



**buildings**  
**2020-023**  
**bulletin**  
Z O N I N G

**RELATED BULLETIN(S)**  
BB 2019-002, BB 2019-007

**ISSUANCE DATE**  
December 15, 2020

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*Assistant Commissioner*  
Code & Zoning Interpretation

**PURPOSE:** This bulletin clarifies the applicable limitations when establishing stationary storage battery systems and stationary fuel-cell power systems accessory to the principle uses they serve within a single zoning lot and outlines the filing procedures for such systems.

**SUBJECT(S):** Accessory use; Stationary storage battery systems; Stationary fuel-cell power systems

**RELATED CODE/ZONING/RULE/LOCAL LAW SECTIONS:**

**3 RCNY 608-01, ZR Article 6 Chapter 4, FGC 633.1,  
Local Law 195 of 2018, 1 RCNY 101-12, AC 28-105.4.26**

The City of New York is committed to reducing its greenhouse gas (GHG) emissions by at least 80 percent by 2050 (80X50). New York City must transition away from using fossil fuels and move towards a renewable-based electric grid, an expansion of renewable energy across the city to prevent outages and unpredictable weather impacts. The major catalyst for the reduction of GHG emissions, to date, has been changes to the electric supply by promoting clean, distributed energy resources (DER), which include customer-owned renewable energy sources, stationary storage battery systems and stationary fuel-cell power systems.

## I. APPLICABILITY

This Bulletin establishes criteria for classifying stationary storage battery systems and stationary fuel-cell power systems as accessory uses and outlines the filing procedures for such systems.

Stationary storage battery systems and stationary fuel-cell power systems, when meeting the definition of **accessory use** in the Zoning Resolution, must be accessory to the principal use(s) within a single zoning lot. For the purposes of establishing stationary storage battery systems and stationary fuel-cell power systems as accessory uses, the size, location, the energy storage capacity of the battery systems, and the energy generating capacity of the fuel-cell power systems, shall be designed to serve such use(s).

This Bulletin does not address the design, installation, operation and maintenance of storage battery systems specifically designed and used for an emergency, standby or uninterruptible power supply.

## II. REQUIREMENTS

### A. Definitions

“STATIONARY STORAGE BATTERY SYSTEM”<sup>1</sup> is a stationary rechargeable energy storage system consisting of electrochemical storage batteries, battery chargers, controls and associated electrical equipment designed to

<sup>1</sup> 2018 International Fire Code, Stationary Storage Battery System definition.

provide electrical power to a building. The system may be connected with renewable energy systems (such as solar power) and energy management applications (such as peak shaving).

“STATIONARY FUEL-CELL POWER SYSTEM”<sup>2</sup> is a stationary energy generation system that converts the chemical energy of a fuel (often hydrogen) and oxidant (often oxygen) to electric energy (DC or AC electricity) by an electrochemical process. The hydrogen comes from a direct hydrogen source or from any hydrocarbon fuel such as natural gas, gasoline, diesel, or methanol if the fuel-cell power system includes integral reforming. The oxygen comes from air around the fuel-cell.

“MAXIMUM ELECTRICAL LOAD” for the purpose of this bulletin, is the total electric power (measured in kilowatts) that could be consumed by all the equipment, lighting, and appliances within a zoning lot. Such load shall be determined in accordance with pertinent New York City Electrical Code Technical Standards.

“MAXIMUM 10-HOUR ENERGY STORAGE CAPACITY” for the purpose of this bulletin, is the *maximum electrical load* multiplied by a 10-hour time period. This is used to determine the maximum permitted energy storage capacity (measured in kilowatt-hours) of the battery systems.

## B. Zoning

1. **Zoning Use Group.** Stationary storage battery systems and stationary fuel-cell power systems that comply with this bulletin may be deemed "accessory uses" for zoning purposes and may be part of the principal zoning use groups they serve.
2. **Permitted Locations within a Zoning Lot.** Accessory stationary storage battery systems and stationary fuel-cell power systems may be deemed "accessory mechanical equipment" and shall be enclosed when placed outdoors. The systems may be permitted within a zoning lot as follows:
  - a) *Within the Bulk Envelope*
    - i. May be located within a building<sup>3</sup>, or on the roof of a building, provided the systems comply with all applicable bulk regulations of the zoning district. Such systems located within a building shall be considered “floor space used for mechanical equipment”.
    - ii. May be located above the maximum height limit or sky exposure plane of the zoning district where the New York City Zoning Resolution allows “accessory mechanical equipment” as a permitted obstruction in any such area.
  - b) *Permitted Obstructions in Rear Yards and Rear Yard Equivalent*

May be located in required rear yards and rear yard equivalents within Flood Hazard Areas subject to Article 6 Chapter 4 of New York City Zoning Resolution.
  - c) *Areas Beyond or Below Required Open Spaces, Courts, and Yards*
    - i. May be located in open areas that are not part of open spaces, courts, and yards required by New York City Zoning Resolution.
    - ii. May be located below the level of required open spaces, courts, and yards subject to Level of Yards and Location of Open Space for Residential Portion Regulations of the New York City Zoning Resolution. Footprints of such utility trenches shall only be sized to house and access proposed systems. Metal grating or other types of fall protection shall be provided in accordance with pertinent New York City Building Code.
  - d) May be located in other locations where permitted by the Zoning Resolution.

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<sup>2</sup> 2018 International Fire Code, Stationary Fuel-cell Power System definition.

<sup>3</sup> Stationary storage battery systems shall not be installed indoor without the approval of FDNY.

### C. System Capacity Determinations with Certified Statements

The energy storage capacity of the stationary storage battery systems is measured in kilowatt-hours (kWh), and the energy generating capacity of the stationary fuel-cell power systems is measured in kilowatts (kW). New York State registered design professionals (RDP) shall provide the following system capacity determinations with certified statements included in the plans of the construction documents:

1. **Accessory Stationary Storage Battery Systems Energy Storage Capacity Determination.**
  - a) **STEP 1:** Provide tabular analysis and calculation to determine the *maximum electrical load* of the zoning lot.
  - b) **STEP 2:** Multiply the *maximum electrical load* by a 10-hour time period to determine the *maximum 10-hour energy storage capacity* permitted for the zoning lot.
  - c) **STEP 3:** Demonstrate the total energy storage capacity for all battery systems within the zoning lot does not exceed the *maximum 10-hour energy storage capacity* permitted for the zoning lot.
  - d) **STEP 4:** The RDP shall certify with the statement, “*I certify that, to the best of my knowledge, belief and professional judgment, the total energy storage capacity of the stationary storage battery systems within the zoning lot does not exceed the maximum 10-hour energy storage capacity permitted for the zoning lot per Buildings Bulletin 2020-023.*”
2. **Accessory Stationary Fuel-Cell Power Systems Energy Generating Capacity Determination.**
  - a) **STEP 1:** Provide tabular analysis and calculation to determine the *maximum electrical load* of the zoning lot.
  - b) **STEP 2:** Demonstrate the total energy generating capacity for all the fuel-cell systems within the zoning lot does not exceed the *maximum electrical load* of the zoning lot.
  - c) **STEP 3:** The RDP shall certify with the statement, “*I certify that, to the best of my knowledge, belief and professional judgment, the total energy generating capacity of the stationary fuel-cell power systems within the zoning lot does not exceed the maximum electrical load of the zoning lot per Buildings Bulletin 2020-023.*”

### D. OTCR Review of Regulatory Requirements

1. **Accessory Stationary Storage Battery Systems.** The stationary storage battery systems described in this bulletin shall comply with the filing and submittal requirements, and the approval process established in New York City Department of Buildings (DOB) Office of Technical Certification and Research (OTCR) [Buildings Bulletin 2019-002 \(BB 2019-002\)](#). Outdoor installations shall comply with Section 608-01 of Chapter 6 of Title 3 of the Rules of the City of New York (3 RCNY 608-01). Stationary storage battery systems shall not be installed indoor without the approval of New York City Fire Department (FDNY).
2. **Accessory Stationary Storage Battery Systems.** Section 633.1 of the New York City Fuel Gas Code (FGC 633.1) prescribes the standards for stationary fuel-cell power systems. Stationary fuel-cell power systems that exceed the power output<sup>5,6</sup> indicated in FGC 633.1 shall be reviewed by OTCR.

## III. APPLICATION SUBMISSIONS

### A. New York City Fire Department (FDNY) Review and Approval

Proposed stationary storage battery systems, stationary fuel-cell power systems that exceed the power output indicated in FGC 633.1<sup>4</sup>, and stationary fuel-cell power systems with natural gas distribution piping gas pressure at or above indicated in FGC Appendix G<sup>4</sup>, are subject to review by FDNY. The applicant shall obtain an FDNY Letter of Acceptance prior to construction document approval. All required fire alarm, fire

suppression, and fire protection plan work types associated with the proposed systems shall be filed with FDNY per [Local Law 195 of 2018](#).

**B. When Office of Technical Certification and Research (OTCR) Review and Approval is Required**

Pursuant to [Section 101-12 to Subchapter A of Chapter 100 of Title 1 of the Rules of the City of New York \(1 RCNY 101-12\)](#) and New York City Administrative Code section 28-113, proposed stationary storage battery systems, and stationary fuel-cell power systems that exceed the power output<sup>5,6</sup> indicated in FGC 633.1, are subject to review by OTCR. The applicant shall obtain a Conditional Acceptance Letter from OTCR prior to construction documents approval. OTCR must receive preliminary approved Zoning Analysis and System Capacity Determinations from DOB plan examiner and FDNY Letter of Acceptance prior to the issuance of the Conditional Acceptance Letter.

Once the systems are installed and inspected per FDNY Letter of Acceptance and OTCR Conditional Acceptance Letter, the RDP will certify, in a letter submitted to OTCR, that the installation complies with all conditions of the OTCR Conditional Acceptance Letter. The certification letter must be signed and sealed by the RDP. The OTCR Final Acceptance Letter will be issued after receipt of the certification letter.

**C. Construction Documents to be Submitted**

1. The following information shall be provided at the initial filing, for all **Accessory Stationary Storage Battery Systems** and **Accessory Stationary Fuel-Cell Power Systems** applications:
  - a) **Zoning Analysis.** Identify Zoning Use Group(s) of the zoning lot and the proposed systems and provide zoning analysis of the proposed systems bulk and locations pursuant of section IIB of this bulletin and NYC Zoning Resolution.
  - b) **System Capacity Determinations.** Provide system capacity determinations with certified statements pursuant of section IIC of this Bulletin.
2. Construction documents required for OTCR review:
  - a) **Accessory Stationary Storage Battery Systems** shall provide construction documents for OTCR review per BB 2019-002 and 3 RCNY 608-01. Including but not limited to all fire protection systems required in the aforementioned regulatory requirements.
  - b) **Accessory Stationary Fuel-Cell Power Systems** exceeding 1MW shall provide the following construction documents for OTCR review:
    - i. Locations and layout diagrams of the locations or areas in which the systems are to be installed
    - ii. Details on the hourly fire-resistance ratings of assemblies enclosing the systems as applicable
    - iii. The quantities and types of the systems to be installed
    - iv. Manufacturer's specifications, ratings and listings of each system
    - v. Description of energy management systems and their operation (e.g. energy source, emissions, etc.)
    - vi. Details on fire suppression, smoke or fire detection, thermal management, ventilation, exhaust and deflagration venting systems
    - vii. Locations and contents of required signage
    - viii. Support arrangement associated with the installation, including any required seismic restraint.
3. Stationary Fuel-Cell Power Systems of 1MW or less that do not require OTCR review:

For stationary fuel-cell power systems that do not require OTCR review<sup>5,6</sup>, at the initial filing, the applicant shall provide, with items in 2b above, construction documents that conform to the provisions of FGC 633.1 and all other applicable codes and regulations prescribed for such systems.
4. Additional information as requested by the reviewers.

**D. General Department of Buildings (DOB) Filing and Sign-off Requirements**

1. DOB job filing shall only be submitted under full plan examination. Filing under Professional Certification Program (Pro-Cert) is not permitted.
2. Stationary storage battery systems, stationary fuel-cell power systems, and ancillary work associated with the installation (e.g. dunnage, fire-resistant penetrations, etc.) may be included on the plans to be filed under the same work type. All required sprinkler systems associated with the proposed systems shall be filed under DOB NOW: *Build 'SP'* work type.
3. The RDP shall provide the following required items:
  - a) Prior to Approval items:
    - i. Preliminary Zoning Analysis approved by the plan examiner
    - ii. Preliminary System Capacity Determinations approved by the plan examiner
    - iii. FDNY Letter of Acceptance<sup>4</sup>
    - iv. OTCR Conditional Acceptance Letter<sup>5</sup>
  - b) Prior to Sign-off items:
    - i. Completion and sign-off of all required sprinkler, fire alarm, fire suppression, and fire protection plan work types associated with the proposed systems
    - ii. OTCR Final Acceptance Letter<sup>6</sup>

**E. NYC Landmark Preservation Commission**

LPC approvals are required if the systems are located in landmarked districts or landmarked buildings.

**IV. System Repair and Replacement**

Any modifications to the approved and signed-off system beyond ordinary repairs pursuant to **Section AC 28-105.4.2**, or in-kind replacement that exceeds the approved system capacity, shall be required to submit a new application to comply with this Bulletin.

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<sup>4</sup> A FDNY Letter of Acceptance is not required for stationary fuel-cell power systems that comply with FGC 633.1 and have a power output that does not exceed 1 MW, and stationary fuel-cell power systems with natural gas distribution piping gas pressure under 15 psig per FGC Appendix G.

<sup>5</sup> An OTCR Conditional Acceptance Letter is not required for stationary fuel-cell power systems that comply with FGC 633.1 and have a power output that does not exceed 1 MW.

<sup>6</sup> An OTCR Final Acceptance Letter is not required for stationary fuel-cell power systems that comply with FGC 633.1 and have a power output that does not exceed 1 MW.