PETITION NO. 1310A - Quinebaug Solar, 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 50 megawatt AC solar photovoltaic electric generating facility on approximately 561 acres comprised of 29 separate and abutting privately-owned parcels located generally north of Wauregan Road in Canterbury and south of Rukstela Road and Allen Hill Road in Brooklyn, Connecticut. Reopening of this petition based on changed conditions pursuant to Connecticut General Statutes §4-181a(b).	}	Connecticut Siting Council April 23, 2020

Opinion

Introduction

On June 15, 2017, Quinebaug Solar, LLC (QS or Petitioner) submitted a petition (Petition) to the Connecticut Siting Council (Council), pursuant to Connecticut General Statutes (CGS) §16-50k and §4-176, for a declaratory ruling for the construction, maintenance, and operation of a 50 megawatt (MW) alternating current (AC) solar photovoltaic electric generating facility on approximately 561 acres comprised of 29 separate and abutting privately-owned parcels located generally north of Wauregan Road in Canterbury, Connecticut and south of Rukstela Road and Allen Hill Road in Brooklyn, Connecticut.

In addition to the Petitioner, one party, Troy & Meghan Sposato (collectively "the Sposatos") participated in the original Petition 1310 proceeding.

On December 7, 2017, the Council voted to deny without prejudice the petition for a declaratory ruling to QS for the 50 MW AC solar facility because the Council determined that the project would have a substantial adverse environmental effect and would not comply with the Department of Energy and Environmental Protection (DEEP) water quality standards due to deficiencies in the environmental surveys and stormwater plans.

Jurisdiction

As it applies to this petition, CGS §16-50k[1] states in relevant part, "…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 grid-side distributed resources project… 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 and the Council does not find a substantial adverse environmental effect…" The project is a "grid-side distributed resources" facility, as defined in CGS §16-1(a)(37), and as originally proposed, it had a capacity of approximately 50 MW.

On November 12, 2015, pursuant to Section 1(c) of PA 15-107 and Sections 6 and 7 of PA 13-303, DEEP issued notice for a RFP, in coordination with Rhode Island and Massachusetts, for Class I renewable energy sources (Tri-State RFP). Project selection occurred on October 25, 2016. On June 27, 2017, DEEP issued its final determination in the RFP and selected 9 out of 31 proposed projects to enter into long-term power purchase agreements with the electrical distribution companies for a combination of energy and environmental attributes. Of those projects selected, one was the approximately 49 MW Quinebaug Solar

[1] The project was selected by DEEP in a solicitation before July 1, 2017; thus, the project is expressly exempt from the requirement set forth in CGS §16-50k(a) regarding written representation from DEEP that the project will not materially affect core forest or written representation from DOAg that the project will not materially affect prime farmland.

Project in Brooklyn and Canterbury. QS entered into power purchase agreements (PPAs) with the following Connecticut utilities: The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) and The United Illuminating Company (UI) for the sale of electricity and renewable energy credits.

Changed Conditions

On November 12, 2019, pursuant to CGS §4-181a(b), QS filed a Motion to Reopen and Modify (Motion to Reopen) the Council's decision to deny without prejudice the petition for a declaratory ruling based on changed conditions. In its Motion to Reopen, QS noted several changed conditions including, but not limited to, the following:

a) Significant modification of the project layout based on the results of environmental surveys, current best development practices, and guidance from the Council's December 8, 2017 decision;
b) Reduction of the development area of the project from 270 acres to 227 acres;
c) Modifications to wetland and watercourse buffers and setbacks, a herpetofauna protection area, and vernal pool directional buffers;
d) Utilization of an existing network of roads already impacted by human activities and avoidance of tree clearing in areas that were previously proposed to be cleared;
e) Wetland buffers at a minimum of 100-feet, except in the vicinity of existing gravel roads, or in areas that have been heavily impacted by agricultural activities;
f) Sediment and erosion control plan to protect natural resources; and
g) Stormwater management plan with detailed construction sequencing that would be synchronized with the stormwater control phasing, to minimize the movement of soil to protect water quality.

On November 13, 2019, the Council issued a memorandum to the service list for the original Petition 1310 proceeding requesting comments or statements of position in writing with respect to whether the Motion to Reopen should be granted or denied and whether a public hearing should be held on this request by November 27, 2019. No comments were received. At a public meeting held on December 5, 2019, the Council voted to grant QS' Motion to Reopen and also voted to schedule a public hearing.

On December 23, 2019, Eversource filed a motion for party status in this proceeding because, as part of QS' electrical interconnection, Eversource would design, construct, own and maintain a new 115-kV switching station in Canterbury, connect the switching station to existing transmission in Canterbury and upgrade the transmission system via a transmission line separation project in the City of Norwich. On January 2, 2020, the Council granted party status to Eversource.

On January 14, 2020, the Council held a field review, evidentiary hearing session, and a public comment session in the Town of Brooklyn. On February 4, 2020, the Council held a continued evidentiary hearing session in New Britain.

Public Benefit

Pursuant to CGS §16-50p, a public benefit exists when a facility is necessary for the reliability of the electric power supply of the state or for the development of a competitive market for electricity. PA 05-1, An Act Concerning Energy Independence, portions of which were codified in CGS §16-50k, established a rebuttable presumption that there is a public benefit for electric generating facilities selected in RFPs. This project was selected in the Tri State RFP.

QS received Qualified Summer Capacity in the amount of 24.9 MW to participate in Forward Capacity Auction (FCA) 14 which took place on February 3, 2020. However, the Council notes that the auction was held the day before the Council's final evidentiary hearing on February 4, 2020. QS testified at the February 4, 2020 hearing that it believes it cleared FCA 14 at roughly 11 MW, subject to final results to be released by ISO-NE.

Subsequent to the Council's closing of the evidentiary record at the close of the February 4, 2020 hearing, ISO-NE submitted its FCA 14 results to the Federal Energy Regulatory Commission (FERC) on or about February 18, 2020. Per ISO-NE's FERC filing, the Council notes that QS did in fact clear FCA #14 at 11.07 MW, consistent with QS' February 4, 2020 testimony.

Proposed Project

The proposed project consists of the installation of approximately 179,128 solar panels at approximately 410 Watts each and associated ground equipment and electrical interconnection on an approximately 599 acre site that straddles the Brooklyn/Canterbury Town Line. The subject property is comprised of 30 separate and abutting parcels located generally north of Wauregan Road in Canterbury and south of Rukstela Road and Allen Hill Road in Brooklyn.

The proposed site includes gently sloping hills, large level areas, overgrown former pasture lands, mixed second-growth woodlands, active gravel mines, and agricultural fields.

Land uses to the south include gravel mining, residential development, forested undeveloped land, and agriculture. The Quinebaug River and the DEEP Quinebaug Valley Trout Hatchery are located to the southeast. Immediately to the east of the proposed site is undeveloped forested land. Farther to the east along Christian Hill and Maynard Road, the current land use is residential. Land uses to the north include agricultural land, forested undeveloped land, and single-family residential uses. Land uses to the west include gravel mining (to the northwest), forested undeveloped land, and agriculture.

The project, including the solar field, equipment pads, and access roads, would be located on approximately 227 acres of development area, which is about 15.9 percent less in area than the original project. While significantly reducing the development area, QS was still able to achieve a total AC power output (or nameplate rating) of 49.36 MW.

The proposed solar panels would be installed in linear arrays on racking systems facing the south and at an angle of about 18 degrees above the horizontal. The average aisle width between the solar panel racking systems would be about nine feet. This spacing would minimize row-to-row shading and allow for topography and maintenance access. Associated project equipment includes approximately 24 inverter/transformer pairs on gravel pads.

The solar field would be enclosed by a 6-foot high chain link fence with barbed wire on top. A wildlife gap of three or six inches would be included at the bottom of the fence. The three-inch gap would be used in publicly accessible areas to accommodate small animals while being limited in size for security purposes. In areas farther away from public access roads, QS would utilize a six-inch gap.

Access to the site during construction and operations would be from Wauregan Road, Canterbury; Rukstela Road, Brooklyn; and Liepis Road, Canterbury. A series of gravel access roads would be constructed to provide access to the solar arrays, substation and transformer/inverter pairs. The proposed 12-foot wide access roads would total 3.3 miles in length. QS intends to utilize existing access wherever feasible.

Electrical Interconnection

The Quinebaug Collector Substation (QCS) would be installed on the subject property south of Wauregan Road and directly west of Eversource's 115-kV electric transmission right-of-way (ROW). QCS would receive the project's output from the 34.5-kV collector lines (from the transformer/inverter pairs) and utilize the generator step up (GSU) transformer to boost the voltage to 115-kV.

The 115-kV output of QCS would connect to Canterbury Switching Station (CSS) that would be constructed, operated and owned by Eversource. The CSS would be located directly south of the QCS. The point of change in ownership from QS to Eversource would be where the conductor leaves the structure at QCS to connect to CSS.

The existing Eversource transmission line ROW contains a single row of double-circuit 115-kV structures. Eversource would connect CSS to one of the existing transmission lines using a loop-through configuration. To accommodate this interconnection with the electric transmission system, Eversource would install two approximately 95-foot tall single-circuit weathering steel dead-end structures (Tap Structures) in the ROW.

ISO-NE's System Impact Study (SIS) concluded that the project, along with identified network upgrades, would not have an adverse effect on ISO-NE's transmission system. QS entered into a large generator interconnection agreement with ISO-NE and Eversource on February 4, 2019.

In the City of Norwich, between Bean Hill Substation and Wawecus Junction, Eversource has an existing ROW with double-circuit structures that currently support the 115-kV #1000 Line and #1080 Line. As part of the ISO-NE SIS, it was determined that connection to the Eversource transmission system would result in the potential for an unacceptable risk of thermal overload in the event of a simultaneous interruption of both the #1000 and #1080 circuits. Eversource's proposed line separation would mitigate the possibility of thermal overloads on the transmission system.

Project Alternatives

QS investigated alternative site parcels within Connecticut that were greater than 50 acres in size and located within one mile of existing electrical transmission infrastructure. QS also investigated brownfield sites, but such sites are typically not large enough to host projects of this size, and they are often not found in as close proximity to electrical infrastructure as the proposed site. Additionally, the proposed site is the only site QS was able to secure that had both willing landowners and close proximity to existing electrical infrastructure.

Public Safety

The proposed project would comply with the National Electrical Code (NEC), the National Electrical Safety Code (NESC), and any applicable National Fire Protection Association codes and standards. The project would be remotely monitored and feature remote shutdown capabilities. The solar facility would have a protection system to shut the plant down in the event of internal or external disturbances (e.g. faults) as well as during power outage events.

Prior to operation, QS would meet with first responders from the Towns of Brooklyn and Canterbury to provide an orientation to the project and information regarding response to emergencies at the project site. All disconnect switches would be clearly marked for use in an emergency. Adequate access for fire and emergency service equipment would be provided via the proposed access roads.

All work for CSS would be designed, constructed and operated in accordance with sound engineering and utility practices, Eversource's standards, and the NESC. Eversource also works with emergency response personnel on training for electrical safety on an ongoing basis throughout its service area.

The solar modules and racking system would be designed to meet the State Building Code for wind and snow loading.

Decommissioning of the project at the end of its useful life would include solar facility infrastructure removal plans and site restoration plans.

The nearest federally-obligated airport is Green Airport in Warwick, Rhode Island, located approximately 25 miles to the east of the proposed facility. The Federal Aviation Administration (FAA) issued Determinations of No Hazard to Air Navigation (No Hazard Determinations) for the proposed project No marking or lighting would be required for aviation safety. QS has confirmed that a glint/glare analysis is not required.

The sources of noise for the proposed project would be the proposed inverters at the solar facility site and the GSU transformer to be located at the QCS. A noise analysis was performed based on these sources and determined that the worst-case noise level would comply with the DEEP Noise Control Standards.

Noise resulting from proposed project construction is exempt from the DEEP Noise Control Standards. The Council will require that QS' final construction hours and days of the week be included in the D&M Plan. Eversource's normal construction hours would be from 7:00 a.m. to 7:00 p.m., Monday through Saturday. Sunday work hours may be necessary if delays occur due to inclement weather and/or outage constraints.

EMF

Along the property boundaries at the CSS and QCS site, the primary sources of electric and magnetic fields (EMF) would be the Eversource transmission lines and any distribution lines. The contributions to such EMFs from QCS would be negligible. The EMF in the vicinity of the proposed CSS would increase in the area beneath where the lines enter and interconnect to the station, which is on the west side of the existing transmission line corridor and the east side of CSS. Away from the point of interconnection, the changes to the EMFs would be negligible.

Scientific evidence indicates that exposure to electric fields, beyond levels traditionally established for safety, does not cause adverse health effects, and as safety concerns for electric fields are sufficiently addressed by adherence to the NESC, as amended, health concerns regarding EMF focus on magnetic fields (MF) rather than electric fields.

Thus, for the proposed Eversource transmission upgrades in Norwich, the maximum MF levels in the ROW (under average annual load conditions) would decrease from a pre-construction maximum of 78.4 mG to a post-construction maximum of approximately 53.9 mG. The Council notes that this would be below the International Commission on Non-Ionizing Radiation Protection maximum exposure limit of 2,000 mG.

Environmental

Historic and Archaeological Resources

The nearest historic resource listed on the National Register of Historic Places (NRHP) is the Wauregan Historic District (WHD) located approximately 0.5-mile east of the proposed project. The project would not directly impact the WHD due to the distance and intervening terrain.

A Phase 1A Cultural Resources Assessment Survey Report (Phase 1A Report) was prepared for the proposed project. It concluded that approximately 300 acres possess a moderate to high sensitivity for producing archaeological resources. Upon review of the Phase 1A Report, SHPO noted that no properties listed on the NRHP have been documented within or immediately proximate to the project. However, SHPO noted that several archeological sites have been recorded along the edges of the project area such as a historic cemetery, agricultural complex (e.g. Mowrey House) and residential building (i.e. Butts/Cady/Harris House).

A Phase 1B survey concluded that proposed construction can occur in the vicinity of the former Butts/Cady/Harris House, and a 50-foot avoidance buffer should be utilized to avoid impacts in the vicinity of the Mowrey Farmstead.

On January 9, 2020, SHPO sent QS correspondence that affirmed and clarified its previous recommendations during the Phase 1A investigations. QS plans to follow the protocol that SHPO outlined in the letter. QS also consulted with SHPO with respect to small breaches of existing stone walls that would be needed for truck traffic and project construction, and SHPO concurs such plans. QS has also been in contact with local Native American tribes and would continue to reach out to them regarding artifacts that may have been found, as well as archeological survey work.

With respect to the Norwich portion of the project, a Phase 1A/1B Survey was conducted of Eversource's transmission modification work area, and no significant artifacts or cultural resources locations were found. No additional survey or investigation was recommended.

Visibility

QS proposes to plant vegetative screening to mitigate potential visual impacts along Wauregan Road (in the vicinity of Liepis Road), along Liepis Road in the southeastern portion of the project area, and along portions of Allen Hill Road and Rukstela Road in the northern portion of the project area. QS would utilize variable planting arrangements to replicate natural vegetation spacing patterns and to blend in with the natural character of the landscape. The tallest proposed plantings would be evergreen trees approximately six to seven feet tall. Additionally, no direct or sky-reflected glare is anticipated from the solar field. QS' proposed project would not have a substantial adverse visual impact on residences due to existing and/or proposed vegetative screening as well as project site topography.

QS' proposed project would not result in a direct impact to any identified resources within the Last Green Valley National Heritage Area (LGVNHA) including Blackwell Brook Trail, located about 155 feet from the project's limits of work. The project would maintain a natural vegetation buffer, and thus no visual impacts are anticipated. Additionally, Eversource's proposed work in Canterbury and Norwich would not impact the LGVNHA.

The nearest recreational area to the proposed solar project is the Quinebaug River Wildlife Management Area (QRWMA). Existing topography and existing and proposed vegetative screening would prevent significant viewshed impacts to this recreational open space area.

Site lighting is not proposed for the project. Temporary lighting would be used at the staging area during construction. Lighting at QCS would be consistent with NEC requirements. Eversource would install lighting at the CSS for nighttime work such as for maintenance or electrical switching operations.

The proposed Tap Structures in Canterbury are 95 feet in height. These structures would be comparable in height to the existing 94-foot tall Structure No. 7259 that currently supports both existing transmission lines.

In Norwich, Eversource's existing double-circuit electric transmission structures to be replaced range in height from 74.5 feet to 92.5 feet tall. The proposed single-circuit monopoles would range between 84 feet and 93.5 feet tall. In general, year-round and seasonal visibility of the proposed monopoles in Norwich would be consistent with existing conditions, and there would be no substantive increase in visibility to the surrounding area.

Within QCS, the static mast would be 70 feet tall. Within CSS, the terminal structures would be about 55 feet tall. The introduction of CSS and associated tap structures would not be expected to result in a significant visual effect on the surrounding area as they would be set back approximately 1,000 feet from Wauregan Road.

The proposed solar project also utilizes low-profile components to significantly reduce the potential visual impact of the project. The transformer/inverter pairs would not be expected to exceed 10 feet in height. The tops of the solar panels would reach a height of approximately six feet, which is comparable to the proposed fence height.

Thus, the Council believes that the project's design features, including, but not limited to, proposed vegetative screening as well as the existing site features would reduce any visual impacts on surrounding neighbors and recreational areas.

Agriculture and Soils

One parcel in Brooklyn is partially classified as open space under the Public Act 490 Program.

Of the 277 acres of project disturbance, about 3 acres are categorically identified as prime/state important/local important farmland soils.

To reduce the potential impacts to agricultural soils, QS has included a Farmland Soil Mitigation Plan (FSMP) to assure that their agricultural value is preserved during the construction, operation and decommissioning of the proposed solar project.

Although applicable only to electric transmission line ROWs, CGS §16-50hh permits the Council to consider post-construction site restoration or revegetation that includes the establishment of model pollinator habitat. As a visual buffer in certain locations, QS proposes to install tiered landscaping that would contain "pollinator-friendly" plantings. The Council will require that the final landscape planting plan (including pollinator-friendly species) be included in the D&M Plan.

Wildlife

In an October 7, 2016 preliminary Natural Diversity Database (NDDB) assessment letter to QS, DEEP identified known extant populations of 12 state-listed species that occur within or near the boundaries of the proposed site including eastern pearlshell, low frostweed, Alleghany plum, blue-spotted salamander, banded sunfish, eastern hognose snake, red bat, hoary bat, purple martin, eastern ribbon snake, brown thrasher, and eastern spadefoot. The proposed transmission line separation area in Norwich is not located within a NDDB area.

The low frostweed, Alleghany plum, banded sunfish, red bat, hoary bat, purple martin, eastern ribbon snake, and brown thrasher would not be expected to occur at the proposed site or be impacted by the proposed project.

QS completed habitat and/or field surveys of the project area for state-listed species referenced in the NDDB letter, including an eastern spadefoot field survey, a bat acoustical survey, and a herpetological survey. QS identified protection measures for the species in a Herpetofauna Avoidance and Mitigation Plan (HAMP) that would be implemented to protect state-listed amphibians and reptiles.

While the blue-spotted salamander (pure diploid), a state-listed Endangered Species, is unlikely to occur at the proposed site, the HAMP would be protective of the species because of its "no disturbance" buffer. These buffers would be maintained during the construction and operation of the project and would provide for conservation of potential habitat for this species. Additionally, a herpetofauna protection area on the western side of the project would leave a highly productive vernal pool intact and connected to Blackwell Brook.

The eastern hognose snake, a state-listed Species of Special Concern, was not found at the project site during field surveys. As a precaution, during the construction phase of the project, exclusion fencing and barriers would be used to keep the eastern hognose snake outside of construction areas. Additional avoidance and mitigation for herpetofauna are included in the HAMP.

QS performed a bat acoustic survey in 2016. The northern long-eared bat (NLEB), a federally-listed threatened species was not found at the site, but the little brown bat and the tri-colored (both state-listed Endangered Species) were identified during the survey. For the protection of bat species at the Brooklyn/Canterbury site, tree clearing would be limited to the period between October 1 and March 31 to avoid potential impacts to bat roosting.

The transmission line work in Norwich is not located near maternity roost trees and would not be located within 0.25 mile of a known NLEB hibernaculum. The nearest NLEB resource is located in North Branford, approximately 35 miles to the southwest.

Recorded data on eastern spadefoot occurrences in eastern Connecticut coincide with Hinckley soils, and QS notes that 86 acres of the study area for this project are Hinckley soils. Accordingly, surveys were conducted during June through September 2018 to detect the presence of the eastern spadefoot, a state-listed Endangered Species. Such survey efforts resulted in the detection of three individual eastern spadefoots.

During the 2018 vernal pool survey and general herpetological inventory, QS identified two potential eastern spadefoot breeding pools known as Pool A and Pool B. Further survey efforts in 2019 identified a third breeding pool known as Pool C. The results of the 2019 eastern spadefoot surveys suggest that the species did not utilize any of the potential breeding pools for a second consecutive year. However, eastern

spadefoots do not breed on a rhythmic, annual cycle and thus can forgo breeding for several consecutive years.

As a precaution, QS' HAMP contains three species-specific mitigation actions for the eastern spadefoot toad: construction phasing; post-construction population monitoring; and monitoring and protecting potential breeding pools.

On March 13, 2020, subsequent to the close of the evidentiary record, QS submitted the final DEEP NDDB determination letter. In the Final NDDB Determination Letter, DEEP identified the American kestrel, a state-listed Species of Special Concern; the eastern pearlshell, a state-listed Species of Special Concern; and the eastern spadefoot as species that have been documented within the vicinity of the proposed project area.

DEEP notes that it concurs with QS' protective measures for the American kestrel which include, but are not limited to, winter tree clearing, construction phase environmental monitoring, on-site environmental training for contractors, and minimizing soil disturbance and establishing meadow habitat following construction.

DEEP also notes that it concurs with QS' protective measures for the eastern pearlshell which include, but are not limited to, "no disturbance" buffer (with erosion controls) around wetlands and watercourses, erosion controls along gravel access roads, a herpetofauna avoidance area immediately up slope from Cold Spring Brook and Blackwell Brook, and other measures.

DEEP also outlined eastern spadefoot mitigation measures including, but not limited to, an approximately 40-acre herpetofauna protection area, wetland and watercourse buffers, seasonal restriction on tree clearing, exclusion fencing, permanent signage around Pool C, and a three-year monitoring plan.

The Council will require submission of final plans to comply with the Final NDDB Determination Letter in the D&M Plan.

Air Quality

During operation, the proposed project would not produce air emissions of regulated air pollutants or greenhouse gases. Thus, no air permit would be required. The proposed project would meet DEEP air quality standards. Given the loss of carbon dioxide sequestration over the estimated 30-year life of the facility due to tree clearing and the carbon dioxide emitted from the manufacture of the solar equipment versus the net carbon dioxide emissions reduction resulting from the solar facility eliminating the need for equivalent natural gas-fueled conventional generation, the "carbon debt payback period" would be approximately two years.

Water Quality

Wetlands and Watercourses

The Inland Wetland and Watercourses Act (IWWA) strikes a balance between economic activities and wetlands preservation. The impact of a proposed activity on the wetlands and watercourses that may come from outside the physical boundaries of the wetlands or watercourses is a major consideration. Defined upland review areas, such as 100 feet, provide a trigger for reviewing whether a regulated activity is likely to affect wetlands and watercourses. Under CGS §22a-41(d), regulatory agencies shall not deny or condition an application for a regulated activity in an area outside wetlands or watercourses on the basis of

an impact or effect on aquatic, plant, or animal life *unless such activity will likely impact or affect the physical characteristics of such wetlands or watercourses.*

A total of 30 wetlands (totaling 70 acres) and 10 watercourses are identified within the project's 516 acre study area. QS applied a standard 100-foot "no disturbance" upland buffer around the majority of (higher quality) wetlands and watercourses. Of the 30 wetlands in the study area, 22 would have the 100-foot buffers. Wetlands that are proposed to maintain a minimum of 50-foot buffers have the greatest amount of existing disturbance occurring in fields that are regularly used for growing corn, soybeans, and hay, or they are bisected by an existing road.

No wetlands or watercourses would be directly impacted by the proposed project. No clearing would occur in wetlands or watercourses. Short term, temporary impacts to water resources from construction activities would be avoided or minimized with specific erosion and sedimentation controls that would be installed and maintained in accordance with the 2002 E&S Guidelines. Water resource buffers as noted in the HAMP would be maintained during construction and operation of the project.

At Eversource's Norwich site, no wetlands or watercourses were identified within the proposed work pad areas or the majority of the proposed access road route.

Vernal Pools

Vernal pool surveys were initially conducted during the spring of 2016, and eight vernal pools were identified within the study area. In the spring of 2018, another independent vernal pool assessment was conducted. During the second assessment, no additional vernal pools were identified beyond the eight known pools previously identified. In spring of 2019, one additional vernal pool known as Vernal Pool No. 9 (VP9) was observed on the subject property north of Wauregan Road and west of the existing access drive; however, VP9 is not located in an area that is proposed for development.

No vernal pools are located within or proximate to the Eversource Norwich project work area.

The proposed project development would extend into the 100-foot to 750-foot Critical Terrestrial Habitats (CTH) of all eight vernal pools. VP1 through VP8 each have a pre-construction percent CTH development area of less than 25 percent. Post-construction, VP4 through VP8 would each have a percent CTH development area of greater than 25 percent.

QS proposes vernal pool best management practices (VP BMPs) that include, but are not limited to, a 100-foot buffer around all vernal pools, a directional buffer around the more productive pools, and a herpetofauna protection area. QS' VP BMPs are consistent with the U.S. Army Corps of Engineers New England District Vernal Pool BMPs.

Stormwater

Pursuant to CGS §22a-430b, DEEP retains final jurisdiction over stormwater management. QS and Eversource would register for DEEP General Permits.

QS would utilize a continuous clearing, grubbing and stabilization process for up to 10-acre areas at a time. While the up to 10-acre areas is larger than the (up to) five acre areas in the original Petition 1310 project, QS has adjusted its projected timeframe to complete the clearing to stabilization process and determined that it would be about two to four days for a given area.

The project has been designed to comply with the 2004 Stormwater Manual and the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control*. QS' stormwater design has also been developed in consultation with DEEP staff and in conformance with the recommendations from DEEP outlined in "Stormwater Management at Solar Farm Construction Projects" dated September 8, 2017 (2017 DEEP Stormwater Recommendations). In January 2020, the DEEP Stormwater Program issued new guidance for solar farm developers concerning effective management of runoff during the design, construction and operation of solar facilities.[2]

Stormwater would fall onto the solar modules and flow off the module edges onto the surface and flow along existing natural flow paths. The only solar modules that would be considered impervious would be the most up-gradient modules located in each subcatchment area. For stormwater analysis purposes, the remaining solar modules within the limits of work would be equivalent to non-grazed meadow.

In addition to regular stormwater controls, the project would protect water quality of Blackwell Brook and Cold Spring Brook as they provide habitat for a variety of species, in particular, mussels. This would include regular inspections of stormwater controls, biological monitoring, training of construction and operations personnel, and documentation and reporting of observations.

Conclusion

Based on the record in this proceeding, the Council finds that there would not be a substantial adverse environmental effect associated with the construction, maintenance and operation of an approximately 49.36 MW solar photovoltaic electric generating facility on approximately 599-acres and associated electrical interconnection via Eversource's Canterbury Switching Station near Wauregan Road in Canterbury and Rukstela Road and Allen Hill Road in Brooklyn and transmission upgrades in the City of Norwich.

The proposed project is a grid-side distributed resources project with a capacity of less than 65 MW under CGS §16-50k, it was selected through a Tri-State RFP under CGS §16a-3f, it is consistent with the state's energy policy under CGS §16a-35k, and the proposed project would meet all applicable U.S. Environmental Protection Agency and DEEP Air and Water Quality Standards. Therefore, the Council will issue a declaratory ruling for the proposed project.

[2] This new guidance neither conflicts with nor supplants the 2017 DEEP Stormwater Recommendations.