

# DRAFT

**Petition No. 1472**  
**Dynamic Energy Solutions, LLC**  
**40 Pepes Farm Road, Milford**

**Staff Report**  
**January 21, 2022**

## **Introduction**

On November 24, 2021, the Connecticut Siting Council (Council) received a petition (Petition) from Dynamic Energy Solutions, LLC (DES), as an agent for Stag Industrial Holdings, LLC, for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the construction, operation and maintenance of a 1.5 megawatt alternating current (AC) solar photovoltaic electric generating facility located at 40 Pepes Farm Road, Milford, Connecticut, and associated electrical interconnection (Project).

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40 on or about November 18, 2021, DES notified City of Milford (City) officials, state officials and agencies, the site property owner and the abutting property owners of the proposed project. All certified mail receipts were received.

On November 30, 2021, the Council sent correspondence to DES noting a deficiency in the completeness of the Petition. Specifically, pursuant to RCSA §16-50j-40, the Petition did not indicate notice was sent to the South Central Regional Council of Governments and Senator Richard Blumenthal, Senator Christopher Murphy and Congresswoman Rosa DeLauro. On December 1, 2021, DES submitted correspondence indicating notice was sent to the respective recipients. Accordingly, by letter dated December 6, 2021, the Council rendered the Petition complete.

The Council issued interrogatories to DES on December 28, 2021. On December 30, 2021, DES submitted responses to the Council's interrogatories.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act (UAPA), an administrative agency is required to take an action on a petition for a declaratory ruling within 60 days of receipt. On January 13, 2022, pursuant to CGS §4-176(e), the Council voted to set the date by which to render a decision on the Petition as no later than May 23, 2022, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

## **Municipal Consultation**

On November 29, 2021, the Council sent correspondence to the City stating that the Council has received the Petition and invited the City to contact the Council with any questions or comments by December 24, 2021. No comments were received from the City.

## **State Agency Comments**

On November 29, 2021, the Council sent correspondence requesting comments on the proposed project from the following state agencies by December 24, 2021: Department of Energy & Environmental Protection (DEEP); Department of Agriculture (DOAg); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and

Management (OPM); Department of Economic and Community Development (DECD); Department of Emergency Services and Public Protection (DESPP); Department of Consumer Protection (DCP); Department of Labor (DOL); Department of Administrative Services (DAS); Department of Transportation (DOT); the Connecticut Airport Authority (CAA); and the State Historic Preservation Office (SHPO).

In response to the Council's solicitation, the CEQ submitted comments on December 15, 2021<sup>1</sup> in support of the Project.

No other state agencies provided written comments on the proposed project.

While the Council is obligated to consult with and solicit comments from state agencies by statute, the Council is not required to abide by the comments from state agencies.<sup>2</sup>

### **Public Act 17-218**

Public Act 17-218 requires, "for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland, excluding any such facility that was selected by DEEP in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j, the DOAg represents, in writing, to the Council that such project will not materially affect the status of such land as prime farmland or DEEP represents, in writing, to the Council that such project will not materially affect the status of land as core forest." The proposed facility has a generating capacity of 1.5 MW. Therefore, it is exempt from the provisions of Public Act 17-218.

### **Public Benefit**

The project would be a distributed energy resource facility as defined in CGS § 16-1(a)(49). CGS § 16a-35k establishes the State's energy policy, including the goal to "develop and utilize renewable energy resources, such as solar and wind energy, to the maximum practicable extent." The 2018 Comprehensive Energy Strategy (2018 CES) highlights eight key strategies to guide administrative and legislative action over the next several years. Specifically, Strategy No. 3 is "Grow and sustain renewable and zero-carbon generation in the state and region." Furthermore, on September 3, 2019, Governor Lamont issued Executive Order No. 3, which calls for the complete decarbonization of the electric sector by 2040. The proposed facility will contribute to fulfilling the State's Renewable Portfolio Standard and Global Warming Solutions Act as a zero emission Class I renewable energy source.

The Project was selected in the statewide Shared Clean Energy Facility (SCEF) Program which is a competitive procurement process administered by the state's electric distribution companies to develop utility scale renewable energy. New or incremental Class I renewable generation projects ranging in size from 100 to 4,000 kW (AC) are eligible to bid into the SCEF program for a SCEF Tariff Terms Agreement (SCEF Agreement) with a 20-year term. DES executed an SCEF Agreement with The United Illuminating Company (UI) for the Project's installed capacity.

The Petitioner does not plan to participate in the ISO-NE Forward Capacity Auction.

The proposed facility is not designed to accommodate a battery storage system.

---

<sup>1</sup> [pe1472-sacrcdpi-ceq-20211216.pdf \(ct.gov\)](#)

<sup>2</sup> *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)

### **Proposed Site**

DES proposes to construct the solar facility on the roof of a commercial building located on a 14.5-acre parcel, zoned Light Industrial. The single level building is approximately 30 feet tall and has a roof area of approximately 202,000 square feet (4.6 acres). The rectangular shaped building is currently used as a storage and distribution center for vehicle parts.

The building is located northwest of Pepes Farm Road. A parking area and an access drive are located to the south of the building. Truck loading docks and lawn areas are located on the southeast side of the building, facing Pepes Farm Road.

Land use in the surrounding area is mixed with commercial and industrial to the north and west, and commercial and residential to the south and east. The host parcel abuts the Metro-North rail corridor to the northwest, undeveloped land to the south and north, and a commercial and a residential area to the east, across Pepes Farm Road. The nearest residence to the host property is approximately 560 feet to the east at 37 Ingersol Road.

Pursuant to CGS §16-50p(g), the Council has no authority to compel a parcel owner to sell or lease property, or portions thereof, for the purpose of siting a facility.<sup>3</sup>

### **Proposed Project**

The Project consists of a 1.5 MW AC solar photovoltaic facility comprised of 5,280 panels, rated at 400 Watts, on the roof of the building. The facility would be arranged in five array areas with aisles between, and within, the array areas to access solar facility inverters and existing rooftop infrastructure such as air units and drainage pipes. The panels would have a 10-degree tilt to the southeast and would extend 1.3 feet above the rooftop. Approximately 30 inverters, arranged in groupings of 2 or 4, would also be installed on the roof. The inverters and solar panels would be installed on a ballast mount racking system.

The Project's net capacity factor is estimated to be 23 percent with an estimated annual degradation of approximately 0.54 percent. Energy production estimates include losses due to dust, pollen, and weather events.

A concrete pad to support transformers, switchgear and switches would be installed in a lawn area at the southeast corner of the building. A 12-foot wide, 85-foot long gravel drive would be installed across the lawn area to access the electrical equipment pad. An existing transformer serving the building would also be replaced. Ground disturbance would total 3,000 square feet.

The circuits from the inverters would extend from the roof in a metal conduit down the side of the building wall to ground level where the circuits would extend underground to the electrical equipment pad.

The proposed Project would interconnect to the existing UI electric distribution system (3 phase) located along Pepes Farm Road. The demarcation point of ownership between the Project and UI would be at the UI metering cabinet and pad mounted fused disconnect. From this point UI would install and maintain 4 utility poles to support an overhead connection from the pad to the distribution circuit. The poles would extend through a lawn area adjacent to the existing driveway. A Distribution System Impact Study for the project has been completed by UI.

---

<sup>3</sup> *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007); CGS §16-50p(g) (2019).

Construction equipment and material would be stored on-site in lockable shipping containers in an existing parking lot that would serve as a staging area. The solar modules, racking and installation equipment would be lifted to the roof via a forklift. The ballast rack system would be installed first, followed by the modules/inverters and associated wiring.

The Project's net capacity factor is estimated to be 20 percent with an estimated annual degradation of approximately 0.5 to 1.0 percent. Energy production estimates include losses due to dust, pollen, and weather events as well as electrical infrastructure degradation.

Construction is anticipated to occur over a 3 to 4 month period. Typical construction hours are Monday – Friday, 7:00 AM to 5:00 PM.

The estimated cost of the project is approximately \$3.1 million. Costs to elevate the ground equipment an additional foot above mean sea level would range from \$8,000 to \$12,000.

### **Public Safety**

The proposed project would comply with the National Electrical Code, the National Electrical Safety Code and any applicable National Fire Protection Association codes and standards. The Project would be reviewed by the City Fire Department. DES would discuss emergency response procedures with local emergency responders, and offer an on-site meeting for local emergency responders when project construction is complete.

The proposed facility would have a protection system to shut down or isolate the facility in the event of a fault or abnormal electrical disturbance through a data monitoring system. Inverters would be able to disconnect independently if there was a failure or if maintenance was required in a section of the facility.

A diagram of all system disconnects would be provided to emergency responders. The main disconnect switch is located at the ground mounted equipment area that would be able to immediately disconnect and shutdown the facility. The fire department would be able to access the roof using their ladder equipment. A rooftop solar array fire can be extinguished using a water spray at a distance determined by the fire department.

The ballast racking system was designed in accordance with the Connecticut State Building Code and using a wind speed of 123 miles per hour. A structural analysis of the building determined the roof structure can support the proposed installation without modifications.

Construction would not impact the operations of the abutting Metro-North Railroad to the northwest of the building. Construction access would occur from the southeast side of the building.

A Phase 1 Environmental Assessment was conducted at the site that determined the likely absence of subsurface containments in the ground equipment/driveway construction areas.

The proposed project is approximately 7.5 miles from Tweed-New Haven Airport (northeast) and Bridgeport Municipal Airport (southwest). Per Federal Aviation Administration guidelines, there would be no impact on air navigation and a glare analysis is not required.

Due to the project's location in an industrial area, operational noise levels at the property lines would be in compliance with DEEP Noise Control Standards. The inverters are the main source of noise when the solar facility is operational, emitting a noise level of 60 dBA at 3.3 feet. Due to the distance of the location on

the rooftop and property lines to nearby residences, noise from the inverters are not expected to exceed regulatory criteria during daytime operation. The inverters would not operate at night.

Construction-related noise is exempt from DEEP Noise Control Standards.

The proposed ground equipment is located outside of a Federal Emergency Management Agency designated 100-year flood zone. The ground equipment is located on the highest ground elevation on the parcel.

## **Environmental Effects and Mitigation Measures**

### *Historic and Recreational Resources*

There are no historic districts or properties near the site. No public parks or other publicly accessible recreation resources are located adjacent to the site.

### *Visibility*

The proposed solar array is located on a 30-foot high roof and extends above the rooftop by 1.3 feet. Visibility from Pepes Farm Road or from area residences is not expected. The host property has a row of evergreens along Pepes Farm Road that block views of the building except for where the driveway exits. Area residences are also buffered by mature forest land. No trees would be removed.

No scenic roads are in the area of the site.

### *Air Quality*

The Project would not produce air or water emissions as a result of operation. The solar project would not produce air emissions of regulated air pollutants or greenhouse gases during operation.

### *Water Quality*

The site parcel is not within a DEEP-designated Aquifer Protection Area or a mapped Public Drinking Supply Watershed. Groundwater in the area is not suitable for human consumption.

There are no wetlands or watercourses on the site. Work would occur in paved and lawn areas.

The project would not require a DEEP Stormwater Permit since the area of ground disturbance is less than one acre. The proposed facility would not alter the existing rooftop drainage system. The rooftop has existing drains that capture water which discharges to a public sewer system.

The host parcel is within the DEEP-designated Coastal Zone Boundary. The project would not affect coastal resources because it is on a developed industrial property and would not directly impact tidal wetlands, or tidal, coastal, or navigable waters or identified coastal resources.

### *Wildlife*

The host parcel is not within a DEEP Natural Diversity Database Area or within a DEEP-designated critical habitat area. Ground disturbance would be limited to a lawn area.

### **Operation and Maintenance**

The operation of the solar array system would be monitored remotely on a daily basis.

The proposed facility would be inspected on a bi-annual basis, including all rooftop and ground-mount infrastructure.

Snow removal and module cleaning is not expected.

Damage from shorebirds dropping shells on the solar panels is not expected as the glass covering the solar panels is designed to withstand impacts. If damaged, modules can be quickly replaced.

### **Decommissioning**

The facility would have an anticipated service life of 25 to 30 years. Decommissioning would include the removal of all rooftop and ground-mount infrastructure. Minor grading and seeding may be required after removal of the electrical pad and underground conduit.

Decommissioning is expected to occur over a 6 week timeframe.

The manufacturer of the selected solar panels has conducted TCLP testing on the panels. The TCLP test indicates the panels would not be characterized as hazardous waste at the time of disposal, under current testing criteria.

### **Conclusion**

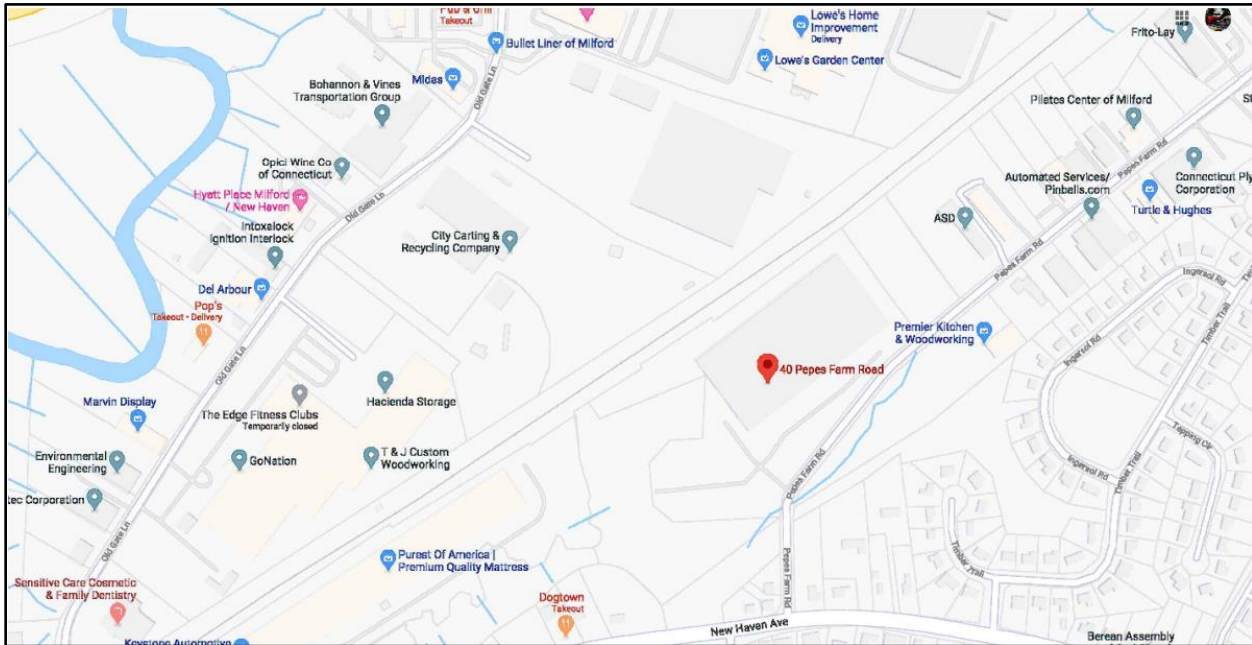
The project is a distributed energy resource with a capacity of not more than sixty-five megawatts that was selected in the state's SCEF Program, meets air and water quality standards of DEEP, and would not have a substantial adverse environmental effect. The proposed project will not produce air emissions, will not utilize water to produce electricity, was designed to minimize environmental impacts, and furthers the State's energy policy by developing and utilizing renewable energy resources and distributed energy resources.

### **Recommendations**

If approved, staff recommends the following conditions:

1. Approval of any project changes be delegated to Council staff;
2. Submit the final structural design for the ballast racking system stamped by a Professional Engineer duly licensed in the State of Connecticut prior to installation.

### Site Location





## Site Plan

