

Petition No. 1078
CTS Energy, LLC
245 Chapel Road, South Windsor
Staff Report
December 12, 2013

On October 18, 2013, the Connecticut Siting Council (Council) received a petition (Petition) from CTS Energy, LLC (CTS) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a 4.98 megawatt (MW) fuel cell facility at 245 Chapel Road, South Windsor. Specifically, CTS seeks to install two 2.49 MW molten carbonate fuel cell systems on the property of an upcoming motion picture studio complex (Studios Project). The project would have a total power output of 4.98 MW.

This petition was field reviewed on November 15, 2013 by Council members Phil Ashton and Dan Lynch, Staff Attorney/Acting Executive Director Melanie Bachman, and Michael Perrone, Siting Analyst. The following individuals also attended the field review: Michele Lipe, Town Planner, Town of South Windsor; Jesse Langer, Attorney, Updike, Kelly & Spellacy, P.C.; Derek Phelps, Director of External Affairs, Updike, Kelly & Spellacy, P.C.; Michael Libertine, Environmental, All Points Technology; David Jackson, VP – Mechanical Acousticals, Fuss & O’Neil; John Waitcomb, Civil Engineer, All Points Technology; Asa Davis, Fuel Cell Consulting, CT Studios; and Michael Holtzman, President, M.J. Holtzman & Associates.

The area making up the Studios Project has been the subject of long term planning and investment by the Town of South Windsor (Town) and the State of Connecticut.

The site is currently vacant land occupied by a gravel parking area off of Chapel Road, scrub vegetation, and remnants of an access road associated with a former drive-in movie theater. Deteriorated theater infrastructure, including the steel skeleton of the screen, is located in the southeastern portions of the subject property. The subject parcel is bordered by commercial developments along Chapel Road to the north, Ellington Road to the east, and Route 5 to the west. An overhead electrical transmission corridor extends through the Studios Project in an east to west direction.

Each fuel cell system contains a fuel cell module, as well the associated mechanical equipment and electrical equipment. The fuel cell facility would operate on natural gas to be supplied by Yankee Gas. Each fuel cell system would consume about nine gallons per minute of water and discharge about 4.5 gallons per minute of water. However, the fuel cell systems would only consume water until their internal tanks are full.

The fuel cell compound would be approximately 110 feet by 140 feet and surrounded by an eight-foot tall chain link fence. Gravel access would be provided to the south and connected to the access drive for the CTS building complex.

The fuel cell facility would provide baseload power for the Studios Project and surplus electricity would be sold to the grid. By Decision dated October 4, 2013 in Docket No. 13-06-27, PURA approved a power purchase agreement between CTS and The Connecticut Light and Power Company. The fuel cell facility would also generate Class I renewable energy that would help bring the State closer to its renewable portfolio standards goals.

CTS will participate in Round 2 of the Department of Energy and Environmental Protection (DEEP)’s Microgrid Grant and Loan Pilot Program (Microgrid Program) in accordance with Section 7 of Public Act 12-148. If selected under the Microgrid Program, the fuel cell project would provide electricity for an emergency shelter at the CTS facility during extreme weather events, and therefore, the project would also satisfy the State’s goal to “maintain planning and preparedness capabilities necessary to deal effectively with future energy supply interruptions.”

The Request for Proposals is expected to be issued by DEEP in January 2014. Awards will be announced in September 2014. CTS also seeks Council approval to install a 250-kW diesel generator at the site to provide black start capability for the fuel cell in the event that this project is selected for as a microgrid project. The backup power would be necessary for microgrid reliability. However, CTS plans to go forward with the fuel cell portion of the project (without the microgrid) in the event that the project is not selected under the Microgrid Program.

CTS is evaluating whether a district heating system would make efficient use of the excess heat generated by the Studio's Project.

The fuel cell project would meet all applicable safety requirements for construction, interconnection, and operation. The chain link fence would secure the facility and associated equipment. CTS would implement a Fire Protection and Emergency Plan in accordance with the Council's Decision and Order in Docket No. NT-2010 and the National Fire Protection Association Standard 853 (2010), which applies to the design, construction, and installation of stationary fuel cell power systems. The facility would have various safety features such as warning alarms, pressure safety devices to prevent system overpressure, flame and smoke detectors, combustible gas detectors, and emergency shutdown buttons in the event that immediate shutdown is necessary.

There are no residences in the vicinity of the site. The nearest residence is approximately 910 feet to the west. Given the commercial/industrial nature of the site, the visual impact is not expected to be significant. Notwithstanding, an earth berm would be placed between the fuel cell facility and Chapel Road to further reduce the visibility of the project. The earth berm would have the following landscaping planted on top: 15 black chokecherrys, 14 gray dogwoods, 19 bayberrys, 21 common junipers, 15 staghorn sumacs, and 15 virgina roses. The west side of the project would have 24 american boxwood or common boxwoods planted.

The site is not located within a 100-year or 500-year floodplain.

The maximum worst-case noise levels at the nearest property line with both fuel cell units and the backup generator would be 68 dB. This is in compliance with the State and Town of South Windsor standard of 70 dB for an industrial emitter and industrial receptor.

No air permits would be required because of the very low emissions. Oxides of nitrogen (NO_x) emissions would be less than 0.01 pounds per megawatt-hour (lbs/MWh). Sulfur oxides (SO_x) emissions would be less than 0.0001 lbs/MWh. Particulate matter (PM) output would be less than 0.005 lbs/MWh. Carbon Monoxide (CO) emissions would be less than 0.1 lbs/MWh. Volatile organic compound (VOC) emissions would be less than 0.02 lbs/MWh.

The nearest off-site wetland or watercourse resource to the site is approximately 400 feet to the west and located on the other side of John Fitch Boulevard. This wetland is associated with the Podunk River. The nearest wetland or watercourse resource on the subject property is a man-made pond located approximately 950 feet to the southeast. The constructed pond has limited fringing wetland vegetation, primarily along the west bank of the pond. The pond appears to have been constructed in uplands to serve originally as an agricultural pond possibly for irrigation. A self-storage facility located near the north bank of the pond currently discharges stormwater into the pond, which has no outlet. According to All Points Technology, Inc., the pond has no wildlife habitat value.

No threatened, endangered, or special concern species or critical habitats are likely to occur at the site. Previous investigations identified six species of interest on the CT Studio property, but not within the proposed project site area. Several brown thrashers (a State Species of Special Concern) were observed primarily within the electric transmission line corridor to the south. A

portion of the Studios Project property contains confirmed habitat for the tiger beetle (a State Species of Special Concern). Potential impacts to this habitat have been mitigated off-site through a plan approved by the Connecticut Department of Energy and Environmental Protection (DEEP) that included collection of tiger beetle larvae and translocation to a mitigation site off the subject property. The plan was implemented by DEEP and the Town in cooperation with Connecticut Studios and was completed in 2009.

An approximately 4.5-acre grassland patch extends into the southeast corner of the site. This grassland habitat patch was found in 2006 to support a probable breeding pair of grasshopper sparrow, a State Endangered bird. Given the relatively small size of suitable habitat, it is possible that it does not consistently support grasshopper sparrow on an annual basis. Nevertheless, as a precaution, the Town of South Windsor has negotiated with DEEP and CT Studios to provide suitable mitigation. This mitigation includes enhancement and management of existing Town-owned open space at Wapping Park on Clark Street (roughly 2.4 miles to the northeast of the fuel cell site). This mitigation plan would provide 47 acres of grassland habitat to support grasshopper sparrow breeding.

Most of Connecticut's known breeding sites and prime habitat for grasshopper sparrow are in Hartford County's portion of the upper Connecticut River Valley (CRV) drainage with most of the prime habitat located along the CRV from the Hartford area north to the Massachusetts line. The CRV is the primary migratory corridor for grassland bird species that return to this area of the State each spring. Wapping Park is located within the CRV and is a comparable distance from the Connecticut River as other existing managed grassland habitat sites, including Northwest Park and the Department of Corrections property in Enfield/Somers. Therefore, since Wapping Park is located between natural and managed grassland habitats that support grasshopper sparrow breeding, grasshopper sparrows that migrate in the spring along the CRV that may stop to investigate the Connecticut Studios property would also be likely to investigate grassland habitat at nearby Wapping Park.

Three rare plants were identified as potentially occurring on the subject property: barratt's sedge (a State-designated Endangered Species), clustered sedge (a State-designated Threatened Species), and climbing fern (a State Species of Special Concern). The habitats for Barratt's sedge and climbing fern do not exist on or near the fuel cell site. Clustered sedge grows in dry sandy or rocky soil. Previous investigations of the Studios Project did not reveal any clustered sedge.

By letter dated December 5, 2013, DEEP noted that the two wildlife mitigation plans were developed and approved to address negative impacts to grassland birds and the big sand tiger beetle. Additional mitigation efforts for these species are not warranted. The tiger beetle mitigation plan is already complete. In addition, the Grasshopper Sparrow mitigation plan is also being performed by the Town and DEEP in cooperation with CT Studios. The grasshopper sparrow mitigation plan is expected to be completed by year-end 2013.

No state-designated scenic roads are located in the vicinity of the proposed site. The nearest historic resources proximate to the site are the Windsor Farms Historic District (approximately 850 feet to the west) and the Elmore Houses (approximately 5,400 feet to the east). By letter dated December 4, 2013, the State Historic Preservation Office found that no historic properties would be affected by this project.

By letter dated August 1, 2013, State Senator Gary LeBeau, and State Representatives Bill Aman and Timothy Larson expressed their support for this project. By letter dated August 2, 2013, Matthew Galligan, Town Manager of the Town of South Windsor expressed support for the project. On October 15, 2013, notice was provided to the Town of South Windsor, state and regional agencies and officials, and abutting property owners. By letter dated October 17, 2013, one abutter expressed support for the proposed project.

