NYC PERMITTING & INTERCONNECTION PROCESS GUIDE FOR OUTDOOR ENERGY STORAGE SYSTEMS

April 2025

SMART DG HUB

A PROGRAM OF:

CUNY Office of Facilities Planning, Construction and Management
Sustainability & Energy Conservation

INTRODUCTION

Sustainable CUNY of the City University of New York formed the NYC Solar Partnership in 2006, working collaboratively with the NYC Mayor's Office and the New York City Economic Development Corporation to develop and implement comprehensive plans for large-scale solar integration in NYC. Sustainable CUNY formalized the Smart DG Hub after Hurricane Sandy, engaging solar and energy storage Subject Matter Experts (SMEs) and NYC Authorities Having Jurisdiction (AHJs) to work on creating a pathway to the marketplace for storage. The DG Hub focuses on facilitating the development of clear solar and storage permitting processes, sharing best practices through workshops and summits, and providing technical assistance tools such as the NY Solar Map & Portal and the Ombudsman program. Sustainable CUNY is an integral program of the Office of Sustainability and Energy Conservation in the University's Department of Facilities Planning, Construction and Management (FPCM).

ESS PERMITTING GUIDE

The 2025 updated ***Energy Storage Permitting and Interconnection Process Guide for New York City: Outdoor Systems*** is designed to provide industry professionals and stakeholders with a comprehensive understanding of the permitting and interconnection requirements and approval processes for outdoor Energy Storage Systems (ESS) in NYC. This guide is intended to help qualified professionals navigate the ESS permitting process in NYC and does not supersede any AHJ guidance.

This document is not a comprehensive design/engineering compliance guide; design requirements are specified within NYC codes, rules, zoning, and product-specific equipment approval issued by the Fire Department. Links are provided throughout this document to AHJ resources, codes, and other references, which may be changed and updated over time. Consult qualified and licensed professionals to ensure installations meet all compliance requirements.

DEVELOPMENT OF THE GUIDE

This document was developed in collaboration with the NYC Department of Buildings (DOB), the Fire Department of the City of New York (FDNY), and Consolidated Edison (Con Ed).

KEY ESS REGULATIONS IN NYC

FDNY 3RCNY 608-01 – adopted Oct 2019
Establishes standards, requirements and procedures for the design, installation, operation and maintenance of outdoor stationary energy storage systems that use various types of battery technologies, including lithium-ion, flow, nickel-cadmium and nickel metal hydride batteries.

2022 Fire Code (FC) Chapter 608 – adopted April 2022
Chapter 608 was adopted as part of a broader update to NYC Fire Code. It primarily establishes requirements and procedures for indoor ESS installations but includes details pertinent to outdoor, rooftop, and residential installations especially via the Code's adoption of selections from NFPA 855 (2020), as modified in FC Appendix B.

City of Yes Zoning for Carbon Neutrality Amendment – adopted Dec 2023
The NYC Zoning Resolution adopted comprehensive amendments that address zoning requirements for ESS installations across all zoning districts and land use types.

Con Edison Energy Storage System Guide Version 4 | July 2022
Provides high level details of the electric interconnection process, typical steps, challenges, and technical solutions associated with ESS projects.

Special thanks for technical assistance contributions from DNV, ESRG, NY-BEST, and individual contributors for their valued input.

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HOW TO USE THIS GUIDE

This document starts with high-level overviews across all three regulatory authorities/agencies, followed by detailed sections for each agency outlining their specific processes.

CROSS-AGENCY OVERVIEW: Pages 4-10 provide an overview and chronology of required submissions, approvals, inspections, and permits across all three approval entities. Separate flowcharts are provided for Small, Medium, and Large systems (as defined in 3RCNY 608-01).

AGENCY-SPECIFIC DETAILS: The bulk of the *Guide* spanning pages 11-37 is comprised of agency specific sections that provide comprehensive, in-depth process details for each approval type from each agency.

Acronyms in this Document

AHJ: Authority Having Jurisdiction, approval agency, regulatory authority, permitting agency

BESS/ESS: Battery energy storage system (preferred by FDNY); Energy storage system

BFSU: Bulk Fuels Safety Unit – conducts FDNY ESS final inspections

BSA: Board of Standards & Appeals

CAL: Conditional Letter of Acceptance – issued by OTCR upon satisfactory review

COA: Certificate of Approval – issued by FDNY, provides product-specific installation criteria

DOB: Department of Buildings of the City of New York

FA/FS: Fire Alarm, Fire Suppression

FDNY/FC: Fire Department of the City of New York; Fire Code

LL: Local Laws – adopted by the City to enact new/updated policies, codes, procedures

LOCA: Letter of Conditional Acceptance – issued by FDNY upon plan approval

LOA: Letter of Acceptance – issued by FDNY upon successful passing of inspection

OTCR: Office of Technical Certification & Research of the NYC DOB

PTO: Permission To Operate (also "Utility Letter of Acceptance") issued by the utility on successful passing of inspection

RCNY: Rules of the City of New York

TMU: Technology Management Unit of the FDNY Bureau of Fire Prevention

For questions about this Guide or general technical assistance regarding energy storage permitting in NYC please contact the CUNY Smart DG Hub:

smartdghub.com

smartdghub@cuny.edu

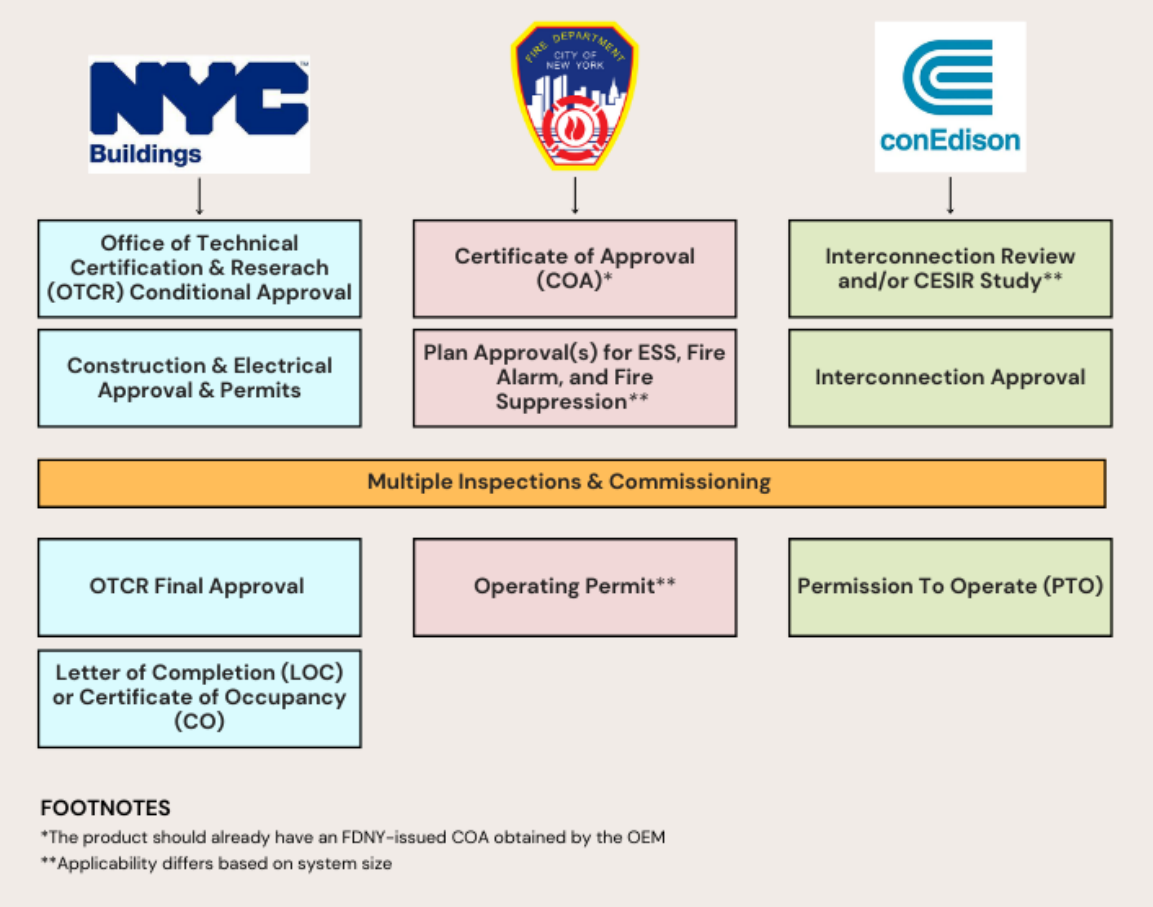
CROSS-AGENCY OVERVIEW: SUMMARY OF REVIEWS & APPROVALS

Deploying ESS in New York City requires approval from three separate agencies/authorities:

AGENCY	UNIT/DEPARTMENT
NYC Department of Buildings (DOB)	Central Development Unit
	Office of Technical Certification & Research (OTCR)
Fire Department of NY (FDNY)	Technology Management Unit
Consolidated Edison (Con Ed)	Energy Services

Permission to install an ESS may necessitate obtaining multiple, separate approvals/permits from FDNY and from DOB, each encompassing their own separate application processes; whereas Con Edison interconnection is a single application/approval. The graphic below provides a high-level summary of the approvals and permits across each of these entities.

Simplified Overview: Approvals/Permits by Agency



General Notes on Permitting Process

The list below provides key foundational information that users should be generally familiar with as part of understanding the NYC ESS permitting and regulatory landscape.

AHJ Requirements	Each agency maintains its own set of required submittal materials/information/ documentation. There is some overlap between these requirements, but also some requirements that are agency-specific.
ESS Size Differentials	3RCNY 608-01 maintains distinct requirements for approvals/permitting and for design/compliance requirements for outdoor ESS among three size categories, Small/Medium/Large, defined as (S) 2-20 kWh, (M) 20-250 kWh, (L) 250+ kWh for lithium-ion and several other chemistries. These kWh size categories are different for other chemistry types including lead acid. Large ESS entail a more complex process for approvals and permitting than small and medium systems.
Outdoor vs. Indoor	This Guide pertains to outdoor ESS installations only which includes rooftop installations. Indoor installations are subject to significantly different installation requirements which are outside the scope of this Guide. Large outdoor ESS are not limited in size by FDNY or DOB, except that rooftop installations of most chemistry types may not exceed 400 kWh if installed on a building of combustible construction.
Product Certification & Approval	No ESS product will be considered for installation in NYC without UL 9540 system certification (or equivalent listing) and UL 9540A thermal runaway (or equivalent) testing. Additionally, no ESS product will be considered for installation in NYC without obtaining the FDNY's Certificate of Approval (COA) for ESS products; the UL listing and testing is a critical component of the COA.
Large-Scale Burn Test Data	UL 9540A large scale burn testing, or equivalent, is required for all new ESS models. A report prepared by the test laboratory will need to be submitted to FDNY as part of its COA review, while this report must be submitted to DOB for each individual project submission, alongside the test data analysis that impacts system design and site-specific conditions. If requested, raw test data may be required.
Application Preparation	Thorough and complete application packages will enable a faster review turnaround time with fewer iterations needed.
Inter- and intra-agency coordination	There are interdependencies among the steps in the approval/permitting process. It is important to be aware of these and interdependencies are denoted in the ESS Flowcharts on pages 8-10.
Installation Supervision – Certificate of Fitness (COF)	All ESS installations require a trained FDNY Certificate of Fitness (COF) holder to provide supervision and oversight of key points in the lifecycle of an ESS installation. The COF is a unique NYC requirement that is applicable to certain products/technologies with potential hazards and safety risks.
New/unique technology or project types	For new ESS technologies or unique project types, see this Innovation & Pilots Guidance document. FDNY and OTCR maintain special pre-submittal preparation and submittal pathways for new technology types.
Mobile ESS	Mobile ESS have unique requirements detailed in 3RCNY 608-01 and FC Appendix B (sections from NFPA 855). Additional mobile ESS regulations are currently in development and this Guide does not specifically address mobile ESS.
Residential (1-2 Family)	Residential ESS have unique requirements as detailed in FC 608.13 and FC Appendix B (sections from NFPA 855). Permitting processes outlined in this Guide are applicable, but additional regulations are currently in development.

Large ESS – Additional Siting and Land Use Approvals

There are additional siting and land-use steps that may need to be completed prior to or in connection with large ESS projects, especially for standalone projects on vacant or undeveloped lots. These steps can vary significantly from project to project and are beyond the formal scope of this Guide. Frequently referenced resources with links are provided below.

Topographical Approval/Address & BIN assignment: may be required as part of DOB approval for sites without an existing address/BIN, which must obtain a new address.	Obtained via Borough President's Office Topographical Bureau.
Lot Subdivisions & Mergers: Dept. of Finance (DOF) must approve any lot subdivision or merger; and an additional DOB Subdivision Improvement (SI) filing is needed for lot(s) where there are any existing structure(s), to confirm post-subdivision zoning compliance. Note: SI filings have specific submittal requirements including Zoning Exhibits and Plot Diagram (PD-1) with topographical approval.	Information/Resources: DOF Lot Apportionment Process Guide DOF Policy & Procedure Memorandum DOB Code Notes: Subdivision
Easements & Restrictive Declarations: can be required in certain circumstances to allow for alternate means of compliance with code requirements, zoning provisions, or to implement environmental mitigations.	Information/Resources: Buildings Bulletin 2015-008
City Parks Building Plan Review & Tree Work Permits: required as part of zoning-mandated street tree requirements and associated tree work.	Information/Resources: NYC Parks Building Plan Review Page
Board of Standards & Appeals (BSA) approval: is a discretionary approval granted by the City, required for non-accessory ESS projects when sited on a zoning lot over 10,000 ft^2 in R-districts.	Information/Resources: CUNY DG Hub NYC ESS Zoning Guide
City Environmental Quality Review (CEQR): is applicable to any publicly supported ESS project, including those requiring BSA approval.	Information/Resources: NYC Mayor's Office of Environmental Coordination CEQR Resources
Waterfront Revitalization Process (WRP): Projects that require CEQR and are located within the NYC Coastal Zone will require WRP review.	Information/Resources: NYC Waterfront Revitalization Program Overview
DEP permits – some or all may be required: • Sewer Certification/Site Connection Permit (SCP) – required for sewer connection or other stormwater control measures, for most large ESS installations. • Stormwater Permit (SWPPP) – additional requirement for projects that disturb 20,000 ft^2 or more of soil or add 5,000 ft^2 or more of new impervious area. • Fire Hydrant Modification – required along with FDNY hydrant installation approval when existing hydrants are not in compliance with Fire Code distances.	Information/Resources: • Sewer Certification & Connection Permit: About • Sewer Certification & Permit Process • Stormwater Permits Page • Water Service Connections & Private Water Mains: Hydrant Modification

Quick Reference Table: Approvals/Permits by System Size

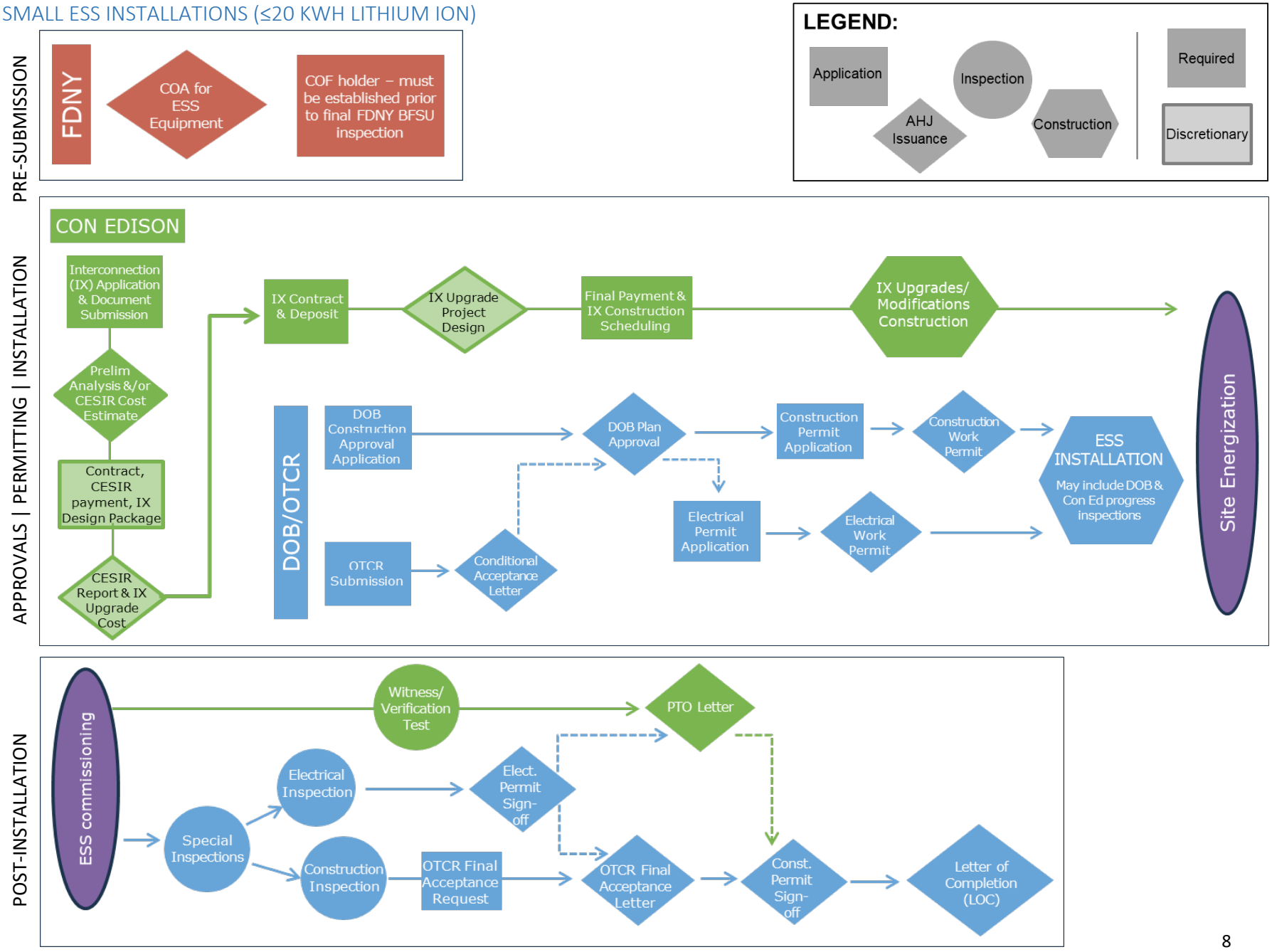
The Quick Reference Table below lists all approval/permit types as these apply to outdoor ESS of the differing size categories. In the flowcharts on pages 8-10, these approval types and their associated component steps (including inspections, commissioning, etc.) are shown in chronological order with any interdependencies indicated.

Approvals/Permits	**3RCNY 608-01 Size (kWh) Category for Lithium-ion ESS***		
	SMALL ≤20	**MEDIUM >20 - ≤250**	**LARGE >250**
FDNY Certificate of Approval (COA)	Y	Y	Y
FDNY Certificate of Fitness (COF)	Y	Y	Y
FDNY Installation Plan Approval: ESS	N	N	Y
FDNY Fire Alarm/Detection System Approval	N	COA dependent	Y
FDNY Fire Suppression Sprinkler System Approval	N	N	Y
FDNY Operating Permit	N	Y	Y
DOB OTCR Approval	Y	Y	Y
DOB Electrical Permit	Y	Y	Y
DOB Construction Permit	Y	Y	Y
Con Edison Permission To Operate (PTO)	Y	Y	Y

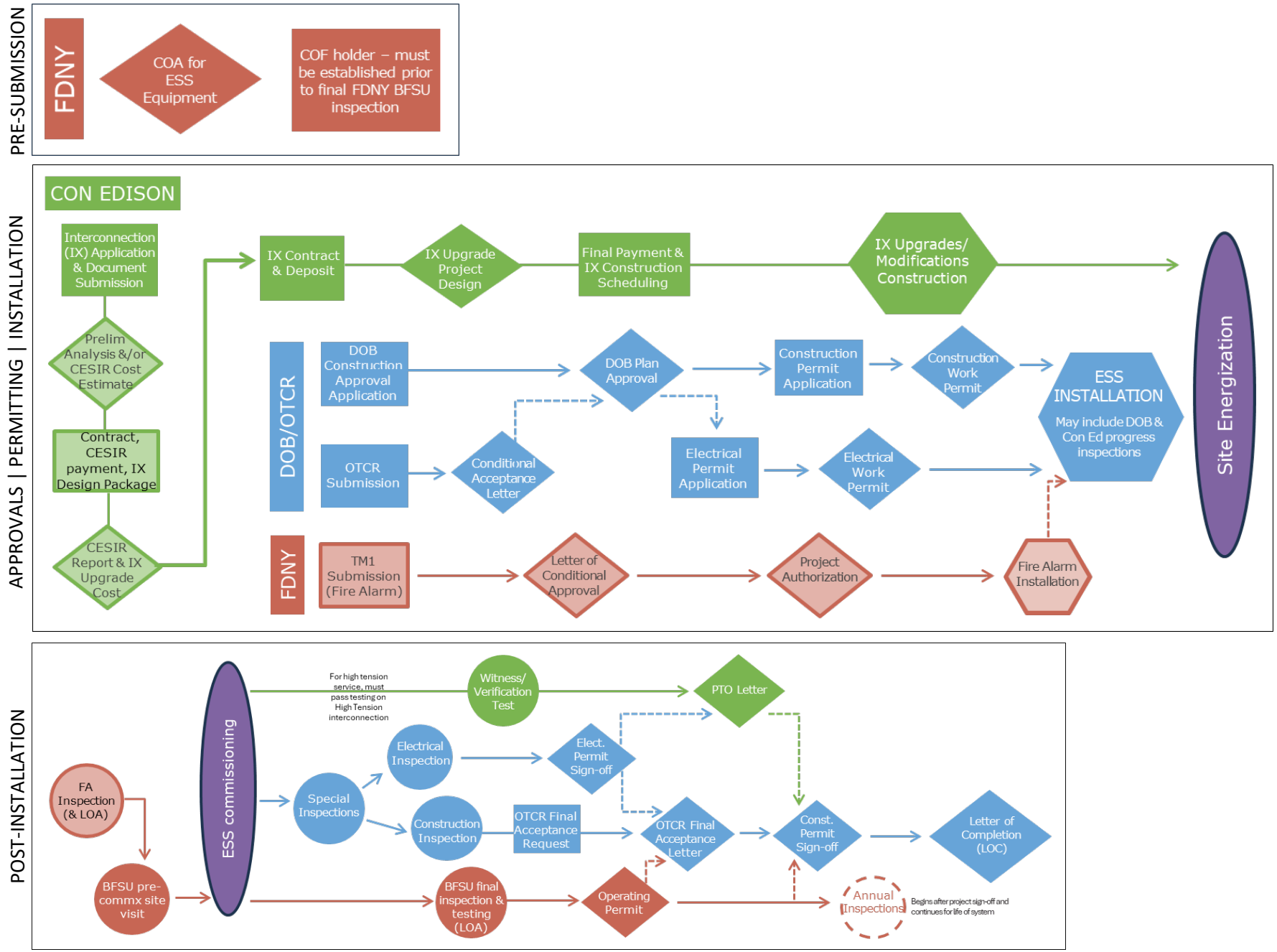
**See 3RCNY 608-01 for kWh size categories for other non-lithium battery types.*

ESS PERMITTING AND INTERCONNECTION FLOW CHARTS

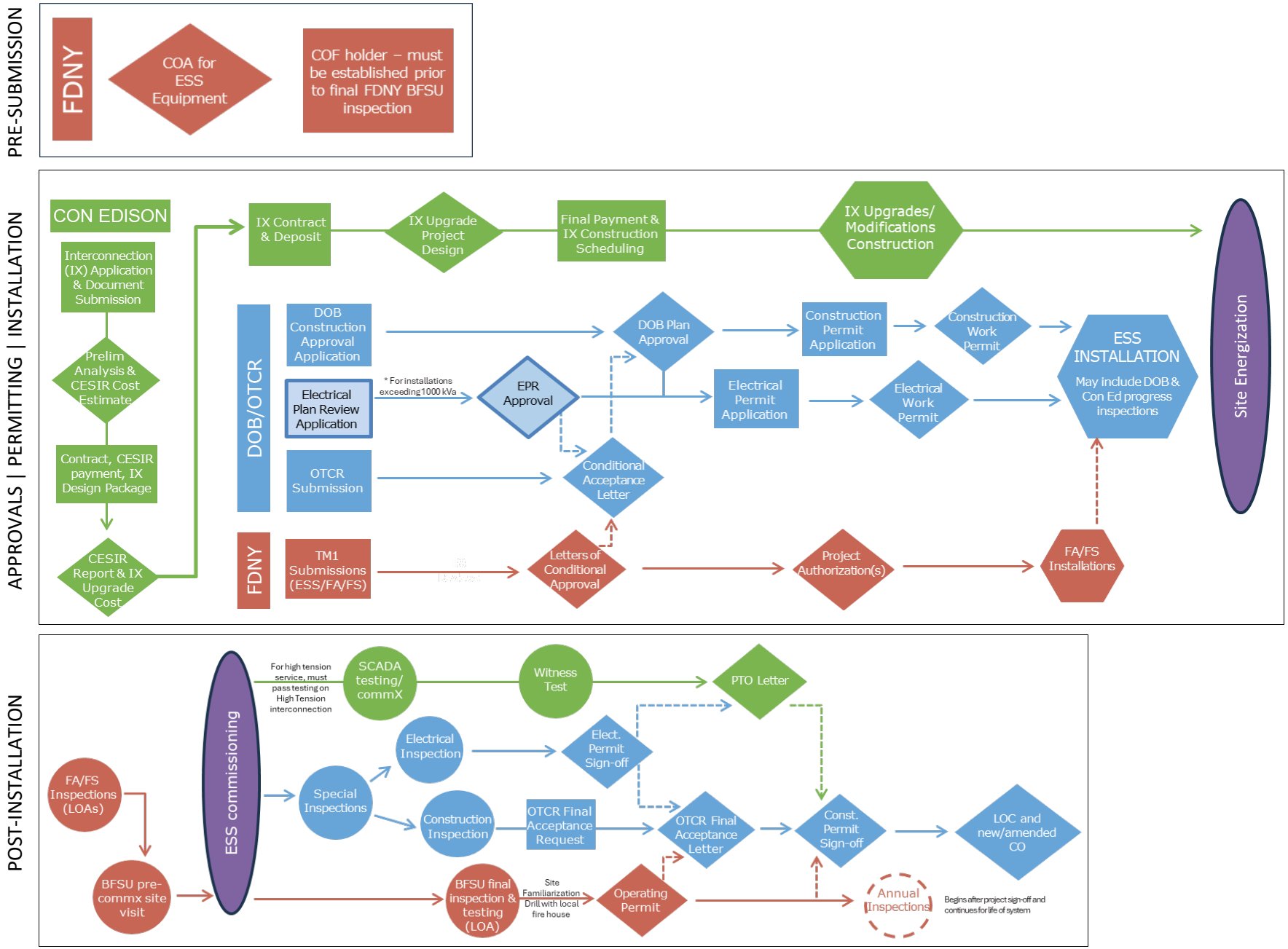
SMALL ESS INSTALLATIONS (≤20 KWH LITHIUM ION)



MEDIUM ESS INSTALLATIONS (>20–250 KWH LITHIUM ION)



LARGE ESS INSTALLATIONS (>250 KWH LITHIUM ION)



AGENCY-SPECIFIC: IN-DEPTH PERMITTING PROCESSES

The following sections of this document provide in-depth, step-by-step details for each of the three AHJs' approval & permitting processes. Each agency-specific section includes:

- General "about" and navigational information pertaining to the agency's filing systems;
- Application/submittal requirements;
- Existing DG Hub and agency-issued training and informational resources;
- Chronological steps for initiating an application;
- Chronological steps for post-construction processes including inspections and close-out;
- Other agency resources, relevant code and regulation references, and contact information.

FDNY and DOB require multiple separate approvals/permits for each ESS project and each of these approvals requires its own separate application processes; whereas Con Edison interconnection is a single application. As such, the DOB and FDNY sections below each contain multiple informational tables that provide the process details pertaining to each individual approval/permit type.

NYC DEPARTMENT OF BUILDINGS (DOB) PROCESS

Permission to install an ESS from the NYC DOB requires obtaining three approvals/permits:

(1) DOB Construction Plan Approval Filing for Construction Permits
(2) OTCR Site-Specific Material Acceptance
(3) DOB Electrical Permit

The DOB construction approval and the OTCR site-specific approval can be initiated simultaneously so that reviews can proceed in parallel. Approval timelines can vary widely depending on project complexity, characteristics, and other factors; and approvals are interdependent. Therefore, it is recommended that submissions of the OTCR and the DOB applications be coordinated appropriately so that project elements can move forward in stages.

Key DOB Terms and Updates from Previous Version of this Guide:

Users of this Guide, especially those who may be new to the NYC market or new to ESS filings, should become familiar with the information below regarding DOB generally.

DOB NOW vs. E-Filing: All ESS permit applications must be filed through the ***DOB NOW: Build*** online portal. E-filing via the DOB's older BIS platform is no longer accepted. DOB has a DOB NOW 101 training webinar available as well as an accompanying DOB NOW Application User Guide.

Updated Job Types, Work Types/Sub-Work Types in DOB NOW:

- The DOB NOW filing platform uses new categories and nomenclatures for Job Types, Work Types, and Sub-Work Types for job filings, which differ from the previous e-filing platform. Examples include the "Alteration" (or "Alt") and "Alt-CO" job types in DOB NOW, formerly "Alt-2" and "Alt-1" respectively. For an overview of these changes, see the DOB's Job Types in DOB NOW presentation.
- As of Nov 2023, there is a specific "Electric Energy Storage Equipment" work type ("Alt GC-EESE") for ESS projects available within DOB NOW. For more information see the DOB's EESE|Green Roof|Solar presentation and webinar.

Property Tax Abatement (PTA): ESS projects whether standalone (placed in service after Jan. 1, 2019) or in conjunction with a solar installation (placed in service after Jan. 1, 2024) can be eligible for the PTA, and the PTA application information is submitted only via the Alt GC-EESE filing in DOB NOW.

Accessory vs. Non-Accessory ESS projects and Alteration vs. Alt-CO ESS filings:

- ***Accessory ESS:*** are those having a kWh capacity less than 24 times the maximum electrical load of the property, as defined within NYC Zoning. These projects can typically be filed as Alteration ("Alt") job types (e.g. the Alt GC-EESE).
- ***Non-Accessory ESS:*** are those with a kWh capacity exceeding 24x the maximum electrical load of the property, and the construction permit filing will usually require an Alt-CO filing ***in addition to*** the Alt GC-EESE filing. The Alt-CO is required when alteration work impacts the Use, Egress, or Occupancy of a given lot or property and will result in issuance of a new or amended Certificate of Occupancy (CO) upon project close-out. **Significant additional requirements are triggered by Alt-CO filings which do not apply to standard Alteration filings**. Further detail is provided in the sections below.

Zoning for ESS: significant changes were adopted via the *City of Yes for Carbon Neutrality* zoning amendment as of December 2023.

- See the NYC Zoning Resolution for the recently updated ESS zoning requirements, and the CUNY DG Hub's NYC ESS Zoning Guide (2nd Ed.) for further information.
- A standard zoning analysis must be included on construction drawings/plansets, in addition to the information required under the Zoning tab in DOB NOW.

Initial vs. Subsequent filings: The DOB NOW platform utilizes a filing structure in which a single *job type* filing can include multiple *work types;* the filing is initiated with one "Initial" Filing ("I-filing") along with one or more "Subsequent" filings ("S-filings"). Subsequent filings will automatically utilize the same job number as the I-filing, allowing for automated linkage and more streamlined processing. For further information, see DOB's Job Types in DOB NOW industry training.

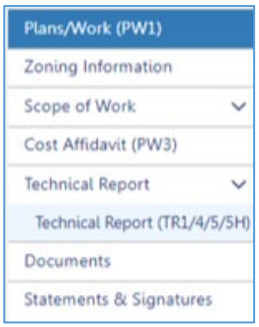
- **Special note:** For ESS projects that require both an Alt GC-EESE filing **and** an Alt-CO filing, the DOB NOW platform does not currently allow combining these as Initial + Subsequent filings. Therefore these must be submitted as two separate Initial filings. See the DG Hub's ESS Alt-CO PTA information sheet, as well as further details in the table below, for important information on applicable work types for each filing and manually linking separate Initial filings.

OTCR Conditional Acceptance: Is required before DOB will issue construction plan approval.

Fire Alarm & Fire Suppression Plans: All Fire Alarm and exterior Fire Suppression plan approvals are filed through FDNY; permits from DOB are no longer required except for indoor NFPA-13 compliant sprinkler systems. See Local Law 195 of 2018 for further information.

DOB TABLE 1: provides expanded details specific to the DOB construction approval process

DOB CONSTRUCTION PLAN APPROVAL & CONSTRUCTION PERMIT FOR BATTERY STORAGE INSTALLATIONS	
Key Details & Resources	DOB construction permits are required for <u>all</u> ESS installation types, regardless of size, type, location, etc. Key details include: • Construction plan approval for ESS projects is dependent upon issuance of the OTCR Conditional Acceptance Letter. • Requirements for construction job filings for ESS projects can vary significantly depending on project characteristics such as ESS size, ESS chemistry/technology type, ground mount vs. rooftop location, building and/or site factors, etc. • All ESS projects require ***Standard Plan Examination*** review, not Professional Certification ("Pro-Cert"). Pro-cert is not allowed for ESS projects at this time. **<u>Key DOB training and guidance materials:</u>** • For a high-level overview of the entire DOB construction project lifecycle, see the DOB's Construction Project Process Overview. • For a general guide on using DOB NOW, see the *DOB NOW: Build* User Guide and DOB NOW 101 training webinar. Additional trainings on a wide variety of topics are available via the DOB NOW Industry Training page. • For specific guidance on the new DOB NOW EESE filing type, see the EESE Job Filing Step-By-Step Guide and training Webinar and Presentation Slides.
Filing Type: Alt GC-EESE	**<u>All</u>** DOB permit applications for ESS projects require an Alt GC-EESE filing; most Large and non-accessory ESS projects will also require an additional Alt-CO filing. **<u>Accessory ESS:</u>** • Are those which meet the NYC Zoning Resolution criteria for Accessory use, having a kWh capacity of ≤24 x maximum kWh of the electrical load of the lot/property. • For these jobs, the Alteration GC-EESE will be the primary/Initial filing ("I-filing"), with any relevant PTA information to be filled out as needed. • The Alt GC-EESE permit results in a ***Letter of Completion (LOC)*** upon successful project close-out. → Accessory ESS do not typically require an additional Alt-CO filing unless the installation will impact the property's Certificate of Occupancy. **<u>Non-Accessory ESS</u>:** • Are those exceeding 24x maximum kWh of the lot/property's electric load. • These will be classified as per NYC Zoning regulations under ***Use Group IV(C)***. → Non-accessory and large ESS typically, with some exceptions, will require an additional Alt-CO filing.

Filing Type: Alt-CO filings	Non-accessory ESS projects will require an additional Alt-CO filing if any of the following factors apply: • The property's existing Certificate of Occupancy (CO) does not already include the applicable ***Use (or Use Group)*** as detailed above; or, • The project changes the Egress or Occupancy of a given lot or property; or, • The lot does not have an existing CO. The Alt-CO filing: • Establishes the applicable Use for a given lot; • Requires creation or modification of the Schedule of Occupancy. See this Certificate of Occupancy Training (starting on page 49) for information. • Results in a ***New or Amended Certificate of Occupancy (CO)*** upon successful completion of project close-out. **Alt-CO filings trigger significant additional filings and requirements based on various project characteristics, including but not limited to:** • Builders Pavement Plan (BPP) (see here and here) • Curb Cut where vehicle access is needed (see here and here and here) • DEP Sewer Certification and/or Stormwater Permit (see here) • Street Tree Checklist and any subsequent Tree Work Permit (see here and here) • Zoning Lot Certifications: Zoning Exhibits I and III – usually in conjunction with Subdivision filings (see here and here) **SPECIAL NOTES ON ALT-CO & ALT GC-EESE COORDINATION:** • The GC-EESE work type is only available under the Alteration job type; it is not available under the Alt-CO job type. • Therefore, if an ESS project requires an Alt-CO filing, then two separate Initial filings must be made – an I-filing for the Alt GC-EESE, and an I-filing for the Alt-CO. • The Alt-CO should encompass work types associated with site preparation e.g. Foundation, Structural, etc. • Additional steps to manually link these two I-filings are needed especially for ESS projects applying for the PTA – see the DG Hub's 1-pager Interim Guidance for Alt-CO ESS PTA Filings. • A subcategory of Alt-CO job types, *"Alt-CO New Building With Existing Elements to Remain"* may be applicable for certain sites. See BB 2016-012.
Submittal Information & Documents	All information and documentation are filled in or uploaded within the *DOB NOW: Build* platform. Required submittal information is delineated under specific tabs (see graphic at right) and are established based on the project's characteristics. The list below provides additional details pertinent to the Alt GC-EESE filing only; additional details can be found in the DOB NOW Application User Guide. The DOB NOW platform for Alt-CO filings will contain similar tabs but information requirements/inputs/documents will vary based on project characteristics. 

Special notes on tabs in DOB NOW for ESS job filings:

Plans/Work (PW1) Tab

- To manually link other job filings relating to the ESS project, enter the job number(s) of any associated filings under the "Additional Information" section on the PW1 in the "Related DOB NOW/BIS Job Numbers" field.
- Under the *Site Characteristics* section within the PW1 tab, the "Fire Suppression", "Sprinkler", and "Standpipe" entries refer to indoor systems only and are not applicable to outdoor ESS installations. Outdoor ESS installations require a dry pipe fixed water spray fire suppression system in compliance with NFPA 15, which is permitted via FDNY.
- EESE filings will need at least one Electrical (EL) Job filing identified as a Related Job under the PW1 tab, prior to permit. See the Electrical Permit Filing section of this guide for further information, page 22.

Zoning Information Tab

- Zoning information entered in this tab is in addition to the standard zoning analysis that must be included on construction drawings/plansets (see the "Documents" tab below).

Scope of Work Tab

- For Alteration GC filings, EESE is an available Work Type under this tab.

Property Tax Abatement Tab

- Appears after selecting "EESE" work type under Scope of Work tab.

Technical Reports Tab

- TR1 Technical Report:
  - Required for Alt-EESE and Alt-CO filings.
  - For Alt-EESE filings, the Applicant may elect to conduct the Final Inspection by selecting the Directive 14 option under the Filing Review Type on the PW1 and indicating inspection responsibility on the TR1.
  - For Alt-CO filings, TR1 Final Inspection is not allowed for Job sign off, but is required for specific work types (EA, FO, ST, MS) of the Alt-CO, prior to final construction inspection by the Department.
- Other Technical Reports will be applicable based on project characteristics and work types. See DOB NOW Technical Reports list for guidance

Documents Tab:

- Establishes both *Required Documents* as well as *Additional Documents*. Documents are denoted as to when they are required; e.g. Prior to Approval, Prior to Permit, Prior to Signoff.
- Construction drawings/planset are uploaded in this tab.
  - **Note:** Construction drawings for Accessory ESS projects must include a System Capacity Determination Calculation with Certified Statement.
- Required documents for EESE filings are listed below as per the DOB NOW EESE/Solar/Green Roof training. Additional required documents beyond those listed below may be needed for Alt-CO filings.

	▪ Plans/Sketch ▪ Attestation of Appendix G compliance ▪ OTCR Conditional Letter of Acceptance ▪ OTCR Final Approval ▪ Final Utility PTO
Site-dependent requirements	• Tenant Protection Plan (TPP1) – for projects where a building has occupied dwelling units. For Alt-CO jobs, the TPP must be approved on the I-filing, and does not need to be approved for S-filings. **Note:** the building Owner is required to notify the Department 72 hours prior to starting work, and notify building occupants as detailed on the DOB's TPP Requirements Page. • DEP Asbestos Abatement notification (ACP-5) – for projects penetrating building envelope and built before April 1, 1987. If asbestos abatement is required, DEP will issue a completion form upon completion of the abatement project, which will be required prior to DOB plan approval. • NYC Landmarks Preservation Commission (LPC) approvals – for installations located in landmarked district or landmarked building. See the NYC LPC Rules document chapter 2-21 for HVAC & Mechanical Equipment requirements, and the LPC Apply page for application details.
Application Submission, Review, & Plan Approval Steps: **Alt GC-EESE filing**	1. Applicant submits DOB filing with Alt GC-EESE work type and any other applicable work type(s) and sub-work type(s), along with applicable fees. See DOB's EESE|Green Roof|Solar presentation and webinar for filing guidance. *→ OTCR Step 1: submit OTCR-2 application* 2. DOB plan examiner provides preliminary approval of zoning and System Capacity Determination to OTCR. 3. DOB reviews the application and issues objections as pertinent; will require any objections to be resolved by the applicant. *→ OTCR Step 2: issuance of Conditional Acceptance Letter (CAL)* 4. After objections are resolved, Applicant must upload the OTCR CAL and any prior-to-approval Required Documents; DOB Plan Examiner then issues plan approval. 5. After plan approval, Applicant or General Contractor completes the Permit tab in DOB NOW along with any outstanding Required Documents. Permits are issued in *DOB NOW: Build* and must be posted on-site. Upon permit issuance construction/installation can begin. 6. Any required Progress Inspections must occur during the construction phase. 7. The BESS and all associated work must be installed in accordance with DOB approved construction documents, the OTCR CAL, FDNY Certificate of Approval, FDNY Letter of Approval, and all applicable codes, rules, and regulations.
Application Submission, Review, & Plan Approval Steps:	For ESS projects requiring an Alt-CO filing, the Alt-CO submission/review/approval steps are similar to the steps above and also include: • Applicant submits Alt-CO filing together with the Alt GC-EESE filing. ➢ **NOTE:** The Alt-CO filing should include the General Construction (GC) work

Alt-CO filing	type, which incorporates the Schedule of Occupancy information; as well as work types associated with site preparation e.g. Earthwork, Foundation, Mechanical Systems, and/or Structural; as detailed in the Interim Guidance for Alt-CO ESS PTA Filings guide. ➢ **NOTE:** Linking of the two I-filings, via manually entering job numbers of related filings, is important for both PTA and non-PTA jobs. • Applicant will need to obtain the work permits for both the Alt-CO filing and for the Alt GC-EESE filing prior to starting construction work.
Post-Construction Process: **Alteration-EESE Filing**	Project close-out process for Alt GC-EESE filing: 1. **Commissioning (see additional commissioning details in FDNY Table 2 below on page 28), and including the reporting requirements below:** 1.1 Functional performance testing of equipment must be conducted, and RDP or approved agency provides a "Preliminary Commissioning Report" of test procedures and results to the building owner. 1.2 Building owner provides the code official with a "letter of transmittal" demonstrating the owner has received the Preliminary Commissioning Report. 1.3 An RDP or approved agency must prepare a "Final Commissioning Report" for the building owner and submit a certification to the DOB with applicable fees. 2. **Special Inspections:** Applicant or Special Inspection Agency conducts any required Special Inspections as identified in the TR1 Statement of Responsibility. 3. **Construction Inspection & Permit(s) Sign-Off:** ➢ If the Final Inspection is to be conducted by the RDP, then the TR1 Final Inspection must be performed and certified within *DOB NOW: Build*. Permit(s) will be signed off when the TR1-Final certification is submitted. ➢ If the Final Construction Inspection is to be completed by the Department, it is requested via DOB NOW: Inspections. The ESS and all associated work will be inspected in accordance with DOB approved construction documents, the OTCR Conditional Acceptance Letter, FDNY Certificate of Approval, FDNY Letter of No Objection, NYC Construction Codes, NYC Electrical Codes, and rules and regulations of the Department. The permit is changed to signed off status when the inspection is given Pass/Final status. → OTCR Step 4: After inspections are complete, RDP must certify the BESS via submitting a signed & sealed letter to OTCR certifying that the installation complies with all conditions of the OTCR Conditional Acceptance Letter. → OTCR Step 5: Obtain OTCR Final Acceptance Letter – OTCR Final Acceptance Letter will be issued after receipt of the certification letter. 4. **Project Sign-Off and Letter of Completion (LOC) Request:** Applicant submits all Required Documents and information in DOB NOW, including: ○ OTCR Final Acceptance Letter ○ Utility PTO (Permission To Operate) Letter ○ PW7 (Letter of Completion Review Request) ○ Complete PW3 Tab (Cost Affidavit)

	○ Final TR1 certification ○ *Final TR8 certification (as applicable)* ○ *PTA final information (as applicable)* ○ *Landmarks signoff (as applicable)* 5. **Final Issuance:** Once reviewed and approved, DOB issues a Letter of Completion (LOC). For ESS that require only an EESE filing (no Alt-CO filing), operation of the ESS can begin after LOC is issued.
Post-Construction Sign-off & Closeout: **Alt-CO Filing**	The steps below are specific to sign-off and closeout of the Alt-CO job filing; and are in addition to/parallel to sign-off and closeout of the Alt GC-EESE job filing: 1. **Commissioning** – required if the Alt-CO job filing includes any mechanical or electrical work. If no mechanical or electrical work is included in the Alt-CO filing, then commissioning shall be part of the Alt-GC-EESE job. 2. **Special Inspections –** Technical Report Special inspections for the Alt-CO work will be specific to the work types of the Alt-CO filing (e.g. concrete inspections for foundation, etc.). These will therefore differ from the Special Inspections identified/needed for the Alt GC-EESE filing. 3. **Construction Inspection** – requested via the *DOB NOW: Inspections* portal. Once the inspection is given Pass/Final status in the *DOB NOW: Inspections* portal, the applicant may request sign off for CO or LOC. For a step-by-step guide see the DOB's Construction Inspection Sign off Prior to Occupancy Request. 4. **Certificate of Occupancy Request** – below are requirements for requesting the new/amended Certificate of Occupancy (CO) for ESS projects, which is initiated within *DOB NOW: Build*. □ OTCR Final Acceptance Letter □ Final Builders Pavement Plan (BPP) □ Final PW3 (Cost Affidavit) □ An approved Schedule of Occupancy in DOB NOW: Build □ Confirmation of no open applications □ Confirmation of no open violations □ Final TR1 □ *Final Building Survey (if a new building or addition to buildings – see NYC Administrative Code §28-118.4)* □ *Other Final TR's (if applicable)* □ *Landmarks signoff (if applicable)* □ *Final electrical sign-off (if an electrical filing is on the Alt-CO)* □ *Final plumbing sign-off (if a plumbing filing is on the Alt-CO)* 5. **Final Issuance –** is a new or Amended CO. Once a Final CO is issued, the job filing status changes to "CO Issued". For non-Accessory ESS that require an EESE filing and an Alt-CO filing, the applicant must obtain the EESE LOC first, then operation of the ESS can begin after issuance of new/amended CO.
Licensed Professionals involved in DOB Filings	All applications must be filed by a NYC Registered Design Professional (RDP) in compliance with design specifications established in codes, rules, and other regulations; see the DOB's Selecting A Design Professional page. Other professionals who may be involved in ESS projects include:

	• Filing Representatives – can assist with specific aspects of permit filings. • Contractors – must have appropriate NYC licenses. • Special Inspection Agency – must be accredited and registered with DOB to perform Special Inspections.
Fees	Permit fees vary, see 2022 NYC Construction Code (§28-112) for more detail. **NOTE:** for projects requiring two separate I-filings (Alt GC-EESE work and Alt-CO work), permit fees will apply to both filings in accordance with the work types associated with each filing. ***Work types should not be duplicated*** within the two separate filings otherwise full fees will be applied to both filings.

DOB TABLE 2: expanded details specific to the Office of Technical Certification & Research approval process

OTCR SITE-SPECIFIC EVALUATION PROCESS FOR BATTERY ENERGY STORAGE SYSTEMS	
OTCR Approval - About	A Site-Specific Evaluation from OTCR is required for every energy storage system (ESS) installations. An OTCR ***Conditional Acceptance Letter*** **(CAL)** is required prior to construction document approval, and an OTCR ***Final Acceptance Letter*** **(FAL)** is required prior to construction sign-off. Relevant codes: See 1RCNY §101-12 and the Article 113 of 2022 New York City Administrative Code.
Required Submittal Materials	All required submittal materials for OTCR site-specific evaluation applications are listed on the ***DOB Office of Alternative Energy's (OAE) ESS Filing & Submittal*** page**.** Key items include: ➢ A completed *OTCR-2: Site-Specific and Electrical Equipment Application* with fee payment. ➢ Documents to be submitted in accordance with the OTCR Battery Application Checklist/Spreadsheet, including but not limited to the following: ○ ESS listing ○ ESS full-scale testing ○ FDNY Certificate of Approval (COA) ○ The OTCR Battery Plan Set ○ Noise Code Attestation (note: applicable to all ESS projects, see DEP's 2025 ESS Noise Code Guidance memo) ○ Zoning and flood zone analyses approved by the DOB plan examiner. ○ FDNY Letter of Conditional Acceptance (LOCA) as required for large outdoor ESS per 3RCNY 608-01. ○ Commissioning plan as required by FDNY for medium and large outdoor ESS (see additional commissioning details in the FDNY Table 2, page 28 below).
How to Submit	**In-person or via mail only:** The New York City Department of Buildings, Office of Technical Certification and Research, 280 Broadway, 7th Floor, New York, NY 10007
Fee	$600 processing fee per OTCR-2 application made payable to the New York City Department of Buildings.
Who can submit	A New York State Registered Design Professional (RDP) must submit the OTCR application in compliance with design specifications established in codes, rules, and other regulations.
Timeline & When to Submit	OTCR submissions should be initiated in parallel with DOB construction and FDNY TM1 applications. Review timelines vary based on factors including completeness of the initial application, unique site needs, and unique project elements.

Application Review/ Approval steps	1. Applicant submits the completed OTCR-2 application form, $600 processing fee, and supporting materials. 2. OTCR reviews project submission documents; may request clarifications or additional information/materials from the applicant. 3. OTCR issues CAL upon satisfactory completion of the evaluation: ➢ CAL must be obtained prior to construction document approval. ➢ CAL must be uploaded to the DOB NOW in association with the job number of the construction application. ➢ CAL establishes conditions that must be met prior to construction and sign-off. 4. Electrical Plan Review (EPR) approval will be required prior to CAL issuance if the electrical installation exceeds kVA and/or voltage thresholds as per 1RCNY 4000-01).
Construc-tion Job Sign-off Steps	After construction/installation of the ESS has been completed: 1. **Complete all DOB and FDNY inspections** of the ESS and associated work. 2. **Conduct commissioning** of the ESS as required per 3RCNY 608-01 (see additional commissioning details in the FDNY Table 2, page 28 below). 3. **Certify the ESS:** RDP must certify via written letter that the installation satisfies all conditions of the CAL. The certification letter must be signed and sealed by the RDP. 4. **Obtain OTCR Final Acceptance Letter (FAL):** ➢ To request the FAL, the applicant must email the certification letter to OTCR along with other required documentation to satisfy the conditions of the CAL, including but not limited to FDNY approvals, inspections sign-off, and commissioning report. ➢ OTCR issues FAL upon satisfactory completion. The FAL must be uploaded to the associated DOB NOW job folder for the construction application prior to construction job sign-off.
Links & Resources	• DOB OAE – About & Contact page • DOB OAE – Energy Storage Filing & Submittals page (includes links to application forms/submission guidance documents)
Contact	The New York City Department of Buildings Office of Alternative Energy | Office of Technical Certification & Research 280 Broadway, 7th Floor New York, NY 10007 **Phone**: (212) 393-2626 **Email:** OAE@Buildings.nyc.gov | OTCR@Buildings.nyc.gov

DOB TABLE 3: expanded details specific to the DOB Electrical Permit process

ELECTRICAL PERMIT PROCESS FOR BATTERY ENERGY STORAGE SYSTEMS	
Electrical Permits - About	**Electrical permits** are required for all ESS installations. **Electrical Plan Review** is required where installations or alterations will exceed certain KVA or voltage thresholds in accordance with NYC electrical code. DOB's Electrical Plan Review page provides details on the EPR submission process. **Special Note:** As of this publication date, the New York City 2025 Electrical Code (**Local Law 128 of 2024**) takes full effect on December 21, 2025. At the option of the project owner, the provisions of the 2025 Electrical Code can be applied to electrical work in accordance with **Buildings Bulletin 2024-008**. All electrical submissions must comply with the requirements of the Energy Conservation Code where applicable.
Required Submittal Documents	1. *DOB NOW: Build* online ED-16A electrical permit application (see the DOB's step-by-step guide, including instructions for submitting electrical permit as a Subsequent filing) ➢ Note: The electrical filing must be listed in the "Related Job Filing" field in the PW1 tab of the EESE construction permit filing 2. Seal and Signature document 3. Other required documents as auto-populated in DOB NOW 4. Equipment specification sheets 5. A single or three-line electrical diagram
How to Submit	Online via the *DOB NOW: Build* application portal
Who can submit	Applications must be filed by a NYC Electrical Licensee or NYS Licensed Professional Engineer. See the *DOB NOW: Build* Electrical Filings Resources site for more information.
Fees	Current NYC Electrical Code (§27-3018, page 18) provides fee details. Current fee structure includes an initial $40 application fee for each electrical permit plus additional fees dependent on the equipment installed and other proposed work, up to $5,000 maximum. Fees are paid via DOB NOW. Note: The adoption of 2025 NYC Electrical Code will affect projects that elect to comply prior to the 2025 code effective date of 12/21/2025. See Buildings Bulletin 2024-008 for details.
Timeline	Permit is issued immediately upon submission. Applicants should obtain the electrical permit after DOB Plan Approval, prior to obtaining the EESE construction permit.

Summary of key steps: Application, Permit, and Sign Off	1. Applicant must apply for and obtain the electrical permit after DOB construction plan approval, prior to obtaining the construction permit. For guidance see the electrical permit Application guide, and Submit, print, and FAQ guide. ➢ At least one electrical (EL) filing must be listed in the "Related Job Filing" field in the PW1 tab of the EESE construction permit filing. 2. In the EL job filing for EESE jobs, under the *Category of Work* section select "Sustainable Energy Installs". Under the *Sustainable Type* section, select the appropriate option, e.g. "Energy Storage Systems and Components" or one of the other renewable energy with storage system options. For additional details see the 11/12/2024 DOB Service Notice. 3. After completion of the installation, applicant requests an electrical inspection online via DOB NOW: Inspections. NOTE: the electrical diagram may be required on-site during inspections when requested by the inspector. 4. Inspector inspects the system. Once the inspection is given Pass/Final status in DOB NOW: *Inspections*, and the job is paid in full, the filing status in DOB NOW: *Build* will be changed to 'Complete'. 5. Applicant requests an Electrical Sign Off via DOB NOW: Inspections. NOTE: The LOC can be requested only after all the permits related to the Job Filing, including the EL Permit, are signed off.
Contact & Additional Information	DOB Customer Service: (212) 393-2405 DOB NOW: Build Electrical Filings Resources – general information page including guidance documents, tip sheets, & links.

FIRE DEPARTMENT OF THE CITY OF NEW YORK (FDNY) PROCESS

FDNY General Updates & Resources:

1. FDNY applications are now done online via the NYC Business/FDNY Business application portal
2. As of 9/7/2021 FDNY LOCA's and Permits are sent via email only
3. User resource: FDNY Business General user guide
4. User resource: FDNY Inspection user guide

FDNY Approvals - Three Components:

1- **Certificate of Approval (COA) for equipment** *(See pages 26-27)*. To be accepted for installation in NYC, all ESS products must obtain equipment approval via the FDNY's *Certificate of Approval* (COA) evaluation process. **NOTE:** The COA is a *product-based* requirement, *not a site-specific requirement*; therefore, an existing COA applies to subsequent installations of that product and does not need to be obtained for each individual installation.

2- **Technology Management Approvals (TM1) & FDNY Operational Permit** *(See pages 28-31)*. TM1 Approvals, and resultant *Letters of Conditional Acceptance* (LOCA), are issued upon completion of the TM1 plan review. Separate TM1 applications are required for the ESS, Fire Alarm, and Fire Suppression system(s), but applicability varies based on project size as outlined in the table on the following page. After completion of the installation, upon passing inspections an Operating Permit is issued for the ESS.

3- **Certificate of Fitness (COF)** *(See pages 32-33)*. All ESS in NYC must be operated and maintained under the general supervision of a trained and knowledgeable person holding a valid FDNY *Certificate of Fitness* (COF) for supervision of stationary energy storage systems: the "B28" COF for commercial ESS, "W27" for Residential/R3 ESS, or "W28" for mobile ESS. COF holder roles and responsibilities specific to ESS are outlined in 3RCNY 608-01 and the COF study materials. Obtaining the COF involves obtaining verification letters, studying the FDNY COF training materials and passing the COF exam, and includes a $25 fee.

FDNY Applications for Approval – Applicability by ESS Size

An overview of FDNY approvals that may apply to an ESS project is outlined below. Applicability of these approval types will vary based on the project kWh size and battery chemistry type. Large systems entail a lengthier process as these projects necessitate multiple FDNY approval types.

FDNY Application Type	System Size Applicability	Issuance(s)
COA: TM2 Application for Certificate of Approval	All systems, all sizes (S/M/L, as defined in Rule 608-01)	COA letter establishing model-specific installation requirements
ESS Installation: TM1 Engineering Application for Site Specific Installation Approval – ESS	Large systems only	**After plan approval:** Letter of Conditional Acceptance (LOCA) issued by Tech Mgt Unit (TMU). **After passing inspection:** Letter of Approval (LOA) issued by Bulk Fuels Safety Unit (BFSU).
Fire Protection: TM1 Engineering Application for Fire Suppression Systems Approval: >Water-spray NFPA 15 fixed systems, and/or >Non-water based systems	Water-spray NFPA 15 fire suppression system is required for all Large ESS projects. Water spray system is not required for Medium and Small ESS, unless specified by the product COA. If a non-water based suppression system is being installed as part of any ESS project, a separate TM1 engineering application will be needed.	**After plan approval:** Letter of Acceptance (LOA) issued by TMU. **Prior to construction:** Project Authorization **After passing inspection:** Letter of Approval (LOA) from Range Hood Unit (RHU)
Fire Alarm: TM1 Fire Alarm Application for Fire Alarm Systems Approval	Fire alarm applicability is dependent on product COA: >Typically required for Large ESS >Not typically required for Small ESS >Applicability varies for Medium ESS	**After plan approval:** Letter of Acceptance (LOA) issued by TMU. **Prior to construction:** Project Authorization **After passing inspection:** Letter of Approval (LOA) from Fire Alarm Inspection Unit (FAIU)
FDNY Operating Permit	Large & Medium systems	**After passing all inspections & obtaining inspection LOAs:** Operating Permit issued by BFSU

FDNY TABLE 1: expanded details specific to the Certificate of Approval application process

CERTIFICATE OF APPROVAL (COA) FOR BATTERY ENERGY STORAGE SYSTEMS	
About & Key Points	To be accepted for installation in NYC, **all ESS products will need to obtain equipment approval** via the FDNY's Certificate of Approval (COA) evaluation. The COA is a comprehensive evaluation of a product and its fire safety profile and performance. It establishes product-specific installation criteria and project design/compliance requirements that must be adhered to in all subsequent installations. It is recommended that ESS installations should utilize products that have already obtained a COA. If a given installation includes a product that has not yet obtained a COA, it will need to obtain the COA as part of its application for FDNY approval. If a given installation is unable to comply with the COA criteria, a site-specific variance can be pursued. **Key points:** • The COA for ESS is issued on a product basis, not on a per-project basis. • The COA evaluation relies substantially on the product's UL 9540 listing, as well as the Hazard Mitigation Analysis (HMA) based on UL 9540A test data (see NFPA 855 ch. 4.4). • FDNY maintains a publicly available list of Approved Energy Storage Systems that have obtained a COA; located on the FDNY Business–Certificate of Approval web page. • The COA letter must be submitted as part of other project approval applications including FDNY TM1 for ESS installation approval, OTCR approval. • COA letters may be obtained from the OEM or authorized OEM officer.
Resources	• To obtain a COA, an application must be submitted to the Technology Management (TM) Unit. See the CUNY DG Hub's "COA Application – Getting Started" guide for: ➢ Submittal requirements ➢ Application portal links & instructions • To learn more about Certificates of Approval generally see Fire Code section **FC 112.**
When to submit	Submissions for the COA can be made at any time. Due to length of time required to complete the COA evaluation, **it is recommended that ESS project developers use equipment that has already obtained a COA, or has a COA application underway**, for time-sensitive or deadline-bound projects.
Who can submit	COA applications are typically submitted by the OEM (Original Equipment Manufacturer), or authorized representative of an OEM.
How to submit	Submit the completed application with all supporting documents via the COA Application Portal. See the above "COA Application – Getting Started" guide for step-by-step submission instructions and additional supporting information.
Fee	$625 per TM2 application for new/original applications, $50 for renewal applications. Online payment must be made at the time of the COA application submission.
Timeline	Applications are reviewed on a rolling basis. Review time will vary; **applicants should anticipate additional information requests and clarifications from the FDNY reviewer and prompt responses will shorten the review timeline.**

Review/ Approval Steps	1. Applicant submits completed application with all required documentation and materials via the FDNY Business portal (Applicant should notify FDNY's Technology Management Unit that an application is forthcoming). 2. Payment must be submitted via the FDNY Business Portal to complete the submission. 3. FDNY reviews the application and notifies the applicant via a Letter of Deficiency (LOD) if further information is needed. ➢ **Note:** this can be an iterative multi-round process; thorough response(s) to the LOD may reduce the need for subsequent LOD's and responses. 4. Upon completion of review, a proposed draft COA letter will be issued. If the applicant agrees to the conditions of approval, the applicant must sign and upload the proposed draft to FDNY Business. 5. The COA will be issued after the applicant returns the proposed and signed draft. 6. The Approved product will be included on FDNY's publicly available List of Approved Energy Storage Systems. Notes: • An application will be deemed abandoned 180 calendar days after the date of filing, if there is no response to a request for Additional Information. • The COA number shall be plainly and permanently stamped or otherwise affixed upon each product by the manufacturer/applicant. • All installations are subject to inspection by the FDNY which may result in additional requirements. • COA must be renewed 3 years after issuance unless otherwise stated. Applicants may apply for renewal from 60 calendar days prior to a certificate's expiration date to not more than 1 year after such date. The commissioner shall not renew certificates that have been expired for more than 1 year.
Contact	Technology Management: tech.mgt@fdny.nyc.gov, 718.999.2405 For application portal assistance contact FDNY.BusinessSupport@FDNY.nyc.gov

FDNY TABLE 2: expanded details specific to the Technology Management application process

TM1 APPROVALS & OPERATING PERMIT FOR BATTERY ENERGY STORAGE SYSTEMS	
About	**TM1 Approval(s)** authorizes use of a device, equipment and/or occupancy as per the NYC Fire Code and other laws, rules, and regulations. Issued by the FDNY Bureau of Fire Prevention (BFP) Technology Management (TM) Unit. **Operating Permits** are required for "Large" and "Medium" ESS systems, as defined in 3RCNY 608-01 and summarized in the *FDNY Applications for Approval–Applicability by ESS Size* table on page 25 above. Permits must be posted in a conspicuous location on the premises and be readily available during inspections.
Initial Application Requirements & Links	**Engineering TM1 for Energy Storage –** for Large ESS only, site-specific installation approval by the TM Sustainability Unit. Application link: FDNY Business Engineering Application portal. Submittal requirements include: ○ ***Site Plan:*** The ESS TM1 application requires submission of a ***Site Plan*** including site drawings/diagram, prepared by a NYS licensed design professional (PE/RA). ▪ A Site Plan Checklist is available from the CUNY Smart DG Hub for guidance. ○ ***Other required documents:*** in addition to the Site Plan, the TM1 also requires the following submittal items. For further detail, see the 2024 Annual NYC Solar & Storage Installer Workshop FDNY presentation. ▪ Narrative or scope of work ▪ Installation manuals and technical documentation ▪ UL Listings ▪ Commissioning & Decommissioning Plans (as per NFPA 855, 2020 edition Chapters 6 and 8; modified by the Fire Code Appendix B pages 30-31) ▪ Emergency Management Plan (as per NFPA 855, 2020 edition section 4.1.3; modified by the Fire Code Appendix B page 26) ▪ Certificate of Fitness (COF) holder information ▪ Other pertinent information (Product COA, signage, flood plan map, Certificate of Occupancy, etc.) ***Filing note:*** in the Project Description field of the ESS TM1, include the Record ID# of any associated TM1 and/or OTCR applications to facilitate ease of tracking. ***Filing note:*** If a DOB job number has been issued, include in item #7 on the TM1.
	Fire Alarm & Fire Suppression TM1 – required based on project size and COA. ○ Fire Alarm TM1 (COA-determined) – see the FDNY Fire Alarm Application portal. ○ Fire Suppression TM1 (Large ESS) – see the FDNY Engineering Application portal. **Additional TM1 types –** may be triggered based on site factors. ○ Fire Apparatus Access TM1 – required when road width or distance to street does not meet code minimums (typically Large ESS only). ○ Fire Hydrant TM1 – required if existing hydrant locations exceed code maximums (typically Large ESS only).

	Project Authorization – is equivalent to the Work Permit issued by DOB, and is required prior to commencement of work for Fire Alarm and Fire Suppression systems. Project Authorization is issued upon successful plan approval, via the FDNY Business portal (see the FDNY Project Authorization Request Guide for instructions).
Notes on other TM1 Application Types	***Fire Alarm Applications:*** • Review/approval by FDNY Fire Alarm plan examination and COA unit. • Note: Fire Alarm applications require providing proof of occupancy, typically a DOB Certificate of Occupancy (CO) or an approved Schedule A. If these are not yet available the applicant can request to move forward with a technical review, with proof of occupancy to be specified as a deficiency to be resolved prior to approval.
	Fire Suppression Water Spray System: • Reviewed/approved by FDNY TMU. • Note: Distance between the Fire Department Connection (FDC) and the hydrant that feeds the suppression system must not exceed 100' as specified in NFPA 14; larger distance may be allowable based on site-specific variance. Distance between the FDC and the ESS installation is determined on a site-specific basis, with a preferred 50' minimum distance that may be modifiable with additional safety mitigation.
	Fire Apparatus Access: • Review/approval by FDNY City Planning unit. • Triggered for projects with no existing public or private road access, or where existing roads do not meet code requirements as per FC 503 including minimum road width of 34' or where the ESS installation exceeds 40' setback from the road.
	Fire Hydrant New Installations: • Review/approval for fire hydrant installation or relocation must be obtained from DEP prior to FDNY. • Installation of a private fire hydrant will be required for an ESS installation if existing hydrant locations exceed code maximums as per FC and NFPA 14 (typically Large ESS only, and in conjunction with fire suppression system design).
Who can submit	All TM1 application(s) must be prepared by a Registered Design Professional in compliance with design specifications established in codes, rules, and other regulations.
Application Review & Approval Steps	1. Applicant submits online application & payment *(Applicant should notify Tech Management when an ESS application is forthcoming).* 2. FDNY reviews the application and notifies applicant electronically if additional information is needed; this may be an iterative process. 3. FDNY issues either a Letter of Deficiency (LOD) requiring response, or a Letter of Conditional Approval (LOCA) to the applicant. 4. For fire alarm and fire suppression systems, applicants must obtain *Project Authorization(s)* via the FDNY Business portal after receiving the Letter(s) of Approval with a stamped plan(s). 5. Upon obtaining the Project Authorization, installation can begin.

Post-Installation: Inspection, Commission-ing, & Final Permit Chronology	Upon completion of installation(s) of ESS, Fire Alarm, and/or Water Spray systems: 1. **Fire Alarm & Water Spray Fire Suppression inspections:** must be scheduled prior to commissioning of the ESS. • NOTE: For *initial* Fire Alarm inspection, in-person submission of request and documentation is required, see Fire Alarm Inspection Instructions & Request Form. 2. **Commissioning**: Commissioning may commence after passing FAIU and RHU inspections. Scheduling of commissioning requires email notice to tech.mgt@fdny.nyc.gov at least 2 business days in advance - see Rule 608-01(f)(3) for further details. No confirmation is required and the scheduled action can proceed in the Department's absence. ○ NOTE: It is recommended that Applicant request BFSU pre-commissioning site visit prior to proceeding with commissioning. 3. **BFSU Inspection:** Request online via FDNY Business Portal. Fire Alarm & Fire Suppression LOAs will need to be provided at BFSU inspection. Utility interconnection agreement is preferred but not required. 4. **Familiarization drill:** BFSU may request familiarization drill with local fire house as part of Final BFSU inspection process. 5. **Final Issuance:** After passing BFSU final inspection/final emergency shutdown test, BFSU issues final LOA and Operating Permit.
Inspections: Additional information	**Key notes on Fire Department Inspections:** • Separate inspections are required for each TM1-approved work type: ○ ESS inspections - conducted by the ***Bulk Fuels Safety Unit*** **(BFSU)**. ○ Fire Alarm inspections - conducted by the Fire Alarm Inspection Unit **(FAIU)**. ○ Fire Suppression inspections - conducted by the Range Hood Unit **(RHU)**. • All inspection requests are made online via FDNY Business portal except for initial Fire Alarm requests which must be made in-person. Resources: General Inspections info & Requesting Inspections info.
Fees	**TM1 Engineering Review:** $420 per TM1 application + $525 fee for new technology/complex technical analysis when required (non-refundable) **TM1 Fire Alarm Review:** $585 Payments must be made online via FDNY Business
Timeline & When to Submit	Application review times are highly variable; a pre-submission meeting with the FDNY Technology Management Unit (TMU) is recommended to identify needs and concerns for a given project. See the CUNY DG Hub's Conceptual Design Meeting Preparation Checklist. **Note:** The ESS LOCA is a required submittal for completing DOB OTCR's conditional approval. Therefore initiating FDNY plan review is recommended prior to or in parallel with the OTCR application.

Resources	• **FDNY Business User Guide** for Obtaining & Viewing a Permit/LOA. • **FDNY Business User Guide** for Inspections Requests & Cancellations and Requirements for Inspection Types. • **Fire Alarm** Tips for Successful Approval of a Fire Alarm System in NYC. • **MyDashboard function** in the NYC Business portal to check application status. • **FDNY Business** Online Services FAQ **–** includes application(s) record management, account management, records sharing.
Contacts	• General contact for TM applications: tech.mgt@fdny.nyc.gov, 718.999.2405 • Questions/assistance with Fire Alarm & Fire Suppression applications: PlanIntake@fdny.nyc.gov • Other elements of FDNY review/approvals processes: BFP_SpecialProjects@fdny.nyc.gov • Assistance with the FDNY Business platform: FDNY.BusinessSupport@FDNY.nyc.gov

FDNY TABLE 3: expanded details specific to the Certificate of Fitness application process

CERTIFICATE OF FITNESS (COF) FOR BATTERY ENERGY STORAGE SYSTEMS	
About: Key Details	• ESS installations require ***General Supervision*** by a Certificate of Fitness (COF) holder – see this About document for basic information. *General supervision* is a defined term in the Fire Code; for ESS this refers to the person holding a B28 (Stationary ESS), W28 (Mobile ESS), or W27 (1-2 Family ESS) COF. • General supervision **does not** require in-person physical presence on the premises when the ESS is in normal operation. General supervision requires oversight of, and availability during, key points in the installation and lifecycle of the ESS and any emergency situations. • The COF holder can be any person who is trained and knowledgeable about the product, its installation, and NYC regulations. The holder serves as the primary point of contact with FDNY and is responsible for overseeing installation, operational & maintenance compliance, and providing assistance to FDNY for fire response needs. • B28 COF is premises related, though a COF holder can apply to supervise multiple sites. W28 and W27 are a city-wide certificate valid for the specific person to whom it is issued and can be used anywhere within NYC.

Application Information	• **About:** FDNY provides a brief Help Guide brochure with basic COF information.
	• **Application:** COF applications must be initiated via the FDNY Business portal; after application is approved FDNY will email approval and exam registration info. See this COF Application Guide to begin.
	  ○ Applicants must submit supporting documents including a *Battery System Training Verification Letter* and an *Employer Recommendation Letter.* Samples of these letters are provided in the Study Materials document for each COF type.
	• **Exam:** Obtaining the COF requires passing a written exam, taken in-person at FDNY Headquarters. Exam fee is $25 and duration is approximately 30 minutes.
	  ○ Applicants must study the *Notice of Exam & Study Materials* thoroughly - all exam questions will be based on the *Notice of Exam & Study Materials.*
	  ○ Notice of Exam & Study Materials are accessible via the *COF Page*; scroll down to locate the B28, W28, or W27 materials depending on your project's need.
	• **Group certifications:** Groups of 10 or more applicants can schedule a group exam.
	• **Multiple sites:** A B28 COF holder may supervise multiple sites. This will require submitting additional COF applications and $25 fee, but additional exam is not required.

When to Apply/ Timeline	Applicants can obtain the COF at any point prior to or during the ESS TM1 application process. For planning purposes: • The application process timeline includes 15-30 business days for approval of the COF application which authorizes the applicant to register for the exam. • The first time the COF holder will be required to be **present on-site** is during the final (emergency shut-down) test during BFSU inspection. • COF contact information must be **included on signage** as per Rule 608-01(i)(6)(B)(5)). • For pre-commissioning and commissioning tests prior to the final shutdown test, a subject matter expert may be present instead of a COF holder, provided that at least one individual at the site is actively working to obtain the COF.
Key Roles & Responsibili-ties	• **COF holder roles/responsibilities** are outlined within the *Study Materials*; also review COF responsibilities as described throughout 3RCNY 608-01. • **Commissioning:** COF holders must supervise commissioning (and decommissioning) including notifications to FDNY as required by 608-01. • **Maintenance/Inspection/Recordkeeping:** The COF holder is responsible for overseeing/ensuring required maintenance, annual inspection, and written logs. • **Emergency Response:** In an emergency event the COF holder must be available to provide technical assistance and/or on-site presence upon FDNY request; the COF holder is to take responsibility for post-incident hand-off/site management.
Information & Assistance	Email pubcert@fdny.nyc.gov or call 718-999-1988 For general COF information visit the FDNY's Certificate of Fitness page.

CONSOLIDATED EDISON INTERCONNECTION PROCESS

The table below is intended to complement existing information and resources that are available from the Department of Public Service (DPS) and Con Edison.

CON EDISON INTERCONNECTION FOR BATTERY ENERGY STORAGE SYSTEMS	
Key Inter-connection Information & Links	1- Interconnection processes are established and detailed in the **New York State Standardized Interconnection Requirements (SIR)** most recent edition, effective as of 2/1/2024. The SIR, as well as other key documents and information, is provided on the **DPS 'Distributed Generation Information' page**. There is ESS-specific content in the SIR including: ➢ *Section I: Application Process* applies to all distributed generation projects; with *Section I.E.* containing additional steps specific to ESS projects. ➢ Technical/design – covered in *Section II: Interconnection Requirements* ➢ Appendix F: Application Package Checklist ➢ Appendix K: ESS Application Requirements 2- The SIR governs projects up to 5MW only. Con Edison's interconnection process and requirements differ depending on project size, especially between "small" (≤50kW) versus "large" (>50kW – 5MW). **NOTE:** for projects over 5MW, applicants must follow the process outlined in Con Edison's **Utility Process for Distributed Generation Interconnections** guide. 3- Large ESS will normally require a ***Coordinated Electric System Interconnection Review* (CESIR)** – the CESIR is a comprehensive engineering study that will assess the impact of an ESS installation on utility infrastructure, and determine the scope, design specs, and costs of any needed utility distribution upgrades and/or interconnection facilities. 4- Con Edison maintains a comprehensive **Energy Storage System Guide, Version 4 July 2022** which provides detailed technical considerations for ESS interconnection within Con Edison network types, along with process steps based on the SIR. Project developers should be familiar with this document. **Note:** the Con Edison Guide references an older version of the SIR; the Guide is still broadly applicable but users should be aware that the most recent edition of the SIR was released in Feb 2024. Additionally, Con Edison's **Applying for Private Generation Interconnection** page provides a list of forms, guidance documents, and application portal links including (but not limited to): ➢ SIR Application Process Flowchart (summary of SIR *Section I: Application Process*) ➢ Distribution Engineering Cost Guide ➢ Cost-Sharing 2.0 FAQ
How to submit	All applications for interconnection are administered via Power Clerk, Con Edison's online portal for distributed generation applications. There are two separate portal links: ➢ Large Projects greater than 50 kW up to 5MW ➢ Small Projects 50kW or less

	For a tutorial on using Power Clerk, see this video. For projects above 5 MW, please contact dgexpert@coned.com for additional guidance.
When to submit	It is recommended that submissions for interconnection be made prior to initiating DOB and FDNY submissions for most ESS projects. Timelines will be lengthier for larger projects.

Fees & Costs	**Fees for utility interconnection applications** are set by the SIR and vary based on system size and other factors related to the complexity of the interconnection.
	
	Application fees:
	• Systems ≤50 kW: No application fee.
	• Systems >50 kW to 5 MW – applicable depending on project type, characteristics, etc.:
	  ○ $750 Pre-Application Report fee (optional; creditable)
	  ○ $750 general application fee (creditable)
	  ○ Supplemental screening ($2500-$5000)
	  ○ Protection & Control Review ($500 plus $4/kW capped at $3,000)
	  ○ CESIR review; cost varies based on factors such as service to the building, local network conditions, etc. Fee estimates are outlined in Con Edison's ***Distribution Engineering Cost Guide***, available via the Applying for Private Generation Interconnection page.
	
	Utility interconnection & system modification costs reflect construction costs for interconnection facilities and any network upgrades needed for integrating the ESS into the local grid infrastructure.
	• Costs are determined on a site-specific basis and many factors can impact costs e.g. hosting capacity, extent of upgrade, site conditions, etc.
	• Actual costs for interconnected projects are published in the ***Con Edison Interconnection Queue Data*** spreadsheet, located under the ***SIR Inventory Information*** section of the **DPS Distributed Generation Information page**.

Application Initiation: Process & Timeline	The SIR establishes the timelines below for application process milestones.
	NOTE: estimates do not include requests for missing information, iterative design reviews, additional inspections that may be required, or changes to project parameters.
	
	The steps below provide a high-level overview. More thorough details, including screening review options (see Step 3 below) that may be more suited for smaller projects, are outlined in Con Edison's Simplified Process Flow Chart (50kW-5MW) and in the SIR.
	
	1. **Applicant initiates Interconnection Request Application** with required fee and documentation/materials outlined in *Appendix F* and *Appendix K* of the SIR.
	
	2. **Initial Application Review (10 business days)** Con Edison provides initial review for completeness, notifies applicant of any missing or supplemental information needed.
	  ○ ***30 business days*** *for the customer to provide any requested additional documentation, may be iterative. Completed application is placed into utility interconnection queue.*
	
	3. **Preliminary Screening Analysis (15 business days)** Con Edison completes preliminary analysis of the proposed system interconnection and provides results to applicant.
	  ○ ***15 business days*** *for customer to sign executed Standardized Interconnection*

	Contract for projects not requiring interconnection facilities or utility upgrades; ○ ***10 business days*** *for customer to notify utility of desired next step option (Preliminary Analysis results meeting; Supplemental Review; Proceed to CESIR – each option will have variable timelines associated).* 4. **CESIR Invoicing/Payment (10 business days)** upon notification from customer to proceed, Con Edison invoices for CESIR cost (+5 additional days for Con Edison to provide estimate of CESIR cost prior to invoicing if applicant requests). ○ ***10 business days*** *for customer to complete payment of CESIR fee.*
For Projects Requiring CESIR Study: Inter-connection & Utility Upgrade Process Steps	1. **CESIR Initiation:** Customer provides any outstanding documents needed to complete the Interconnection Design Package; as well as proof of site control, electrical studies, etc. (as outlined in SIR Appendices F and K, and the ***Application Forms section*** of the Applying for Private Generation Interconnection page). This may be an iterative process to finalize correct/comprehensive submittals. 2. **CESIR Study Phase (60 - 100 days):** Con Edison conducts CESIR review; completed study provides results to Customer including: ○ Impacts on utility network. ○ Estimated design specs and costs of interconnection and system upgrades. ○ Service ruling – e.g. physical connection for electric service. ○ ESS operating parameters e.g. charge and discharge windows. ○ Any upgrades triggering Cost Sharing that may be required (see ***Cost Sharing 2.0 FAQ*** on the Applying for Private Generation Interconnection page. ○ ***Up to 90 business days*** *after receipt of CESIR results for customer to submit initial 25% payment of interconnection/upgrade cost estimate. Contract is executed after payment; utility provides initial construction schedule and may commence design work. Customer must complete subsequent payment of remaining 75% of project cost within 120 business days of initial payment.* 3. **Interconnection & System Upgrade Construction Design & Planning:** Con Edison commences review and approval of interconnection & utility upgrade construction plans; may be iterative with the customer. Characteristics of service being provided and local site factors will impact level of review needed, and subsequent timeline. ➢ Customer submits & obtains approval for any pending follow-up project elements (e.g. blockhouse design, high-tension design, line diagram, proof of land-use modification approvals) as applicable. ➢ Con Edison completes customer design review. Approval of plans will be issued via email. ➢ Customer and Con Edison collaborate to develop a Project Construction Schedule and identify an In-Service Date. 4. **Construction Phase:** Con Edison commences construction of utility modifications; customer constructs the interconnection facilities in accordance with the utility-accepted design (ESS installation may occur in parallel). Site conditions and other project-specific factors, including external factors, will impact construction timeline. 5. **Energization:** On completion of interconnection/upgrade construction, customer requests site energization. ➢ DOB sign-off of electrical permit is required prior to site energization.

	➢ Customer completes ESS commissioning as per City code requirements. 6. **Verification Testing:** Upon customer completion of ESS commissioning, applicant must request utility Verification Test via PowerClerk; furnish signed First Amendment of the Interconnection Agreement; and submit final as-builts, DOB electrical sign-off, and testing procedure prior to test. ➢ For larger ESS projects, the utility will typically require witnessing of the verification testing. ➢ For <50 kW projects, after construction/utility upgrades, applicant must submit written certification that the Verification testing has been completed. 7. Upon successful completion of Verification Test and final inspection utility issues Permission To Operate (PTO) Letter and counter-signed First Amendment of the Interconnection Agreement within 10 business days. 8. Cost Reconciliation
Inspections	Provided by Con Edison; no additional fee/cost. Note: • Inspections can consist of both mid-construction as well as final/post-construction inspection. PTO is issued upon satisfactory passing of final inspection. • Two inspection types may be applicable: 1) Addressing the utility service (for jobs requiring upgraded or new service). 2) Addressing the DG/DER (e.g. ESS plus associated equipment).
Questions, Additional information, & Assistance	Questions during the application, review, and approval process should be directed to the Con Edison Customer Project Manager (CPM), who is assigned after applications are submitted. Applicants can track the status of their application online through the Project Center's "My Projects" tab or by communicating with their CPM assigned to the project. Additional information on general incentive programs and process guidelines is available at Con Edison's DG Home Page.

ABOUT | The Smart Distributed Generation (DG) Hub, established by Sustainable CUNY of the City University of New York in 2013, is a comprehensive effort to develop a strategic pathway to safe and effective solar and storage installations in New York City. The work of the DG Hub is supported by the U.S. Department of Energy, the New York State Energy Research & Development Authority (NYSERDA), the New York Power Authority (NYPA), and the City of New York. The DG Hub's Solar and Storage Ombudsmen are available as a technical assistance resource for stakeholders – reach out for assistance with your solar or storage project.

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