LOCAL LAW 88: LIGHTING UPGRADES AND SUB-METERING
Version 1: January 2016
GREENER, GREATER BUILDINGS PLAN

Improving energy and water efficiency in NYC’s largest buildings.

Local Law 84
Benchmarking

Local Law 85
NYC Energy Conservation Code

Local Law 87
Energy Audits & Retro-Commissioning

Local Law 88
Lighting Upgrades & Sub-metering

See http://nyc.gov/ggbp for more info
WHY TARGET LIGHTING?

Energy Used in NYC Buildings

- Lighting: 18%
- Other End Uses: 82%
WHY TARGET SUB-METERING?

Commercial tenants use the majority of energy, but often do not know how much they use because they:

- Pay a flat rate not based on usage
- Do not receive monthly statements
WHAT IS LOCAL LAW 88?

- Upgrade lighting systems in all non-residential spaces
- Install electrical sub-meters in non-residential tenant spaces
- Provide monthly energy statements
WHO IS RESPONSIBLE FOR COMPLYING?

- Property owners and co-op and condo associations are responsible
- They may delegate reporting to a property manager or consultant
WHY START NOW?

Local Law 88 comes into effect January 2025. Leases being signed now run past that date. Start the work now to:

- Avoid Tenant Disruption
- Save Money Immediately
- Incentivize Tenants to Save
- Plan Capital Expenditures
GETTING STARTED

Step 1: Determine if property is subject to LL88

- 1 building greater than or equal to 50,000 gross square feet
- 2 or more buildings (same tax lot) together greater than 100,000 gross square feet
- 2 or more buildings (in condo ownership) together greater than 100,000 gross square feet

GETTING STARTED

Step 2: Determine if the property is exempt

- Small residential housing exempt (1-3 families, no report required)
- Residential uses exempt (must file documentation of exemption)
- House of worship exempt from lighting upgrades (must comply with metering and must document lighting exemption)
DOING THE WORK

Step 3: Determine who will be the compliance administrator

- Someone responsible for complying with other city laws
- Someone dedicated to complying with LL88
DOING THE WORK: LIGHTING

Buildings come into compliance during turnover / space renovations. Track renovations and make sure to upgrade spaces not renovated.
DOING THE WORK: LIGHTING

Buildings that do not need to upgrade:

- Have lighting components that comply with July 2010 energy code or later
- Have compliant areas within larger non-compliant areas that have closable doors and/or permanent floor-to-ceiling partitions
DOING THE WORK: LIGHTING

Step 4: Create a tracking document

- Create a list of all areas of the building, including:
  - landlord shared spaces (such as lobbies, back of house spaces such as mechanical areas, stairwells)
  - all tenant spaces
- List any lighting upgrades after 2010 and year of DOB filing
Step 5: Develop an Upgrade Plan

Develop a plan to renovate during tenant occupancy if:

- No lighting upgrades are executed during lease turnover
- Current lease expires after January 1, 2025
DOING THE WORK: LIGHTING

Step 6: Work lighting upgrades into your standard lease

- Better to upgrade during turnover
- Retrofitting lighting during occupancy is more expensive
Step 7: Consider hiring a lighting consultant

There are two components to energy code lighting standards:

- Lighting power densities: watts of lighting per square foot
- Lighting controls: switches, sensors, timers, etc.

A lighting consultant can determine if you can:

- Comply with today’s lighting power densities by simply swapping existing light bulbs for LED lights
- Install new lighting controls simply by swapping out light switches
Step 8: Assess what meters the building currently has

An existing building may have:

- One Con Ed master meter for the entire building (one bill paid by the building)
- Multiple Con Ed “direct” meters for spaces throughout the building (paid directly by the owners / lessors of those spaces)

Either of these kinds of buildings can also have sub-meters (not controlled by Con Ed) for smaller spaces.
Step 9: Develop a meter installation plan

- Each tenant space greater than 10,000 gross square feet

- Entire floor greater than 10,000 gross square feet leased to 2 or more tenants
DOING THE WORK: SUB-METERING

Step 9: Develop a meter installation plan

Option 1 - Install meters as leases become due

Pro: Staggered spending
Con: Does not allow for cost savings in bulk purchasing of meters

Option 2 - Install meters all at once

Pro: Cheaper overall
Pro: Allows for multi-channel meter option

Con: Disruptive for tenants
Con: Requires more capital
Step 10: Decide what type of meter you will use

Manual Meter

- Traditional meter
- Someone must walk through the building to manually record readings
DOING THE WORK: SUB-METERING

Step 10: Decide what type of meter you will use

- **Automatic Meter**
  - Can communicate with local building network or the cloud
  - Can electronically deliver billing directly to tenants (if integrated correctly)
  - Owners must install cabling throughout the building
  - Cost of cabling can vary
DOING THE WORK: SUB-METERING

Step 10: Decide what type of meter you will use

Single Channel vs. Multi-Channel Meter

- Single-Channel meters are most common
- Multi-Channel meters can read power usage from 2-16 electric services
- Multi-Channel meters are very cost effective
## DOING THE WORK: SUB-METERING

<table>
<thead>
<tr>
<th>Meter</th>
<th>Pros</th>
<th>Cons</th>
<th>Economic Effects</th>
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<tbody>
<tr>
<td>Manual</td>
<td>- Common</td>
<td>- Professional must read meter</td>
<td>- Extra labor costs to read meter</td>
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<td>- Least Expensive</td>
<td>- Delays bills/statements and tenant</td>
<td>- Installation costs</td>
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<td></td>
<td>- If already installed, purchase same</td>
<td>reaction to bills</td>
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<td>brand to save time</td>
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<tr>
<td>Automatic</td>
<td>- Direct reporting to cloud</td>
<td>- Installing cable can take up space</td>
<td>- Cost of cable installation can vary</td>
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<td></td>
<td>- Run through cable or wireless</td>
<td>and time</td>
<td>- Meters cost 10% more than manual</td>
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<tr>
<td></td>
<td>- Usage can be available in real time</td>
<td></td>
<td>- No labor cost to read meters</td>
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<tr>
<td>Multi-Channel</td>
<td>- Easy to install all at once</td>
<td>- Challenge to implement on pre-</td>
<td>- Overall purchase, installation, and</td>
</tr>
<tr>
<td></td>
<td>- Can read 2-16 locations</td>
<td>existing channels/meters</td>
<td>commission is cheaper than</td>
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<tr>
<td></td>
<td></td>
<td>- Disrupts tenants</td>
<td>individual meters</td>
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DOING THE WORK: SUB-METERING

Step 11: Adjust standard leases

Leases signed now should address:
- Metering
- Energy bills
- Costs

Indicate in lease deal:
- If owner or tenant will pay for meter and installation
- That owner needs access to tenant space to assess metering and lighting compliance for LL88
DOING THE WORK: SUB-METERING

Step 12: Provide tenants monthly statements

REQUIRED

Provide monthly statements showing electricity use (January 2025)

Each tenant must receive a statement of their own energy use

OPTIONAL

Provide tenants’ energy consumption data in real-time
SUBMIT YOUR REPORT

Step 13: Submit your compliance report

Reports are due (on or prior to) **January 1, 2025**, certifying:

- Upgrade of lighting system
- Installation of sub-meters
CONGRATULATIONS!
YOU COMPLIED WITH LOCAL LAW 88!