

Achieving Submetering Code Compliance with VerifEye™ Submetering Solutions

Overview

With all the variables surrounding code compliance and tenant billing (location, project size, end user needs), selecting a submetering system that will meet all requirements can be overwhelming. Rely on Leviton for quality, reliable, simplified solutions that can be used to meet submetering requirements for any sized project—from single office suites and classrooms to high-rise mixed use buildings and school campuses. As we prepare for the future of energy usage and submetering system design, trust the company that has been innovating the way forward for over a century.

VerifEye Building Manager Online (BMO) assists end users in meeting energy submetering requirements found in local and national energy codes such as

ASHRAE 90.1 2013/2016/2019, 2019 Title 24, Seattle Energy Code and New York Local Law 88. Create virtual meters to easily report on aggregated end use energy loads such as lighting, HVAC, plug loads and other equipment. Generate date-based reports for whole building energy sources as well as internal building systems.

BMO also allows multi-unit property operators to equitably allocate and invoice individual tenant utility costs as well as capture and allocate common area costs across portfolios of buildings and facilities. The platform provides a variety of billing summary reports as well as a portal for tenants to individually view their energy usage information online.

Energy Monitoring



Building Manager Online

	Base Energy Management	Energy Management with Advanced Reporting	Tenant Billing
	Web-Based Software		
Primary Functions	Provides easy to understand graphics of energy consumption and demand based on user defined inputs. Includes basic dashboard and virtual meter functions to assist in meeting national and local building code requirements.	Includes all the Base Module features plus a variety of more detailed analytic reports, custom report design, and a public kiosk feature.	Includes all the features of the Advanced Reporting Module and allows users to create invoices and tenant billing reports.

Leviton Manufacturing Co., Inc. Lighting & Controls

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Breaking Down ASHRAE 90.1

Electrical energy measurement systems are required in new buildings to monitor the end use of energy at the building system level.

8.4.3.1 Electrical Energy Monitoring

Measurement devices shall be installed in new buildings to monitor the electrical energy use for each of the following separately:

- Total electrical energy
- HVAC systems
- Interior lighting
- Exterior lighting
- Receptacle circuits

8.4.3.1 Electrical Energy Monitoring

- The electrical energy use for all loads specified in Section 8.4.3.1 shall be recorded a minimum of every 15 minutes and reported at least hourly, daily, monthly, and annually
- The data for each tenant space shall be made available to that tenant; in buildings with a digital control system installed to comply with Section 6.4.3.10, the energy use data shall be transmitted to the digital control system and graphically displayed
- The system shall be capable of maintaining all data collected for a minimum of 36 months

Breaking Down 2019 Title 24, Part 6

Section 130.5(a) & (b)—Service Metering, Disaggregation of Electrical Circuits:

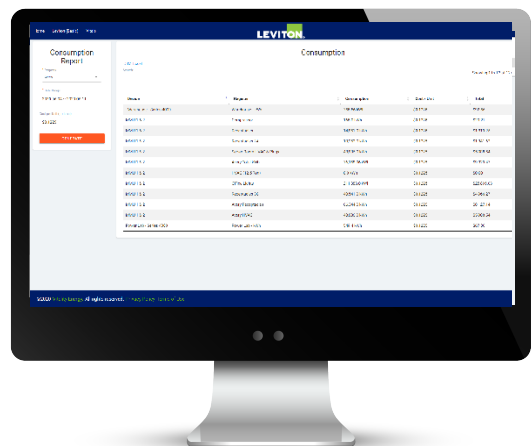
- Newly installed meters must be capable of disaggregated measurement of electrical loads, which can be viewed downstream from the meter
- Additive and subtractive methods can be used to determine system level energy usage; use BMO software to present that content graphically
- Title 24 does not specify data acquisition methods or data storage and presentation methodology
- 2019 Title 24, Part 6 Submetering Requirements Section 130.5(a) include user accessible metering of total electrical use from whole building to branch circuit monitoring



Public Kiosk Display



Vitals - Demand Summary



Consumption Report

Breaking Down Seattle Energy Code: Non-Residential & Multi-Family Buildings

The Seattle Code for Energy Metering (Chapter 12) requires:

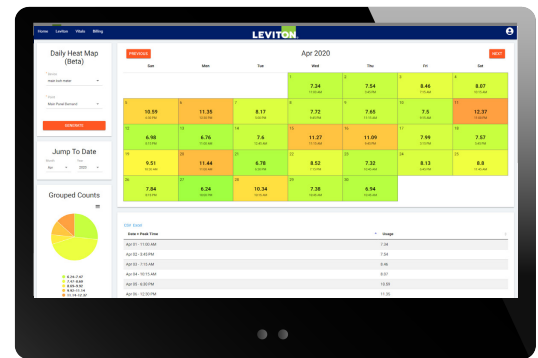
- Submetering in newer buildings larger than 20,000 sq ft, and additions larger than 10,000 sq ft.
- Tenant improvements where a tenant occupies an entire building floor must be individually metered
- Buildings with metering capabilities must maintain that capability in future alterations and additions

1202.1-1202.5 End User Submetering

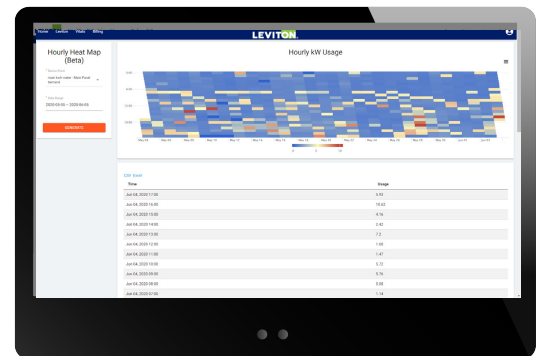
The system must also collect energy use data for the total building and separately for each of the end-use categories in Sections 1202.1 through 1202.5.

1204 Energy Displays

The Seattle Code requires a permanent, accessible, visible display for building operation and management. BMO offers comprehensive measurement & verification (M&V) software to utilize alongside data acquisition, communication, and submetering products. Application includes a dashboard and report features to meet the energy information display requirements.



Daily Heat Map

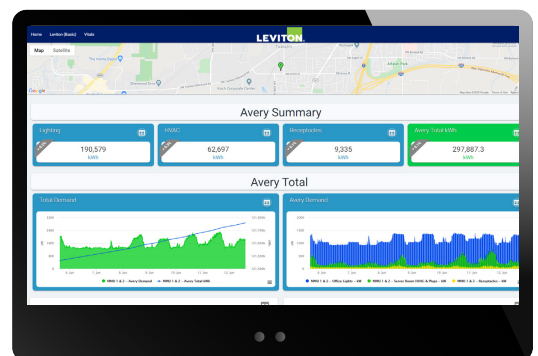


Hourly Heat Map

Breaking Down New York Local Law 88 (NY LL 88 - 132/134)

New York City requires:

- Amended by LL 132/134 in 2016 to reduce square footage thresholds
- All commercial buildings larger than 25,000 sq ft (was 50,000 sq ft) must install submeters for any tenants that lease at least 5,000 sq ft (was 10,000 sq ft) of space
- Required equipment must be in place by January 1, 2025
- Majority of NY commercial leases are 10 years long
- Meters must be planned and installed now to ensure compliance and prevent disruption



Property Summary

Tenant Billing



Breaking Down Tenant Billing

Measure, monitor and manage utility bills. Generate billing based on actual tenant consumption. BMO provides individual tenant billing capabilities to ensure accurate and complete recovery of tenant energy costs. This software solution streamlines the tenant billing process by eliminating manual meter reads or square footage calculations and delivering accurate metered energy data.

BMO collects energy consumption data from all submeters on a periodic basis and generates energy bills, billing reports as well as graphical snapshots of energy consumption data to support billing calculations. Other submetered energy data for gas, water and BTU/Hr data may be integrated into the system.

The Leviton Advantage

- Receive accurate details of energy use and demand from a specific circuit or a specific area to a complete building or complex
- Discover energy saving opportunities with advanced analytics
- Meets separation of load requirements with branch circuit monitoring technology
- Integrate with Building Management Systems (BMS)
- Open protocol data sharing capability
- Integrate all utilities including gas, steam and BTU's into the overall submetering system



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