

**Robidoux, Evan**

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**From:** Riese, Frederick  
**Sent:** Thursday, June 20, 2019 4:47 PM  
**To:** CSC-DL Siting Council  
**Subject:** Petition No. 1372, Derby Fuel Cell, LLC  
**Attachments:** Petition 1372-Derby Fuel Cell.pdf

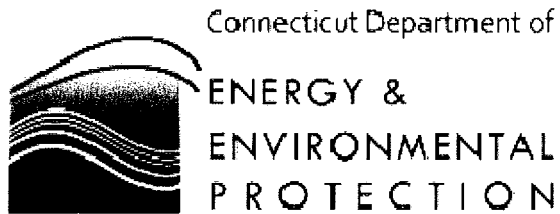
Thursday, June 20, 2019

Dear Melanie and Members of the Connecticut Siting Council:

Attached are DEEP's comments on Petition No. 1372, Derby Fuel Cell, LLC. Feel free to contact me should you have any questions regarding these comments.

Fred Riese

Frederick Riese  
Senior Environmental Analyst  
Office of Environmental Review  
Connecticut Department of Energy and Environmental Protection  
79 Elm Street, Hartford, CT 06106-5127  
P: (860) 424-4110 | F: (860) 424-4053



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Ensuring a clean, affordable, reliable, and sustainable energy supply.*



June 20, 2019

Connecticut Siting Council  
10 Franklin Square  
New Britain, Connecticut 06051

RE: 14.0-MW Fuel Cell Facility  
Derby Fuel Cell, LLC  
Derby, Connecticut  
Petition No. 1372

Dear Members of the Connecticut Siting Council:

Staff of this department have reviewed the above-referenced petition for declaratory ruling that no Certificate of Environmental Compatibility and Public Need will be required for the construction of a 14.0-MW fuel cell generating facility at 200 Roosevelt Drive in Derby. A field review of the site was conducted on June 17. Based on these efforts, the following comments are offered to the Council for your use in this proceeding.

The proposed Derby Fuel Cell facility was one of three fuel cell projects selected by DEEP pursuant to a January 31, 2018 *Request for Proposals from Private Developers for Clean Energy*. This RFP solicited proposals for offshore wind, fuel cell and anaerobic digester Class I resources.

#### Site Description

The project site is a compact parcel bounded by IDA Properties to the southeast, the Housatonic River to the southwest, a United Illuminating substation to the northwest and an access road and industrial canal to the northeast. A fishing access area and parking lot lie on the far side of the UI substation to the northwest.

The host site is level, rising ever so slightly toward the access road, Canal Street, which serves the substation and the fishing access area. Though an employee of the adjacent IDA Company described the parcel as a storage area where parties have stored items with permission from IDA, it does not appear that the owners of the 'stored' items have any intention of ever reclaiming them. The photos in Exhibit A of the Petition do not do justice to the current accumulation of items on the site. A partial inventory of the stored items would include four boats, a paratransit van, two pick-up trucks, a camper, a Dodge Neon subcompact, an equipment trailer, a small utility truck and rolls of fencing. Most of

these items are in advanced states of disrepair and many are well surrounded by vegetation which has grown up around them during their residency in storage. A chain link fence completely surrounds the project site except for an access opening from the IDA property. Vegetation on the site is mostly invasive species dominated by mugwort, Japanese knotweed and tree-of-heaven, with some aspen and black locust around the periphery.

The site is well buffered from the nearest residential areas. Three units at 239, 241 and 243 Roosevelt Drive are the nearest residences, located east of and on the opposite side of Roosevelt Drive and the industrial canal from the site. Other nearby homes are located on the far side of Park Avenue, which runs parallel to Roosevelt Drive one block to the northeast of it.

Along Roosevelt Drive, which is also called Route 34, Yale University's Gilder Boathouse and crew team clubhouse at 280 Roosevelt Drive lie northwest of the Derby Dam fishing access site parking lot, while two additional abandoned industrial properties lie to the southeast of the extensive IDA Company facility. None of these land uses will be impacted by the proposed fuel cell facility.

#### Air Permits

As mentioned in DEEP's comments on Petition No. 1350, the 19.98-MW EIP Investment Fuel Cell in New Britain, the United States Supreme Court overturned the regulatory requirements for CO<sub>2</sub> permits and DEEP subsequently eliminated the invalid CO<sub>2</sub> permit requirements from our New Source Review and Title V programs, so this former permit requirement would not be applicable to the proposal at hand.

Though it is not clear what the 'measured emissions factors' cited on page 9 of the Petition refer to, DEEP agrees that the emissions from the five gas-fired start up burners mentioned on page 9 of the Petition are not likely to rise to a level which would trigger any permit requirements. DEEP concurs with the assessment on page 10 that no air permits are required for the construction or operation of this facility.

#### Potential Hazardous Waste Generation

Fuel cells have the capability to generate various types of wastes, some of which may be subject to regulation as hazardous wastes. Typically such wastes are generated during maintenance activities, such as the replacement of individual fuel cells in an installation, or the replacement of the electrolyte media within a fuel cell. In addition, fuel cells have a limited life, and must be managed in accordance with applicable waste management requirements when they are decommissioned.

The most common type of potentially-hazardous waste routinely generated by fuel cells is associated with desulfurization filters. The sulfur that is added to natural gas as an odorant must be removed from the gas before it is fed into the fuel cells. During the process of filtering out the sulfur, certain other constituents of the natural gas such as benzene are

commonly also removed. When the spent desulfurization filters are drained out or replaced, the resulting materials are typically collected and sent off-site for treatment and disposal. The presence of the benzene or other hazardous constituents can render the resultant waste a hazardous waste. All hazardous waste must be managed in conformance with hazardous waste generator requirements, which vary depending on the amount of hazardous waste that is generated and stored on the site. If the facility will generate 1,000 kg or more of hazardous waste per calendar month or will accumulate 1,000 kg or more of hazardous waste on site at any one time, it is classified as a large quantity generator of hazardous waste in Connecticut.

Fuel Cell Energy is undoubtedly familiar with the notification and disposal requirements for both small quantity and large quantity hazardous waste generators. Information on Connecticut's requirements for notification, storage, and proper disposal is available

at:

[https://www.ct.gov/deep/cwp/view.asp?a=2718&q=455812&deepNav\\_GID=1967](https://www.ct.gov/deep/cwp/view.asp?a=2718&q=455812&deepNav_GID=1967)

#### Fuel Cell Facility Wastewater

The Petition correctly notes that the fuel cell plant will require registration under the DEEP Miscellaneous Sewer Compatible Discharge General Permit. In addition to coordinating with DEEP, Derby Fuel Cell LLC should also coordinate with the Derby Water Pollution Control Authority. The Derby WPCA would like to know:

- What are the anticipated wastewater characteristics of the discharge? Will any pre-treatment be necessary?
- How will the discharge be cycled and what is the peak flow (the actual backwash rate)? Will it be high enough to require an equalization tank/system?
- Exactly where does Derby Fuel Cell propose to tie into the sewer system? The WPCA would like this information to see if the gravity sewer at that location can handle the proposed peak flow, or whether an upgrade is required.

The Petitioner is requested to contact Edward Abel, Acting Superintendent of the Derby Water Pollution Control Authority, at (203) 673-7128 to provide this information.

#### Miscellaneous Petition Commentary

Discussion on pages 10 and 11 of the Petition alludes to raising the project site by six feet above existing grade to elevate the site and facility above the 100-year flood elevation. No mention is made either of the existing or new final site grade or how either compares to the 100-year flood elevation. It is also unclear how the project site can be outside of the 500-year floodplain while being within the 100-year floodplain, as stated on page 10.

The statement is made on page 3 of the Petition that "the Project will reduce the electric load that would otherwise be required of the electric grid, thereby reducing stress on the system and reducing loads on overloaded transmission lines". The Council may

wish to get an explanation of what this means. Is this a reference to the facility being within the Southwest Connecticut electrical demand region and therefore closer to load centers than other generation sources? The meaning of the statement is unclear.

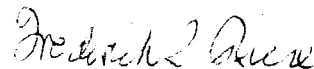
Nowhere in the Petition is it explicitly stated that the access point to the facility will be from the IDA property as opposed to from Canal Street, but the notation for a rolling gate on Drawing C-002 of Exhibit A implies this. Will access from the IDA property be compatible with the existing operation and uses made of that property which supports active manufacturing operations?

Also not mentioned in the Petition is any discussion of the height of the facility including its tallest component, which should incorporate the six feet the site is to be raised above current grade.

Lastly, on page 14 of the Emergency Response/ Safety Plan (Exhibit E of the Petition), the facility is described as employing biodegradable soybean oil as its transformer dielectric fluid. While this is a good choice in terms of minimizing any hazard from a leak or spill event, containment for releases is still required regardless of the type of transformer oil used. Thus, for each transformer, containment equal to 110% of the fluid volume of the transformer must be provided to prevent release of the oil from the site. The transformers are cited as containing up to 253 gallons of dielectric fluid, so containment capacity of up to 278 gallons for the largest transformer must be provided.

Thank you for the opportunity to review this petition and to submit these comments to the Council. Should Council members or Council staff have any questions, please feel free to call me at (860) 424-4110.

Respectfully yours,



Frederick L. Riese  
Senior Environmental Analyst

cc: Commissioner Katie Dykes