



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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January 20, 2017

Lee D. Hoffman, Esq.
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3720

RE: **PETITION NO. 1184** - Beacon Falls Energy Park, LLC declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, operation, and maintenance of a 63.3 Megawatt AC fuel cell facility located on Lopus Road, Beacon Falls, Connecticut.

Dear Attorney Hoffman:

At a public meeting of the Connecticut Siting Council (Council) held on January 19, 2017, the Council considered and approved the Development and Management (D&M) Plan for the Fuel Cell Power Block and Water Interconnection submitted for this project on October 7, 2016, with the following conditions:

1. Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
2. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes;
3. Approval of requested significant changes to the approved D&M Plan be delegated to Council staff in accordance with Section 16-50j-62(b) of the Regulations of Connecticut State Agencies; and,
4. The electric transmission connection, natural gas connection, and facility/associated infrastructure decommissioning plan components of the D&M Plan be submitted for Council review and approval.

This approval applies only to the D&M Plan submitted on October 7, 2016 and supplemental data dated December 14, 2016. Requests for any changes to the D&M Plan shall be approved by Council staff in accordance with Regulations of Connecticut State Agencies (RCSA) §16-50j-62(b). Furthermore, the project developer is responsible for reporting requirements pursuant to RCSA §16-50j-62.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the Council's decision on the petition dated January 11, 2016 in the D&M Plan dated October 7, 2016, and in the supplemental data dated December 14, 2016.

Enclosed is a copy of the staff report on this D&M Plan, dated January 19, 2017.

Thank you for your attention and cooperation.

Sincerely,

Robert Stein ^{HAB}

Robert Stein
Chairman

RS/RDM/cm

Enclosure: Staff Report dated January 19, 2017

- c: The Honorable Christopher J. Bielak, First Selectman, Town of Beacon Falls
Kevin McDuffie, Planning & Zoning Chairman, Town of Beacon Falls
Mike Mormile, Zoning Enforcement Officer, Town of Beacon Falls

PETITION NO. 1184 - Beacon Falls Energy Park, LLC declaratory ruling	}	Connecticut
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Megawatt AC fuel cell facility located on Lopus Road, Beacon Falls,	}	
Connecticut.	}	Council

January 19, 2017

**Partial Development and Management Plan
Fuel Cell Power Block and Water Interconnection**

Staff Report

Introduction

On January 7, 2016, the Connecticut Siting Council (Council) issued a Declaratory Ruling to Beacon Falls Energy Park, LLC (BFEP) that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, and operation of a 63.3 megawatt (MW) fuel cell facility in the Town of Beacon Falls, Connecticut. As required in the Council's Decision and Order, BFEP submitted a partial Development and Management (D&M) Plan for this project to the Council and the Town of Beacon Falls on October 7, 2016, specific only to the construction and installation of the fuel cell power block and water connection portions of the Project. The electric transmission connection, natural gas connection, and facility decommissioning plan components of the D&M Plan will be submitted at a later date. The Town did not comment on the partial D&M Plan. BFEP submitted responses to Council interrogatories on December 15, 2016 and granted the Council an extension to February 7, 2017 to render a decision on the partial D&M Plan.

Facility Site Plan

In accordance with Council Decision and Order Item 1(a), BFEP provided site development plan depicting the fuel cell power block layout and associated site details. The fuel cell facility will be located on a 25-acre parcel owned by O&G Industries, Inc., south of Lopus Road, north and west of the Metro-North Railroad and Railroad Avenue, and east of Gruber Road. The project will be constructed within an approximate 14-acre area in the central and eastern portions of the property.

BFEP will construct the fuel cell power block within an eight-acre area, consisting of 20 fuel cell units, a heat recovery generator, four desulfurization skids, a natural gas meter station, a nitrogen fuel station, a process water storage tank, four water treatment skids, a control shelter, and an electrical switchyard.

BFEP will install fifteen FCE DFC3000 units, rated at 2.8 MW each, and five FCE HEFC units, rated at 3.7 MW each. The collective output of the fuel cell power block is rated at 63.3 MW. An additional 4.6 MW will be provided by an ORMAT heat recovery generator that will be installed at the south end of the power block, adjacent to the HEFC units. The ORMAT unit uses waste heat from the fuel cell units to power a turbine, producing additional power at the facility.

The DFC3000 fuel cell units will be arranged in three rows, with five units mounted on a 70-foot by 250-foot concrete pad. The five HEFC units will be installed in pairs on 120-foot by 130-foot concrete pads, except for a single unit installed on a 120-foot by 65-foot concrete pad. The ORMAT heat recovery generator measures approximately 79 feet by 129 feet. Additional support equipment for the recovery generator includes an oil tank, pump house and an electrical enclosure.

A 115-kilovolt switchyard will be constructed in the northwest corner of the power block area. It will contain two transformers, each featuring spill containment curbs, three 115-kV circuit breakers, three 115-kV switches, a deadend structure and a control building. The switchyard will have a gravel surface and will be enclosed by a chain link fence with two vehicle access gates.

The fuel cell power block will be enclosed by an eight-foot high chain link fence of two-inch mesh. The power block will be under security camera surveillance and will have security night lighting that is Dark Sky Association compliant. A fire hydrant will be installed adjacent to the facility compound access gate for use in the event of an emergency.

BFEP will obtain water from an Aquarion water main on Railroad Avenue, east of the site and east of the Metro-North Railroad. To provide water to the site, BFEP, upon final agreement from Metro-North, will install four water pipe casings 10 feet under the rail corridor. Two of the pipe casings will contain water supply pipes to service the facility; one feeding the water pump station and the other to the new fire hydrant. The other two pipe casings are reserved for future use, if necessary.

The steel water storage tank has an approximate diameter of 47 feet and height of 27 feet, and has a 250,000 gallon capacity. Two vegetated process water infiltration basins, approximately 210 feet long, 60 feet wide and 8 feet deep, will be installed adjacent to the water storage tank.

Site access will be from a new paved driveway extending south from Lopus Road and downhill to the fuel cell power block. BFEP will coordinate with AT&T in order to cross an underground AT&T fiber line adjacent to Lopus Road. A new catch basin and riprap-lined drainage swale will be installed along the west side of the access drive, discharging south towards a stormwater detention basin.

Although the project site is somewhat isolated due to topography and the Metro-North railroad, landscaping in the form of cedar, pine and spruce plantings will be installed along most of the project perimeter.

Construction Procedures and Environmental Control

In accordance with Council Decision and Order Item 1(b), BFEP provided construction plans for site clearing, grading, sound mitigation, water drainage, stormwater control, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

Existing vegetation, mostly scrub-shrub species in the power block area and hardwood tree species in the access drive area, will be cleared with waste material being removed from the site for appropriate disposal. Cuts and fill to create project design contours are expected to be balanced. No site blasting will be required to construct the project.

Erosion and sediment controls would be installed consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. The limits of construction will be separated from non-work areas using a geotextile sediment control filter fence, with hay bale fortification in areas upgradient of wetland areas. Additionally, BFEP will install coir rolls at the south end of the site to provide additional protection to a nearby pond. Temporary swales with check dams and four temporary sediment basins will be installed for the construction phase of the project. Exposed soil areas will be seeded if left undisturbed for a period of 30 days or more. Sediment and erosion controls will be inspected periodically and in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

During construction, a gravel anti-tracking pad would be established at the access road entrance at Lopus Road. Given the steep slopes in the access road construction area, BFEP will use 2:1 slopes. Other select areas of the project will also use 2:1 slopes due to space constraints. All 2:1 slopes will be covered with a biodegradable erosion control blanket to enhance stability of the slopes.

Stormwater from the power block compound area will be collected in catch basins that discharge into three vegetated stormwater infiltration basins located adjacent to the compound area. The basins are approximately six to eight feet deep and will be vegetated with a New England Wildlife mix. Each basin will have an outlet that would discharge flows into a rip-rap lined splash pad/drainage swale during high runoff stormwater events. The basins will be inspected and cleaned in accordance with an established inspection and maintenance schedule. Access to the basins for maintenance will be from the north and south ends of the project site.

In accordance with Council Decision and Order Item 1(c), BFEP examined the possibility of reducing the amount of paving in the fuel cell compound but determined a solid paved surface is necessary for heavy equipment necessary to periodically access the fuel cell block as well as to provide safe access for emergency vehicles. Some reduction in paving may be incorporated near the water storage tank during the construction phase.

Road Safety Improvements

In accordance with Council Decision and Order Item 1(d), BFEP, upon consultation with the Town, will cut back the sloping hillside along Lopus Road at a curve opposite the facility access drive entrance to increase vehicle sightlines. BFEP will also upgrade an existing roadway guard from a steel cable design to a rigid steel guardrail along the hill and install appropriate traffic warning and control signage.

Project Environmental Requirements

In accordance with Council Decision and Order Item 1(e), BFEP proposes to install a sound attenuation barrier on the east side of the site to mitigate facility operational noise from an abutting residential area along Gruber Road. BFEP conducted additional noise analyses to determine the best location for the sound attenuation barrier with the consideration of possible traffic noise reflection from Route 8, located west of Gruber Road. To meet applicable DEEP Noise Control criteria, BFEP will construct a 900-foot long, 12-foot high wood sound attenuation barrier using a Connecticut Department of Transportation design. The sound attenuation barrier will generally follow the top of a slope above the power block that extends west along Lopus Road and south along the Gruber Road. Although the barrier will be installed in an open area among vegetation, some trees will be cleared along the Lopus Road side to facilitate construction.

In accordance with Council Decision and Order Item 1(f), BFEP will investigate a former waste dump near the access drive for hazardous materials and/or soils prior to disturbance. Any materials identified as hazardous will be removed/excavated and disposed of in accordance with applicable regulatory criteria.

In accordance with Council Decision and Order Item 1(g) and (h), BFEP consulted with the Department of Energy and Environmental Protection (DEEP) regarding field investigations for certain species that may occur at the site. Based on a review of subsequent field investigations conducted by BFEP, DEEP recommend Eastern Hognose Snake protection measures due to the presence of suitable habitat for this species on the site property. BFEP has incorporated an Eastern Hognose Snake Protection Program that follows established DEEP procedures into the D&M Plan.

In accordance with Council Decision and Order Item 1(j), BFEP is undergoing the New Source Review Air Permit process as required by DEEP. The air permit application includes provisions for a Best Available Control Technology analysis to reduce targeted air emissions to the greatest extent possible.

Work Hours and Project Notices/Reports

In accordance with Council Decision and Order Item 1(i), typical construction hours are between 7:00 a.m. to 5:00 p.m. Monday through Friday. Some weekend work and/or night work will occur during facility start-up procedures. BFEP will provide the Council with the following Notices/Reports;

- a. written notification at least two weeks prior to the beginning of clearing activities for each successive portion of the site;
- b. written notification at least two weeks prior to the beginning of construction activities for each successive portion of the site;
- c. notice of identification of laydown/off-site staging areas;
- d. quarterly construction progress reports;
- e. notice of significant D&M Plan changes;
- f. notice of completion and site rehabilitation; and
- g. final project report within 180-days of completion of all site construction and site rehabilitation.

Decommissioning Plan

In accordance with Council Decision and Order Item 1(k), BFEP intends to submit a facility and associated infrastructure decommissioning plan at a later date.

Recommendations

The partial D&M Plan complies with requirements of RCSA § 16-50j-60 to 16-50j-62 and is consistent with the Council's D&O dated January 7, 2016. Council staff recommends approval of the partial D&M Plan with the following conditions:

1. Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
2. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes;
3. Approval of requested significant changes to the approved D&M Plan be delegated to Council staff in accordance with Section 16-50j-62(b) of the Regulations of Connecticut State Agencies; and,
4. The electric transmission connection, natural gas connection, and facility/associated infrastructure decommissioning plan components of the D&M Plan be submitted for Council review and approval.