

PETITION NO. 1425 – Gaylord Mountain Solar Project 2019, LLC } Connecticut
petition for a declaratory ruling, pursuant to Connecticut General }
Statutes §4-176 and §16-50k, for the proposed construction, } Siting
maintenance and operation of a 1.9-megawatt AC solar photovoltaic }
electric generating facility located at 360 Gaylord Mountain Road in } Council
Hamden, Connecticut, and associated electrical interconnection.

March 25, 2021

Findings of Fact

Introduction

1. On August 7, 2020, Gaylord Mountain Solar Project 2019, LLC (GMS) submitted a petition to the Connecticut Siting Council (Council), pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 1.9-megawatt AC solar photovoltaic electric generating facility located at 360 Gaylord Mountain Road in Hamden, Connecticut, and associated electrical interconnection (Project). (GMS 1, p.1)
2. The party in this proceeding is GMS. The intervenors in this proceeding are South Central Connecticut Regional Water Authority (RWA) and Shawn O’Sullivan (O’Sullivan). (Transcript 1 -November 17, 2020, 2:00 p.m. [Tr. 1], p. 6; Transcript 3- December 15, 2020, 2:00 p.m. [Tr. 3], pp. 3-7)
3. GMS is a Delaware limited liability company authorized to conduct business in Connecticut with principal offices located at 200 Harborside Drive, Suite 200, Schenectady, New York. GMS is a wholly-owned subsidiary of Distributed Solar Development, LLC (DSD). (GMS 1, p. 1; Tr. 3, p. 88)
4. GMS would construct and own the proposed facility. (Tr. 1, p. 48; Tr. 3, p. 88)
5. The proposed project would be a “grid-side distributed resources” facility under CGS §16-1(a)(37). (CGS §16-1(a)(37))
6. The proposed project would generate renewable electrical energy from solar power. Solar power is considered a Class I renewable energy source. (CGS §16-1(a)(20))
7. The State legislature established a renewable energy policy under CGS §16a-35k that encourages the development of renewable energy facilities to the maximum extent possible. (CGS §16a-35k)

Procedural Matters

8. Upon receipt of the petition, the Council sent a letter to the Towns of Hamden and Bethany (a municipality within 2,500 feet of the proposed facility) on August 10, 2020, as notification that the petition was received and is being processed, in accordance with CGS § 16-50k(a) and invited the Towns to contact the Council with any questions or comments by September 6, 2020. (Record)
9. On August 14, 2020, the Town of Hamden (Town) submitted correspondence requesting a public hearing and site review on the petition. The Town also requested additional time beyond the September 6, 2020 deadline to submit comments on the proposed project. (Record)

10. On August 20, 2020, the Council granted the Town's request to extend the comment period to October 6, 2020. (Record)
11. On September 10, 2020, during a public meeting of the Council, the Council granted the Town's request for a public hearing and conditionally granted the Town's request for a site visit based upon Governor Lamont's Emergency Orders that are in place at the time of the scheduled public hearing. (Record)
12. On September 24, 2020, during a public meeting of the Council, the Council approved a public hearing schedule. (Record)
13. On March 10, 2020, Governor Lamont issued a Declaration of Public Health and Civil Preparedness Emergencies, proclaiming a state of emergency throughout the state as a result of the COVID-19 pandemic. (Council Administrative Notice Item No. 71)
14. On March 12, 2020, Governor Lamont issued Executive Order No. (EO) 7 ordering a prohibition of large gatherings, among other orders and directives. (Council Administrative Notice Item No. 71)
15. On March 14, 2020, Governor Lamont issued EO 7B ordering suspension of in-person open meeting requirements of all public agencies under CGS §1-225. The Freedom of Information Act defines "meeting" in relevant part as "any hearing or other proceeding of a public agency." (Council Administrative Notice Item No. 71; CGS §1-200, *et seq.* (2019))
16. EO 7B allows public agencies to hold remote meetings provided that:
 - a) The public has the ability to view or listen to each meeting or proceeding in real-time, by telephone, video, or other technology;
 - b) Any such meeting or proceeding is recorded or transcribed and such recording or transcript shall be posted on the agency's website within seven (7) days of the meeting or proceeding;
 - c) The required notice and agenda for each meeting or proceeding is posted on the agency's website and shall include information on how the meeting will be conducted and how the public can access it;
 - d) Any materials relevant to matters on the agenda shall be submitted to the agency and posted on the agency's website for public inspection prior to, during and after the meeting; and
 - e) All speakers taking part in any such meeting shall clearly state their name and title before speaking on each occasion they speak.(Council Administrative Notice Item No. 71)
17. On March 25, 2020 and as subsequently extended, Governor Lamont issued EO 7M allowing for an extension of all statutory and regulatory deadlines of administrative agencies for a period of no longer than 90 days. (Record; Council Administrative Notice Item No. 71)
18. Pursuant to Governor Lamont's EO 7B and CGS §16-50m, the Council published legal notice of the date and time of the remote public hearing via Zoom conferencing in the New Haven Register on October 2, 2020. The hearing was scheduled for November 17, 2020. (Record)

19. Pursuant to Governor Lamont's EO 7B, as extended, and CGS §16-50m, on September 29, 2020, the Council sent a letter to the Towns of Hamden and Bethany to provide notification of the scheduled remote public hearing via Zoom conferencing and to invite the municipalities to participate. (Record)
20. In compliance with Governor Lamont's EO 7 prohibition of large gatherings, the Council's Hearing Notice did not refer to a public field review of the proposed site. (Record)
21. Field reviews are not an integral part of the public hearing process. The purpose of a site visit is an investigative tool to acquaint members of a reviewing commission with the subject property. (Council Administrative Notice Item Nos. 72 and 73)
22. On September 29, 2020, in lieu of an in-person field review of the proposed site, the Council requested GMS submit photographic documentation of site-specific features into the record intended to serve as a "virtual" field review of the site. On October 20, 2020, GMS submitted such information in response to the Council's interrogatories. (GMS 2, response 54)
23. On October 7, 2020, the Council held a pre-remote hearing teleconference on procedural matters for parties and intervenors to discuss the requirements for pre-filed testimony, exhibit lists, administrative notice lists, expected witness lists, and filing of pre-hearing interrogatories. Procedures for the remote public hearing via Zoom conferencing were also discussed. Representatives of GMS, RWA and the Hamden Alliance for Trees participated in the pre-remote hearing teleconference. (Council Pre-Hearing Conference Memoranda, dated October 1, 2020 and October 8, 2020)
24. Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-21, on November 3, 2020 GMS installed a four-foot by six-foot sign at the proposed site access driveway on Gaylord Mountain Road. The sign included information about the proposed facility, the public hearing date and contact information for the Council. (GMS 3)
25. Pursuant to CGS §16-50m, the Council, after giving due notice thereof, held a remote public hearing on November 17, 2020, beginning with the evidentiary session at 2:00 p.m. and continuing with the public comment session at 6:30 p.m. via Zoom conferencing. The Council provided access information for video/computer access or audio only telephone access. (Council's Hearing Notice dated September 29, 2020; Tr. 1, p. 1; Transcript 2- November 17, 2020, 6:30 p.m. [Tr. 2], p. 114)
26. The Council continued the remote evidentiary hearing session on December 15, 2020 at 2:00 p.m. and January 7, 2021 at 2:00 p.m. via Zoom conferencing. (Council's Continued Evidentiary Hearing Memo dated November 18, 2020; Council's Continued Evidentiary Hearing Memo dated December 17, 2020; Tr. 2, p. 15; Tr. 3, p. 1, p. 126; Transcript 4 –January 7, 2021, 2:00 p.m. [Tr. 4], p. 1)
27. In compliance with Governor Lamont's EO 7B:
 - a) The public had the ability to view and listen to the remote public hearing in real-time, by computer, smartphone, tablet or telephone;
 - b) The remote public hearings were recorded and transcribed and such recordings and transcripts were posted on the Council's website on November 18, 2020, December 7, 2020, December 16, 2020, January 7, 2021, January 8, 2021 and January 11, 2021, respectively;

- c) The Hearing Notice, Hearing Program, Citizens Guide for Siting Council Procedures and Instructions for Public Access to the Remote Hearing were posted on the agency's website;
- d) The record of the proceeding is available on the Council's website for public inspection prior to, during and after the remote public hearing; and
- e) The Council, parties and intervenors and members of the public who spoke during the public comment session provided their information for identification purposes during the remote public hearing.

(Hearing Notice dated September 29, 2020; Tr. 1; Tr. 2; Tr. 3, Tr. 4; Record)

Municipal Consultation

- 28. GMS began its consultation with local municipal land use officials in March 2019. Topics discussed included the preliminary site layout, stormwater management issues and Council jurisdiction. At the time of the initial consultation, the proposed project had a larger footprint/limit of disturbance. (GMS 1, pp. 6-7)
- 29. After the initial consultation, GMS redesigned the project to reduce potential environmental impact. Changes include a reduction in the site footprint and project output, reduced site clearing, a redesign of the stormwater management system and the use of a temporary construction access from the west that would eliminate construction traffic along Gaylord Mountain Road. (GMS 1, pp. 6-7)
- 30. After the Project was redesigned, GMS attempted to discuss the project with the Mayor of Hamden in March 2020, but the attempts were not successful. (GMS 1, p. 7)
- 31. On May 14, 2020, GMS invited 26 landowners in proximity to the proposed project, the Mayor of Hamden and the Hamden Town Planner to attend project virtual public information meeting (VPIM), hosted by GMS, that was scheduled for May 21, 2020. The Hamden Town Planner and 24 landowners attended the VPIM. (GMS 1, pp. 6-7)
- 32. Based on comments from the neighbors and the Hamden Town Planner at the VPIM, GMS further refined the proposed project and incorporated the following changes;
 - a) Reduction in the number of solar panels from 6,968 to 6,292 by avoiding most areas of the site with slopes greater than 15 percent;
 - b) Reduction of the project area from 14.7 acres to 12.3 acres;
 - c) tree clearing limits were pulled back along the south property boundary to increase the vegetative buffer to adjacent residences;
 - d) the landscape plan was revised to include a vegetated berm on the south side of the proposed project;
 - e) the perimeter security fence was changed to a farm fence; and
 - f) stormwater management and control measures were further modified to address potential on-site and off-site impacts.(GMS 1, p. 8, Exhibit C; GMS 2, response 53; GMS 10, pp 2-3)
- 33. On June 19, 2020, GMS provided an update on the status of the proposed project to abutting landowners that included information regarding the selection of the proposed site and reasons why two potential alternative sites that were suggested at the VPIM were not viable. (GMS 1, pp. 8-9, Exhibit C)

34. Pursuant to RCSA §16-50j-40, notice of the petition was provided to all abutting property owners by certified mail on August 6, 2020. (GMS 1, Exhibit E)
35. On August 6, 2020, GMS provided notice to all state and local officials and agencies listed in RCSA §16-50j-40. This included notice to the Town of Bethany, located within 2,500 feet of the proposed project. (GMS 1, Exhibit F)
36. The Hamden Inland Wetland Commission, Hamden Planning and Zoning Commission, and Hamden Tree Commission submitted comments to the Council on August 28, September 9, and October 2, 2020, respectively. (Record)
37. In correspondence dated December 16, 2020, State Representative Josh Elliot of the 88th Assembly District and State Senator Martin M. Looney of the 11th Senate District expressed written opposition to the proposed project. (Record)

State Agency Comment

38. Pursuant to RCSA §16-50j-40, on August 10, and September 24, 2020, the following state agencies were solicited by the Council to submit written comments regarding the proposed facility: Department of Energy and Environmental Protection (DEEP); 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 Agriculture (DOAg); Department of Transportation (DOT); Connecticut Airport Authority (CAA); Department of Emergency Services and Public Protection (DESPP); and State Historic Preservation Office (SHPO). (Record)
39. The Council received comments from the DPH, CEQ and DEEP on September 8, September 18, and November 12, 2020, respectively, which are attached hereto. The DOT Bureau of Engineering and Construction submitted correspondence on September 15, 2020 stating it had no comment. (Record)
40. The following agencies did not respond with comment on the application: PURA, OPM, DECD, DOAg, CAA, DESPP, and SHPO. (Record)
41. 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. 76, *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)).

State of Connecticut Planning and Energy Policy

42. Section 51 of Public Act (PA) 11-80 requires that DEEP prepare a Comprehensive Energy Strategy (CES) every three years that reflects the legislative findings and policy stated in CGS §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 proposed projects using renewable fuels, as well as smaller, more innovative transmission proposed projects emphasizing reliability. (2013 CES; CGS §16a-3d)
43. On February 8, 2018, DEEP issued the 2018 Comprehensive Energy Strategy (2018 CES). Guided by the long-term vision of transitioning to a zero-carbon economy, the 2018 CES highlights eight key strategies to guide administrative and legislative action over the next several

years. Specifically, strategy No. 3 is “Grow and sustain renewable and zero-carbon generation in the state and region.” (Council Administrative Notice Item No. 51 – 2018 CES, p. 14)

44. CGS §16-245a establishes Connecticut’s *Renewable Portfolio Standards (RPS)*. Up until recently, RPS required that 20 percent of Connecticut’s electricity usage had to be obtained from Class I renewable resources by 2020. Under Public Act 18-50, RPS was updated to require 21 percent of Connecticut’s electricity usage be obtained from Class I renewable resources by 2020 and increasing each year to reach 40 percent by 2030. (CGS §16-245a; Public Act 18-50; Council Administrative Notice Item No. 51 – 2018 CES, pp. 110-112)
45. The 2018 CES notes that, “Most recent analyses indicate that there should be adequate Class I resources to meet Connecticut’s Class I Renewable Portfolio Standards (RPS) goals in 2020*.” *This was based on the “20 percent Class I by 2020” requirement that was in place at the time the 2018 CES was prepared. (Council Administrative Notice Item No. 51– 2018 CES, p. 112)
46. 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)
47. The proposed facility will contribute to fulfilling the State’s RPS and Global Warming Solutions Act as a zero emission Class I renewable energy source. (Council Administrative Notice Item No. 51– 2018 CES)
48. Section 7 of PA 08-98 required the Governor’s Steering Committee on Climate Change to establish an Adaptation Subcommittee to evaluate the proposed 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. 64 – Climate Change Preparedness Plan)
49. Governor Lamont’s 2019 Executive Order No. 3 declares the state’s goal to reach 100 percent carbon free electricity by 2040. (Governor Lamont’s Executive Order No. 3, September 3, 2019)

Competitive Energy Procurement

50. GMS participated in a Request for Proposal (RFP) for Virtual Net Metering (VNM) Credits pursuant to a Connecticut State College and University (CSCU) RFP. The state-approved RFP was a transaction for financial credits, not an energy purchase. RFP participants were responsible for proposed project costs and risks, including site selection on private land not located at any CSCU member institution. (GMS 2, response 2)
51. GMS was selected in the RFP to enter into an agreement to sell VNM credits to CSCU member institutions located within The United Illuminating Company’s (UI) service territory. (GMS 2, response 2)
52. As part of the VNM agreement, CSCU has the right to annually select and change the utility accounts allocated to receive the respective VNM credits. The VNM application contemplates both Gateway Community College (2 utility meters) and Southern Connecticut State University (1 utility meter) as beneficiary accounts. (GMS 2, response 4)
53. The initial term of the VNM agreement is 20 years with a five-year extension. The property lease term is 20 years with two five-year extensions. After the VNM agreement expires, GMS would decommission the facility if the property lease is not extended. If the property lease is extended,

GMS would seek other revenue mechanisms at that time and continue to produce power from the facility. (GMS 2, response 5; Tr. 1 pp. 84-86)

54. The project was awarded a low-emission renewable energy certificate (REC) contract through the Low-emission/Zero-emission Renewable Energy Certificate (LREC/ZREC) program. UI would acquire 100 percent of the LRECs assigned to the proposed project. (GMS 2, response 3)
55. A 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. ZREC contracts are limited to 1 MW and LREC contracts are limited to 2 MW. (Council Petition 1312, Finding of Fact #62; Council Administrative Notice Item No. 51 – 2018 CES, p. 124)
56. The proposed facility would need to be in commercial operation by January 1, 2022 to conform to the LREC contract. Extensions to this existing deadline are available but would require the approval of PURA. (GMS 10; Tr. 1, pp. 87 and 121)
57. GMS would not participate in an Independent System Operator- New England Forward Capacity Auction. (GMS 2, response 6)

Public Benefit

58. 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. (CGS. §16-50p(c))
59. Public Act (PA) 05-1, An Act Concerning Energy Independence, established a rebuttable presumption that there is a public benefit for electric generating facilities selected in a RFP. (Public Act 05-1; CGS §16-50k(a))
60. The project would be a distributed energy resource facility as defined in CGS §16-1(a)(49). CGS §16a35k establishes the State's energy policy, including the goal to "develop and utilize renewable energy resources, such as solar and wind energy, to the maximum practicable extent." (CGS §16-1(a)(49); CGS §16a-35k)

Public Act 17-218

61. Effective July 1, 2017, PA 17-218 requires, "for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland, excluding any such facility that was selected by DEEP in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j, the DOAg represents, in writing, to the Council that such proposed project will not materially affect the status of such land as prime farmland or DEEP represents, in writing, to the Council that such proposed project will not materially affect the status of land as core forest." Because the proposed project is below the two-megawatt threshold it is exempt from this provision of PA 17-218. (CGS §16-50k)
62. PA 17-218 also requires that the Council not find a substantial adverse environmental effect in its exercise of jurisdiction over facilities eligible to be approved by declaratory ruling under CGS §16-50k. There are no exemptions from this provision of PA 17-218. (CGS §16-50k)

Site Selection

63. Considerations in GMS's site selection process, include, but are not limited to, the following:

- a) Site suitability for solar arrays size, grade and topography;
 - b) Availability of land for lease or purchase;
 - c) Proximity to electrical infrastructure; and
 - d) Compatibility with surrounding land use.
- (GMS 1, p. 3)

64. GMS and DSD, considered four sites to develop a solar facility, one of which is the proposed site. The three other sites that were investigated and not pursued are as follows:

- a) Town Farm Road, Plainfield- The site is adjacent to the Moosup River and wetlands. Concerns include floodplain and stormwater impacts, an interconnection that would require crossing the river, and unfavorable land lease terms;
- b) Elmridge Road, Stonington- The site is within a golf course. Concerns include construction constraints associated with the golf course, nearby state or federally protected fish habitat, and the potential for unfavorable land lease terms; and
- c) Demers Road, Plainfield- The site borders Snake Meadow Brook, and a wetland. Concerns include the potential for unmapped watercourses, potential wetland crossings for construction access roads, over 20 acres of tree clearing, no nearby electric connection point, and the potential for unfavorable land lease terms.

(GMS 1, Exhibit C)

65. During the VPIM, neighbors suggested two alternate sites in Hamden. GMS investigated and rejected these sites, as follows:

- a) Hamden Landfill/Transfer Station- The top of the former landfill is currently developed with a solar facility. The remaining area consists of on-going operations of a transfer station and wetland/watercourse; and
- b) 100 Skiff Street- The property consists of an abandoned and demolished commercial/manufacturing infrastructure. The property is privately-owned within an Urban Center Zone within an area of high commercial development potential. GMS believes owner expectations for development and pricing would be unreasonable. Also, the Farmington Canal Heritage Trail circumvents the parcel on the south, east, and north property boundaries.

(GMS 1, Exhibit C)

66. Pursuant to CGS §16-50p(g), the Council has no authority to compel a parcel owner to sell or lease property, or portions thereof, for the purpose of siting a facility. (Council Administrative Notice Item No. 76 - *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007))

Site

67. Pursuant to RCSA §16-50j-2a(29), “Site” means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located. (RCSA §16-50j-2a(29))

68. The project parcel owned by Vertical Bridge LandCo LLC (Vertical Bridge) and an adjacent parcel, north and east of the project, owned by Thomas A. Talmadge share an address identified as 360 Gaylord Mountain Road according to the Town Geographic Information System. (GMS 2, response 15; GMS 3, Attachment 2)

69. GMS identifies the nearest property boundary and off-site residence as the Talmadge property. The property boundary and residence are located approximately 22 feet and 143 feet,

respectively, northeast of the project perimeter fence. (GMS 2, response 15; GMS 3, Attachment 2)

70. Access to the Vertical Bridge property is via a driveway leading south from the intersection of Gaylord Mountain Road and West Todd Street. (GMS 1, p. 3; Exhibit H, Appendix G)
71. The proposed site is located on an irregularly shaped, approximately 33.64-acre parcel that consists of mostly undeveloped forest land. The parcel has an electric transmission corridor bisecting the central portion of the property north to south and an existing 625-foot-tall guyed communications tower located in the northwest corner (refer to Figure 3). (GMS 1, p. 3, Exhibit H, p. 1)
72. The parcel is zoned Residential R-2. (GMS 1, Exhibit H, Sheet T-1)
73. The proposed site would be located on an approximate 12.3-acre leased area of the parcel between the electric transmission line right-of-way and Gaylord Mountain Road. The solar array field would occupy approximately 8.6 acres of the site with an additional approximately 3.7 acres of disturbance beyond the fenced limits. (GMS 1, Exhibit H, p. 5)
74. Surrounding land use consists of residential development to the south, east and north of the site while undeveloped land lies to the west of the site. Gaylord Mountain Road extends along the eastern site boundary. (GMS 1, Exhibit H, p. 3)
75. In general, a mature upland forest interspersed with five wetlands is located within the central and eastern portion of the site. The western portion of the site contains the managed electric transmission line right-of-way and the telecommunications tower. The site's topography ranges from moderate to steep, with elevations ranging from approximately 560 feet above mean sea level (AMSL) in the west to 455 feet AMSL in the east. Generally, slopes range from 12.5 percent to greater than 30 percent with the steeper slopes associated with rock outcrops. (GMS 1, Exhibit H, p. 3, Sheet GP-1; GMS 2, response 41; Tr. 3, pp. 25-26)

Project Description

Solar Array

76. Approximately 6,292 fixed solar panels, rated at approximately 400 Watts direct current (DC), would be installed on the site. (GMS 1, Exhibit H, Sheet OP-1; GMS 2, response 56)
77. The panels would be arranged two-high in a portrait orientation to a 72.6-degree azimuth and set at a 30-degree angle, extending to an approximate height of 10 feet above grade and approximately 3 feet above grade at the bottom edge. (GMS 1, Exhibit H, p. 5, Sheet DN-1; GMS 2, response 56)
78. Approximately 1.71 acres (or 20 percent) of the 8.6 acre solar field area have slopes greater than 15 percent. Within the solar field, solar panels would be installed on approximately 0.34 acres (or 4 percent) with slopes greater than 15 percent (refer to Figure 4). (GMS 11)
79. The final design of the racking system has not been determined. Racking would consist of a combination of driven posts, drilled piers and/or ground screws, to a maximum depth of approximately 10 feet. (GMS 2, response 44)

80. The aisle between the solar panel rows would be 8 feet wide. The horizontal width of the solar panel row would measure 12.5 feet. (GMS 1, Exhibit H, Sheet SP-1; GMS 2, response 32)
81. Wiring that connects the panels would be installed on the racking system and to one of 16 decentralized inverters. Wiring not run on the racking would run in conduit. All exposed wiring is UV-rated and is secured to the racking at a minimum of 3 feet above grade to protect it from small animals and damage during mowing operations. (GMS 2, response 30)
82. One 30-foot by 20-foot electrical service concrete equipment pad would be installed in the southeast corner of the solar field, near the access road entrance. The pad would support a transformer, switchboard system and associated equipment. The transformer is filled with non-toxic, biodegradable dielectric fluid, made from renewable seed oils. (GMS 1, p. 4, Exhibit H Appendix E; GMS 2, response 34)
83. The proposed project would be enclosed by a 7-foot high farm fence consistent with Section 694.4(2) of the National Electrical Code (NEC), 2020 Edition. The fence includes a vehicle gate and a 4-6 inch gap at the bottom for small wildlife movement. (GMS 2, response 17)
84. The solar panels would be approximately 20-40 feet from the solar field perimeter fence, depending on location. (GMS 1, Exhibit H, Sheets SP-1 and SP-2)

Site Access

85. Once constructed, the proposed project would be accessed by a new 370-foot long, 15-foot wide permanent gravel access road that extends from Gaylord Mountain Road into the southeast corner of the site. The access road would have an approximate 15 percent slope. GMS consulted with the Town Fire Marshal to determine if the slope would be an impediment for emergency response vehicles. The Fire Marshal concluded the design of the access road is acceptable. (GMS 1, p. 4, Exhibit H, Sheets EC-3 and DN-3; GMS 2, response 31; GMS 10)
86. To reduce traffic and disturbance to residents along Gaylord Mountain Road and Hunting Ridge Drive during construction, GMS proposes to utilize the existing 12-foot wide, 800-foot long gravel access road that extends to the on-site telecommunications tower for temporary construction access. Most of this existing road extends along the Eversource right-of-way. (GMS 1, p. 4, Exhibit H, p. 5, Sheet SP -1; GMS 2, response 31)
87. No improvements to the existing gravel access road are necessary; however, the GMS would construct a new 15-foot wide, 330-foot long temporary gravel access road to access the project construction area. It would extend southeast from the existing access road, across the electric transmission line right-of-way, to the west end of the construction area. Some sections of the new temporary access road, where it extends from the Eversource right-of-way to the solar array, would have slopes that exceed 15 percent, with one portion at a grade of 30 percent or greater. The portion of the temporary access road within the GMS lease area would be graded to achieve moderate slopes. (GMS 1, Exhibit H, p. 5, Sheet SP -1, Sheet GD-1; GMS 2, response 31; Tr. 1, pp. 62-63; GMS 11)
88. GMS has filed a "Permitted Use Application" with Eversource seeking permission to cross the right of way. That application is pending with Eversource. (GMS 1, p. 4; GMS 2, response 11)
89. GMS has consent from the landowner to temporarily access its leased area from the north for construction purposes. (GMS 1, p. 4; GMS 2, response 11)

90. Upon completion of construction, GMS would seed the portion of the temporary access road that crosses the Eversource right-of-way with an approved hydroseed mix. (GMS 2, response 59)
91. The temporary access road that is located within the GMS lease area would be left in place to minimize the potential soil disturbance and erosion that could occur during removal/excavation. It would also provide an alternative access for the future, if needed. (Tr. 1, p. 35)

Electrical Interconnection

92. The project is comprised of a single, independently-metered system with a total design capacity of approximately 1.83 MW AC, including assumed losses, at the point of interconnection with the electric distribution system. (GMS 1, p. 4; GMS 2, responses 18-19)
93. The point of interconnection is adjacent to the permanent access road at the southeast corner of the proposed project site. An underground feeder would exit the proposed project and transition to overhead lines along the access road, utilizing five new 36-foot tall utility poles prior to connecting with an existing UI distribution pole. ((GMS 1, p. 5, Exhibit H, Sheet SP-1; GMS 2, response 36)
94. The project would interconnect to UI's existing 13.8 kV distribution system on Gaylord Mountain Road. UI would need to extend its three-phase service one-quarter mile to the interconnection point. UI is responsible for permits/approvals for such work. (GMS 1, p. 5)
95. GMS has an interconnection agreement with UI and the interconnection would be conducted in accordance with UI's requirements. (GMS 1, pp. 5-6)
96. The proposed project interconnection is not required to be reviewed by ISO-NE. (GMS 2, response 33)

Project Construction

97. The timing of construction for the project would depend on final project approvals. The project could be placed in service approximately 120 days following the commencement of construction. If construction commences on April 1, 2021 for example, the project could be completed on or before October 1, 2021, including 30 to 60 days for site stabilization. (GMS 1, p. 5; GMS 10, p. 6; Tr. 3 p. 43)
98. Construction phasing would be performed in accordance with the requirements of the DEEP General Stormwater Permit. GMS proposes to construct the site in 3 main phases; as follows:
 - Phase 1: Demarcation of work area limits including protection of wetlands, installation of erosion and sedimentation controls including compost filter sock along contour, clear and grub areas where specified to install the sediment basin, swales and access roads;
 - Phase 2: Clearing/grubbing of areas upgradient of the sediment basins, followed by site stabilization with temporary seeding/hydroseeding with seeded areas allowed to grow for 30 days;
 - Phase 3: construction of the solar array and related infrastructure, install landscaping, final stabilization/seeding.(GMS 1, Exhibit H, Sheet EC-1)
99. Site disturbance, including all site features, includes 8.1 acres for solar array area and 4.2 acres for the stormwater management features and access roads. (GMS 1, Exhibit H, Sheet EC-3)

100. Soil stockpiles would be located on the northwest and southeast portions of the proposed project area and would be maintained with proper erosion control measures. Excess material would be removed from the site. (GMS 10 p. 7)
101. Exposed surfaces during Phase 1 construction would be stabilized with either riprap or erosion control blankets and hydroseeded with tackifier. The seed would be allowed to establish for 30 to 60 days for site stabilization. After site stabilization is achieved, construction of the racking system would commence. (Tr. 1, p. 40; Tr. 3, p. 43)
102. GMS is amenable to extend the time of site stabilization through a growing season if an extension of time is granted per the power purchase agreement. (GMS 1, p. 5; GMS 10, p. 6; Tr. 3 pp. 42-43)
103. Project construction would require 5,639 cubic yards of cut and 4,181 cubic yards of fill. The excess 1,458 cubic yards of cut would be removed from the site. (GMS 1, Exhibit H, p. 24 and Sheet T-1)
104. Site grading would be limited to the proposed level spreader southwest of the solar array, the temporary construction access driveway along the west side of the solar array, the landscape berm along the south side of the solar array, the stormwater detention basin and rip rap drainage swale along the east side of the solar array, and the permanent site access drive and swale to the southeast of the solar array. (GMS 11)
105. Material laydown and construction equipment storage would occur near the existing telecommunications tower site west of the Eversource transmission line. Any on-site refueling and fuel storage would occur in this portion of the landlord's property and would be performed in accordance with the Wetland Protection Plan. (GMS 10)
106. Construction hours would be Monday through Saturday from 7:00 AM to 7:00 PM. (GMS 1, p. 12)

Facility Operation

107. The projected capacity factor for the project is 18.7 percent. (GMS 2, response 20)
108. The 400-Watt module has an efficiency factor of 19.9 percent. (GMS 2, response 21)
109. The orientation of the solar arrays was modified from facing due south (0 degree azimuth) to face east (72.6 degree azimuth) to reduce the potential for erosion from stormwater running off the panels. This shift in panel orientation resulted in an eight percent reduction of energy production. (GMS 10; Tr. 1, pp. 65-66)
110. To address some of the neighborhood concerns, GMS agreed to cut fewer trees within the southern extent of project area, adjacent to the abutters on Hunting Ridge Drive. This would result in a ten percent soft shading loss in energy production. This loss was included in the capacity factor for the project. (GMS 2, response 23)
111. There are no plans to incorporate a battery energy storage system into the project. (GMS 2, response 22)

112. The project is not designed to serve as a microgrid. In order for the project to function as a microgrid, it would require extensive design changes, including, but not limited to the inclusion of an energy storage component. (GMS 2, response 24)

Operations and Maintenance

113. GMS provided a post-construction Operations and Maintenance Plan (O&M Plan) that includes provisions for active remote monitoring, planned/preventative maintenance, unscheduled maintenance, and module cleaning. (GMS 1, Exhibit G)
114. Sediment that has accumulated within the stormwater management system would be removed and transported from the stormwater features via a skidsteer loader. The sediment can be spread and stabilized within upland areas on site or disposed of offsite in accordance with applicable laws and regulations. (GMS 2, response 67)
115. Module cleaning would be conducted twice per year using deionized water which would not impact water quality. (GMS 2, response 65)
116. Any electric production degradation due to snow build-up has already been modeled into the annual system output and performance calculations. Snow removal would not be required; rather, the snow would be allowed to melt or slide off. (GMS 1, Exhibit H, p. 5)
117. Replacement modules would not be stored on-site. Damaged panels would be detected and marked for replacement either remotely through alarms in the monitoring system or during routine site inspections by operations and maintenance technicians. (GMS 2, response 66)

Project Decommissioning

118. The project has a lifespan of 20 to 30 years, dependent on the VNM rider and lease agreement. (GMS 2, response 5; Tr. 1 pp. 84-86)
119. GMS provided a decommissioning plan that includes facility infrastructure removal and site restoration provisions. Project decommissioning would include the removal of all above grade facility components, such as solar arrays, equipment, inverters, transformers, and ancillary structures. Below grade foundations may remain in order to minimize erosion and site disturbance. (GMS 1, p. 5; GMS 2, response 7)
120. Removal/decommissioning of the proposed solar facility at the end of its useful life would be performed in accordance with the provisions of the lease agreement executed with the landowner. (GMS 1, p. 5; GMS 2, response 7)
121. Areas that are disturbed during decommissioning activities would be raked and seeded for final stabilization. (GMS 1, Exhibit B; GMS 2, response 7)
122. The cost of Project decommissioning assumes that approximately 90 percent of the decommissioned materials are recyclable. Other costs include labor and transporting dismantled components. (GMS 1, Exhibit B)

Public Safety

123. The proposed project would comply with the NEC, the National Electrical Safety Code (NESC) and the National Fire Protection Association (NFPA) code. (GMS 2, response 37)
124. GMS consulted with the Town Fire Marshal to determine if the slope of the access road would be an impediment for emergency response vehicles. The Fire Marshal concluded the design of the access road is acceptable. (GMS 10)
125. GMS would provide training to the Hamden Fire Department on solar facility operations, facility safety features and emergency shutdown equipment prior to commercial operation. A Knox Box/key access would be installed per a recommendation from the Fire Marshal. (GMS 10)
126. The project would be remotely monitored and would feature remote shutdown capabilities. Manual shut-off switches can also be used to shut down or disconnect site operations. (GMS 10)
127. UI is requiring the use of and shared access to a Supervisory Control and Data Acquisition system that can open the facility's recloser and shutdown the facility as needed. (GMS 2, response 26)
128. The proposed project is located within an unshaded Flood Zone X, defined by the Federal Emergency Management Agency as an area of minimal flooding, typically above the 500 year level. (GMS 1, Exhibit H, p. 20)
129. The DEEP Dam Safety Division reviewed the project and determined that the proposed stormwater basin qualifies as a dam with a hazard classification of "AA". Class AA dams are assigned to structures that have negligible hazard potential. Negligible hazard class dams are under the jurisdiction of the Town. However, once the stormwater dam is constructed, GMS must contact the DEEP Dam Safety Program and submit a dam registration form. (GMS 1, p. 9, Attachment D)
130. The nearest federally-obligated airport is New Haven Tweed Airport, in New Haven/East Haven, Connecticut, approximately 12 miles south-southeast of the proposed site. A Federal Aviation Administration (FAA) glare analysis of the proposed facility would not be required. GMS has secured a FAA Determination of No Hazard to Air Navigation for use of a temporary crane at eleven locations on the proposed site to install the solar panels. (GMS 1, Exhibit H p. 30; GMS 2, response 38; Council Administrative Notice No. 96)
131. The FAA requires a glare analysis for on-airport solar development at federally- obligated airports. Federally- obligated airports are airports that receive federal funding. The FAA recommends that the design of any solar installation at an airport consider the approach of pilots and ensure pilots would not have to face glare that is straight ahead of them or within 25 degrees of straight ahead during the final approach. (Council Administrative Notice Item Nos. 17-19)

Noise

132. The proposed inverters and transformer are the main sources of noise for the project. GMS considered the facility to be an industrial emitter to a residential receptor. DEEP Noise Control

Standards for such emitter/receptor would be 61 dBA during the daytime and 51 dBA at nighttime. (GMS 1, Exhibit H, p. 29)

133. Noise levels generated by the transformer and inverters would be 56 dBA and 65 dBA, respectively, at approximately 10 feet as specified by the equipment manufacturer. (GMS 1, Exhibit H, p. 29 and Appendix E)
134. The nearest property line and residence is approximately 96 feet and 217 feet south, respectively, from the proposed facility equipment pad. The residence is located at 5 Hunting Ridge Road owned by O'Sullivan. (GMS 1, Exhibit H, p. 29; GMS 2, Attachment 2; O'Sullivan 1)
135. GMS did not conduct a noise study; however, sound reduces with distance and the inverters and transformer are inactive at night. Due to the proposed separation distance, noise levels from the project-related equipment during operation would be below 61/51 dBA at surrounding property lines. (GMS 1, Exhibit H, p. 29)
136. Construction noise is exempt from DEEP Noise Control Standards. (RCSA §22a-69-108(g))

Environmental Effects

Air Quality

137. The proposed project would meet DEEP air quality standards, with no material emissions associated with site operation. The project does not require an air permit. (GMS 1, p. 13, Exhibit H p. 23)
138. An equivalently-sized natural gas fueled electric generating facility would produce about 97,956 metric tons of carbon dioxide equivalent (MT CO₂eq) over an equivalent 20-year service life. The proposed solar facility would have a net carbon emissions of approximately 18,212 MT CO₂eq or about 81 percent less than a natural gas-fueled facility over the same 20- year service life. (GMS 1, response 50)
139. During construction of the proposed project, air emissions from construction vehicles would be mitigated using available measures such as limiting idling times of equipment; proper maintenance of all vehicles and equipment; and, watering/spraying to minimize dust and particulate releases. (GMS 1, p.13, Exhibit H p. 23)

Water Quality

140. As applicable to any proposed jurisdictional facility site, the Council's Filing Guide for a Petition for a Declaratory Ruling for a Renewable Energy Facility requires the submission of Plans for erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Erosion and Sedimentation Control (2002 E&S Guidelines); Water consumption and discharge rates; FEMA Flood Zone information and associated flood mitigation plans; Proximity to DEEP Aquifer Protection Areas; DEEP groundwater classification underlying the site; Wetland and Watercourse Analysis Report and map, and associated Wetland and Watercourse Impact Mitigation Plan; and Vernal Pool Analysis Report and map, and associated Vernal Pool Impact Mitigation Plan. (Record)
141. During operation, the facility would be unstaffed and no potable water uses or sanitary discharges are planned. No liquid fuels are associated with the operation of the facility. (GMS 1, Exhibit H, p. 21)

142. Groundwater underlying the site is classified by DEEP as "GAA". This classification indicates groundwater within the area is presumed to be suitable for human consumption without treatment. (GMS 1, Exhibit H, p. 21; RWA 1, p. 4)
143. The project site is located outside of a DEEP-designated Aquifer Protection Area. (GMS 1, Exhibit H, p. 21)
144. To prevent any impacts to groundwater resources, GMS would follow Best Management Practices during construction of the project, including, but not limited to, fuel spill prevention and control. A spill prevention plan is included within the Project Wetland Protection Plan. (GMS 1, Exhibit H Appendix B, Sheet EC-1)
145. The proposed project is located within the Mill River Watershed, which drains south and east via an unnamed tributary flowing to Eaton Brook. The brook is a feeder to the Mill River which flows to the Lake Whitney Reservoir located more than five miles southeast of the project area. (GMS 2, response 51; RWA 2, pp. 4- 5)
146. There are no drinking water wells located on the subject property. There are private drinking water wells at five adjacent residential properties (3, 5, 9 and 18 Hunting Ridge Road and Talmadge property at 360 Gaylord Mountain Road) with well depths ranging from 150 to 620 feet below grade. (GMS 11; GMS 12)
147. Installation of the racking posts would not cause excessive vibrations beyond the proposed project area and sedimentation of nearby wells is not anticipated. Additionally, the adjacent wells are at depths far below the construction zone and no special precautions are warranted. (GMS 2, response 44)
148. Galvanized metal infrastructure has a potential to contribute to zinc levels in surrounding soils. It is unlikely that the buried posts associated with the project would raise local zinc concentrations in soil or groundwater. (GMS 2, response 48)
149. GMS would contact the RWA prior to construction and would allow RWA personnel to inspect the project area. (GMS 2, response 52).

Stormwater

150. Pursuant to CGS Section 22a-430b, DEEP retains final jurisdiction over stormwater management and administers permit programs to regulate stormwater pollution. DEEP regulations and guidelines set forth standards for erosion and sedimentation control, stormwater pollution control and best engineering practices. (CGS §22a-430b; DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. (DEEP-WPED-GP-015))
151. The DEEP Individual and General Permits for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (Stormwater Permit) require implementation of a Stormwater Pollution Control Plan (SWPCP) to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a proposed project after construction is complete. In its discretion, DEEP could hold a public hearing prior to approving or denying any Stormwater Permit application. (CGS Section 22a430b; CGS Section 22a-430(b))
152. The SWPCP incorporates project designs consistent with the 2002 E&S Guidelines and the 2004 Connecticut Stormwater Quality Manual (2004 Stormwater Manual). (DEEP-WPED-GP-015)

153. DEEP has the authority to enforce project compliance with its Individual or General Permit and the SWPCP, including, but not limited to, the installation of site-specific water quality protection measures in accordance with the 2002 E&S Guidelines. (CGS Section 22a-430b)
154. The Council may impose a condition that requires subsequent compliance with DEEP standards and regulations. (Council Administrative Notice No. 74)
155. The proposed project would require a DEEP-issued Stormwater Permit prior to commencement of construction. (CGS Section 22a-430b)
156. The proposed project has been designed to comply with the 2004 Stormwater Manual and the 2002 E&S Guidelines. (GMS 1, Exhibit H, p. 21 and Sheet EC-1)
157. GMS discussed the proposed project with DEEP Stormwater Division personnel on several occasions, including video calls on May 19, and May 26, 2020, and a site walk on June 10, 2020. (GMS 2, response 55)
158. Consistent with DEEP Stormwater Division recommendations, GMS revised the project site design and stormwater management system prior to submission of the project to the Council. The project revisions included the following:
 - a) Removal of approximately 672 solar panels from slopes greater than 20 percent;
 - b) Orientation of the solar panels to an azimuth of approximately 72.6 degrees to be perpendicular to the existing topography to minimize stormwater runoff of the drip-edge of the solar panel;
 - c) Installation of a series of compost filter sock along existing contours every 75 feet, at a minimum, along the slope;
 - d) Employment of a phased construction approach to provide a minimum of one month of site stabilization between site clearing and rack installation; and
 - e) Use of hydroseeding with tackifier for all disturbed areas.(GMS 1, p. 10, Exhibit H, p. 22; GMS 2, response 56)
159. Trees would be cleared and cut to grade to maintain existing soil stability. Grubbing of stumps would be necessary in areas of temporary and permanent access roads, equipment pads, and stormwater management features. (GMS 1, Exhibit H p. 22 and Sheet EC-3; Tr. 1, p. 41)
160. GMS proposes to install one stormwater detention basin, three swales and one level spreader in the proposed project area. The proposed stormwater management system was designed to meet DEEP's draft Appendix I, Stormwater Management at Solar Array Construction Proposed projects. In accordance with draft Appendix I, the stormwater calculations for the project were performed with the reduction of one hydrologic soil group. Water quality volume was calculated with the solar panels, roadways, gravel surfaces, and transformer pads considered as effective impervious cover. (GMS 1, Exhibit H, pp 21-22)
161. Stormwater calculations were performed for 2, 10, 25, and 100-year storms. The hydrological calculations indicate that the design of the proposed stormwater basin would reduce peak discharge rates below pre-construction levels. These calculations indicate the proposed stormwater management system would reduce the amount of stormwater runoff from the site currently entering into Wetland 3 (located adjacent to Gaylord Mountain Road) and onto Gaylord Mountain Road. (GMS 2, response 64, Attachment 4 p. 3).

162. GMS intends to submit its Stormwater Permit application to DEEP after further revisions to the stormwater management system are made based on additional comment from DEEP and the Council. (GMS 2, response 55)
163. As part of the phasing plan, the stormwater basin would be constructed prior to upstream site work activities. The basin would be used as a temporary sediment basin during construction and then cleaned upon completion of construction. (GMS 1, Exhibit H, Sheet EC-1)
164. The latest draft stormwater permit, including Appendix I – Stormwater Management at Solar Arrays Construction Projects, specifies Plan Implementation Inspections. GMS would retain a designing qualified professional and a qualified inspector to conduct inspections of the construction erosion and sedimentation controls and stormwater features at least once per week. Reports of the inspections are submitted to DEEP. (GMS 10, pp. 7-10)
165. DEEP and the appropriate soil and water conservation district may inspect the site for compliance with the Stormwater Permit at any time construction activities are ongoing and upon completion of construction activities to verify final site stabilization. (GMS 10, pp. 7-10)
166. The post-construction stormwater basin would be designed as a wet detention basin with contingency capacity. The basin has been designed with two outlet structures with an overflow weir that would release water once it reaches a certain level. The detained water level is based on stormwater calculations. (GMS 1, Exhibit H, Sheet DN-2)
167. Post-construction stormwater that discharges from the detention basin would exit through two outlet structures located adjacent to each other. The outlet structures are concrete with a low flow orifice and grate top with a 24-inch outlet pipe that discharges onto a single riprap energy dissipator/level spreader. Basin discharge would flow to a wetland west of Gaylord Mountain Road. (GMS 1, Exhibit H, Sheet DN-2)
168. A rip-rap lined diversion swale is proposed along the slope of the north and east portions of the proposed project area that would serve to divert stormwater runoff from a majority of the solar field into the stormwater detention basin. (GMS 1, Exhibit H, Sheets GD-1, GD-2)
169. A drainage swale would be located along the north side of the permanent access road extending from Gaylord Mountain Road to collect stormwater runoff from the road. The swale leads to a plunge pool that would discharge flows towards a wetland adjacent to Gaylord Mountain Road. (GMS 1, Exhibit H, Sheets GD-1, GD-2)
170. The stormwater basin outlet structure, and associated riprap energy dissipator/level spreader is located directly above the plunge pool associated with the access road drainage swale. (GMS 1, Exhibit H, Sheets GD-1, GD-2)
171. A diversion swale/level spreader is proposed on the hillside west of the proposed project area and downstream of a wetland along the electric transmission right of way. It is designed to collect and direct stormwater runoff from upgradient areas to the level spreader to reduce existing channelized stormwater velocities and promote sheet flow away from the proposed solar array area. (GMS 1, Exhibit H, Sheets GD-1, GD-2; GMS 2, response 60)
172. The stormwater calculations considered pre- and post-construction land use in the sub-drainage areas based on runoff curve numbers established by the Natural Resources Conservation Service (NRCS). Land use types with specific curve numbers used in the analysis included woods, brush, meadow, unconnected pavement, and water surface cover. (GMS 9; GMS 10, pp. 4-6)

173. The NRCS curve numbers predict infiltration or direct runoff from rainfall. A curve number assigned to a particular drainage area is based on soils, plant cover, amount of impervious areas, interception, and service storage. The higher the curve number on a particular site, the higher the runoff amount would be for a given storm event. (GMS 10, pp. 4-6)
174. The following are the curve numbers for the Meadow and Woods (Good Condition) ground cover in hydrologic soil groups (HSG) A, B, C, & D:

	HSG - A	HSG - B	HSG - C	HSG - D
Meadow	30	58	71	78
Woods (Good Condition)	30	55	70	77

The curve numbers for Meadow and Woods ground cover are virtually identical in each of the HSGs. A Meadow is a natural area that, like Woods, helps to slow down and filter rain water allowing it to soak back into the ground. Similar to Woods, Meadows have many environmental benefits, including reducing soil erosion, increasing groundwater recharge, and enhancing air and water quality. (GMS 10, pp. 4-6)

175. Post-construction stormwater falling from the solar panels would drain across the vegetated solar field areas, infiltrating into the soil. (GMS 2, response 45)
176. Wethersfield/Ludlow loam soil is present at the site. The USDA classifies this soil as having a high erosion potential, as follows:
- a) a high content of fine soil particles, which are carried by raindrops or flowing water;
 - b) small soil particles remain suspended for multiple days in stormwater detention areas, often exiting as overflow; and
 - c) small soil particles pass though haybales and the mesh in silt fence, also though the fiber filling in a coir log. Compost filled coir logs do filter clay and silt, but their permeability is low, and are prone to overtopping.
- (O’Sullivan 2, p. 6; Tr. 2, pp 29-30.)
177. An undisturbed vegetative buffer between a developed area and a wetland resource can filter pollutants and protect water quality from stormwater runoff. (Council Administrative Notice No. 47 - 2004 Stormwater Manual, pp. 4-3 – 4-4)
178. Generally, a minimum 100-foot undisturbed upland buffer along a wetland boundary or on either side of a watercourse should be maintained to promote water quality. Establishment of buffers should also consider slopes and the sensitivity of wetland/watercourse resources. (Council Administrative Notice No. 47 – 2004 Stormwater Manual, pp. 4-3 – 4-4)
179. The proposed stormwater detention basin would be located a minimum of 47 feet from delineated on-site wetlands. (GMS 1, Exhibit H, p. 19)

Wetlands and Watercourses

180. 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.)

181. 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)
182. 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)
183. Under the IWWA:
 - a) “Wetlands” means land, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey, as may be amended from time to time, of the Natural Resources Conservation Service of the United States Department of Agriculture;
 - b) “Watercourses” means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border the state; and
 - c) Intermittent watercourses are delineated by a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) Evidence of scour or deposits of recent alluvium or detritus, (B) the presence of standing or flowing water for a duration longer than a particular storm incident, and (C) the presence of hydrophytic vegetation.
(CGS §22a-36, et seq.)
184. A total of five wetlands, collectively comprising approximately 0.44 acre, are identified within the site property. Wetlands 1 and 4 are scrub-shrub and emergent vegetated wetlands; Wetland 2 is transitional scrub/shrub, cleared/maintained emergent wetland that has been disturbed, Wetland 3 abuts Gaylord Mountain Road with varying degrees of historic impacts including vegetation management and accumulation of debris, and Wetland 5 is forested (refer to Figure 3). (GMS 1, Exhibit H, pp. 17-18; GMS 2, response 47)

185. The distance to the wetlands from the project limits of disturbance is presented in the table below:

Project Proximity to Wetlands (from limit of disturbance)	Distance (ft.)	Direction (of wetland from L00)
Project Proximity to Wetland 1	22	Northwest
Project Proximity to Wetland 2	25	Northeast
Project Proximity to Wetland 3	47	East
Project Proximity to Wetland 4	21	North
Project Proximity to Wetland 5	0	East

(GMS 1, Exhibit H, p. 19)

186. Wetlands 1, 4, and 5 consist of isolated wetland features that do not support any significant functions or values. Wetland 2 has experienced historic disturbances in the form of residential development, vegetation management associated with pasture conversion, and surface alteration. Wetland 3 has been significantly altered through historical development and routine maintenance of Gaylord Mountain Road. Although both Wetland 2 and Wetland 3 have been historically disturbed, they are the highest quality wetlands on the site. Due to the existing quality of the wetlands, the proposed wetland buffers would be sufficient to maintain their existing functions and values. (GMS 2, response 47; Tr. 1, pp. 66-72)

187. Wetlands 1-4 are located beyond the project perimeter fence. Wetland 5 is located within the perimeter fenced area of the proposed solar array. All of the trees within the wetland (approximately 2,500 square feet) would be cleared to prevent project shading. No ground disturbance is proposed within Wetland 5 and stumps would be left in place. (GMS 1, Exhibit H, p. 19; Tr. 3, p. 59)

188. A Wetland Protection Plan would be implemented to avoid or minimize indirect wetland and watercourse impacts during construction. The Wetland Protection Plan consists of the inspection and maintenance of erosion and sedimentation controls; contractor training; wetland awareness signage; establishment of protective measures; and, reporting by an Environmental Monitor. (GMS 1, Exhibit 1, p. 20, Exhibit H, Appendix B)

189. No vernal pool breeding habitat was observed during the wetland delineation that was completed on March 16, 2020. (GMS 1, Exhibit H, p. 19)

Visibility

190. The proposed facility would consist of non-reflective solar panels measuring approximately 10 feet high surrounded by an approximate seven-foot tall security fence. The solar panels are designed to absorb incoming solar radiation and minimize reflectivity and are installed at a fixed angle of 30 degrees, thereby further reducing reflectivity. (GMS 1, Exhibit H, p. 19; GMS 2, response 17)

191. GMS conducted a viewshed analysis that encompasses a one-mile radius (2,639 acres) surrounding the proposed facility. Approximately 17 acres (0.6%) would have year round views and 88 acres (3.3%) would have seasonal views of the proposed facility. (GMS 1, Exhibit H, Appendix G)

192. Year-round views of the proposed facility would be confined to areas in vicinity of the site, primarily from portions of abutting properties to the south along Hunting Ridge Road and east across Gaylord Mountain Road. Views from select locations along Hunting Ridge Road would be minimized by the combination of a 50-foot non-clearing buffer to the property line and

construction of an earth berm planted with coniferous trees along the south fence line. (GMS 1, Exhibit H, p. 30)

193. Limited seasonal views, during leaf-off conditions, could extend approximately 800 to 1,000 feet in all directions. An electric transmission line and undeveloped land exist west and north of the proposed facility, respectively. Views beyond the immediate area would be minimized by a combination of the solar array's low height and the presence of intervening vegetation and topography. (GMS 1, Exhibit H, p. 30)
194. A historic structure (Caleb Doolittle Jr. House) is located northeast of the proposed facility. GMS considered installing a planted berm to provide project screening from the structure; however, this would require additional tree/vegetative clearing and thus, it was considered counterproductive. (GMS 2, response 53)
195. No state designated scenic roads or scenic areas are located near the project site. The nearest local scenic road, Hillfield Road, is located approximately 1 mile east of the site but the project would not be visible from this road. (GMS 1, Exhibit H, p. 27, Appendix G)
196. The nearest publicly accessible recreational area is the Quinnipiac Trail, a hiking trail maintained by the Connecticut Forest and Parks Association. The trail is located approximately 0.12 miles west of the site at its closest point. The project would not be visible from the trail. (GMS 1, Exhibit H, p. 27 Appendix G; Council Administrative Notice No. 93)

Historic and Archaeological Resources

197. No properties listed on the State or National Register of Historic Places are located within one mile of the project site; however, two previously known archaeological sites (Sites 8-5 and 8-15) and five historic standing structures are located within the vicinity of the proposed project area. Site 8-5 has been destroyed by previous construction activities, and Site 8-15 has not been assessed for its significance. (GMS 1, Exhibit H, Appendix D, Phase IA Cultural Resources Assessment Survey Report, p. 16)
198. A Phase IA Cultural Resources Assessment Survey Report (Phase IA Report) concluded that the western, southern, eastern, and central approximate 9.7 acres of the proposed project area retain no to low archaeological potential, and the northern approximate 0.5 acres of the proposed project area possess a moderate to high sensitivity for producing archaeological resources. No additional archaeological examination of the no/low potential areas was recommended. (GMS 1, Exhibit H, Appendix D, Phase IA Report, p. 23)
199. The Phase IA Report recommended that the areas of moderate to high sensitivity be subject to archaeological examination as part of a Phase IB Cultural Resources Reconnaissance Survey (Phase IB Report). A total of 12 shovel tests were excavated throughout the 0.5 acre zone. No artifacts, features, or cultural resources were found. No additional examination of the moderate/high sensitivity zone or the remainder of the proposed project area is recommended prior to construction. (GMS 1, Exhibit H, Appendix D, Phase IB, p. 22)
200. The Phase IA/IB Reports were submitted to SHPO for review in June 2020. (GMS 2, response 49)

Wildlife

201. There are no known State Threatened, Endangered, or Special Concern species and/or critical habitats on the proposed site. The nearest known DEEP Natural Diversity Data Base (NDDDB) buffer area is located approximately 0.52 miles to the south/southeast of the proposed project area. No formal consultation with DEEP NDDDB is required. (GMS 1, Exhibit H, p. 16)
202. The northern long-eared bat (NLEB), a federally-listed Threatened Species and state-listed Endangered Species, range encompasses the State of Connecticut. There are no known NLEB hibernacula within Hamden, and there are no known maternity roost trees in Connecticut. (GMS 1, Exhibit H, pp. 16-17)
203. Connecticut is within the range of the northern long-eared bat (NLEB), a federally-listed threatened species and state-listed endangered species. There are no known NLEB hibernacula or known maternity roost trees within 0.25 miles and 150-feet, respectively, of the project site. GMS consulted with the U.S. Fish and Wildlife Service and determined that the project would not have an impact on the NLEB. (GMS 1, Exhibit H, pp. 16-17 and Appendix D)
204. GMS proposes a Habitat Enhancement Area to maintain land between the fence and the proposed forest edge of tree growth to prevent shading of the solar arrays. Mowing on a rotational basis every four to seven years would allow the area to revert to late old field habitat and create a soft ecotone that can provide cover and a suitable environment for forest-dwelling wildlife and edge nesting birds. Soils disturbed during construction in this area would be planted with a pollinator-friendly seed mix. (GMS 1, Exhibit H, p. 12)

Geology

205. A geotechnical engineering report determined subsurface conditions within the site generally consist of an approximate 8 to 12-inch layer of topsoil/forest duff layer overlying one to two feet of sub-soil grading to glacial till (ranging from 3 to 12 feet deep). Bedrock was encountered at depths of 5 to 10 feet below grade. (Gaylord 2, Attachment 4, Appendix A)
206. According to the USDA NRCS database, soils in the proposed project area are Wethersfield/Ludlow loam type soils. (Gaylord 2, Attachment 4, Appendix A)
207. The project area soils belong in NRCS hydrologic soil Groups B and C. A small percentage of soils designated as Group B have a moderately low runoff potential when thoroughly wet. A larger percentage of soils designated as Group C are soils having a slow infiltration rate when thoroughly wet and with a layer that impedes downward movement of water or are soils of moderately fine texture or fine texture. (Gaylord 2, Attachment 4, Appendix A)
208. In April 2020, GMS conducted six test borings to determine design grades and racking foundations. One bore test location was in the stormwater basin. Depths of the borings averaged 7.8 feet and the average depth of borings to encounter water was 2.8 feet. Groundwater levels would vary depending on factors such as temperature, season, precipitation and among other factors. (Gaylord 2, Attachment 4, Appendix A)

Agriculture

209. No NRCS mapped prime farmland soils are located on the site. (GMS 1, Exhibit H, p. 25)

Forest and Parks

210. No state parks or forests are located adjacent to the site. (Council Administrative Notice No. 95)
211. Approximately 12.8 acres of forest would be cleared to develop the site. (GMS 1, Exhibit H Site Plan EC-1)
212. DEEP's Forestland Habitat Impact Map does not include the project site within an area mapped as core forest. (GMS 1, Exhibit H pp. 12-13)
213. UConn's Center for Land Use Education and Research's *Forest Fragmentation Analysis* ("FFA") designates "core forest" as greater than 300 feet from non-forested habitat. Based on FFA criteria, the central portion of the site is within a small core forest block totaling approximately 0.9 acre. The proposed clearing of this area would result in a loss of this isolated small core forest block. This size forest block is insufficient to support core forest dependent species. (GMS 1, Exhibit H pp. 12-13; Tr. 3, pp. 47-49)
214. The proposed project is located on the watershed of Eaton Brook, which flows to the Mill River. The Mill River flows near the RWA Mount Carmel wellfield before flowing downstream to the Lake Whitney reservoir, both of which are active drinking water sources for RWA customers. (RWA 2, pp. 1, 4)
215. Water supply watershed management considers forests as the most beneficial land cover for protecting water quality for the following reasons:
 - a) Trees intercept rain and snow which is held in the forest floor soil layers, promoting infiltration and uptake by tree roots;
 - b) Forests reduce runoff flow and velocities and have little soil erosion;
 - c) Forests use nutrients from soil, atmospheric deposition, and stormwater runoff that would otherwise help aid algae blooms in lakes and reservoirs.
 - d) Forests help mitigate impacts of climate change on water quality, such as moderating stream temperatures and, attenuating runoff from extreme precipitation events. The water quality of lakes and reservoirs is in large part a function of watershed forest cover. The overall cost of treatment necessary to meet state and federal drinking water requirements and customer expectations is generally less for a forested vs. a developed watershed. (RWA 2, p. 3)
216. The potential loss of forest cover could affect water quality, water temperatures, and peak flows in Eaton Brook, potentially adding further stress to the Mill River ecosystem. (O'Sullivan 2, pp. 10-11)
217. On September 3, 2019, Governor Lamont issued EO No. 3, which re-established and expanded the membership and responsibilities of the Governor's Council on Climate Change (GC3). The purpose of the Working and Natural Lands Working Group is to evaluate "the role of nature-based solutions (e.g., scaling up the preservation and restoration of forests and coastal wetlands, green and natural infrastructure, agricultural lands) in climate change mitigation and adaptation and how to best incorporate the economic, social, and environmental co-benefits of these solutions into Connecticut's climate change planning strategies." (RWA 2, p. 8; O'Sullivan 4a)
218. The Forest Subgroup of the GC3 researched and prepared a detailed draft report released for public comment on September 9, 2020, that recommends a no-net loss policy for Connecticut forestlands and strongly discourages the conversion of such lands to solar installations. Forests

are valued for carbon sequestration, air pollution filtering and associated health benefits, cooling, as well as for wildlife, property, values, and spiritual/psychological health. (RWA 2, p. 8; O'Sullivan 4a)

219. RWA owns over 27,000 acres of mostly forested land and continues to protect additional watershed land as it becomes available. Since 2007, RWA spent \$12.8 million to protect 948 acres of land from development. (RWA 2, p. 2; Tr. 3, pp. 105-106)
220. The RWA constructed a 1.0 MW solar array on land containing invasive species at one of its wellfields in 2015. (RWA 2, p. 4)

Neighborhood Concerns

221. Under CGS § 16-50p, the Council is not required to take into account the status of property values. (CGS §16-50p; *Westport v. Conn. Siting Council*, 47 Conn. Supp. 382 (2001), *affirmed*, 260 Conn. 266 (2002); *Goldfisher v. Conn. Siting Council*, 2005 Conn. Super. LEXIS 306 (2005), *affirmed*, 95 Conn. App. 193 (2006))
222. Pursuant to CGS § 16-50m, the Council, after giving due notice thereof, held a remote public comment hearing session on November 17, 2020 at 6:30 p.m. via Zoom conferencing. (Record; Tr. 2, p. 4)
223. One limited appearance statement was made at the remote public comment hearing session. Concerns include, but are not limited to, the following:
 - Site is located within a watershed;
 - Clearcutting 12 acres of mature forest;
 - Impacts to onsite wetlands;
 - Forest ecosystems protect wetlands and drinking water supplies;
 - Steep slopes and erodible soils are of concern; and
 - GC3 subgroup adopted policy of no net loss of forest for solar development.(Record; Tr. 2)
224. The Council received 50 written limited appearance statements regarding the proposed facility. (Record)

Figure 2. Existing Conditions



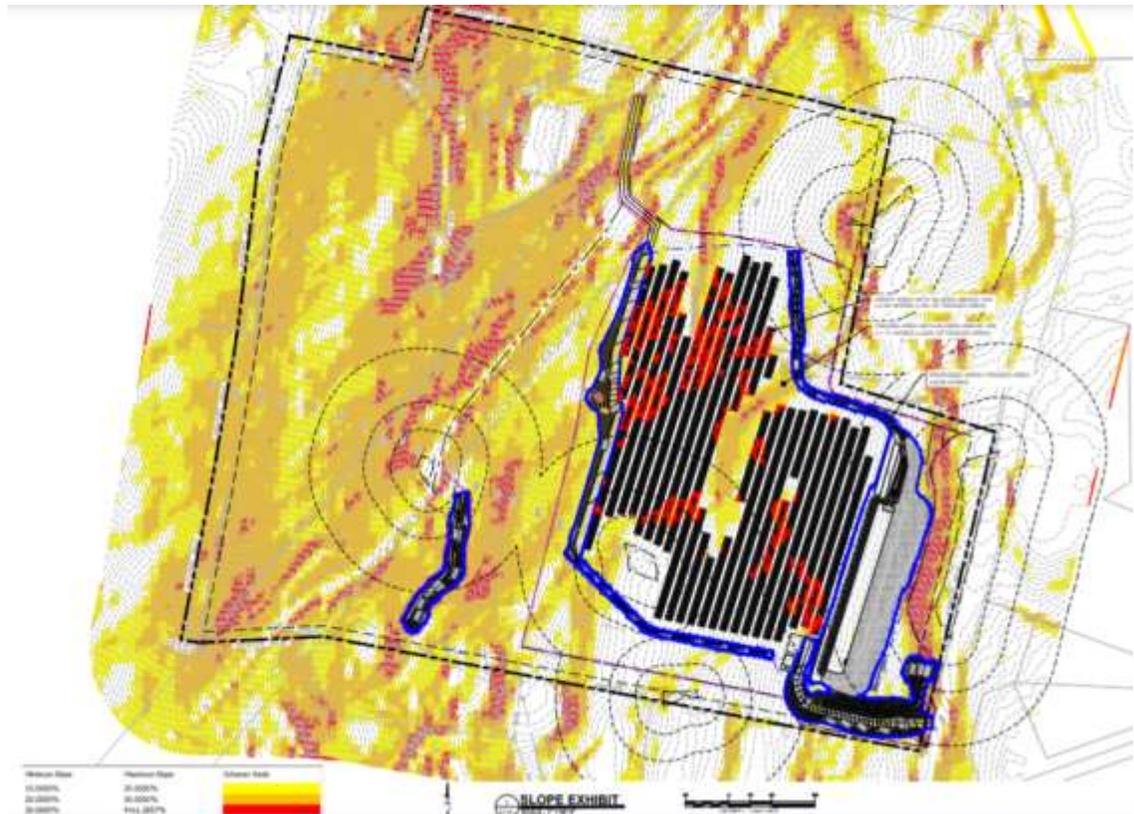
(GMS 1, Exhibit H, p. 4)

Figure 3. Proposed Site Layout and Location of Wetlands



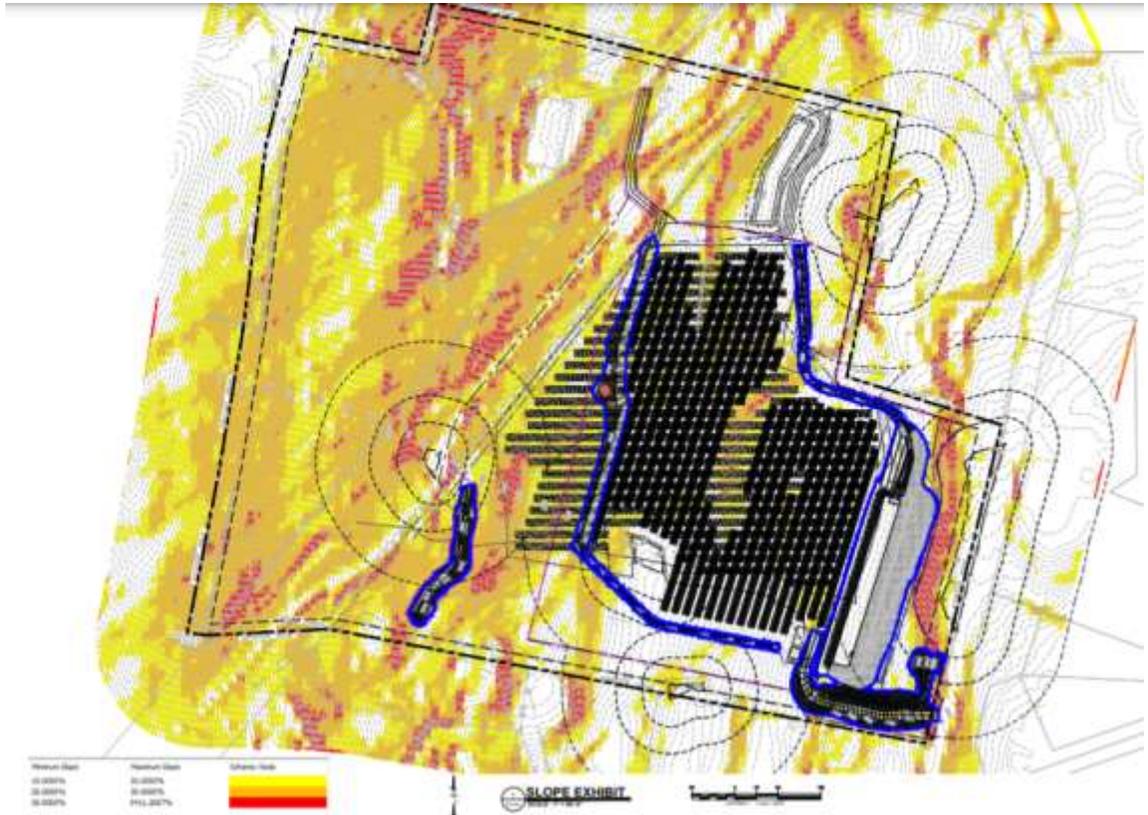
(GMS 1, Exhibit H, p. 6)

Figure 4. Proposed site layout of panels on slopes greater than 15/20/30 percent



(GMS 11)

Figure 5. Proposed concept layout with initial panels oriented due south layered on top with proposed panels oriented 72.6 degrees east



(GMS 11)

Appendix A

State Agency Comments

Department of Public Health

Council on Environmental Quality

Department of Energy and Environmental Protection

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

Deidre S. Gifford, MD, MPH
Acting Commissioner



Ned Lamont
Governor
Susan Bysiewicz
Lt. Governor

Drinking Water Section

September 8, 2020

Melanie Bachman
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Petition 1425 - Gaylord Mountain Solar Project 2019, LLC petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 1.9-megawatt AC solar photovoltaic electric generating facility located at 360 Gaylord Mountain Road in Hamden, Connecticut, and associated electrical interconnection.

Dear Ms. Bachman:

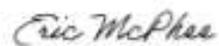
The Drinking Water Section (DWS) of the Department of Public Health has reviewed the location and specific work items associated with the above noted petition. This project is contained within the public water supply watershed (Mill River System) of Lake Whitney Reservoir, an active source of public drinking water for the Regional Water Authority (PWSID #CT0930011). The DWS offers the following recommendations to protect this source of public drinking water:

- The provided environmental assessment makes no mention of this proposal's location being within a public drinking water source watershed. The potential impact of the loss of forested land and disturbance of wetlands on source quality and quantity should be assessed. Forests and wetlands provide critical ecosystem services for drinking water sources.
- Erosion and sedimentation controls should be in place and properly maintained as necessary during construction.
- Servicing of construction machinery should be completed outside of the public water supply watershed.
- Refueling of vehicles or machinery should take place on an impervious pad with secondary containment designed to contain fuels.
- Fuel and other hazardous materials should not be stored within the public water supply watershed. Any fuel or hazardous materials that must be kept within the public water supply watershed during working hours should be stored on an impervious surface utilizing secondary containment.
- A fuel spill remediation kit should be stored on-site so that any spills that occur can be contained and cleaned quickly.
- Regional Water Authority should be contacted prior to starting this project to review the scope of this project.
- Regional Water Authority personnel should be allowed to periodically inspect this project during and after construction to ensure that drinking water quality is not being adversely impacted.

Ms. Melanie Bachman
September 8, 2020
Page 2

Thank you for the opportunity to comment on this petition. If you have any questions, you may contact Rich Iozzo at (860)509-7333.

Sincerely,



Eric McPhee
Supervising Environmental Analyst
Environmental Health and Drinking Water Branch

c: Ron Walters, South Central Connecticut Regional Water Authority



STATE OF CONNECTICUT

COUNCIL ON ENVIRONMENTAL QUALITY

Keith Ainsworth

Alicia Charamut

David Kalafa

Lee E. Dunbar

Alison Hilding

Kip Kolesinskas

Matthew Reiser

Charles Vidich

Peter Heam
Executive Director

September 18, 2020

Melanie Bachman, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: PETITION NO. 1425 – Gaylord Mountain Solar Project 2019, LLC petition for a declaratory ruling for the proposed construction, maintenance and operation of a 1.9-megawatt AC solar photovoltaic electric generating facility located at 360 Gaylord Mountain Road in Hamden, Connecticut, and associated electrical interconnection.

Dear Ms. Bachman:

The Council on Environmental Quality (“the Council”) supports the development of clean, renewable energy technologies on appropriate sites in Connecticut and offers the following comments with regard to Petition No. 1425 (Petition):

1. Visibility

The Council supports the Petitioner’s strategy to provide visual screening of the proposed facility by maintaining a buffer of trees and by constructing an earthen berm along the southern side of the proposed facility and asks whether consideration should be given to using a coniferous buffer to provide screening during leaf-off conditions. On the northwest side of the site is the Caleb Doolittle Jr. House, which is potentially eligible for listing in the National/State Register of Historic Places and consequently should be considered for vegetative screening too.

2. Wetlands

While the total area of wetlands affected by the project is small, the Council notes, with concern, that the Petitioner proposes only minimal, or no, buffer areas between the identified wetlands and the proposed project. With regard to Wetlands 1, 2, 3, and 4, the proposal states, “none of these wetlands areas will not be adversely impacted”. With the exception of the 47 ft. buffer allowed for Wetland 3, they all have buffers of 25 ft. or less. At Wetland 5, there is no buffer proposed. The project is within the public water supply watershed (Mill River System) of Lake Whitney Reservoir, an active source of public drinking water for the Regional Water Authority. The value of wetland buffers to reduce wetland filling and contamination is well established.¹ The role of these wetlands, particularly, should be evaluated with consideration of installing buffers at all the site’s wetlands that would be sufficient to prevent any deterioration of the quality and quantity of the public water supply.

¹ Planner’s Guide to Wetland Buffers for Local Governments, Environmental Law Institute, March 2008; https://www.ecosystemmarketplace.com/wp-content/uploads/archive/documents/Doc_457.pdf

Additionally, the presence of the proposed project within the drinking water supply's watershed necessitates that the proposal incorporate a Spill Prevention, Control, and Countermeasure (SPCC) plan for the proposed project that includes provisions for the proper storage of fuel and/or refueling on the proposed site.

3. Stormwater

The Council notes that development of the proposed solar facility may present some challenges regarding erosion control and stormwater management given the slopes and soil conditions present. While the Petitioner has proposed to phase construction, use hydroseeding, and install a series of filter socks along existing contours every 75 feet, the Council recommends that the Petitioner engage an environmental monitor to periodically inspect the proposed site during and after construction to ensure that the erosion and sedimentation control features are installed and maintained properly.

Thank you for your consideration of these comments. Please do not hesitate to contact the Council if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Peter Hearn". The signature is written in black ink and is positioned above the typed name.

Peter Hearn
Executive Director



79 Elm Street • Hartford, CT 06106-5127

www.ct.gov/deep

Affirmative Action/Equal Opportunity Employer

November 12, 2020

Melanie Bachman, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, Connecticut 06051

RE: Petition No. 1425- Gaylord Mountain Solar Project, 1.9MW
Distributed Solar Development
360 Gaylord Mountain Road, Hamden

Dear Attorney Bachman and members of the Siting Council:

The Department of Energy and Environmental Protection has reviewed the above referenced petition for a declaratory ruling for the proposed construction, maintenance, and operation of a 1.9 MW AC ground-mounted solar photovoltaic electric generation facility at 360 Gaylord Mountain Road, Hamden, Connecticut.

Location

The parcel is 33.88 acres on Gaylord Mountain Road, which is a winding road with areas of steep slopes and residential housing between stretches of undeveloped land. The project proposes clearing and grading of 12.3 acres of the site. The site slopes up from east to west with areas exceeding 25% slope. Site work involves construction along Gaylord Mountain Road, with a drainage basin with berm located approximately 100 ft in and clearing and grading for a plunge pool within a few feet from Gaylord Mountain Road. The existing communications tower on site is accessed from the north off Gaylord Mountain Road. This access road will be utilized during construction, and a new access road and interconnection route is proposed off of Gaylord Mountain Road as part of the construction process.

Stormwater Runoff

The petition states the site is designed in accordance with DEEP's guidance on Solar Array for Construction Stormwater General Permit Appendix I dated 1/6/20, dropping one hydrologic soil group to account for soil compaction, and stating the solar panels, transformer pads, and the gravel roadway are considered impervious cover. No HydroCAD models were submitted with the Environmental Assessment to verify the runoff coefficient and corresponding soil group. This site runs downhill with areas of steep slopes. Because of the downhill nature of this location, the large capacity stormwater basin is designed with a raised berm to control water volume.

Construction projects that involve creating a dam or berm for stormwater retention/ detention require a review from DEEP's Dam Safety Division. This review is required because a dam is defined in § 22a-

409-1 of the Regulations of Connecticut State Agencies (RCSA) as *any barrier of any kind whatsoever which is capable of impounding or controlling the flow of water, including but not limited to storm water retention or detention dams, flood control structures, dikes and incompletely breached dams*. The result of a review by DEEP Dam Safety is to determine the Hazard Potential if the structure were to fail, in terms of loss of life, economic loss or environmental damage.

Based upon the resources provided by the petitioner, Dam Safety staff reviewed the area down slope of the proposed drainage basin, the inundation map, topography, and existing land cover. Based on those elements and on the storage capacity of 78,771cf (cubic feet) or 1.8af (acre-feet) of the basin, Dam Safety staff consider this a Hazard Class AA Dam. A Class AA dam is described as a negligible hazard potential dam that if it were to fail, would result in no measurable damage to roadways, no measurable damage to land and structures, and negligible economic loss. After construction, the petitioner will need to register the stormwater structure with DEEP Dam Safety unit. All dams are subject to reclassification at any time if the DEEP Commissioner determines that the hazard potential has changed.

In reviewing the premise of the design for the large detention basin, there may be a conflict with what is in the Environmental Assessment regarding the description of the analysis and what was provided to Dam Safety to assess the berm. The Environmental Assessment, page 22, states that the site was considered as fully impervious when determining water runoff. This is in line with DEEP's stormwater guidance documents. However, the single HydroCad model provided to Dam Safety by the petitioner to show the storage capacity of the basin during a 100-year storm event, shows that the site was considered fully pervious. A "zero" was inserted in the "percent impervious cover." Though the HydroCad model provided to Dam Safety was for a particular purpose, the description in the Environmental Assessment discussing runoff takes a different approach. There were no HydroCad models included in the petition.

A few storm drains along Gaylord Mountain Road were observed to contain debris and leaves which prevents stormwater from entering these drains. Site design should account for water volume and velocity and seek to contain water to this site, so as not to add to the existing conveyance issues along the road.

The petition states they will apply for DEEP's *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities* (Stormwater GP). DEEP can assess erosion and sedimentation controls, water volume and water quality once that application is submitted.

Stockpiles

During construction there is an estimated 5,600 CY of material being excavated. Sheets EC-3 and EC-6 of the site plans show two stockpile locations with silt fences around them. The petitioner may need to clarify if the stockpiles are sized appropriately to hold 5,600 CY of soils while under construction and if silt fence is the appropriate erosion control for this amount of soil. The petition states that 1458 CY of material in excess may be used elsewhere on the site after constructing the berm and basin. More clarification is needed as to where the material will go and for what purpose.

Wetlands

Clarification is needed for the purpose of the riprap level spreader outside the solar field Limits of Disturbance, near wetland 1. A discussion of this area should include the steep slopes and the anticipated runoff for this area.

The petition states that wetlands were inspected during one field day in March 2020. The wetlands were identified as either depressions or isolated pockets, with little detail about habitat value and a conclusion that none of these sites are potential amphibian breeding habitats. The buffers proposed may be reasonable to prevent siltation or other potential impacts during and after construction, but without a habitat assessment of these five wetlands there is not enough information to determine a reasonable distance to disturbance.

Core Forest

This petition is not subject to a letter from DEEP regarding a core forest determination. The petition includes a discussion of core forest and identifies a small interior area within the 13-acre array. DEEP would advise developers to consider the parcel as a whole and how it fits into its surroundings when looking at impacts to core forest. The CL&P utility right of way bisects the northwestern portion of the site, essentially separating this parcel from directly connecting to a broader, undeveloped stretch of land owned by the South-Central Connecticut Regional Water Authority. Due to development surrounding this site with Gaylord Mountain Road, Hunting Ridge Road and the CL&P Right of Way, it is likely not considered to be core forest.

Mill River Watershed

Connecticut DEEP, Save the Sound, and other stakeholders collaborated on a Mill River Watershed Management Plan in 2018. The Mill River runs from Cheshire to New Haven and forms Lake Whitney, a reservoir operated by the South Connecticut Regional Water Authority. This site is near Eaton Brook, which is a feeder brook to the Mill River. Any measures that can be taken on the property to reduce the velocity and volume of water and improve water quality leaving the site should be included in a watershed protection plan.

Errata

Table 4 on page 25 of the Environmental Assessment may not be referencing this site, it is referring to a larger parcel of at least 54 acres.

Thank you for the opportunity to review this project. If there are any questions regarding these comments, please contact me at Linda.Brunza@ct.gov.

Best Regards,
Linda Brunza, Environmental Analyst
Office of Planning & Program Development, Environmental Review
Department of Energy & Environmental Protection