



PERMITTING ENERGY STORAGE SYSTEMS IN NYC:

An Update of Agency Requirements & Resources

Daniella Leifer, CUNY Smart DG Hub Project Manager

Central Hudson Solar Summit March, 2021



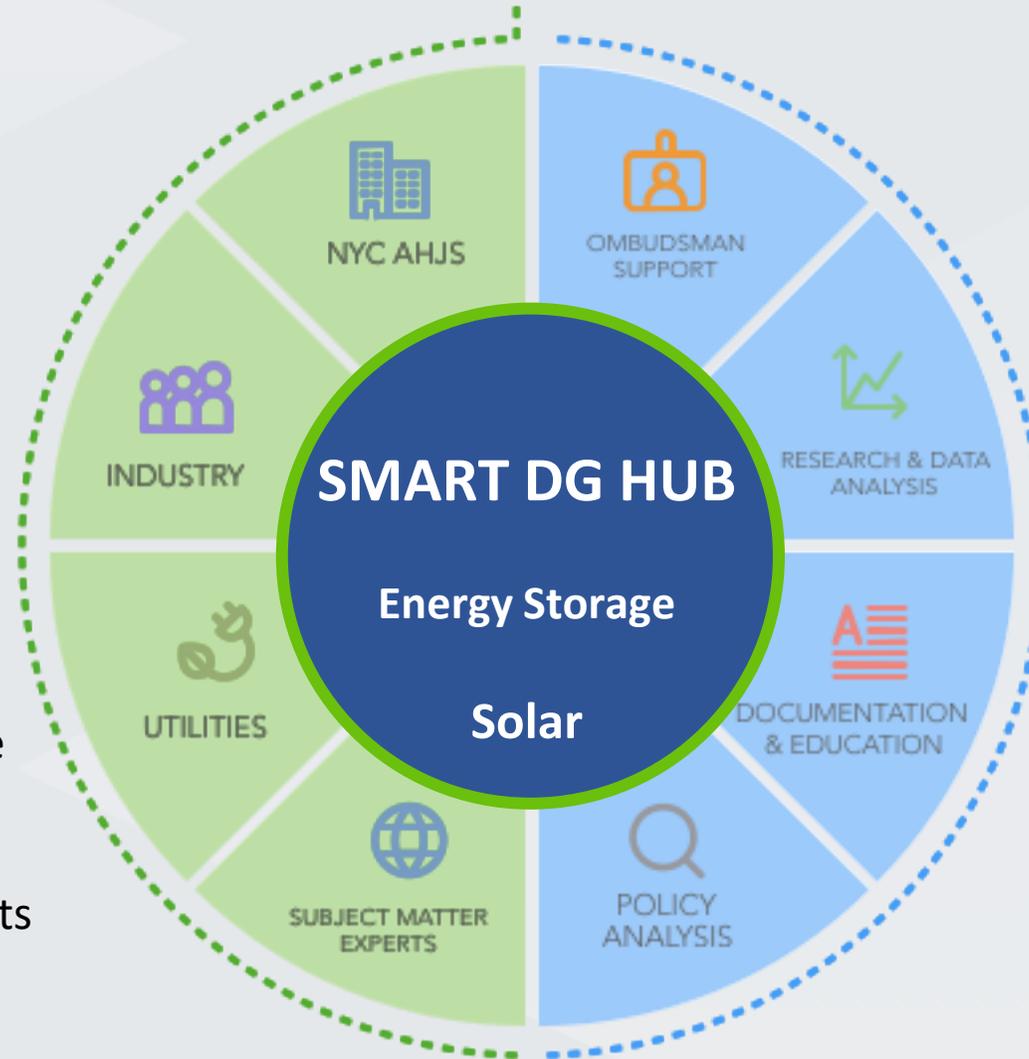
SMART DG HUB



Sustainable CUNY- Smart DG Hub

ENGAGEMENT OF STAKEHOLDERS

- Mayor's Office
- NYC DOB
- FDNY
- NYCHA
- ConEd
- NYPA
- NYSERDA
- Department of Energy
- NYC Solar Installer Roundtable
- DG Hub Roundtable
- National Laboratories
- Industry Subject Matter Experts
- CUNY Faculty (Hunter, City College, Energy Institute, CSI)



PATHWAYS TO PROGRESS

- NY Solar Map & Portal
- NY Solar/DG Ombudsmen
- Solar/Storage Permitting Guides
- Industry Training
- Agency Training
- NYC DG Roadmap
- Property Tax Abatement Analysis
- Solar Pro-Cert
- Solarize Pilots
- Summits and Workshops
- Zoning Analysis
- Largest Community Shared Solar Program in the Country (NYCHA)

Robust Internship Program for CUNY Students

Timeline: ESS Permitting in NYC and National Standards

2017

New York City

- **Feb 2017** DG Hub, NYSERDA, FDNY, / DOB permitting initiative
- **Feb - Dec 2017** Weekly meetings with AHJs on guidelines

National Standards

- **Aug 2017** IFC 2018 published
- **Oct 2017** NFPA 855 first draft
- **Nov 2017** UL 9540A 1st edition

2018

New York City

- **April 2018** NYC outdoor permitting guidelines published
- **Sept 2018** DOB 1st storage bulletin
- **Nov 2018** UL flow charts developed

National Standards

- **Jan 2018** UL 9540A 2nd edition
- **June 2018** UL 9540A 3rd edition
- **July 2018** NFPA 855 second draft

2019

New York City

- **Jan 2019** DOB 2nd storage bulletin
- **July 2019** ConEd Bulk Storage RFP issued
- **July 2019** NYS emergency rule published
- **Aug 2019** NYSERDA Guidebook published
- **Sept 2019** DOB storage zoning bulletin
- **Oct 2019** FDNY storage rule published
- **Nov 2019** Stakeholder feedback

National Standards

- **Sept 2019** NFPA 855 published
- **Nov 2019** UL 9540A 4th edition

2020

New York City

- **Feb 2020** Updated NYC Permitting Guide
- **April 2020** NYC UL 9540A Data Utilization Guide & Flow Charts
- **Dec 2020** Permitting in NYC: FDNY Emergency Management Plan Preparation Guide
- **Dec 2020** Permitting in NYC: Conceptual Design Meeting Preparation Guide

National Resource

- **Feb 2020** UL 9540A 2nd edition

NYC Agencies & Approvals

Authorities Having Jurisdiction (AHJs)



Standard Permits

Construction

Electrical

OTCR

Private Generation Interconnection

CESIR & Interconnection Requirements

Tech Management (engineers)

Haz Mat Operations

Equipment Approval/COA & Permit/Letter of Approval

OTCR Letter of Acceptance: "Conditional" and "Final"

DOB Permitting: Buildings Bulletin 2019-002

- Issued January 30, 2019
- Available at https://www1.nyc.gov/assets/buildings/bldgs_bulletins/bb_2019-002.pdf
- Outlines filing and submittal requirements, approval process for DOB standard permits and OTCR special approval.
- References **OTCR Battery Application Checklist**, Required Submittal Information e.g. project design specs, safety features, etc.
- Applies to specified battery chemistry types – lithium-ion, flow batteries, lead acid, and VRLA; indoor and outdoor.



NYC Buildings Department
280 Broadway, New York, NY 10007

Rick D. Chandler, P.E., Commissioner



BUILDINGS BULLETIN 2019-002 OTCR

Supersedes: 2018-012

Issuer: Alan Price, P.E. 
Director, Office of Technical Certification and Research

Issuance Date: January 30, 2019

Effective Date: Immediately to applications submitted after issuance date

Purpose: This document establishes filing and submittal requirements, and outlines the approval process for lithium-ion, flow batteries, lead acid, and valve regulated lead-acid battery energy storage systems listed to UL 9540.

Related Code/Zoning Section(s): MC 502
BC 509
FC 608

NYC EC Article 408
NYC EC Article 685
NYC EC Article 705

FDNY Permitting: FDNY Rule 3RCNY 608-01

- Enacted October 1, 2019
- Available at <https://www1.nyc.gov/site/fdny/codes/fire-department-rules/fire-dept-rules.page>
- Establishes standards, requirements, and procedures for design, installation, O&M, record-keeping
- Applies to outdoor systems only, not UPS, emergency/backup power
- Applicability of requirements varies – depends on system size & battery chemistry type

Table 1
Stationary Storage Battery System Size Thresholds

Battery Technology	Aggregate Rated Energy Capacity		
	Small	Medium	Large
<u>Lead Acid Battery</u>	<70 kWh	>70 kWh and ≤ 500 kWh	> 500 kWh
<u>Ni-Cd Battery</u>	<70 kWh	>70 kWh and ≤ 500 kWh	> 500 kWh
<u>NiMH Battery</u>	<70 kWh	>70 kWh and ≤ 500 kWh	> 500 kWh
<u>Li-ion Battery</u>	<20 kWh	>20 kWh and ≤ 250 kWh	> 250 kWh
<u>Flow Battery</u>			

Table 2
Stationary Storage Battery System Compliance Requirements

Section	Compliance Requirement	Small	Medium	Large
(c)	<u>General Provisions</u>			
(c)(4)	Permit	No	Yes	Yes
(c)(5)	Supervision (Certificate of Fitness)	Yes	Yes	Yes
(c)(6)	Obligations of Owner and Operator	Yes	Yes	Yes
(c)(7)	<u>Listing and Full-Scale Testing Standards</u>			
(c)(7)(A)	• <u>Listing</u>			
	○ <u>Lead Acid Battery</u>	Yes	Yes	Yes
	○ <u>Ni-Cd or NiMH Battery</u>	Yes	Yes	Yes
	○ <u>Li-Ion Battery</u>	Yes	Yes	Yes
	○ <u>Flow Battery</u>	Yes	Yes	Yes
(c)(7)(B)	• <u>Full-Scale Testing</u>			
	○ <u>Lead Acid Battery</u>	No	No	No ^g
	○ <u>Ni-Cd Battery</u>	No	No	No ^g
	○ <u>NiMH Battery</u>	No	No	No ^g
	○ <u>Li-Ion Battery</u>	Yes	Yes	Yes
	○ <u>Flow Battery</u>	No	No	No ^g

NYC Outdoor Lithium Ion Permitting Guide

Energy Storage System
Permitting and Interconnection
Process Guide
For New York City
Lithium-Ion Outdoor Systems

February 2020

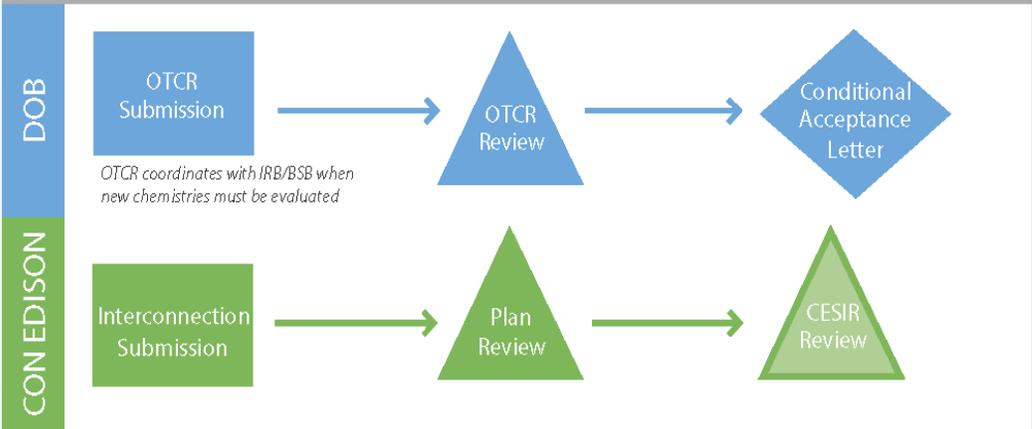


With Technical Assistance Provided by DNV GL

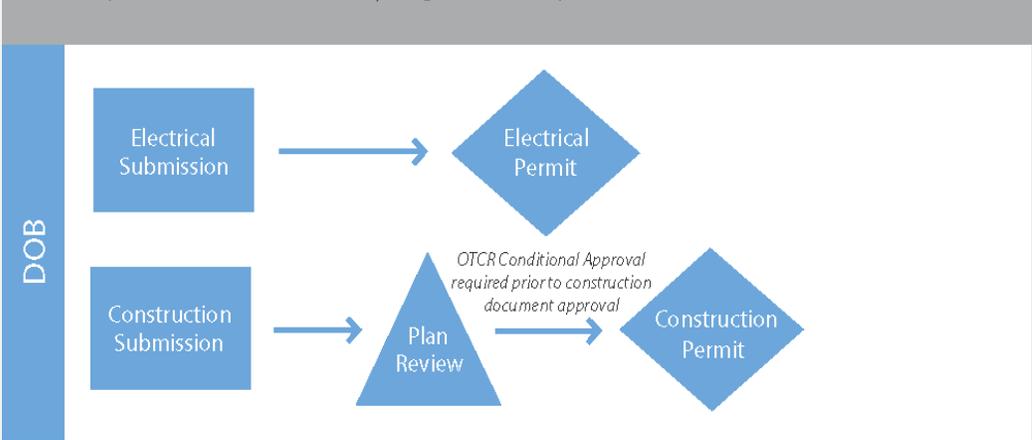
- **Comprehensive guide across all 3 approval entities –** FDNY, DOB, Con Edison (for grid interconnection)
- Originally published April 2018
- Updated and re-released Feb 2020
- Available at https://nysolarmap.com/media/2038/li-ion-permitting-guide-updates_feb-2020final.pdf
- Consolidates **all** application requirements, submission documents, project/site design requirements, and approval processes
- Information provided:
 - **Multi-agency Overview**
 - **Small/Medium/Large Process Flowcharts**
 - **Individual Agency How-To Details**
 - **Lithium-Ion Comprehensive Checklist**

Permitting Process Flowchart: Small systems

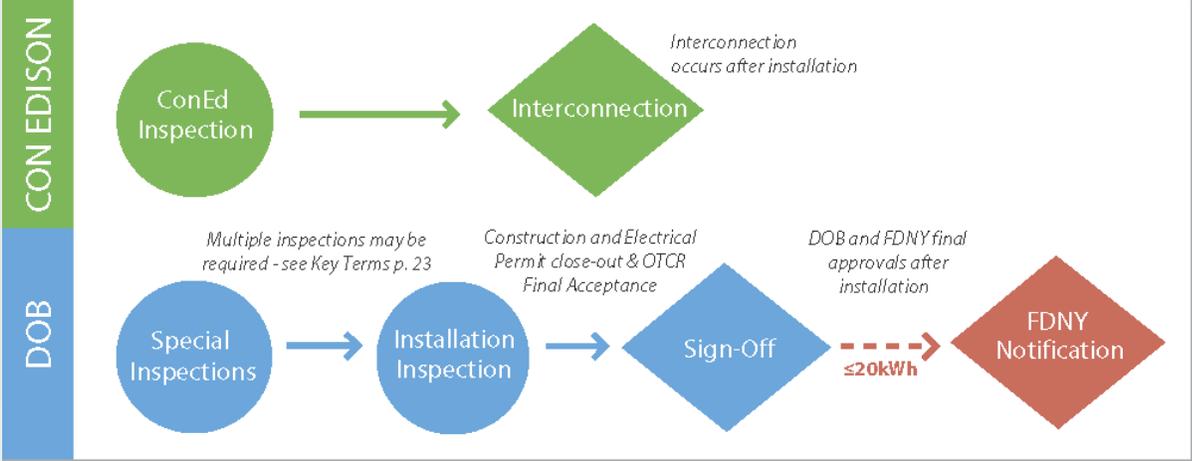
STEP 1: These submissions initiate the permitting process. Submissions may be made in parallel.



STEP 2: These submissions occur after OTCR conditional approval. Submissions may be made in parallel. Construction may begin after the permits below are obtained.



STEP 3: These steps occur during ESS installation. Inspections may occur in parallel.



ACRONYMS

- TM: Technology Management
- HM: Hazardous Materials
- OTCR: Office of Technical Certification and Research
- IRB: Innovation Review Board
- BSB: Buildings Sustainability Board
- CESIR: Coordinated Electric System Integration Review

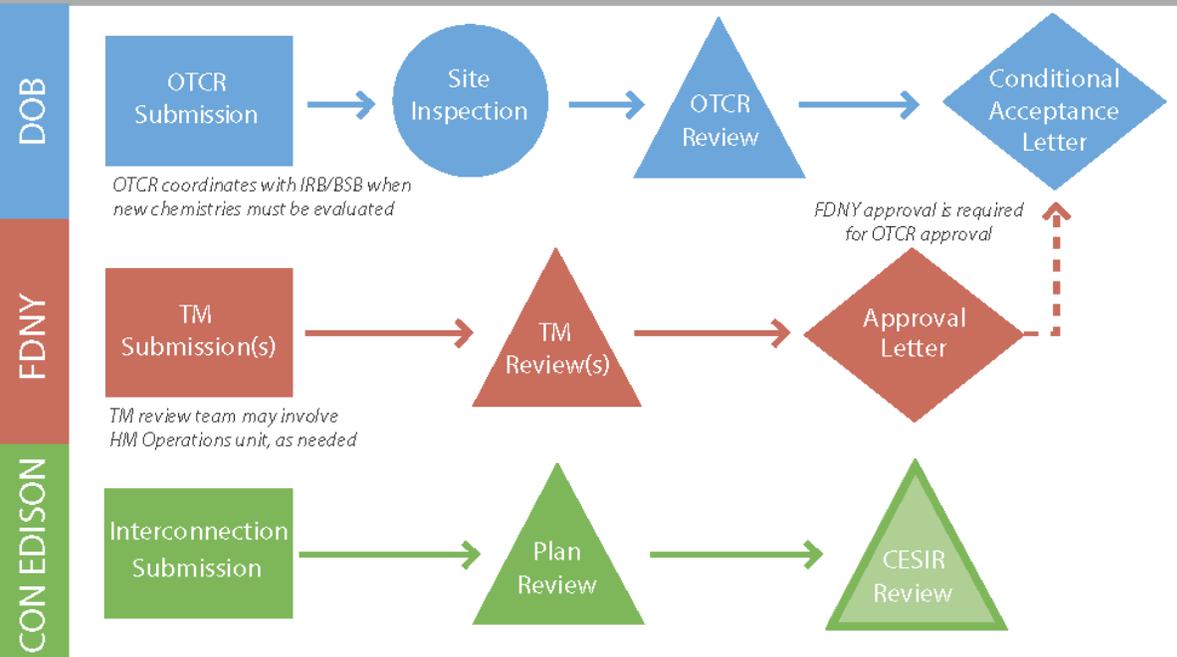
TIMELINE

The timeline for these processes vary by project size and location, product listings, completeness of required documentation, and other factors.

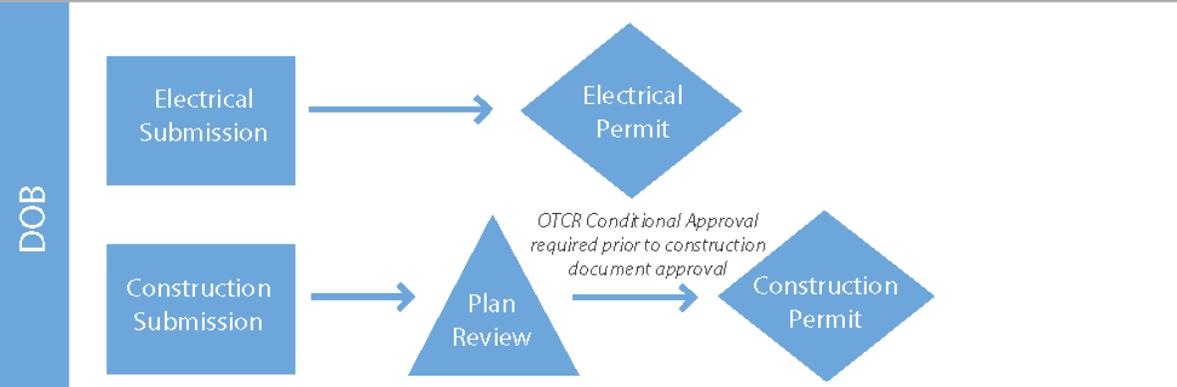
Applicants may need to resubmit documentation as requested. Currently, FDNY, DOB and Con Edison cannot provide a projected timeline.

Permitting Process Flowchart: Large/medium systems

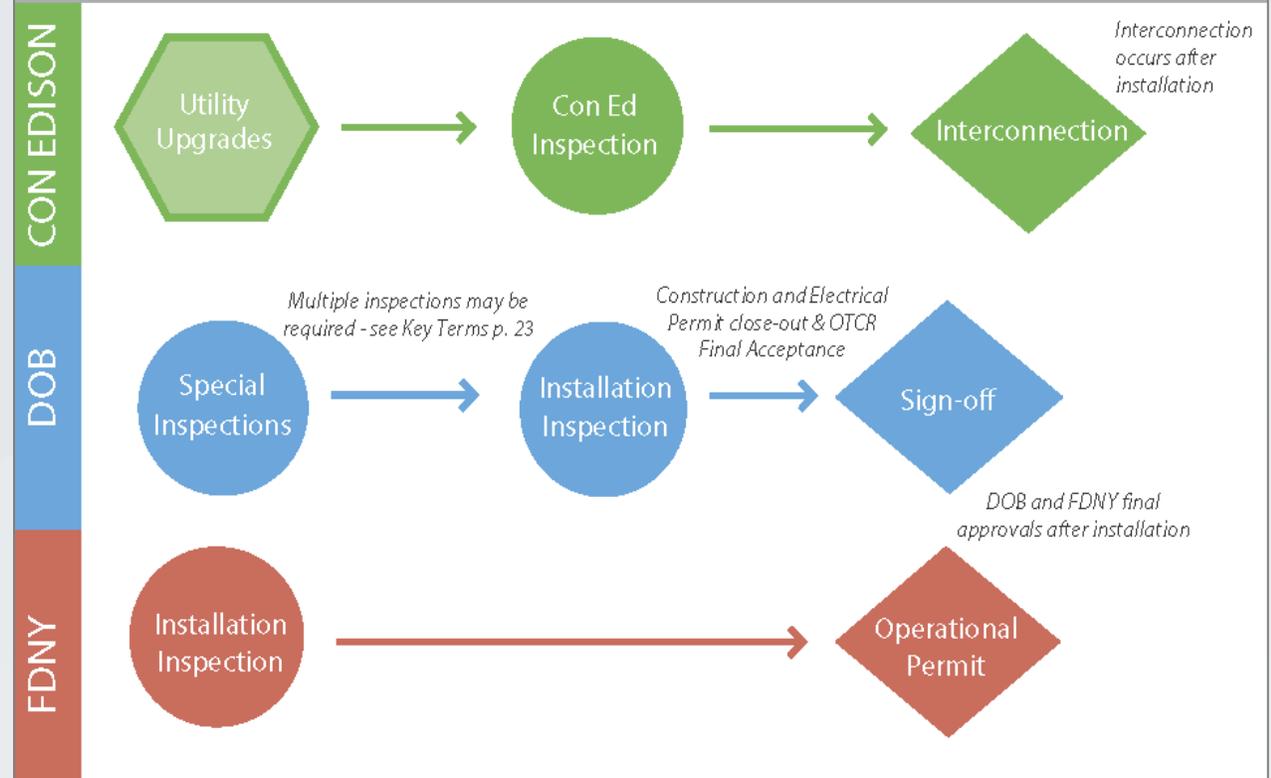
STEP 1: These submissions initiate the permitting process.



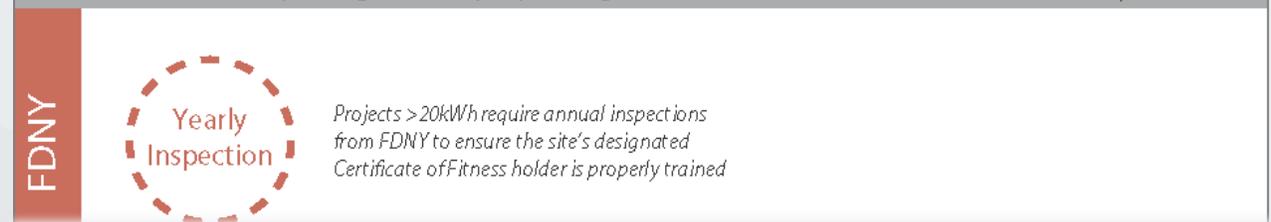
STEP 2: These submissions occur after OTCR conditional approval. Submissions may be made in parallel. Construction may begin after the permits below are obtained.



STEP 3: These steps occur during ESS installation. Inspections may occur in parallel.



STEP 4: These steps begin after project sign-off and continue for the life of the system.



<https://nysolar.com/solarplusstorage/>

NYC Outdoor Lithium Ion Permitting Guide

Energy Storage System Permitting and Interconnection Process Guide For New York City Lithium-Ion Outdoor Systems

February 2020



With Technical Assistance Provided by DNV GL

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- NYC Permitting & Interconnection Process
- NYC Permitting & Interconnection Process
- PERMITTING PROCESSES BY AUTHORITY
- NYC DEPARTMENT OF BUILDINGS
- FIRE DEPARTMENT OF THE CITY OF NEW YORK
- APPLICANT CHECKLIST FOR OUTDOOR LITHIUM-ION SYSTEMS
- CON EDISON PROCESS
- KEY TERMS

CONSTRUCTION PERMIT FOR BATTERY STORAGE TECHNOLOGIES			
ELECTRICAL PERMIT FOR BATTERY STORAGE TECHNOLOGIES			
Construction Permit	Required Submission Documents	DOB OTCR PROCESS FOR MATERIAL ACCEPTANCE OF BATTERY STORAGE TECHNOLOGIES	
		Electrical Permit	Electrical and Mechanical
Required Submission Documents	<ul style="list-style-type: none"> Fire Department Certificate of Approval Electrical Department Certificate of Approval Approved Professional Engineer 	OTCR Approval	Signatures
How to Submit	May be submitted in person or via email	Required Submission Documents	<ul style="list-style-type: none"> Required Submission Documents FDNY APPLICATION PROCESS FOR ESS
Fees	Fees vary by application and equipment (see 3018)	How to Submit	<ul style="list-style-type: none"> Who can submit the application When to submit How to submit
Timeline	Issued by Electrical Department	Fee	<ul style="list-style-type: none"> When to submit How to submit
Summary of key steps	<ol style="list-style-type: none"> 1. Application 2. Review 3. Approval 4. Installation 	Timeline	<ul style="list-style-type: none"> Fee Timeline
Contact	Electrical Department	Summary of key steps	<ul style="list-style-type: none"> Fee Timeline Steps

FDNY APPLICATION PROCESS FOR ESS	
Required Submission Documents	<ul style="list-style-type: none"> TM-2 form (Certificate of Approval for new equipment*) *For equipment that has not previously received a COA from the FDNY. To be submitted by the equipment manufacturer or authorized officer of the manufacturer. TM-1 form(s) (Application for Plan Examination) Medium and Large battery systems require a TM-1 for the battery system and where applicable, separate TM-1 forms will also be required for the fire alarm system and the fire suppression system
Who can submit the application	The TM-1 application(s) shall be prepared by a registered design professional or an expert in the subject field. The TM-2 application, when required, shall be submitted by the equipment manufacturer or authorized officer of the manufacturer.
When to submit	Submissions to FDNY and the DOB can be made in parallel. If a DOB job number has been issued, include this under item #7 on the TM-1.
How to submit	<ul style="list-style-type: none"> In-person: Window #8, 1st Floor, 9 Metrotech Center Hours: Mon-Fri, 8am – 3pm Mail*: Fire Department of the City of New York Bureau of Fire Protection Technology Management 9 MetroTech Center, Third Floor, Room 3W-2 Brooklyn, NY 11201-3857 *Except fire alarm plans – these must be submitted in person
Fee	\$420 per TM-1 application + \$525 fee for new technology/technical analysis (non-refundable). Credit cards, checks, and money orders are accepted. \$625 per TM-2 application for new/original applications, \$50 for renewal applications.
Timeline	Applications are typically reviewed within 40 business days. This timeline may increase if additional site visits or other information is required, or if the FDNY is unfamiliar with the battery technology being considered.
Steps	<ol style="list-style-type: none"> 1. Applicant submits all applicable paperwork (Applicant should notify FDNY that an application is forthcoming)

Lithium Ion – Applicant Checklist Chart

Permitting and Interconnection Process Guide For New York City Lithium-Ion Outdoor Systems

APPLICANT CHECKLIST FOR OUTDOOR SYSTEMS

The following checklist is a comprehensive list of requirements for permitting applications, including documentation and details below when preparing with further details as outlined in Appendix A, the

Documentation	Details
FDNY	TM-1 Application for plan examination
	TM-2 Certificate of Approval for new ⁹ equipment
DOB	OTCR-2 Site specific approval application
	ED16-A Electrical permit
	PW1 Application for Plan/Work Approval form
	PW3 Project cost estimate
	TR1 Technical Report: Statement of Responsibility
TR8 Technical Report: Statement of Responsibility	
Site plans	Indicating placement of ESS containing scale, demonstrating compliance with
Other structures on site	If planned adjacent-to-building placement non-combustible construction or has compliance with adjacent placement If another energy storage system is indicated with storage capacity of or more than 20kWh, the applicant shall provide a site plan showing the location of the system and the location of the system relative to the building.
Site use	Industrial, commercial, residential, municipal
Site characteristics	Flood, seismic, environmental, and other applicable NYC Construction Codes and NY Fire Code
System description	A system specification or similar including description of system, total system capacity, total system weight and dimensions.
Single line drawing	Demonstrating compliance with NYC energy storage and balance of system and interconnection of equipment, including emergency stops.
UL 1973	Certification required
UL 1741	Certification required
UL 9540	Generic system certification required Project-specific certification required
UL 9540A	UL 9540A testing and test data. When conducted, AHJs will determine a real-time testing shall be completed. Each system shall be tested once.
Explosion analysis	Based on UL 9540A-compliant test data from a test laboratory.

Permitting and Interconnection Process Guide For New York City Lithium-Ion Outdoor Systems

Permitting and Interconnection Process Guide For New York City Lithium-Ion Outdoor Systems

Fire analysis	Based on UL 9540A-compliant test laboratory.
FMEA	Generic FMEA required, in accordance with stipulated requirements as outlined by NYS PE.
	Site specific FMEA required, if not UL 9540 certification, in accordance with requirements as outlined in Appendix A.
Battery specification	If not included in system specific including total number of batteries.
Inverter specification	If not included in system specific including make, model, and rating.
System encasement specification	If not included in system specific including confirmation that container is approved or appropriate for placement (applicable), and is secured again.
	Drawing of cabinets or racks with type of each.
Communication and controls specification	If not included in system specific including: 1) description of 24/7 string, and battery level of at least 2) approved energy management current, voltage, and temperature case of emergency conditions; 3) indicator (screen or indicator light active, faulted); 4) Delineation of operation ranges; 5) communication protocol.
Monitoring and alarms specification	If not included in system specific for smoke, gas, and temperature visual alarms in the area. If a detection suppression system is required, a drawing is required.
Fire protection system description	Drawing of suppression system, including results ⁴ . Water pressure and flow calculations.
	If system is installed on a rooftop, suppression system, drawing of Fire Department Connection is provided.
Non-water suppression system	If installed, specification sheets containing name, system details, and MSDS position within container.
Specification for ventilation and exhaust system	Specification sheet for HVAC or other system to maintain safe temperature range and maintain LFL below 25%.

Deflagration venting and exhaust	Based on explosion analysis including exhaust, flame, or explosion from combustible materials.
Installation and commissioning plans	Plan should include coordination with authority.
Operations and maintenance plan	O&M manual provided, or system that maintenance must be kept 107.7, available for inspection provided at the required site representative in a labeled container. Department Personnel. System systems shall be listed and identified.
Decommissioning and disposal plan	Description of planned process including information, recycling information, transportation plan.
Emergency management plan	Plan must be available on site. List of considered risks: 1) List of considered risks detected and assessed; 2) Shut-down procedures and awareness; 3) Emergency notification SME, operators, owners, AHJ applicable; 4) Response time (including spill control and repair, and/or system removal).
Signage	Signage must comply with Section 504.4.1. Signage on the container and at entrance additionally be labeled as required by code, or as required by certificate of approval.
Rooftop structural analysis	If installed on a rooftop, and structurally capable of handling weight.
Rooftop materials descriptions	Description of building as non-combustible assembly, and combustible, extending at least 10 feet from container.

Permitting and Interconnection Process Guide For New York City Lithium-Ion Outdoor Systems

¹ Siting requirements:

- Must demonstrate compliance with NYC zoning requirements per zoning area and equipment category.
- Description of access to energy storage system equipment and clearly defined and maintained means of egress as required by code (both Fire and Building Codes' Chapter 10, as applicable).
- Individual containers may not exceed 53' x 8.6' x 9.6'.
- Must indicate distance from other site features, regardless of proximity to energy storage system, covering at least:
 - o Minimum of 10' from: Lot lines, public ways, buildings (and air intakes or openings such as doors and windows), stored combustible material, hazardous material, high piled stock, other exposure hazards, means of egress, and required exits;
 - o OR can install a line of protection if approved by AHJ;
 - o OR if explosion and fire analysis using data obtained from UL 9540A testing demonstrates otherwise and is not in conflict with zoning or building code. DOB requires review and approval of data obtained under UL 9540A testing.
- Indicate location and distance from fire hydrants and standpipes, as applicable.
- Location of shut-off and electrical disconnects on site must be specified on plans or described and should be within line of sight or clearly signed, and be compliant with NEC Article 706 and ADA.
- If installation on rooftop below 100 ft, description of how installation complies with NYC Fire Code 504.4.

² Adjacent to building requirements:

- Must be under 20 kWh.
- Building must be non-combustible;
 - o OR a 1-hour fire rated assembly over the existing building surface that extends 5 feet on either side of the container and 10 feet in the direction of expected flame travel in the event of a fire.
- AND installed at least 5 ft. from any openings in walls (windows, doors, vents, etc.) and 10 ft. from required exit;
 - o OR where insufficient space, a non-combustible or 1-hour fire rated assembly barrier may be put in place, if approved by AHJ.
- UL 9540A test results may be submitted to OTCR for evaluation. OTCR may omit the above requirements based on their evaluation.

³ Over 20kW system site requirements are to be evaluated on a case by case.

⁴ Applicability pending UL 9540A testing results.

⁵ Spill Control and Neutralization Requirements:

- For free-flowing electrolyte, method and materials shall be capable of neutralizing a spill of the total capacity from the largest cell or block to a pH between 5-9.
- For immobilized electrolyte, the method and material shall be capable of neutralizing a spill of 3% of the capacity of the largest cell or block to a pH between 5-9.

⁶ Signage Requirements:

- Dimensions at least 8.5" x 11".
- Made of durable material.
- Must have non-glare finish, and characters must contrast with background.
- If sign fades, a new one must replace it.
- Characters must be a minimum of 0.5" in height.
- Sign must be securely attached at approximately 5 ft.
- Sign will include following or equivalent:

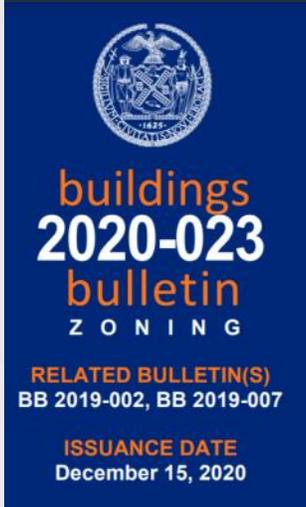
NYC Permitting: Recent Updates

DOB Buildings Bulletin 2020-023

- Released Dec. 15, 2020
- Available at https://www1.nyc.gov/assets/buildings/bldgs_bulletins/bb_2020-023.pdf
- Establishes new zoning designations/classifications for ESS as Accessory Mechanical Equipment.
- Opens up additional potential rooftop siting.

DOB Peer Review

- Third-party analysis of 9540A test data application to fire protection design.



ISSUER: Keith L. Wen, R.A.
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 principal 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

NYC Permitting: Recent Updates (continued)

Developer Guidance Document – Emergency Management Plan

- Available at <https://nysolarmap.com/resources/reports-and-guides/solarplusstorage/storage-permitting/>
- Provides an outlined summary of the information and details to include in the Emergency Management Plan, a required component of the permitting package for Large (>250kWh) and Medium (>20-250kWh) ESS projects

Developer Guidance Document – Conceptual Design Meeting Prep Checklist

- Available via link above
- Provides a checklist of information suggested to prepare for initial meetings with AHJs

FDNY Certificate of Approval

- “Pre-approval” of ESS products – provides review and approval of products with installation criteria/specifications.
- Not a new requirement – but as more ESS products obtain UL certification & testing, COA will become standard process, eliminates site-specific product/equipment approval.

NYC Permitting: In the Pipeline

FDNY Fire Code Update

- Current code revision process will update existing fire code chapter covering batteries
- Will address indoor installations
- Will address UPS, emergency, standby battery systems
- Applicability of siting/installation/design/safety features will be based on equipment approval (FDNY COA, Certificate of Approval)

DOB – NFPA 855 Adoption

- Working group tasked with reviewing NFPA 855 and suggesting modifications to passages as needed.
- NFPA 855 with modifications will serve as basis for streamlined DOB requirements for all battery types, indoor and outdoor systems.

NYC Permitting: In the Pipeline

Developer Guidance Document – Site Plan Checklist

- Guidance document for creating Site Plan, part of the submittal package for Installation Approval
- Pertains to outdoor, large (>250 kWh Li-ion) ESS

Developer Guidance Document – Decommissioning Plan

- Guidance document for creating ESS Decommissioning Plan, part of the submittal package for Installation Approval
- Pertains to outdoor, large (>250 kWh) ESS

Industry Outreach: Certificate of Approval Information Session

- Information session(s) aimed at educating battery industry/manufacturers about the NYC COA process

STORAGE RESOURCES



STORAGE PERMITTING

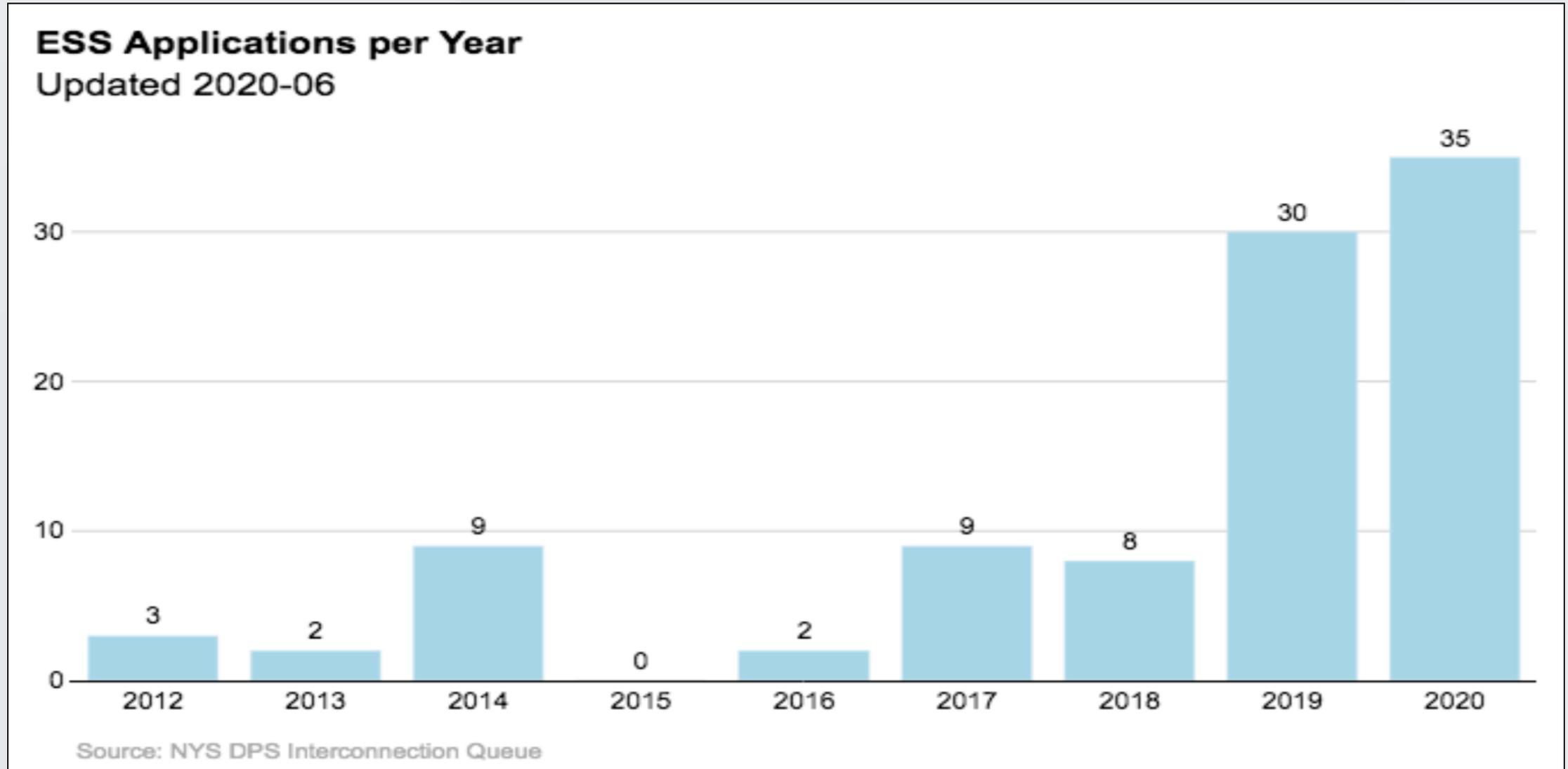


ROADMAP | SURVEYS



CASE STUDIES | FACT SHEETS | GUIDANCE

NYC ESS Interconnection Application History



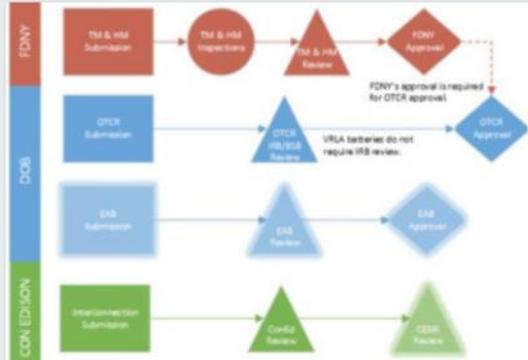
Smart DG Hub Projects: www.smartdghub.org

NY SOLAR MAP Going Solar- Installing Solar- Financing Solar- **Solar+Storage-** Resources- NYC Solar- About- NY Solar+Storage Summit

Learn More About Our Storage Projects



REDUCING STORAGE SOFT COSTS



RESOURCES, PERMITTING AND GUIDES



RESILIENT SOLAR PROJECT



CRITICAL FACILITY SOLAR+ EVALUATOR



STORAGE ROADMAP & TRACKER



STORAGE 101

STORAGE RESOURCES



STORAGE PERMITTING



ROADMAP | SURVEYS



CASE STUDIES | FACT SHEETS | GUIDANCE



STORAGE MAPPING TOOLS



STORAGE WEBINARS



ADDITIONAL RESOURCES

Energy Storage

UL 9540A Data Utilization: NYC methodology

THERMAL RUNAWAY

- Thermal propagation
- Preventative measures and controls

FIRE SPREAD

- Unit spacing
- Fire and smoke detection
- Fire suppression

TOXICITY

- Ventilation requirements
- IDH levels
- First responder and public safety

EXPLOSION

- Deflagration hazard
- Ventilation and exhaust requirements
- Threat to nearby people and buildings

Logos: NYSERDA, SMART DG HUB, Con Edison, NYC DOB, UL

NYC Energy Storage: UL 9540A Data – NYC Utilization Guide

Webinar: 58:29

4/14/2020 | Sustainable CUNY and partners hosted a complimentary webinar on April 14th that was an in-depth review of the [UL 9540A Data Utilization Guide for NYC](#), recently published by our Smart DG Hub.

2020 NYC Solar+Storage Installer Workshop
PART 1 AGENDA

- 9:30 – 9:40 am: Welcome, housekeeping instructions and introduction of program
- 9:40 – 10:40 am: **Interconnection Application Processes for Solar and Energy Storage**
Joe White, DG Ombudsman, Con Edison
Fred Farello, DG Group, Con Edison
Sean Yang, Energy Services, Con Edison
Renate Hegyi, Distribution Engineering, Con Edison
- 10:40 – 11:40 am: **Construction and Electrical Permit Application Process**
Solar Panel Installations - Barry Stein, NYC Department of Buildings
Material Acceptance Requirements for Battery Energy Storage Systems
Alan Price, NYC Department of Buildings
- 11:40 am – 12:40 pm: **Update on Fire Codes**
Roof Top Access Requirements & Variance Request Process - J. Jergels, FDNY
Requirements & Application Process for Energy Storage - Nick Petrakis, FDNY

NYC Solar and Storage Installer Workshop Part 1

Webinar: 2:47:04

3/27/2020 | Sustainable CUNY and Con Edison conducted their annual workshop as a two-day webinar. Part 1 included presentations from Con Edison, the NYC Department of Buildings, and the Fire Department of New York

2020 NYC Solar+Storage Installer Workshop
PART 2 AGENDA

- 9:30 – 9:40 am: Welcome, housekeeping instructions and introduction of program
- 9:40 – 9:55 am: **Next Steps in Permitting and Zoning for NYC Solar and Storage**
Daniella Leifer, Sustainable CUNY
- 9:55 – 10:40 am: **Participating in the Community Shared Solar Market**
New York State Incentives - Luke Forster, NYSERDA
VDER Value Stack - Cliff Baratta, DG Group, Con Edison
- 10:40 – 11:40 am: **Participating in the Energy Storage Market**
New York State Incentives - Luke Forster, NYSERDA
Con Edison Programs & Incentives
Griffin Reilly, Non-Wires Solutions, Con Edison
Mohamed Kameloube, Distribution Planning, Con Edison
- 11:40 am – 12:25 pm: **Market Drivers for Solar and Storage in NYC**
Impact of Local Laws 92 & 94 on the NYC Solar Market - Ellie Kahn, MOS
Solar and Storage on City-owned Properties - Hamid Lelik, DCAS
NYCHA's Solar Programs - Chris White, New York City Housing Authority

NYC Solar and Storage Installer Workshop Part 2

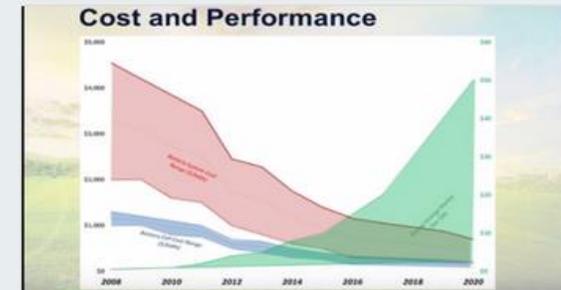
Webinar: 2:50:08

3/30/2020 | Part 2 of the Sustainable CUNY and Con Edison workshop webinar included presentations from Sustainable CUNY's Smart DG Hub, NYSERDA, the NYC Mayor's Office of Sustainability, DCAS, NYCHA and Con Edison

NYC ENERGY STORAGE
Updates to Energy Storage Permitting Guidelines and Path Forward
February 14, 2020

Logos: NYSERDA, SMART DG HUB, Con Edison, NYC DOB, UL

In-depth webinars on the development of UL standards for storage can be found on the [Reducing Storage Soft Costs](#) page



Thank you!

Questions? Comments?

Contact us at SmartDGhub@cuny.edu
www.smartdghub.org