



# The Greener, Greater Buildings Laws and the Impact on New York City Buildings

**Robert D. LiMandri** Commissioner  
**Fatma M. Amer** First Deputy Commissioner  
**James Colgate** Assistant Commissioner  
**Helen Gitelson** Executive Director

- 
- **The 4 Greener, Greater Buildings Laws**
  - **Energy Code Compliance Rule**
  - **Greener, Greater Building Advisory Committee**
  - **Discussion**

**LL 84/09**

Benchmarking

**LL 85/09**

NYC Energy  
Conservation  
Code

**LL 87/09**

Audits & Retro-  
commissioning

**LL 88/09**

Lighting Upgrades  
& Sub-metering

12 / 2009

**4 bills signed into law**

## Benchmarking

City-owned buildings due

Private buildings due

05 / 2010

07 / 2010

## NYC Energy Code

Effective Date for all construction

05 / 2011

## Audits & Retro-commissioning

Early compliance reports due

Commence staggered report deadlines

01 / 2013

## Lighting & Sub-metering

Compliance reports due

01 / 2025

NYC Energy Conservation Code  
**Effective July 2010**  
**Applies to *all* alterations**



## NYC Energy Conservation Code

- **Eliminates 50% threshold for applicability**
- **Only administrative portions affected**
- **DOB to issue rules for implementation**



**Establishes the legal basis  
for the City to amend the  
Energy Code further to  
reduce energy consumption  
beyond State regulations**





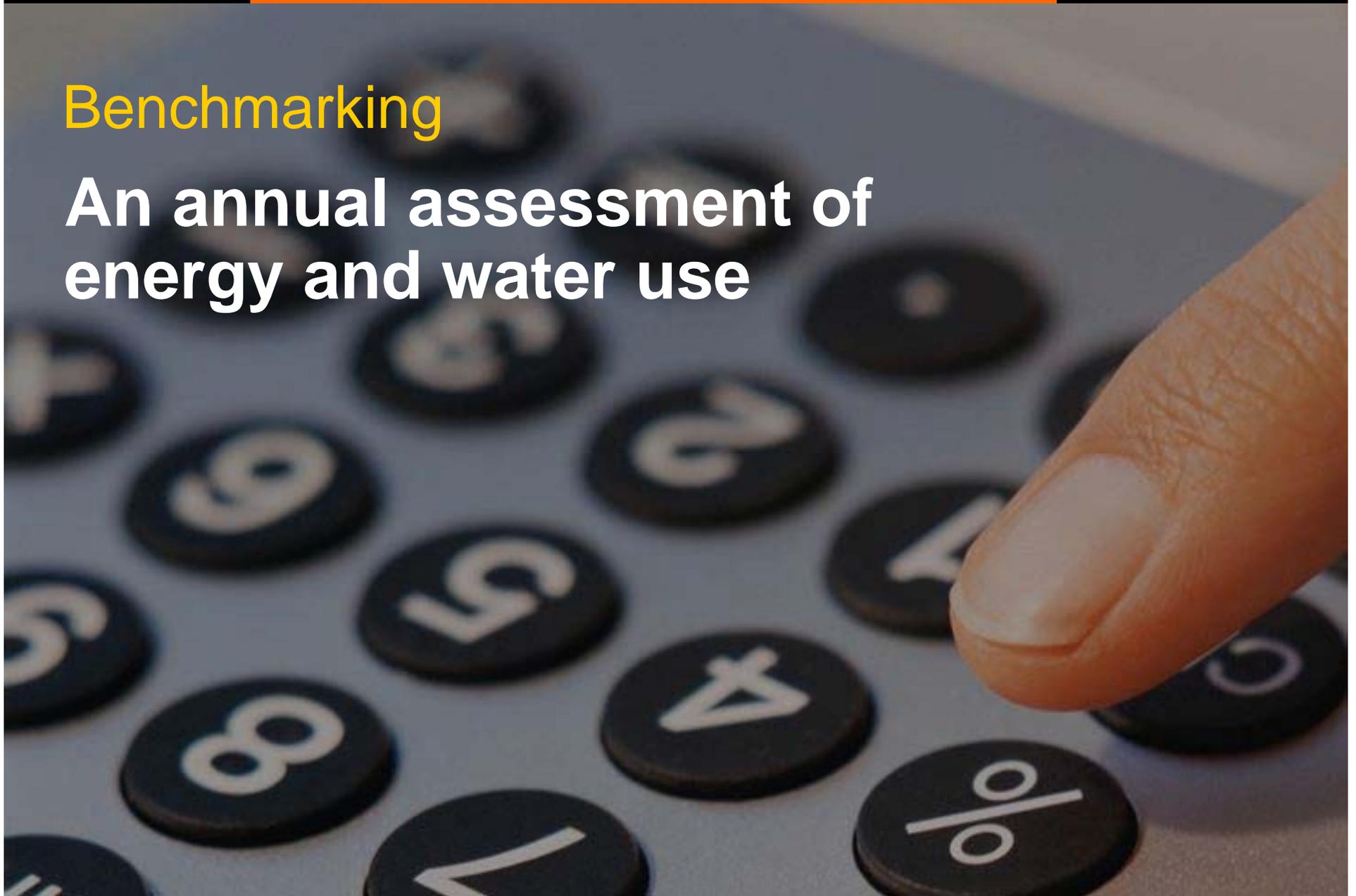
## Challenges

- Outreach & training
- Define “Lead Professional”
- Construction documents submission (electrical plans, standards for submission)



## Benchmarking

An annual assessment of  
energy and water use



- Energy (electric, gas, oil) and water efficiency
- Applies to all buildings greater than 50,000 square feet in area (city-owned buildings greater than 10,000 sq ft)

12/28/2009

**Bill Signing**



5/1/2010

**Benchmark due:  
City-owned  
Buildings**



5/1/2011

**Benchmark due:  
Privately owned  
Buildings**



# Compliance:

- Requires annual upload of building data using EPA Portfolio Manager

Visit [www.energystar.gov](http://www.energystar.gov)

PORTFOLIO MANAGER

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[CONTACTS](#)
[FAQ](#)
[FREQUENTLY ASKED QUESTIONS](#)
[CONTACT US](#)
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[Home](#) > [My Portfolio](#) > **Fire Station 2**

Facility Summary: **Fire Station 2**  
[How do I use this page?](#)

Building ID: 1642681  
 Level of Access: Building Data Administrator

Electric Distribution Utility: Virginia Electric & Power Co  
 Regional Power Grid: [SERC Virginia/Carolina](#)  
[Select my Power Generation Plant](#) to calculate my electric emissions rate  
 Electric Emissions Rate (kgCO<sub>2</sub>e/MBtu): 151.7 ([what is this?](#))

[Generate a Statement of Energy Performance](#) for uses other than applying for the ENERGY STAR.

General Information <a href="#">Edit</a>	
<b>Address:</b> 000 Blank Street , Arlington, VA 22209	
<b>Year Built:</b> 1990	
<b>Property Type:</b> Single Facility	
<b>Baseline Rating:</b> <span style="color: blue;">N/A</span>	<b>Current Rating:</b> <span style="color: blue;">N/A</span>
Eligibility for the ENERGY STAR	
N/A	



# LL 84/09

## Benchmarking



PORTFOLIO MANAGER



[Home](#) > [My Portfolio](#) > [Fire Station 2](#)

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### Facility Performance [Set Baseline Period](#) | [Set Energy Performance Target](#)

Select View:  [Create View](#) | [Edit View](#)

12 Months Ending	Current Source Energy Intensity (kBtu/Sq. Ft.)	Change from Baseline: Adjusted Energy Use (%)	Change from Baseline: Energy Use Intensity (kBtu/Sq. Ft.)	Change from Baseline: GHG Emissions (MTCO <sub>2</sub> e)	Total Energy Cost per Sq. Ft. (US Dollars (\$))
December 2008 (Current)	172.6	-17.2	-10.7	-488.62	\$0.37
Select Date					
<b>Change</b>					
<input type="button" value="REFRESH VIEW"/>					

### Space Use [Add Space](#)

Space Name	Space Type	Floor Area (Sq. Ft.)	% Floor Area	Alerts	
<a href="#">Sample Space</a>	Other - Fire Station/Police Station	300,000	100	>10% of Total Floor Space <a href="#">more</a>	<a href="#">Delete Space</a>
<b>Total</b>		<b>300,000</b>	<b>100</b>		

#### General Facility Administration

[Track](#) Energy Performance Improvements  
[Delete](#) this Facility from Portfolio Manager  
[Contact](#) us

#### Sharing Data

[Add](#) user to share this Facility  
[Modify](#) list of users  
[Transfer](#) Facility to another user  
[View](#) entire Access List for this Facility

#### Applying for the ENERGY STAR

[Apply](#) for the ENERGY STAR  
[View](#) status of ENERGY STAR Applications

#### Building Profiles

A building Profile can be created when an ENERGY STAR label application is submitted

Because more than 50% of your building is Fire Station/Police Station, your building is designated as Fire Station/Police Station within Portfolio Manager. This type of building is not eligible for an energy performance rating ([Click to learn more](#)). However, you can still compare this building's performance with the national average for Fire Station/Police Station. ([Click to learn more](#)).

Due to rounding, the % Floor Area Total may not always equal 100%.

### Energy Meters [Add Meter \(Quick Meter Add\)](#) | [Update Multiple Meters](#) | [View All Meter Data in Excel](#)

Meter Name	Energy Type	Space(s)	Last Meter Entry (End Date)	Alerts
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# LL 84/09

## Benchmarking



PORTFOLIO MANAGER



ACCOUNT INFORMATION



CONTACTS



FREQUENTLY ASKED QUESTIONS



CONTACT US



HELP



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[Home](#) > [My Portfolio](#)

### Group Averages

**Baseline Rating: 72**

Facilities Included: 1

**Current Rating: 80**

Facilities Included: 1

**Change from Baseline: Group Adjusted Percent Energy Use (%): -14.8%**

Facilities Included: 2

Averages are weighted by Total Floor Space.

[More about Baselines](#)

[More about Change from Baseline: Adjusted Energy Use](#)

[Add](#) a Property

[Import](#) Facility Data Using Templates

#### Work with Facilities

[Update](#) Multiple Meters

[Share](#) Facilities

[Request](#) Energy Performance Report

#### Apply for Recognition

[Apply](#) for the ENERGY STAR

[ENERGY STAR Leaders](#)

#### Automated Benchmarking

[Get Started Now](#)

My Facilities

My Campuses

GROUP:

[Create Group](#) | [Edit Group](#) | [View All](#)

VIEW:

[Create View](#) | [Edit View](#) | [View All](#)

[Download](#) in Excel

Search Facility Name:

Results 1 - 2 of 2

All # A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Facility Name <input type="checkbox"/>	Current Source Energy Intensity (kBtu/Sq. Ft.) <input type="checkbox"/>	Change from Baseline: Adjusted Energy Use (%) <input type="checkbox"/>	Change from Baseline: Energy Use Intensity (kBtu/Sq. Ft.) <input type="checkbox"/>	Change from Baseline: GHG Emissions (MtCO <sub>2</sub> e) <input type="checkbox"/>	Total Energy Cost per Sq. Ft. (US Dollars (\$)) <input type="checkbox"/>
<a href="#">Fire Station 1</a>	160.1	-12.3	-6.1	-275.86	\$0.30
<a href="#">Fire Station 2</a>	172.6	-17.2	-10.7	-488.62	\$0.37

[Download](#) in Excel

Search Facility Name:

Results 1 - 2 of 2

All # A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

The rating is calculated by using the last day of the latest full calendar month where all meters in the facility have meter entries; the Period Ending date reflects that particular date.

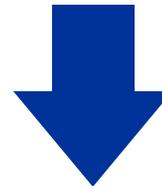


# DOF initial posting of results:

**City buildings**  
Sep. 1, 2011



**Non-residential buildings**  
Sep. 1, 2012



Sep. 1, 2013

**Residential buildings**

### STATEMENT OF ENERGY PERFORMANCE Fire Station 2

Building ID: 1642681  
 For 12-month Period Ending: December 31, 2008<sup>1</sup>  
 Date SEP becomes ineligible: N/A

Date SEP Generated: March 05, 2009

**Facility**  
 Fire Station 2  
 000 Blank Street  
 Arlington, VA 22209

**Facility Owner**  
 N/A

**Primary Contact for this Facility**  
 N/A

**Year Built:** 1990  
**Gross Floor Area (ft<sup>2</sup>):** 300,000

**Energy Performance Rating<sup>2</sup> (1-100)** N/A

**Site Energy Use Summary<sup>3</sup>**

Electricity (kBtu)	15,500,000
Natural Gas (kBtu) <sup>4</sup>	0
<b>Total Energy (kBtu)</b>	<b>15,500,000</b>

**Energy Intensity<sup>4</sup>**

Site (kBtu/ft <sup>2</sup> /yr)	52
Source (kBtu/ft <sup>2</sup> /yr)	173

**Emissions (based on site energy use)**

Greenhouse Gas Emissions (MtCO <sub>2</sub> e/year)	2,352
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**Electric Distribution Utility**

**Sample report produced by EPA Portfolio Manager**

Stamp of Certifying Professional

Based on the conditions observed at the



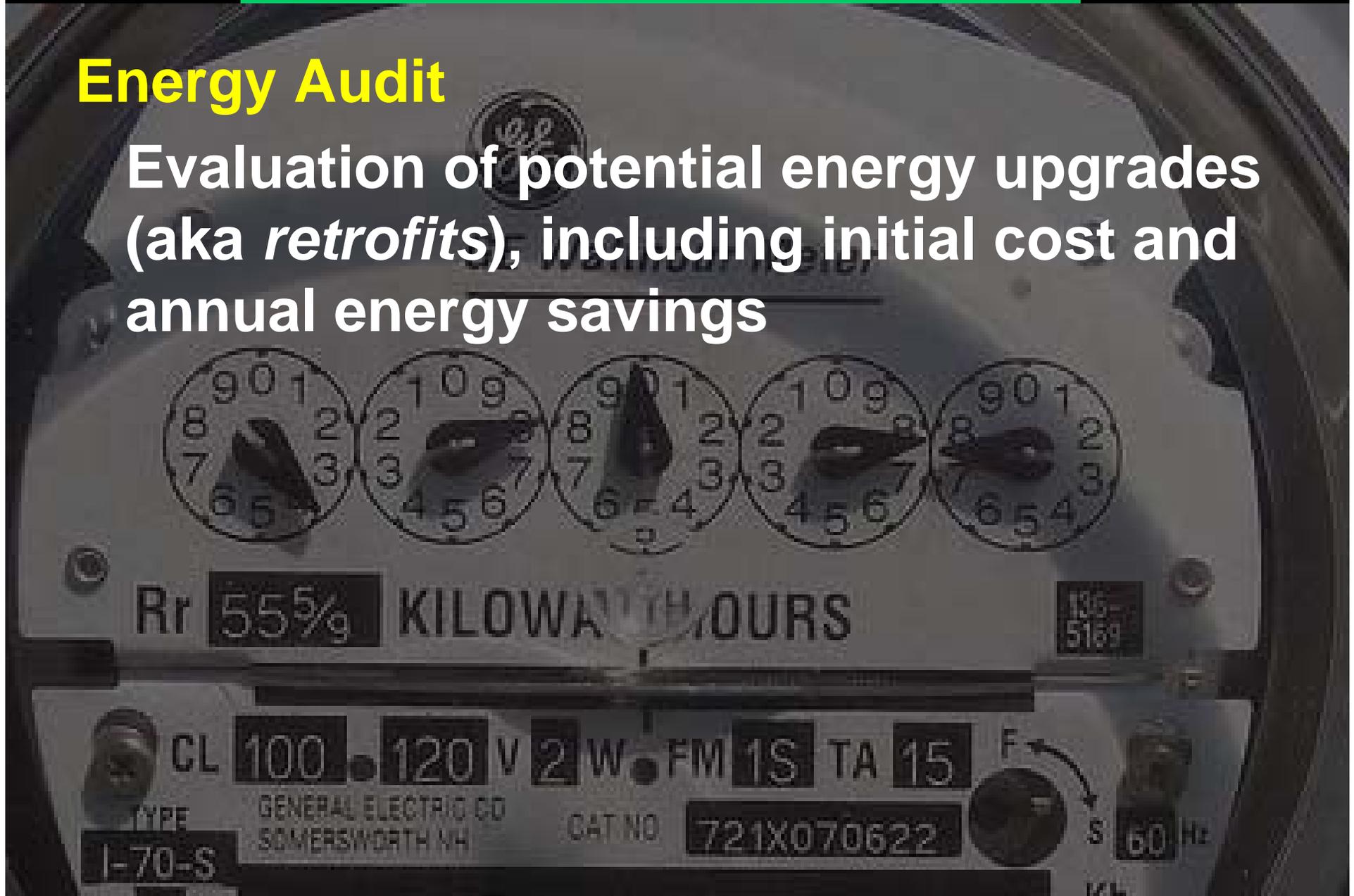
## Challenges

- Outreach & training
- DOB/DOF/OLTPS coordination



## Energy Audit

Evaluation of potential energy upgrades (aka *retrofits*), including initial cost and annual energy savings



## Retro-commissioning

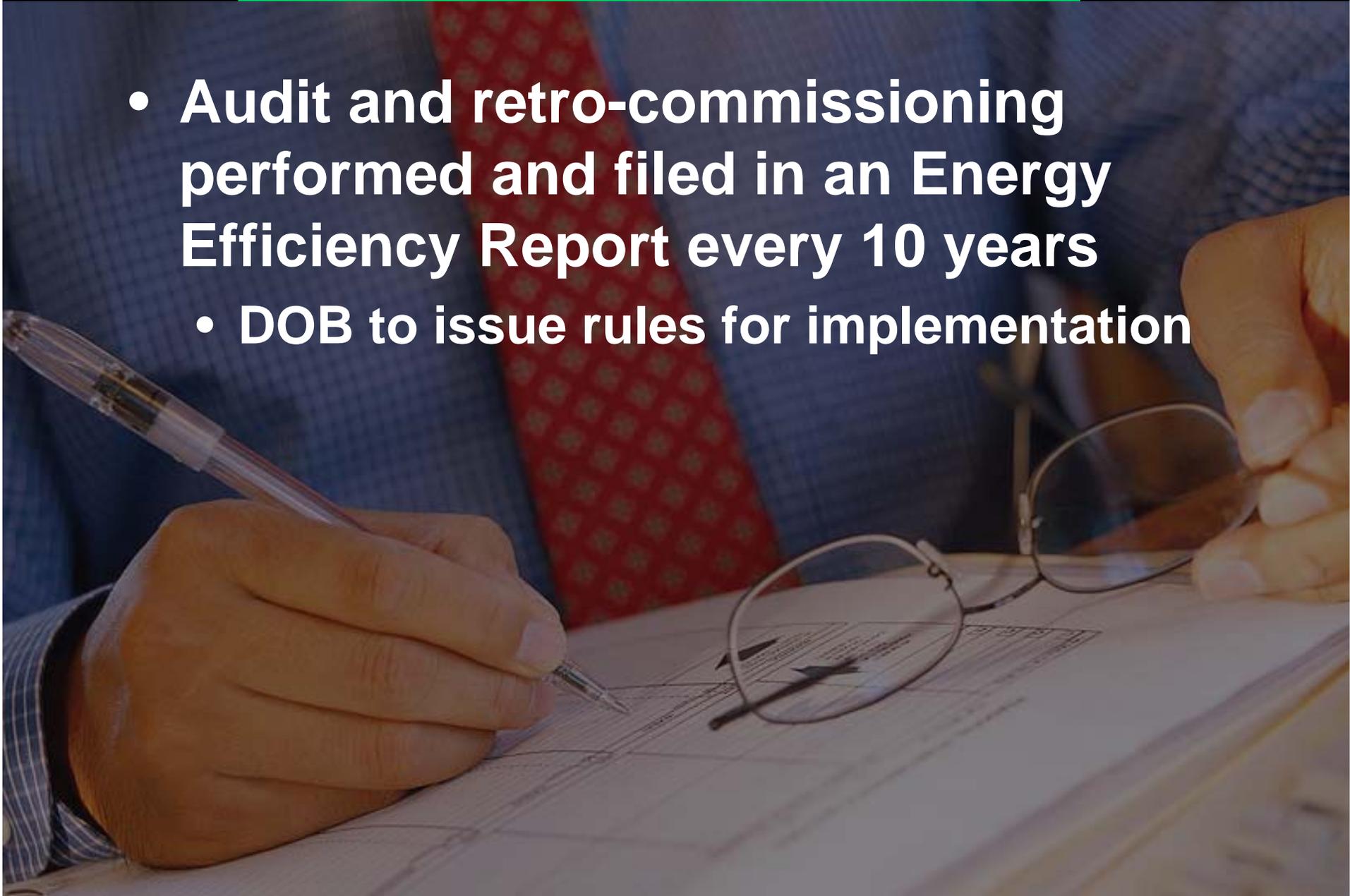
Repairs, cleaning, and adjustments to equipment controls and sensors to improve performance.

Similar to tuning up a car

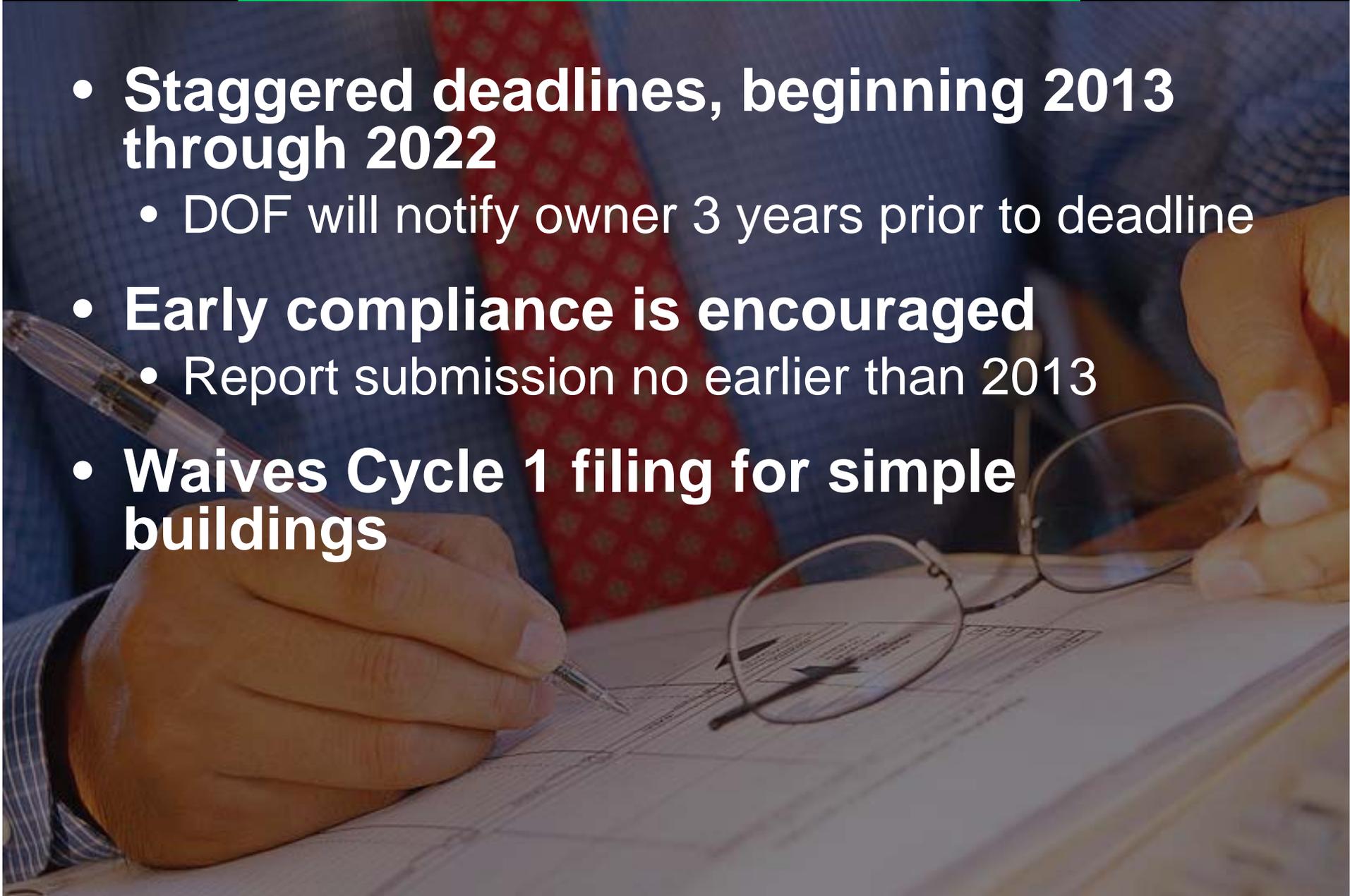


- Applies to buildings greater than 50,000 sq ft in area
- Affects base-building systems:
  - Envelope
  - HVAC
  - Service hot water
  - Lighting and electrical
  - Elevators & escalators

- **Audit and retro-commissioning performed and filed in an Energy Efficiency Report every 10 years**
  - **DOB to issue rules for implementation**

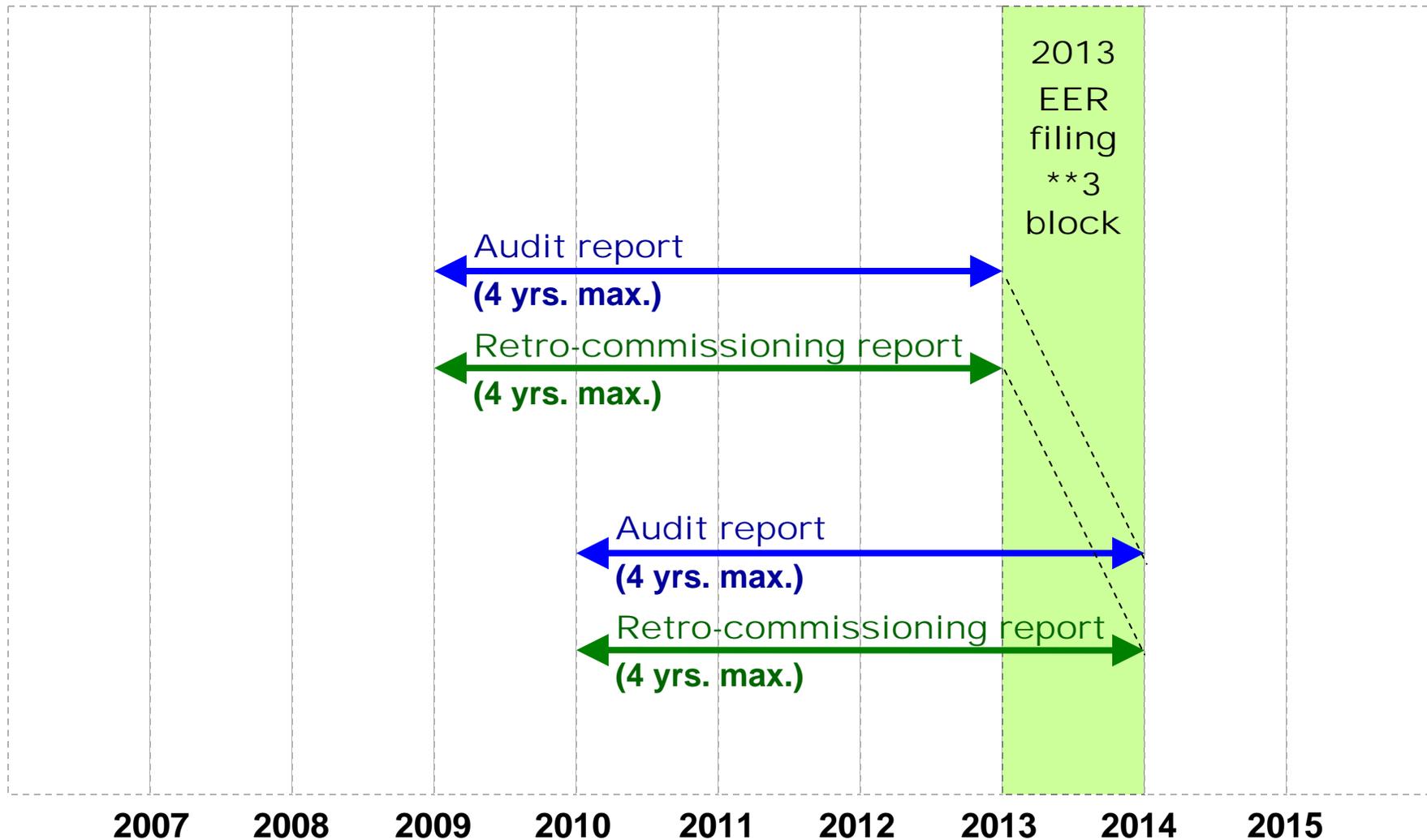


- **Staggered deadlines, beginning 2013 through 2022**
  - DOF will notify owner 3 years prior to deadline
- **Early compliance is encouraged**
  - Report submission no earlier than 2013
- **Waives Cycle 1 filing for simple buildings**



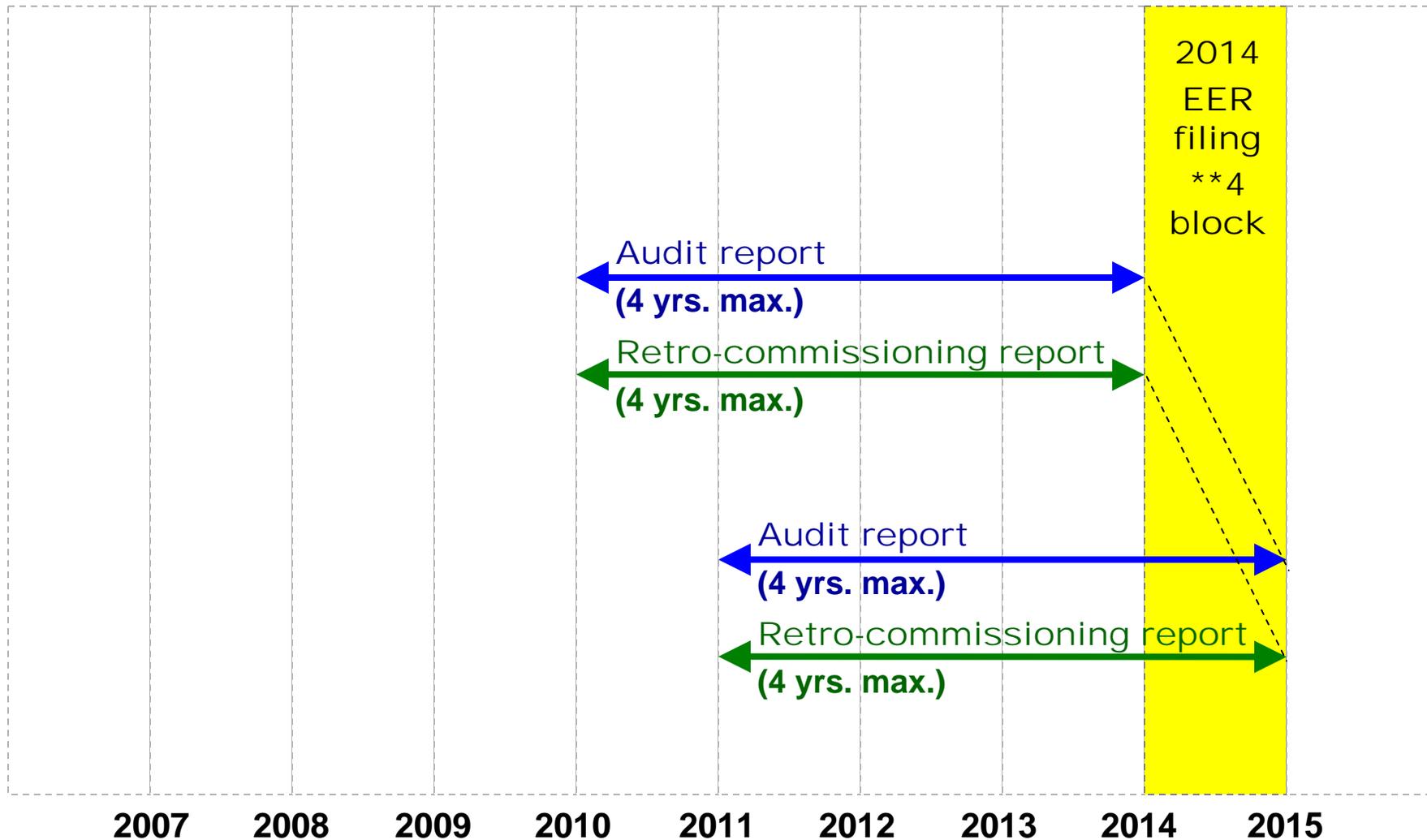
# Audits & Retro-commissioning – Regular Cycles

## Compliance Timeline



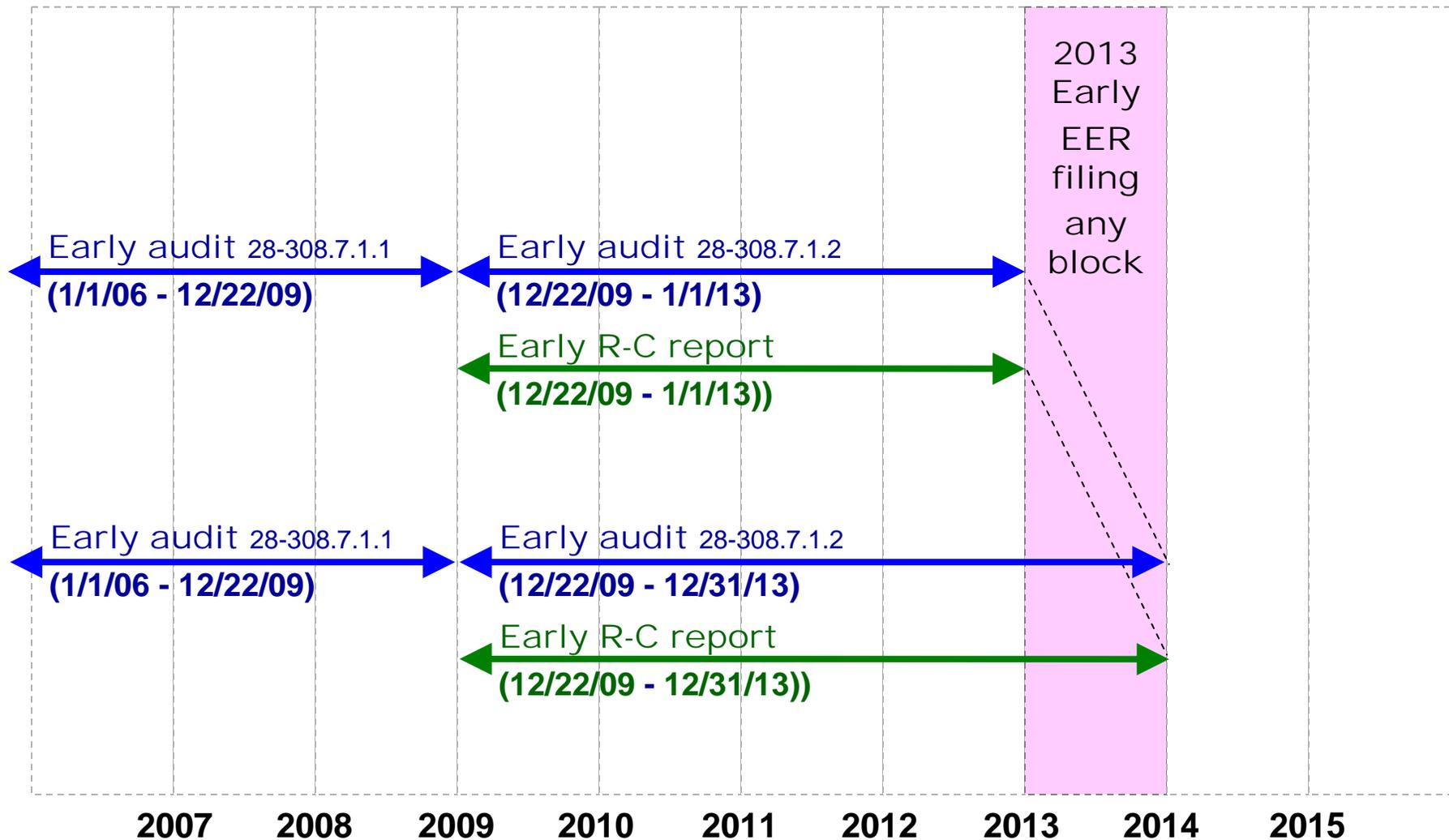
# Audits & Retro-commissioning – Regular Cycles

## Compliance Timeline



# Audits & Retro-commissioning – Regular Cycles

## Compliance Timeline



## Challenges

- Outreach & training
- DOB/DOF/HPD coordination re: financial hardship
- Duties & qualifications retro-commissioning agent & auditor
- Report content and format

## Lighting upgrade:

- An existing lighting system must comply with the standards for a new system
  - interior lighting power
  - lighting controls
  - exterior lighting
  - tandem wiring
  - exit signs

## Lighting upgrade:

- Applies to buildings greater than 50,000 square feet in area
  - Individual dwelling units exempt
  - Houses of worship exempt

12/28/2009

**Bill Signing**



01/01/2025

**Lighting+Electrical  
Compliance  
Report due**



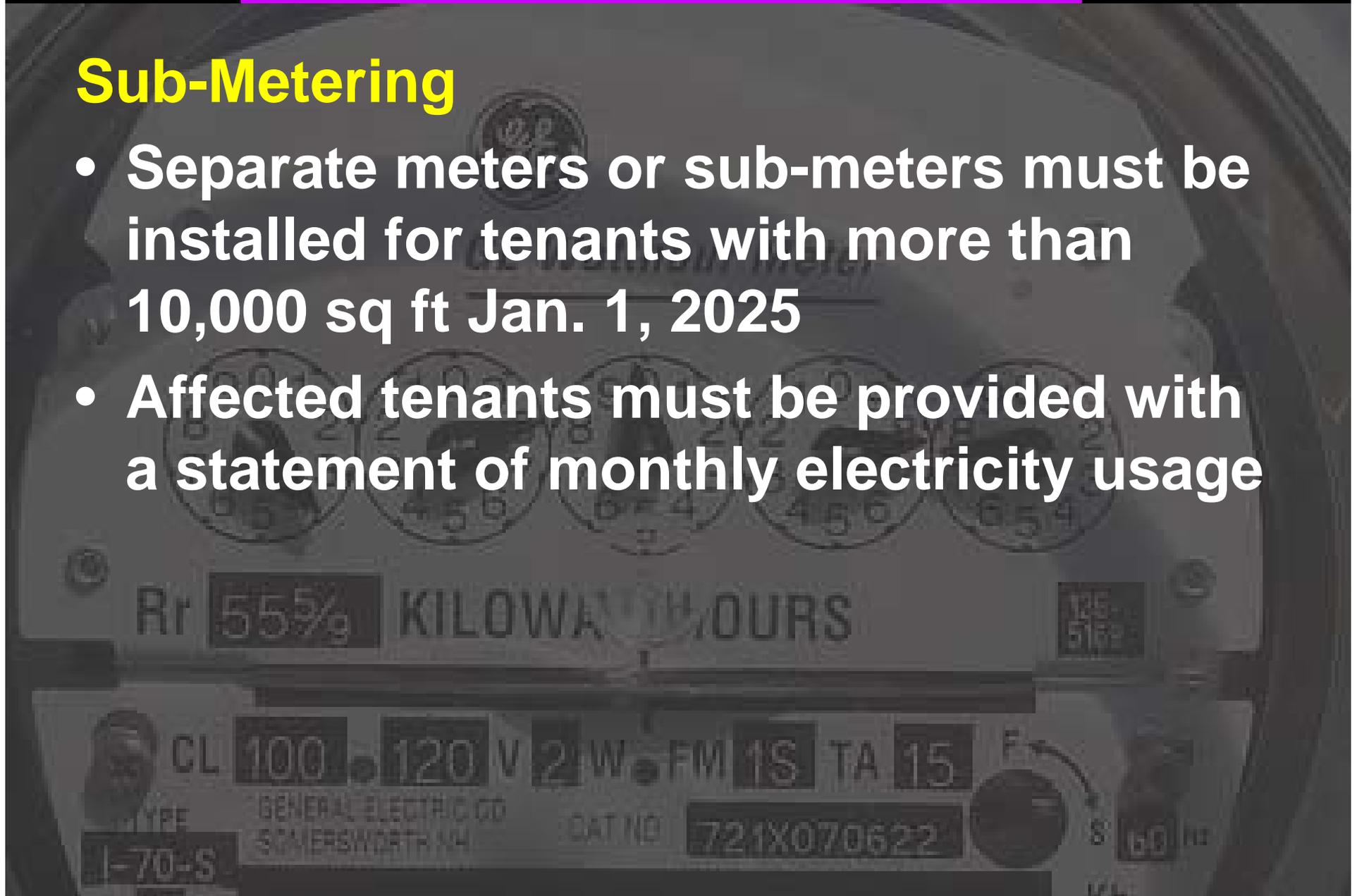
## Lighting upgrades:

- **Must comply by Jan. 1, 2025**
  - **Certified by a PE/RA or licensed electrician**
  - **Can be done incrementally, as long as documentation is kept and filed all together**



## Sub-Metering

- Separate meters or sub-meters must be installed for tenants with more than 10,000 sq ft Jan. 1, 2025
- Affected tenants must be provided with a statement of monthly electricity usage





## Challenges

- Outreach & training
- Report content and format
- BIS tracking



# Small Residential Buildings

Compliance NOT  
Required

**Dwelling  
unit lighting** ✘

Compliance Required

**Facade**  
(incl. windows) ✔

**Building  
HVAC** ✔

# Commercial Buildings

Compliance NOT  
Required

**Dwelling  
unit lighting** ✘

Compliance Required

**Facade**  
(incl. windows) ✔

**HVAC** ✔

**Lighting** ✔

## ***Draft* DOB Rule – Energy Code Compliance**

- **Document submission requirements**
- **Progress inspections**
  1. **Progress inspections to be noted and described in the approved construction drawings**
  2. **Details the “relevant experience” required of a progress inspector**

- **Greener Greater Buildings Advisory Committee**
- **Department develops rules for new local law implementation**
- **Challenges ahead**
  - Outreach
  - Interagency coordination
  - Professional duties and qualifications
  - Submittal documents (e.g. reports)
  - BIS tracking