

Petition 1406A, Bridgeport 9.66 MW Fuel Cell Project

Interrogatories from Joe Provey to NuPower

1. Is there an example of a similar fuel cell tower (20 or more modules) in the United States? How many fuel cell modules does it contain? Where is it located? Will it be near residences, cultural or recreational resources, railroads, or interstate highways? Please provide contact information for developer of said project and describe it in as much detail as possible, including renderings or photos if available.
2. Does NuPower or Doosan have plans to build other facilities similar to the one proposed for 600 Iranistan Avenue in the United States? If a similar facility is planned, how many fuel cell modules will it contain? Where will it be located? Will it be near residences, cultural or recreational resources, railroads, or interstate highways? Please provide contact information with developer of said project and describe it in as much detail as possible, including renderings or photos if available.
3. Were alternate sites considered for the fuel cell power plant? If so, where? Were they near residential areas? Why were these sites rejected? Please provide correspondence and notes of meetings with alternate lessors. When was the subject of leasing the proposed site first discussed with the lessor? Please provide a copy of correspondence and notes of meetings with lessor. Please produce a copy of the lease or option to lease agreement.
4. Has the petitioner provided a detailed rendering of the proposed facility per the request from the CSC during previous rounds of interrogatories? If so, please provide a copy. If not, why not? Please note that we are looking for a *rendering* that shows what the facility will look like, including all associated, visible, equipment.
5. Is it fair to say that the photos of the South Korean fuel cell facilities submitted by petitioner depict what the proposed fuel cell tower would look like? Given that the Korean facility does not use natural gas -- and the proposed facility will -- how does this difference affect the appearance of the fuel cell tower? Will it, for instance, require additional venting? Other equipment, such tanks or valves? De-sulfuring equipment? Have these items been incorporated in the rendering?
6. How many tons of CO₂ will the proposed plant emit per year? How many tons of methane will it emit? The petitioner claims that such emissions are "below levels that would render the Project a 'major stationary source.'" Has the petitioner considered the cumulative effect of these and other emissions when added to those from the other nearby sources of greenhouse gases? If so, please share data, source, and projections.
7. Will the facility add other air pollutants, odors, or noise during regular maintenance? Will the presence of sulfur in the fuel cell process cause odors during operation or maintenance? Will the de-sulfuring of natural gas cause the release of odors?
8. How many tons of CO₂ per MWh will the facility produce annually? How does this compare to the solar and wind projects currently being discussed for Connecticut? How does it compare with the newly constructed gas power plant, PSEG's Harbor Station No. 5? Please provide sources and documentation for your projections.
9. The plant would be visible to many residences in the South End of Bridgeport because it is much taller than the railroad viaduct that separates it from the Division Street Historical District to the north and because of the clear line of sight under the I-95 overpass (see photos) from the south. It will also be prominent and visible to those who drive into the South End, towering over Iranistan Avenue. Aside from the meeting with Seaside Village, has the petitioner reached out to other nearby communities/residents, to discuss light and noise pollution, emissions, and loss of view/sunlight? If so, when and with whom did the petitioner have these discussions? Please provide dates and notes from the meetings.

10. What are the funding sources for the fuel cell tower and thermal loop? What portion of the projected \$80 million fuel cell tower cost would UI ratepayers be expected to fund? Would the project reduce electricity costs in the South End of Bridgeport?

11. In previous rounds of interrogatories, it was found that thermal energy must be subject to firm customer commitments before the PURA could approve grants. Firm customer commitments would also help mitigate the risk of a UI ratepayer funded project. How has this requirement been resolved in the current petition?

12. Have any principals of NuPower or Doosan been investigated, admonished, sued or banned from equity roles in past Connecticut green energy projects because of a history of project failure? If so, when and where? Have any principals of NuPower or Doosan been involved in a failed renewable energy project that resulted in default on loans from the Renewable Energy Investment Fund? If so, what was the project and reason for failure? What was the amount of the loan?

13. What is the projected annual tax revenue to the city of Bridgeport? How has this amount been determined? Was it negotiated with city officials? Upon what is the tax projection based? Will the taxes paid to Bridgeport depreciate during the 20-year life of the plant?

14. A net reduction in local green house gas emissions is predicated upon the construction of a thermal loop in Bridgeport. This was discussed in the first petition, 1406, but is barely mentioned in the revised petition. Why was it eliminated in 1406A? Have plans for the thermal loop been abandoned?

15. If plans for the thermal loop are still active, when is construction planned to begin on the thermal loop? What other waste heat producers have signed on to contribute waste heat to the thermal loop? What buildings in the area have signed contracts for using the waste heat? What percent of waste heat generated by the proposed facility has been committed to confirmed customers? When the facility ceases operation in 20 years, how will customers heat and cool their operations? If via other waste heat providers, please name them. Please provide a copy of any relevant documents that confirm participation of the waste heat providers and waste heat users.

16. Were city councilors, state representatives and senators, and/or developers given copies of a supporting letter, drafted by the city administration, and asked to sign it? If so, who drafted the letter, which officials, representatives, and developers signed it, and which ones declined to do so? Was it presented to city council members from the South End's 131st district? Did city council representatives from the South End's 131st district sign it? Did the South NRZ vote to support the plan and provide a letter of support? If so, when? Please provide said document.

17. Currently, Iranistan Avenue is the primary egress to a large number of South End residents. The entrance and exit for Windward Commons (a 500-plus-unit affordable housing development currently under construction), and Seaside Village both exit onto Iranistan Avenue. Seaside Park visitors and University of Bridgeport students and staff also exit via Iranistan Avenue. Has an evacuation route in case of a plant accident, fire or explosion been submitted to the City of Bridgeport? If so, when? Please provide a copy of the plan.

18. Resilient Bridgeport, a group whose mission is to mitigate flooding in Bridgeport, has singled out Iranistan Avenue and neighboring Park Avenue underpasses for being flood prone. It has proposed using sites, such as 600 Iranistan Avenue, to serve as catch basins for the regular flash floods and the larger flood events we experience in the South End. Has Resilient Bridgeport been apprised of the petitioner's plans for raising the elevation of the proposed site, precluding its use as a catch basin? If so, when, and what was its response.

19. Are there expansion plans for the fuel cell facility, and if so where would additional fuel cells go? Do preliminary plans exist? Have they been discussed with any city officials? If so, please supply dates of meetings, meeting notes, and associated correspondence. Are there plans to eventually fuel the facility with hydrogen gas, should it become available? How would the hydrogen gas be delivered? What safety precautions would be required given the hazards associated with hydrogen gas?

20. Where does electricity generated by the fuel cell tower go? How does it benefit the South End, which already hosts several much larger power plants? Is it true that Connecticut currently produces more energy

than it needs and that much of Connecticut's electricity production currently goes to other states? If so, why is a community, already overburdened with power plants, being asked to host yet another power-generating plant?

21. The bank of fans atop the fuel cell tower would be quite loud judging from our experience with the relatively small bank of fans at NuPower's Cherry Street Loft project. We were told they also require free airflow to cool effectively. What option does the petitioner have for sound mitigation for the proposed (and much larger) fan bank that will not impede cooling? Blankets would seem problematical because they would impede airflow. Can the petitioner provide an example of a similar fuel cell tower that employs the sound mitigation systems the petitioner has proposed? Do the South Korean facilities employ these sound-reduction designs? If so, are decibel readings available for said facilities? Please provide any noise data available from Doosan-supplied projects in South Korea. If these facilities do not use sound mitigation, why not?

22. If, once built, the fuel cell tower exceeds sound limits, and if further sound mitigation efforts fail, will the plant be decommissioned because it is not in compliance with city ordinances? Who would pay for removing the tower? Will the petitioner commit to removing the structure in the event of noise non-compliance?

23. Fans and fan noise will be at about the same elevation and within a mere 12 feet of car traffic on I-95. Will it startle and distract drivers as they drive by? Has this issue been discussed with the DOT? If so, when and with whom? Please supply any relevant meeting notes and correspondence.

24. Will the electric cables go underground or overhead to the substation? If overhead, has there been an assessment of electromagnetic radiation (EMR)? Does the petitioner have an estimate of the increase in mG readings from current readings? If so, when and with whom did the petitioner work to estimate readings?

25. Assuming no thermal loop, how much water would the facility discharge annually and where would it go? If to the city's antiquated combined storm and sewer system (a constant source of back ups in Seaside Village and elsewhere in the South End). Has the petitioner met with the WPCA to ensure that the plant does not further exacerbate the problem? If so, when and with whom?

26. The South End of Bridgeport is, unfortunately, plagued with illegal dumping, litter, trash, and graffiti. Local companies and residents have teamed up to try to control the problem. A fenced in area, such as the one proposed, would make clean up efforts difficult. What plan does the petitioner have for keeping the facility from becoming blighted by trash and graffiti? How regularly will NuPower/Doosan maintenance crews clean out the fenced in facility and remove graffiti?