



# ENERGY CODE COMPLIANCE



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# PRESENTATION DESCRIPTION

This presentation covers a brief background on Energy Code timeline as set forth by Local Law 32 of 2018. The presentation covers the compliance requirements in the Electrification Law (Local Law 134 of 2021), the recently passed amendments to the New York State Energy Law regarding historic buildings, and amendments to the service hot water system efficiency requirements. It will highlight the new filing process in DOB NOW and cover the most frequently asked questions regarding the new process.



# AGENDA

- NYC Building Electrification Law
- Advanced Building Codes, Appliance and Equipment Efficiency Standards Act of 2022
- 2020 NYCECC & Service Water Heating Requirements
- DOB NOW Energy FAQs



# NYC BUILDING ELECTRIFICATION LAW

# NYC BUILDING ELECTRIFICATION LAW

- **Intro.2317 Carbon Limits for Fuel-combustion**, signed by Mayor de Blasio and enacted as Local Law 154 of 2021
- Portions of the law are contained in two sections of the City Administrative Code:
  - **Title 24** (NYC Air Pollution Control Code, administered by DEP) sets the limit and the fines
  - **Title 28** (NYC Construction Codes, administered by DOB) sets scope

# NYC BUILDING ELECTRIFICATION LAW

- Prohibits on-site combustion of fuels that emit more than 25kg CO<sub>2</sub>/MMBTU
- Applies to New Construction
  - Be aware of Section 101.4.5 of the Administrative Code, which covers alterations that must be filed as **New Buildings** (see *Buildings Bulletin 2016-012*), aka **ALT-CO New Building with Elements to Remain**

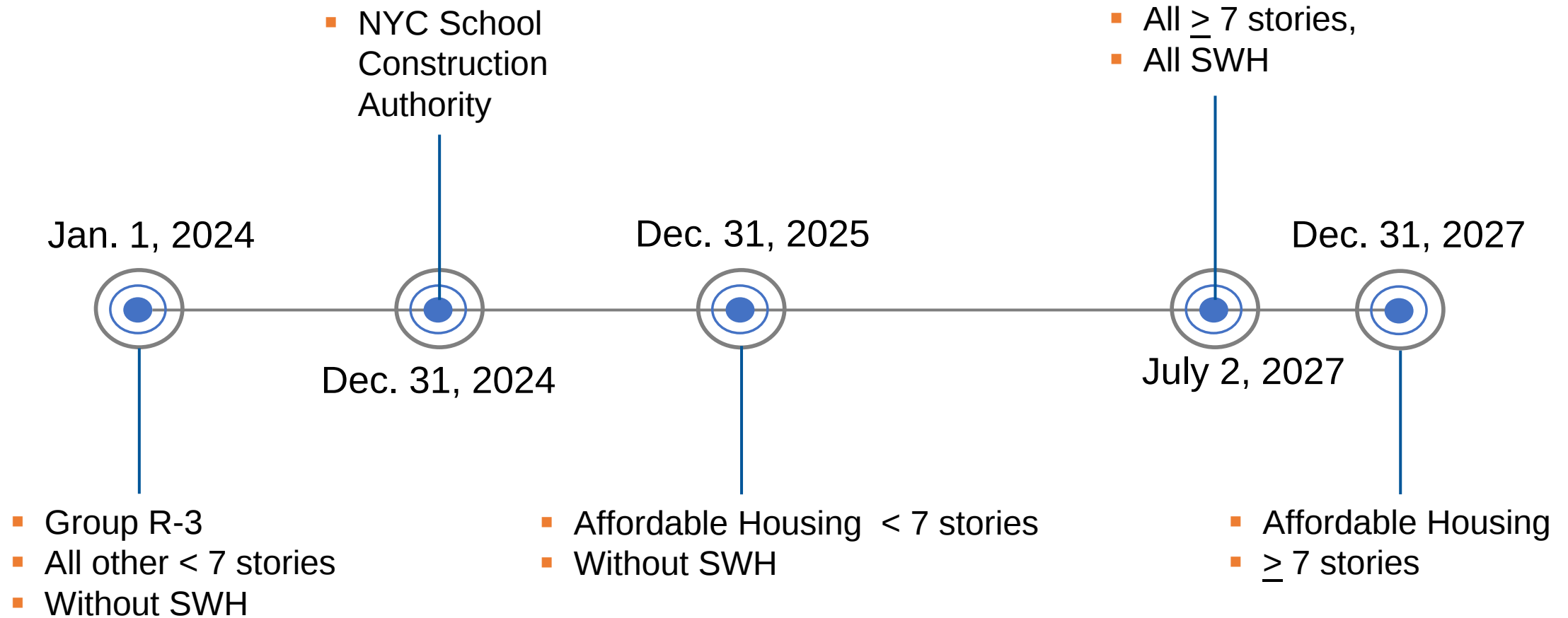


# NYC BUILDING ELECTRIFICATION LAW

## ■ *EXCEPTIONS*

- Buildings used by a regulated utility for energy generation
- Buildings operated by DEP for treatment of sewage or food waste
- Buildings in which fossil fuels are necessary for a manufacturing use or purpose:
  - Laboratories
  - Laundromats
  - Hospitals and Crematoria
  - Commercial Kitchens
  - For emergency or standby power

# LOCAL LAW 154: COMPLIANCE DATES



# NYC BUILDING ELECTRIFICATION LAW

- **Local Law 154 of 2021** (*continued*)
  - Future studies required by **June 1, 2023**
    - Heat pump feasibility Study in low-rise and high-rise buildings
    - Grid Reliability and Resiliency Study

# ADVANCED BUILDING CODES, APPLIANCE & EQUIPMENT EFFICIENCY STANDARDS ACT OF 2022

*Legislation A.10439/S.9405*

*Impact to Historic Buildings*



# NEW YORK ENERGY LAW §11-102

- Definition of **historic building** now includes locally designated historic buildings
  - **Historic building.** Any building that is one or more of the following: (a) listed, or certified as eligible for listing, on the national register of historic places or on the state register of historic places, (b) designated as historic under an applicable state or **local law**, or (c) certified as a contributing resource within a national register-listed, state register-listed, or **locally designated historic district**.

# NEW YORK ENERGY LAW §11-102

- Blanket exemption for historic building removed
  5. The state fire prevention and building code council, in consultation with the commissioner of the department of parks, recreation and historic preservation, is authorized to adopt exemptions to such uniform standards and requirements for historic buildings as defined in section 11-102 of this article, to the extent that the uniform standards and requirements would threaten, degrade, or destroy the historic form, fabric, or function of such historic buildings.

# SUMMARY OF CHANGE

- Historic building includes **NYC Landmarks**
- State Building Code Council and Commissioner of the Department of Parks, Recreation and Historic Preservation to determine applicable exemptions
- Awaiting guidance from NY Department of State

# 2020 NYCECC & SERVICE WATER HEATING EQUIPMENT

*Changes from 10 CFR 430.32*



# SERVICE WATER HEATING EFFICIENCY

- Beginning June 12, 2017, the Department of Energy has replaced High Efficiency (EF) to a new industry standard for measuring energy efficiency in water heaters called **Uniform Energy Factor (UEF)**.
- 2020 NYCECC Chapter C4 does not reflect these efficiencies
  - See US Code of Federal Regulations 10CFR Part 430.32

# SERVICE WATER HEATING EFFICIENCY

## OLD "EF" RATING

Gallon Capacity	First Hour Rating Gallon	Energy Factor	Recovery @ 90°F Rise Gallon Per Hour	Element Wattage 240V		Dimensions in Inches			Approx. Shipping Weight (lbs)
				Standard	Maximum	A	B	C	
30	47	0.95						19	95
40	50	0.95						18	118
50	73	0.95						20-1/2	125
55	76	0.94						24	145
30	48	0.95						20	95
30	49	0.95	21	4500	6000	39-3/4	30-1/2	22	94
40	55	0.95	21	4500	6000	49-3/4	40-3/4	20-1/2	109
50	62	0.95	21	4500	6000	49-1/4	40-3/8	23	161



# SERVICE WATER HEATING EFFICIENCY

(d) *Water heaters.* The **uniform energy factor** of water heaters shall not be less than the following:

Expand  
Table  


Product class	Rated storage volume and input rating (if applicable)	Draw pattern	Uniform energy factor
Gas-fired Storage Water Heater	≥20 gal and ≤55 gal	Very Small	$0.3456 - (0.0020 \times V_r)$
		Low	$0.5982 - (0.0019 \times V_r)$
		Medium	$0.6483 - (0.0017 \times V_r)$
		High	$0.6920 - (0.0013 \times V_r)$

- Draw Pattern is based on the First Hour Rating (storage type) or Max GPM (tankless)
- $V_r$  is the Rated volume

# SERVICE WATER HEATING EFFICIENCY

## NEW "UEF" RATING

## ELECTRIC WATER HEATERS

Nominal Capacity	Rated Storage Volume	First Hour Rating (Gallons)	UEF	Recovery @ 90°F Rise Gallon Per Hour	Element Wattage 240V			Dimensions in Inches			Approx. Shipping Weight (lbs)
					Standard	Minimum	Maximum	A	B	C	
30	27	48	0.89					2	39-1/2	19	95
40	36	53	0.92					4	53-1/4	18	118
50	46	62	0.92					2	51-1/4	20-1/2	125
50	46	45	0.88					2	51-1/4	20-1/2	125
55	55	72	0.93					2	48-1/2	24	145

ACCEPTED

BIN	BIN Daily Usage (Gallons)	First Hour Rating (Tank-Type Water Heaters)	Max GPM (Tankless Water Heaters)
Very Small	10	Less than 18 gallons	Less than 1.7
Low	38	18 to 51 gallons	1.7 to 2.8
Medium	55	51 to 75 gallons	2.8 to 4
High	84	75 gallons or larger	4 or more



# ENERGY IN DOB NOW

## *Frequently Asked Questions*

# DOB NOW ENERGY: FAQs

- **What is the new review process for Energy Plan Exam?**
  - Energy review occurs in parallel with main plan exam review
  - Full approval of the main set cannot occur until both main plan exam and Energy plan exam have issued approval
  - Applicant is required to coordinate the details in the GC set with the EN application
  - Subsequent applications will be reviewed separately, and to the extent possible, given to the same examiner

# DOB NOW ENERGY: FAQs

- New Energy submission process and new fees for NB, ALT-CO went into effect **November 8, 2021**

- EN submissions are required for:

- Foundation (FO)
- General Construction (GC)
- Mechanical Systems (MS)
- Boiler Equipment (BE)
- Plumbing Systems (PL)

- Fees are only charged on **initial** filing

	New Building	Alteration-CO*	Alteration
1,2,3 Family	\$220	\$220	\$220
Other than 1,2,3 Family	\$875	\$875	\$525

# DOB NOW ENERGY: FAQs

## How should Energy Plans be filed?

- EN Plans must be submitted separately from the main filing set, but should reference the main set
  - Essential EN Plan data, includes, but is not limited to Professional Statement, TR8 Progress Inspections Table, Energy Analysis, Wall UA information, thermal boundary diagrams and Commissioning Statement.
  - Supporting Documentation, i.e., construction documents for Arch/PL/MS/BE must be submitted as part of the respective main 'PlansSketch' file.
  - Duplicate Supporting Documentation data should not be included in the EN Plans.
- PL Filings may have the Energy Analysis on the MS filing and duplicated in the PL filing
  - Compliance information includes: Professional Statement, TR8 Inspection Table, Commissioning Statement and the Tabular or COMcheck for PL equipment subject to the Energy Code.



# DOB NOW ENERGY: FAQs

- **Does Energy need to be separate by trade or can a complete package (e.g., GC/MS) be submitted as a single set?**
  - If the initial set is filed as GC/MS, the EN plans may include all the Architectural and MEP components
  - For applications where GC and MS are filed separately, EN Plans must be submitted for each work type
  - Energy Modeling applications must submit all related applications. If the design team chooses to submit a COMcheck as a place holder, that is acceptable, as long as the application demonstrates compliance through COMcheck

# DOB NOW ENERGY: FAQs

- **Can an Energy Consultant (not the applicant of record) upload EN Plans?**
  - Only the applicant of the DOB NOW filing can upload EN Plans related to that work type unless a delegated associate is added by the applicant.
  - The applicant must always attest, sign and submit.

# DOB NOW ENERGY: FAQs

- How should the EN plans for lighting be submitted?

*Scenario - Lighting Design by Architect, Analysis by Engineer*

	<i>I1 - GC</i>	<i>S1-MS</i>
	<i>Signed by Architect</i>	<i>Signed by Engineer</i>
<b><u>Required Docs</u></b>	"Envelope"  Arch Dwgs plus Lighting RCPs and Schedules	"Mechanical"  Mech Dwgs
<b>EN Analysis</b>	Envelope stamped by RA  <i>(note for analysis)</i>	Mech + Lighting Analysis by PE  <i>(note for documentation)</i>
<b><u>Additional Docs</u> <i>(as a reference)</i></b>	Lighting Analysis stamped by PE	



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