

Electrical Submetering in NYC

Compliance and Opportunity



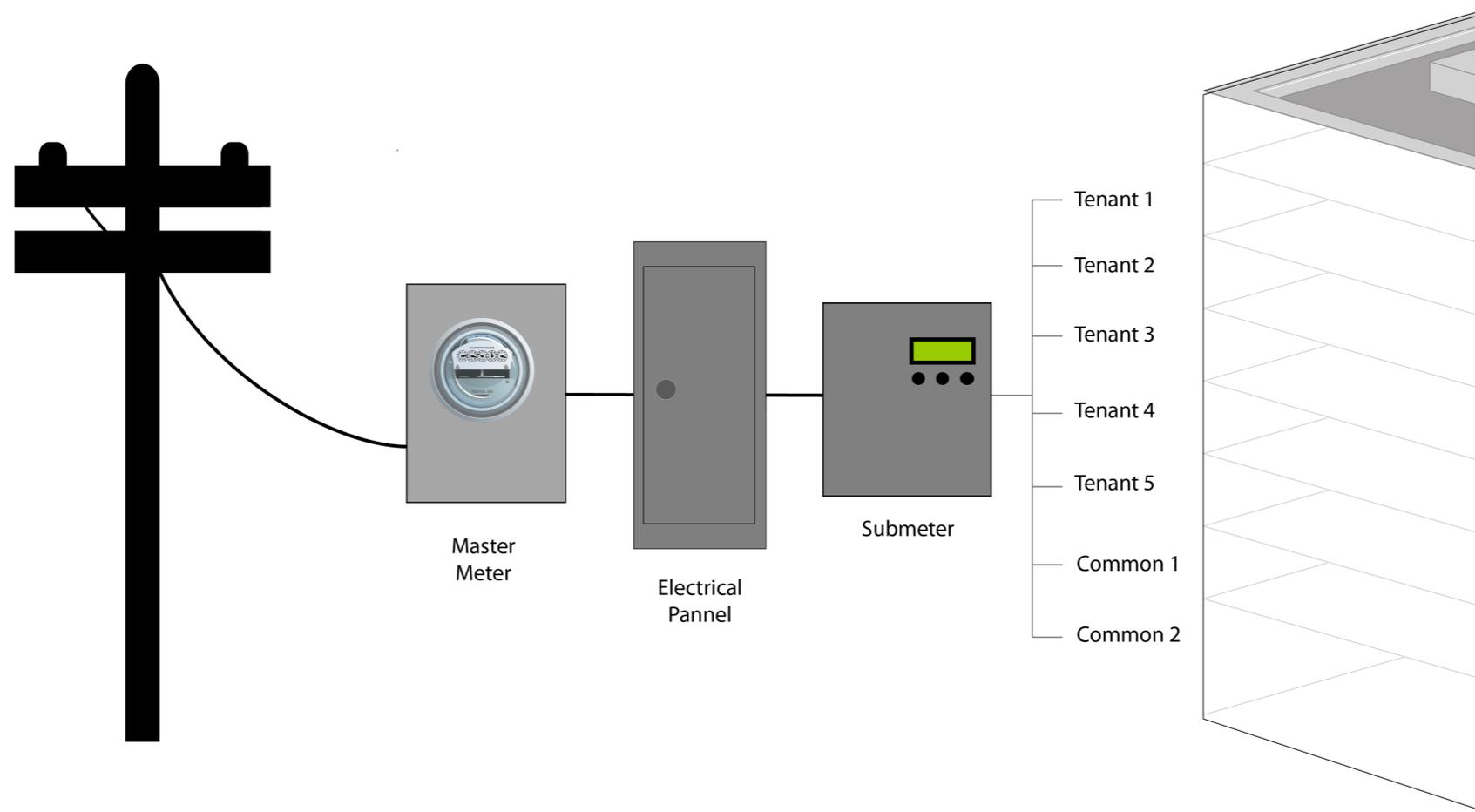
New York State law requires building owners and management companies to use New York Public Service Commission (NYPSC) listed meters when billing residential tenants. At the same time, New York City has implemented some of the most aggressive electrical submetering requirements for commercial and multi-unit residential buildings in North America. In the face of a growing wave of electrical submetering regulation, are you ready to comply and prosper?



WHAT IS ELECTRICAL SUBMETERING?

Many commercial and residential buildings in New York use a single "master meter." Electricity comes into a building at bulk rate prices from the Utility. Landlords bill tenants for electricity based on flat fees or formulas derived from the building space they occupy. Occupants pay for electricity as part of a monthly bill, but their energy use is not individually tracked.

Electrical submetering is the measurement of electricity consumption after the master meter. Submeters (also referred to as power meters, electrical meters, and energy monitors) are installed after the master meter to measure individual electrical load.



Submeters can measure energy use for tenants, departments, building equipment, or any other electrical load.

WHAT ARE THE BENEFITS OF ELECTRICAL SUBMETERING?

Submeters allow for the granular measurement of energy use, right down to the individual circuit. Building owners and property managers can pinpoint energy use, identify failing equipment, and allocate cost fairly by installing submeters. Tenants pay only for the electricity they use, can account for their consumption and conserve energy, and lower their electricity bills.

REDUCE ENERGY USE, SAVE MONEY

There are several strategies for reducing energy costs, but few are as compelling and fundamental as submetering. Many studies have shown that using submeters to allocate charges based on actual energy use is one of the most effective ways to reduce consumption.

Perhaps the most exhaustive study of applying electrical submetering to multi-unit buildings was undertaken by the U.S. Department of Energy as part of the Federal Energy Management Program (FEMP) in 2007.

How Much Could You Save ?	
Action	Observed Savings
Installation of Meters	0 - 2% (the "Hawthorne Effect")
Bill Allocation Only	2.5 - 5% (Improved Awareness)
Building Tune-up	5 - 15% (Improved Awareness and Identification of Simple Operations and Maintenance Improvements)
Continuous Commissioning	15 - 45% (Improved Awareness, ID of simple O&M Improvements, Project Accomplishment, and Continued Management Attention)

This study showed that merely installing meters resulted in a 2% reduction in energy use through the Hawthorne Effect. ^[1]

But that was just the start. FEMP found that submetering as part of a coherent, continuous commissioning program of benchmarking, analysis, and remediation can result in 15% to 45% savings. ^[2]

1. *The Hawthorne Effect refers to how people modify their behaviour when being observed or measured.*
2. *Making the Case for Energy Metering, ASHRAE*



WIN, WIN, AND WIN

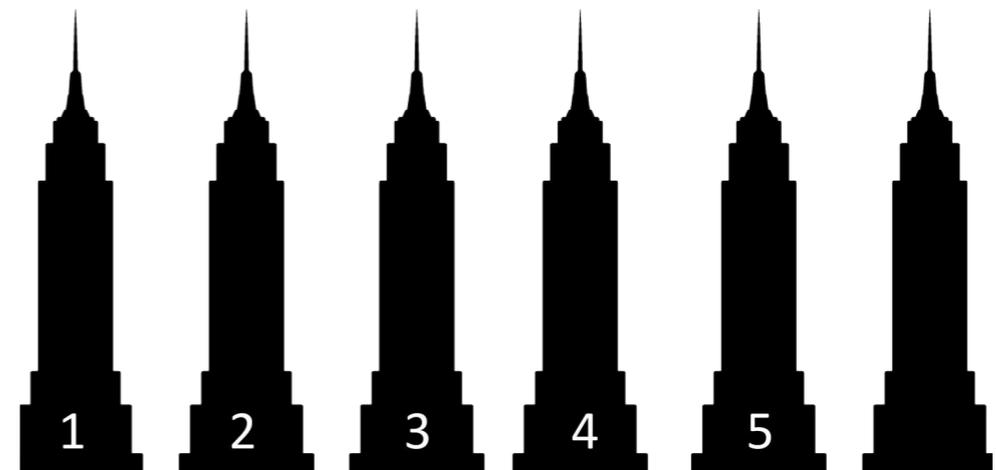
When tenants pay directly for their energy use, overall building consumption drops on average by 20%. That's an impressive saving that's comparable to installing an entire building automation system or changing all the windows in an office tower — at a fraction of the cost.

Put another way, for every five buildings that are submetered, an entirely new building can be powered from the saving.

With electrical submeters installed:

- ✓ Tenants win by saving money and reducing their energy use.
- ✓ Landlord's win with considerably lower energy and operational costs.
- ✓ The environment wins with significant reductions in greenhouse gas emissions.

THIS ONE FOR FREE



For every five buildings that are submetered, an entirely new building can be powered from the savings alone.

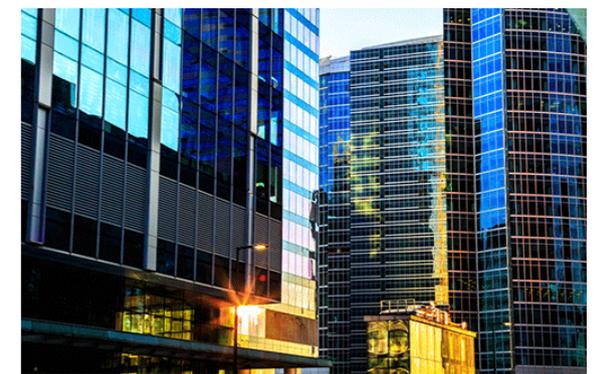
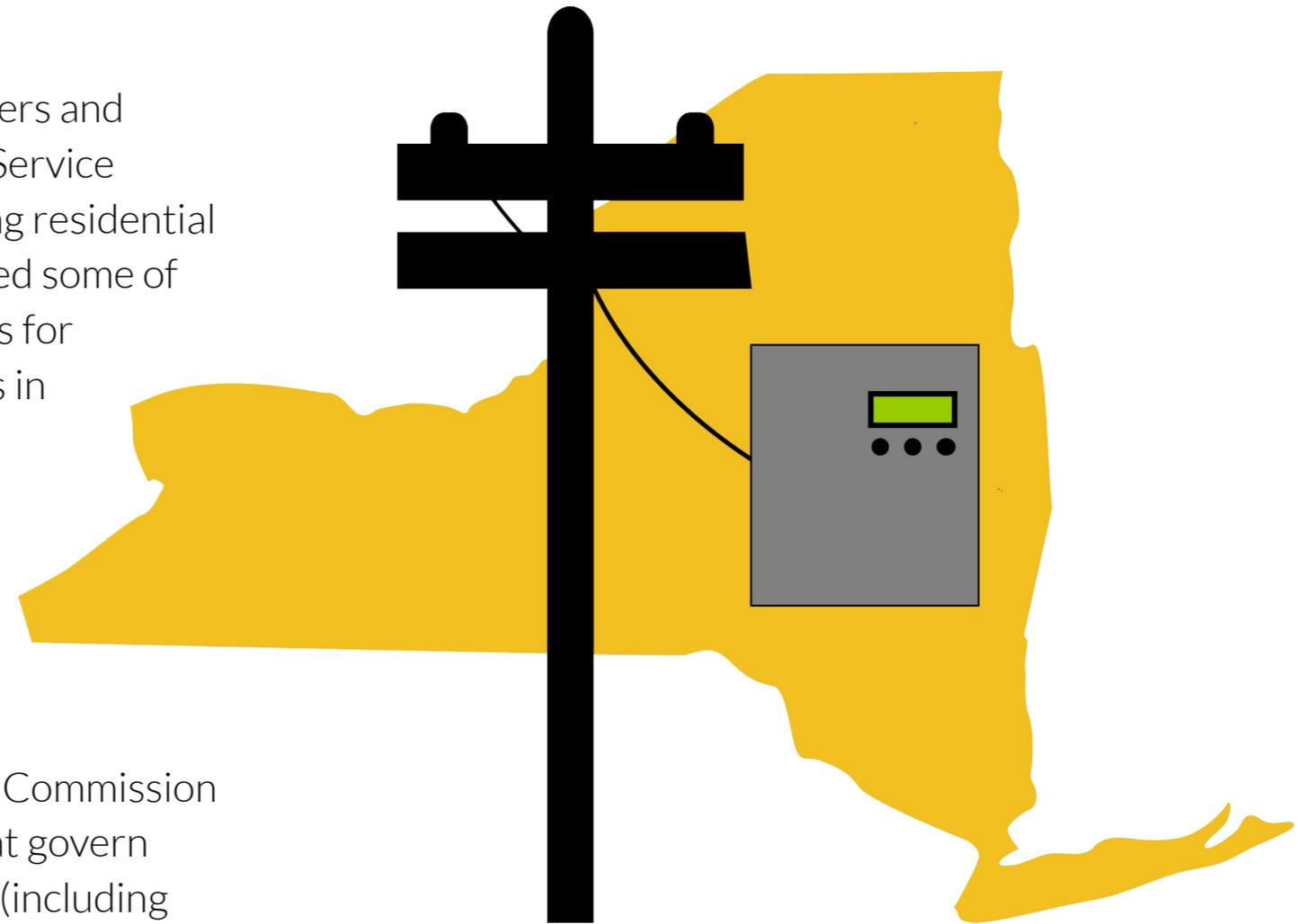


WHAT LAWS GOVERN ELECTRICAL SUBMETERING IN NEW YORK?

New York State law requires that building owners and management companies use New York Public Service Commission (NYPSC) listed meters when billing residential tenants – while New York City has implemented some of the most aggressive submetering requirements for commercial and multi-unit residential buildings in North America.

RESIDENTIAL TENANT BILLING IN NEW YORK STATE

At the State level, the New York Public Service Commission (NYPSC) has instituted strict requirements that govern electrical submetering in a residential building (including cooperatives, condominiums, and rental facilities).





The rules affect how submeterers (building owners, property management companies, or third-party energy resellers) bill for electricity use — protecting residents while promoting energy conservation.

For owners, a common question is whether they can profit from submetering residential tenants. The rules are clear. Landlords can charge residents up to, but not more than, the direct metered utility rate for electricity.

The goal is to reduce electricity use by making those consuming it directly responsible for paying for it.

NYPSC APPROVED SUBMETERS

Multi-unit residential building owners looking to submeter residential tenants in New York State must install and use New York Public Service Commission (NYPSC) listed submeters. [Contact Triacta for the complete list of approved meters.](#)

The logo for the Public Service Commission, featuring the text "Public Service Commission" in white, bold, sans-serif font on a blue rectangular background. Below the text is a white outline map of New York State.

**Public
Service
Commission**



GREENER, GREATER BUILDINGS

Buildings generate 75% of the greenhouse gas emissions in New York City. [The Greener, Greater Buildings Plan \(GGBP\)](#) is a comprehensive set of energy efficiency laws designed to reduce NYC's carbon footprint and save consumers millions in annual energy costs.

WHAT IS LOCAL LAW 88

Local Law 88 (LL88) is part of the larger GGBP initiative, targeting energy efficiency in large existing buildings in New York City. NYC was one of the first cities in the United States to require submetering for buildings over a specific size.

Local Law 88 (and add-on Local Law 132) require all non-residential buildings greater than 25,000 square feet to install electrical submeters for each large non-residential tenant space greater than 5,000 square feet. The submeters must be installed by **January 1, 2025**.

Building owners and property managers are not required to charge tenants for electricity based on the submeters installed. However, the meters must be installed by 2025 and tenants informed of their actual monthly electricity usage.





WHAT IS LOCAL LAW 97

Local Law 97 (LL97) is New York City's innovational emissions law that places carbon caps on most buildings larger than 25,000 square feet. The caps start in 2024 – with both emission goals and enforcement becoming increasingly demanding over time. The city's goal is to reduce CO₂ emissions by 80% by 2050.

Many buildings in New York City are affected by LL97 and could face significant financial penalties if not compliant by 2024.

WHAT DOES LL97 MEAN FOR YOUR BUILDING?

The first step is to determine if your property is subject to LL97. Generally speaking, if a building is subject to Local Law 84 (NYC Benchmarking Law), it is subject to the building emissions law. Check the [Covered Buildings List](#) for your property every year. If you are on the list, you need to determine your building's carbon emissions and limits.

Urban Green Council has a great FAQ on how to do that [here](#).

A photograph of a tall building at night. The building is dark, but the windows are lit up. From the rooftop HVAC units, a thick plume of white smoke or steam is rising into the dark sky. The image is used as a background for the text box.

The caps start in 2024 – with both emission goals and enforcement becoming increasingly demanding over time. The city's goal is to eventually reduce CO₂ emissions by 80% by 2050.

HOW CAN I REDUCE MY BUILDING'S CARBON EMISSIONS?

Reducing a property's energy use is by far the most effective way to reduce its carbon footprint. There are several strategies for reducing energy costs, but few are as compelling and fundamental as submetering.

According to Marc Reimer of Bay City Metering, submetering provides the granular consumption detail that property managers and building owners need to reduce energy use and avoid potential fines.

Mr. Reimer is not alone in these assertions. Many studies have shown that using submeters to allocate expenses based on actual energy use is one of the most effective ways to reduce consumption. For more on the benefits and payback of submetering, see [Making the Case for Energy Metering, ASHRAE](#).

Reducing a property's energy consumption with submetering not only sets property managers and building owners up for LL97 compliance, but can significantly improve building operations, allow for fair cost allocations, and increase tenant satisfaction.

“Local Law 97 enforces penalties on building owners for excessive energy usage. Owners can protect themselves by having a better understanding of their common area and tenant electricity use. Utility billing provides the full scope of usage and cost, but smaller, more granular data is needed to truly understand where, why, and how electricity is being used.

Through submetering, owners can zero in on tenant usage or equipment that leads to energy waste, and correct these problems — thereby lowering their usage, costs, and penalties.

Marc Reimer of Bay City Metering



WHAT IS LOCAL LAW 84

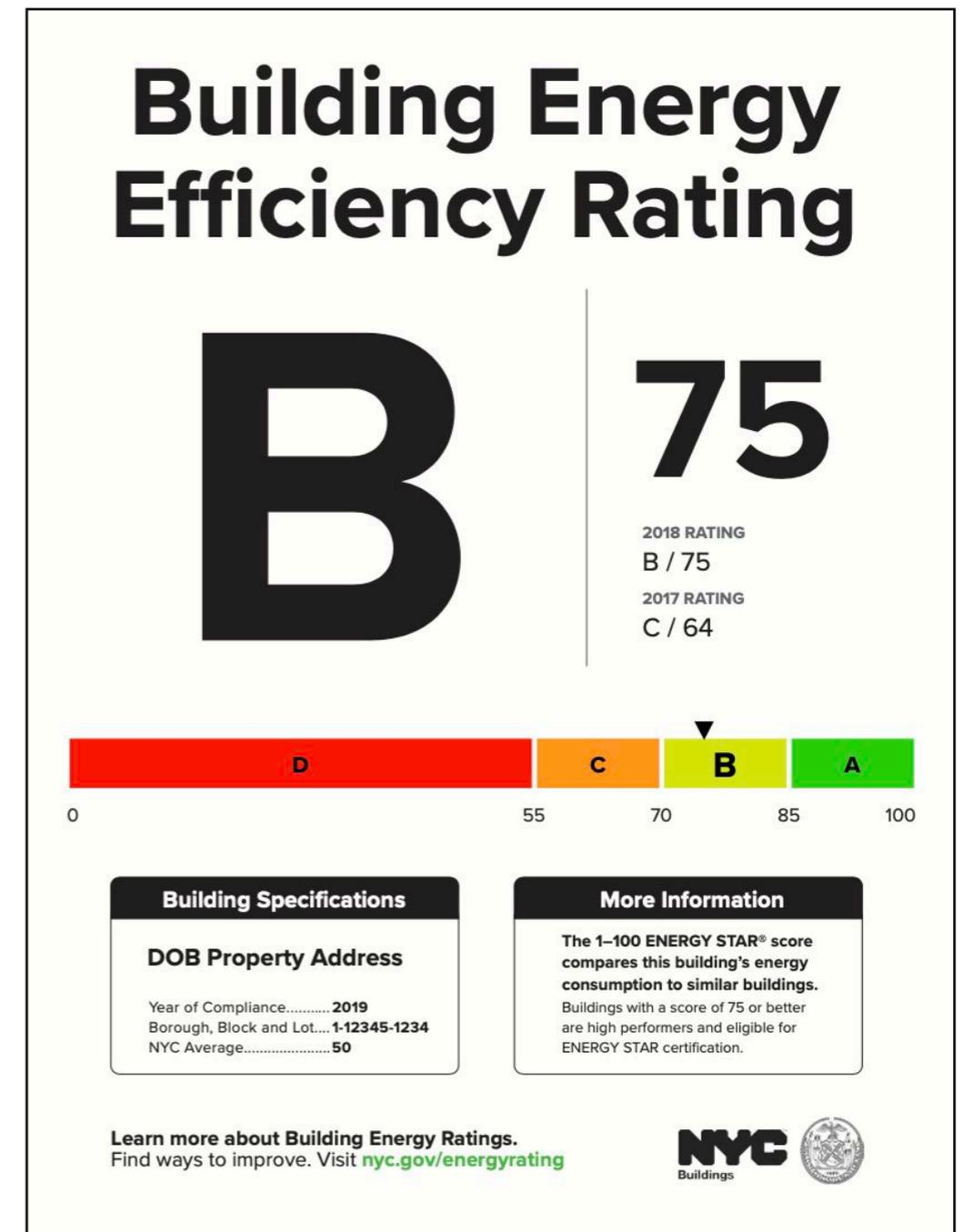
Known as the Benchmarking Law, Local Law 84 (LL84) requires building owners to submit yearly energy and water usage data. Reports are due May 1 of each year. Failure to comply will result in fines.

Building owners must submit data for buildings that are larger than 25,000 square feet or if a building owner has two or more buildings on a single lot that are larger than 100,000 square feet. Property managers and building owners can see if their building falls under LL84 by checking the [LL84 Covered Building List](#).

To comply with LL84, owners must submit data using the [Environmental Protection Agency's \(EPA\) Portfolio Manager platform](#). This tool allows for the comparison of a building's energy efficiency with similar structures.

WHAT IS LOCAL LAW 33

Under Local Law 33, owners of buildings subject to Local Law 84 must publicly display **Building Energy Efficiency Rating** labels. The labels, generated from data submitted to the EPA Portfolio Manager platform for LL84 compliance, give the public a snapshot of a building's energy performance relative to other NYC buildings. Building owners who pursue energy efficiency improvements are rewarded with higher energy grades.



Building Energy Efficiency Ratings include a 1-100 ENERGY STAR® score and letter grade (A-D). Scores are based on occupancy type, with a building's performance measured against similar structures.



WHAT IS LOCAL LAW 87

Local Law 87 requires all commercial and residential buildings over 50,000 square feet to carry out an energy audit and retro-commissioning every ten years. The purpose of the review is to identify recommended but not required energy savings measures. The recommended actions are provided in an energy Efficiency Report (EER) to the building owner and filed with the New York City Department of Buildings.

Energy Audit

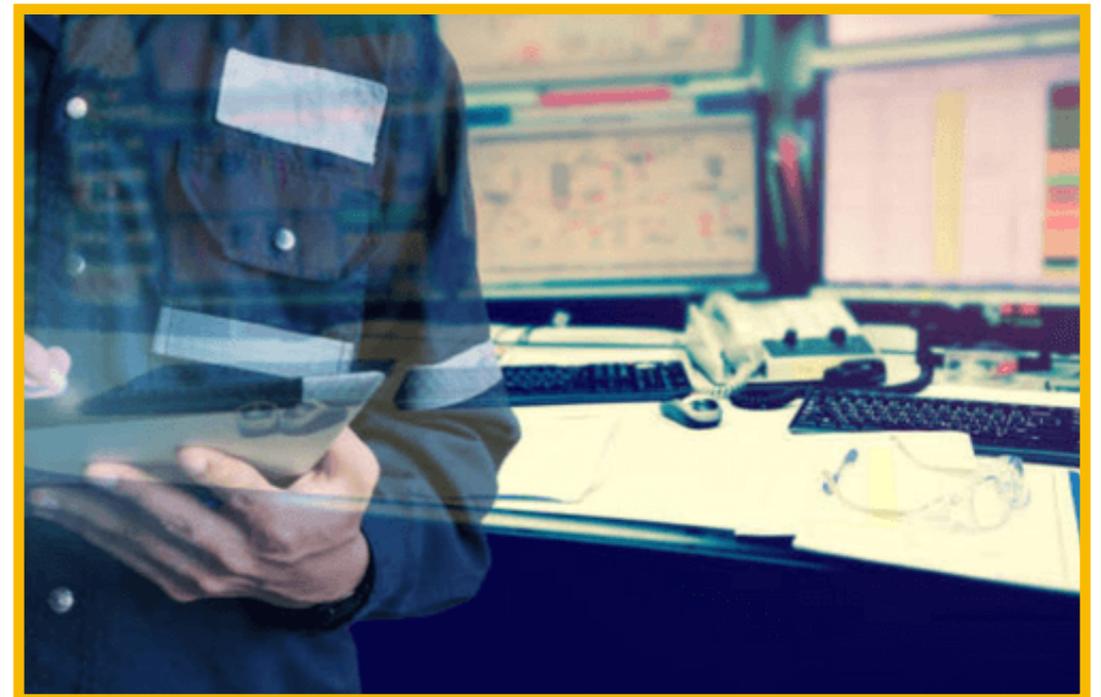
An energy audit is a systematic analysis of a building's energy equipment and systems — including boilers, chillers, electrical and lighting systems, and HVAC systems. The goal of the audit is to identify the most cost-effective improvements for reducing energy use.

A qualified energy auditor typically carries out energy audits. The auditor is responsible for creating a report with recommended strategies for saving energy — complete with costs and the payback expectations.

Retro-Commissioning

Commissioning is the process of assessing how a building's equipment and systems function together — to ensure optimal energy efficiency. Retro-commissioning sees the same systematic approach

applied to existing buildings that have never been commissioned. The goal is to ensure energy systems operate and are maintained according to the building's operational needs.



Energy Efficiency Report

Energy Efficiency Reports are a collection of Certification Forms and data collection tools that are submitted electronically. The forms contain the details of a building's audit status, along with the energy audit and retro-commissioning findings, as well as a statement of compliance from the building owner.



COMPLIANCE AND OPPORTUNITY

While New York City's building emission and submetering laws are stringent — they are forward-thinking and fair. If property managers and building owners act now, there is plenty of time to put in energy savings practices and processes that will allow them to be compliant with all Local Laws, while meeting state-wide residential billing submetering requirements.

But perhaps as, or more important than being compliant, is the amount of money you'll save on energy costs, improvements to failing building equipment, and increased tenant satisfaction.



NYPSC



Local Law 88



Local Law 97



THE MORE THE MERRIER

The evolution of multi-point electrical meters has created a cost-effective way to meet New York City's stringent submetering and carbon emissions laws.

Multi-point meters can isolate and monitor energy use by circuit, aggregate circuit-level data in any combination required, and easily adjust to circuit changes. Existing buildings don't need costly rewiring or expensive extra equipment. For new builds, panels can be installed with less labour since no additional time is needed to validate complex layouts.

Multi-point meters have the added advantages of having a much smaller footprint than multiple single-point meters and lower per meter point deployment, integration, and maintenance costs.

Multi-point meters allow for the metering of 6 or more circuits depending on the model and need.

They are useful when measuring a large concentration of circuits and a viable option for multi-load, granular data requirements.

Multi-point meters have a much smaller footprint than multiple single point meters and lower per meter point deployment, integration, and maintenance costs.



One multi-point meter (in yellow circle) replaces multiple, single-point meters.



SUBMETERS BEWARE!

While the cost and effort of submetering are well within scope for most building projects, there are several things property managers and building owners need to pay attention to when deploying submetering in New York City, including:

- ✓ A clear understanding of the laws governing commercial and residential electricity submetering in New York City.
- ✓ What, precisely, needs to be measured for Local Laws compliance? How should it be measured? How often? Do you need to keep a historical record of energy use?
- ✓ The risks and consequences of Local Law non-compliance. Who enforces the laws? What are the costs of non-compliance? How do you demonstrate compliance?
- ✓ Which meters are approved for residential billing by the New York Public Service Commission?
- ✓ How long can you expect to be able to use a meter?
- ✓ What happens when technology and communication protocols evolve? Will your chosen meter keep pace?

ADDITIONAL RESOURCES

For more on multipoint Electrical Submetering:

[From Space Saver to Information Cornerstone: The Evolution of the Multi-Point Electrical Meter](#)

[Making the Case for Electrical Submeters](#)

[How to Choose the Right Electrical Submeter](#)

[Successful Energy Management Through Submetering, Part 1](#)

[Successful Energy Management Through Submetering, Part 2](#)

For more on New York Local Laws for Commercial and Residential Submetering:

[Electrical Submetering Laws for Commercial Properties in the U.S.A.](#)

[Are You Ready for New York City's Innovative LL97 Emissions Law?](#)

[Take Advantage of Local Law 88 to Save Electricity, Boost Your Bottom Line](#)

POWERHAWK 6000 METERS

The PowerHawk® 6000 series of meters combines revenue-grade electrical submetering with advanced communications technology. PowerHawk 6000 meters are NYPSC listed, and independently verified to ANSI C12.20 Class 0.5.

Using advanced IP-based communications, PowerHawk® meters transmit data over existing phone or high-speed Internet connections without the cost of a dedicated service. There's no need to purchase or maintain additional computers or meter reading equipment.



ABOUT TRIACTA

Triacta Power Solutions designs and manufactures revenue-grade electrical submeters for tenant billing and energy management applications. Triacta is a subsidiary of Metergy Solutions Inc., one of North America's most experienced submetering providers.

Long known for its high-reliability, precise, multi-protocol submetering products, Triacta's meters have been easily and successfully deployed by submetering companies, property owners, building system integrators, and local distribution companies since 2003.



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