



BUILDINGS BULLETIN 2019-007

Zoning

Supersedes: None

Issuer: Keith L. Wen, R.A.
Assistant Commissioner, Code and Zoning Interpretation

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Purpose: This bulletin clarifies the applicable zoning use group and limitation when establishing facilities for non-accessory fuel cell systems and battery energy storage systems.

Related Code/Zoning Section(s):

ZR 32-15	AC Title 24 Chapter 2
ZR 37-20	FGC 633.1
	BC 1206.2

Subject(s): Fuel cell; Fuel cell installation; Fuel cell facility; Use group, fuel cell; Battery energy storage systems; Battery installation; Battery energy storage system facility; Use group, battery energy storage; Zoning Use Group classification (UG), Use Group 6D

I. Background

One of the strategies outlined in the [New York City's Roadmap to 80 x 50'](#) is to promote clean, distributed energy resources at a community scale. Distributed energy resources (DERs), which include renewable energy sources, energy efficient technologies and strategies, and energy storage, will play an important role in increasing the amount of clean energy and in reducing demand on the grid and providing resiliency benefits. This bulletin clarifies the applicable zoning use group and limitation when establishing facilities for non-accessory fuel cell systems and battery energy storage systems, which are types of DERs.

A. Battery energy storage systems (BESS). BESS store energy through electrochemical means to supply electrical energy at a future time, and provide electrical energy for other uses. Batteries are charged when energy can be produced with lower carbon emissions or when renewable energy is available, and discharged when it is more convenient, economic, or when energy is not available from the grid or other distributed generation sources. Battery energy storage systems may employ lithium-ion, lead acid, flow batteries or other approved types of technology. The systems' components may include equipment for charging, discharging, storage, communication, control and protection of the equipment, fuel, containment and other equipment used to properly operate the system.

B. Fuel cell technology. Fuel cells are a type of distributed generation (DG) technology that provides energy to customers at the community level and/or to support the existing electricity grid, where it is necessary to mitigate aging and inadequate energy distribution infrastructure. Fuel cells are commonly connected to natural gas, which produces hydrogen gas through reforming. The hydrogen is then passed through the cell to produce electricity via an electro-chemical reaction. Fuel cells generally operate at efficiency levels higher than traditional combustion generators.

II. Clarification of Zoning Use Group and limitations

ZR 32-15, states in part, with emphasis added:

“Use Group 6

D. Public Service Establishments⁵

Electric or gas utility substations, open or enclosed, limited in each case to a site of not more than 10,000 square feet¹

¹ In C5 Districts, a use in Use Group 6, marked with an asterisk*, shall not be located on the ground floor of a building unless such use is at least 50 feet from the street wall of the building in which it is located, as provided in Section 32-423 (Limitation on ground floor location)

⁵ In a C6-1A District, uses in Use Group 6D are not permitted”

* “marked with an asterisk” as published but “marked with footnote 1” was intended

It is determined by this Department and the Department of City Planning that a non-accessory fuel cell facility and non-accessory battery energy storage system facility may be classified as Zoning Use Group 6D, “Electric/Gas Utility Substation,” provided the following conditions are met:

- The facility provides energy to support the existing electric grid.
- The facility may be *open* or *enclosed*, which shall be indicated on the Certificate of Occupancy (CO).
- The provisions of yards pursuant to the NYC Zoning Resolution and Section BC 1206.2 of the 2014 NYC Building Code shall apply.
- For facilities located in Lower Density Growth Management Areas in the Borough of Staten Island, within certain districts, special screening requirements may apply. Refer to ZR 37-20 for guidance.
- The portion of the zoning lot occupied by the fuel cell or battery energy storage facility within an individual zoning lot shall be limited to a site area of not more than 10,000 square feet, which shall include any required yards, areas occupied by fuel cell or battery energy storage arrays, associated equipment including but not limited to utility transformers, water deionizers, telemetry cabinets, disconnect switches, utility cabinets, and any service walkways and access paths for maintenance, as bounded by an enclosed or fenced area.
- For fuel cell facilities, where a facility is defined as the customer operated system downstream of the utility meter and regulator set, each facility may utilize only natural gas systems having a pressure not in excess of 15 psig, in the generation of energy.
- For fuel cell facilities, sound studies shall be submitted to demonstrate compliance prior to approval. Each facility must comply with Chapter 2 of Title 24 of the New York City Administrative Code for noise control.

A non-accessory fuel cell facility or a non-accessory battery energy storage system facility, which occupies more than 10,000 square feet of the site area within an individual zoning lot or does not meet the conditions above shall not be classified as Zoning Use Group 6D. Depending on the size, characteristics, and technical specification of the facility, it may be classified under other Use Groups such as Zoning Use Group 17C, “Public transit, railroad or electric utility substations, open or enclosed, with no limitation as to size”, or may be considered as other uses permitted by special permits.

III. Safety requirements

Pursuant to Section FGC 633.1 of the New York City Fuel Gas Code, the NYCFGCode provides prescribed standards for stationary fuel-cell power systems, including requirements for testing in accordance with ANSI CSA America FC 1. Stationary fuel-cell power systems classified as Zoning Use Group 6D in accordance with

Section II of this bulletin that exceed the power output indicated in Section FGC 633.1 shall be reviewed by the Office of Technical Certification and Research (OTCR) of the Department of Buildings.

Battery energy storage systems as described in this bulletin shall comply with filing and submittal requirements, and approval process established in [OTCR Buildings Bulletin 2019-002](#).

(Attachment: DCP letter dated August 16, 2019 to DOB on next page)

¹ New York City's Roadmap to 80 x 50 (2016).

(https://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/New%20York%20City's%20Roadmap%20to%2080%20x%2050_20160926_FOR%20WEB.pdf)



DEPARTMENT OF CITY PLANNING
CITY OF NEW YORK

ZONING DIVISION

Marisa Lago, *Director*
Department of City Planning

August 16, 2019

Assistant Commissioner Keith Wen
New York City Department of Buildings
280 Broadway, 7th Floor
New York, NY 10007

Re: Use classification of fuel cells and energy storage systems

Dear Assistant Commissioner Wen:

The Department of City Planning is writing to support the Department of Buildings' proposed classification of non-accessory facilities utilizing fuel cells and/or energy storage systems as "electric utility substations", and accordingly, providing for their classification as Use Group 6D uses when limited to sites up to, but not exceeding 10,000 square feet, and as Use Group 17C uses on sites larger than 10,000 square feet.

It is DCP's view that fuel cells and energy storage systems utilize new technologies which were not anticipated at the time of the current Resolution's adoption in 1961, nor during recent citywide zoning text amendments such as the 2011 Zone Green Text Amendment. We also recognize that utility providers and City agencies are seeking new ways to enhance the city's energy resiliency by providing for distributed energy generation, and that as these technologies mature, the costs associated with their installation are rapidly falling. These factors have led to rising adoption of these technologies across the city – a trend which will likely continue to increase over the coming years.

While we note that the current text of the Zoning Resolution allows for such technologies to be installed as "accessory uses" when they meet the requirements set forth in Section 12-10 of the Resolution, we also recognize that the current text of the Resolution does not explicitly provide regulations for instances where such installations do not meet the requirements of an "accessory use", such as when installed on a zoning lot containing no other use.

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Therefore, we support DOB's efforts to find the most appropriate use categorization for these new technologies through a consideration of their land use impacts and a consideration of the use group designations to which they most closely relate.

We have no objection to DOB's proposed approach, which will classify sites occupied solely or principally by fuel cells or energy storage systems under the same rubric as similar open or enclosed utility substation uses. Such sites are typically characterized by a lack of noise, vibrations, emissions, or other noxious industrial impacts, as well as by the low pedestrian and truck traffic they generate. Such installations are typically critical elements of public infrastructure, and their siting is often necessitated by the needs of this infrastructure.

We believe this approach most carefully considers the land use impacts of these technologies, allowing for their appropriate siting without undue hardship, while also providing for the protection of the character of residential districts.

Sincerely,



Frank Ruchala, Jr.

Cc: Mona Sehgal, Esq., General Counsel, DOB
Felicia Miller, Esq., Deputy General Counsel, DOB
Susan Amron, Esq., General Counsel, DCP