STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF THE DURHAM	:	PETITION NO. ____
MANUFACTURING COMPANY TO APPROVE	:	
BY DECLARATORY RULING THE	:	
CONSTRUCTION AND OPERATION OF A	:	
SOLAR PHOTOVOLTAIC ELECTRIC	:	
GENERATING FACILITY AT 201 MAIN	:	
STREET, DURHAM, CONNECTICUT	:	MARCH 16, 2018

PETITION FOR A DECLARATORY RULING:
INSTALLATION OF A CUSTOMER-SIDE DISTRIBUTED RESOURCE

I. Introduction

Pursuant to Section 16-50k(a) of the Connecticut General Statutes ("Conn. Gen. Stat.") and Sections 16-50j-38 *et seq.* of the Regulations of Connecticut State Agencies ("R.C.S.A."), Durham Manufacturing Company ("DMC") hereby petitions the Connecticut Siting Council ("Council") to approve, by declaratory ruling, the proposed construction and operation of a 1.42 megawatt ("MW") solar photovoltaic electric generating facility (the "Facility" or "Project") on its property located a Main Street (Connecticut Route 17) and abutting Maiden Lane in Durham Connecticut (the "Property").[1]

Conn. Gen. Stat. Section 16-50k(a) provides that:

> Notwithstanding the provisions of this chapter or title 16a, the council shall, in the exercise of its jurisdiction over the siting of generating facilities, approve by declaratory ruling…(B) the construction or location…of any customer-side distributed resources project…or facility with a capacity of not more than sixty-five megawatts, as long as such project meets air and water quality standards of the Department of Energy and Environmental Protection….

[1] The Property is identified as Map 38, Lot 46 on the Durham Assessor's records and is also known and referred to as 201 Main Street.

As discussed more fully below, DMC respectfully submits that the Facility constitutes a customer side distributed resource and satisfies the criteria of Conn. Gen. Stat. Section 16-50k(a).

II. Petitioner

DMC is an S Corporation, incorporated in the State of Connecticut located at 201 Main Street in Durham, Connecticut (i.e., the Property). DMC was established in 1922.

Correspondence and/or communication regarding this petition should be addressed to:

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A copy of all such correspondence and/or communications should also be sent to the petitioners' attorneys:

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III. Background

DMC has entered into a contract with Pfister Energy to construct and maintain a 1.42 MW solar photovoltaic electric generating facility on the Property. The Property is owned by DMC. On business days or days when operations at DMC are ongoing, all of the power generated by the Facility will be utilized by DMC (i.e., it is a customer-side distributed resource). The Facility will provide power to the grid on weekends or otherwise when DMC is not in operation. A full set of Project plans for the proposed Facility ("Project Plans") are

included as Appendix D to the separately-bound Environmental Assessment ("EA") included with this Petition.[2]

The Facility is consistent with Connecticut's Comprehensive Energy Strategy ("CES"), issued by the Department of Energy and Environmental Protection ("DEEP") on February 8, 2018.[3] Specifically, two of the six top-level goals identified by the CES are to "[g]row and sustain renewable and zero-carbon generation in the state and region" and to "[e]xpand deployment of all cost-effective distributed generation ('behind the meter') in a sustainable manner." CES at 28-45. As a zero-carbon, behind the meter project, the Facility advances both of these goals. Further, as a privately-funded project, the Facility advances these goals in a manner that is cost-effective for Connecticut's taxpayers and ratepayers.

IV. Property Description

The 18-acre Property is located near the center of Durham with frontage on both Main Street (Connecticut Route 17) and Maiden Lane. Project Plans, at EX-1. The Property has been the home of DMC for nearly a century, and DMC's active manufacturing plant is on the western portion of the Property closest to Main Street. The Facility will be constructed on the eastern portion of the Property, which has been intermittently utilized as a seasonal Christmas tree business. The Facility will be constructed in an area abutting (and accessible by) Maiden Lane. *Id.* Because of the size, configuration and historic use of the Property, it has area in both the Main Street Residential (MR) Zone and the Farm Residential (FR) Zone. The Facility will be located within the FR Zone. Project Plans, at OP-1. The Property is surrounded by both residential use and properties owned and utilized by the Region 13 school district. *Id.* There are no municipal boundaries located within 2,500 feet of the Property.

[2] A full-sized set of Project Plans has also been included with the copies of this Petition transmitted to the Council.

[3] Available at: http://www.ct.gov/deep/lib/deep/energy/ces/2018_comprehensive_energy_strategy.pdf.

The wetland areas proximate to the proposed Facility (both on and off the Property) were evaluated by All-Points Technology Corp. ("APT") in conjunction with APT's development of the EA. As discussed in further detail in the EA, there are three wetlands proximate to or present on the Property:

- Wetland 1 is a broad, forested riparian corridor associated with Hersig Brook. Except for a small portion in the southeastern corner of the Property, Wetland 1 is located off-site, primarily east of the eastern boundary of the Property.
- Wetland 2 is a narrow perennial stream system associated with Ball Brook, which bisects the Property on a north/south axis and converges with Wetland 1 south of the Property.
- Wetland 3 is a small, isolated wetland pocket located on the eastern boundary of the Property.

EA, Appendix A; EA, at 4-6. As discussed further below, the Facility has been configured to avoid impacts to these wetlands to the extent practicable.

At present, upland areas of the Property provide only limited habitat value. The Property has been utilized as a seasonal Christmas tree business, with regular rows of evergreen plantings interspersed with routinely mowed grass corridors covering approximately 5.4 acres, and a wooded windrow of approximately one acre in the center of the Christmas tree plantings. *Id.* at 7. The cultivated Christmas tree portion of the Property provides "early open field" habitat type. *Id.* The wetland areas of the Property contain a wetland forest habitat type. *Id.* at 7-8.

V. Project Description

Upon completion, the Facility will occupy an area of approximately 4.72 acres in the eastern portion of the Property. During construction, related improvements (e.g., construction

staging and laydown areas) will also be required and the area of activity will be approximately 6.40 acres (the "Project Area"). *Id.* at 1. In addition, a linear utility connection approximately 900 feet long will be required to connect the solar array to the DMC manufacturing facility, requiring the disturbance of an additional 0.41 acres (the "Utility Corridor"). *Id.* at 1-2. To minimize impacts to Wetland 2 in the center of the Property, construction access to the Project Area will be from Maiden Lane to the north of the Project Area. *Id.* at 4.

DMC intends to install the following components:[4]

- 4194 340W Mission Solar MSE340SO6J photovoltaic modules installed at a tilt angle of 30 degrees;
- (24) SMA Core1 50kW Inverters;
- (1) SMA Tripower 15kW Inverter;
- Two Service Interconnection points via solar breakers on 'Front Service' and 'Rear Service';
- A post driven rack system;
- A utility connection; and
- Security fencing.

Project Plans, at DN-1.

DMC expects construction of the Facility to take approximately three (3) to four (4) months. *See* Construction Schedule at EA, Appendix E.[5] Construction will commence immediately after DMC receives all necessary permits and approvals. The design and construction of the Facility will comply with all applicable National Electrical Safety Code and

[4] Transformers will not be required, as the Service Voltage and Solar Inverter Voltage are both 480VAC.

[5] Construction is expected to take place from 7:00 am to 6:00 pm Monday through Saturday, and 9:00 am to 6:00 pm on Sunday, excluding Federal Holidays. EA, Appendix F.

National Fire Protection Association standards and will be interconnected to the grid consistent with Eversource's requirements.

VI. The Facility Will Comply with the DEEP Air and Water Quality Standards and Will Not Have a Substantial Adverse Effect on the Environment

APT, on behalf of DMC, has completed an exhaustive EA of the Property and has evaluated the potential environmental effects that may occur during and following the development of the Facility. A copy of the EA is separately bound and included with this Petition. Based on the conclusions in the EA, DMC respectfully submits that the Facility will comply with the DEEP's air and water quality standards and will not have a substantial adverse effect on the Property or its surrounding environment, consistent with Conn. Gen. Stat. Section 16-50k(a).

A. Air Quality Standards

Operation of the Facility will not produce emissions of any regulated air pollutants or greenhouse gases. No impacts to air quality are expected, and no DEEP air permit is required for the Facility. EA, at 26.

B. Water Quality Standards and Stormwater

The Facility is unstaffed and does not require the use of potable water or any sanitary facilities in the production of electricity. Any water utilized during construction for dust control will be minimal and have no impact on water quality in the vicinity of the Property. No liquid fuels are associated with the operation of the Facility. *Id.*

The Facility has been configured to avoid placement of any components in flood areas, except for the unavoidable crossing of a flood zone by the Utility Corridor (*see* EA, at Figure 5). The majority of the Project Area is located in Zone X (i.e., an area of minimal flooding) and the Utility Corridor will cross a small area of Zone AE Floodway (i.e., the 100-year floodplain). *Id.*

at 28. The Property is not located in an Aquifer Protection Area ("APA"). *Id.* at 10. Groundwater on the eastern portion of the Site, beneath the Project Area, is classified as "GA".[6] *Id.*

With regard to stormwater, DMC will establish and implement multiple protective measures. Such protective measures include, but are not limited to, the monitoring of established sedimentation and erosion controls, the development of a detailed stormwater management plan and compliance with the filing requirements of the DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewater. *Id.* at 21. After Facility construction, drainage characteristics will largely mimic existing conditions, and shrub plantings will be installed just outside the southwest corner of the Facility perimeter fencing to promote zero increase in runoff during storm events. *Id.* A copy of a Stormwater Management Report ("SWMR") for the Facility is included at Attachment 1, and the Erosion and Sedimentation Control Plan is included in the Project Plans, at EC-1 through EC-3. As demonstrated in the SWMR, there will be no negative stormwater impacts resulting from the development and operation of the Facility.

C. Wetland Impacts

The Project Area has been configured to minimize wetland impacts, and no direct wetland impacts are anticipated relative to the primary facility components. *Id.* at 19. All clearing and grading activities to enable placement of the Facility's primary infrastructure (i.e., solar array, security fencing, access, and associated equipment) will maintain a minimum setback of at least ten feet from the nearest wetland resource areas. *Id.* Given that Wetland 2 bisects the Property, the Utility Corridor is required to cross Wetland 2 (including Ball Brook) in order to

[6] The GA classification indicates groundwater within the area is presumed to be suitable for human consumption without treatment. Groundwater underlying the western portion of the Site is classified by the CTDEEP as "GA, GAA may not meet current standards." The classification indicates that groundwater within the area may not meet the objective of GA/GAA groundwater, which is to be suitable for human consumption without treatment.

convey the power from the Facility to the DMC manufacturing plant. The stream crossing approach is set forth in the Project Plans (at EC-2B) and EA (at 20). Specifically, the trench crossing will be accomplished using coffer dams to temporarily divert flows into a proposed diversion channel located west of the existing stream channel. EA, at 20. These direct temporary wetland impacts account for approximately 288 square feet. *Id.* Spoils from the trenching will be stockpiled onsite to the west of Wetland 2 to be reused in place. *Id.* The stream bottom and banks of Ball Brook along with the adjoining narrow wetlands will be restored upon completion of the underground utility installations. *Id.* Temporary impacts associated with Project construction will be minimized through the robust erosion control measures (including silt fencing and surface stabilization) shown in the Erosion and Sedimentation Control Plan. Project Plans, at EC-1 through EC-3. *See also,* EA, at 20-21.

Due to time of year restrictions, the presence or absence of vernal pools in wetlands proximate to the Project Area could not be confirmed. EA, at 25. In general, the terrestrial habitats impacted by Project construction are open field/cultivated forest types that are characterized by regularly spaced plantings and periodic mowing. *Id.* As such, they constitute suboptimal habitat for vernal pool species. *Id.* Out of an abundance of caution, the Wetland and Vernal Pool Protection Program will be observed during the construction of the Facility. *See* EA, Appendix G.

D. Vegetation and Wildlife

A majority of the Project Area has been cultivated for Christmas tree production. The associated "early open field" habitat typically requires a minimum patch size of approximately 10 acres to support rare bird species specialized to this habitat type. EA, at 22. The Property only contains approximately 5.4 acres of this habitat type, however, or approximately one half of the minimum patch size for habitat specialists. *Id.* While other birds require smaller patch sizes,

the regular cultivation and disturbance associated with the Christmas tree activities result in diminished habitat quality. *Id.*

The Property also includes "edge upland forest" and "wetland forest" habitat types, and the Facility has been configured to avoid impacts to these habitats. A limited amount of selective tree removal will be required in the "edge upland forest" habitat at the periphery of the Project Area, in addition to a narrow windrow that presently exists in the cultivated Christmas tree area. *Id.* at 22-23. Tree clearing adjacent to Wetlands 1 and 2 will only consist of mature trees that would cause shading of the solar arrays, while low growth vegetation and ground cover will remain. *Id.* at 19-20. Habitat enhancement measures will be employed after the fence has been installed around the perimeter of the Facility. Specifically, the areas around the Facility that must be kept clear of mature trees will be mowed on a rotating basis every four to seven years, providing habitat for edge-nesting birds. *Id.* at 24.

E. Rare Species

According to Natural Diversity Database ("NDDB") mapping, the entire Property is located within a cross-hatched area, indicating that threatened or endangered species, species of special concern or critical habitats may exist. EA, at 9. On January 5, 2018, APT submitted a review request to the NDDB with respect to this Project to determine if any of the abovementioned concerns exist at the Site. *Id.* A response from DEEP was received on February 19, 2018 indicating that the State Listed Species of Special Concern slimy sculpin (Cottus cognatus)[7] is associated with Hersig Brook in this area of Durham. *Id.* DEEP indicated that it will review permit applications to determine if the Project could adversely affect the slimy scuplin. *Id.* at 9-10.

[7] The slimy sculpin is a cold-water fish that inhabits rocky riffles of cold streams, rocky areas of lakes, springs, and their effluents.

The Project Area is located approximately 250 feet north of Hersig Brook, and no Project-related impacts are proposed in Wetland 1, which is associated with Hersig Brook. *Id.* at 23. The construction of the Project's Utility Corridor will directly impact a portion of Wetland 2 (associated with Ball Brook, which is a tributary to Hersig Brook, flowing from north to south prior to its convergence). Downstream impacts associated with the construction of the Utility Corridor will be minimized through the implementation of the Project's Erosion and Sedimentation Control Plan. After construction is complete, Ball Brook and Wetland 2 will be restored (*id.* at 20) and overall site stormwater conditions will mimic pre-construction conditions (Attachment 1, at 4). The Project's proposed stormwater control system does not include the use of large stormwater storage basins, mitigating the potential for thermal pollution to either Ball Brook or Hersig Brook. EA, at 23. Secondary thermal gain resulting from the clearing of mature forest over Ball Brook for the Utility Corridor will also be mitigated through post-construction plantings to reestablish scrub/shrub and sapling vegetation. *Id.* Any additional measures recommended by DEEP for the protection of slimy scuplin will be incorporated into the Project's best management practices during construction, as required.

Further, APT determined that one federally listed "threatened" species, the *Northern Long Eared Bat* ("NLEB") may occur in the vicinity of the Property. The identified range of the NLEB encompasses the entire State of Connecticut. To assess the potential impact of the DMC project on the NLEB, APT evaluated the recently established U.S. Fish and Wildlife Service (USFWS) NLEB impact criteria and determined that the facility will not result in an adverse effect on or incidental take of NLEB. EA, at 24; EA, Appendix H.

F. Visibility and Scenic Areas

APT has completed a visual impact assessment for the proposed Facility. The Facility will be screened from Maiden Lane by existing vegetation, new evergreen plantings, and

evergreen plantings reused from Christmas tree operations. *See*, *e.g.*, Project Plans, at SP-1. The Facility will be effectively screened and set back sufficiently from abutting properties and the nearest public roadways. EA, at 29. Intervening vegetation between these adjacent points and the Facility provide adequate and complete visual screening. *Id.* The Facility will, therefore, have minimal aesthetic impact on adjacent uses and/or properties. *Id.*

The portion of Main Street (Connecticut Route 17) fronting the Property is a State-designated scenic road (*id.* at 11), but no direct views of the Facility will be achieved from Main Street (*id.* at 27). Therefore, no State designated scenic areas will be physically or visually impacted by the development of the Facility. *Id.* at 26-27.

G. Historic and Archeological Resources

There are no reported archaeological sites within one-half mile of the Site. *Id.* at 11. No direct views of the Facility will be achieved from locations within the Main Street Historic District or from the four (4) properties listed on the State Register of Historic Places. *Id.* at 27. There will be some partially obstructed views of the Facility through intervening vegetation/landscaping from select locations on the adjacent H. Tucker House property at 63 Maiden Lane. *Id.* at 11. However, this house is not eligible for listing on the National Register of Historic Places. *Id.* Therefore, the Project will not have an effect on historic properties. *Id.* at 27. DMC has not yet received a response from the Connecticut State Historic Preservation Office , but will forward it to the Council when it becomes available. *Id.*; EA, Appendix C.

H. Recreational Resources

The Facility will not impact any existing or proposed recreational resources in the Town of Durham. EA, at 28.

I. Carbon Debt Analysis

A Carbon Debt Analysis is provided as Attachment 2. Construction of the Facility will

require the clearing of approximately 1.45 acres of wooded area.[8] Attachment 2. Using a United States Environmental Protection Agency ("US EPA") conversion factor, the associated "carbon debt" is estimated to be 1.23 metric tons (MT) carbon dioxide (CO_2) per year.[9] *Id.* Over 20 years, the 1.45 acres of wooded area would have sequestered approximately 24.6 MT CO_2. *Id.* The Project is expected to produce approximately 1,833 megawatt hours (MWh) of energy in its first year of operation, which equates to an offset of approximately 1,364 MT CO_2. *Id.* Therefore, it will take approximately 6.6 days for the Facility to offset the amount of CO_2 that would have been sequestered by the 1.45 acre cleared area over 20 years. *Id.*

J. Noise

The only equipment associated with the Facility that generates noise are the fans associated with the inverters, which only operate when the Facility is generating power during the daytime. EA, at 28. According to a Noise Report prepared for the proposed installation, the Facility will comply with all State and local noise standards. EA, Appendix I. Specifically, the highest noise level at an adjacent property is projected to be 45 dBa, well below the 55 dBa threshold in the state noise control regulation (R.C.S.A. § 22a-69-1 *et seq.*). *Id.* Since the inverters do not operate at night, nighttime noise levels will be unchanged from existing conditions. EA, at 28.

K. Traffic

Traffic to the Facility, after the initial construction period, will be minimal. EA, at 18. Unless there is a problem with a particular piece of equipment, DMC anticipates the need for annual maintenance visits by technicians. *Id.* In addition, typical grounds maintenance involves

[8] The Christmas trees are not included in the calculation of forested area to be cleared, since they are intended to be periodically cut.

[9] The conversion factor is 0.85 MT CO_2 per acre of forest cover (US EPA, 2017).

mowing of the area between the solar panels approximately two (2) times during a typical calendar year. *Id.*

L. Decommissioning Plan

DMC has developed a Decommissioning Plan to prepare for the eventual permanent closure of the Facility, which is provided as Attachment 3. The Decommissioning Plan describes the process for removal and disposal or the recycling of all equipment and materials installed within the Project Area and the restoration of the area. *See* Attachment 3.

VII. Notice to the Government Officials and Abutting Landowners

DMC invited all abutting landowners and local town officials to an informational meeting which was held on December 14, 2017. The sample letter to abutters, letters to municipal officials and Certificates of Mailing showing the abutters and officials who were sent this invitation are included in Attachment 4. The meeting was well attended and comments and questions were both thoughtful and overwhelmingly positive. Laura Francis, First Selectman for the Town of Durham, was in attendance and has sent correspondence to the Council with her reaction to the meeting and the Project. A copy of this correspondence is included as Attachment 5. A letter from Robert Francis, the Supervisor of Buildings and Grounds for abutting property owner Regional School District 13, is included as Attachment 6.

Notice of this Petition has been sent by certificate of mailing to municipal, regional and State officials, pursuant to the requirements of Conn. Gen. Stat. Section 16-50l(b). A Certificate of Service, along with the lists of the officials who were sent notice of the Petition, are included in Attachment 7. A Certificate of Service verifying that notice of the Petition was also sent to all abutting landowners in accordance with R.C.S.A. Section 16-50j-40, along with a list of these abutters, is included in Attachment 8.

VIII. Conclusion

For the reasons stated above, DMC respectfully requests that the Council approve the location and construction of the Facility by declaratory ruling.

Respectfully submitted,

Durham Manufacturing Company

By Emilee Mooney Scott

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List of Attachments

1. Stormwater Management Report
2. Carbon Debt Analysis
3. Decommissioning Plan
4. Invitations to an Informational Meeting
5. Letter from Laura Francis, Town of Durham First Selectman
6. Letter from Robert Francis, Supervisor of Buildings and Grounds, Regional School District 13
7. Certification of Service: Government Officials
8. Certification of Service: Abutting Landowners