



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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www.ct.gov/csc

June 7, 2019

TO: Parties & Intervenors

FROM: Melanie Bachman, Executive Director *MAB*

RE: **PETITION NO. 1312** - Candlewood Solar LLC Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 20 megawatt AC (26.5 megawatt DC) solar photovoltaic electric generating facility located on a 163 acre parcel at 197 Candlewood Mountain Road and associated electrical interconnection to Eversource Energy's Rocky River Substation on Kent Road in New Milford, Connecticut. **Court-ordered remand regarding visibility.**

On March 5, 2019, the Connecticut Superior Court (Court) issued an order remanding the administrative appeals filed by Rescue Candlewood Mountain and Carl M. Dunham, Jr. in the above-referenced matter to the Connecticut Siting Council (Council). The basis for the remand was solely to clarify whether the Findings of Fact and Opinion of the Council on visibility agree with the evidentiary record.

At a public meeting held on June 6, 2019, the Council voted to approve the amended Findings of Fact and Opinion, as a result of the March 5, 2019 Court order remanding the administrative appeals filed by Rescue Candlewood Mountain and Carl M. Dunham, Jr. in the above-referenced matter to the Council to clarify whether the Findings of Fact and Opinion of the Council on visibility agree with the evidentiary record.

Enclosed are the Council's amended Findings of Fact and Opinion with the additions highlighted in yellow.

Enclosure

MAB/MP/laf

c: The Honorable Henry S. Cohn, J.T.R., Connecticut Superior Court
Assistant Attorney General Robert L. Marconi



STATE OF CONNECTICUT)

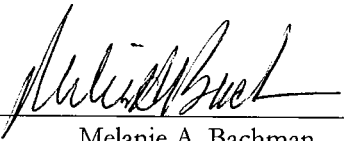
ss. New Britain, Connecticut :

June 7, 2019

COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the amended Findings of Fact and Opinion issued by the Connecticut Siting Council, State of Connecticut.

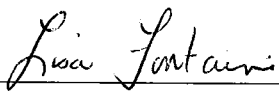
ATTEST:



Melanie A. Bachman
Executive Director
Connecticut Siting Council

I certify that a copy of the amended Findings of Fact and Opinion in Petition No. 1312 has been forwarded by Certified First Class Return Receipt Requested mail, on June 7, 2019, to all parties and intervenors of record as listed on the attached service list, dated May 6, 2019.

ATTEST:



Lisa Fontaine
Fiscal Administrative Officer
Connecticut Siting Council

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Petitioner	<input checked="" type="checkbox"/> E-mail	Candlewood Solar LLC	<p>Paul R. Michaud, Esq. Michaud Law Group LLC 515 Centerpoint Drive, Suite 502 Middletown, CT 06457 Phone: (860) 338-3728 pmichaud@mlgcleanenergy.com</p> <p>James J. Walker Vice President Ameresco, Inc. 111 Speen Street, Suite 410 Framingham, MA 01701 Phone: (508) 598-3030 Fax: (508) 598-3330 jawalker@ameresco.com</p> <p>Joel S. Lindsay Director Ameresco, Inc. 111 Speen Street, Suite 410 Framingham, MA 01701 Phone: (508) 661-2265 Fax: (508) 598-3330 jlindsay@ameresco.com</p>
Party (granted 07/20/17)	<input checked="" type="checkbox"/> E-mail	Town of New Milford	<p>Daniel E. Casagrande, Esq. Cramer & Anderson LLP 30 Main Street, Suite 204 Danbury, CT 06810 Phone: (203) 744-1234 Fax: (203) 730-2500 dcasagrande@crameranderson.com</p>
Party reconditionally granted 08/31/17 Status Withdrawn 10/26/17)	<input type="checkbox"/> E-mail	Lawrenceville, Georgia Environmental Protection	<p>Kristen S. Ryan Bates Environmental Law & Policy Department of Ecology and Environmental Policy 100 Chandler Street New Britain, CT 06051 Phone: (860) 274-1841 Fax: (860) 274-1841 kristen.ryan@bates.edu</p>

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Party (granted 08/31/17)	<input checked="" type="checkbox"/> E-mail	Connecticut Department of Agriculture	Jason Bowsza Connecticut Department of Agriculture 450 Columbus Blvd Hartford, CT 06103 (860) 713-2526 Jason.Bowsza@ct.gov
Party and CEPA Intervenor (granted 09/14/17)	<input checked="" type="checkbox"/> E-mail	Rescue Candlewood Mountain (RCM)	Daniel E. Casagrande, Esq. Cramer & Anderson LLP 30 Main Street, Suite 204 Danbury, CT 06810 Phone: (203) 744-1234 Fax: (203) 730-2500 dcasagrande@crameranderson.com Lisa Ostrove 240 East 47 th Street, Apt. 30EF New York, NY 10017 mostrove@nyc.rr.com

PETITION NO. 1312 - Candlewood Solar LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 20 megawatt AC (26.5 megawatt DC) solar photovoltaic electric generating facility located on a 163 acre parcel at 197 Candlewood Mountain Road and associated electrical interconnection to Eversource Energy's Rocky River Substation on Kent Road in New Milford, Connecticut.	}	Connecticut
	}	Siting
	}	Council
Court-ordered Remand Regarding Visibility.		June 6, 2019

Findings of Fact

Introduction

1. On June 28, 2017, Candlewood Solar, LLC (CS or Petitioner) pursuant to Connecticut General Statutes (C.G.S.) §16-50k and §4-176, submitted a petition (Petition) to the Connecticut Siting Council (Council) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) is required for the construction, maintenance, and operation of a 20 megawatt (MW) alternating current (AC) solar photovoltaic electric generating facility on a 163 acre parcel at 197 Candlewood Mountain Road and associated electrical interconnection to Eversource Energy's Rocky River Substation on Kent Road in New Milford, Connecticut. (CS 1, p. 5)
2. CS is a wholly owned subsidiary of Ameresco, Inc. with headquarters at 111 Speen Street, Suite 410, Framingham, Massachusetts. Ameresco, Inc. specializes in development of projects with utility, commercial, federal and municipal customers nationwide with a focus on the New England Region. (CS 1, pp. 6-8)
3. Ameresco, Inc. acts as lead project developer providing construction financing, in-house engineering, local distribution company interconnection agreements, equipment procurement, construction management and oversight, system commissioning, and operations and maintenance. (CS 1, pp. 6-8)
4. The parties in this proceeding are CS, the Town of New Milford (Town), the Department of Agriculture (DOAg), the Department of Energy and Environmental Protection (DEEP) and Rescue Candlewood Mountain (RCM). RCM is also an intervenor under the Connecticut Environmental Protection Act (CEPA) intervenor. (Record; Transcript 1, September 26, 2017, 3:00 p.m. [Tr. 1], p. 5)
5. Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40, notice of the Petition was provided to all abutting property owners by certified mail on or about June 23, 2017. (CS 1, Attachment 10 and 11)
6. CS provided notice to all federal, state and local officials and agencies listed in RCSA §16-50j-40 on or about June 23, 2017. (CS 1, Attachment 10 and 11)
7. The proposed project would generate renewable electrical energy from solar power. Solar power is considered a Class I resource. (CS 1, p. 6; C.G.S. § 16-1(a)(20))
8. The proposed project would be a "grid-side distributed resources" facility under C.G.S. § 16-1(a)(37). (CS 1, p. 6; C.G.S. § 16-1(a)(37))

9. CS would sell power to four Massachusetts and Rhode Island electric distribution companies - Nantucket Electric Company and Massachusetts Electric Company, d/b/a National Grid; NSTAR Electric Company, d/b/a Eversource; Western Massachusetts Electric Company, d/b/a Eversource; and Fitchburg Gas and Electric Company, d/b/a Unitil - pursuant to its selection under the New England Clean Energy Request for Proposals. (Council Administrative Notice Item 38 – Tri-State Clean Energy RFP; CS 2, Response 2; CS 3a, pp. 5-6)
10. The State legislature established a renewable energy policy under C.G.S. §16a-35k that encourages the development of renewable energy facilities to the maximum practicable extent. (C.G.S. § 16a-35k)
11. The Council is required to approve the project by a declaratory ruling as long as the project meets Department of Energy and Environmental Protection (DEEP) air and water quality standards. (C.G.S. § 16-50k(a); Council Memorandum and Staff Report dated September 29, 2017)

Procedural Matters

12. Upon receipt of the Petition, on June 29, 2017, the Council sent a letter to the Town of New Milford as notification that the Petition was received and is being processed in accordance with C.G.S. §16-50k(a). Notice was also provided to the Towns of Brookfield and New Fairfield because they are located within 2,500 feet of the proposed site. (Council correspondence dated June 29, 2017)
13. During a regular Council meeting held on July 20, 2017, the Petition was deemed complete pursuant to RCSA §16-50j-39a, and in its discretion under C.G.S. §4-176, the Council voted to hold a public hearing on the Petition. A public hearing schedule was also approved by the Council. (Record)
14. On July 24, 2017, the Council sent a letter to the Towns of New Milford, Brookfield and New Fairfield to provide notification of the scheduled public hearing and invite the municipalities to participate. (Record)
15. Pursuant to C.G.S §16-50m, the Council published legal notice of the date and time of the public hearing in The Danbury News Times on July 26, 2017. (Record)
16. On August 30, 2017, the Council held a pre-hearing conference on procedural matters for parties and intervenors to discuss the requirements for pre-filed testimony, exhibit lists, administrative notice lists, expected witness lists, filing of pre-hearing interrogatories and the logistics of the public inspection of the site scheduled for September 26, 2017 at the office of the Council, 10 Franklin Square, New Britain, Connecticut. The Petitioner, DOAg, Town and DEEP attended and participated in the pre-hearing conference. (CSC Pre-Hearing Conference Memoranda, dated August 23, 2017 and August 30, 2017).
17. Pursuant to RCSA § 16-50j-21, on September 13, 2017, CS erected a sign at the proposed site access driveway along Candlewood Mountain Road. The sign presented information including the project name, Petitioner name, date of Council's public hearing, and contact information for the Council. (CS 5; CS 9)
18. The Council and its staff conducted a public inspection of the proposed site on September 26, 2017, beginning at 1:30 p.m. (Council Hearing Notice dated July 24, 2017; CS 10)

19. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on September 26, 2017, beginning with the evidentiary hearing session at 3:00 p.m. and continuing with the public comment session at 6:30 p.m. at the Roger Sherman Town Hall, 10 Main Street, New Milford, Connecticut. (Council's Hearing Notice dated July 24, 2017; Tr. 1, p. 1; Transcript 2 – 6:30 p.m. [Tr. 2], p. 1)
20. On October 24, 2017, DEEP withdrew its party status. (Record; Council Memorandum dated October 27, 2017).
21. The Council held continued evidentiary hearing sessions on October 31, 2017 and November 14, 2017 at 11:00 a.m. at the office of the Council, 10 Franklin Square, New Britain, Connecticut. (Tr. 1, p. 87; Council Memorandum dated September 27, 2017; Transcript 10/31/17, 11:00 a.m., [Tr. 3], p. 1; Tr. 3, p. 201; Council Memorandum dated November 1, 2017; Transcript 11/14/17, 11:00 a.m. [Tr. 4], p. 1)
22. The Connecticut Supreme Court acknowledges that constitutional principles permit an administrative agency to organize its hearing schedule so as to balance its interest in reasonable, orderly and non-repetitive proceedings against the risk of erroneous deprivation of a private interest. (*Concerned Citizens of Sterling v. Connecticut Siting Council*, 215 Conn. 474 (1990); *Pet v. Department of Public Health*, 228 Conn. 651 (1994); *FairwindCT, Inc. v. Connecticut Siting Council*, 313 Conn. 669 (2014))

Court-ordered Remand Proceeding

23. By its Decision and Order dated December 21, 2017, the Council ruled that the project would not have a substantial adverse environmental effect, meets all applicable U.S. Environmental Protection Agency and Connecticut DEEP air and water quality standards and, pursuant to CGS §4-176 and §16-50k, issued a declaratory ruling for the solar photovoltaic electric generating facility. (Council December 21, 2017 Final Decision)
24. On February 2, 2018, pursuant to CGS §4-183, RCM and Carl J. Dunham, Jr. (Dunham) filed administrative appeals of the Council's December 21, 2017 final decision in the Superior Court. (Council Administrative Notice Item Nos. 102-107 - Administrative Appeal Record)
25. On March 5, 2019, the Superior Court issued an order remanding the administrative appeals filed by RCM and Dunham to the Council (Remand Order). The basis of the Remand Order was solely to clarify whether the findings and opinion of the Council on visibility agree with the agency record. (Council Administrative Notice Item No. 104 – Remand Order)
26. On March 7, 2019, the Council sent a memorandum to the parties and intervenors to provide notification of the Remand Order and the scheduled public hearing on May 14, 2019. (Record)
27. Pursuant to CGS §16-50m, the Council published legal notice of the date and time of the public hearing in The Danbury News Times on April 2, 2019. (Record)
28. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on May 14, 2019 with an evidentiary session held at 1:00 p.m. in Hearing Room One, 10 Franklin Square, New Britain, Connecticut. (Council's Hearing Notice dated April 1, 2019; Transcript 5, May 14, 2019 [Tr. 5], p. 1)

Municipal Consultation and Community Outreach

29. Since December 2015, CS and its local representatives have met with the Town with respect to the proposed project. Eight meetings were held with the Economic Development Director, two meetings were held with the Economic Development Committee, four meetings were held with the Town Planner, three meetings were held with the Town Assessor, five meetings were held with the Mayor, three meetings were held with the Town Council, one meeting was held with the Board of Finance, one meeting was held with the Zoning Board, two meetings were held with the Forest & Farmland Committee, and one meeting was held with the Chamber of Commerce. (CS 1, p. 12; CS 1, Attachment 4)
30. CS held a public forum in the Town on December 7, 2016. It was attended by approximately 30 people. (CS 1, p. 14; Tr. 3, pp. 59-60)
31. CS worked with the Town on a Payment in Lieu of Taxes (PILOT) Agreement that was executed on February 17, 2017. The PILOT Agreement will generate over \$2.7 million in revenue for the Town over 20 years and includes provisions to provide protection and assurances to the Town with regard to the construction, operation and decommissioning of the proposed facility. Provisions include, but are not limited to, surety bonds for roads and infrastructure, erosion and sedimentation control and landscaping; a decommissioning plan and bond; Development and Management (D&M) Plan and Stormwater Management Plan; planting of shade tolerant grasses; and consultation with a Connecticut certified forester with regard to methods to be used for clearing of areas for the array. (CS 1, p.13-14; CS 1, Attachment 5)
32. Schedule B of the PILOT Agreement requires a landscaping surety construction bond in the amount of \$100,000 to cover the performance and costs of any additional landscaping required to be installed by CS to address visual impacts attributable to construction, installation and operation of the facility that will be in effect until one year after the project commercial operation date. (CS 1, Attachment 5; Tr. 5, p. 13; 32-33)
33. As of May 14, 2019, the PILOT Agreement remains valid. (Tr. 5, p. 16)
34. By letter dated June 9, 2017, Town Mayor David R. Gronbach expressed his conditional support for the proposed project noting the provisions of the PILOT Agreement. (Letter from Mayor David R. Gronbach dated June 9, 2017; CS 1, Attachment 6)
35. By letter dated July 14, 2017, the Town Zoning Commission recommended the Council hold a formal public hearing on the petition and informed the Council of a public informational hearing scheduled for July 25, 2017 to receive public input on the project. (Town 2)
36. By letter dated July 24, 2017, the Town Planning Commission indicated the proposal is not in contravention with the Town Plan of Conservation and Development (POCD) provided the developer comply with the provisions of the Town Farmland and Forest Preservation Committee (FFPC) memo dated December 7, 2016 that was issued after the FFPC meeting held on November 30, 2016. (Town 3)

37. The December 7, 2016 FFPC memo indicates that while it is FFPC's preference for the property to remain in active agricultural use, FFPC does not object to the proposal provided CS consider the following:
- Provide a construction management plan to the town that addresses site access, land disturbance, drainage and sedimentation and erosion control;
 - Planting pasture grasses instead of turf grass;
 - Using sheep or other livestock to graze the solar field area;
 - Restoring or funding off-site agricultural enhancements;
 - Allowing public access to the site;
 - Placing a permanent easement or deeding the parcel to the Weantinoge Heritage Land Trust or similar land conservation organization to be used for agriculture or open space following the cessation of the use of the land as a solar farm, including removal of all associated infrastructure. (Town 3; Town 8)
38. By letter dated September 11, 2017, the Town Zoning Commission submitted the minutes from the July 25, 2017 public informational hearing and a summary of the comments, concerns and recommendations that were discussed with regard to CS's petition, which include, but are not limited to, the following:
- The proximity of the proposed facility to Candlelight Farms Airport;
 - Visual impacts to abutting residential properties;
 - Increased traffic and impacts to Candlewood Mountain Road;
 - Lack of detail in regard to sedimentation and erosion control and stormwater management both during and after construction;
 - Provision of a more detailed glare analysis tailored to Candlelight Farms Airport;
 - Require a 100 foot landscape buffer along Candlewood Mountain Road and common property boundaries with single family homes;
 - Restrict construction hours to Monday through Friday from 7:30 AM to 5:30 PM, Saturdays 7:30 AM to 12:00 PM and no activities to occur on Sundays and federal holidays; and
 - Require a third party sedimentation and erosion control specialist to provide weekly inspection reports to the Town during construction. (Town 5)
39. Under Section 117-040 of the Town Zoning Regulations, buildings in excess of 35 feet in height are required to be adequately screened by landscape materials or existing vegetation. Along the perimeter of the development a front, side and rear buffer yard having a minimum width of 60 feet is required. However, no buffer shall be required for a front, side or rear yard if the Zoning Commission determines that the existing topography or landscaping provide natural screening. (Town 9, response 1 and 2; Tr. 5, pp. 96-97, 104-105)
40. Under Section 015-010 of the Town Zoning Regulations, a buffer area is defined as an area within a property or site, generally adjacent to and parallel with the property line, either consisting of natural existing vegetation and/or created by the use of trees, shrubs, fences and/or berms, designed to limit the view of the site to adjacent sites or properties. (CS 21, response 6f; Tr. 5, p. 98)
41. Under Section 130-040 of the Town Zoning Regulations, when an industrially zoned or business zoned parcel in excess of 5 acres abuts a residential zone where single family or multiple family dwellings are currently located less than 150 feet to the adjoining property line, the required minimum buffer depth shall be 100 feet. The Major Planned Residential Development District (MPRDD) is not included in Section 130-040 of the Town's Zoning Regulations. See Section 130-040 of the Town Zoning Regulations attached hereto as Attachment A. (Town 9, response 3; Tr. 5, pp. 101, 102)

42. Under Section 130-040 of the Town Zoning Regulations, the Zoning Commission has the discretion to determine no additional screening will be required based on the presence of natural screening from existing topography and/or landscaping. If the Council determined existing topography and a natural buffer is adequate for this project and a vegetated buffer is not required, it would be consistent with the Zoning Commission's authority. (Town 9, response 3; Tr. 5, pp. 104, 105)
43. All of the single family dwellings on the residential properties abutting the project site are located in excess of 150 feet to the adjoining property line. (CS 21, response 3; Tr. 5, pp. 102-103)
44. The closest dwelling in a residential zone that abuts the project site is a guesthouse/studio located at 183 Candlewood Mountain Road at 280 feet to the west-southwest of the property line. (CS 21, response 3, Figure 1; Town 10, Photo D1)
45. The Town Zoning Commission's recommendation for a 100 foot landscape buffer along Candlewood Mountain Road and common property boundaries with single family homes is based on the Zoning Commission's classification of the solar project as an industrial use. (Tr. 5, pp. 102-105)
46. The Standard Land Use Classification Manual of Connecticut classifies utilities, such as solar electric generating facilities, as commercial land uses. (Council Administrative Notice Item No. 70; Tr. 5, pp. 88-89)
47. CGS §16-50g mandates the Council balance the statewide need for public utility services at a reasonable cost with environmental values. The Council has exclusive jurisdiction over the location of electric generating facilities in the state and the authority to preempt orders of local zoning. Although the Council gives consideration to other state laws and municipal regulations as it deems appropriate, the Council's final decision satisfies and is in lieu of all certifications, approvals and other requirements of state and municipal agencies. (CGS §16-50x; *FairwindCT v. Connecticut Siting Council*, 313 Conn. 669 (2014); *Preston v. Connecticut Siting Council*, 20 Conn. App. 474 (1990); *Preston v. Connecticut Siting Council*, 21 Conn. App. 85 (1990); Town 10, p. 6; Tr. 5, pp. 63-66, 103-104)
48. By letter dated September 18, 2017, the Town Inland Wetlands Commission (IWC) informed the Council that the IWC reviewed and denied an application for a housing development at this site known as Dunham Farm in 2007 and that many of the current IWC members were on the IWC at that time and have firsthand knowledge of the property, its topography, wetlands, watercourses, vernal pool and vegetative habitats. The IWC provided a summary of concerns and recommendations as follows:
 - a) The design of the project take into account, both in the stormwater management system and the erosion control plans, two small side hill seep areas and an intermittent watercourse within the solar field array or clearing area for the project have shallow groundwater that seasonally discharges to the surface or on occasion flows overland in defined channels that could cause significant sedimentation or erosion control impacts both during and after construction;
 - b) Light intrusion due to deforestation, thermal impacts to runoff, alteration of water flow patterns to the wetlands and watercourses, and sedimentation and chemical composition within stormwater discharge should be formally addressed and modifications made to the plans to prevent any direct or indirect impact to wetland and watercourse systems on the property;
 - c) Identify location and amount of conduit that is necessary for the electrical connections, including, but not limited to, location of piping, whether it is attached to the solar panels or buried, trenching requirements and location of the conduits if buried, and the amount and type of backfill required for the conduit;

- d) Follow a detailed phasing or sub-phasing plan for tree clearing, stumping, grading and stabilization of soils within the seasonal timeframes for site restoration;
- e) Ensure the swale system proposed for surface water runoff that surrounds the development area at the periphery of the project does not divert all surface flow and starve portions of the wetland system from existing water flow patterns and surcharging other portions of the wetlands at the outlets;
- f) Incorporate the gravel access roads and installation of solar panels in pre-development and post-development calculations for the stormwater management plans;
- g) Address drip edge erosion and long slope erosion potential in the stormwater management system;
- h) Redesign the stormwater management system to incorporate sub-management systems that act on an independent basis and reduce diverting water flows to mimic the existing water flow pattern on the property; and
- i) Engagement of a peer review process for final approval of the sedimentation and erosion control and stormwater management plans, a third party sedimentation and erosion control specialist to provide weekly inspection reports and a Connecticut licensed professional engineer to provide written certification that the stormwater plan was installed in accordance with the approved plans.

(Town 6)

49. By letter dated September 18, 2017, the Town Conservation Commission (CC) notes the project should be subjected to the customary application review process at the town level, the project documents and maps lack adequate detail on matters of interest to the CC, the project does not represent sound environmental planning and CS fails to define “natural state.” If the Council decides not to require CS to utilize the customary review process at the town level, the CC submits the following recommendations:
- a) Require the establishment of a 60 foot buffer zone surrounding the entire 80 acre project;
 - b) Require a comprehensive environmental survey and title search to note stone walls, stone bounds, old roads and pathways and other points of interest, such as stone foundations; and
 - c) Require CS to develop a specific restoration plan reflective of conditions prior to any work at the site and establish an appropriate bonding level to achieve reasonable restoration.

(Town 7)

50. The record of the Conservation Commission’s deliberations on recommendations to the Council for the solar project do not indicate the basis for its recommendation to require the establishment of a 60 foot buffer zone surrounding the entire project. (Town 9, response 5)

51. By letter dated September 18, 2017, the FFPC clarifies that its December 7, 2016 memo is not a letter of support for the project, but simply states that if CS adheres to the recommendations outlined in the memo, FFPC would not oppose the project. (Town 8)
52. By e-mail dated July 20, 2017, First Selectman Clay Cope of the Town of Sherman urged the Council to hold a public hearing. At the September 26, 2017 public comment session, First Selectman Cope gave a limited appearance statement in opposition to the project on behalf of Sherman residents who live on Hubbell Mountain Road, Fox Run and Mill Pond. (Record; Tr. 2, pp. 20-21)
53. The Towns of Brookfield and New Fairfield did not comment on the project. (Record)
54. By letter dated September 22, 2017, United States Senator Richard Blumenthal and United States Congresswoman Elizabeth Esty note that there remain outstanding environmental questions on the project and urge the Council to fully and completely vet the proposal. (Record)

55. By letter dated September 25, 2017, State Representative Richard Smith of the 108th District expressed opposition to the project on the basis that it would raze almost half of the 163 acre parcel, destroy wildlife and habitat currently present, lower property values, disrupt the picturesque mountain community, endanger air traffic utilizing the nearby airport and contribute to erosion of the mountain. (Record)
56. C.G.S. § 22a-20a and DEEP's Environmental Justice Guidelines require applicants seeking a permit from DEEP or the Council for a new or expanded facility defined as an "affecting facility" that is proposed to be located in an environmental justice community to file an Environmental Justice Public Participation Plan (EJPPP). The proposed solar facility is not an "affecting facility" under C.G.S. § 22a-20a because it uses non-emitting and non-polluting renewable resources. Thus, Environmental Justice does not apply to the facility and an EJPPP is not required. (CS 11, Response 81; C.G.S. § 22a-20a)

State Agency Comments

57. Pursuant to R.C.S.A. §16-50j-40, on June 30, 2017, July 24, 2017 and April 1, 2019, the following state agencies were requested to submit written comments regarding the proposed facility: Department of Energy and 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 Construction Services (DCS); Department of Transportation (DOT); the Connecticut Airport Authority (CAA); and the State Historic Preservation Office (SHPO). (Council Hearing Package, dated July 24, 2017)
58. On August 30, 2017, the Council received a response from the DOT's Bureau of Engineering and Construction indicating that the proposed project may result in associated work within the state right of way, including, but not limited to, overhead or underground utility work from Route 7 to the project site and therefore, CS must attain a Highway Encroachment Permit prior to performing any work within the right of way. (DOT Letter dated August 30, 2017)
59. On August 30, 2017, the Council received a response from CEQ indicating concern that the petition provides insufficient information on upland habitats, upland soils, vegetation and wildlife. (CEQ Letter dated August 30, 2017)
60. On September 22, 2017, the Council received comments from the DEEP, including, but not limited to, the following:
- a) DEEP did not select the project in the Tri-State RFP. Massachusetts selected the project;
 - b) With foliage on the trees, no off-site structures are seen from the project site and this lack of visual connection should operate from off-site to the project site;
 - c) The proposed access road offers an excellent line of sight in both directions off Candlewood Mountain Road;
 - d) A noticeable feature of the area is the sound of small aircraft from the nearby Candlewood Airport;
 - e) The project contemplates clearing 68 acres of forested land that is part of a larger block of unfragmented forest, which totals 788 acres mostly lying to the north of the project site;
 - f) Of the 788 acres of unfragmented forest, 443 acres are considered core forest and 345 acres are considered edge forest (within 300 feet of non-forested areas). The project would reduce the area of core forest to 348 acres and will increase edge forest to 370 acres;

- g) Core forest land is targeted for preservation in the Connecticut Green Plan and the Forest Action Plan. Public Act 17-218's purpose is to discourage fragmentation of forest blocks larger than 250 acres;
- h) The note on page 14 of the petition regarding the solar farm developer's plans to work with local non-profit conservation groups to establish a permanent conservation easement for as much as 90 acres would operate to preserve much of the forest resources of the site;
- i) While the petitioner may agree to obtain approval by the Town IWC for its stormwater management plan, it should recognize that the Council retains final jurisdiction over wetlands impacts of this project and DEEP retains final jurisdiction over stormwater management;
- j) The vernal pool protection strategies proposed by the petition were deemed to be satisfactory by the NDDB, surveys have been requested for the state-endangered golden-winged warbler and the state-threatened slimy salamander, seasonal forest clearing restrictions are recommended to protect three species of migratory, tree-roosting bats and standard protection strategies are set forth for the eastern box turtle and the wood turtle;
- k) Placement of the interconnection line underground would be extremely difficult and disruptive. Approximately 10 structures will be in wetlands, but the wetland impacts of the placement of these poles would be very minor;
- l) Approval of land clearing plans by a state-certified forester is not a requirement and it is a commendable step to assure that best management practices are applied to the land clearing. Harvesting the merchantable saw timber on the property for its timber value is encouraged;
- m) If facility decommissioning will cause a soil disturbance of five acres or more, the petitioner may need a stormwater permit from DEEP for that work; and
- n) The shade tolerant grass mix to be planted under the solar panels will also need to be more drought tolerant than the current grasses on the site.

(DEEP Letter dated September 21, 2017)

61. On September 22, 2017, DEEP provided a recommendation document titled, "Stormwater Management at Solar Farm Construction Projects" and dated September 8, 2017 that it recommends be incorporated into a Stormwater Pollution Control Plan (SWPCP) for the proposed project. Such recommendations are listed below:

- a) Ensure that only a Professional Engineer and/or Landscape Architect serve as the (DEEP) Commissioner's agent to inspect the site and serve as the qualified inspector (Authorized Professional) for the purposes of the general permit;
- b) Ensure that the Authorized Professional prepare a proposed inspection checklist assure that the construction project is being conducted in compliance with the terms and conditions of the General Permit, and the SWPCP is implemented in accordance with the General Permit;
- c) Ensure that the credentials for the Authorized Professional proposed by the (General Permit) Applicant and the proposed inspection checklist be submitted for the review and approval of the Commissioner and be included with the registration application for the General Permit;
- d) Ensure that the Authorized Professional personally perform all pre-construction, construction and post-construction site inspections; perform inspections at the end of any storm event (whether or not such storm generates a discharge); and prepare and submit all inspection reports including the supporting inspection checklists in compliance with the General Permit;
- e) Ensure that the Authorized Professional report any violations of the terms and conditions of the General Permit or the SWPCP to the Commissioner's designee within two hour of becoming aware of such violation, or at the start of the next business day if outside normal business hours;
- f) Within five days of such violation, the Authorized Professional shall prepare and submit a signed and stamped written report, which documents the cause of the violation, during

- including dates and times, and corrective action taken or planned to prevent future occurrences;
- g) Ensure that if circumstances necessitate a revision to the SWPCP, the Authorized Professional works with the Permittee's design professional to ensure compliance with the terms and conditions of the General Permit, and any such change to the SWPCP shall be submitted for review and written approval of the Commissioner; and
 - h) Ensure that the Authorized Professional reviews all stormwater monitoring reports to evaluate the effectiveness of the SWPCP and to document any adverse impacts that any stormwater controls on the construction site or discharges on the construction site may have on wetlands, streams, or any other receiving waterbodies. Such evaluation shall be documented in the inspection reports and inspection checklists performed in accordance with the General Permit.

(DEEP Stormwater Recommendations received September 21, 2017)

- 62. 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. (Council Administrative Notice Item No. 100 – *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007))
- 63. The following agencies did not respond to the Council's request for comment on the proposed facility: DPH, PURA, OPM, DECD, DESPP, DCP, DOL, DCS, CAA, and SHPO. (Record)

New England Regional System Planning

- 64. New England's electric power grid has been planned and operated as a unified system of transmission owners and market participants. The New England system integrates resources with the transmission system to serve all regional load regardless of state boundaries. Therefore, electrical performance in one part of the system affects all areas of the system. (Council Administrative Notice Item No. 24 – 2015 ISO-NE Regional System Plan, pp. 25-26)
- 65. Created in 1997, ISO-NE is the independent, not-for-profit corporation responsible for the reliable operation of New England's electric power generation and transmission system, overseeing and ensuring the fair administration of the region's wholesale electricity markets, and managing comprehensive regional electric power planning. (Council Administrative Notice Item No. 32 – ISO FCA #10 Press Release dated February 29, 2016, p. 2)
- 66. ISO-NE's primary responsibility is electric reliability. ISO-NE is fuel and technology neutral and takes no position on any proposed energy projects. ISO-NE does not own any transmission or distribution lines or power plants. (Council Administrative Notice Item No. 35 – ISO-NE State of the Grid Presentation dated January 30, 2017, pp. 5-6)
- 67. The physical power from the proposed facility would be delivered to the ISO-NE grid via a distribution connection. Depending on the local loads at a given time, the power generated by the facility will serve those loads, and any excess power flow will serve the regional load. (CS 2, Responses 29 and 30)
- 68. On November 5, 2015, ISO-NE issued the 2015 Regional System Plan (2015 RSP) to identify the New England region's electricity needs and plans for meeting these needs for 2015 through 2024. (Council Administrative Notice Item No. 24 – 2015 RSP, p. i)
- 69. ISO-NE holds an annual auction to acquire the power system resources needed to meet future demand for the New England region. The annual Forward Capacity Market Auction (FCA) is held

approximately three years before each capacity commitment period to provide time for new resources to be developed. Capacity resources can include traditional power generation, renewable generation, or demand-side resources, such as load management and energy efficiency measures. Resources clearing in the auction will receive a monthly payment during the delivery year in exchange for their commitment to provide power or curtail demand when called on by ISO-NE. (Council Administrative Notice Item No. 32 – ISO FCA #10 Press Release dated February 29, 2016, pp. 1-2)

70. ISO-NE computes and annually updates an installed capacity requirement (ICR) for the New England Region. ICR is a measure of the installed resources that are projected to be necessary to meet both ISO-NE's and the Northeast Power Coordinating Council's (NPCC) reliability standards, with respect to satisfying the peak load forecast for the New England Balancing Authority while maintaining required reserve capacity. (Council Administrative Notice Item No. 31 - ISO-NE ICR Report dated January 2016, p. 9)

Generating Capacity Retirements in New England

71. ISO-NE identifies the following power plants as “closed” or “retiring.”

Power Plant	Fuel	Summer Capacity	Status
Vermont Yankee	Nuclear	604 MW	Closed
Mount Tom	Coal	146 MW	Closed
Salem Harbor	Coal and Oil	750 MW	Closed
Pilgrim	Nuclear	702 MW	Retiring by May 2019
Brayton Point Nos. 1-4	Coal and Oil	1,493 MW	Projected to retire on or about May 2017
Norwalk	Oil	342 MW	Closed
Total		4,037 MW	

(Council Administrative Notice Item No. 26 – 2015 CELT Report, pp. 2.1.3, 5.1.7, and 5.1.8; Council Administrative Notice Item No. 35 – ISO-NE State of the Grid Presentation dated January 30, 2017, p. 12; Council Administrative Notice Item No. 30 – ISO-NE 2017 Regional Electricity Outlook, pp. 27-28; Council Administrative Notice Item No. 24 – 2015 RSP, p. 95)

72. The 2017 Regional Electricity Outlook (2017 REO) identifies the roughly 6,000 MW as “at risk for retirement in coming years” and referred to these resources in a table as “hypothetical” retirements in the 2025 through 2030 timeframe. These “at risk” power plants are listed below. (Council Administrative Notice Item No. 30 – ISO-NE 2017 REO, pp. 27-28)

Power Plant	Fuel	Summer Capacity
Yarmouth Nos. 1-4	Oil	811 MW
Merrimack No. 1-2	Coal	436 MW
Newington No. 1	Oil/Natural Gas	400 MW
Schiller Nos. 4&6	Coal	95 MW
Mystic No. 7***	Natural Gas/Oil	575 MW
Canal No. 1-2	Oil	1,121 MW
West Springfield No. 3***	Natural Gas/Oil	94 MW
Middletown Nos. 2-4*	Oil/Natural Gas	744 MW
Montville Nos. 5-6**	Oil/Natural Gas	467 MW
New Haven Harbor	Oil/Natural Gas	447 MW
Bridgeport Harbor No. 3	Coal	383 MW
Total		5,573 MW

*Middletown No. 4 is oil-fired only. Middletown Nos. 2 and 3 are oil/natural gas.

**Montville No. 5 is oil/natural gas. Montville No. 6 is oil-fired only.

***While primarily fueled by natural gas, these are steam turbine units.

(Council Administrative Notice Item No. 29 – ISO-NE 2016 Regional Electricity Outlook, p. 11; Council Administrative Notice Item No. 30 – ISO-NE 2017 Regional Electricity Outlook, pp. 27-28; Council Administrative Notice Item No. 26 – ISO-NE 2015 CELT Report, pp. 2.1.12, 2.1.13, 2.1.16, 2.1.43, 2.1.44, 2.1.48, and 2.1.49)

CS' Participation in ISO-NE's Forward Capacity Market Auction

73. CS is required by its Power Purchase Agreement (PPA) to participate in the FCA. CS anticipates a capacity commitment period after the 2021 timeframe. (Tr. 1, p. 14; Tr. 3, p. 17; Tr. 3, pp. 54-55)
74. For solar resource capacity, ISO-NE counts a percentage of a project's nameplate capacity - the megawatts it should produce under optimal conditions - and its measurable day-to-day performance, which can differ significantly due to the weather-dependent nature of solar resources. (Council Administrative Notice Item No. 29 – ISO-NE 2016 Regional Electricity Outlook, p. 34)
75. The PPA requires CS to be an ISO-NE market participant or have entered into an agreement with a market participant that shall perform all of CS' ISO-NE obligations in connection with the facility and requires CS to comply with ISO-NE Rules and Practices relative to construction, operation and maintenance of the facility. (Council Administrative Notice Item No. 38- Tri-State RFP, Appendix C)
76. Under its PPA, CS must take all necessary and appropriate actions to qualify and participate in the FCA and all commercially reasonable actions to be selected and compensated in every auction year for the duration of the project's PPA, including, but not limited to, best efforts to make network upgrades such that the maximum output of the facility is qualified to participate in the FCA. See section of this document entitled, "Power Purchase Agreement." (Council Administrative Notice Item No. 38 - Tri-State RFP, Appendix C).

Regional Collaboration Among the New England States

77. In September 2013, the Governors of the six New England states in the ISO-NE region entered into a commitment to advance a regional energy infrastructure initiative that diversifies the region's energy supply portfolio while ensuring that the benefits and costs of investments are shared appropriately among the New England states. (Council Administrative Notice Item No. 44)
78. In April 2015, the Governors of the six New England states in the ISO-NE region convened a Northeast Forum on Regional Energy Solutions focused on energy infrastructure challenges and regional collaboration to support energy infrastructure solutions, and reaffirmed their commitment to work together toward a cleaner, more reliable and more affordable energy future. The Governors released a six-state action plan that includes, but is not limited to, continuing to invest in energy efficiency and distributed generation, utilizing existing authority to procure clean energy generation and transmission, and securing and utilizing state authority to find solutions to infrastructure challenges. (Council Administrative Notice Item No. 45 – NESCOE Report - Governors' Statement on Regional Cooperation for Energy Infrastructure, dated April 23, 2015; Council Administrative Notice Item No. 46 – NESCOE Report - Governors' Actions for a Cleaner, More Reliable and More Affordable Energy Future, dated April 23, 2015)
79. Two types of standards are generally used to implement policy objectives in the electric power sector: Renewable Portfolio Standards (RPS) and Clean Energy Standards. Both standards have a requirement that regulated utilities or others providing certain services to consumers must either buy the desirable environmental attributes of certain power generation sources or pay a fee. (Council

Administrative Notice Item No. 46 – NESCOE Report - Governors' Actions for a Cleaner, More Reliable and More Affordable Energy Future, dated April 23, 2015)

80. A renewable energy certificate (REC) certifies that one megawatt-hour (MWh) of renewable electrical energy has been generated. RECs create a market to separate renewable energy attributes and resource output. Environmental attributes are sold into the REC markets. (Council Administrative Notice Item No. 46; Council Administrative Notice Item No. 72 - 2014 IRP, Appendix D; Tr. 3, p. 41)

State of Connecticut Planning and Energy Policy

81. Public Act (PA) 11-80 was the legislation that restructured the Department of Environmental Protection as the Department of Energy and Environmental Protection. Section 51 of PA 11-80 requires that DEEP prepare a Comprehensive Energy Strategy (CES) every three years that reflects the legislative findings and policy stated in C.G.S. §16a-35k.. As such, this statute consolidated Connecticut's energy planning for the first time. The final version of the state's inaugural CES was published on February 19, 2013 (2013 CES). It advocated smaller, more diversified generation projects using renewable fuels, as well as smaller, more innovative transmission projects emphasizing reliability. (Council Administrative Notice Item No. 49 – Council 2014/2015 Forecast Report, pp. 48-49; Council Administrative Notice Item No. 71 – 2013 CES; CGS §16a-3d)
82. Biennially, DEEP, in consultation with the electric distribution companies, is required to prepare an energy and capacity resource assessment that includes:
- a) The energy and capacity requirements of customers for the next three, five and ten years;
 - b) The manner of how best to eliminate growth in electric demand;
 - c) How best to level electric demand in the state by reducing peak demand and shifting demand to off-peak periods;
 - d) The impact of current and projected environmental standards, including, but not limited to, those related to greenhouse gas emissions and how different resource could help achieve those standards and goals;
 - e) Energy security and economic risks associated with potential energy resources; and
 - f) The estimated lifetime cost and availability of potential energy sources.
- (CGS §16a-3a)
83. Resource needs are required to first be met through all available energy efficiency and demand reduction resources that are cost-effective, reliable and feasible. Thereafter, needs for generation capacity and transmission and distribution improvements are considered. (CGS §16a-3a)
84. Pursuant to CGS §16a-3a, DEEP, in consultation with the electric distribution companies, is required to review the state's energy and capacity resource assessment and approve the Integrated Resource Plan (IRP) for the procurement of energy resource, including, but not limited to, conventional and renewable generating facilities, energy efficiency, load management, demand response, combined heat and power facilities, distributed generation and other emerging energy technologies to meet the projected requirements of customers in a manner that minimizes the cost of all energy resources to customers over time and maximizes customer benefits consistent with the state's environmental goals and standards. The goal of the IRP is to lower the rates and cost of electricity. (CGS §16a-3a)
85. The IRP is required to consider approaches to maximizing the impact of demand-side measures; the extent to which generation needs can be met by renewable and combined heat and power facilities; optimization of the use of generation sites and generation portfolio existing in the state; fuel types, diversity, availability, firmness of supply and security and environmental impacts thereof, including

impacts on meeting the state's greenhouse gas emission goals; reliability, peak load and energy forecasts, system contingencies and existing resource availabilities; import limitations and the appropriate reliance on such imports; the impact of the IRP on the costs of electric consumers; and the effects on participants and non-participants. (CGS §16a-3a)

86. Annually, the procurement manager of the PURA, in consultation with each electric distribution company, shall develop a plan for the procurement of electric generation services and related wholesale electricity market products to enable the electric distribution companies to manage a portfolio of contracts to reduce the average cost of standard service while maintaining cost volatility within reasonable levels. The Procurement Plan shall provide for the competitive solicitation, including contracts for generation or other electricity market products and financial contracts and an explanation of why such purchases are in the best interest of ratepayers. (CGS §16-244m)
87. From time to time, in accordance with the IRP and the Procurement Plan, DEEP shall initiate a generation evaluation and procurement process if it is determined to be in the best interests of Connecticut customers. The evaluation process entails a nonbinding prequalification process to identify potentially eligible new generators. Generators shall demonstrate how they will reduce electrical rates for Connecticut ratepayers while maintaining or improving reliability, improving environmental characteristics of the Connecticut generation fleet and providing economic benefit to Connecticut. (CGS §16-244m)
88. Determination of generator eligibility is based on a showing of project attributes, including, but not limited to, ratepayer, environmental and economic benefits, as well as a demonstration of reasonable certainty of completion of development. If a determination of eligibility is made by DEEP, it shall issue a request for proposals. (CGS §16-244m)

Connecticut's Renewable Portfolio Standards

89. RPS requirements are stimulating the need for and the development of renewable energy resources and energy efficiency in the region, which reduce emissions. States typically develop RPS to facilitate the development of new renewable energy sources with the goals of stabilizing long-term energy prices, enhancing environmental quality and creating jobs. RPS targets are designed to achieve a certain level of renewable energy penetration, typically in proportion to total electricity sales. (Council Administrative Notice Item No. 24 - 2015 RSP, p. 12; Council Administrative Notice Item No. 46)
90. C.G.S. §16-245a establishes Connecticut's RPS. They call for 20 percent of Connecticut's electricity usage to come from Class I renewable resources by 2020, which is higher than Class I targets in Massachusetts and Rhode Island. (Council Administrative Notice Item No. 49 – Council 2014/2015 Forecast Report, p. 42; Council Administrative Notice Item 38 – Tri-State Clean Energy RFP, p. 7; Council Administrative Notice Item No. 42, MA Renewable Energy Portfolio Standard; Council Administrative Notice Item No. 43, RI Renewable Energy Standard)
91. RECs provide additional revenue to qualifying renewable resources in proportion to the energy each resource generates. RECs create a market that reveals the additional price required, beyond energy and capacity payments, to make projects economically viable and also identifies when there is a need for additional resources. The REC-based compliance feature is designed to use competitive market forces to identify the appropriate level of economic support to achieve the policy goals. (Council Administrative Notice Item No. 46)
92. Connecticut electric utilities that do not obtain the required number of RECs are required to pay an Alternative Compliance Payment (ACP). According to DEEP's 2014 Integrated Resources Plan

(2014 IRP), for Class I renewable energy in Connecticut, the ACP is \$55 per MWh. (Council Administrative Notice Item No. 72 - 2014 IRP, Appendix D, pp. D-3 and D-4)

93. The 2014 IRP projects that Connecticut will face a shortage of Class I renewable resources starting in 2015. Beginning in 2017, the region as a whole will face shortages of Class I renewables unless additional supply is procured or otherwise added to the market. (Council Administrative Notice Item No. 72 - 2014 IRP, p. iv)
94. To meet Connecticut's RPS goals, the 2013 CES estimates that meeting the 2020 RPS would require the development of 6,196 gigawatt-hours (GWh) or nearly 3 gigawatts (GW) of low carbon supply. (Council Administrative Notice Item No. 71 – 2013 CES, p. 76)

Connecticut's Global Warming Solutions Act and Climate Change Preparedness Plan

95. The Global Warming Solutions Act (PA 08-98) sets a goal of reducing greenhouse gas (GHG) emissions by 80 percent by 2050. (CGS §22a-200)
96. According to the Governor's Commission on Climate Change (GC3), overall statewide emissions are 10.6% below 1990 levels. In 2016, the GC3 built four mitigation scenarios:
 - a) The Pilgrim Nuclear Plant retires and is replaced with natural gas. The remaining 3 regional nuclear plants continue to operate through 2050. The grid evolves toward zero-carbon with utility-scale solar as the dominant resource;
 - b) All nuclear plants retire at the end of their current license periods and are replaced with natural gas. The grid evolves toward zero-carbon with utility-scale solar as the dominant resource;
 - c) All nuclear plants retire at the end of their current license periods and are replaced with on-shore wind. The grid evolves toward zero-carbon with roughly an even split between on-shore wind and utility-scale solar; and
 - d) Scenario 1 with accelerated early deployment of mitigation technologies and measures, such as greater levels of energy efficiency to significantly reduce load. (Council Administrative Notice Item No. 77)
97. Section 7 of PA 08-98 required the Governor's Steering Committee on Climate Change to establish an Adaptation Subcommittee to evaluate the projected impacts of climate change on Connecticut agriculture, infrastructure, natural resources and public health and develop strategies to mitigate these impacts. (Council Administrative Notice Item No. 89 – Climate Change Preparedness Plan)
98. Adaptation strategies for agriculture, infrastructure and natural resources include, but are not limited to, best management practices to ensure water recharge, sustainable water capture and storage and water reuse guidelines for industry; research, monitoring and education to analyze competing demands on Connecticut water quantity and quality to develop new approaches while supporting multiple and conflicting needs; and policy, legislation, regulation and funding to protect critical soil landscapes, adopt a water hierarchy and encourage collaboration with other states and federal agencies. (Council Administrative Notice Item No. 89 – Climate Change Preparedness Plan)

DEEP Competitive Energy Procurements

99. On December 9, 2011, pursuant to Section 127 of PA 11-80, DEEP issued notice for a Request for Proposals (RFP) for 30 MW of zero emission Class I renewable energy sources. On December 23,

- 2011, DEEP issued its final determination in the RFP and selected 2 out of 21 proposed projects to enter into long-term power purchase agreements with the electric distribution companies (EDCs). The 2 projects selected were the 5 MW East Lyme Solar Park in East Lyme, Connecticut and the 5 MW Somers Solar Center in Somers, Connecticut that DEEP found will serve the long term interests of ratepayers. (Council Administrative Notice Item Nos. 54 and 55; Public Act 11-80).
100. On July 8, 2013, pursuant to Section 6 of PA 13-303, DEEP issued notice for a RFP for Class I renewable energy resources. On September 26, 2013, DEEP issued its final determination in the RFP and selected 2 out of 47 proposed projects to enter into long-term power purchase agreements with the EDCs for a combination of energy and environmental attributes. The 2 projects selected were the 250 MW Number Nine Wind Farm in Aroostook County, Maine and the 20 MW Fusion Solar Center in Sprague, Connecticut that DEEP found to be in the interest of ratepayers, consistent with the requirements to reduce greenhouse gas emissions and in accordance with the policy goals of the CES. (Council Administrative Notice Item No. 56; Public Act 13-303)
101. On October 8, 2013, pursuant to Section 8 of PA 13-303, DEEP issued notice for a RFP for run-of-the-river hydropower, landfill methane gas and biomass Class I renewable energy resources. On January 31, 2014, DEEP issued its final determination in the RFP and selected 3 out of 28 proposed projects to enter into long-term power purchase agreements with the EDCs for a combination of energy and environmental attributes. The 3 projects selected were a 21.5 MW portion of an existing 43 MW biomass facility located in New Hampshire, a 5.4 MW portion of an existing 54 MW biomass facility located in Vermont and a 2.7 MW portion of an existing 54 MW biomass facility located in Vermont. (Public Act 13-303)
102. 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 EDCs for a combination of energy and environmental attributes. The 9 projects selected were as follows:
- a) 21 MW Antrim Wind Project in New Hampshire;
 - b) 49 MW Sanford Solar Project in Maine;
 - c) 49 MW Chinook Solar Project in New Hampshire;
 - d) 49 MW Quinebaug Solar Project in Connecticut (Council Petition No. 1310);
 - e) 49 MW Farmington Solar Project in Maine;
 - f) 20 MW Enfield Solar Project in Connecticut;
 - g) 126 MW Cassadaga Wind Project in New York;
 - h) 20 MW Woods Hill Solar Project in Connecticut; and
 - i) 20 MW Hope-Scituate Solar Project in Rhode Island.
- (Council Administrative Notice Item No. 38 - Tri-State RFP)
103. In the Tri-State RFP, Massachusetts and Rhode Island selected 11 out of 31 proposed projects to enter into long-term power purchase agreements with the EDCs for a combination of energy and environmental attributes. The 11 projects selected were as follows:
- a) 21 MW Antrim Wind Project in New Hampshire;
 - b) 49 MW Sanford Solar Project in Maine;
 - c) 49 MW Chinook Solar Project in New Hampshire;
 - d) 49 MW Quinebaug Solar Project in Connecticut (Council Petition No. 1310);
 - e) 49 MW Farmington Solar Project in Maine;
 - f) 20 MW Enfield Solar Project in Connecticut;
 - g) 126 MW Cassadaga Wind Project in New York;
 - h) 20 MW Woods Hill Solar Project in Connecticut;

- i) 20 MW Hope-Scituate Solar Project in Rhode Island;
 - j) 26.4 MW Simsbury Solar Farm in Connecticut (Council Petition No. 1313); and
 - k) 20 MW Candlewood Solar Project in Connecticut (the subject of this Petition).
(Council Administrative Notice Item No. 38 - Tri-State RFP; CS 6a, p. 5)
104. On March 9, 2016, pursuant to Section 1(b) and 1(c) of PA 15-107, DEEP issued notice for a RFP for Class I renewable energy sources and Class III sources with a nameplate capacity rating of more than 2 MW and less than 20 MW (Small Scale RFP). Project selection occurred on November 28, 2016. On June 27, 2017, DEEP issued its final determination in the RFP and selected 25 out of 107 proposed projects to enter into long-term power purchase agreements with the EDCs for a combination of energy and environmental attributes. The 25 projects selected were as follows:
- a) 15 MW Pawcatuck Solar Center in Connecticut;
 - b) 19.99 MW Hecate Energy Solar Greene County Project in New York;
 - c) 6 MW Swantown Road Solar Project in Connecticut;
 - d) 5 MW Holiday Hill Community Wind Project in Massachusetts;
 - e) 19.99 MW Hecate Energy Solar Albany County Project in New York;
 - f) 19.80 MW Litchfield Solar Plant and Park in Connecticut;
 - g) 5 MW Kidder Hill Community Wind Project in Vermont;
 - h) 17.50 MW Swanton Wind Project in Vermont;
 - i) Incremental Energy Efficiency in Connecticut;
 - j) 10 MW North Stonington Solar Plant in Connecticut;
 - k) 14.69 MW W. Portsmouth St. Solar Project in New Hampshire;
 - l) 19.59 MW Constitution Solar Project in Connecticut;
 - m) 19.60 MW Highgate Solar Project in Vermont;
 - n) 19.58 MW Hinckley Solar Project in Maine;
 - o) 19.58 MW Randolph Center Solar Project in Vermont;
 - p) 19.63 MW Sheldon Solar Project in Vermont;
 - q) 19.58 MW Winslow Solar Project in Maine;
 - r) 19.58 MW Davenport Solar Project in Vermont;
 - s) 19.60 MW Nutmeg Solar Project in Connecticut;
 - t) 4.98 MW GRE-15-North Haven-CT Solar Project in Connecticut;
 - u) 19.99 MW Wallingford Renewable Energy Solar Project in Connecticut;
 - v) 3.50 MW Wind Colebrook South Project in Connecticut;
 - w) 12.50 MW Minuteman Wind Project in Massachusetts;
 - x) 17.73 MW GRE-29-Waterford-CT Solar Project in Connecticut;
 - y) 19.59 MW Coolidge Solar I Project in Vermont.
- (Council Administrative Notice Item No. 76 – 2-20 MW RFP)
105. Section 6 of Public Act 13-303 (codified at CGS §16a-3g), which allows the Commissioner of DEEP to solicit proposals from providers of Class I renewable energy sources in coordination with other states in the ISO-NE region, was upheld as constitutional by the federal courts. (Council Administrative Notice Item No. 20 – *Allco Fin. Ltd. v. Klee*)

Power Purchase Agreement

106. CS has a PPA to sell the electricity that would be generated by the proposed project to the following Massachusetts utilities: National Grid, Eversource/WMECO, Eversource/NSTAR, and Unitil. (CS 2, response 2)
107. Under CS' PPA, the RECs and electrical energy are sold to the utilities in a bundled package. (Tr. 4, p. 109)

108. Since the proposed project was not selected by DEEP, PURA did not review the final PPA. The PPA was filed with the Massachusetts Department of Public Utilities (MDPU) for review on or about September 20, 2017. The PPA is pending final approval by the MDPU. There are no provisions for extending the PPA after its 20-year term. (Tr. 1, p. 13; Tr. 3, p. 16; Tr. 4, p. 110; CS 2, response 3)

Public Benefit

109. 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. (Conn. Gen. Stat. §16-50p(c))
110. Public Act 05-1, An Act Concerning Energy Independence, established a rebuttable presumption that there is a public benefit for electric generating facilities selected by the Department of Public Utility Control (DPUC, now known as PURA) in a Request for Proposals. (Public Act 05-1)

Project Alternatives

111. CS investigated alternative site parcels for the proposed project as follows:
- a) **Kimberly Clark Property, Route 7, New Milford** – This property consists of a closed landfill and adjacent unused farm and forest area, but is not large enough to accommodate a 20 MW solar array. There are also Prime and Statewide Important Farmland soils mapped for this property, the potential for the occurrence of endangered species, extensive wetland areas and high visibility to Route 7 traffic and abutters;
 - b) **Private Farmland, New Milford** – This property consists of over 122-acres of working farm surrounded by residential uses, but is not large enough to accommodate a 20 MW solar array. There are steep grades, significant wetlands and high visibility to abutters;
 - c) **Pickett District Road, New Milford** – This property is under contract for sale with an affiliate of New Milford Clean Power, but is not large enough to accommodate a 20 MW solar array;
 - d) **Candlelight Valley Country Club, 401 Danbury Road, New Milford** – This property consists of 129 acres, but is in the 100-year flood elevation with extensive wetlands. The total feasible buildable area would be less than 40 acres and it would be highly visible to abutters. (CS 12, response 111)
112. CS considered use of the Century Brass site, a 72-acre brownfield in New Milford, but it is not large enough to accommodate a 20 MW solar project, contains significant wetland areas and at the time of the investigation, this parcel was under contract to Panda Power, Inc. (CS 12, response 112)
113. CS did not evaluate the roughly 100 to 200 acre New Milford Landfill as a possible solar facility site. However, it is not known who the landowner of the New Milford Landfill is or whether or not the property is available for use for a solar facility. (Tr. 4, p. 122; Record)
114. The open field area off of Candlewood Mountain Road was avoided for solar development because of visibility concerns. The area is approximately 5 acres. If some of the panels were moved onto the open field area, there could be some reduction in the amount of forested area to be cleared and some reduction in the amount of solar arrays in the northern portion of the project site. (Tr. 3, pp. 32-33)
115. DOAg suggested a clustered low impact development with rooftop solar, passive solar or geothermal on a portion of the property with the remaining areas of forestland, wetlands and farmland protected with a conservation easement. (DOAg 2, response 19; Tr. 3, p. 116)

116. Rooftop solar would not be a feasible alternative because of the proposed project size and acreage required. (Tr. 3, p. 14)
117. The proposed site is the only site CS was able to secure that had willing landowners, adequate acreage and close proximity to existing electrical infrastructure. (Tr. 3, p. 13)

Site

118. The proposed site is located on the southern flank of Candlewood Mountain. Located to the east is Candlewood Lake. To the north of the site is forested. To the northeast is Route 7. To the west and southwest is Candlewood Mountain Road. (CS 1, Environmental Assessment, p. 1 and Figure 9)
119. The approximately 163-acre array parcel (number 26/67.1) that would contain the solar array is located off of Candlewood Mountain Road and currently owned by Wells Fargo Bank NA. The proposed property owner would be New Milford Clean Power. (CS 1, p. 9 and Tab 12; Tr. 3, p. 157; Tr. 4, p. 71)
120. CS possesses a lease option with New Milford Clean Power, LLC for the property to utilize the property for a solar project. (Tr. 1, pp. 12-13)
121. CS' electrical interconnection route would cross the eastern portion of the array parcel and then two additional parcels (numbers 9/6 and 34/31.1) owned by FirstLight Hydropower (FirstLight). (CS 1, p. 10 and Tab 12)
122. The proposed site is undeveloped and partially wooded with hay fields/horse pasture in the southern portion of the array parcel. Existing utility corridors cross the interconnection parcels. (CS 1, Environmental Assessment, p. 2)
123. Existing land use directly to the north of the array parcel is undeveloped forest. To the east of the solar array site is primarily undeveloped forested areas. Farther to the east/southeast of the solar array site is Candlewood Lake. Land uses immediately south of the solar array primarily consist of wooded/forested areas. To the west are single family residences located along Candlewood Mountain Road. (CS 1, response 4)
124. The large majority of the forested areas around the site were cleared, open fields as of the 1930s/1940s and have since had regrowth of forest. The same is true of the wooded areas on the site itself. There are also remnant stone walls in these wooded areas. (CS 1, response 4)
125. The subject property is located in New Milford's MPRDD #1. (CS 1, Environmental Assessment, p. 12)
126. The two FirstLight parcels that the interconnection corridor would pass through are located in the Industrial (I) and Residential (R-80) zones. (CS 1, Environmental Assessment, p. 12)
127. In the PILOT Agreement, New Milford Clean Power, LLC agrees to voluntarily terminate the MPRDD zoning that currently applies to the subject property and work with the New Milford Zoning Commission to change the zoning to R-80. Under Section 020-010 of the Town Zoning Regulations, a R-80 zone requires a 50-foot minimum yard setback from the front, rear and side corner and a 40-foot minimum setback from the side. (CS 1, Environmental Assessment, p. 12; CS 1, Tab 5 - PILOT Agreement, p. 6; CS 21, response 6a(f); Tr. 5, p. 9)

128. New Milford Clean Power, LLC, prospective land owner, had initial discussions with local non-profit conservation groups to establish a permanent conservation easement for a portion of parcel 26/67.1 that is not being used for solar. (CS 3b, p. 18)
129. The MPRDD zoning was established for the subject property approximately 12 years ago to allow for the potential development of a large scale, high-density, multi-story residential complex. Plans for a 508-unit active adult residential development (known as Dunham Farms) were submitted to the Town of New Milford in 2007, but approval was not granted by the Town, and thus, the Dunham Farms project did not go forward. (CS 2, response 10)
130. The application for final site plan approval for the Dunham Farm housing development was denied by the Town Zoning Commission partially on the basis that it proposed encroachments onto the neighboring property to the north, eliminated a vegetated buffer and failed to provide sufficient landscaping details. (Town 9, response 4)
131. There are no current plans pending with the Town for development of the Dunham properties located at 195 Candlewood Mountain Road and the undeveloped parcel south of the solar project property boundary. (Tr. 5, pp. 87-88, 116-125)
132. The rear of the property at 195 Candlewood Mountain Road is entirely treed upgradient along approximately 20% slopes with ledge and outcrops to the western property boundary of the project site and beyond. The tree line along the property boundary is 300-400 linear feet. (Council Administrative Notice Item No. 103, 1/8/19 Transcript, pp. 53-58, 80-81, 136-142; RCM 11, response 1, Tab C; Tr. 5, p. 118, 121)
133. The undeveloped Dunham parcel northwest of the solar project property boundary contains wetlands in the west and 15-45% slopes in the east. (Tr. 5, pp. 121-125)
134. The closest off-site residence structure is a guesthouse located at 183 Candlewood Mountain Road at a distance of approximately 350 feet to the proposed revised project perimeter fence. The distance from the guesthouse to the revised (approved) project limit of work is 280 feet. (CS 13c, p. 5; CS 21, response 6(b); Tr. 5, p. 22; Council Administrative Notice Item No. 103, 12/4/18 Transcript, pp. 30-33)
135. The residential structure at 185 Candlewood Mountain Road is located 525 feet from the revised (approved) project limit of work. The property line at 185 Candlewood Mountain Road corresponds to the revised (approved) project limit of work. (CS 21, response 3, Figure 1)
136. The residential structure at 195 Candlewood Mountain Road is located 160 feet from the existing access road. The property line at 195 Candlewood Mountain Road is located 20 feet from the existing access road. There are trees on either side along the path of the existing access road. (CS 21, response 3, Figure 1; Council Administrative Notice Item No. 103, 12/4/18 Transcript, pp. 129-133; Tr. 5, p.18)

Project Description

137. The originally proposed project consisted of a solar photovoltaic electric generating facility consisting of 75,000 fixed solar panels at approximately 350 Watts direct current (DC) each, for a total of about 26.5 MW DC. The originally proposed solar panels were oriented an angle of 15 degrees above the horizontal. See Figure 1. (CS 1, p. 11 and Sheet E-100; Tr. 4, p. 117)

138. On October 24, 2017, the Petitioner submitted revised site plans. Specifically, the solar array has been reduced in physical size/footprint to allow the project and associated area of disturbance to avoid undisturbed slimy salamander habitat and to increase the size of the undisturbed buffer around the cryptic vernal pools. The revised array layout would also provide a buffer around an area of archaeological sensitivity. The revised layout will be considered the proposed layout for subsequent Findings of Fact. (CS 13a, p. 2; CS 13c, p. 4)
139. Along with the proposed revised project, the developer of the parcel hosting the project, New Milford Clean Power, LLC, would deed approximately 100 acres (located on the project parcel as well as on adjacent parcels also controlled by the developer) to a local land conservation trust as permanently conserved land. This area to be set aside would encompass the area of three vernal pools and associated prime slimy salamander habitat immediately to the north and east of the area to be used for the project. The area to be placed into conservation would include the location of the summit of Candlewood Mountain which is also the terminus of the “Blue Trail.” The 100-acre area includes, but is not limited to, Wetlands I, III and V, the buffers for Wetlands III and V, and the Critical Terrestrial Habitat areas for vernal pools associated with Wetlands I and V that are not located within the solar footprint. See Figure 8. (CS 13a, p. 4; CS 15 – Conservation Restriction Area)
140. This proposed revised project would consist of approximately 60,000 fixed solar panels at approximately 400 Watts each, for a total of approximately 24 MW DC, and the total AC power output would remain unchanged at 20 MW AC. See Figure 2. (CS 1, p. 11; CS 13a, pp. 2-3)
141. The solar panels would be installed in linear arrays on racking systems generally in an east-west orientation with the panels facing the south. The proposed revised project has the solar panels oriented at an angle of approximately 12 degrees above the horizontal. (CS 13a, p.2 and Sheet E-100)
142. The reduction in the angle from 15 degrees to 12 degrees reduces row-to-row shading and facilitates a smaller project footprint because the solar panel rows can be placed closer together. (Tr. 3, pp. 14-15)
143. Shading extents are the cross-hatched areas depicted on the shading analysis that experience shading at certain times of day from the surrounding trees that would be left in place on and off the solar project property. See Figure 9. The shading analysis does not apply to screening. (CS 21, response 10, Attachment D; Tr. 5., pp. 28-30, 41-44)
144. Redesign of the solar array would have to account for some loss of capacity due to shading loss. CS accepts loss of production due to portions of the solar array being shaded. (CS 21, response 10; Tr. 5, pp. 26-30)
145. The proposed revised project would include an approximately six-foot to eight-foot wide aisle between solar racking systems. This would be the minimum spacing distance to allow for access, maintenance and shading effects. (Tr. 3, p. 15)
146. There would be up to 8 inverters to convert the DC power produced by the solar panels to AC power. The AC voltage would be boosted to 13.8 kilovolts (kV) by transformers located next to the inverters. Inverter and transformer skids would be placed on concrete pads. The inverters and transformers would have heights of approximately 92 and 82 inches, respectively. (CS 13a, Sheets E-100 and E-101; CS 1, pp. 11 and 18; CS 2, response 24)
147. No energy storage system is proposed at this time. (CS 2, response 20)

148. The ground beneath the solar arrays would be planted with seed mixtures according to DEEP guidelines. (Tr. 4, p. 112)
149. The top of the solar arrays would reach a height of approximately six feet. The bottom of the solar arrays would be located approximately 30 inches above grade. (CS 11, response 108)
150. The proposed facility would be surrounded by a seven-foot tall chain link fence without an anti-climb design. A gap at the bottom of the fence (for wildlife passage purposes) is not proposed. (CS 1, Environmental Assessment, p. 15; CS 2, responses 13 and 36; Tr. 3, p. 22)
151. A roughly 1,316-foot existing dirt access road off of Candlewood Mountain Road **that has been historically used to access the fields at the top of the parcel** would be improved for use during construction and operation of the project by installing 12 inches of graded gravel. (CS 13a, Sheet E-100; CS 2, response 26; CS 1, pp. 11-12; CS 1, Environmental Assessment, p. 1; **Tr. 5, p. 18**)
152. Since the array layout and associated disturbed area has been reduced to decrease the potential impact on habitat areas, the site and stormwater designs would be modified by the Petitioner. (CS 13b)
153. The Petitioner contends that the proposed revised project's site and stormwater designs would comply with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* (2002 E&S Guidelines). (CS 13b)
154. The Petitioner contends that the proposed revised project's stormwater design would be designed to comply with the *2004 Connecticut Stormwater Quality Manual* (2004 Stormwater Manual). (Tr. 4, p. 111-112)
155. The Petitioner contends that it has minimized the land area necessary to achieve its electrical capacity target. (Tr. 3, p. 19)
156. CS has a commitment to a 20 MW capacity target under its PPA as well as under its selection in the Tri-State RFP. (Tr. 3, pp. 19-20; CS 13a, p. 3; Council Administrative Notice Item No. 38)
157. The total estimated cost of the proposed revised project would be roughly \$40,000,000. (Tr. 3, p. 90)

Electrical Interconnection

158. The electrical interconnection route would originate near the eastern-most edge of the solar array*. The interconnection route would run through wooded areas as it traverses from west to east and to the north of the dam on the FirstLight property. The route would then turn along an existing paved access road and turn east to run along an existing, already cleared access way owned by FirstLight.

*In the proposed revised project, a portion of the electrical interconnection corridor immediately east of the facility was slightly altered to follow an existing old road cut. (CS 1, p. 10; CS 13a, pp. 2-3 and Sheet E-100)
159. The approximately 7,000-foot long electrical interconnection corridor would be cleared to a width of approximately 30 feet and would not be fenced. (CS 1, Environmental Assessment, Tab E, SHPO Project Cover Form; CS 3b, p. 6; CS 2, response 36)

160. The interconnection route would have two three-phase 13.8-kV conductors on poles approximately 45 to 55 feet in height. (CS 1, p. 11; CS 2, response 31; Tr. 1, pp. 17-18)
161. An underground interconnection route would be difficult to construct, and thus, the Petitioner prefers an overhead interconnection route. (Tr. 1, p. 20; DEEP Letter dated September 21, 2017)
162. The interconnection line would connect to Rocky River Substation located on the north or opposite side of Kent Road (Route 7). The interconnection line crossing of Route 7 would be underground, subject to final confirmation from Eversource. (CS 2, responses 3 and 31; CS 13a, Sheet E-100)
163. CS would apply for a CDOT Highway Encroachment Permit, as necessary, for work it conducts within the Route 7 right-of-way. (Tr. 1, pp. 16-17)
164. The interconnection study is currently about four months behind schedule. (CS 11, response 80)
165. Eversource would present the project to the ISO-NE Reliability Committee once the final impact study reports are completed. (CS 3, response 33)

Project Construction

166. A Construction General Permit (General Permit) from DEEP would be obtained before commencement of construction activities. (CS 2, response 68)
167. The proposed construction sequence would be the following:
- a) Improve the **existing** access road to the site from Candlewood Mountain Road with the installation of erosion control measures;
 - b) Clear wooded areas and conduct grading along with installation of temporary stormwater and erosion control measures;
 - c) During the site preparation, racking and solar panels would be delivered;
 - d) Commence interconnection work as soon as site preparation is complete and perform this work in parallel with array construction (as noted below);
 - e) Install solar array racks starting at the northern portion of the array and work towards the south;
 - f) Install solar panels from the northern portion of the array and work towards the south; and
 - g) Install the balance of system such as trenching, wiring and installation of inverters, transformers and fencing.
- (CS 2, response 66; **Tr. 5, p. 18**)

168. Of the approximately 163 acres on the subject property (plus the interconnection corridor properties), the development areas and the tree clearing areas for the originally proposed project versus the proposed revised project are listed below.

Component	Previous Total Area	Previous Forested Area to be Cleared	Revised Total Area	Revised Forested Area to be Cleared
Solar Array Limit of Work (LOW)	84.42	68.52	67.9	51.55
Fenced Solar Array	67.04	57.1	54.55	38.92
Electric Interconnect Route	4.57	4.3	4.83	4.52
Access Road	0.43	0	0.43	0
Temporary Construction Parking and Equipment / Material Storage Area	0	0	5	0
Total Area	89.42	72.8	78.16	56.07

(CS 1, p. 9 and Tab 12; CS 13c, p. 11)

169. The proposed access drive from Candlewood Mountain Road would also serve as the construction access. A stabilized construction exit would be installed to minimize sediment tracking onto the public roads. (CS 2, response 71)
170. Clearing, stump removal and limited grading would be performed such that the total area of disturbed, exposed ground surface contributing to stormwater runoff to a common point would not exceed five acres at a time. Once an approximately five-acre sub-area has been stabilized, work at the next downgradient sub-area can begin. (CS 1, Erosion and Sediment Control Plan, pp. 2, 5)
171. Minimal grading within the footprint of the array would be required where slopes exceed the maximum allowable slope for the racking equipment. Grading would also be required to implement construction phase best management practices (BMPs) for erosion and sedimentation control which would be converted to permanent stormwater quality BMPs to maintain water quality after construction. (CS 2, response 63)
172. RCM reviewed the erosion control plan and expressed several concerns as noted below:
- RCM did not see a phasing plan that adequately outlines the proposed phases;
 - The plan has phases being stabilized and then being redisturbed. The Petitioner should consider installing the solar arrays as soon as the area is prepped to avoid disturbing the area again. Areas smaller than 4.9 acres should be considered, especially on sloped areas;
 - The plan calls for importing topsoil. The Petitioner should address the risk of spreading invasive species to the site from such imported soils. Also, an on-site invasive species plan to eradicate invasive species and keep them from spreading should be implemented;
 - The planting season is normally in the spring and fall. Seeding in the summer, as proposed, is not recommended because it is very difficult to get grass to grow in the summer. Also, once established, the grass would have to be re-disturbed to install the solar panels. RCM

contends that it would be very difficult to maintain the grass during the installation of the solar panels.

- e) There is no inspection of the swales proposed on a year-round basis during construction. They should also be inspected prior to a forecasted rain event. This would identify any problem areas that may fail, and repairs could be made accordingly;
- f) There are no plans to prevent calcium chloride (used for dust control) from getting into the lake and watercourses;
- g) CS' plan mentions the need for washing trucks, but it contains insufficient detail on how and where truck washing would occur;
- h) The rip rap inlet and outlet detail assumes one size fits all pipe sizes. Also, there is a no depressed area to reduce velocity as is normally on such a detail;
- i) Due to the scale of the overall site plan, the location of the erosion controls cannot be seen, if they are included. Erosion controls, sediment traps, and soil stockpile locations should be depicted;
- j) The grades along the electrical interconnection corridor are steep. A detailed erosion control plan (for both during construction and for the long term) should be required. It would be expected that the area would be subject to periodic inspection, and it should be explained how the inspections would occur; and
- k) The overall site plan shows gravel access roads going approximately perpendicular to the contours. CS should explain how these roads would be handled on a long term basis.

(RCM 6c – Pre-filed Testimony of Russell Posthauer, P.E., p. 1-2)

173. CS responded to RCM's erosion control plan concerns as follows and as corresponds to FOF #172 above:

- a) CS met with DEEP and will be working to complete a phasing plan for DEEP's review;
- b) These details related to construction phasing are not complete at this time, and such details would be part of the phasing plan;
- c) If topsoil is imported, there would be a specification provided on such soil;
- d) CS concedes that it is more difficult to grow grass in the summer, so in that case, there may be some temporary stabilization that would be required;
- e) Inspections would be performed in accordance with DEEP guidelines;
- f) Water would be used for dust control. No calcium chloride would be used;
- g) CS is unsure about the need to wash trucks, but would address this in the DEEP submittal;
- h) The final design is still being revised;
- i) This information would be provided to DEEP.
- j) This information would be provided to DEEP.
- k) This would be finalized in the design, but CS is reassessing the roads and the possibility of having them flush the existing grade. They may be some conveyances to the side with drainage swales.

(Tr. 4, pp. 113-115)

174. For the originally proposed project, there was an estimated net cut of approximately 175 cubic yards for the solar array area to address slopes that exceed the maximum allowable slope of the racking equipment and a net cut of approximately 280 cubic yards for the access road. The net cut for the proposed revised project has not yet been calculated. (CS 2, response 64; Tr. 4, p. 117)
175. The approximately six to seven foot tall screw posts would be "spun" into the ground using a self-propelled screw drilling machine, leaving about four to six inches exposed above grade. In the event that ledge is encountered, no chipping or blasting would be performed; the rock would be pre-drilled with diamond drill bits before the screw post is drilled into the rock. Relocation of posts due to ledge would not be necessary. (Tr. 1, p. 20; CS 2, response 61 and 65)

176. CS is considering potentially utilizing the existing hay/horse pasture located along Candlewood Mountain Road for parking and equipment and material storage during construction. Upon completion of construction, the hay/horse pasture would be seeded and/or mulched as necessary and allowed to return to existing conditions. (CS 13c, p. 11)
177. If the proposed revised project is approved, CS would commence construction in approximately February or March of 2018. CS seeks to complete construction in early 2019, but no later than mid-2019, in order to control project costs and leave a time “buffer” for unexpected delays and still meet its commercial operation date of September 30, 2019 in accordance with its PPA. (CS 11, response 80)
178. The estimated construction period is approximately 12 months. (CS 21, response 12)
179. It is anticipated that during construction an average of 20 trucks per day will enter and exit the site. Once construction is complete, 1 truck per month or less will enter and exit the site for routine inspections and maintenance. (CS 21, response 6c)
180. CS would comply with the construction hours as specified in the Town of New Milford Zoning Commission comments dated September 11, 2017. Specifically, the construction hours would be expected to be Monday through Friday between 7:30 a.m. and 5:30 p.m. and Saturdays between 7:30 a.m. and 12:00 p.m. (Tr. 1, p. 21; Town 5, p. 2; CS 2, response 67; Tr. 3, p. 75)

Traffic

181. CS anticipates that construction vehicles for the solar facility would utilize Candlewood Mountain Road. The maximum number of construction vehicles to visit the proposed site during a given day while the project is under construction would be 50, but the average would be closer to five. (CS 2, response 79)
182. CS anticipates that construction vehicles for the electrical interconnection work would utilize Route 7 via the FirstLight property. The total number of construction vehicles for this portion of the project would be less than five trucks per day. (CS 2, response 79)
183. After the solar plant is operational, approximately one or two pickup trucks would be expected to visit the site an average of three to four times per year. (CS 2, response 79)

Facility Operation

184. The project parameters, including the original 15 degree angle of the panels above the horizontal, were selected to maximize energy production. However, the proposed revised project reduced this angle to 12 degrees, and the number of solar panels were reduced. Thus, the proposed revised project results in a reduction in electrical energy production of about 3,000,000 kWh per year versus the originally proposed project. (CS 2, response 18; CS 13a, pp. 2-3)
185. The estimated capacity factor of the proposed revised project would be approximately 14.7 percent. (CS 1, p. 20; CS 13a, p. 3)
186. The proposed revised project would be expected to produce approximately 31,000,000 kilowatt-hours (kWh) or 31,000 MWh of AC electrical energy per year. (CS 13a, p. 3)

187. As the solar panels age, power output would decline by roughly 0.5 percent per year. (Tr. 3, pp. 18-19)
188. The proposed solar facility would be expected to have a service life of at least 20 years. (CS 1, p. 19)
189. CS would own and operate the solar facility for the 20 year PPA term. (CS 1, p. 9)
190. Black start capability is the capability of a power plant to start generating electricity by itself without any outside source of power, such as during a blackout. The proposed facility would not be a black start facility. (Council Administrative Notice Item No. 49 – Council 2014/2015 Forecast Report, p. 53; Tr. 4, p. 11)
191. The solar facility cannot operate as an independent microgrid. If grid power is lost, the facility would not be able to supply power. The solar facility's protection system would shut the plant down during a grid outage for safety purposes. (Tr. 3, p. 65-66)

Project Decommissioning

192. The proposed solar facility would be decommissioned after 20 years. A decommissioning plan has not been finalized. CS would finalize the plan once a decision on this Petition is rendered by the Council. (CS 1, p. 20; CS 12, response 82)

Public Safety

193. The proposed project would comply with the National Electrical Code (NEC 2017) and all applicable safety and fire protection codes and standards. (CS 2, response 34; CS 1, Environmental Assessment, p. 32)
194. CS would train emergency responders as to how to handle an emergency at the solar plant. (Tr. 3, p. 20; CS 2, response 46)
195. The access road has been designed to accommodate a typical, roughly 40-foot long fire truck. (Tr. 3, p. 70)
196. There would be lock box/key box that emergency responders could access to shut down the entire solar facility in the event of an emergency. First responders would have the key*, unless the Town requests a different key holder.

*A code might be used in lieu of key. (Tr. 3, p. 20; Tr. 4, pp. 104-105; CS 2, response 46)

197. In the event of a fault within the facility, the system would have all protection systems including fuses, breakers, and reclosers that would isolate a section of the array or the entire plant if necessary. (CS 2, response 34)
198. All of the solar panels would be inspected upon manufacture. CS has no concerns regarding the reliability of the 400 Watt solar panel. (Tr. 4, p. 118)
199. The solar panels are designed for a wind pressure of 112 pounds per square foot on the front of the panels per the International Electrotechnical Commission (IEC) 61215 standard. This would be equivalent to approximately 155 miles per hour based on the original angle of 15 degrees. (CS 2, response 10)

200. Snow would be allowed to accumulate on the panels and naturally slide or melt off of the panels. The racking system that would support the solar panels would be designed to accommodate the snow load in accordance with applicable American Society of Civil Engineers, International Building Code and Underwriter Laboratories standards. (CS 2, response 72)

Aviation Safety

201. Candlelight Farms Airport is located roughly 0.5 miles west of the solar project. (CS 1, Environmental Assessment, p. 32; CS 2, response 43)
202. By letters dated July 17, 2017 and August 29, 2017, the Federal Aviation Administration (FAA) issued Determinations of No Hazard to Air Navigation (No Hazard Determinations) for the originally proposed project based on CS' filings for the center and various corners of the project and utility interconnection poles. The No Hazard Determinations require that CS provide notice to the FAA within 5 days after construction reaches its greatest height. (CS 8, No Hazard Determinations, p. 1)
203. The No Hazard Determinations expire on January 17, 2019 and February 18, 2019, respectively, unless construction commences or it is extended/revised by the FAA. (CS 8, No Hazard Determinations)
204. The No Hazard Determinations are based on the height and location of the proposed facility, not glare-related issues. (Tr. 1, pp. 15-16)
205. CS contends that the existing FAA No Hazard Determinations are still applicable for the proposed revised project because the height of the proposed revised project is essentially the same. On April 12, 2018, the FAA issued a Determination of No Hazard to Air Navigation for the revised project layout that expires on October 12, 2019 unless construction commences or it is extended/revised by the FAA. (Tr. 3, p. 21; CS 21, response 6e, Attachment 2; Tr. 5, p. 20)
206. No marking or lighting is required for aviation safety, except for three specific locations identified as North Point 1, North Point 2, and NE Point. As a condition of the FAA No Hazard Determinations, these three select northern corner points (associated with the originally proposed project) would require FAA marking/lighting (e.g. red aviation safety lighting) at a height of about 10 feet above ground level. (CS 8, No Hazard Determinations, p. 1)
207. Existing terrain in proximity to the locations to be marked/lighted is of greater height than the solar facility proposal. As a comparison, the solar facility would be approximately eight feet tall at its maximum height (i.e. the top of the inverters), and the average existing tree canopy height at the proposed site is estimated to be between approximately 90 and 100 feet. The average height of the existing tree canopy outside of the solar array property is estimated to be between approximately 80 and 100 feet. (CS 8, No Hazard Determinations, p. 4; CS 1, Environmental Assessment, p. 7; Tr. 3, p. 23; CS 11, response 108; CS 2, response 24; Tr. 5, pp. 81-82)
208. FAA requires a glare analysis for on-airport solar development at federally obligated airports. Federally obligated airports are airports that receive federal funding. FAA recommends that the design of any solar installation at an airport consider the approach of pilots and ensure pilots will not have to face glare that is straight ahead of them or within 25 degrees of straight ahead during the final approach. (Council Administrative Notice Item Nos. 17-19)

209. FAA does not require a glare analysis for this project. Notwithstanding, a glare analysis has been performed using the Solar Glare Hazard Analysis Tool developed by Sandia National Laboratory.* The analysis shows that the glare hazard is minimal and at acceptable levels for safe airport operation.

*Sandia National Laboratories is a federally funded research and development center under contract with the the U.S. Department of Energy.

(Tr. 1, p. 16; Tr. 3, p. 78; CS 1, p. 26; Council Administrative Notice Item Nos. 17-19)

210. CS contends that the glare analysis conclusions are still applicable to the proposed revised project. (Tr. 3, p. 22)

211. On January 5, 2018, CS conducted a second glare analysis for the revised (approved) project. Under the FAA policy, yellow glare is glare with potential to cause flash blindness when observed prior to a typical blink response time and green glare is glare with low potential to cause flash blindness when observed prior to a typical blink response time. The results indicate for both the northern and southern flight paths at Candlelight Farms Airport there is no yellow or green glare. (CS 21, Attachment C; Council Administrative Notice Item Nos. 17, 18, 19; Council Administrative Notice Item No. 103, 1/8/19 Transcript p. 131; Tr. 5, p. 20-21)

212. A crane would be needed for certain tasks such as off-loading equipment pallets and for installing/mounting the inverters and transformers. CS and its contractors would provide notice to the FAA as appropriate for crane use. (CS 2, response 44)

Environmental Effects

Air Quality

213. During operation, the proposed project would not produce air emissions of regulated air pollutants or GHGs. Thus, no air permit would be required. (CS 1, Environmental Assessment, p. 16)
214. The Petitioner contends that the project would meet DEEP air quality standards. (CS 1, p. 6)
215. Given the loss of carbon dioxide sequestration due to tree clearing versus the net carbon dioxide emissions reduction resulting from the solar facility displacing existing fossil fueled generation in the grid portfolio, the annual “carbon debt payback period,” on average, would be less than one day of solar facility operation. (CS 2, response 48; CS 13c, p. 5-6)

Water Quality

Hydrology

216. The Petitioner contends that the proposed project would meet DEEP water quality standards. (CS 1, Environmental Assessment, p. 1)
217. The proposed project would not consume water during its operation. (CS 1, p. 25)
218. No work is proposed within the 100-year or 500-year flood zone. (CS 2, response 58; CS 1, Environmental Assessment, Figure 5; CS 13a, Sheet E-100)

219. The proposed revised project would not be located within a DEEP-designated Aquifer Protection Area (APA). (CS 2, response 55; Council Administrative Notice Item No. 116 – DEEP APA Map of New Milford)
220. A portion of the project area is located within the Candlewood Lake Watershed District (CLWD). (CS 1, Environmental Assessment, p. 12)
221. The groundwater depth at the proposed site ranges from 18 to 37 inches. The Petitioner contends that no impact to groundwater would be expected. (CS 2, response 61; Tr. 3, p. 72)
222. Groundwater at the proposed site is classified as Class GA according to DEEP. Class GA-designated uses include existing private and potential public or private supplies of water suitable for drinking without treatment and base flow for hydraulically-connected surface water bodies. (CS 1, Environmental Assessment, p. 11)
223. No impacts to public drinking water supplies would be expected. (CS 1, Stormwater Management Report, p. 4)
224. Construction of the proposed project would not be expected to impact private wells. (CS 2, response 55)
225. The solar panels would not require regular cleaning or other similar maintenance. (CS 2, response 75)

Stormwater

226. DEEP retains final jurisdiction over stormwater management. Both CS and DEEP acknowledge the requirement for the project to obtain a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit). (DEEP September 21, 2017 correspondence; CGS §22a-430b; DEEP September 19, 2017 Responses to Town of New Milford Interrogatories; CS 1, Environmental Assessment p. 16)
227. CS submitted an application for a General Permit to DEEP that was rejected without prejudice on or about March 14, 2019. CS is revising the stormwater management plans and the proposed project limits of work (LOW) to address specific DEEP comments related to stormwater management. Once CS secures a General Permit from DEEP, CS would request approval of the revised Development and Management (D&M) Plan from the Council. (RCSA §16-50j-62; CS 21, response 3; CS 21, response 6a(d); Tr. 5, pp. 51-52, 54-58, 71-73)
228. CS would modify the stormwater design to accommodate the proposed revised project in accordance with the General Permit, 2002 E&S Guidelines and 2004 Stormwater Manual prior to construction. (CS 13b)
229. CS would comply with the recommendations from DEEP outlined in “Stormwater Management at Solar Farm Construction Projects” dated September 8, 2017. (Tr. 3, pp. 25-26; DEEP Stormwater Recommendations received September 21, 2017)
230. In accordance with DEEP General Permit guidelines, stormwater design components would be installed in five-acre stages to control stormwater flows onto adjacent properties during construction. (CS 2, response 69)

231. The Petitioner contends that solar panels themselves are not considered impervious areas because they are elevated above the ground, and stormwater would run under the panels. CS would not be installing paved roads and housing. Thus, in terms of impervious area, CS' project would be very different from a housing development project. (Tr. 3, pp. 26-27)
232. RCM reviewed the preliminary stormwater drainage calculations and expressed several concerns as noted below:
- a) In general, the post-construction drainage calculations do not take into account the placement of the solar panels on the site;
 - b) The Time of Concentration (Tc), a critical part of any drainage calculation, has been determined ignoring the solar panel locations. By creating a longer Tc, the amount of post-construction flows is under-estimated. A shorter Tc increases estimated runoff;
 - c) The increase in impervious area, associated with the gravel roads, did not appear to be incorporated into the calculations. The absence of such factor decreases the drainage flow for the post-construction condition. The location of the gravel roads would also affect the Tc, further reducing number;
 - d) The solar panel areas would be equivalent to being impervious. Additionally, any vegetative growth (under the solar panels) would be expected to be poor and not as good as indicated in the calculations. Poor vegetative growth would be expected to substantially increase the stormwater flow off the site. It would affect Tc by further reducing it.
- (RCM 8 – Supplemental Pre-filed Testimony of Russell Posthauer, P.E., p. 1)
233. CS responded to RCM's stormwater drainage calculation concerns as noted below.
- a) CS takes into account the solar panels and the areas that they would be placed in. Specifically, the curb number (e.g. factor that takes into account the surface and whether rain would infiltrate or not) would change;
 - b) The Tc is defined as the most distant point in the watershed area to the final point, and it is taken into account. CS disagrees that the panels should be considered impervious because they are not in direct contact with the ground;
 - c) The gravel roads have been taken into account. CS clarified with DEEP that gravel roads need to be considered impervious. CS' software model has different numbers for gravel versus paved, but in the final analysis, the gravel access drive would be modeled as impervious; and
 - d) The panels are placed on racks, and there are gaps between each of the panels. Thus, CS contends that it is not a situation where all of the rain hitting a rack flows to the drip edge. Rain does go between each solar row, and it is CS' experience that vegetation growth is actually better under the panels because of its shading from the sun, versus being burned by direct sun in open areas. (Tr. 3, pp. 28-33)
234. The Petitioner contends that post-construction discharge rates associated with the proposed revised project would be no greater than the existing discharge rates. (Tr. 3, p. 26)

Wetlands and Watercourses

235. The Inland Wetlands and Watercourses Act (IWWA), CGS §22a-36, *et seq.*, contains a specific legislative finding that the inland wetlands and watercourses of the state are an indispensable and irreplaceable but fragile natural resource with which the citizens of the state have been endowed, and the preservation and protection of the wetlands and watercourses from random, unnecessary, undesirable and unregulated uses, disturbance or destruction is in the public interest and is essential to the health, welfare and safety of the citizens of the state. (CGS §22a-36, *et seq.*)

236. The IWWA grants regulatory agencies with the authority to regulate upland review areas in its discretion if it finds such regulations necessary to protect wetlands or watercourses from activity that will likely affect those areas. (CGS §22a-42a)
237. The IWWA forbids regulatory agencies from issuing a permit for a regulated activity unless it finds on the basis of the record that a feasible and prudent alternative does not exist. (CGS §22a-41)
238. Wetland surveys were conducted in December of 2016 and May of 2017 that identified nine wetland areas and associated watercourses at the project area and along the electric interconnection route. No wetlands or watercourses would be directly impacted by the installation of the proposed facility. See Figure 6. (CS 1, Environmental Assessment, pp. 4, 5)
239. Approximately 0.05 acres of tree clearing would be necessary in wetland areas. Wetlands VI, VII, VIII and IX would be converted from forested wetlands to emergent and/or shrub wetlands to allow for vertical clearance for the proposed electric utility line. (CS 13c, p. 9)
240. The proposed facility fence line would be approximately 64 feet from Wetland III and approximately 470 feet from the watercourse associated with Wetland I. (CS 13c, pp. 9, 10)

Vernal Pools

241. There are three vernal pools at the project site. One in Wetland V and two cryptic vernal pools within Wetland I. Construction of the project would not directly impact any of the vernal pools or the 100-foot vernal pool envelopes. (Tr. 2, p. 32)
242. Both cryptic vernal pools have characteristics of having been manipulated during agricultural use of the land. The two pools are joined by a subtle stream. Both pools have a maximum depth of approximately one-foot. (CS 11, Attachment 1)
243. The vernal pool envelope (VPE) is the area within 100 feet of the spring high water mark. The critical terrestrial habitat (CTH) is the area within 100 to 750 feet from the spring high water mark. (CS 1, Environmental Assessment, p. 6; CS 11, response 90)
244. Two cryptic vernal pools were delineated within Wetland I on September 30, 2017. The two cryptic vernal pools were evaluated for potential impacts together as a single system because they are both part of the same wetland. The proposed facility would completely avoid the two cryptic vernal pools and the 100-foot VPE of Wetland I. Development of the project would develop 41.4 percent of the CTH. Approximately 2 percent of the CTH of the Wetland I vernal pools is currently altered field area. (CS 11, response 90)
245. The post-development condition of the cryptic vernal pool in Wetland I exceeds the recommendation for less than 25 percent developed area within a CTH that is a guideline of Calhoun and Klemens (2002). (CS 11, response 92)
246. The nearest point of proposed construction area would be no closer than 145 feet from the cryptic vernal pools in Wetland I. (CS 11, response 93)
247. Wetland V is a Tier I vernal pool. The Wetland V vernal pool is just beyond the northern end of the project within a narrow cut between two granite outcrops. The facility would completely avoid disturbance of the vernal pool and the 100-foot VPE of Wetland V. The project would require the development of 17.3 percent of the CTH of Wetland V. (DEEP comment letter dated September 21, 2017; Tr. 1, p. 47; CS 11, response 90)

248. Since the CTH of the vernal pools associated with Wetland I overlap with the CTH of the vernal pool associated with Wetland V, the two systems were assessed together. As a single system, the CTH is approximately 94.6 acres and the development area of the single system CTH is approximately 29.9 acres or 31.6 percent. (CS 11, response 90)
249. None of the vernal pools at the site have been examined for obligate vernal pool species during peak breeding season. The habitat interior to the VPEs of Wetland I is slightly more diverse than that of Wetland V. (Tr. 2, p. 34)

Visibility

250. Property owners have no right to an unobstructed view from structures built on adjacent property except where there is an express statutory provision or there is a contract or restrictive covenant protecting the private right to a view or vista. (Council Administrative Notice Item No. 103, 3/5/19 Transcript, p. 28; *Mayer v. Historic District Commission of Town of Groton*, 325 Conn. 765 (2017); CGS §47-25)
251. There are no express statutory provisions, contracts or restrictive covenants granting any person a private right to a view or vista across the solar project site. (Council Administrative Notice Item Nos. 102 and 103; Tr. 5, p. 20)
252. The solar panels would be black or a light or dark blue in color with an anti-reflective coating to reduce reflection as much as possible. The solar array would also be shielded in all directions by tree buffers. Shielding does not necessarily mean not visible; shielding refers to limiting or obscuring a view. (CS 2, responses 27 and 40; CS 13a, Sheets E-100; Tr. 5, p. 9)
253. Existing trees on and/or off the project property would provide a visual buffer from the solar array. There are existing forested areas in most directions on adjacent parcels (CS 21, response 7; Tr. 5, pp. 39-41)
254. The proposed LOW are in the process of being revised to provide a minimum vegetative buffer of 50 feet between the property line and the LOW. The future 50-foot buffer is based on Section 020-010 of the Town Zoning Regulations and would result in less visual impact of the facility than the revised (approved) project. (CS 21, responses 6a(b), 6c, 6d, 7, 9; Tr. 5, p. 33-35, 39-41, 61, 62, 72)
255. The LOW are basically the same as the tree clearing line. The area between the property line and the LOW will remain in a natural state. The fence line is further from the property line than the LOW. The solar array is beyond the fence line. (Tr. 5, p. 25)
256. The proposed revised LOW with a 50 foot vegetative buffer would change the visibility analysis to depict the solar panels farther away from the property lines and more vegetation (natural or supplemented) for 50 feet, which is equivalent to 1-inch to 1 ¼-inch more vegetation proportionally on the cross section illustration. See Figure 10. (Tr. 5, pp. 132-137; Town 10, Attachment C, Cross Section D)
257. CS does not propose landscape plantings around the solar facility. Where lack of screening is a concern, additional vegetative screening may be installed to further minimize visual impacts on abutting residential properties. CS anticipates planting evergreens. (CS 13a, Sheets E-100 and E-101; CS 21, responses 6a(b), 6c, 6d, 7; Tr. 5, pp. 21, 72)

258. The Town believes an evergreen buffer along the southerly border of the solar project property could be installed to block visibility of the solar panels from the undeveloped Dunham property, but it has not identified specific plant material that would be appropriate for an understory in that area. (Town 10, p. 7, Attachment A; Tr. 5, pp. 153-154; Council Administrative Notice Item No. 103, 12/4/18 Transcript, pp. 75-77)
259. The revised approved solar facility will be located between approximate elevations 728 and 918 feet above mean sea level (amsl). Land surrounding the solar project site is located between approximate elevations of 250 feet to the north and 700 feet to the west and south. (CS Attachment 2, page 22 of EA)
260. CS performed a topographic survey of the project site. All of the structures on the properties adjacent to the project site are situated at a lower elevation than the project site and the fronts of the structures face away from the solar array:
- a) Candlewood Lake is at an elevation of approximately 429 feet amsl.
 - b) 195 Candlewood Mountain Road is located at elevations approximately between 700 and 800 feet amsl. 195 Candlewood Mountain Road is in a residential zone;
 - c) 185 Candlewood Mountain Road is located approximately between elevations of 690 and 720 feet amsl. 185 Candlewood Mountain Road is in a residential zone;
 - d) The undeveloped Dunham parcel to the south of the solar project property boundary is located at elevations approximately between 640 and 810 feet amsl. The undeveloped Dunham parcel is partially in a residential zone and partially in a business zone.
 - e) Candlelight Farms Inn property is located at an elevation of approximately between 690 and 720 feet amsl. Candlelight Farms Inn is in a business zone; and
 - f) Candlelight Farms Airport is located at an elevation of approximately 675 feet amsl. Candlelight Farms Airport is in an airport zone.
- (Council Administrative Notice Item No. 122, United States Geological Survey, Connecticut Topographic Map Collection; Town 10, p. 3; CS 21, Attachment 2, page 22, FAA No Hazard Determination, p. 4; Tr. 5, pp. 18, 38, 50-51; 124-127; Council Administrative Notice No. 103, 1/8/19 Transcript p. 133; Council Administrative Notice Item No. 102)
261. The maximum height of the solar panels at a 12 degree tilt angle is 7 feet. (Tr. 5, p. 16)
262. Candlelight Farms Inn is a seasonal operation where weddings are held in buildings, tents or in an airport hangar located at Candlelight Farms Airport between May 15 and the end of October. During the winter, the airport hangar is used for equipment storage. (Council Administrative Notice Item No. 103, 12/4/18 Transcript, pp. 117-123; Council Administrative Notice Item No. 103, 1/8/19 Transcript, pp. 10-11, 77)
263. Candlelight Farms Inn is across Candlewood Mountain Road approximately 695 feet south/southwest of the project area. The solar arrays will have minimal if any direct visibility from Candlelight Farms Inn. The approximately 5-acre area proposed for temporary construction staging will be visible from the horse pasture at Candlelight Farms Inn. (CS 21, response 2, Attachment B; RCM 11, response 1, Tab F; Town 10, p. 6; Council Administrative Notice Item No. 103, 3/5/19 Transcript, p. 15; 1/8/19 Transcript, p. 17)
264. The approximately 5-acre area adjacent to Candlewood Mountain Road proposed for temporary construction staging will be restored back to preconstruction conditions as meadow/field and left as open space upon completion of construction. (CS 21, response 11)

265. The nearest public recreation area is the approximately 5,420-acre Candlewood Lake, located approximately 815 feet east of the proposed revised solar array and approximately 467 feet east of the electrical interconnection corridor. Lynn Deming Park is located on the northeastern side of Candlewood Lake (approximately 1,698 feet from the edge of the proposed revised solar array) and includes the use of the lakefront and the lake. Recreational uses associated with Lynn Deming Park and Candlewood Lake include but are not limited to swimming, picnicking, fishing, boating, kayaking, canoeing, scuba diving, and water skiing. (CS 2, responses, 11, 12 and 13; CS 13a, Sheet E-100; CS 13c, p. 2)
266. For the originally proposed project, CS does not expect that the solar array or associated electrical interconnection poles would be visible from any portion of the main body of Candlewood Lake. Moreover, CS does not expect that the changes from the originally proposed project to the proposed revised project would change the visibility from Candlewood Lake. CS also does not expect that the changes from the revised (approved) project to the future revised project would change the visibility from Candlewood Lake. (CS 2, response 13; CS 13c, p. 3; Tr. 5, pp. 24-25)
267. An approximately 100-foot section of the electrical interconnection route may be visible from the discharge canal to the northeast of Lynn Deming Park, but not from the main body of Candlewood Lake. (CS 2, response 13)
268. The relocation of a portion of the electrical interconnect route east of the facility to old road cut would not provide any new views of the electrical interconnect route from Candlewood Lake. (CS 13c, p. 3-4)
269. Under leaf-off conditions, the proposed (revised) solar array would be visible to the west, such as by Fox Run and Candlelight Farms Airport. (Tr. 4, p. 113)
270. Candlelight Farms Airport is across Candlewood Mountain Road approximately 0.4 miles southwest of the proposed access road off Candlewood Mountain Road. The airport runway is parallel with Candlewood Mountain Road. The solar arrays will be partially visible during leaf-off conditions from this location. Existing trees located along the east side of the airport would provide screening of the view when leaves are present. (CS 21, response 2, Attachment B)
271. Across Candlewood Lake, by Lynn Deming Park, the proposed revised solar array would not be visible, nor would the electrical interconnect. (Tr. 4, p. 113)
272. Lynn Deming Park and Millstone Ridge Beach are located on the east side of Candlewood Lake. The solar array will not be visible from these locations as it would be located on the western side of the mountain below the ridgeline. (CS 21, response 2, Attachment B)
273. The Housatonic Range Trail/Blue Trail System is approximately 933 feet north of the northern limit of work associated with the proposed project and approximately 963 feet north of the project fence line. Views from the trail would be screened by existing intervening vegetation. (CS 13c, p. 2; Tr. 4, pp. 115-116)

Noise

274. The primary or dominant source of noise would be the inverters. (Tr. 4, pp. 110-111)
275. The sources of noise for the proposed project would only operate in the daytime when electricity would be produced by the solar facility. (CS 2, Boaffresponse 39)

276. The proposed project would be considered Class B noise emitter, and its surrounding abutters are considered to be Class A and Class B receptors. The DEEP Noise Limit for a Class B source emitting to a Class A receiver is 55 dBA during the daytime. (CS 2, responses 38 and 39)
277. The proposed facility would be in compliance with DEEP Noise Standards because the nearest inverter is roughly 700 feet to the nearest habitable structure, and at that distance, noise levels would be below the DEEP Noise Limit of 55 dBA. (CS 2, response 39)
278. Construction noise is exempt from DEEP Noise Standards. (R.C.S.A. §22a-69-108(g))

Historic and Archaeological Resources

279. The nearest historic resource listed on the National Register of Historic Places (NRHP) to the proposed solar array is the Boardman's Bridge, located approximately 1.0 mile to the north. The nearest historic resource listed on NRHP to the electrical interconnection corridor terminus is The Flat Iron Building, located approximately 0.9 miles to the east. No adverse impacts to these NRHP resources would be expected because they are well removed from areas with potential line of sight to the solar facility. (CS 1, Environmental Assessment, p. 21)
280. By letter dated June 21, 2017, the State Historic Preservation Office (SHPO) notes that although no properties listed on the NRHP have been documented within the project parcels, the project area is situated on well-drained soils adjacent to wetlands. Additionally, this project site is within close proximity to both Candlewood Lake and the Housatonic River. This type of environmental setting tends to be associated with pre-contact Native American settlement. Several archaeological sites have been recorded in the region surrounding the affected parcels. SHPO requests that a professional cultural resources assessment and reconnaissance survey be completed prior to construction. (CS 2, response 15, SHPO Letter dated June 21, 2017)
281. A Phase 1A Cultural Resources Assessment Survey Report (Phase 1A Report) was prepared by Heritage Consultants, LLC (Heritage) for the proposed project and submitted to SHPO on or about September 18, 2017. The Phase 1A Report concluded that no additional archaeological examination of the proposed access road or electrical interconnection route is recommended. However, the central portion of the proposed solar facility area can be considered to retain a moderate/high archaeological sensitivity, and a Phase 1B cultural resources reconnaissance, using subsurface testing techniques, is recommended for those areas that would be impacted by construction. (CS 7, p. 1)
282. A Phase 1B Cultural Resources Reconnaissance Survey (Phase 1B Report) has been prepared by Heritage. Examination of the moderate/high archaeologically sensitive areas associated with the proposed solar facility and potential temporary construction parking and laydown area resulted in the identification of eight cultural resource loci known as Locus 1 through Locus 8. In the Phase 1B Report, Heritage determined that no additional archaeological examination of Locus 1, 2, 3, 4, 5, 6, and 8 are necessary. (Phase 1 B Report, p. 36; CS 20, p. 1)
283. Locus 7 was assessed as potentially significant, and an avoidance plan was recommended. Accordingly, the proposed revised project includes a revision that would provide an approximately 69-foot buffer from the limits of work to Locus 7. In addition, the 100-acre permanent conservation restriction would include Locus 7 and would provide additional protection. (CS 17, Phase 1B Report, p. 36; CS 20, p. 2)
284. On or about October 26, 2017, the Phase 1B Report with an avoidance and protection plan for Locus 7 were submitted to SHPO. The Phase 1B Report and protective measures for Locus 7 are being reviewed by SHPO. (CS 20; Tr. 4, p. 116)

285. The five acre open field area proposed as a temporary construction staging area is identified as Area 4 in the Phase IA Report. This area will not be graded, no additional tree clearance would occur and no stone walls would be altered. To lessen the potential impact to undisturbed resources, SHPO recommends the use of construction matting in Area 4. (November 28, 2017 SHPO correspondence attached hereto as Attachment B)

Geology

286. Bedrock geology beneath the project area is identified as Ordovician granitic gneiss. Ordovician granite gneiss is described as white, light-gray, buff, or pink, generally foliated granitic gneiss, composed of sodic plagioclase, quartz, microcline, muscovite, and biotite, and locally garnet or sillimanite, and it commonly contains numerous inclusions or layers of mica schist and gneiss. (CS 1, Environmental Assessment, p. 3)
287. Bedrock is not expected to be encountered during construction given the minimal subsurface disturbance required. (CS 1, Environmental Assessment, p. 16)
288. The proposed site is not located on a mapped fault line. The site is not located on an area of unconsolidated materials such as sands or artificial fill with a potential for liquification in the event of an earthquake. The site is also not located on an area of material which could amplify seismic waves. The risk of a significant seismic event at the proposed site is relatively low. (CS 11, response 109)
289. CS is not aware of any existing environmental contamination on the proposed site from previous agricultural use or other land use. (CS 2, response 8)

Wildlife

290. On July 10, 2017, a DEEP Natural Diversity Database (NDDB) Preliminary Assessment was provided to the Petitioner. This assessment identified known extant populations of nine state-listed species occur within or near the boundaries of the proposed site. The assessment also concurred with conservation measures suggested by the Petitioner for the protection of the vernal pools and recommended additional mitigation measures. (DEEP comment letter dated September 21, 2017; CS 2, response 49)
291. The nine state-listed species referenced in the NDDB preliminary assessment letter include: little brown bat, golden-winged warbler, slimy salamander, Jefferson salamander “complex,” wood turtle, eastern box turtle, red bat, silver-haired bat and hoary bat. (CS 2, response 49)
292. The petitioner completed surveys of the project area for state-listed species referenced in the NDDB preliminary assessment letter. None of the species were found on the site during the surveys; however, the Petitioner identified protection measures for the species. (CS 13c, p. 6; CS 18)
293. The petitioner would commit to following best management practices, protection measures and mitigation for the NDDB listed species. (CS 13c, p. 6)
294. Construction personnel would be trained for the potential presence of listed threatened and endangered species that are likely to occur in the project area. Training would include descriptions of the species, information on who to contact if a species is identified, reporting and notification requirements and instructions for relocation of a species found within a work area. Additionally, instructional posters would be placed at construction trailers. (CS 13c, pp. 6, 7)

Birds

295. There are four areas on the proposed site identified by the NDDB as being potential habitat suitable for breeding by the golden-winged warbler, a state endangered bird species. The golden-winged warbler breeds in old-field habitat generally 10 acres or greater in size. The identified areas are upland, actively hayed and/or pastured and contain virtually no tall growing forbs, shrubs or tree seedlings, which are typically associated with inhabited golden-winged warbler habitat. Therefore, suitable breeding habitat for the species does not exist on the site and no protection measures are proposed. (CS 2, response 49; CS 18)

Mammals

Bats

296. The three State-listed NDDB bat species are tree roosting bats that roost high in large coniferous and deciduous trees. For the protection of bat species, tree clearing would be limited to November 1 through March 30. (CS 2, response 49; CS 11, response 84; CS 13c, p. 7)
297. Tree clearing during the timeframe recommended for the protection of bat species would occur prior to the initiation of nesting activity for most potential breeding bird species; thereby providing protection for those species as well. Additionally, construction activities would deter birds seeking nesting sites. (CS 1, Environmental Assessment, pp. 8, 9; CS 11, response 85)

Reptiles

Turtles

298. There were no observations of wood turtles or eastern box turtles, both state-listed species of special concern. However, protection measures are proposed for these species. (CS 18, pp. 8, 9)
299. For the protection of the eastern box turtle, silt fence and haybales would be installed along the limit of work to enclose the construction areas of the solar array and the interconnection corridor after tree clearing activities but before April 15. The exclusion barrier would be inspected weekly for any gaps at the ground level to ensure that it is functioning properly. Silt fencing would be removed following stabilization of the site. (CS 13c, p. 7)
300. Following construction of the facility, eastern box turtles would be excluded from the fenced-in solar array by a counter-sunk fence. The fence is designed to avoid potential for mowing mortality to turtles that may be encountered with a raised fence configuration. Maintenance mowing of the shade aprons outside the fenced area would occur between November 1 and April 15. (CS 11, response 95)
301. Turtles found within the construction area would be moved to an adjacent area outside of the exclusion barrier. (CS 13c, p. 7)
302. Any sightings of box, wood or spotted turtles on the site would be reported to the NDDB. No heavy machinery or vehicles would be permitted to park outside of the exclusion barrier. Any trees cut near brooks and streams would be cut to fall away from the waterway and not dragged across the waterway. To the extent practicable, use of equipment within 50 feet of streams or brooks would be avoided and limited. (CS 13c, p. 8)

303. No additional protection measures are proposed for wood turtle protection at this site. (CS 13c, p. 8)

Amphibians

Vernal Pool Species

304. Vernal pool indicator species in Connecticut include wood frog, spotted salamander, marbled salamander, Jefferson salamander/blue-spotted salamander and fairy shrimp. (CS 1, Environmental Assessment, p. 6)
305. Species observed at the cryptic vernal pools associated with Wetland I include marbled salamanders, four-toed salamanders, mole salamanders, post-metamorphic wood frogs, an eft stage eastern newt, and sub-adult American toads. (CS 11, Attachment 1)
306. The Jefferson salamander complex is a state-listed species of special concern that may occur at the site. During site surveys, no observations of this species occurred. (CS 18, pp. 8, 9)
307. During a survey of the Wetland V vernal pool on April 14, 2017, the following vernal pool indicator species were found: eight spotted salamander egg masses and five wood frog egg masses. (CS 1, Environmental Assessment, p. 6)
308. Mole salamanders live most of its lifecycle in forested area outside the vernal pool. (Tr. 3, pp. 95, 96)

Slimy Salamander

309. During the September 26, 2017 field visit to the site, a small, dark salamander was observed that was identified as potentially being a lead-back salamander or a juvenile slimy salamander. The salamander escaped before identification could be confirmed. (CS 11, response 100)
310. Preferred slimy salamander habitat includes mature deciduous woodland with slopes greater than 35 percent. Approximately 30 percent of the solar array area is high-quality slimy salamander habitat. However, the entire site has the potential to be slimy salamander habitat. Slimy salamanders prefer forested environments without fragmentation. (CS 11, response 101, response 103; Tr. 1, pp. 68, 69)
311. Approximately 2 percent of on-site high-quality slimy salamander habitat would be directly altered through the proposed clearing and development of the facility. (CS 11, response 104)
312. The optimal time of year to capture slimy salamanders in Connecticut is between May and June. (Tr. 1, p. 63)
313. There are three areas of high-quality slimy salamander habitat including: north of Wetland I, southeast of Wetland I and east of the existing haul road from Candlewood Mountain Road. The habitat associated with the haul road is isolated and would be further isolated from the expansive contiguous habitat east and north of the arrays. The two habitat areas near Wetland I would remain intact and development would not pose a barrier to long-term dispersal of the species. (CS 11, response 107)
314. Site surveys for assessing slimy salamander habitat were conducted on September 12, 22, 30 and October 4, 2017. During these surveys a total of 45.5 field hours were primarily spent searching for slimy salamander and habitat. At least 23 of these field hours were spent searching for slimy

salamander specimens by turning natural cover objects. No slimy salamanders were observed during these site surveys. (CS 18)

315. For the protection of the slimy salamander and the Jefferson salamander, the same exclusion barrier from the fenced solar array proposed for the protection of eastern box turtle species is proposed. Additionally, the petitioner would create an approximately 100-acre contiguous, steep slope, mature forest perpetual conservation parcel to allow for preservation of slimy salamander habitat, conservation of existing unfragmented forest, and protection of existing wetlands and vernal pools. (CS 13c, p. 8)

Core Forest

316. Of the forested land in the state, 46 percent is considered “core forest,” defined as being outside the “edge effect,” over 300 feet in all directions from non-forested areas. Small core forests are core forest patches that are less than 250 acres. Medium core forests are core forest patches that are between 250 acres and 500 acres. Large core forests are core forest patches that are greater than 500 acres. (Council Administrative Notice Item No. 78 – Connecticut’s Forest Action Plan, p. 9; RCM Administrative Notice Item No. 2, Core Forest Explained)
317. The state’s *Green Plan* identifies the value of large-scale, intact forest areas as they provide “key habitat linkages” for wildlife species. Other benefits identified in the *Green Plan* include, but are not limited to, the forests ability to absorb rainwater and slow runoff, filter pollutants and regulate air temperature. (Council Administrative Notice Item No. 79 – *Green Plan*; DEEP comment letter dated September 21, 2017, p. 4)
318. The 2004 Environment Canada Report cited by the University of Connecticut Center for Land Use Education and Research suggests that 250 acres of upland forest should be considered the absolute minimum forest patch size needed to support area-sensitive edge-intolerant bird species. The recommended minimum forest patch size is 500 acres, as this is likely to provide enough suitable habitat to support more diversity of interior forest species. (RCM Administrative Notice Item No. 2, Core Forest Explained; CS 1, Environmental Assessment, p. 19)
319. Balance in size and age classes is necessary for Connecticut’s forests to function as diverse habitat for wildlife, providing for forest products and being resistant to insect and disease outbreak. (DEEP comment letter dated September 21, 2017, p. 5)
320. Canopy is the top of the forest that can be in two locations: overstory and understory. Overstory consists of trees that are greater than 20 feet in height. Understory consists of trees and shrubs that are under 20 feet in height and is described in terms of density. (Tr. 5, pp. 83-85)
321. Approximately 25-30% of the black birch and gray birch trees occurring on the undeveloped Dunham property along the southern property line of the project site are exhibiting indications of rot. The amount of light that comes through the overstory into the understory would dictate what type of vegetation would take over. (Tr. 5, pp. 85-86, 109-110, 131)
322. A potential agreement to work with local non-profit conservation groups to establish a permanent conservation easement for the portions of the host property that would not be used by the facility, would result in preservation of core and edge forest habitat and would mitigate the impacts of the facility. (DEEP comment letter dated September 21, 2017)

323. The DEEP NDDB Final Determination requires CS to establish the 100-acre conservation restriction. Portions of the 100-acre conservation restriction area are to the north, northwest and east of the site. Those areas will be permanently conserved in a natural state. (Tr. 5, pp. 14, 74)
324. The owners of the solar project property and 100-acre conservation restriction area have been in negotiations with land trusts for an agreement to transfer the 100-acre conservation restriction area. No agreement will be signed until the final design of the solar project is approved. (Tr. 5, pp. 74-75)
325. Currently, approximately 788 acres of contiguous forest is present on and adjacent to the project area. Of this 788 acres, 443 acres are considered core forest, and 345 acres are considered edge forest (or areas not more than 300 feet from non-forested areas). (CS 1, Environmental Assessment, p. 19; CS 21, response 8, Figure 3)
326. In the originally proposed project, the amount of core forest would have been reduced to 348 acres, post-construction. (CS 1, Environmental Assessment, Figure 15)
327. In the proposed revised project, the amount of core forest would be reduced to 359 acres, post-construction. (Tr. 3, p. 24-25)
328. The proposed revised project would change the interior of the forest and increase forested edge habitat by eight to nine percent. (Tr. 4, p. 98)
329. Visibility depends on the density of vegetation in the edge habitat and edge forest. Edge habitat is the area of transition from meadow to forest. Edge forest is the immediate edge of the forest. The edge habitat and edge forest are contiguous. (Town 10, p. 4; Tr. 5, pp. 87, 128-131)
330. From a general visibility standpoint, if you look from either side of the understory, depending on the density of the vegetation, the view should be the same. (Tr. 5, pp. 128-129)

Agriculture

331. The statutory mission of the Governor's Council for Agricultural Development (GCAD) is to develop a statewide plan for Connecticut agriculture. In 2012, GCAD recommended DOAg create an agriculture-friendly energy policy that includes, but is not limited to, on-farm energy production to reduce costs and supplement farm income, agricultural net metering for power production and transmission, and qualification of agricultural anaerobic digestion projects for zero-emissions renewable energy credits (ZRECs). (Council Administrative Notice Item No. 96 – Grow CT Farms)
332. Agriculture in Connecticut is likely to be adversely impacted by climate change. It is most affected by changes in temperature and both the abundance and lack of precipitation. The top five most imperiled agricultural products are maple syrup, dairy, warm weather produce, shellfish and apple and pear production, but there are opportunities for production expansion with the future climate, including, but not limited to, biofuel crops, witch hazel and grapes. (Council Administrative Notice Item No. 89)
333. Adaptation strategies for climate change impacts to agriculture include promotion of policies to reduce energy use, conserve water and encourage sustainability. (Council Administrative Notice Item No. 89)
334. Pursuant to C.G.S. §22-26aa, *et seq.*, DOAg administers the Statewide Program for the Preservation of Agricultural Land (SPPAL). The main objective of the voluntary program is to establish a land resource base consisting mainly of prime and important farmland soils. A permanent restriction on

- non-agricultural uses is placed on the deed of participating properties, but the farms remain in private ownership and continue to pay local property taxes. (C.G.S. §22-26aa, et seq.)
335. Connecticut preserved 1,289 acres of agricultural land in 2015, the most since 2009. Connecticut preserved 1,563 acres of agricultural land in 2016, the most since 2011. (Council Administrative Notice Item No. 93 – CEQ Report on Energy Sprawl dated February 3, 2017; Council Administrative Notice Item No. 94 - CEQ Report dated June 21, 2017)
336. DOAg has not purchased any development rights for the proposed site as part of the SPPAL. (CS 2, response 5)
337. Public Act 490 is Connecticut's Land Use Value Assessment Law for Farm Land, Forest Land and Open Space Land that allows land to be assessed at its use value rather than its fair market or highest and best use value for purposes of local property taxation. The site parcel is not part of the Public Act 490 Program. (CS 2, response 9; PA 490)
338. The proposed project would not qualify under Connecticut's Agricultural Virtual Net Metering Program because an agricultural virtual net metering facility is defined under C.G.S. §16-244u(a)(7)(B) as having a nameplate capacity rating of 3 MW or less. (CS 2, response 7)
339. Prime Farmland Soils are defined by the United States Department of Agriculture (USDA) National Resources Conservation Service (NRCS) as having the ideal combination of chemical and physical characteristics to support crop production, such as for food, feed, forage, fiber and oil and seed crops. These soils are also considered important for pasture land, range land and forest land. (Council Administrative Notice Item No. 16 – USDA Soil Survey Manual; 7 C.F.R. §657.5 (2016) – Identification of Important Farmlands)
340. Farmland of Statewide Importance are soils which do not meet all of the requirements to be considered Prime Farmland Soils, but they are equally as important in the production of food, feed, forage or fiber crops. (Council Administrative Notice Item No. 16 – USDA Soil Survey Manual; 7 C.F.R. §657.5 (2016) – Identification of Important Farmlands)
341. Locally important Farmland Soils do not meet the physical or chemical requirements of either Prime Farmland or Farmland of Statewide Importance soils, but they are still used for the production of food or fiber crops and support the local economy due to their productivity. (Council Administrative Notice Item No. 16 – USDA Soil Survey Manual; 7 C.F.R. §657.5 (2016) – Identification of Important Farmlands)
342. DOAg indicated that a field visit to evaluate surface stone removal would determine if prime and important farmland soils are present on the site. Mapped soils for the project site are listed as having a very stony or extremely stony surface modifier. This is what has kept the soils from being considered prime or important farmland soils. If decades of agricultural activity have removed the stones, then it is possible that the soil could meet the criteria for prime and important farmland. (DOAg 2, response 18; CEQ Letter dated August 30, 2017; Tr. 3, pp. 95-96)
343. The potential of the site for future agricultural use depends on the existing soils and then how they're disturbed and managed during construction. Reclassification of the soils as prime or important farmland soils would depend on the concentration of the stones remaining. (Tr. 3; pp. 104-105; DOAg 2, response 18)
344. DOAg did not perform an on-site investigation of stones remaining at the site. (Tr. 3, pp. 95-97)

345. CS obtained soil survey data from the USDA NRCS mapping to determine that the solar array parcel does not contain any prime or important farmland soils. (CS 2; response 7; CS 1, Environmental Assessment, p. 2-3)
346. Connecticut Prime Farmland Soils and Connecticut Important Agricultural Soils are mapped on portions of the interconnection parcels; however, these locations would not be impacted by construction of the electrical interconnection. (CS 2, response 7)
347. The project array area does contain Paxton and Montauk fine sandy loams soils, very stony, with three to eight percent slopes. The Town of New Milford GIS mapping indicates that this is a locally important farmland soil. (CS 1, Environmental Assessment, p. 3)

Pollinator Habitat

348. Although applicable only to electric transmission line right-of-ways, CGS §16-50hh permits the Council to consider post-construction site restoration or revegetation that includes the establishment of model pollinator habitat. (CGS §16-50hh)
349. Pollinator habitat is not proposed at this time. CS is willing to consider incorporating pollinator habitat, but cannot commit to such plans without further review. (CS 2, response 78)

Neighborhood Concerns

350. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public comment session on Tuesday, September 26, 2017 at 6:30 p.m. at the Roger Sherman Town Hall, 10 Main Street, New Milford, Connecticut. (Council's Hearing Notice dated July 24, 2017; Tr. 1, p. 1; Tr. 2, p. 1)
351. Thirty three interested persons provided oral limited appearance statements both in favor and in opposition to the proposed facility, some of which were RCM members, during the public comment session. (Tr. 2)
352. Of the approximately nine written limited appearance statements in favor of the proposed facility, concerns generally include, but are not limited to, the following:
- cleaner source of energy;
 - reducing GHG emissions;
 - temporary nature of the project as opposed to other development; and
 - tax revenue.
- (Tr. 2; Public Comment Record)
353. Of the approximately fifty five written limited appearance statements in opposition to the proposed facility, concerns generally include, but are not limited to, the following:
- visual impacts;
 - traffic;
 - impacts to forest;
 - impacts to air traffic at Candlewood Farms Airport;
 - wildlife and environmental impacts;
 - decommissioning issues;
 - well or other groundwater impacts;

- stormwater impacts; and
 - property values.
- (Tr. 2; Public Comment Record)

354. CS submitted 21 FAA Determinations of No Hazard to Air Navigation and analyzed the potential glare impacts to planes taking off or landing via the two principal directions for Candlelight Farms Airport. (CS 2, Response 40; Tr. 1, pp. 15-16)
355. In response to neighborhood concerns, CS reduced the size of the project and associated area of disturbance to avoid slimy salamander habitat, increased the size of buffers around vernal pools, and avoided an area of archaeological sensitivity. CS also established a 100-acre conservation restriction. (CS 13c, p.4; CS 13a, p.2 ; Tr. 1, p. 36)

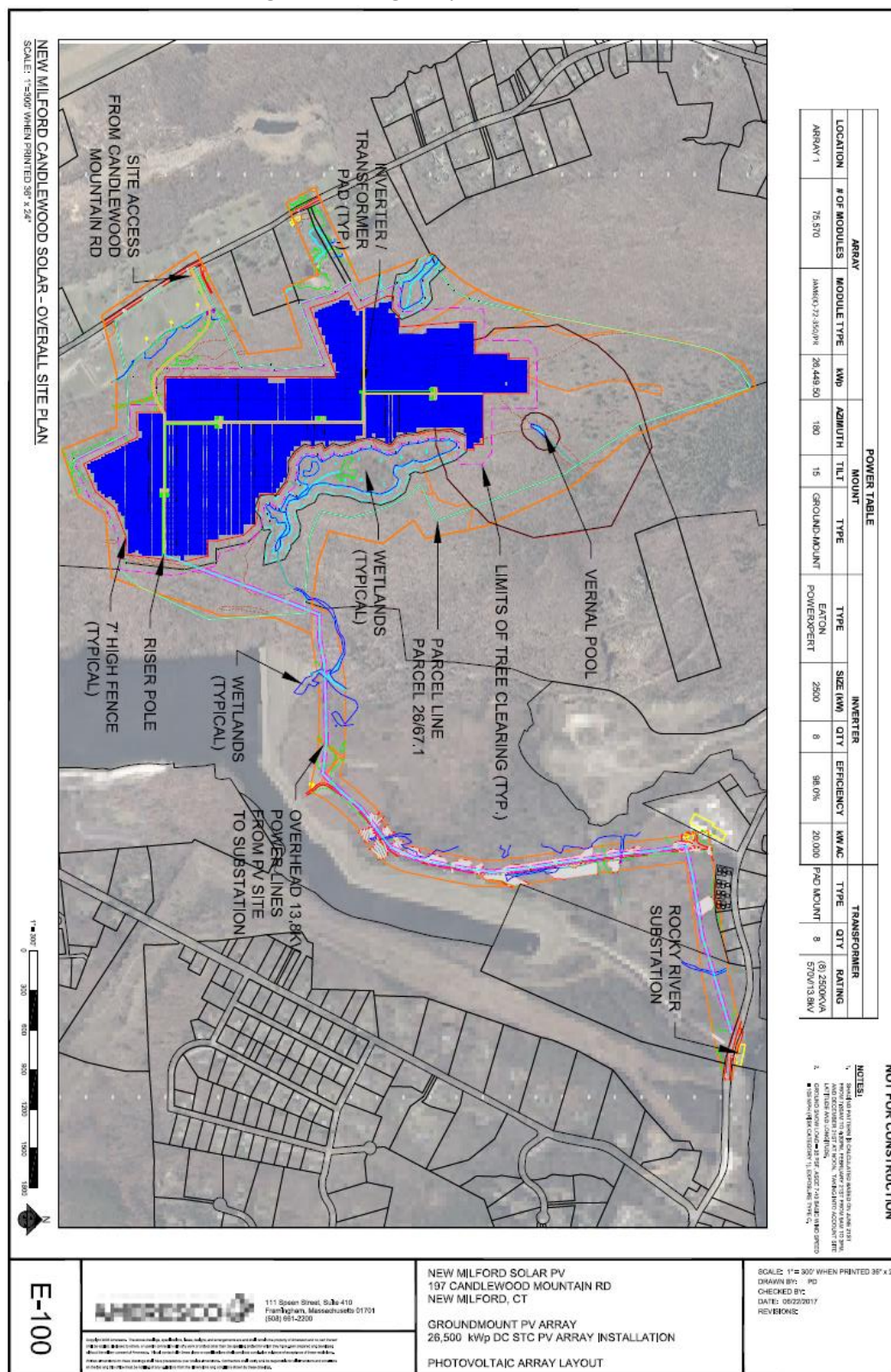
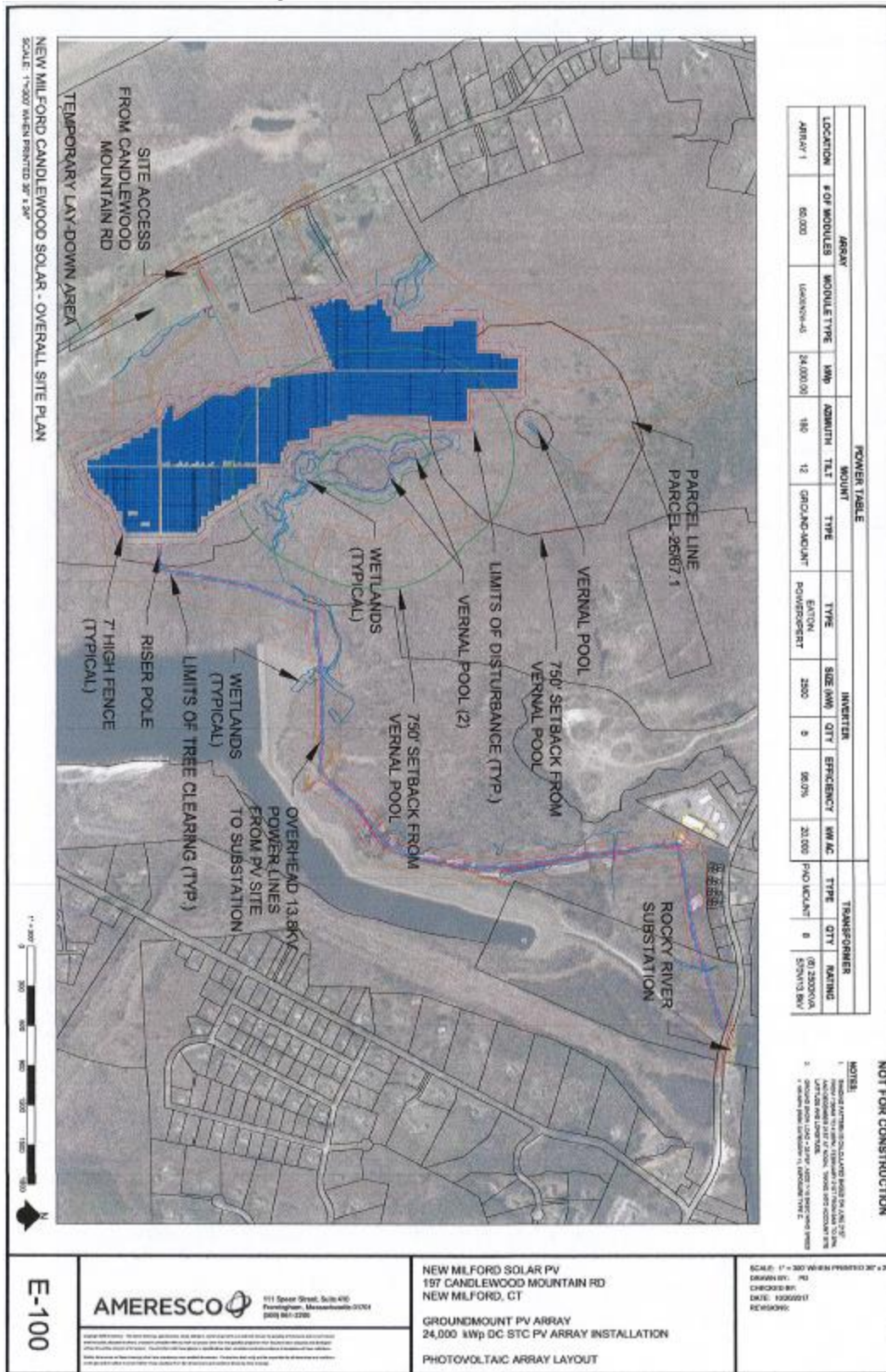
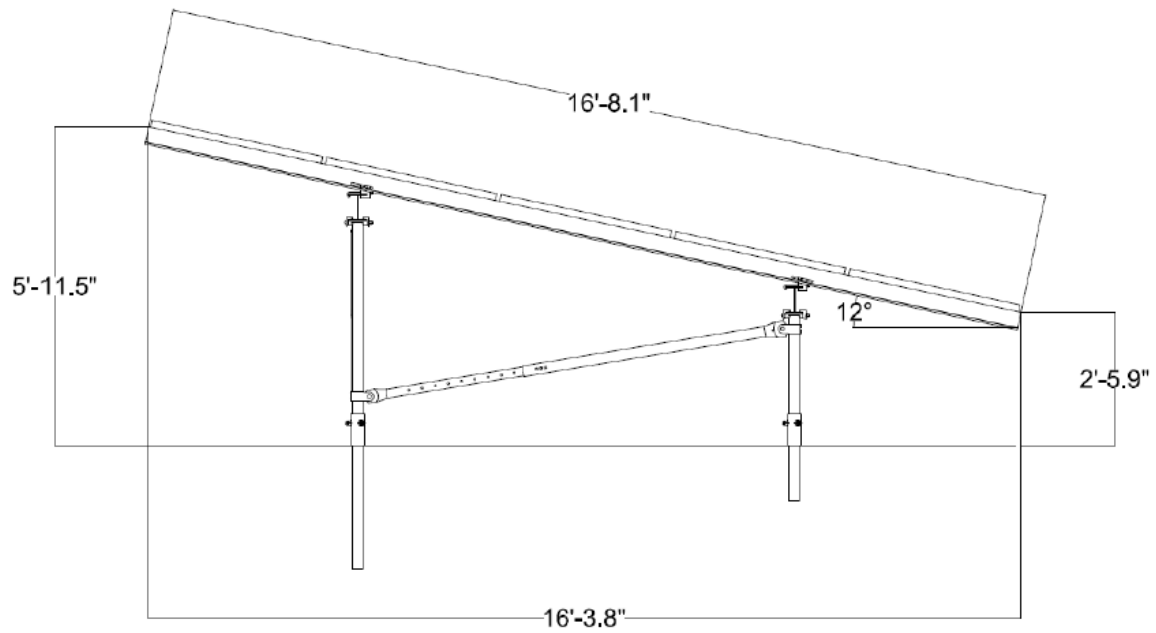


Figure 2 – Proposed Revised Site Plan



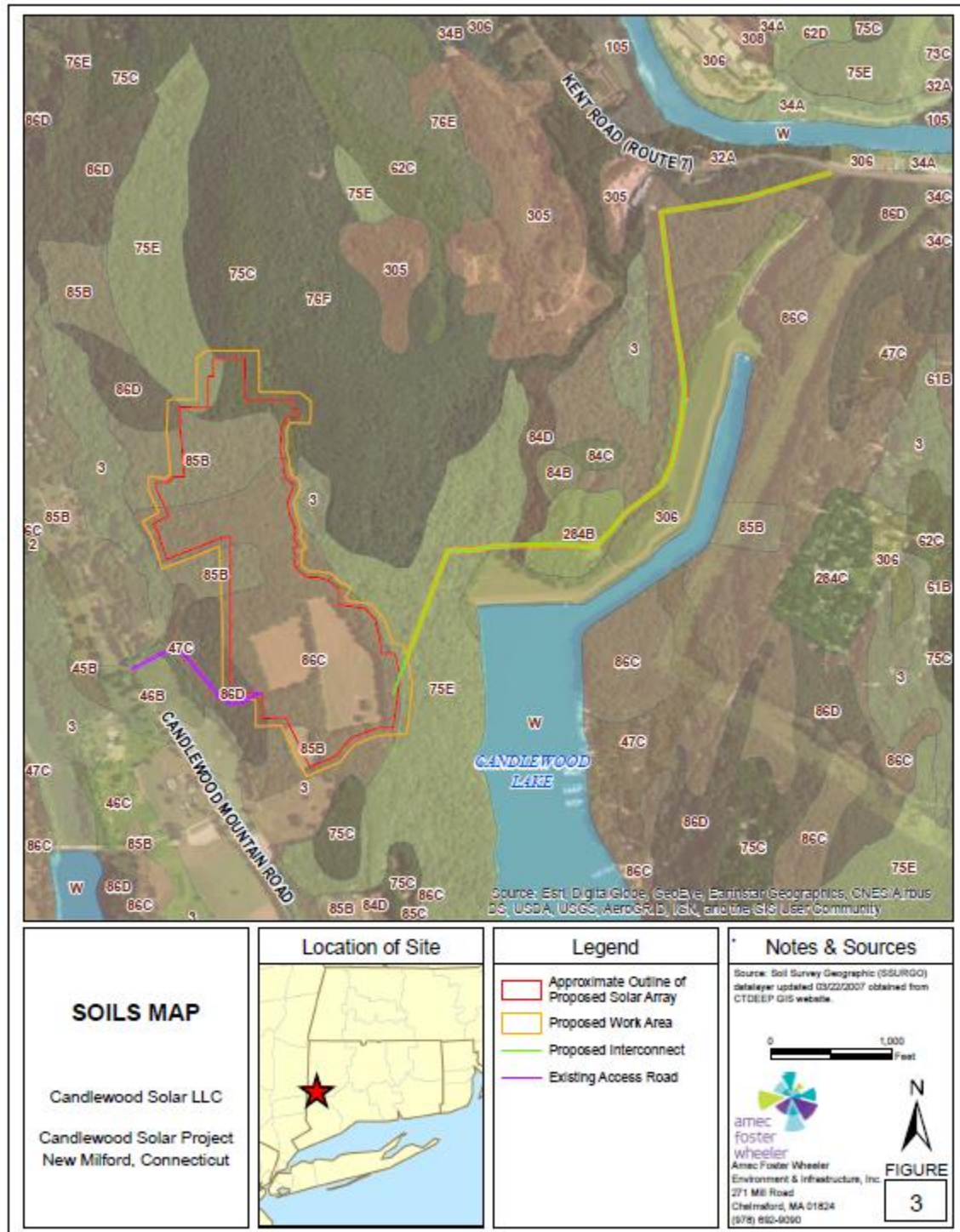
(CS 13a)

Figure 3 – Proposed Solar Rack Side Elevation View



(CS 11, response 108)

Figure 4a – Soils Map



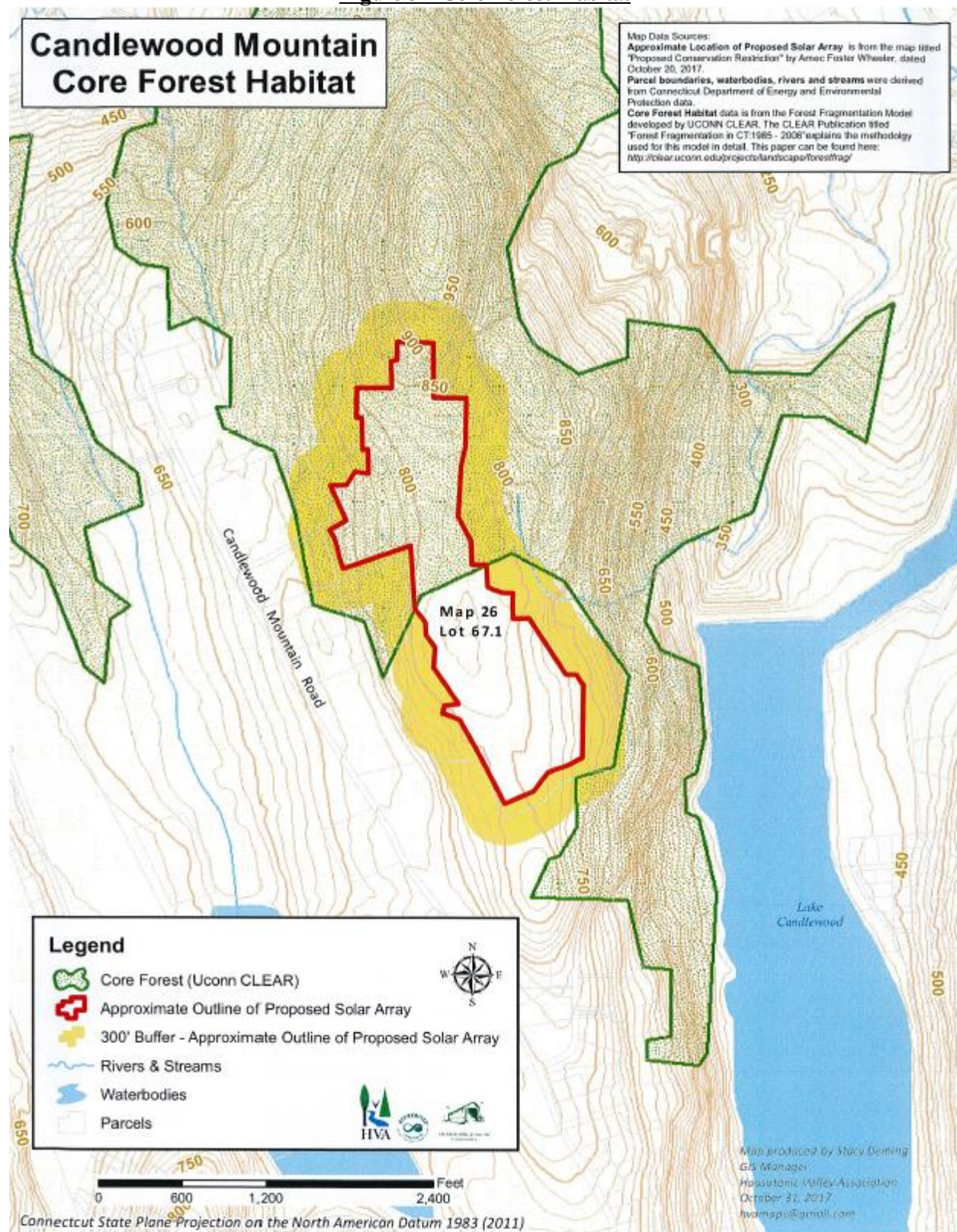
(CS 1, Environmental Assessment, Figure 3)

Figure 4b – Soils Map Table

Table 2.2-1. Soils at the Project Area	
Map Unit Symbol	Map Unit Name
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony
306	Udorthents-Urban land complex
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony
75C	Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes
75E	Hollis-Chatfield-Rock outcrop complex, 15 to 45 percent slopes
76F	Rock outcrop-Hollis complex, 45 to 60 percent slopes
84D	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes
85B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes, very stony
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony
284B	Paxton-Urban land complex, 3 to 8 percent slopes

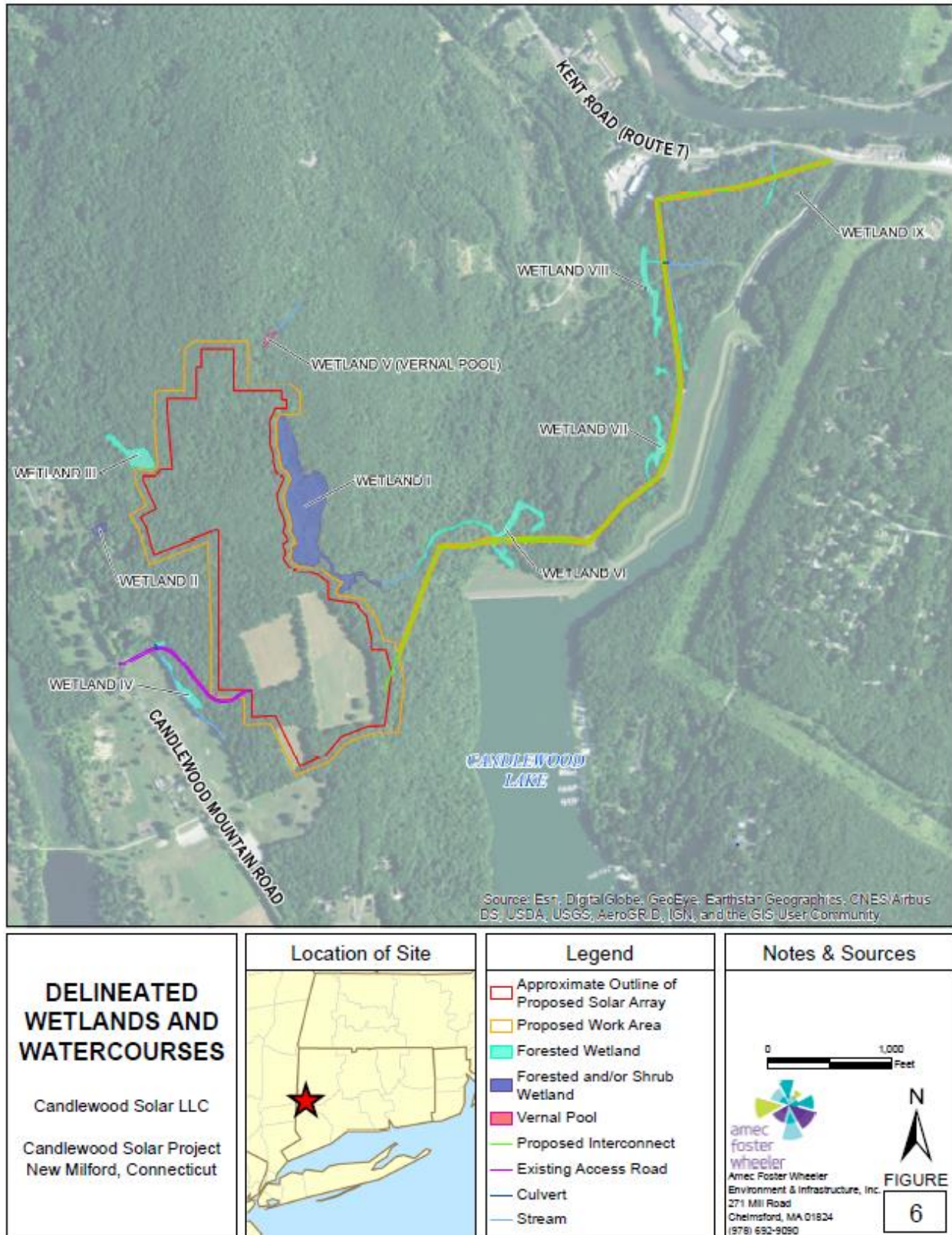
(CS 1, Environmental Assessment, p. 3)

Figure 5 – Core Forest Habitat



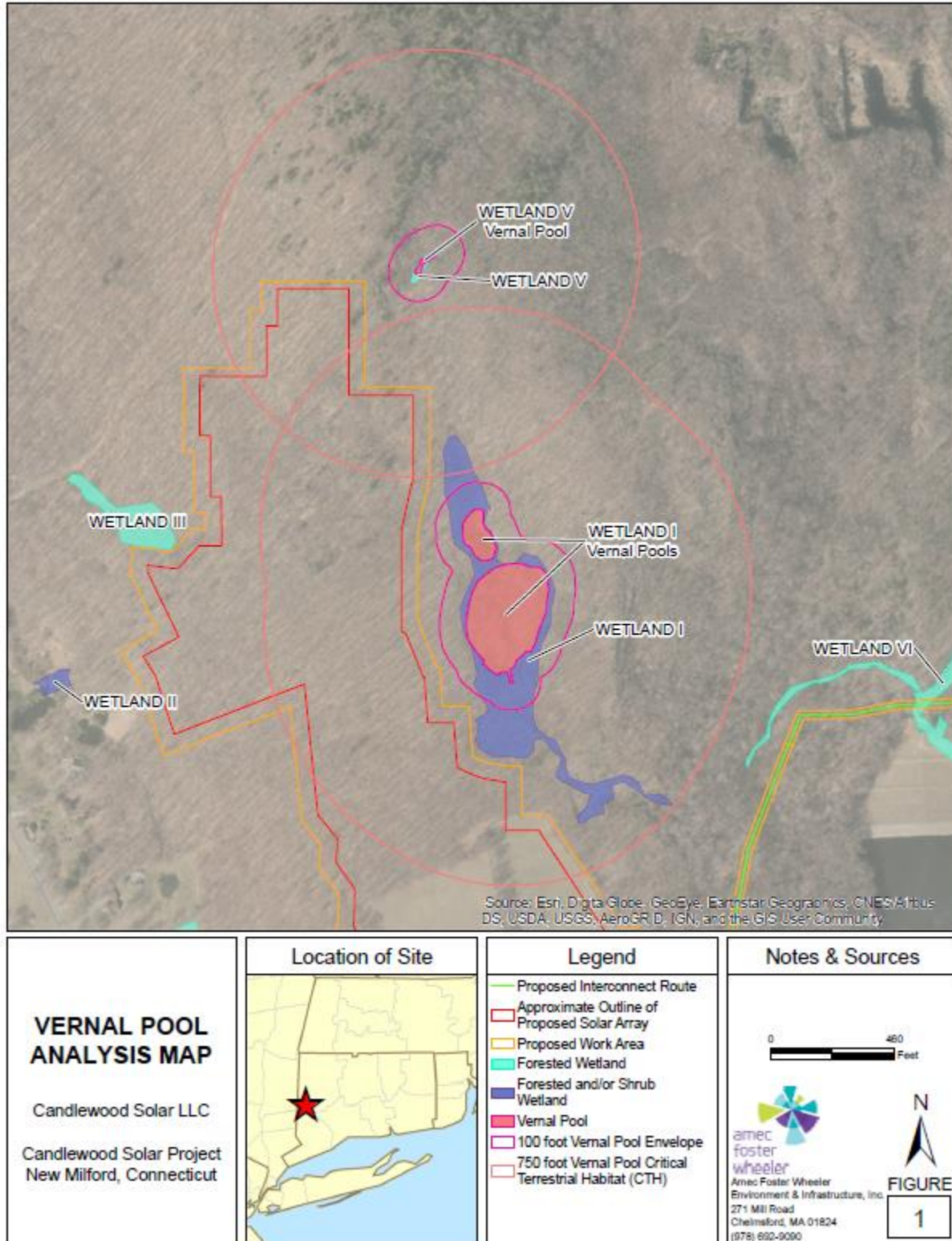
(RCM 10 – Candlewood Mountain Core Forest Habitat Map)

Figure 6 – Wetland Map



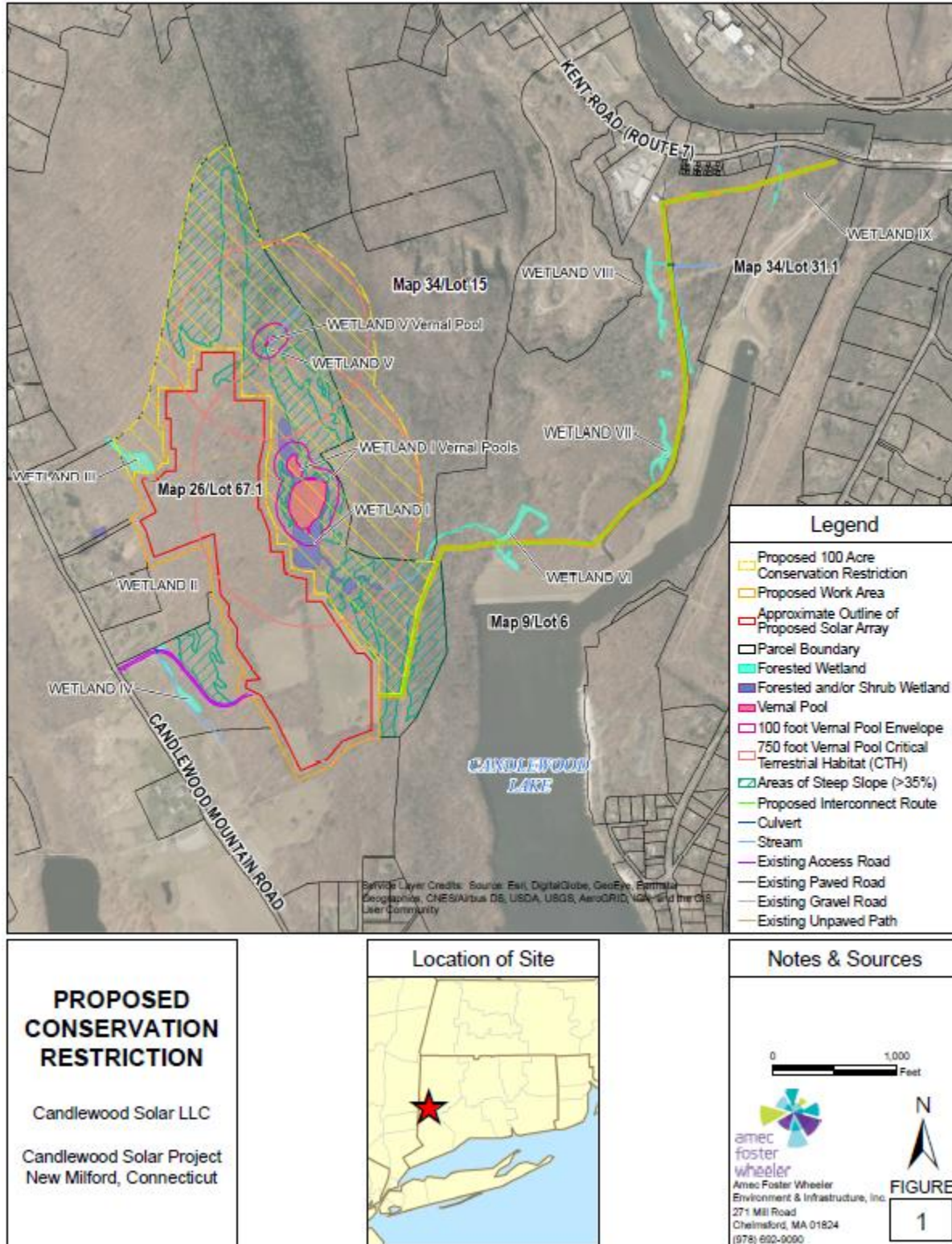
(CS 1, Environmental Assessment, Figure 6)

Figure 7 – Vernal Pool Map



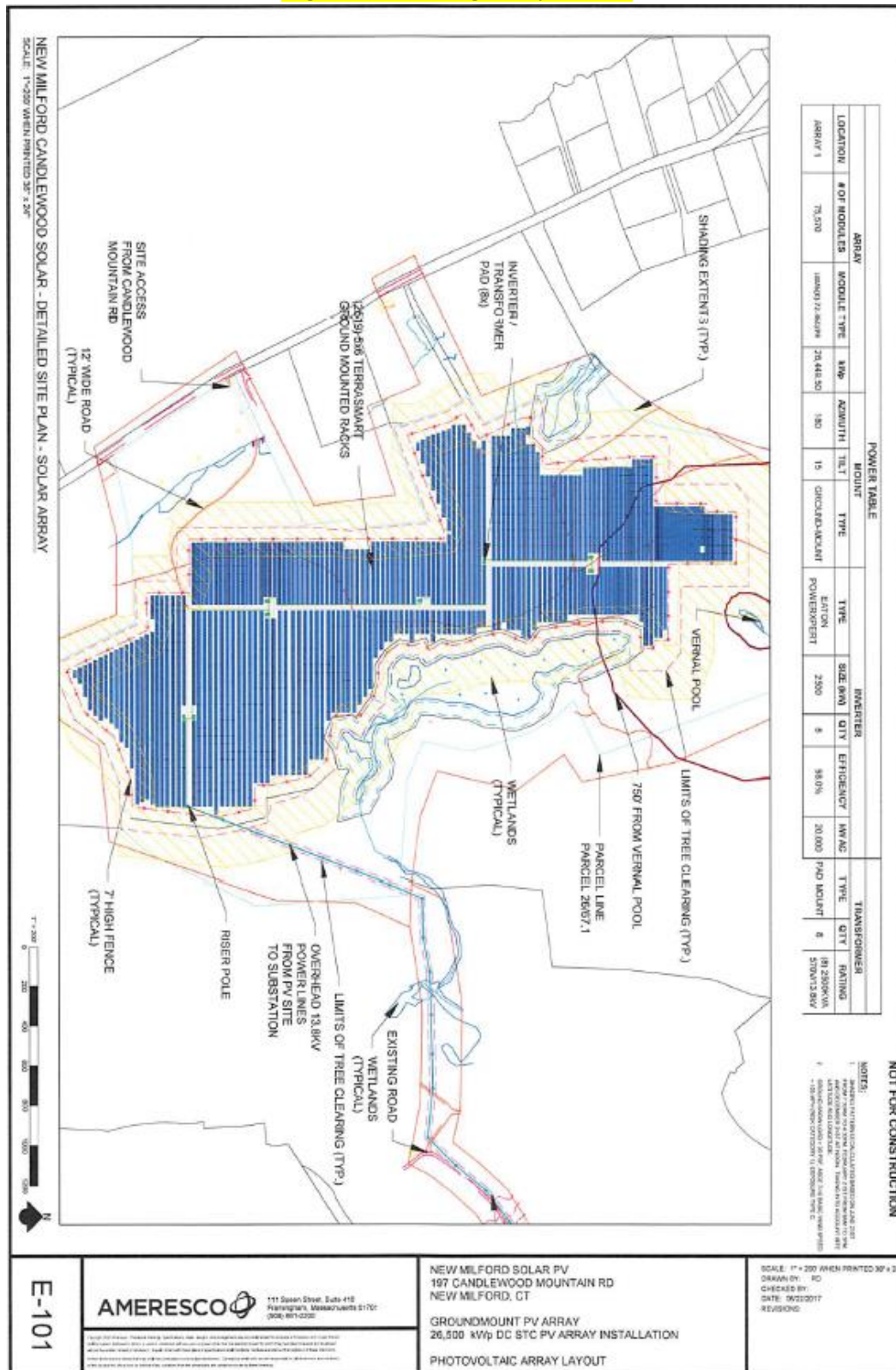
(CS 11, response 90 – Attachment 2)

Figure 8 – Conservation Restriction Map

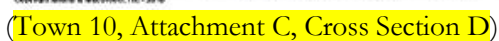


(CS 15 – Conservation Restriction Area)

Figure 9 – Shading Analysis Map



(CS 21, response 10, Attachment D)



Attachment A

Section 130-040 of the Town of New Milford Zoning Regulations

Section 130-040 Buffer Areas

The purpose of a buffer area is to provide privacy from noise, headlight glare, and visual intrusion onto any lots currently used for single family and multiple-family residential uses located in a Single Family or Multiple-Family Residential Zone. A buffer area shall be provided by the owner/developer of any property located in the Industrial (I), Industrial Commercial (IC), Restricted Industrial (RI), Restricted Business Zone (B-1), General Business Zone (B-2), B-4 Zone, Lake Business Zone (B-3), Multiple-Residence District (MR) and the Airport District where any parcel in any of these zones is used for a use other than a single family residence and abuts a residentially zoned parcel containing a single family dwelling or a multi-family dwelling. Such buffer shall be implemented and located along the interior perimeter of a parcel utilized for non-residential uses where the property line adjoins a parcel zoned and utilized for residential purposes. A multi-family residence located within a Multiple Residence Zone shall be required to provide said buffer when abutting a parcel which is used for residential purposes and is located in a Single Family Residential Zone.

In addition, any special permit use outlined in Chapter 25 under sections 025-080, 025-100, and 025-070 which requires parking for more than 8 motor vehicles, and which parcel is located in a single family residential zone with abutting residential uses shall be required to provide the buffer described above.

1. The minimum depth of buffer areas shall be as follows:
 - a. Special Permit Uses in all Residential zones which will require parking for more than 8 motor vehicles: 60 feet
 - b. Business Zones (B-1, B-2, B-3, B-4): 60 feet. Properties 5 acres or less in the B-1 Zone may, subject to Site Plan Approval from the Zoning Commission, reduce the buffer to 40 feet if the number of evergreens required below in subsection (2) is doubled for each required "plant unit".
 - c. Industrial Zones (I, I/C, RI): 60 feet
 - d. When an industrially zoned (I, I/C, RI) or business zoned (B-1, B-2, B-3, B-4) parcel in excess of 5 acres abuts a residential zone where single family or multiple-family dwellings are currently located less than 150' to the adjoining property line, the required minimum buffer depth shall be 100' and the required number of plantings shall be proportionately adjusted.
 - e. Airport Zone: 60 feet
2. The buffer area shall be left in a natural condition or planted in lawn and/or ground cover and contain one (1) plant unit for each one hundred feet (100') of buffer length, or a portion thereof. For the purposes of this paragraph, "one plant unit" consists of:
 - a. Four (4) canopy trees
 - b. Six (6) understory trees

- c. Twenty four (24) shrubs
 - d. Twelve (12) evergreens
 - e. A berm
3. At the Commission's sole discretion, where the existing topography and/or landscaping provide natural screening, which satisfies the purpose of this regulation, no additional screening will be required.
 4. No structures, including but not limited to septic systems, stormwater detention basins, stormwater retention basins, water quality basins or infiltration systems may be located in any required buffer areas. The Commission may allow fencing or walls in the required buffer area if erection of such would assist in achieving the purpose of the buffer area.

(Section Amended Effective: June 8, 2018)

Section 130-050 Bonding

When a bond is required, it must be presented prior to the issuance of a zoning permit for all approved site plans. This bond shall be in an amount equal to the full value of the plant material and installation. The form of bond shall be a bank check, cash, or savings or certificate passbook account. All landscaping bonds shall be held for a period of three (3) growing seasons. Prior to the release of the landscaping bond, a licensed arborist shall inspect all plant material and certify that all plants will survive and are healthy.

Section 130-060 Definitions

Unless specifically defined below, words or phrases used in the landscaping regulations shall be interpreted so as to give them the meaning they have in other parts of the Zoning Regulations, or where not otherwise defined, the meaning they have in common usage.

1. Canopy Tree: A deciduous shade tree planted at least two and one half inches (2 ½") in caliper measured at three feet (3') off the ground with a mature height of at least thirty-five feet (35').
2. Understory Tree: A deciduous shade tree or fruit tree planted at least two inches (2") in caliper measured at three feet (3') off the ground with a mature height of twelve feet (12').
3. Evergreen Tree: A coniferous species tree planted at least six feet (6') in height at the time of planting.
4. Shrub: A plant of either deciduous species planted at two and one half feet (2 ½') in height with a mature height of at least six feet (6') or a coniferous species planted at two and one half feet (2 ½') in spread. Shrubs must be at least five (5) gallons in size at the time of planting.

Attachment B

November 28, 2017 SHPO correspondence

November 28, 2017

Ms. Tricia Foster
Senior 2 Planner
Amec Foster Wheeler Environment and Infrastructure, Inc.
271 Mill Road, 3rd Floor
Chelmsford, MA 01824

Subject: Phase IB Cultural Resource Reconnaissance Survey
20 MW Solar Photovoltaic Project
Parcels 26/67.1, 9/6, and 34/31.1
Candlewood Mountain Road
New Milford, Connecticut

Dear Ms. Foster:

The State Historic Preservation Office (SHPO) has reviewed the archeological survey report prepared by Heritage Consultants, LLC (Heritage), dated October 2017. The fieldwork was completed at the request of this office in a letter dated June 21, 2017. The proposed activities are under the jurisdiction of the Connecticut Siting Council and are subject to review by this office pursuant to the Connecticut Environmental Policy Act (CEPA). The proposed facility is located on portions of three adjacent parcels, totaling 163.5 acres; the solar array will occupy approximately 54.55 acres. The reconnaissance survey consisted of subsurface testing of areas deemed to have moderate to high archaeological sensitivity, and that would be subject to ground disturbing impacts as part of the proposed undertaking. A total of 8 cultural resources loci were identified, and 446 shovel tests were excavated within the areas considered to be archeologically sensitive based on the results of the Phase IA survey completed by Heritage. The submitted report is well-written, comprehensive, and meets the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

During the archeological reconnaissance survey, shovel tests were excavated at 15 and 30-meter intervals; in areas where cultural materials were identified, shovel tests were reduced to 7.5 and 3.75-meter intervals. During survey, Locus 1, 3, and 4 contained small prehistoric flake scatters, indicative of single-use areas for stone sharpening, while failing to produce additional artifacts or evidence of cultural features, and as such, are not considered eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). This office concurs that additional archeological investigations of these areas are not warranted.

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | Cultureandtourism.org

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Department of Economic and
Community Development

State Historic Preservation Office

Locus 2 contained a single Early Archaic Period Bifurcate projectile point, an artifact type rarely identified in Connecticut. No other cultural materials for evidence of cultural features were identified within Locus 2.

Examination of the proposed solar facility also resulted in the identification of Locus 7, a prehistoric lithic workshop. Multiple shovel tests conducted in the area produced lithic material from undisturbed soil contexts, and is potentially eligible for listing on the National Register of Historic Places under Criterion D. SHPO will assign a state archaeological site number to Locus 7 once it has been requested by the consultant.

In response to the results of the survey, an avoidance and construction management plan has been developed by the project sponsor. Revisions to the previously submitted site plan include a buffer of approximately 69 feet that will separate the limit of work (LOW) and limit of tree clearing from the area of archeological sensitivity. Additionally, a fence line that will surround the facility is proposed to be located approximately 129 feet from Locus 7. Though tree clearing is proposed between the LOW and the fence line, the tree stumps will not be removed. An exclusion barrier consisting of standard silt fencing will be installed along the limit of the LOW. Further, a 100-acre area of the site, which includes Locus 7, is proposed for permanent conservation restriction. Area 4, anticipated as a staging area for construction parking and material/equipment storage, will not be graded, no additional tree clearance would occur, and no stone walls would be altered. SHPO suggests construction matting be used in Area 4 to lessen the potential impact to undisturbed resources. With these precautionary measures taken into consideration, the proposed development of the solar farm would have no adverse effect to cultural resources.

SHPO appreciates the cooperation of all interested parties in the professional management of Connecticut's cultural resources. We look forward to additional consultation if or when additional portions of the parcel are scheduled for development. These comments are provided in accordance with the Connecticut Environmental Policy Act. For additional information, please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or marena.wisniewski@ct.gov.

Sincerely,

Mary B. Dunne
Deputy State Historic Preservation Officer

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | Cultureandtourism.org

An Affirmative Action/Equal Opportunity Employer An Equal Opportunity Lender

PETITION NO. 1312 – Candlewood Solar LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 20 megawatt AC (26.5 megawatt DC) solar photovoltaic electric generating facility located on a 163 acre parcel at 197 Candlewood Mountain Road and associated electrical interconnection to Eversource Energy’s Rocky River Substation on Kent Road in New Milford, Connecticut.	} Connecticut
	} Siting
	} Council
	June 6, 2019

Court-ordered Remand Regarding Visibility.

Opinion

Introduction

On June 28, 2017, pursuant to Connecticut General Statutes (CGS) §§16-50k and 4-176, Candlewood Solar, LLC (CS or Petitioner) submitted a petition to the Connecticut Siting Council (Council) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) is required for the construction, maintenance and operation of an approximately 20 megawatt (MW) alternating current (AC) solar photovoltaic generating facility located on an approximately 163-acre parcel at 197 Candlewood Mountain Road and associated electrical interconnection to Eversource Energy’s Rocky River Substation on Kent Road in New Milford, Connecticut.

As it applies to this petition, CGS §16-50k¹ 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.” The project would be a “grid-side distributed resources” facility, as defined in CGS §16-1(a)(37), and it would have a capacity of approximately 20 MW.

On November 12, 2015, pursuant to Section 1(c) of Public Act (PA) 15-107 and Sections 6 and 7 of PA 13-303, the Department of Energy and Environmental Protection (DEEP) issued notice of a Request for Proposals (RFP), in coordination with Rhode Island and Massachusetts, for Class I renewable energy sources (Tri-State RFP). CS’ project was submitted in response to the Tri-State RFP. 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 (PPA) with the electrical distribution companies (EDCs) for a combination of energy and environmental attributes. The proposed project was not selected by DEEP. In the Tri-State RFP, Massachusetts and Rhode Island selected 11 out of 31 proposed projects to enter into long-term PPAs with the EDCs. Of those projects selected, one was the approximately 20 MW Candlewood Solar Project in New Milford. CS entered into a PPA with Massachusetts utilities for the sale of electricity and renewable energy credits.

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 a Tri-State RFP.

¹ CGS §16-50k was modified by Public Act 17-218 effective July 1, 2017. Public Act 17-218 does not apply to the proposed project because the petition was received by the Council on June 28, 2017.

Proposed Project

As originally proposed, the project consisted of the installation of approximately 75,000 solar photovoltaic panels and associated ground equipment on approximately 163 acres in New Milford, plus the use of two additional parcels for the electrical interconnection route. The solar array property is currently owned by Wells Fargo Bank NA. The proposed property owner would be New Milford Clean Power, LLC. CS possesses a lease option with New Milford Clean Power, LLC to utilize the property for a solar project. The two parcels to be used for the electrical interconnection are owned by FirstLight Hydropower.

The proposed site is undeveloped and partially wooded with hay fields/horse pasture in the southern portion of the array parcel. Existing utility corridors cross the interconnection parcels. The proposed site is currently located in a MPRDD zone. In the executed PILOT Agreement, the Town requests CS to change the zoning designation to a R-80 zone despite the Town Zoning Commission's classification of the proposed facility as an industrial use and recommendation for a 100-foot vegetative buffer. Under the Town Zoning Regulations, a 50-foot minimum front, side corner and rear yard setback is required in a R-80 zone. CS is proposing a 50-foot vegetative buffer between the property lines and the limits of work. Under the Town Zoning Regulations, a buffer area is defined as an area on a site consisting of natural existing vegetation and/or created by trees, shrubs, fences and/or berms, designed to limit the view of the site to adjacent properties.

Land use directly to the north of the solar array parcel is undeveloped forest. To the east of the solar array site is primarily undeveloped forested areas. Farther to the east/southeast of the solar array site is Candlewood Lake. Land use immediately south of the solar array primarily consists of wooded/forested areas. To the west are single family residences located along Candlewood Mountain Road.

On October 24, 2017, the Petitioner submitted revised site plans. Specifically, the solar array has been reduced in physical size/footprint to allow the project and associated area of disturbance to avoid undisturbed slimy salamander habitat and to increase the size of the undisturbed buffer around the cryptic vernal pools. The revised array layout would also provide a buffer around an area of archaeological sensitivity. The angle of the panels with the horizontal was reduced from 15 degrees to 12 degrees, and the number of panels was reduced from 75,000 to 60,000. CS was able to maintain the same AC capacity of 20 MW (despite a decline in DC MW) by utilizing 400 Watt solar panels in the proposed revised project versus the originally proposed 350 Watt panels. The smaller angle reduces row-to-row shading and allows closer spacing of the solar panel row. This combined with less solar panels results in the fenced solar array area being reduced from about 67 acres to approximately 57 acres.

Along with the proposed revised project, the developer of the parcel hosting the project, New Milford Clean Power, LLC, would deed approximately 100 acres (located on the project parcel as well as on adjacent parcels also controlled by the developer) to a local land conservation trust as permanently conserved land. This area to be set aside would encompass the area of three vernal pools and associated prime slimy salamander habitat immediately to the north and east of the area to be used for the project. The area to be placed into conservation would include the location of the summit of Candlewood Mountain which is also the terminus of the "Blue Trail." The Council encourages CS to work with entities such as, the Town of New Milford, DEEP, Weantinoge Heritage Land Trust and/or other local conservation groups to prepare and finalize the conservation easement.

The revised (approved) project area, including the solar field, equipment pads, and access roads, would be located on the same 163-acre subject parcel. Project equipment includes up to 8 inverters and associated transformers on concrete pads. The solar field would be enclosed by a seven-foot high chain link fence.

The future revised project area would incorporate a 50-foot vegetative buffer between the property lines and limits of work. Redesign of the solar array would have to account for some shading loss. CS accepts the loss of production due to portions of the array being shaded.

A roughly 1,316-foot existing dirt access road off of Candlewood Mountain Road that has been historically used to access the fields at the top of the parcel would be improved for use during construction and operation of the project by installing 12 inches of graded gravel. The estimated construction period is approximately 12 months. Once construction is complete, one truck per month or less would enter and exit the site for routine inspections and maintenance.

Electrical Interconnection

The electrical interconnection route would originate near the eastern-most edge of the solar array. In the proposed revised project, a portion of the electrical interconnection corridor immediately east of the facility was slightly altered to follow an existing old road cut. The interconnection route would run through wooded areas as it traverses from west to east and to the north of the dam on the FirstLight property. The route would then turn along an existing paved access road and turn east to run along an existing, already cleared access way owned by FirstLight. This approximately 7,000-foot long electrical interconnection corridor would be cleared to a width of approximately 30 feet and would not be fenced. The interconnection route would have two, three-phase 13.8-kV conductors on poles approximately 45 to 55 feet in height. An underground interconnection route would be difficult to construct, and thus, the Petitioner prefers an overhead interconnection route.

The electrical interconnection line would connect to Eversource's existing Rocky River Substation located on the north or opposite side of Kent Road (Route 7). An on-site substation for the project is not proposed. The interconnection line crossing of Route 7 would be underground, subject to final confirmation from Eversource.

CS' interconnection study is currently under review. Eversource would present the project to the ISO-NE Reliability Committee once the final impact study reports are completed.

Project Alternatives

CS investigated four alternative site parcels for the proposed project: Kimberly Clark Property on Route 7; private farmland; property on Pickett District Road; and Candlelight Valley Country Club. All four sites were rejected for various reasons including, but not limited to, inadequate space, visibility to abutters, wetland issues, and steep grades. CS also considered use of a brownfield site known as the Century Brass Site, but found significant on-site wetland areas and insufficient area for a 20 MW AC solar array.

CS did not specifically evaluate the New Milford Landfill as a possible solar site. However, the Council notes that, according to the record in this proceeding, it is not known who the landowner of the New Milford Landfill is or whether or not the property is available for use for a solar facility.

The open field area on the project parcel off of Candlewood Mountain Road was avoided for solar development because of visibility concerns. The area is approximately 5 acres. CS proposes to use this area as a temporary construction laydown area that will be restored back to preconstruction conditions as meadow/field and left as open space upon completion of construction. If some of the panels were moved onto the open field area, there could be some reduction in the amount of forested area to be cleared and some reduction in the amount of solar arrays in the northern portion of the project site. The Council recommends that the possibility of locating a portion of the solar panels in the 5-acre field (with

consideration of visual screening of such areas) be explored in the Development and Management Plan (D&M Plan).

The 5-acre open field area identified as Area 4 in the Phase IA Report will not be graded, no additional tree clearance would occur and no stone walls would be altered. To lessen the potential impact to undisturbed resources, SHPO recommends the use of construction matting in Area 4. The Council will require that plans to restore areas used for parking, equipment, and material storage, i.e. "laydown areas" during construction (and not otherwise occupied by solar panel array installation) be included in the D&M Plan.

DOAg suggested a clustered low impact development with rooftop solar, passive solar or geothermal on a portion of the property with the remaining areas of forestland, wetlands and farmland protected with a conservation easement. Rooftop solar would not be a feasible alternative because of the proposed project size and acreage required.

The Council notes that CS has a commitment to a 20 MW capacity target under its PPA as well as under its selection in the Tri-State RFP. The record reflects that CS believes it has minimized the land area necessary to achieve its electrical capacity target. The proposed site is the only site CS was able to secure that had willing landowners, adequate acreage and proximity to electrical infrastructure.

Public Safety

The proposed project would comply with the National Electrical Code (NEC 2017) and all applicable safety and fire protection codes and standards. In the event of a fault within the facility, the system would have protection systems that would isolate a section of the array or the entire plant if necessary. CS would train emergency responders as to how to handle an emergency at the solar plant. First responders would have a key or code to a key/lock box that could be used to shut down the entire solar facility in the event of an emergency.

The solar panels are designed for a wind pressure loading per the International Electrotechnical Commission (IEC) 61215 standard. The racking system supporting the solar panels would be designed to accommodate the snow load in accordance with applicable American Society of Civil Engineers, International Building Code and Underwriter Laboratories standards. Decommissioning of the project at the end of its useful life would include plant infrastructure removal plans and site restoration plans. The Council will require that a decommissioning plan be provided in the Development and Management Plan (D&M Plan).

Candlelight Farms Airport is located roughly 0.5 miles west of the solar project. The Federal Aviation Administration (FAA) issued Determinations of No Hazard to Air Navigation for the proposed project. No marking or lighting is required for most of the project. However, three select northern locations (based on the originally proposed configuration) are required to be marked/lit, with red lighting recommended approximately 10 feet above ground level. In terms of visual impacts of the red lights to the surrounding area, the Council notes that a 10-foot light height is very low relative to the surrounding average tree height of 90 to 100 feet proximate to the solar array. CS contends that the existing No Hazard Determinations are still valid despite the slight changes to the layout. On April 12, 2018, the FAA issued Determinations of No Hazard to Air Navigation for the revised (approved) solar project layout. The Council will require that a final FAA marking/lighting plan, as necessary, be provided in the D&M Plan.

FAA requires a glare analysis for on-airport solar development at federally obligated airports. FAA does not require a glare analysis for this project. Notwithstanding, a glare analysis has been performed using the Solar Glare Hazard Analysis Tool developed by Sandia National Laboratory. The analysis shows that the glare hazard is minimal and at acceptable levels for safe airport operation. CS contends that the glare analysis conclusions are still applicable to the proposed revised project. On January 5, 2018, CS conducted a second

glare analysis for the revised (approved) project specific to the north and south flight paths at Candlelight Farms Airport consistent with FAA policy. The results indicate there is no glare.

The primary or dominant source of noise for the proposed project would be from the up to eight inverters. The proposed facility would be in compliance with the DEEP Noise Control Standards. Noise resulting from Project construction is exempt from the DEEP noise standards.

Environmental

Historic and Archaeological Resources

The nearest historic resource listed on the National Register of Historic Places (NRHP) to the proposed solar array is Boardman's Bridge, located approximately 1.0 mile to the north. The nearest historic resource listed on NRHP to the electrical interconnection corridor terminus is The Flat Iron Building, located approximately 0.9 miles to the east. No adverse impacts to these NRHP resources would be expected.

The State Historic Preservation Office (SHPO) has noted that although no properties listed on the NRHP have been documented within the project parcels, the project area is situated on well-drained soils adjacent to wetlands. Additionally, this project site is within close proximity to both Candlewood Lake and the Housatonic River. This type of environmental setting tends to be associated with pre-contact Native American settlement, and several archaeological sites have been recorded in the region surrounding the affected parcels. Accordingly, SHPO requested that a professional cultural resources assessment and reconnaissance survey be completed prior to construction. A Phase 1A Cultural Resources Assessment Survey Report (Phase 1A Report) was prepared for CS by its consultant and submitted to SHPO on or about September 18, 2017.

The Phase 1A Report concluded that no additional archaeological examination of the proposed access road or electrical interconnection route is recommended. However, the central portion of the proposed solar facility area can be considered to retain a moderate/high archaeological sensitivity, and a Phase 1B cultural resources reconnaissance, using subsurface testing techniques, was recommended for those areas that would be impacted by construction. A Phase 1B Cultural Resources Reconnaissance Survey was performed, and a Phase 1B Report was prepared. Examination of the moderate/high archaeologically sensitive areas associated with the proposed solar facility and potential temporary construction parking and laydown area resulted in the identification of eight cultural resource loci known as Locus 1 through Locus 8.

In the Phase 1B Report, CS' consultant determined that no additional archaeological examination of seven out of the eight loci were necessary. However, Locus 7 was assessed as potentially significant, and an avoidance plan was recommended. Accordingly, the proposed revised project includes a revision that would provide an approximately 69-foot buffer from the limits of work to Locus 7. In addition, the 100-acre permanent conservation restriction would include Locus 7 and would provide additional protection. On or about October 26, 2017, the Phase 1B Report with an avoidance and protection plan for Locus 7 were submitted to SHPO. By letter dated November 28, 2017, SHPO recommended precautionary measures to lessen the potential impact to undisturbed resources, including the use of construction matting in the proposed temporary construction staging area referred to as Area 4 in the Phase 1A Report. The Council will require plans to comply with SHPO's recommended precautionary measures to be included in the D&M Plan.

Visibility

The solar panels would be black or blue in color with an anti-reflective coating to reduce reflection as much as possible. The solar array would also be shielded in all directions by tree buffers. Shielding does not

necessarily mean not visible; shielding refers to limiting or obscuring a view. As such, CS does not propose landscape plantings around the solar facility. Where lack of screening is a concern, additional vegetative screening may be installed to further minimize visual impacts on abutting residential properties. CS anticipates planting evergreens. Furthermore, CS is in the process of revising the proposed limits of work to provide a minimum vegetative buffer of 50 feet between the property line and the limit of work. The future 50-foot buffer is based on the Town's residential zoning regulations for a residential parcel abutting a residential parcel and would result in less visual impact of the facility than the revised (approved) project. There are existing forested areas in most directions on adjacent parcels.

Nearby recreational resources include the approximately 5,420-acre Candlewood Lake, located approximately 815 feet east of the proposed revised solar array and approximately 467 feet east of the electrical interconnection corridor. Lynn Deming Park is located on the northeastern side of Candlewood Lake (approximately 1,698 feet from the edge of the proposed revised solar array) and includes the use of the lakefront and the lake. Recreational uses associated with Lynn Deming Park and Candlewood Lake include, but are not limited to, swimming, picnicking, fishing, boating, kayaking, canoeing, scuba diving, and water skiing. However, CS does not expect that the solar array or associated electrical interconnection poles would be visible from any portion of the main body² of Candlewood Lake based on the originally proposed project and the proposed revised configuration and the future revised project. Also, views of the solar facility from the Housatonic Range Trail/Blue Trail System (located approximately 933 feet north of the northern limit of work) would be screened by existing intervening vegetation.

The approved solar facility will be located between approximate elevations 728 and 918 feet above mean sea level (amsl). Land surrounding the solar project site is located between approximate elevations of 250 feet to the north and 700 feet to the west and south.

CS performed a topographic survey of the project site. All of the structures on the properties adjacent to the project site are situated at a lower elevation than the project site and the fronts of the structures face away from the solar array:

- a) Candlewood Lake is at an elevation of approximately 429 feet amsl.
- b) 195 Candlewood Mountain Road is located at elevations approximately between 700 and 800 feet amsl. 195 Candlewood Mountain Road is in a residential zone;
- c) 185 Candlewood Mountain Road is located approximately between elevations of 690 and 720 feet amsl. 185 Candlewood Mountain Road is in a residential zone;
- d) The undeveloped Dunham parcel to the south of the solar project property boundary is located at elevations approximately between 640 and 810 feet amsl. The undeveloped Dunham parcel is partially in a residential zone and partially in a business zone;
- e) Candlelight Farms Inn property is located at an elevation of approximately between 690 and 720 feet amsl. Candlelight Farms Inn is in a business zone; and
- f) Candlelight Farms Airport is located at an elevation of approximately 675 feet amsl. Candlelight Farms Airport is in an airport zone.

Existing trees and topography on and off the project property would provide a visual buffer from the solar array. There are existing forested areas in most directions on adjacent parcels. Any views of the 5-acre construction staging area would be temporary and this area will be restored back to preconstruction conditions as meadow/field and left as open space upon completion of construction.

² An approximately 100-foot section of the electrical interconnection route may be visible from the discharge canal to the northeast of Lynn Deming Park, but not from the main body of Candlewood Lake.

The Council notes that the top of the solar panels would be approximately six feet above grade. This would be similar to the height of the proposed seven-foot tall chain link fence and comparable to the inverter and transformer heights of roughly eight feet. Thus, the proposed solar facility would not significantly protrude above the top of the fence line. Lastly, the proposed electrical interconnection poles would have approximate heights of 45 to 55 feet, which is significantly lower than the average tree canopy height of 90 to 100 feet. The Council believes that all of these design features would reduce any visual impacts on surrounding neighbors and recreational areas.

Agriculture and Soils

The state has not purchased any development rights to the proposed site nor is the proposed site part of the Public Act 490 Program. CS obtained soil survey data from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) mapping to determine that the solar array parcel does not contain any prime or important farmland soils. Connecticut Prime Farmland Soils and Connecticut Important Agricultural Soils are mapped on portions of the interconnection parcels; however, these locations would not be impacted by construction of the electrical interconnection. Also, the project array area does contain Paxton and Montauk fine sandy loams soils, very stony, with three to eight percent slopes. The Town of New Milford GIS mapping indicates that this is a locally important farmland soil.

With respect to the solar array parcel, mapped soils for the project site are listed as having a very stony or extremely stony surface modifier. This is what has kept the soils from being considered prime or important farmland soils. If decades of agricultural activity have removed the stones, then it is possible that the soil could meet the criteria for prime and important farmland. DOAg indicated that a field visit to evaluate surface stone removal would determine if prime and important farmland soils are present on the site. Such field evaluation has not been performed. Notwithstanding, the Council finds that CS has performed its due diligence in researching the existing USDA NRCS soil survey data in its preparation of this Petition.

The Council encourages CS to incorporate pollinator habitat on-site post-construction.

Core Forest

The 2004 Environment Canada Report cited by the University of Connecticut Center for Land Use Education and Research suggests that 250 acres of upland forest should be considered the absolute minimum forest patch size needed to support area-sensitive edge-intolerant bird species. The recommended minimum forest patch size is 500 acres, as this is likely to provide enough suitable habitat to support more diversity of interior forest species.

Currently, approximately 788 acres of contiguous forest is present on and adjacent to the project area. Of this 788 acres, 443 acres are considered core forest, and 345 acres are considered edge forest (or areas not more than 300 feet from non-forested areas). Although the proposed revised project would result in a (post-construction) reduction of core forest to 359 acres, the Council notes that this would still be about 43.6 percent above the absolute minimum threshold of approximately 250 acres and about 28.2 percent below the recommended minimum threshold of approximately 500 acres. The proposed revised project would increase forested edge habitat by eight to nine percent. Additionally, portions of the 100-acre conservation restriction area are to the north, northwest and east of the project site that will be permanently conserved in a natural state.

Wildlife

In a July 10, 2017 preliminary Natural Diversity Database (NDDB) assessment letter to CS, the DEEP Wildlife Division identified known extant populations of nine state-listed species within or near the

boundaries of the proposed site. The assessment also concurred with conservation measures suggested by the Petitioner for the protection of the vernal pools and recommended additional mitigation measures. The nine state-listed species referenced in the NDDB preliminary assessment letter include: little brown bat, golden-winged warbler, slimy salamander, Jefferson salamander “complex,” wood turtle, eastern box turtle, red bat, silver-haired bat and hoary bat.

The petitioner completed surveys of the project area for state-listed species referenced in the NDDB preliminary assessment letter. None of the species were found on the site during the surveys; however, the Petitioner identified protection measures for the species, and the petitioner would commit to best management practices, protection measures and mitigation for the NDDB listed species.

While DEEP identified potential breeding habitat suitable for the golden-winged warbler, a state-listed endangered bird species, it breeds in old-field habitat generally 10 acres or greater in size. The identified areas are upland, actively hayed and/or pastured and contain virtually no tall growing forbs, shrubs or tree seedlings, which are typically associated with inhabited golden-winged warbler habitat. Therefore, suitable breeding habitat for the species does not exist on the site, and no protection measures are proposed.

The three State-listed NDDB bat species are tree roosting bats that roost high in large coniferous and deciduous trees. For the protection of bat species, tree clearing would be limited to November 1 through March 30. The Council notes that the tree clearing restriction is in effect during the mid-May through late October wedding season at Candlelight Farms Inn and Candlelight Farms Airport.

There were no observations of wood turtles or eastern box turtles, both state-listed species of special concern. However, protection measures are proposed for these species.

Vernal pool indicator species in Connecticut include wood frog, spotted salamander, marbled salamander, Jefferson salamander/blue-spotted salamander and fairy shrimp. Species observed at the cryptic vernal pools associated with Wetland I include marbled salamanders, four-toed salamanders, mole salamanders, post-metamorphic wood frogs, an eft stage eastern newt, and sub-adult American toads.

The Jefferson salamander complex is a state-listed species of special concern that may occur at the site. During site surveys, no observations of this species occurred.

Site surveys for assessing slimy salamander habitat were conducted on September 12, 22, 30 and October 4, 2017. No slimy salamanders were observed during these site surveys. However, during the September 26, 2017 public field review of the site, a small, dark salamander was observed that was identified as potentially being a lead-back salamander or a juvenile slimy salamander. The salamander escaped before identification could be confirmed. Notwithstanding, the Council notes that the field survey time of year was not ideal as the optimal time of year to capture slimy salamanders in Connecticut is between May and June.

Preferred slimy salamander habitat includes mature deciduous woodland with slopes greater than 35 percent. Approximately 30 percent of the solar array area is high-quality slimy salamander habitat. However, the entire site has the potential to be slimy salamander habitat. Approximately 2 percent of on-site high-quality slimy salamander habitat would be directly altered through the proposed clearing and development of the facility.

Three specific areas of high-quality slimy salamander habitat were identified including: north of Wetland I, southeast of Wetland I and east of the existing haul road from Candlewood Mountain Road. The habitat associated with the haul road is isolated and would be further isolated from the expansive contiguous habitat east and north of the arrays. The two habitat areas near Wetland I would remain intact and development would not pose a barrier to long-term dispersal of the species.

The Council notes that, for the protection of the slimy salamander and the Jefferson salamander, the same exclusion barrier from the fenced solar array proposed for the protection of eastern box turtle species is proposed. Additionally, the petitioner would create an approximately 100-acre contiguous, steep slope, mature forest perpetual conservation parcel to allow for preservation of slimy salamander habitat, conservation of existing unfragmented forest, and protection of existing wetlands and vernal pools.

Air Quality

The project would have no adverse effect on 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 life of the facility due to tree clearing versus the net carbon dioxide emissions reduction resulting from the solar facility displacing existing fossil fueled generation in the grid portfolio, the “carbon debt payback period” would be, on average, less than one full day of solar facility operation per year.

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*.

There are nine wetland areas within the properties that comprise the project. Approximately 0.05 acres of tree clearing would be necessary in wetland areas. Wetlands VI, VII, VIII and IX would be converted from forested wetlands to emergent and/or shrub wetlands to allow for vertical clearance for the proposed electric utility line. The proposed facility fence line would be approximately 64 feet from Wetland III and approximately 470 feet from the watercourse associated with Wetland I. The Council finds that no wetlands or watercourses would be directly impacted by the installation of the proposed facility.

Vernal Pools

There are three vernal pools at the project site: one is located in Wetland V, and two cryptic vernal pools are located within Wetland I. Construction of the project would not directly impact any of the vernal pools or the 100-foot vernal pool envelopes (VPE).

Two cryptic vernal pools were delineated within Wetland I on September 30, 2017. The two cryptic vernal pools were evaluated for potential impacts together as a single system because they are both part of the same wetland. The proposed facility would completely avoid the two cryptic vernal pools and the 100-foot VPE of Wetland I. Development of the project would develop 41.4 percent of the 100-foot to 750-foot critical terrestrial habitat (CTH). The post-development condition of the cryptic vernal pool in Wetland I exceeds the recommendation for less than 25 percent developed area within a CTH that is a guideline of Calhoun and Klemens 2002 (C&K BDPs), but approximately two percent of the CTH in Wetland I vernal pools is currently altered field area. The nearest point of proposed construction area would be no closer than 145 feet from the cryptic vernal pools in Wetland I.

Wetland V is a Tier I vernal pool. The Wetland V vernal pool is just beyond the northern end of the project within a narrow cut between two granite outcrops. The facility would completely avoid disturbance of the vernal pool and the 100-foot VPE of Wetland V. The project would require the development of 17.3 percent of the CTH of Wetland V.

While some post-construction development within the vernal pool CTH areas would exceed the 25 percent maximum recommended in C&K BDPs, the Council notes that the approximately 100-acre conservation area and construction BMPs would provide adequate protection of these vernal pools. **The DEEP NDDDB Final Determination requires CS to establish the 100-acre conservation restriction.**

Stormwater

Minimal grading within the footprint of the array would be required where slopes exceed the maximum allowable slope for the racking equipment. Grading would also be required to implement construction phase best management practices (BMPs) for erosion and sedimentation control which would be converted to permanent stormwater quality BMPs to maintain water quality after construction.

DEEP has final jurisdiction over stormwater management. On or about March 14, 2019, DEEP rejected CS's application for a General Permit without prejudice. CS would modify the stormwater design to accommodate the proposed revised project and the future revised project in accordance with specific DEEP comments on the stormwater management plans, the General Permit, *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and *2004 Connecticut Stormwater Quality Manual* prior to construction. CS stated it would comply with the recommendations from DEEP outlined in "Stormwater Management at Solar Farm Construction Projects" dated September 8, 2017. In accordance with DEEP General Permit guidelines, stormwater design components would be installed in five-acre stages to control stormwater flows onto adjacent properties during construction. Clearing, stump removal and limited grading would be performed such that the total area of disturbed, exposed ground surface contributing to stormwater runoff to a common point would not exceed five acres at a time. Once an approximately five-acre sub-area has been stabilized, work at the next downgradient sub-area can begin.

The Petitioner contends that the final post-construction discharge rates associated with the proposed revised project would be no greater than the existing discharge rates. The Council notes that, while a housing development project at this site (known as Dunham Farms) was denied by the Town of New Milford in 2007, in part due to stormwater issues, the development of the proposed revised solar project is very different in terms of impervious area. Specifically, the proposed revised solar project would not involve the installation of paved roads³ and housing.

The Council will require final stormwater design plans and its related phasing plan, as well as plans to comply with the recommendations from DEEP outlined in "Stormwater Management at Solar Farm Construction Projects" dated September 8, 2017, to be included in the D&M Plan. **Any changes to the stormwater management plans in the DEEP General Permit application process that result in a project redesign would be submitted to the Council as D&M Plan revisions.**

Conclusion



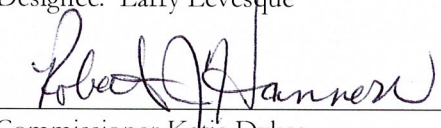
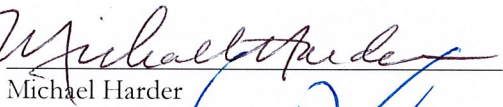
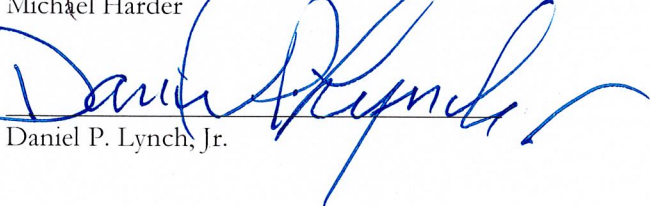
Based on the record in this proceeding, the Council finds that there would not be a substantial adverse environmental effect associated with the construction, maintenance and operation of an approximately 20 MW Solar Photovoltaic Project on an approximately 163-acre parcel and associated electrical interconnection

³ Notwithstanding, the proposed gravel access drive would be modeled as impervious, consistent with DEEP guidance provided to CS.

parcels located generally north of Candlewood Mountain Road in New Milford, Connecticut. 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 §16-35k, 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.

DECLARATORY RULING

The undersigned members of the Connecticut Siting Council (Council) hereby certify that they have heard this case, or read the record thereof, in the court-ordered remand regarding visibility on **PETITION NO. 1312** - Candlewood Solar LLC Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 20 megawatt AC (26.5 megawatt DC) solar photovoltaic electric generating facility located on a 163 acre parcel at 197 Candlewood Mountain Road and associated electrical interconnection to Eversource Energy's Rocky River Substation on Kent Road in New Milford, Connecticut, and voted as follows to approve the amended Findings of Fact and Opinion:

<u>Council Members</u>	<u>Vote Cast</u>
 Robert Silvestri, Presiding Officer	Yes
 Chairman Marissa Paslick Gillett Designee: Larry Levesque	Yes
 Commissioner Katie Dykes Designee: Robert Hannon	Yes
 Edward Edelson	Absent
 Michael Harder	Yes
 Daniel P. Lynch, Jr.	Yes

Dated at New Britain, Connecticut, June 6, 2019.



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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June 7, 2019

TO: Classified/Legal Supervisor
1312190308
The Danbury News Times
333 Main Street
Danbury, CT 06810
legals@hearstmediact.com

FROM: Lisa Fontaine, Fiscal Administrative Officer

RE: **PETITION NO. 1312** - Candlewood Solar LLC Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 20 megawatt AC (26.5 megawatt DC) solar photovoltaic electric generating facility located on a 163 acre parcel at 197 Candlewood Mountain Road and associated electrical interconnection to Eversource Energy's Rocky River Substation on Kent Road in New Milford, Connecticut. **Court-ordered remand regarding visibility.**

Please publish the attached legal notice for one day on the first day possible from receipt of this notice.

Please send an affidavit of publication and invoice to my attention.

Thank you.

LM





STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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NOTICE

Pursuant to a Connecticut Superior Court order, dated March 5, 2019, remanding the administrative appeals to the Connecticut Siting Council (Council) to clarify whether the December 21, 2017 Findings of Fact and Opinion of the Council on visibility agree with the evidentiary record in the matter of Candlewood Solar LLC Declaratory Ruling for the proposed construction, maintenance and operation of a 20 megawatt AC solar photovoltaic electric generating facility located on a 163 acre parcel at 197 Candlewood Mountain Road and associated electrical interconnection to Eversource Energy's Rocky River Substation on Kent Road in New Milford, Connecticut, the Council announces that, on June 6, 2019, the Council amended the Findings of Fact and Opinion for this declaratory ruling. This remand record is available for public inspection in the Council's office, Ten Franklin Square, New Britain, Connecticut.

