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February 1, 2024

Mr. Douglas McLean, Planning Commissioner
Planning Commission, Town of Coventry
1675 Flat River Rd
Coventry, Rhode Island 02816

**Re: Preliminary Plan Application - Moo Cow Solar
2446 Victory Highway (Route 102)
AP 304, Lots 27.1 and 28
TRC Project No. 500563.0000.0000**

Dear Mr. McLean,

TRC Engineers, Inc. (TRC), on behalf of EDP Renewables NA Distributed Generation LLC (Applicant), is pleased to submit the site plans and associated materials for Preliminary Plan Application for Major Development approval of the Moo Cow Solar Project. The subject project is located on land mapped as Lot 28 (Owner: Moo Cow LLC) and 27.1 (Owner: NARYA LLC). This project has received Master Plan approval from the Planning Commission on May 30, 2023, a Special Use Permit from the Zoning Board on August 2, 2023. TRC will be submitting an application to RIDEM for review as a Significant Alteration to a Freshwater Wetlands prior to the Preliminary Plan public hearing, as noted in a letter to the Planning Commission, dated January 23, 2024. Please find enclosed the following application materials:

1. Transmittal Form
2. Filing Fee (\$250)
3. Preliminary Plan Checklist for Major Development
4. Preliminary Plan Supporting Documents
 - a. Proof of utility interconnection approval
 - b. Any memorandum of lease, easement, or utility/distribution agreements
 - c. Proof of liability insurance
 - d. Contact information for the project contractors
 - e. Grading Plan (included in plan set)
 - f. Shading analysis
 - g. A viewscape analysis demonstrating that the reasonable steps have been taken in the siting of the proposed solar installation to reduce negative impacts on rural and forested viewscales
5. Stormwater Report
6. Sedimentation and Erosion Control (SESC) Plan
7. Emergency Response Plan
8. Operation and Maintenance Plan
9. Decommissioning Plan
10. Abutter List and Notification Receipts
11. Town of Coventry Master Plan Approval Documentation
12. Town of Coventry Zoning Board Special Use Permit
13. Site Plans, prepared by TRC and dated February 1, 2024
14. Darrow & Everett Letter to Doug McLean re: RI General Laws 2024 Changes dated January 23, 2024
15. RI DEM Edge Verification

A brief narrative of the existing conditions and proposed project is provided below.



Existing Conditions

The Site is located at 2446 Victory Highway in Coventry, Rhode Island. The proposed project will be located on a 117.3-acre parcel and is identified as Assessor's Plat 304, Lot 27.1 and Lot 28 (the subject property). Both lots, which are zoned as Rural Residential (RR5), will be administratively merged by action of the Coventry Planning Commission for Final Plan approval. The site is privately owned and has been used for forestry, farming and related activities. Lot 27.1 features an existing abandoned dwelling and two historical cemeteries totaling less than 2,000-SF in area. The remainder of the lot is wooded. Lot 28 is almost entirely wooded, with the exception of a small open field located in the northwestern portion of the parcel. There are large wetland complexes throughout the northern and southern portions of the property, as well as a stream on the eastern side of the property. The following wetlands were delineated by TRC in November 2022 and described below: one large deciduous forested swamp ≥ 10 acres, three swamps < 1 acre, another deciduous forested swamp ≥ 10 acres, a deciduous forested swamp ≥ 1 acre but < 10 acres, and two unnamed streams.

A state-designated Natural Heritage Area used to be mapped in the northeastern corner of the property; however, the most current map (last updated March 2023) published by Rhode Island GIS shows the Natural Heritage Area located outside the property's boundary. The site is located within a Federal Emergency Management Agency Area of Minimal Flood Hazard (Zone X). There are two mapped historical cemeteries located on AP 304, Lot 27.1 (Town of Coventry Nos. 86 and 141). There are no historic sites or historic districts mapped at the site.

Abutting properties are largely wooded with residences along Victory Highway, Old Sawmill Farm, on the opposite side of Victory Highway, and a new solar development in West Greenwich.

Hydrology

The western portion of the Site is located within the Flat River Reservoir sub-watershed (HUC 010900040602), while the eastern portion of the Site is located within the Big River sub-watershed (HUC 010900040601). According to RIDEM's online Environmental Resource Map, both sub-watersheds are listed as 303d Impaired Watersheds (RIDEM 2023a). The designed drainage basins will outlet into wetlands that converge to a tributary of the Quidneck Reservoir or the Nooseneck River. The Nooseneck River is listed as coldwater fisheries in 250-RICR-150- 05-1 (Water Quality Regulations), Section 1.25.I.1 but was removed from the TMDL list in the 2022 Impaired Waters Report, dated December 2021. The Quidneck Reservoir is not listed as a coldwater fishery or TMDL.

Wetland Delineation

Wetlands were delineated by TRC Companies in November 2022. The Final Wetland report is dated January 2023. Wetland edges were verified by RIDEM in a letter dated July 14, 2023.

The field survey resulted in the identification and delineation of several wetland complexes found throughout the property, delineated by the flag series 'A', 'B', 'C', 'D', 'E', 'F', 'H' and 'I'.

Flag series A (A1-A74), F (F1-F47), and H (H1-H74) were flagged as three separate wetland areas but are a single hydrologically connected, deciduous forested swamp ≥ 10 acres. The wetland area delineated by flag series F connects to the A flag series wetland offsite to the south. Both the A and F flag series direct flow towards the series H wetland, which flows offsite to the east.

Flag series B (B1-B4) is a small, isolated vernal pool located just to the northeast of series C.

Flag series C (C1-C4) is an isolated, excavated pit (vernal pool) to the southwest of series B.





Flag series D (D1-D50) is a deciduous forested swamp ≥ 10 acres in size, which extends offsite to the north. In the north half of the delineated area there are multiple wetland types within 50 feet of the wetland edge as the deciduous forested swamp transitions to a deciduous shrub swamp and then an emergent marsh. Per RIDEM, since these transitions happen within 50 feet of the wetland edge, the buffer zone in the areas between flags D1-D5 and flags D57-D66 will receive an additional 25 feet of buffer zone. A small portion of Wetland F (described above) flows toward this wetland area, Wetland D.

Flag series E (E1-E42) is a deciduous forested swamp between 1 and 10 acres in size, with very similar characteristics to flag series F. Due to its size being < 10 acres, it is afforded a smaller buffer zone than the deciduous forested wetlands located onsite that are ≥ 10 acres in size.

Flag series I (I1-I6) is a small, < 1 acre isolated wetland to the northwest of series H.

Proposed Design Plan

The Applicant proposes to construct a $4.37 \pm$ MW direct current (DC) ground mounted photovoltaic solar array and corresponding electrical equipment, equipment pad, utility poles, fence, and stormwater basins. The project will be accessed by a crushed stone driveway to be constructed from Victory Highway (Route 102). The proposed solar array would occupy approximately $9.37 \pm$ acres of the parcel and will be surrounded by a seven-foot-tall chain-link security fence, enclosing a total area of approximately $13.1 \pm$ acres. A 6-inch clearance will be provided beneath the security fence to permit wildlife passage. The total LOD, including shade tree cutting, is $15.4 \pm$ acres.

The ground within the fenced area and beneath the solar array will be cleared, grubbed and seeded with a low maintenance grass seed mix. Shade trees between the proposed fence and the solar array where no grading is proposed will be cut but not grubbed, leaving the existing ground cover intact. A restoration seed mix will be applied over this cleared area. The small open field area located on the west side of the site within the 40-foot vegetated buffer zone will be planted with native vegetation to maintain a visual buffer along that side of the Site consistent with the Coventry zoning ordinance. Seed mixes and landscape plantings are shown on the Landscape Plans.

Stormwater Best Management Practices were designed in general accordance with the Stormwater Design and Installation Standards Manual to provide water quality treatment and attenuate peak flows from the 1, 10, and 100-year, Type III 24-hour design storms. They include level stone trenches, three basins, and a washed crushed stone access road surface.

- Level stone trenches – Level stone trenches are proposed to encourage sheet flow beneath the panel drip edges. The trenches are proposed beneath the panels where slopes exceed 8% and are not generally parallel with the array drip edge. They are 14 feet long by 2.5 feet wide with a reverse slope. The trenches will be installed parallel with the contours and spaced at intervals no longer than 100 feet.
- West Basin – A 1 foot deep, 5,785 cubic foot infiltration basin will attenuate stormwater runoff from Drainage Area 205C (the western and southwestern boundary of the solar array field) and infiltrate the 1-yr and 10-yr design storms. A 50-foot-wide spillway has been provided to accommodate the 100-yr design storm. Pre-treatment will be provided by a pea gravel diaphragm.
- Sand Filter – A 2 foot deep, 5,258 cubic foot sand filter will infiltrate stormwater runoff from Drainage Area 206C (the northwest corner of the solar array field) for the Water Quality and 1-yr and 10-yr design storms. A 10-foot-wide spillway has been provided to accommodate the 100-yr design storm. Pre-treatment will be provided by a stone berm and shallow forebay area.
- East Basin – A 3 foot deep, 46,113 cubic foot infiltration basin will attenuate stormwater runoff from Drainage Area 207C (a majority of the central, north, east and south of the solar array field) and infiltrate the 1-yr and 10-yr design storms. A 20-foot-wide spillway has been provided to accommodate the 100-yr design storm. Pre-treatment will be provided by a pea gravel diaphragm. A portion of the infiltration basin, where





adjacent slopes exceed 15%, will be lined with an impervious liner to prevent undermining the adjacent steep slope.

- Crushed Stone Road – The access road will be surfaced with a minimum of 6 inches of washed crushed stone and will be used infrequently; therefore, it is expected to remain pervious.

All basins have been designed to drain within 48 hours after the design storm ends.

Anticipated Impacts

The proposed project design avoids and minimizes impacts to freshwater wetlands to the greatest extent practical and is subject to the Rhode Island Rules and Regulations Governing the Administration and Enforcement of the Fresh Water Wetlands Act (250-RICR-150-15-1).

The results of the stormwater analysis indicate that the proposed conditions peak runoff rates generated by the 1, 2, 10, 25, and 100-year storms will not exceed existing conditions after attenuation. The 11 Minimum Stormwater Management Standards required by the Rhode Island Stormwater Management, Design and Installation Rules have been met.

The proposed project plan has been designed to comply with Article XXI, “Special Regulations - Solar Power Generators” and includes:

1. 100-ft front yard setback, one 85-ft side yard setback, and a 150-ft rear yard setback. The Applicant is requesting relief from the zoning dimensional requirements for (Article 6, Section 610, Table 6-4) Nursery/Greenhouse in zone RR 5 of an 85-ft setback from the sideyard to the North. The Applicant is proposing to install the solar panels within 63-ft of that property sideyard in order to accommodate increased drainage facilities to address peak stormwater flows and volumes from the development before reaching the wetlands. The increased drainage facilities are designed to mitigate stormwater flows to the wetlands so they are less than or equal to the pre-development conditions.
2. The solar array covers less than 15% of the lots, once merged. The designed array coverage of 9.37± acres is 8.0% of the 117.3± acre combined lot size.
3. A minimum 40-ft vegetated buffer consisting of existing vegetation will be maintained.
4. The access road is angled to obstruct views of the array.
5. The array will be surrounded by a 7 ft tall security fence.
6. Exterior lighting is not proposed.

As conditioned in the July 19, 2023, Master Plan Approval Decision, the plan also includes:

1. The existing structure located near the eastern boundary line of lot 27.1 shall be demolished.
2. A 50-foot setback around both historic cemeteries has been shown along with a proposed 5-foot-wide easement from the driveway to the cemeteries.
3. The solar installation does not exceed 12 feet in height as measured from the original grade of the ground surface to the highest point of the solar installation, including the top of any support structure or panel.
4. Any topsoil that must be moved shall be stored and stabilized onsite for future use.





5. All cleared areas below and surrounding a ground mounted solar installation shall be maintained in a vegetated state to stabilize soils and prevent erosion.
6. A 40-foot vegetated buffer will be maintained between the installation and all property boundaries to screen the solar installation from view from abutting properties and roads.

Please feel free to call me at 401-330-1223 or email me at JSzczepanski@trccompanies.com with any questions or comments.

Sincerely,
TRC Companies

A handwritten signature in black ink, appearing to read "Jack Szczepanski".

Jack Szczepanski, PhD
Project Manager, Senior Ecologist of Planning, Permitting and Licensing

Enc.

CC: David Kane, EDPR NA Distributed Generation LLC
Kelley Morris Salvatore, Darrow Everett, LLP
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