PETITION NO. 1104 – The United Illuminating Company petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 2.2 MW AC solar photovoltaic facility and a 2.8 MW AC Fuel Cell facility on approximately 22 acres of the former Seaside Landfill located at 350 Waldemere Avenue, Bridgeport, Connecticut.	}	Connecticut Siting Council November 13, 2014

Opinion

On May 27, 2014, The United Illuminating Company (UI) submitted a petition to the Connecticut Siting Council (Council) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) is required for the construction, maintenance, and operation of a 2.2 megawatt (MW) solar photovoltaic facility and a 2.8 MW fuel cell facility in the City of Bridgeport.

The project is proposed in response to Public Act 11-80, Section 127, *An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future,* that permits electric distribution companies to construct, own, or operate Class I renewable energy facilities. The Act further specifies that each company can manage up to 10 MW of renewable energy with each renewable generating facility rated between 1 MW and 5 MW. The Council is required to approve the project by a declaratory ruling as long as the project meets Department of Energy and Environmental Protection (DEEP) air and water quality standards.

The proposed solar facility would be located on top of the City-owned former Seaside Landfill that was closed in 2000. The landfill is approximately 46 acres in size and is generally rectangular in shape with steep sloping north and south sides tapering to a flat area along the top. The landfill varies in height with lower elevations at the west and east ends, rising to a height of approximately 80 feet above mean sea level (amsl) at its center.

UI would lease 22 acres on the landfill and establish an approximate 11-acre solar field consisting of 8,550 solar photovoltaic panels and associated ground equipment. The solar field would extend for approximately 2,350 feet along the crest of the landfill with elevations ranging from 40 feet amsl on the east end, rising to 80 feet amsl at the center, and sloping down to 25 feet amsl on the west end. DEEP has regulated the landfill since the 1980's and, after the landfill was closed, issued a tentative landfill Stewardship Permit to the City in May 2010. In order for UI to develop the solar field, a DEEP Disruption Permit and a DEEP-approved Post Closure Use Plan would be required.

The solar panels would be installed on the landfill in linear rows using a ballast rack system. Metal frames (racks) that hold the panels would be mounted on concrete blocks (ballasts), each measuring six feet by two feet. The racks would position the panels so that the bottom of each panel is two feet above ground level, extending to 4.2 feet above ground level.

The ballast rack system was chosen to avoid significant disturbance to the landfill cap, which consists of 24 inches of cover material, rated to a specific impermeability, and supports a vegetative layer. Although the top and sides of the landfill close to the top are level enough for the ballast rack system to be installed generally without grading, in certain locations UI would have to excavate some of the cover material and install gravel under the ballasts to make them more level.

The solar facility would be accessed by an existing dirt drive ascending the northeast side of the landfill from the City's mulch processing area. UI would improve access by adding gravel and extending the drive to several transformer/inverter pads that would be located along the edge of the solar field. The solar facility would be enclosed by an eight-foot high chain link fence, anchored by concrete ballasts. The fence would not have barbed wire on top. A gate would be installed at the base of the access drive.

The proposed fuel cell facility would be located within a 290-foot by 80-foot lease area on a 2.1-acre parcel owned by the City and used for the storage of City Parks Department equipment located east of the landfill. The facility would consist of two molten carbonate fuel cell modules, a water treatment skid and two inverters. The facility would be approximately 70 feet long by 44 feet wide by 13 feet high, with an exhaust stack extending to 24 feet. Switchgear equipment for both the solar field and fuel cell would be located adjacent to the north side of the fuel cell facility. The fuel cell facility and the switchgear would be enclosed by an eight-foot high chain link fence topped with barbed wire.

The fuel cell/switchgear area is located within the Federal Emergency Management Agency (FEMA) designated 100-year flood zone, which sets the flood elevation level at 13 feet amsl. UI proposes to fill the area to raise the grade to 14 feet amsl. The Council, seeking further protection of this equipment at a relatively low additional cost in the event of coastal flooding, will order UI to raise the grade to 15 feet amsl.

Flooding would not be an issue for the solar facility, which is not within the FEMA designated 100-year flood zone. To prevent significant changes in storm water runoff from the solar field during construction, UI would leave the existing vegetation, which consists mainly of mugwort, an invasive plant, as ground cover. Instead of being taken down to bare soil, the mugwort would be mowed to a low height and excavated where necessary to support the fence and rack ballasts. Post-construction, UI would maintain the mugwort at a low height, below the solar panels, allowing runoff to filter and drain in a natural pattern.

Land use to the north, east and west of the proposed project overall is a mix of commercial, industrial and residential. The fuel cell facility is relatively small and its visual impact would be similar to other existing industrial use in the surrounding area. Seaside Park, a 195-acre City-owned public park, is listed in the National Register of Historic Places, particularly notable because the park's eastern end was designed by landscape architect Frederick Law Olmsted. However, the State Historic Preservation Office, in correspondence submitted to UI, stated the proposed project would have no adverse effect to the Seaside Park Historic District with the condition that the solar field be adequately screened by plants consistent with Olmsted's original design. UI intends to install plantings to screen the fence as necessary, although the type of plants to be used has not been determined.

Although the solar field would have a large footprint, its visual effect on the park would be minimal, especially during leaf-on conditions when most users would visit the park, since visibility would be limited to areas along Barnum Boulevard serving West Beach. Stands of small trees along the base and south sides of the landfill and the intervening mugwort would block open views of the fence and solar panels from the beach and associated parking areas.

In general, visibility of the project would also be limited from areas east, north and west due to intervening vegetation and existing structures. Although several marinas front Black Rock Harbor across Cedar Creek from the landfill, the low height of the solar field equipment and a row of trees along the base of the landfill would prevent expansive views of the facility. Also, the solar facility is located generally along the top of the landfill rather than on the steep sloping sides: this placement further mitigates the visual effect.

The project would have no adverse environmental effect on air or water quality: it would meet all applicable U.S. Environmental Protection Agency and DEEP Ambient Air Quality Standards and Water Quality Standards. Development of the site would not affect any state or federal endangered or threatened species, or species of special concern. A small wetland is located along the west end of the landfill, formed from landfill settlement. UI would fill the wetland as it has little biological value; indeed, the Council notes, its presence threatens the integrity of the landfill cap. Use of the landfill for this project is consistent with State policy concerning brownfield redevelopment, as a solar project has recently been developed at the former landfill in Hartford and others are proposed elsewhere in the State.

Based on the record in this proceeding, the Council finds that there would be no significant adverse environmental effect associated with the construction of a 2.2 MW solar photovoltaic facility and a 2.8 MW fuel cell in Bridgeport. Furthermore, both proposed components of the project would increase "the use of clean energy and technologies that support clean energy" in accordance with Section 1 of Public Act No. 11-80: *An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future*. Therefore, the Council will grant the Petition for a Declaratory Ruling that a Certificate of Environmental Compatibility and Public Need is not required for this project.