucks will enter the site via Pent Road and unload onto a temporary staging area (located directly north of Pent Road). Ballasts will be unloaded from the trucks with either a wheeled telehandler or a wheeled skid steer (i.e. a "Bobcat") by picking the blocks from underneath with forks.

Ballasts will be transported from the staging area to the approximate permanent location. Low ground pressure tracked equipment (i.e. 1,000 pounds per square foot or less) will be used on the landfill.

Also in approximately mid-May, WRE will survey all ends of rows and each ballast location. If any ballast locations requires gravel pads, WRE will install approximately 1.5-inches of gravel, compact the gravel and level and taper the gravel pads as necessary.

c. Final Vernal Pool Survey results and associated protective measures;

A final vernal pool survey was submitted to the Council on August 8, 2018. In the Vernal Pool Survey Report dated June 14, 2018, it notes that REMA Ecological Services, LLC (REMA), in coordination with Oxbow Associates, Inc. (OA), conducted in-field, breeding season surveys of nine seasonally flooded wetland areas that had been identified in October 2017 as potential vernal pool (PVP) habitats. Such PVPs were identified as PVP-1 through PVP-7, PVP-7A and PVP-8.

Field scientists from OA conducted vernal pool surveys on April 11 and 23, 2018. Field scientists from REMA conducted surveys on April 27, April 30, and May 29, 2018.

The survey confirmed that most of the previously identified PVPs were found to be functional vernal pools and contained obligate vernal pool species including wood frog, spotted salamander and fairy shrimp. Only PVP-7A was determined to not qualify as a vernal pool. Also, two additional functional vernal pool habitats (known as PVP-2A and PVP-4A) were identified during this 2018 survey. Thus, the total number of confirmed vernal pools is ten.

Construction activity within the 100-foot vernal pool envelope (VPE) is indicated below. This is based on the originally approved configuration; however, VPE impact areas will not change as a result of the revised configuration of the solar panels.

Table 1: Proposed Activities within VPEs Associated with Wallingford Renewable Energy

VP#	VP Area (acres)	VPE Area (acres)	Existing VPE Disturbed?	Project Disturbance?	Percent of VPE Affected by Project Activities in CSC Petition[2]	Percent of VPE Affected by Project Activities with Confirmed Vernal Pools[3]
1	0.01	0.91	No	Yes – fence and minor clearing	4	4
2	0.13	1.82	Yes – Utility ROWs	No	-	
2A	0.09	1.42	Yes – Utility ROWs	Yes – very small portion of fence and clearing	Not identified	0.4
3	0.03	1.07	Yes – Utility ROWs	No	-	
4	0.09	1.61	Yes – Utility ROW	No	-	
4A	0.01	0.86	No	Yes – segment of fence and clearing	Not identified	6.5
5	0.07	1.43	Yes – past disturbance, current trash	No	-	
6	0.16	1.86	No	No	-	
7	0.04	1.13	Yes – existing access road	Yes – use of existing access road	8	8
8	0.11	1.70	Yes – existing access roads	Yes – use of existing access road; enhanced turnaround; fence and minor clearing	12	11

While some project disturbance within the VPE areas will occur, consistent with the U.S. Army Corps of Engineers 2015 Vernal Pool Best Management Practices, sufficient connectivity corridors are provided between all of the pools and all of the upland habitats that would be used by the wood frog population.

Construction disturbance within the 100-foot to 750-foot critical terrestrial habitat (CTH) area is indicated below[2].

VP #	Prior Layout			Proposed Layout		Comparison
	CTH Disturbance Area	CTH Affected – CSC Petition	CTH Affected – Vernal Pool Report	CTH Disturbance Area	CTH Affected	
1	4.8 acres	12%	12%	5.0 acres	12%	No change
2	8.9 acres	21%	19%	9.1 acres	20%	Less than in CSC Petition
2A	12. 5 acres	--	28%	12.5 acres	28%	No change
3	7.7 acres	20%	18%	7.9 acres	20%	Same as in CSC Petition
4	7.6 acres	19%	17%	7.8 acres	18%	Less than in CSC Petition
4A	6.5 acres	--	16%	6.7 acres	16%	No change
5	4.8 acres	12%	11%	5.0 acres	11%	No change
6	11.8 acres	28%	26%	11.8 acres	26%	No change
7	12.2 acres	29%	29%	12.2 acres	29%	No change
8	10.1 acres	24%	22%	10.1 acres	22%	No change

[2] Proposed layout refers to the revised configuration.

Based on the encroachment upon the vernal pools' CTHs, it is expected that there may be some impacts to the overall wood frog population, and to a lesser extent, the spotted salamanders. However, sufficient upland wooded habitat, as well as suitable hibernation habitat (embedded within the delineated wetlands) will remain intact and well-connected, both on-site and off-site.

Based on the 2018 breeding season surveys, the study of past habitat disturbances and the ecology of the vernal pools and their obligate amphibians, the obligate vernal pool amphibian population at the study area and the 10 confirmed breeding habitats will be conserved post-development[3].

d. Plans to comply with DEEP Natural Diversity Database Comments dated March 9, 2018 including, but not limited to, final turtle protection plan, final bat protection plan and plans for additional NDDB invertebrate surveys or relocation of solar panels outside of the sand barren habitat;

By letter dated March 9, 2018, DEEP noted that, in order to protect the low frostweed, a state-listed Species of Special Concern, WRE should conduct additional surveys for this plant in the sand barren habitat (located near the junction of Pent Road and Oliver Road) during the appropriate time of year. (The plant blooms in mid to late June.) Accordingly, WRE conducted a survey of plants and habitat of the 0.08-acre sand habitat. The low frostweed was identified at the site, and a conservation plan to protect the plant from project impacts was provided. By letter dated July 27, 2018, DEEP acknowledged receipt of the survey report and the conservation plan.

Also in the July 27, 2018 DEEP letter, DEEP recommended that a conservation plan be prepared for the false mermaid weed, a state-listed Endangered Species. Accordingly, in its D&M Plan, WRE prepared a plan to protect such plant species, and received written concurrence from DEEP regarding the protective measures.

DEEP also acknowledged receipt of WRE's investigation results for invertebrates (i.e. state-listed insect species) that were also requested in its March 9, 2018 letter. Such results indicate that the small size does not warrant mitigation measures for invertebrates, and DEEP concurs with such conclusion.

The northern long-eared bat, a state-listed Species of Special Concern (and federally-listed Threatened Species), may occur at the proposed site. Accordingly, in its letters dated March 9, 2018 and July 27, 2018, DEEP included protective measures for state-listed bat species, including but not limited to a seasonal restriction that prohibits tree cutting between May 1 and August 15. WRE will comply with such bat protection measures.

DEEP also notes that, although the wood turtle, spotted turtle and the eastern box turtle (all state-listed Species of Special Concern) were not included in the NDDB preliminary assessment, WRE's habitat assessment suggests that these turtles may occur at the project site. Accordingly, DEEP has included a protection plan for all three turtle species. WRE will comply with such turtle protection measures.

e. Final seed mixture and any associated pollinator species as applicable;

The final seed mixture for the project includes a mix of Kentucky Bluegrass, Perennial Ryegrass and Fine Fescue. Such seed mixture was submitted to DEEP as part of the Stormwater Pollution Control Plan (SWPCP). Seed mix would be applied at a rate of about 50 pounds per acre.

In addition to standard seeding, WRE will also utilize a seeding mix that includes pollinator-attracting plants to supplement the permanent vegetative cover for the project. Of the species in such mix, the partridge pea and the showy tick trefoil are considered pollinator species.

[3] While the Vernal Pool Survey Report and related analyses were prepared based on the originally proposed configuration, the conclusion will not be affected by the revised configuration.

f. Final erosion and sedimentation control plan consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control;*

Final erosion and sedimentation control plan consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control* has been included. This plan was also submitted to DEEP as part of the SWPCP application package for the General Permit.

g. Copy of DEEP General Permit; and

Pursuant to CGS Section 22a-430b, DEEP retains final jurisdiction over stormwater management. WRE filed its SWPCP and General Permit application with DEEP on or about February 4, 2019. The General Permit is expected no later than May 6, 2019 and will be provided to the Council by WRE upon receipt. WRE will not begin construction until a copy of the General Permit is submitted to the Council.

h. Consideration of relocation of solar panels from the southern portion of the site to the northwest portion of the landfill to minimize fragmented solar panel installation and to further maximize wetland buffers.

In consultation with DEEP staff, WRE investigated the possibility of relocating some of the solar panels from the southern portion of the site to the northwest portion of the landfill to minimize fragmented solar panel installation and to further maximize wetland buffers. However, there is a metal hydroxide sludge disposal cell in that area; thus, relocating solar panels to that area was deemed to not be possible.

Work hours would typically be 7:00 a.m. to 9:00 p.m., Monday through Saturday. Sunday hours might be necessary.

Recommendations

If approved, staff recommends the following condition:

1. A copy of the DEEP General Permit shall be submitted to the Council prior to construction.