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
		December 21, 2017

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))

Municipal Consultation and Community Outreach

23. 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)

24. 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)

25. 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)

26. 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)

27. 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)

28. 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)

29. 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:
    a) Provide a construction management plan to the town that addresses site access, land disturbance, drainage and sedimentation and erosion control;
    b) Planting pasture grasses instead of turf grass;
    c) Using sheep or other livestock to graze the solar field area;
    d) Restoring or funding off-site agricultural enhancements;
    e) Allowing public access to the site;
    f) 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)

30. 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:
    a) The proximity of the proposed facility to Candlelight Farms Airport;
    b) Visual impacts to abutting residential properties;
    c) Increased traffic and impacts to Candlewood Mountain Road;
    d) Lack of detail in regard to sedimentation and erosion control and stormwater management both during and after construction;
    e) Provision of a more detailed glare analysis tailored to Candlelight Farms Airport;
    f) Require a 100 foot landscape buffer along Candlewood Mountain Road and common property boundaries with single family homes;
    g) 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
    h) Require a third party sedimentation and erosion control specialist to provide weekly inspection reports to the Town during construction.

    (Town 5)

31. 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)

32. 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)

33. 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)

34. 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)

35. The Towns of Brookfield and New Fairfield did not comment on the project. (Record)

36. 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)

37. 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)

38. 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

39. Pursuant to R.C.S.A. §16-50j-40, on June 30, 2017 and on July 24, 2017, 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)

40. 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)

41. On August 30, 2017, the Council received a response from CEQ indicating conern that the petition provides insufficient information on upland habitats, upland soils, vegetation and wildlife. (CEQ Letter dated August 30, 2017)

42. 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)

43. 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 occureances;
    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)

44. 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)

45. 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

46. 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)

47. 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)

48. 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)

49. 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)

50. 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)

51. 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)

52. 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

53. 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)

54. 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

55. 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)

56. 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)

57. 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)

58. 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

59. 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)

60. 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)

61. 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)

62. 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

63. 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)

64. 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)

65. 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)

66. 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)

67. 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)

68. 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)

69. 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)

70. 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

71. 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)

72. 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)

73. 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)

74. 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)

75. 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)

76. 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

77. 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)

78. 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)

79. 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)

80. 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

81. 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).

82. 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)

83. 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)

84. 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)

85. 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)

86. 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)

87. 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

88. 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)

89. Under CS' PPA, the RECs and electrical energy are sold to the utilities in a bundled package. (Tr. 4, p. 109)

90. 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

91. 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))

92. 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

93. 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)

94. 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)

95. 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)

96. 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)

97. 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)

98. Rooftop solar would not be a feasible alternative because of the proposed project size and acreage required. (Tr. 3, p. 14)

99. 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

100. 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)

101. 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)

102. 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)

103. 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)

104. 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)

105. 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)

106. 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)

107. The subject property is located in New Milford's Major Planned Residential Developoment District (MPRDD) #1. (CS 1, Environmental Assessment, p. 12)

108. 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)

109. 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. (CS 1, Environmental Assessment, p. 12; CS 1, Tab 5 - PILOT Agreement, p. 6)

110. 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)

111. 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 residiential 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)

112. The closest off-site residence structure is located at 183 Candlewood Mountain Road at a distance of approximately 350 feet to the proposed revised project perimeter fence. (CS 13c, p. 5)

Project Description

113. 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)

114. 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)

115. 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)

116. 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)

117. 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)

118. 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)

119. 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)

120. 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)

121. No energy storage system is proposed at this time. (CS 2, reponse 20)

122. The ground beneath the solar arrays would be planted with seed mixtures according to DEEP guidelines. (Tr. 4, p. 112)

123. 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)

124. 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)

125. A roughly 1,316-foot existing dirt access road off of Candlewood Mountain Road 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)

126. 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)

127. 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)

128. 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)

129. The Petitioner contends that it has minimized the land area necessary to achieve its electrical capacity target. (Tr. 3, p. 19)

130. 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)

131. The total estimated cost of the proposed revised project would be roughly $40,000,000. (Tr. 3, p. 90)

Electrical Interconnection

132. 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)

133. 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)

134. 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)

135. 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)

136. 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)

137. 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)

138. The interconnection study is currently about four months behind schedule. (CS 11, response 80)

139. 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

140. A Construction General Permit (General Permit) from DEEP would be obtained before commencement of construction activities. (CS 2, response 68)

141. The proposed construction sequence would be the following:
    a) Improve the 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, tranformers and fencing.

(CS 2, response 66)

142. 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)

143. 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)

144. 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 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)

145. 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)

146. RCM reviewed the erosion control plan and expressed several concerns as noted below:
a) RCM did not see a phasing plan that adequately outlines the proposed phases;
b) 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;

c) 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;
d) 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)

147. CS responded to RCM's erosion control plan concerns as follows and as corresponds to FOF #146 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)

148. 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)

149. 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)

150. 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)

151. 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)

152. 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

153. 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)

154. 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)

155. 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

156. 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)

157. The estimated capacity factor of the proposed revised project would be approximately 14.7 percent. (CS 1, p. 20; CS 13a, p. 3)

158. 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)

159. As the solar panels age, power output would decline by roughly 0.5 percent per year. (Tr. 3, pp. 18-19)

160. The proposed solar facility would be expected to have a service life of at least 20 years. (CS 1, p. 19)

161. CS would own and operate the solar facility for the 20 year PPA term. (CS 1, p. 9)

162. 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)

163. 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

164. 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, reponse 82)

Public Safety

165. 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, Environmetnal Assessment, p. 32)

166. CS would train emergency responders as to how to handle an emergency at the solar plant. (Tr. 3, p. 20; CS 2, response 46)

167. The access road has been designed to accommodate a typical, roughly 40-foot long fire truck. (Tr. 3, p. 70)

168. 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)

169. 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)

170. 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)

171. 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)

172. 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

173. Candlelight Farms Airport is located roughly 0.5 miles west of the solar project. (CS 1, Environmental Assessment, p. 32; CS 2, response 43)

174. 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 utilty 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)

175. 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)

176. The No Hazard Determinations are based on the height and location of the proposed facility, not glare-related issues. (Tr. 1, pp. 15-16)

177. 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. (Tr. 3, p. 21)

178. 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)

179. 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. (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

180. 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. (Tr. 1, p. 16; Tr. 3, p. 78; CS 1, p. 26)

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

182. 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

183. 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)

184. The Petitioner contends that the project would meet DEEP air quality standards. (CS 1, p. 6)

185. 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

186. The Petitioner contends that the proposed project would meet DEEP water quality standards. (CS 1, Environmental Assessment, p. 1)

187. The proposed project would not consume water during its operation. (CS 1, p. 25)

188. 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)

189. 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)

190. A portion of the project area is located within the Candlewood Lake Watershed District (CLWD). (CS 1, Environmental Assessment, p. 12)

191. 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)

192. 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)

193. No impacts to public drinking water supplies would be expected. (CS 1, Stormwater Management Report, p. 4)

194. Construction of the proposed project would not be expected to impact private wells. (CS 2, response 55)

195. The solar panels would not require regular cleaning or other similar maintenance. (CS 2, reponse 75)

Stormwater

196. 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)

197. 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)

198. 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)

199. 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)

200. RCM reviewed the preliminary stormwater drainage calculations and expressed several concerns as noted below:
    a) In general, the post-construction drainage calcuations 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 calculcations. The abscense 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)

201. 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)

202. 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

203. 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.)

204. 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)

205. 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)

206. 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)

207. 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)

208. 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

209. 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)

210. 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)

211. 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)

212. 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)

213. 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)

214. 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)

215. 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)

216. 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)

217. 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

218. 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. (CS 2, responses 27 and 40; CS 13a, Sheets E-100)

219. CS does not propose landscape plantings around the solar facility. (CS 13a, Sheets E-100 and E-101)

220. 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)

221. 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 2, response 13; CS 13c, p. 3)

222. 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)

223. 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)

224. Under leaf-off conditions, the proposed (revised) solar array would visible to the west, such as by Fox Run and Candlelight Farms Airport. (Tr. 4, p. 113)

225. 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)

226. 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

227. The primary or dominant source of noise would be the inverters. (Tr. 4, pp. 110-111)

228. 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, Boafffresponse 39)

229. 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)

230. 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)

231. Construction noise is exempt from DEEP Noise Standards. (R.C.S.A. §22a-69-108(g))

Historic and Archaeological Resources

232. 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)

233. 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)

234. 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)

235. 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 addiontal archaeological examination of Locus 1, 2, 3, 4, 5, 6, and 8 are necessary. (Phase 1 B Report, p. 36; CS 20, p. 1)

236. 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)

237. 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)

Geology

238. 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)

239. Bedrock is not expected to be encountered during construction given the minimal subsurface disturbance required. (CS 1, Environmental Asssessment, p. 16)

240. 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 earthequake. 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)

241. 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

242. 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)

243. 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)

244. 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)

245. The petitioner would commit to following best management practices, protection measures and mitigation for the NDDB listed species. (CS 13c, p. 6)

246. 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

247. 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

248. 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)

249. 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

250. 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)

251. 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)

252. 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)

253. Turtles found within the construction area would be moved to an adjacent area outside of the exclusion barrier. (CS 13c, p. 7)

254. 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)

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

Amphibians

Vernal Pool Species

256. 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)

257. 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)

258. 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)

259. 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)

260. Mole salamanders live most of its lifecycle in forested area outside the vernal pool. (Tr. 3, pp. 95, 96)

Slimy Salamander

261. 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)

262. 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)

263. 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)

264. The optimal time of year to capture slimy salamanders in Connecticut is between May and June. (Tr. 1, p. 63)

265. 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)

266. 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)

267. For the protection of the slimy salamander and the Jefferson salamander, the same exclusion barrier from the fenced solary 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

268. 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 that 500 acres. (Council Administrative Notice Item No. 78 – Connecticut's Forest Action Plan, p. 9; RCM Administrative Notice Item No. 2, Core Forest Explained)

269. 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)

270. 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)

271. 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)

272. 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)

273. 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)

274. 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)

275. In the proposed revised project, the amount of core forest would be reduced to 359 acres, post-construction. (Tr. 3, p. 24-25)

276. The proposed revised project would change the interior of the forest and increase forested edge habitat by eight to nine percent. (Tr. 3, p. 97)

Agriculture

277. 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)

278. 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)

279. 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)

280. 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.)

281. 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)

282. DOAg has not purchased any development rights for the proposed site as part of the SPPAL. (CS 2, response 5)

283. 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)

284. 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)

285. 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)

286. 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)

287. 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)

288. 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)

289. 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)

290. DOAg did not perform an on-site investigation of stones remaining at the site. (Tr. 3, pp. 95-97)

291. 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)

292. 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)

293. 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

294. 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)

295. 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

296. 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)

297. 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)

298. 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)

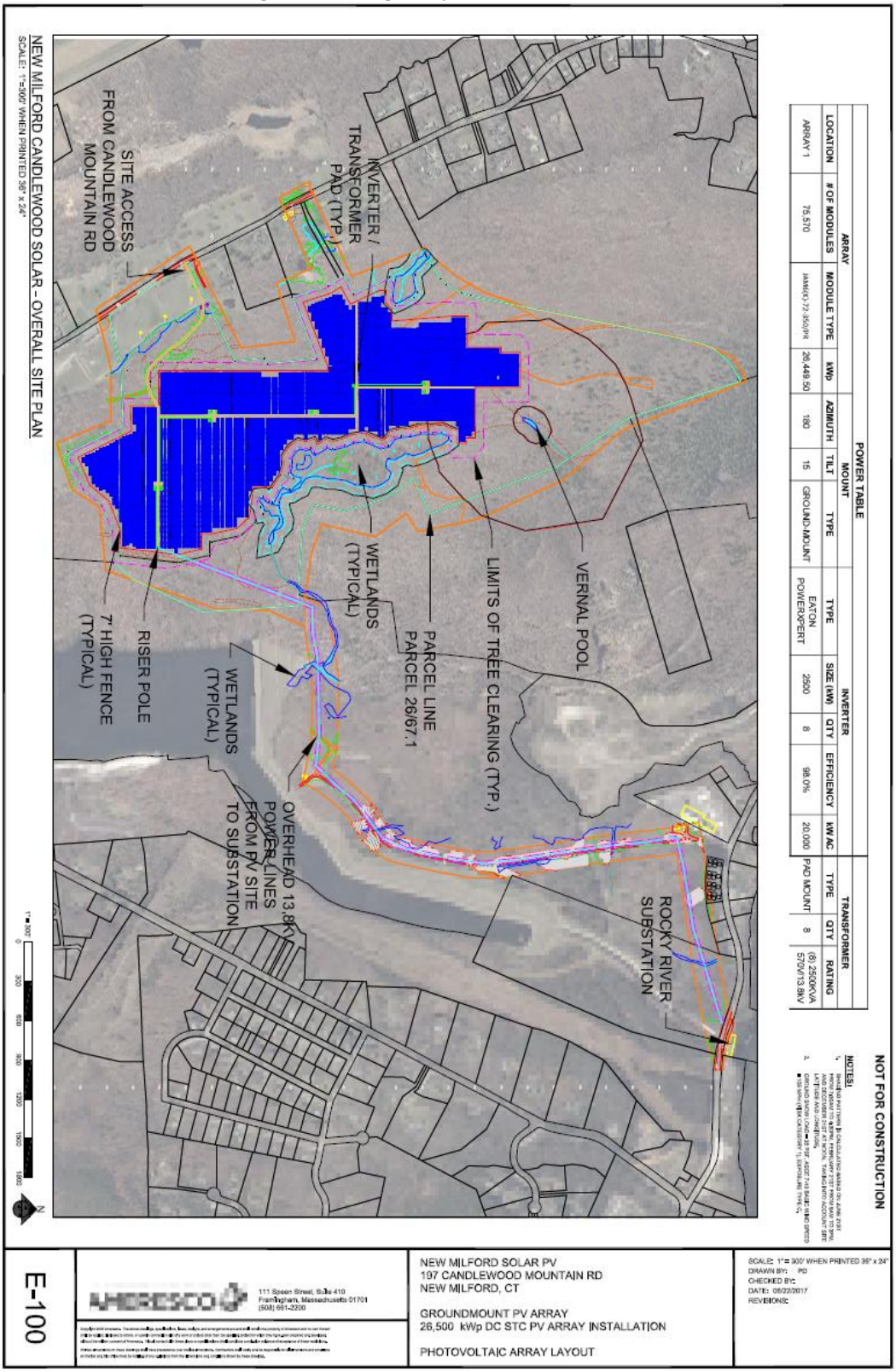
299. Of the approximately fifty five written limited appearance statements in opposition to the proposed facility, concerns generally include, but are not limited to, the following:
- visual impacts;
- traffic;
- impacts to forest;
- impacts to air traffic at Candlewood Farms Airport;
- wildlife and environmental impacts;
- decommissioning issues;
- well or other groundwater impacts;
- stormwater impacts; and
- property values.

(Tr. 2; Public Comment Record)

300. 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)

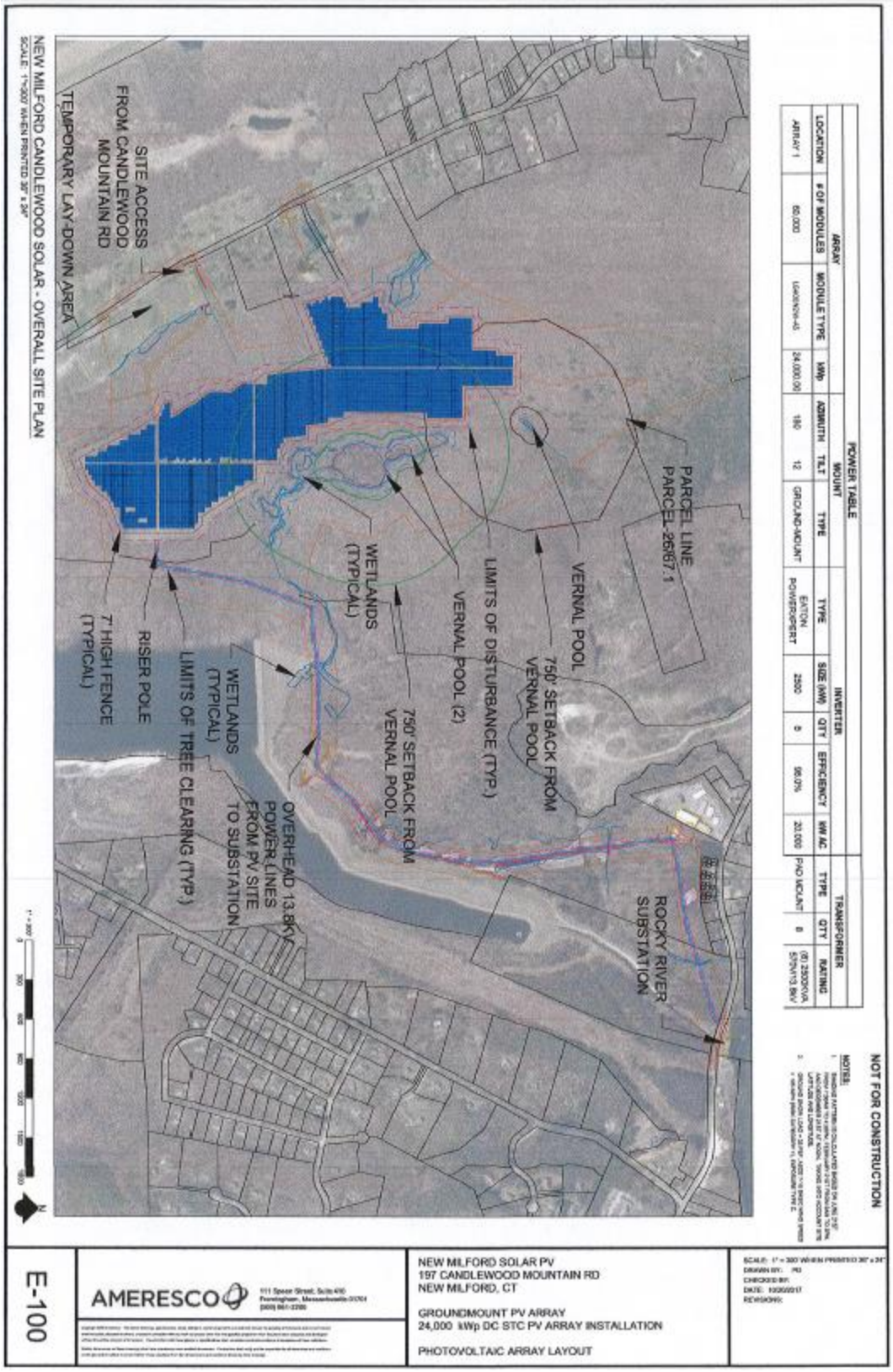
301. In response to neighborhood concerns, CS reduced the size of the project and associated area of disturbance to avoid slimy salamander habitat, increased the size of buffers around vernal pools, and avoided an area of archaeological sensitivity. CS also established a 100-acre conservation restriction. (CS 13c, p.4; CS 13a, p.2 ; Tr. 1, p. 36)

Figure 1 – Originally Proposed Site Plan



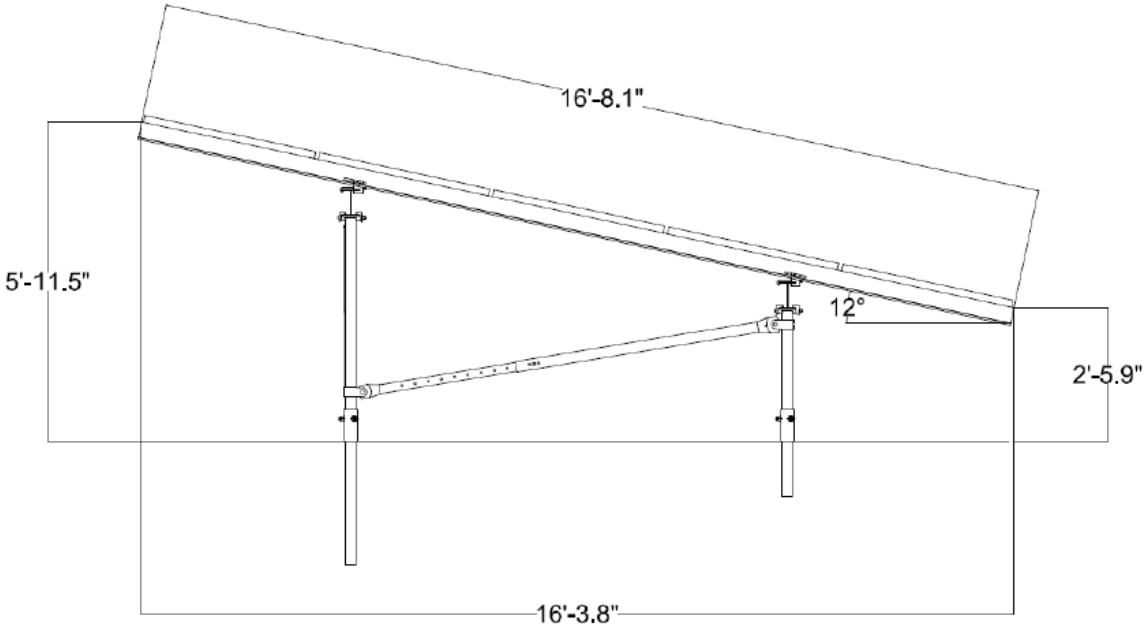
(CS 1, Sheet E-100)

Figure 2 – Proposed Revised Site Plan



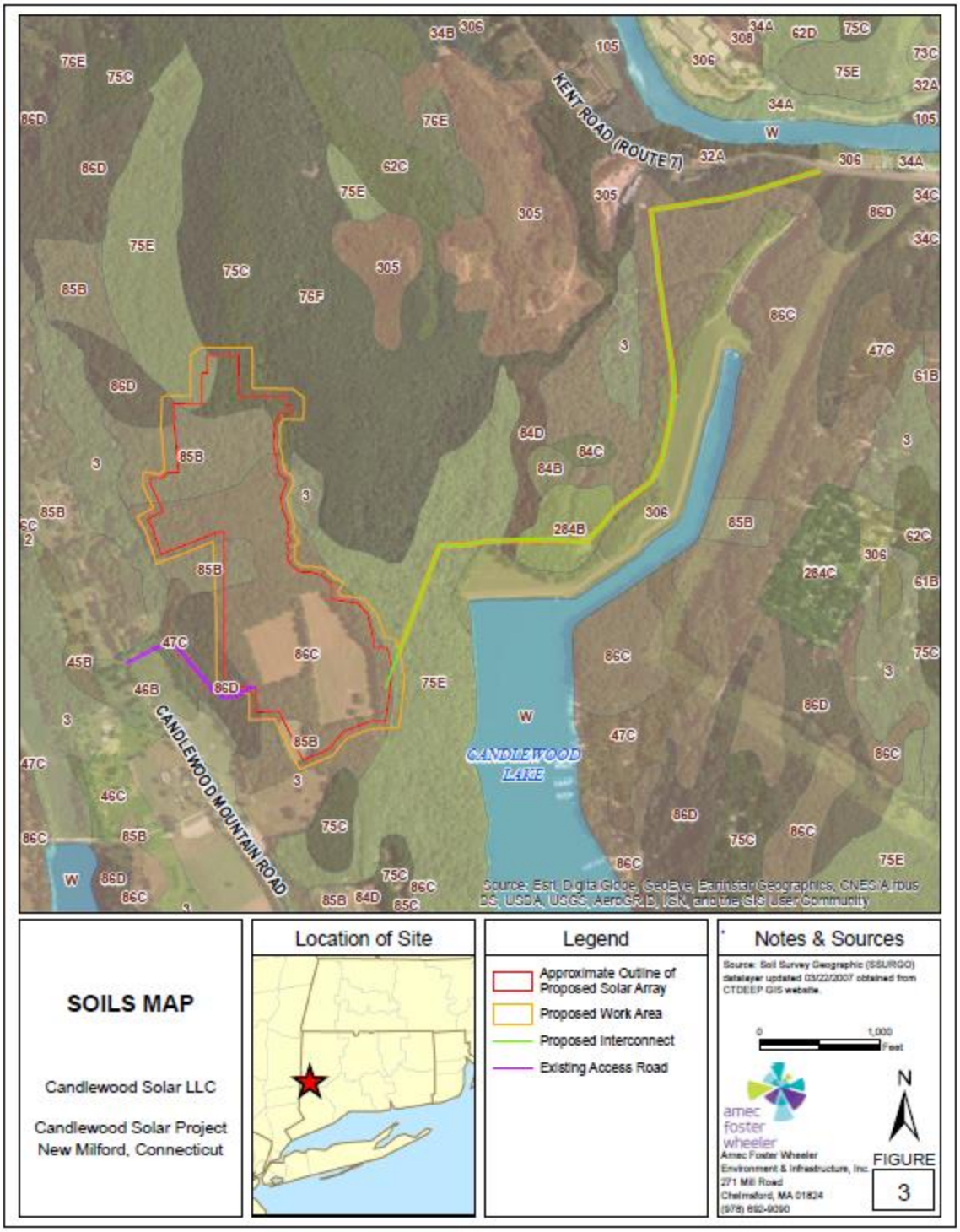
(CS 13a)

Figure 3 – Proposed Solar Rack Side Elevation View



(CS 11, response 108)

Figure 4a – Soils Map



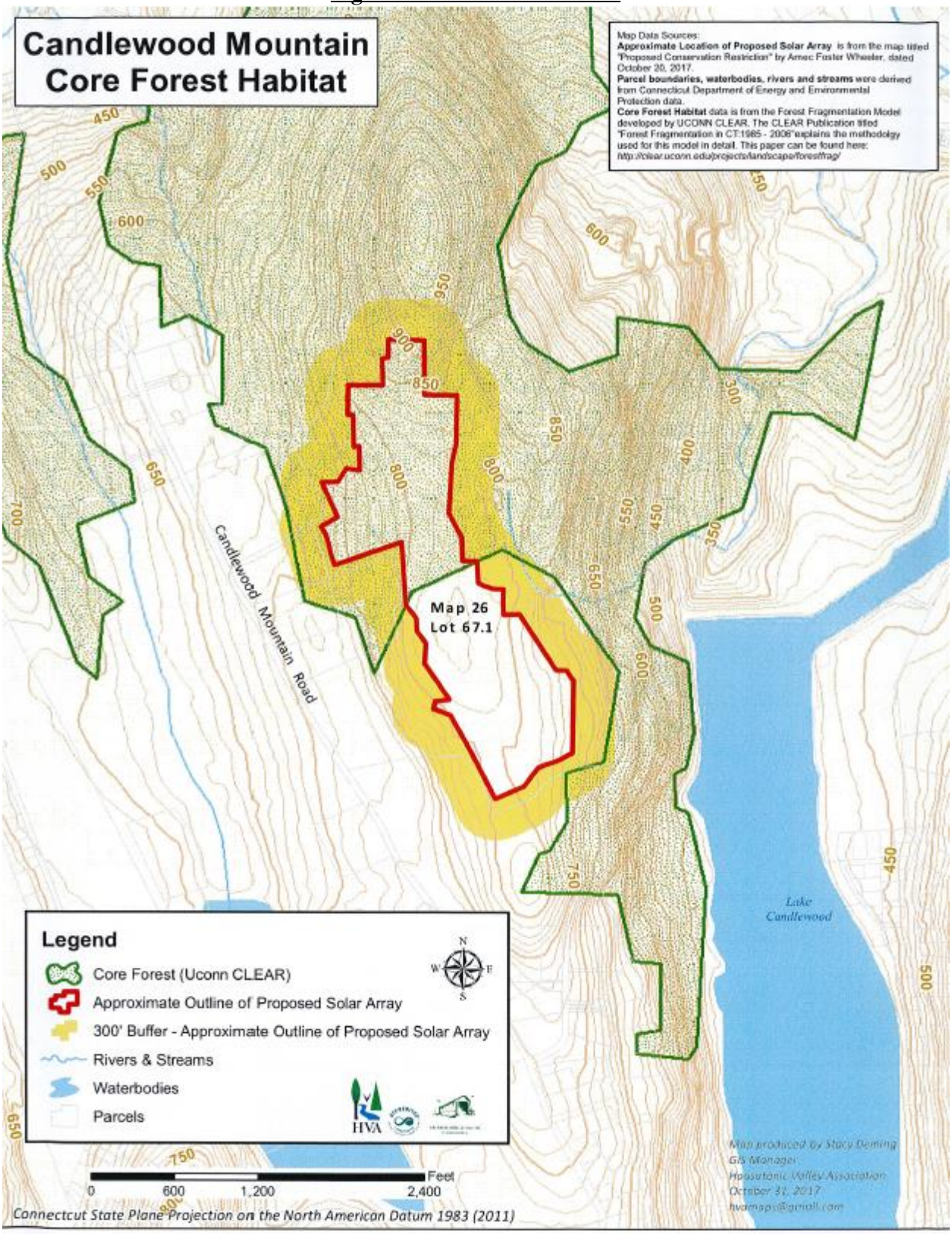
(CS 1, Environmental Assessment, Figure 3)

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

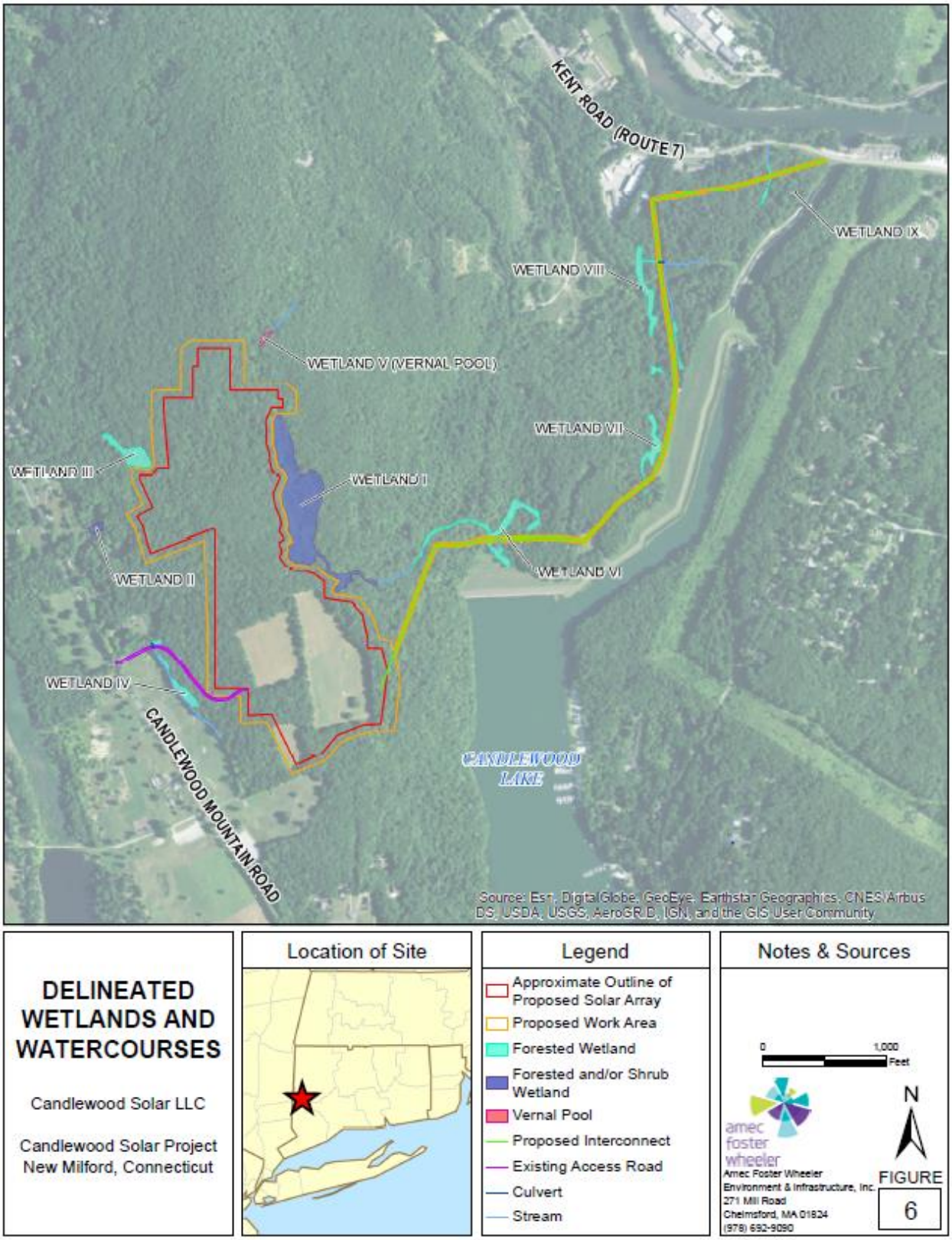
(CS 1, Environmental Assessment, p. 3)

Figure 5 – Core Forest Habitat



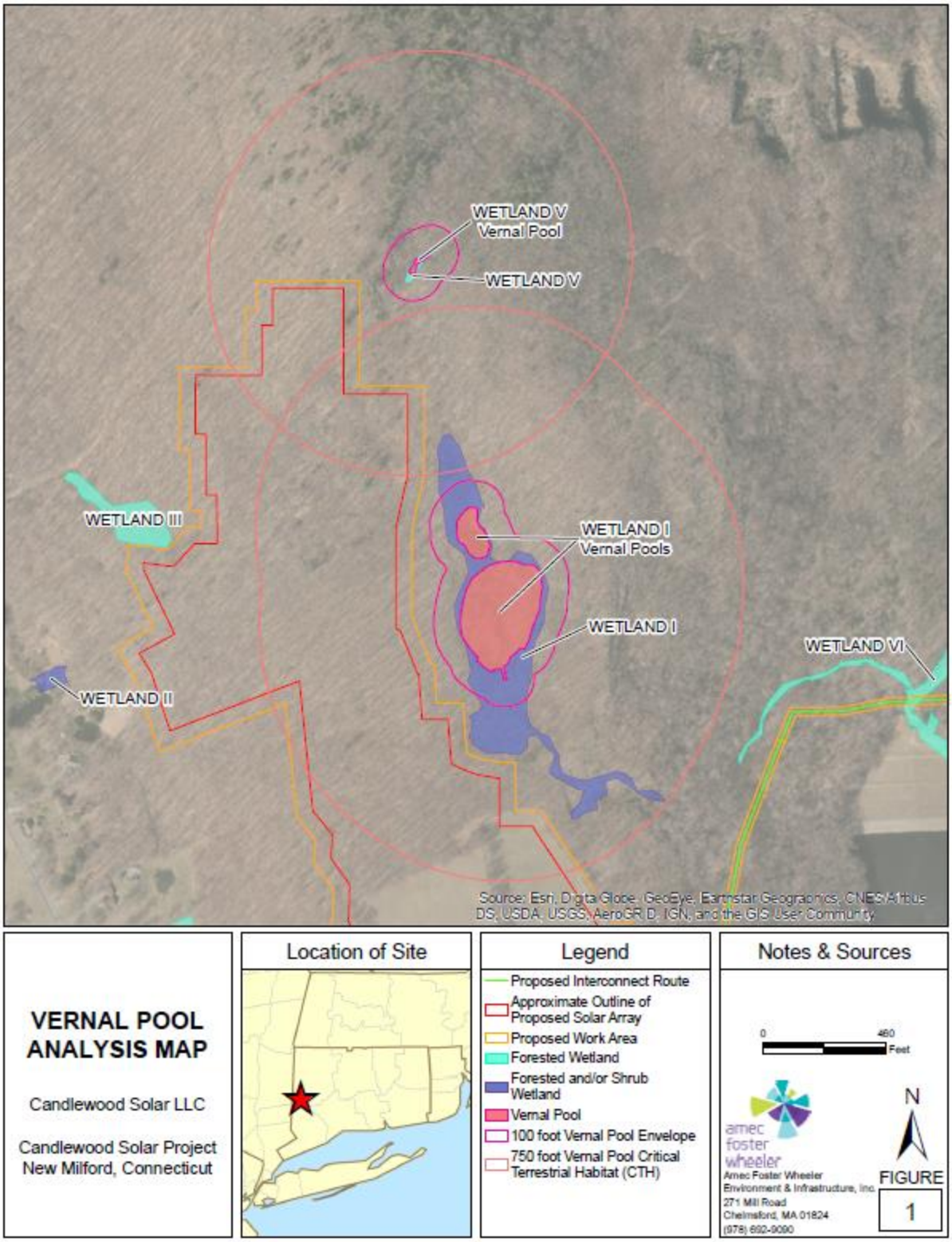
(RCM 10 – Candlewood Mountain Core Forest Habitat Map)

Figure 6 – Wetland Map



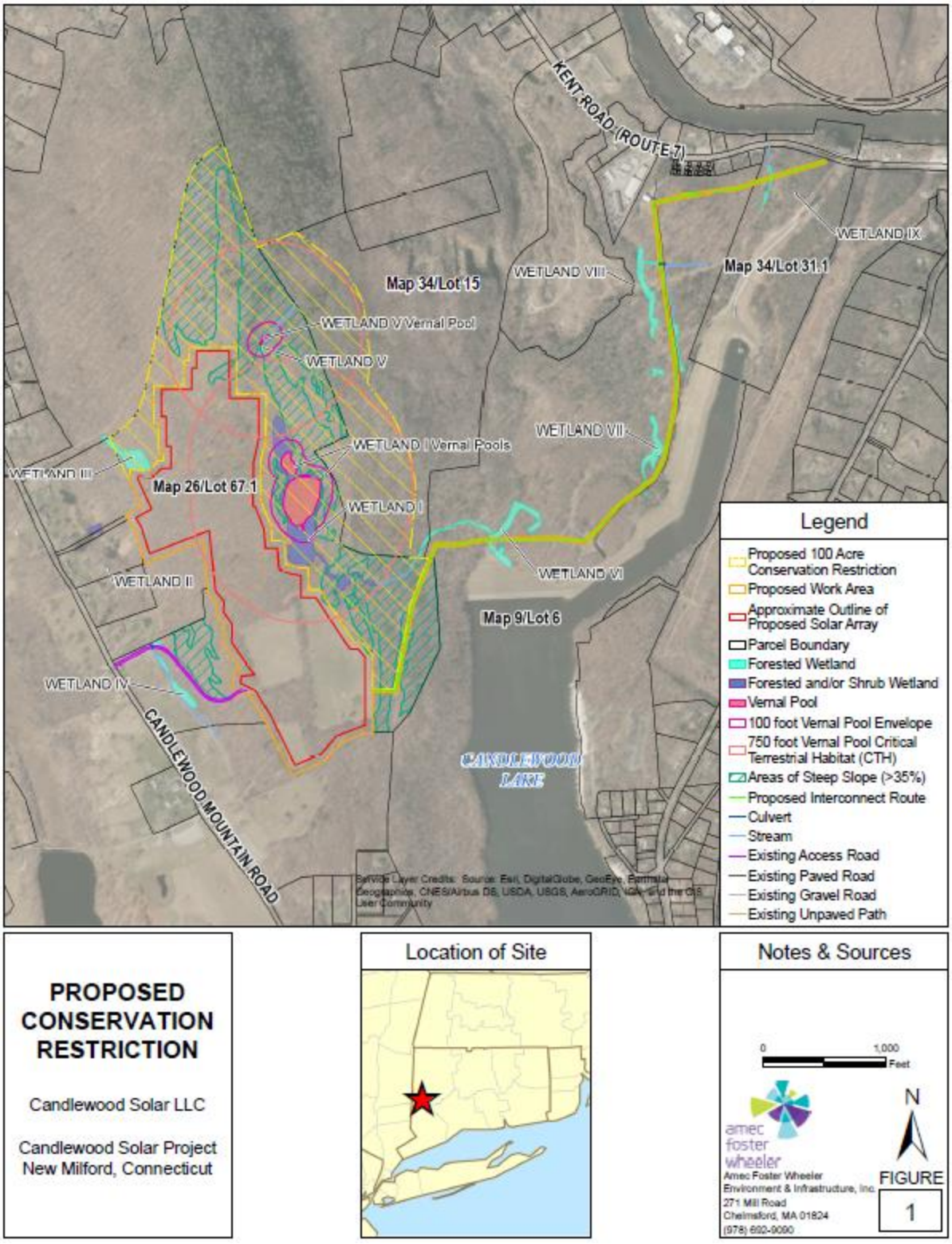
(CS 1, Environmental Assessment, Figure 6)

Figure 7 – Vernal Pool Map



(CS 11, response 90 – Attachment 2)

Figure 8 – Conservation Restriction Map



(CS 15 – Conservation Restriction Area)