Petition No. 1489
NRG Curtailment Solutions, Inc.
ESPN
935 Middle Street, Bristol, Connecticut

DRAFT Staff Report
April 14, 2022

Introduction

On February 22, 2022, the Connecticut Siting Council (Council) received a petition from NRG Curtailment Solutions, Inc. (NRG) for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, that the installation of four 2.46-megawatt (MW) natural gas-fired emergency generating devices and associated equipment inside two existing buildings located on the ESPN Campus at 935 Middle Street in Bristol, Connecticut is exempt from Council jurisdiction and would not have a substantial adverse environmental effect (Petition).

Pursuant to an agreement between NRG and ESPN, the four 2.46-MW natural gas-fired emergency generating devices (EGD) are interconnected behind ESPN's utility meter and operated primarily when called upon by ISO-New England, Inc. (ISO-NE) under a demand response program designed to reduce load on the electric grid. All of the power generated by the EGD is consumed on-site under any operating scenario, including, but not limited to, demand response, peak shaving and emergency situations.

On March 2, 2020, NRG secured City of Bristol (City) building, electrical, plumbing, heating and cooling, and fire protection permits for the installation of the EGD inside Generator Plant Buildings 1B and 2 at the ESPN Campus. Two EGD are located in Generator Plant Building 1B and two EGD are located in Generator Plant Building 2. See Figure 1 – Site Location. NRG completed installation of the EGD in December 2020.

On February 22, 2022, in accordance with Regulations of Connecticut State Agencies (RCSA) §16-50j-40, NRG provided a copy of the Petition via certified mail to ESPN, the property owner, abutting property owners, City officials and Town of Southington officials.[1]

On February 23, 2022, pursuant to RCSA §16-50j-40, the Council sent correspondence to the City and the Town of Southington stating that the Council has received the Petition and invited the municipalities to contact the Council with any questions or comments by March 24, 2022. The Council has not received any comments to date.

Also on February 23, 2022, the Council notified state agencies that it received the Petition and requested comments be submitted to the Council by March 24, 2022. No comments were received.

The Council issued interrogatories to NRG on March 22, 2022. NRG responded to the Council's interrogatories on April 1, 2022.

Council Jurisdiction

In March 2020, NRG applied to the City for permits to install the EGD and applied to the Department of Energy and Environmental Protection (DEEP) for air permits to operate the EGD on the assumption that

[1] The ESPN Campus is comprised of four parcels. Two parcels are located in Bristol and two parcels are located in Southington. The EGD are located in the existing generator buildings in the northeastern portion of the ESPN Campus that is located in Bristol.

the EGD were exempt from Council jurisdiction. Installation of the EGD was completed in December 2020.

In February 2022, NRG filed this Petition seeking a determination from the Council that the installed and operational EGD are exempt from Council jurisdiction and do not have a substantial adverse environmental effect. NRG is under contract to sell the EGD to Palm Energy, LLC by the end of the year.

Under the Public Utility Environmental Standards Act, the Council has exclusive jurisdiction over "facilities," including, "any electric generating facility… using any fuel… ***but not including an emergency generating device***…" (Emphasis added.)

An "emergency generating device" is defined under CGS §16-50i(f) as "an electric generating device with a generating capacity of five megawatts or less, installed primarily for the purpose of producing emergency backup electrical power for not more than five hundred hours per year, and that:

1. does not have a substantial adverse environmental effect, as determined by the Council; or
2. is owned and operated by an entity other than an electric distribution or gas company; or
3. is under construction or in operation prior to May 2, 1989."

Each 2.46-MW EGD installed at the ESPN campus has a generating capacity of less than 5 MW. Collectively, the EGD have a total generating capacity of 9.84-MW. The EGD were not installed primarily for the purpose of producing emergency backup electrical power. The EGD were installed primarily to support ISO-New England, Inc. (ISO-NE) and Eversource Energy demand response programs. The EGD would produce backup electrical power for more than 500 hours per year. The DEEP air permits allow each EGD to produce electrical power for 1,750 hours per year when called upon by ISO-NE to reduce strain on the electric grid and for emergency backup generation.

The EGD are not exempt from Council jurisdiction as they do not meet the criteria for exemption under CGS §16-50i(f). The EGD are subject to the Council's jurisdiction under CGS §16-50i(a)(3) as an electric generating facility. Therefore, the Council must determine that the installation and operation of the EGD at the ESPN Campus does not have a substantial adverse environmental effect.

EGD Site

The ESPN campus is approximately 115 acres. It is developed with buildings, structures, parking areas and internal access drives. An existing electric transmission line extends from north to south along the eastern edge of the ESPN campus. An existing Eversource electric distribution substation is located to the south of Generator Plant Building 1B.

The City portion of the ESPN campus is located in an Industrial Park (IP-1) zone. The Town of Southington portion of the ESPN campus is located in a Business (B) Zone. The Generator Plant Buildings where the EGD are installed are located in the northeast portion of the campus in the City's IP-1 zone. Some residential properties are located to the south and southeast of the Generator Plant Buildings. The property immediately east of Generator Plant Building 1B is a residential property. The property immediately east of Generator Plant Building 2 is an industrial property.

Generator Plant Building 1B is located approximately 115 feet from the nearest residential property line to the east. Generator Plant Building 2 is located approximately 465 feet from the nearest residential property line to the southeast. An existing vegetative buffer is present between the ESPN campus and abutting properties to the east, south and southeast.

EGD Installation and Operation

CGS § 16a-35k establishes the State's energy policy, including the goal to "consume energy resources in the most efficient manner feasible." The EGD installation is a "customer-side distributed resources" facility, as defined in CGS § 16-1(a)(34). Primarily, the EGD reduce the demand for electricity on the ESPN Campus. Secondarily, the EGD serve as an emergency backup power source for the ESPN Campus. The EGD are interconnected behind ESPN's utility meter. ESPN consumes all of the power generated by the EGD. No power is exported to the grid.

The EGD consist of four 2.46-MW Caterpillar G3520H natural-gas fired generators. Two EGD totaling 4.92 MW are installed in Generator Plant Building 1B and two EGD totaling 4.92 MW are installed in Generator Plant Building 2. Each EGD measures 66.88 feet long by 21.6 feet wide by 24.72 feet high and is installed on a reinforced concrete floor.

The dimensions of both Generator Plant Buildings are 483 feet long by 103 feet wide by 56 feet high. The height of the exhaust stacks is approximately 88 feet above grade, inclusive of the height of the generator buildings. Exhaust stacks associated with the EGD extend above the roof of each Generator Plant Building (approximately 88 feet above grade).

Each EGD interconnects to the existing ESPN gas service at the exterior of the Generator Plant Buildings via a dedicated gas line interior to the Generator Plant Buildings. Each EGD interconnects to the ESPN electrical distribution system via three existing utility feeds with a line voltage of 13.8-kV.

Maintenance for the EGD is performed on run-hour and yearly intervals in accordance with the manufacturer's specifications. Routine maintenance is performed when the EGD are off-line.

The operational service life of the EGD is approximately 30 years. The EGD would be decommissioned at the end of their useful life. Decommissioning of the EGD would be performed in accordance with the manufacturer's decommissioning protocols.

Environmental Effects and Mitigation

The EGD are installed inside existing Generator Plant Buildings at the ESPN Campus. No forest or prime farmland was disturbed by the EGD installation. No historic or recreational resources are impacted by the EGD installation.

Operation of the EGD complies with all applicable DEEP water quality standards as no water would be consumed or discharged by the EGD. Operation of the EGD complies with all applicable DEEP air quality standards as each EGD was issued a DEEP air permit on March 12, 2020. The EGD are equipped with oxidation catalysts to achieve 99% carbon monoxide reduction efficiency, 89.7% volatile organic compound reduction efficiency, and 99.1% formaldehyde reduction efficiency.

The exhaust stacks associated with the EGD are visible from portions of the ESPN campus to the west of the Generator Plant Buildings and are the same height as the existing exhaust stacks on the roof of each Generator Plant Building.

Public Safety

The ESPN Campus Emergency Response Plan includes safety protocols associated with the EGD. It was last updated in 2021. The ESPN Campus also has a Spill Prevention Control and Countermeasure Plan, portions of which are associated with the Generator Plant Buildings and the EGD.

The nearest airport to the site is Robertson Airport in Plainville, which is located approximately 3.5 miles to the northeast. Similar to other existing buildings and exhaust stacks on the ESPN Campus, the EGD exhaust stacks are not aviation hazards under Federal Aviation Administration (FAA) criteria and would not require FAA obstruction marking or lighting.

The EGD are equipped with engine exhaust and duct silencers. They are not exempt from DEEP Noise Control Standards as emergency backup generators because the EGD will be used primarily for demand response and secondarily for emergency backup generation.

The Noise Evaluation Report for the EGD recommended the employment of mitigation measures to reduce noise impacts at the east property line adjacent to Generator Plant Building 1B. Specifically, the Noise Evaluation Report recommended replacing the door on the east side of the building with an acoustically rated door or adding an entry vestibule on either side of the existing door. Although it was intended to be within the scope of work associated with the EGD, the acoustically rated door has not yet been installed by NRG.

Conclusion

The EGD are not exempt from Council jurisdiction as they do not meet the criteria for exemption under CGS §16-50i(f). They were not installed primarily for the purpose of producing emergency backup electrical power, they operate when called upon by ISO-NE to reduce strain on the electric grid and the DEEP air permits allow each EGD to produce electrical power for 1,750 hours per year. Therefore, the EGD are subject to the Council's jurisdiction under CGS §16-50i(a)(3) as an electric generating facility.

Consistent with the provisions of CGS §16-50k, the EGD are a customer-side distributed energy resource facility with a capacity of not more than sixty-five megawatts, meet air and water quality standards of the DEEP, and do not have a substantial adverse environmental effect.

If approved, staff recommends the following conditions:

1. Approval of any EGD changes be delegated to Council staff; and
2. NRG provide written notification when installation of the acoustically rated door is completed at Generator Plant Building 1B prior to the sale of the EGD to Palm Energy, LLC.

Figure 1- Site Location

Figure 2 - Photograph of Installed and Operational EGD