



September 10, 2015

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Matthew Beaton, Secretary  
Massachusetts Executive Office of Energy and Environmental Affairs  
Attention: MEPA Office  
Holly Johnson, EEA # 15407  
100 Cambridge Street, Suite 900  
Boston, MA 02114

**RE: Expanded Environmental Notification Form/Phase 1 Waiver Request  
Canal Unit 3 Project and Canal Community Solar Project**

Dear Secretary Beaton:

The Association to Preserve Cape Cod (APCC) is the Cape's leading nonprofit environmental advocacy and education organization. Founded in 1968 and today representing over 5,000 members across the region, APCC's mission is to preserve, protect and enhance the natural resources of Cape Cod. APCC has reviewed the Expanded Environmental Notification Form/Phase 1 Waiver Request for the Canal Unit 3 and Canal Community Solar Project and offers the following comments.

The proposed project is a two-phased project located at the Canal Generating Station on the Cape Cod Canal and consists of a Phase 1 Canal Community Solar project and a Phase 2 Canal Unit 3 project. The Canal Community Solar project is an approximately 1.5-MW photovoltaic solar array. The Canal Unit 3 project is described in the ENF as a fast-starting, dual-fueled simple-cycle electric generating facility utilizing a combustion turbine capable of generating 330 MW and intended for operation during times of peak energy demand. This third generator will be added to the two existing generators at the plant.

**Canal Community Solar**

As proposed, the solar project alone does not trigger MEPA review, although it does require review from the Cape Cod Commission. The applicant is seeking a Phase 1 Waiver request to allow the project to move forward while the Canal Unit 3 project undergoes MEPA review so that the applicant can take advantage of Investment Tax Credits that are due to expire at the end of 2016. If required review prolongs implementation of this portion of the project, the applicant indicates the solar project loses its economic viability and will be withdrawn.

After review of the Expanded ENF and Phase 1 Waiver request, APCC supports a Phase 1 Waiver for Canal Community Solar to allow this phase of the project to move forward, enabling renewable energy production to commence at this site. Standing on its own, the solar project will result in a net benefit by displacing 924.5 tons of CO<sup>2</sup> emissions each

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year and supplying approximately 2,023,00 KW hours of clean energy annually to the regional electric grid.

It must be noted that when compared to the proposed Canal Unit 3's 330 MW per day generation, the 1.5 MW of clean energy produced by the solar array is a modest addition. While every bit helps, this meager amount of renewable energy production represents only a fraction of the electricity produced at the Canal Generating Station and underscores the need for investment in more sources of clean, renewable energy.

### **Canal Unit 3**

As stated above, the proposed Canal Unit 3 project calls for installation of a single 330 MW combustion turbine, which will operate during times of peak demand when extra energy sources are required. The new unit will be constructed adjacent to two existing generators on a developed and disturbed site. Natural gas, which produces somewhat lower emissions than oil, will be the primary fuel, and will be supplied by a transmission line that currently runs to the property. A backup petroleum-based fuel of ultra-low sulfur distillate (ULSD) would be used for a maximum equivalent of 1,440 hours. The ENF is not clear why the alternate ULSD fuel source needs to be utilized, or during what circumstances it would need to be used instead of natural gas. APCC recommends that an explanation be provided in the EIR.

The ENF states that Canal Unit 3 will be in operation up to 4,380 hours per year. With 8,765 hours in a year, this suggests that Canal Unit 3 could be on line for half the year. APCC would like more information on how peak demand time is defined and whether the equivalent of six months of use during a given year typically falls under the category of "peak" demand time that cannot be accommodated by the existing grid.

The following are additional issue areas that APCC recommends be discussed in greater detail in the EIR:

**Emissions:** The ENF states that the addition of Canal Unit 3 to the current Canal Generating Station will have no significant impact on air quality. Yet Canal Unit 3 does represent an increase in emissions at the power plant, and the proposed Canal Community Solar is of insufficient size to offset this increase. The following table showing the breakdown of existing and projected new emissions is taken from the ENF:

Emissions in tons per day

	Existing	Change	Total
Particulate matter	2.58	1.16	3.74
Carbon monoxide	130.16	0.49	130.65
Sulfur dioxide	142.10	0.06	142.16

Volatile organic compounds	0.65	0.11	0.76
Oxides of nitrogen	36.17	0.81	36.98
Lead	0.00130	0.00003	0.00133
Any hazardous air pollutant	0.31	0.01	0.32
Carbon dioxide	20,964	6,760	27,724

APCC recommends that the applicant be required in the EIR to study the probable environmental and human health impacts from the emissions that will be generated by Canal Unit 3, based on the above table. APCC recommends that the analysis also include the projected impacts resulting from the combined emissions of the existing two generators and Canal Unit 3 as indicated in the table.

**Water Resources:** The ENF describes impacts to water resources as minimal. Water needed for the operation of Canal Unit 3 will be withdrawn from an existing onsite well, identified as Well No. 4. Water use and discharge will be minimized through the use of simple-cycle turbine technology that is described as a dry low NOX combustion system and a near-zero liquid discharge system that avoids any process water discharge into Cape Cod Canal or other surface water body. APCC welcomes the use of technology that will not cause discharges into the Cape’s water resources.

The ENF states that 125,129 gallons per day (gpd) will be extracted from Well No. 4 and process wastewater will be treated in the near-zero liquid discharge facility or trucked offsite. Wastewater generation will be 2,673 gpd. APCC could not find an explanation in the ENF describing how this water will be used, what toxic materials the process wastewater will contain, or how the wastewater will be disposed of after it is trucked offsite. APCC recommends that the EIR provide this information.

APCC would also like to see expanded discussion in the EIR about the proposed use of Well No. 4 for the Canal Unit 3 project, with particular emphasis on the studies conducted that, according to the ENF, indicate pumping water from the well will not result in adverse effects on nearby wetlands or on the potential for changes to the existing interface between fresh and salt water. This discussion should explain whether the effects of predicted sea level rise on the water table were factored into the analysis.

**Stormwater:** The ENF states that the project will include a stormwater management plan that will sufficiently treat stormwater from the two project sites. APCC looks to the EIR for more detail on the applicant's stormwater management plan.

**Wetlands:** The ENF estimates that area equaling less than 1,000 sf of the buffer zone of Bordering Vegetated Wetland will be impacted as a result of the Canal Unit 3 project. APCC recommends that the EIR should describe any proposed mitigation for impacts to the wetland buffer.

**Climate Change Preparedness:** The ENF states that combined, the Canal Unit 3 and Canal Community Solar phases will alter 475,240 sf of Land Subject to Coastal Storm Flowage (461,736 for

Canal Unit 3 and 13,504 sf for the solar project). Because of its location, APCC recommends that the applicant describe in the EIR how the project, including the construction of new infrastructure and the use of existing infrastructure, will be designed to withstand impacts from future severe coastal storm events associated with changing climate conditions.

Although the project is a private project, the project's purpose—to supply energy to the region—should be regarded as a high priority public interest, and the applicant should provide reasonable guarantees that the public's interests will be protected. As an integral part of the region's energy infrastructure, a plan for adequate climate change preparedness for the entire Canal Generating Station is essential.

APCC thanks the Secretary for this opportunity to provide comments.

Sincerely,



Edward DeWitt  
Executive Director



Don Keeran  
Assistant Director

cc: Cape Cod Commission