

# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@po.state.ct.us](mailto:siting.council@po.state.ct.us)

Web Site: [www.state.ct.us/csc/index.htm](http://www.state.ct.us/csc/index.htm)

### **CERTIFIED MAIL RETURN RECEIPT REQUESTED**

October 20, 2003

Brad N. Malicki, Esq.  
Nxegen, Inc.  
362 Industrial Park Road, Suite 7  
Middletown, CT 06457

RE: **PETITION NO. 647** - Nxegen, Inc. petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the installation of a fuel cell at the Water Pollution Control Authority at 345 East Shore Parkway, New Haven, Connecticut.

Dear Mr. Malicki:

At a public meeting held on October 14, 2003, the Connecticut Siting Council (Council) considered and ruled that this proposal would not have a substantial adverse environmental effect, and pursuant to General Statutes § 16-50k would not require a Certificate of Environmental Compatibility and Public Need.

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 petition, dated September 17, 2003.

Enclosed for your information is a copy of the staff report on this project.

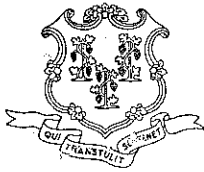
Very truly yours,

Pamela B. Katz, P.E.  
Chairman

PBK/laf

Enclosure: Staff Report dated October 14, 2003

c: Honorable John Destefano, Jr, Mayor, City of New Haven  
Frank Gargiulo, Zoning Administrator, City of New Haven



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Petition No. 647

New Haven Water Pollution Control Authority

New Haven, Connecticut

Staff Report

October 14, 2003

On Monday, October 6, 2003 Connecticut Siting Council (Council) member Philip T. Ashton with Derek Phelps of Council staff met New Haven Water Pollution Control Authority (WPCA New Haven) representative Charlie Biggs, Site Director, Engineering; John F. Carbone, Chief Operating Officer, and Vic Riscassi, Project Manager, of Nxegen, Inc. (Nxegen); for a field review of this petition. WPCA New Haven, through Nxegen, is petitioning the Council for approval via a declaratory ruling to install a fuel cell at the WPCA New Haven site on East Shore Parkway in New Haven.

WPCA New Haven proposes to install a PC25 Power Plant (fuel cell) manufactured by UTC Fuel Cells LLC. The proposed fuel cell project consists of a single unit that is approximately ten feet wide, 18 feet long, and ten feet high. A fuel cell module contains electrochemical cells that produce direct current electricity. An electrical module converts the direct current power to alternating current power. A mechanical module contains fuel and water treatment equipment, air blowers, and a heat exchanger that utilizes waste heat to preheat fuel and water.

The fuel cell unit produces 200kW of electric power at 480 volts and is equipped with a "high grade" heat recovery system that produces approximately 450,000 BTU/hr at 250°F. The high-temperature output will be used for heating the Fats, Oils, & Grease (FOG) tanks and the low-temperature output will be used for preheating the circulating water in the maintenance building heating system, pending further analysis. As a result of operating the unit, monthly peak demand will be reduced by 200 kW, garnering approximately \$3,100.00/month in utility demand charges. Energy purchases from the utility will be reduced by approximately 190,000kWh/month thereby saving an additional \$9,500.00 in utility charges.

The fuel cell will utilize natural gas as a fuel and will be water-cooled. The fuel cell would consume approximately 2,050 standard cubic feet per hour of natural gas, which will be provided by the Southern Connecticut Gas Company. Approximately 240 gallons of water per day would be consumed by the fuel cell. The fuel cell exhaust will contain low levels of oxides of nitrogen, oxides of sulfur, carbon monoxide, and volatile organic compounds. An air permit will not be required due to low emission levels of these regulated constituents.

The fuel cell proposed has a decibel rating of 60 dba at a distance of 30 feet, including noise from the cooling module fans. This level is considered similar to a conversational tone. At the WPCA New Haven property line on East Shore Parkway, approximately 120 feet from the proposed fuel cell site, the sound level would be below the zoning noise criteria for industrial and commercial areas.

The fuel cell would be sited 25 feet to the east (rear) of the WPCA New Haven Maintenance Building.