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October 9, 2015

FINAL RECORD OF DECISION

PROJECT NAME : Canal Unit 3; Canal Community Solar
PROJECT MUNICIPALITY : Sandwich
PROJECT WATERSHED : Cape Cod
EEA NUMBER : 15407
PROJECT PROPONENT : NRG Canal 3 Development LLC; NRG Renew Canal 1
LLC
DATE NOTICED IN MONITOR : September 23, 2015

Pursuant to the Massachusetts Environmental Policy Act (MEPA) (G.L.c.30, ss. 61-62I) and Section 11.11 of the MEPA regulations (301 CMR 11.00), I have reviewed the Expanded Environmental Notification Form (EENF) and hereby **grant a Waiver** that will allow the proponent to proceed with design and permitting of Phase 1 of the project prior to completing the Environmental Impact Report (EIR) process for the entire project.

Project Description

As described in the EENF, the project consists of two parts: 1) construction and operation of a 330 megawatt (MW) fast-start, dual-fueled simple-cycle electric generating facility (Canal Unit 3) and 2) construction and operation of a 1.5 MW solar photovoltaic (PV) array (Canal Community Solar (CCS)). The Proponent has requested a Phase 1 waiver to allow the CCS project to proceed prior to completion of an EIR for the entire project.

The 88-acre project site is comprised of two separate areas, the 52-acre Northern Area and the 36-acre Southern Area. Canal Unit 3 is proposed in the Northern Area. The CCS is proposed in the Southern Area. According to the EENF, the Canal Unit 3 project will consist of a single General Electric (GE) 7HA.02, or comparable, combustion turbine with an approximate net nominal capacity of 330 MW. The unit is proposed to operate during peak periods of energy

demand, for up to 4,380 hours per year, primarily fueled by natural gas with a maximum of 1,440 hours per year on ultra-low sulfur distillate (ULSD). The dual-fueling option is proposed to provide unit flexibility and reliability to meet regional power demand during both summer and winter peak demand periods and power grid system outage events. Canal Unit 3 will include an approximately 215-foot tall stack. Canal Unit 3 is proposed on a previously developed 12-acre portion of the Northern Area, currently occupied by warehouse space, two ammonia storage tanks, temporary trailers, and gravel parking. Natural gas and ULSD interconnections will run west-to-east along existing interconnection corridors established by the Canal Generating Station. ULSD will be delivered via fuel tanker by the Cape Cod Canal. Connections to the electric grid will be provided via the Eversource-owned switchyard located to the south of the Northern Area, across Rickey's Road and the railroad ROW. Water withdrawals for operation of Canal Unit 3 will be sourced from an on-site well that was previously developed but never brought online.

The CCS includes installation of two areas of solar panels arrays with an approximate net nominal generating capacity of 1.5 MW. It is proposed on a 10-acre portion of the Southern Area to the south of the existing oil storage tanks and west of the Eversource electrical transmission ROW. Panels will be installed based on existing grading and require clearing of vegetation for panel installation and maintenance, shading clearance, and installation of transformers, and underground and overhead 22.8-kV three-phase circuits. The two solar arrays will be connected to the existing Eversource 22.8-kV overhead distribution circuit located along Route 6A, south of the CCS site. Access to the site will be provided by Tupper Road via an existing gravel access road.

Project Area

As noted previously, the 88-acre project site is comprised of the 52-acre Northern Area and the 36-acre Southern Area. The Northern Area includes 48 acres of upland and 4 acres of land under water (LUW) (within the Cape Cod Canal) and is bounded by Freezer Road and land owned by the United States Army Corps of Engineers (ACOE) to the east, by Canal Service Road and the Cape Cod Canal to the north, the Town of Bourne to the west, and Rickey's Road and a railroad right-of-way (ROW) owned by the Massachusetts Department of Transportation (MassDOT) to the south. It contains the existing Canal Generating Station, which has a capacity of 1,120-MW. The facility consists of two dual-fueled electric generation units, a 498-foot high exhaust stack, above ground oil and ammonia storage tanks, and associated infrastructure.

The Southern Area is bounded by the Town of Bourne to the West, Route 6A and Tupper Road to the south, the railroad ROW to the north, and undeveloped property owned by Eversource to the east. The northern portion of the Southern Area contains two large aboveground oil storage tanks associated with the Canal Generating Station and the eastern portion of the Southern Area includes a 360-foot wide transmission corridor, held by Eversource under easement, and high-voltage transmission infrastructure. The remainder of the Southern Area is a mix of open fields, scrub/shrub vegetation, and wooded vegetation.

The Northern Area is located in the Massachusetts Coastal Zone. Portions of both the Northern and Southern Areas are located in the 100-year flood zone. The flood zone is identified

by the Federal Emergency Management Agency (FEMA) as Zone AE, elevation 14 North American Vertical Datum of 1988 (NAVD 88), and shown on the Flood Insurance Rate Map issued in July 2014 (Map 25001C0319J).¹ The project site is not located in a velocity zone.

Jurisdiction and Permitting

The project is undergoing MEPA review and is subject to a Mandatory EIR pursuant to 301 CMR 11.03(7)(a)(1) and (8)(a)(2) because it includes construction of a new electric generating facility with a capacity of 100 or more MW, and it requires modification of an existing Stationary Source with federal potential emissions that collectively will result, after construction and the imposition of required controls, of 75,000 tpy of GHGs based on CO₂ equivalent. The project also exceeds two ENF thresholds: alteration of one-half or more acres of any other wetlands (LSCSF) (301 CMR 11.03(3)(b)(1)(f)) and modification of an existing major stationary source resulting in a 'significant net increase' in actual emissions, provided that the stationary source or facility is major for the pollutant, emission of which is increased by: 15 tpy PM₁₀; 100 tpy of carbon monoxide (CO); 40 tpy of sulfur dioxide (SO₂); 25 tpy of volatile organic compounds (VOC) or NO_x; 0.6 tpy of lead.

The project will require several permits from the Massachusetts Department of Environmental Protection (MassDEP) including: New Source Review/Air Plan Approval/Title V Operating Permit Modification; Federal Prevention of Significant Deterioration (PSD) Permit; Water Management Act (WMA) Approval; and a Section 401 Water Quality Certification. The project may require a new or modified Chapter 91 (c. 91) License for fuel-delivery infrastructure. The project will require an Approval of Petition to Construct from the Energy Facilities Siting Board (EFSB) and an Approval of Request for Exemptions from Zoning from the Department of Public Utilities (DPU). Phase 1 may require a State Agency Action in the form of a Superseding Order of Conditions from MassDEP, but only if the Order of Conditions from the Sandwich Conservation Commission is appealed.

The project will require Fuel Oil Tank Approval from the Massachusetts Department of Public Safety for the aboveground storage tanks and Hazardous Substance Tank Approval from the Massachusetts State Fire Marshal. The project is subject to review by and requires an Approval to Construct from the Massachusetts Department of Transportation pursuant to M.G.L. c.40 §54A. The project may require Federal Consistency Review by the Office of Coastal Zone Management (CZM). The project is subject to review under the May 2010 MEPA GHG Emissions Policy and Protocol ("the Policy").

The project requires an Order of Conditions from the Sandwich Conservation Commission (or in the case of an appeal, a Superseding Order of Conditions from MassDEP). The project will be subject to review as a Development of Regional Impact (DRI) by the Cape Cod Commission (CCC) and will require a Certificate of Appropriateness from the Town of Sandwich Old King's Highway Historic District Committee.

¹ The terms 100-year floodplain and Land Subject to Coastal Storm Flowage (LSCSF) are used interchangeably within this Certificate.

The project also requires National Pollutant Discharge Elimination System (NPDES) Permits from the U.S. Environmental Protection Agency (EPA) for the construction and operation of the facility and a Notice of Construction for the Federal Aviation Administration (FAA) for construction of the stack.

As the project requires approval from the EFSB, MEPA jurisdiction over this project is broad and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Environmental Impacts

The project includes modification of an existing Stationary Source. Upon completion, the facility will generate a total of 1,001,028 tons per year (tpy) of greenhouse gas (GHGs) emissions (CO₂ equivalent). Canal Unit 3 will generate an additional 108.4 tpy of oxides of Nitrogen (NO_x) and 98.6 tpy of particulate matter (PM) as PM₁₀. According to the EENF, the Canal Unit 3 project will alter 461,736 square feet (sf) of Land Subject to Coastal Storm Flowage (LSCSF) and construction of stormwater management bioretention areas for the CCS project will alter 13,504 sf of LSCSF. Land alteration is estimated at 18.8 acres, 10.6 acres for Canal Unit 3 and 8.2 acres for the CCS project. New impervious areas include 4.5 acres at the Canal Unit 3 site and 0.4 acres at the CCS site. The project is not anticipated to increase average daily vehicle trips (adt) or parking spaces. The Canal Generating Station generates approximately 100 adt and includes 75 parking spaces. The CCS project is not anticipated to generate any water or wastewater impacts. The Canal Unit 3 project will increase water withdrawals and wastewater generation. Water withdrawals are projected to increase by 125,129 gallons per day (GPD) from 518,449,315 GPD to 518,574,444 GPD.² Water use will increase by 125,129 GPD from 449,315 GPD, for a total of 574,444 GPD for Canal Generating Station in its entirety. Canal Unit 3 will generate an additional 2,673 GPD of wastewater, in addition to the 664,000 GPD generated by Canal Units 1 and 2, for a site total of 666,673 GPD.

Waiver Request

The Proponent requested a Phase 1 Waiver to allow the project to proceed with its first phase of development (the CCS project) prior to preparation of an EIR for the entire project (Canal Unit 3). Consistent with these requests, an EENF was prepared that identified the environmental impacts associated with Phase 1 and described measures to be undertaken by the Proponent to avoid, minimize and mitigate project impacts.

The EENF generally described how the project proposes to meet the Phase 1 Waiver criteria and the comment period was extended 1 week as required. The waiver request was discussed at the consultation/scoping session for the project which was held on August 31, 2015.

Criteria for a Phase 1 Waiver

² The existing water withdrawals include non-contact cooling water and well water withdrawal associated with Canal Units 1 and 2. Water for cooling purposes is primarily withdrawn from the Cape Cod Canal.

The MEPA regulations at 301 CMR 11.11(1) state that I may waive any provision or requirement in 301 CMR 11.00 not specifically required by MEPA and may impose appropriate and relevant conditions or restrictions, provided that I find that strict compliance with the provision or requirement would:

- (a) result in an undue hardship for the Proponent, unless based on delay in compliance by the Proponent; and
- (b) not serve to avoid or minimize Damage to the Environment.

The MEPA regulations at 301 CMR 11.11(4) state that, in the case of a partial waiver of a mandatory EIR review threshold that will allow the Proponent to proceed with Phase 1 of the project prior to preparing an EIR, I shall base the finding required in accordance with 301 CMR 11.11(1)(b) on a determination that:

- (a) the potential environmental impacts of Phase 1, taken alone, are insignificant;
- (b) ample and unconstrained infrastructure facilities and services exist to support Phase 1;
- (c) the project is severable, such that Phase 1 does not require the implementation of any other future phase of the project or restrict the means by which potential environmental impacts from any other phase of the project may be avoided, minimized or mitigated;
- and**
- (d) the agency action(s) on Phase 1 will contain terms such as a condition or restriction, so as to ensure due compliance with MEPA and 301 CMR 11.00 prior to commencement of any other phase of the project.

Findings

I find that subject to conditions described below, the Proponent has met the criteria for a Phase 1 Waiver. My determination is based on the information submitted by the Proponent and consultation with State Agencies. As further outlined below, I have determined that compliance with the requirement to prepare an EIR prior to Phase 1 would not serve to avoid or minimize Damage to the Environment, the project is severable, and that Agency Actions on Phase 1 can be conditioned to ensure compliance with MEPA.

1. Requiring the preparation of an EIR in advance of undertaking Phase 1 would cause undue hardship and would not serve to minimize Damage to the Environment:

Phase 1 will not result in significant environmental impacts on its own and the EENF proposed adequate measures to avoid, minimize and mitigate Phase 1 impacts. The requirement to file an EIR prior to Phase 1 will constitute an undue hardship because the financial feasibility of the project is dependent upon securing investment tax credits that will expire in 2016. The federal solar Investment Tax Credit (ITC) of 30 percent requires project to be in service prior to December 31, 2016. This tax credit is critical to achieving cost savings which will be passed on to residential owners and is a key focus of a community solar installation. Filing an EIR prior to Phase 1 would not provide significant, additional value in terms of evaluating additional alternatives not already assessed, reducing environmental impacts, or minimizing the environmental benefits of the Phase 1 project.

Given the complex environmental analyses necessary to complete the MEPA review process for the Canal Unit 3 project, it is not likely that the MEPA review process for the entire project could be completed prior to the expiration of the ITC. Remaining issues associated with Phase 1 can adequately be resolved during permitting.

Proposed mitigation measures include:

- construction of a stormwater management system consistent with MassDEP Stormwater Management Regulations and associated performance standards;
- preparation of a Stormwater Pollution Prevention Plan (SWPPP) in accordance with NDPS construction general permit requirements;
- areas cleared for solar panels will be seeded with a grass mixture prior to installation of the solar arrays; and
- avoiding additional site clearing through use of existing service road for access.

The CCS project is anticipated to supply approximately 2,023,000 kW-hour/year of electrical energy to the regional electric supply. This source of renewable energy is anticipated to displace older, more polluting generating facilities and result in a net decrease of emissions of air pollutants including 924.5 tpy of CO₂ emissions.³ The Proponent should provide a self-certification to the MEPA Office following completion of Phase 1 signed by an appropriate professional (e.g. civil engineer, traffic engineer, architect, general contractor) indicating that the CCS project, or equivalent measures, has been designed and installed to achieve the proposed GHG emission reductions committed to in the EENF.

Given the foregoing, and subject to the conditions described above, I find that a requirement to complete MEPA review prior to initiating the permitting process for Phase 1 is not necessary in order for the Proponent to demonstrate that it will avoid, minimize, and mitigate potential Damage to the Environment to the maximum extent practicable, and that a requirement to do so would therefore cause undue hardship and would not serve to minimize Damage to the Environment.

Therefore, the requirement for completion of an EIR prior to Phase 1 is not necessary and would not serve to avoid or minimize Damage to the Environment.

1. The potential environmental impacts of Phase 1, taken alone, are insignificant.

Potential impacts of Phase 1 are limited to clearing approximately 8.2 acres of land currently characterized by a mix of old field, scrub/shrub, and wooded areas, creation of 0.4 acres of new impervious area, and construction of stormwater management basins within LSCSF. The CCS arrays will be located outside the 100-foot buffer zone to Bordering Vegetated Wetlands (BVW) and LSCSF. Stormwater from the CCS site will be conveyed to two vegetated bio-retention areas to mitigate stormwater runoff volumes and water quality.

³ Based on ISO New England emission rate of 914 pounds per megawatt-hour (lb/MW-hour). The system average emission rate of 730 lb/MW-hour would result in displacement of 738.4 tpy of CO₂.

These impacts, taken alone, do not exceed ENF or EIR thresholds. The project will be constructed consistent with applicable stormwater performance standards, and will undergo additional review through the local permitting process and CCC review.

The CCS project will not result in any impacts to Areas of Critical Environmental Concern, mapped rare species habitat, historic or archaeological resources, water resources, waterways, air quality or traffic.

2. Ample and unconstrained infrastructure facilities and services exist to support Phase 1.

Phase 1 does not require additional off-site infrastructure or facilities including water or sewer services. The project will connect to the existing Eversource 22.8-kV three-phase overhead distribution circuit located adjacent to the Phase 1 site on Route 6A (Sandwich Road).

3. The project is severable, such that Phase 1 does not require the implementation of any other future phase of the project or restrict the means by which potential environmental impacts from any other phase of the project may be avoided, minimized or mitigated.

Phase 1 is severable from the Canal Unit 3 project, has independent utility and will not preclude the Proponent from implementing project alternatives still under consideration for the entire project. Comments do not request that the DEIR include additional analysis of the Southern Area as an alternative site for Canal Unit 3. Furthermore, Phase 1 does not require the construction of Canal Unit 3, as the two projects have separate and distinct purposes. Based on the foregoing, I find that the project is severable and does not restrict the means by which potential environmental impacts from any other phase of the project may be avoided, minimized or mitigated.

4. The agency action(s) on Phase 1 will contain terms such as a condition or restriction, so as to ensure due compliance with MEPA and 301 CMR 11.00 prior to commencement of any other phase of the project.

Phase 1 may require a State Agency Action from MassDEP (if the Order of Conditions is appealed). I hereby direct MassDEP to include conditions in its permit (if necessary) that require compliance with MEPA and 301 CMR 11.00 prior to commencement of Canal Unit 3. Canal Unit 3 will require filing of a DEIR and completion of the MEPA review process. Based on the foregoing, I find that Phase 1 of the project can commence prior to the completion of the MEPA review process.

Conclusion

Based on these findings, I have determined that the Waiver request has merit. A DROD was issued on September 18, 2015 and published in the Environmental Monitor on September 23, 2015 in accordance with 301 CMR 11.15(2), which began the public comment period. The public comment period lasted for 14 days and concluded on October 7, 2015. Accordingly, I

hereby **grant** a Waiver to allow the Proponent to proceed with design, permitting and construction of Phase 1 of the project prior to completing the EIR process for the entire project, subject to the above findings and conditions.

October 9, 2015

Date



Matthew A. Beaton

Comments received on the DROD:

None.

Comments received on the EENF:

9/8/2015	Division of Marine Fisheries
9/10/2015	Association to Preserve Cape Cod
9/11/2015	Jones River Watershed Association
9/11/2015	Cape Cod Commission
9/11/2015	Massachusetts Department of Environmental Protection – Southeast Regional Office (MassDEP-SERO)
9/14/2015	Town of Bourne, Town Administrator
9/15/2015	Office of Coastal Zone Management
9/18/2015	Department of Energy Resources

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