



Powerlink Measurement and Verification Panelboards With Energy Insight

Make the most of your energySM

Schneider
Electric[™]

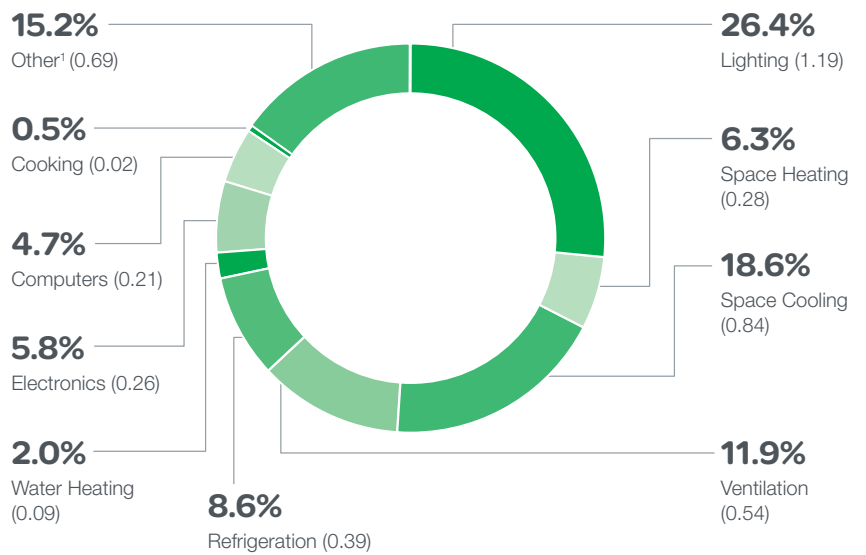
Understanding Hidden Energy Costs

Doing more with less is a familiar mantra around the world, especially when it concerns energy use. The most acute pain point is due to intrinsic inefficiencies. It follows that eliminating energy waste will deliver the best returns. Those returns must come from all levels to be truly efficient.



From point-of-use components to building power main, meaningful efficiency is a pervasive mandate. But before you can drive energy efficiencies and save energy, you have to be able to see it — that's where the Schneider Electric™ Measurement and Verification Panelboard (MVP) comes in.

Commercial Sector Buildings Electricity End Use



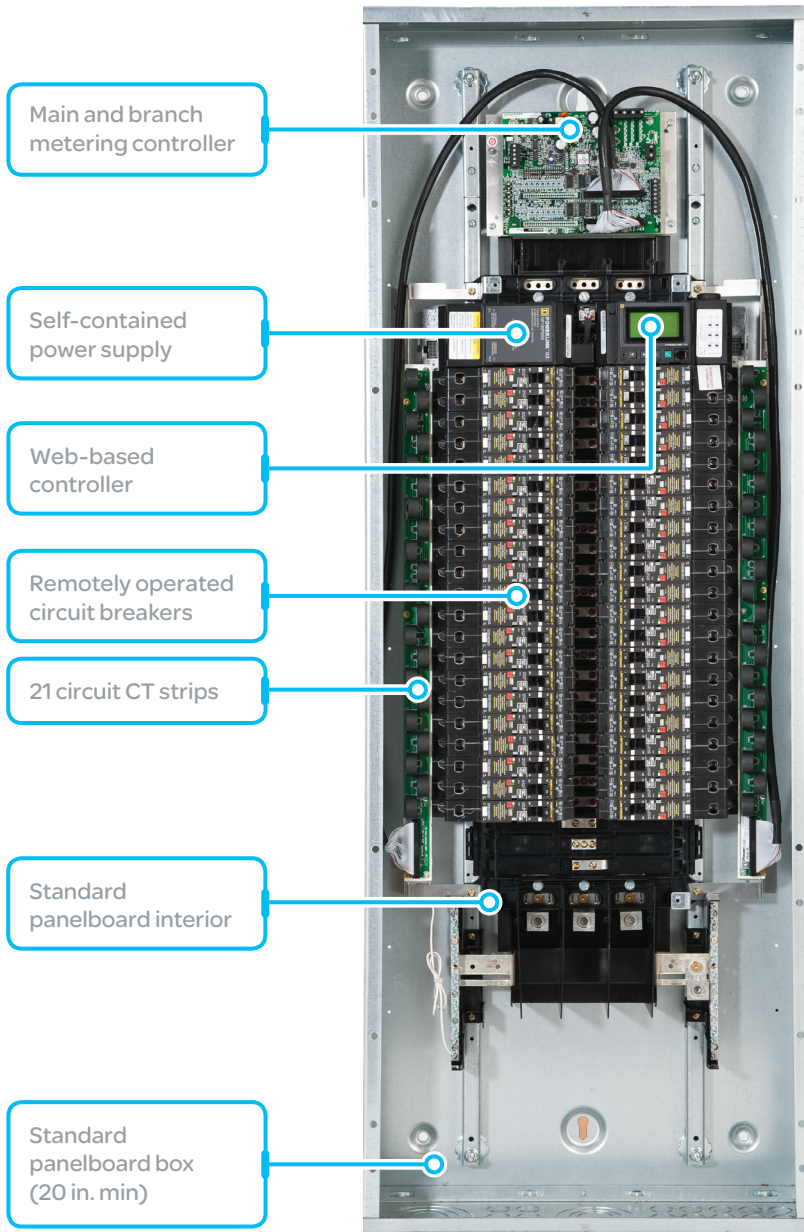
¹ Includes service station equipment, ATMs, telecommunications equipment, medical equipment, pumps, and manufacturing performed in commercial buildings.

Source: U.S. Department of Energy: Buildings Energy Data Book, Section 3.1 Commercial Sector Energy Consumption, March 2012, 3.1.4 Commercial Electricity End-Use Splits

The real savings opportunities may be those that are the most visible but too often ignored. Lighting and receptacle loads can account for as much as 50 percent of a building's connected electrical energy consumption, but are often improperly monitored to achieve maximum energy efficiency. Everything that consumes power must be addressed actively if sustained gains are to be made and maintained.

Pinpoint Energy Savings

Powerlink™ MVP **provides the intelligent core** to your energy management system. It gives you true visibility into how your energy conservation measures are performing, even down to the branch circuit level. Plus, it provides automated and schedule-based lighting control to help you cut energy costs by up to 30 percent.



Powerlink Measurement and Verification Panelboard (MVP)

Features and benefits

- > Individual branch circuit metering gives you the needed insight on where your energy is being used
- > Easily aggregate multiple branch circuit energy usage by load type, building area, lighting system, or entire facility
- > Review data through existing building management software or specialized MVP software to isolate areas of energy waste and improve efficiency
- > Achieve greater savings month-over-month and year-over-year while accomplishing your energy management goals
- > Combine reliable over-current protection, energy monitoring, and lighting controls in one standard panelboard
- > Eliminate unnecessary energy use by switching lights off during unoccupied periods
- > Improve productivity by controlling and monitoring panels from remote locations
- > Reduce demand by shedding lights during peak demand periods
- > Receive instant alerts with remote email alarming
- > As your facility changes or your needs grow, MVP is there, easily reconfigurable to accommodate changing needs through the life of the facility

Award-winning Product

- > Environmental Leader Review 5 Star Ranking – “Game Changing Technology”
- > Buildings Magazine Money Saving Product of the Year
- > NECA Showstopper Award
- > Consulting Specifying Engineer – Product of the Year Award

Understand Usage and Achieve Energy Efficiency Through Energy Insight



Identify and label circuits and zones

- Energy Insight automatically populates with the circuits on your MVPs when you initiate the software, making it easy to label panel circuits and create zones for meaningful analysis
- Assign respective MVP circuits to as many zones as you like, allowing you to understand their efficiency in a variety of analyses, such as baselines, locations, and departments
- Easily build new zones or change existing zones on-the-fly

Baseline energy performance

- Measure and compare consumption across departments, processes, and industry KPIs to identify the optimal places for improvement or adjustment
- Monitor real-time voltage; stay alert to adverse trends and load imbalances
- Understand time-of-day, weekly, monthly, and seasonal demand of your respective circuits and maintain a two-year history



Compare loads

- Load type vs. Load type
- Department vs. Department
- Building vs. Building
- And more

Take action to optimize energy use

- Compare significant electrical load consumptions to easily locate prime cost reduction areas
- Establish alarms and adjust existing ones to quickly identify demand and usage issues
- Identify locations of poor power factor and justify power factor improvement measures



Verify performance

- Review historical patterns to build a curtailment plan to enable participation in utility programs
- Measure the impact of energy efficiency strategies to verify achievement of expected performance or compliance
- Leverage insights to negotiate to reduce loads in response to utility curtailment requests

Target future savings

- Ensure operations are normal
- Confirm ROI for system improvements with advanced reporting and analysis
- Reduce expenses, enable best practices, and validate all your conservation initiatives

Measurement and Verification



Having the ability to accurately measure and verify your lighting and plug loads has become more important than ever before. However, there is a confusing patchwork of tools and processes from many sources that rely on spot-checking and one-time verification. Guesswork and point-in-time verification metering efforts cannot provide the complete history of accurate information to ensure investment and efforts to reduce waste are truly effective. Accurate information is at the heart of achieving sustainable energy savings.

By using Energy Insight with our award-winning MVPs, accurate and detailed information on energy use is available by circuit, zone, group of circuits, or complete building. Without having this level of insight available, any strategy developed to increase efficiency of lighting and plug loads would be like shooting in the dark. Best of all, our MVP solution can help you achieve and fulfill government, industry, and/or council regulations and requirements regarding energy efficiency, such as ISO50001. Accurate, detailed, complete, as well as ongoing information is the power needed to maximize energy performance efforts and investments.

Measurement and verification requirements and guidelines

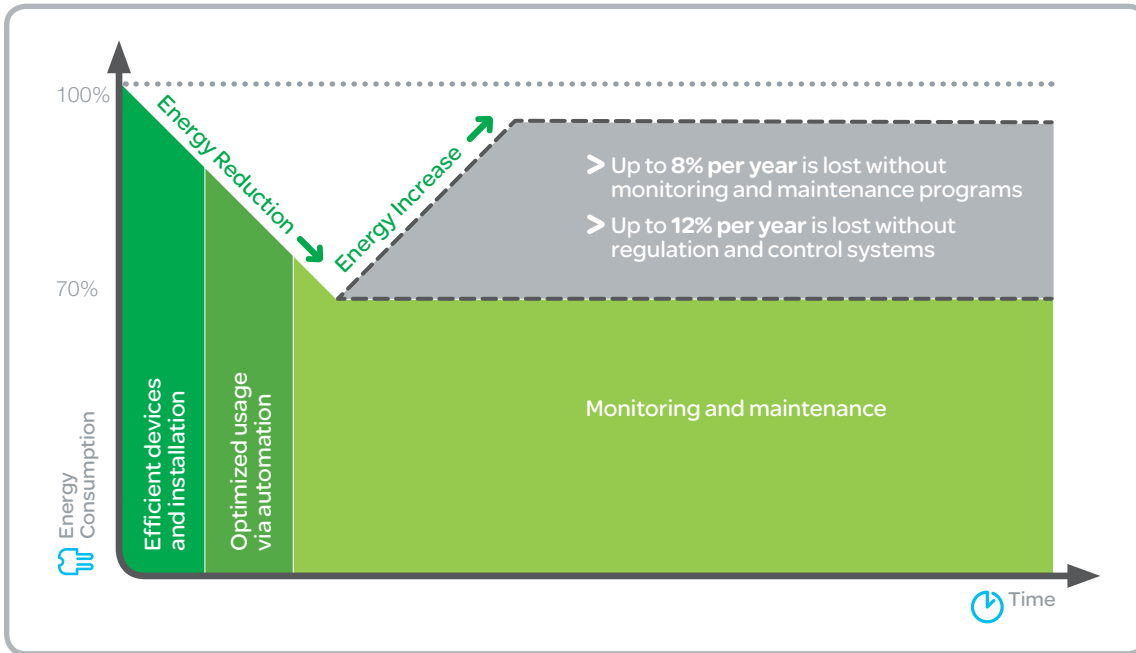
USGBC	Green Energy Building Council – LEED® Certification
ASHRAE	ASHRAE 189.1 – American Society of Heating, Refrigerating and Air Conditioning Engineers
IPMVP®	International Performance Measurement and Verification Protocol
ISO	ISO 5001 – International Organization for Standardization
FERC	Federal Energy Performance Contract
FEMP	Federal Energy Management Program
IECC®	International Energy Conservation Code®
CEC	California Energy Commission
EVO®	Efficiency Valuation Organization



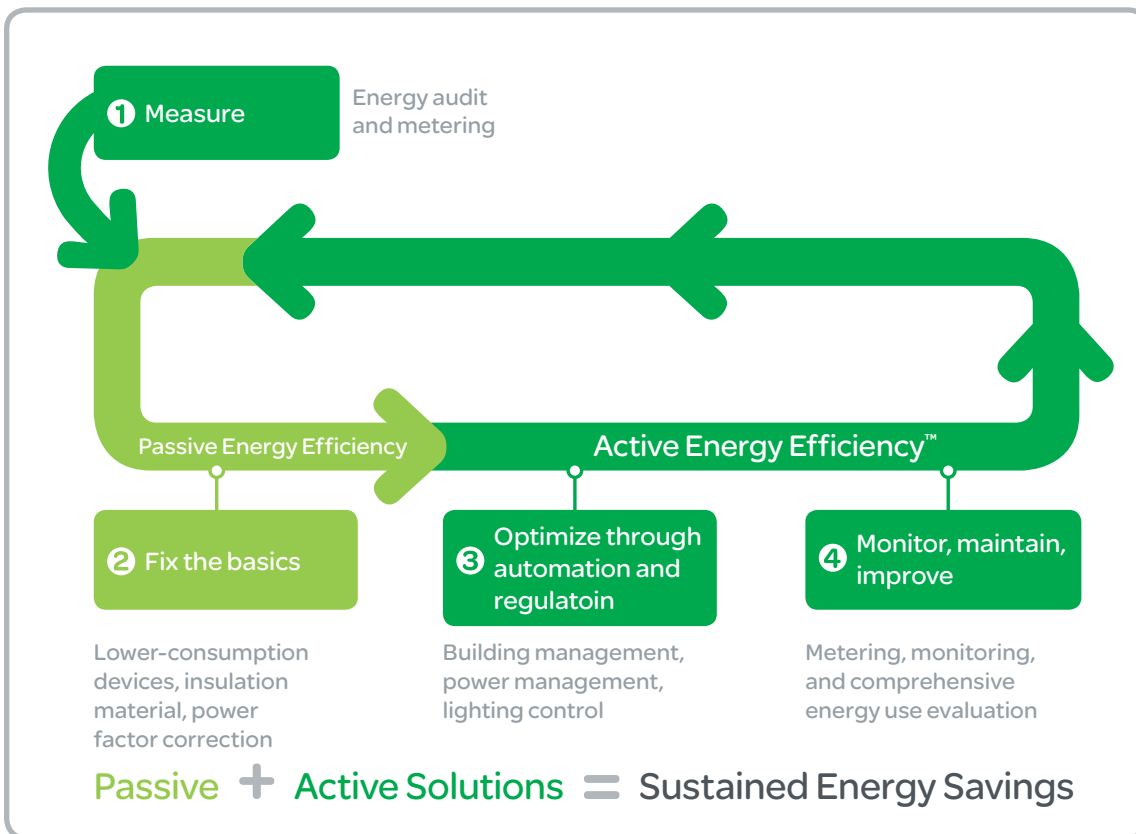
When do I need MVP with Energy Insight?

- > To achieve an understanding of the efficiency of your lighting and plug loads
- > To fulfill government, industry, and/or council regulations and requirements regarding energy efficiency
- > Establish baselines for the implementation of performance contracts
- > Quantify results of lighting and electrical upgrades

Active Monitoring Protects Savings



Powerlink MVP with Energy Insight helps you manage your energy efficiency and gives you detailed insight into energy-related costs, risks, and opportunities for savings. Protect and optimize your savings potential through active monitoring and verification. Sustain savings by observing energy sources and seeing improvements in real time or historical trend.



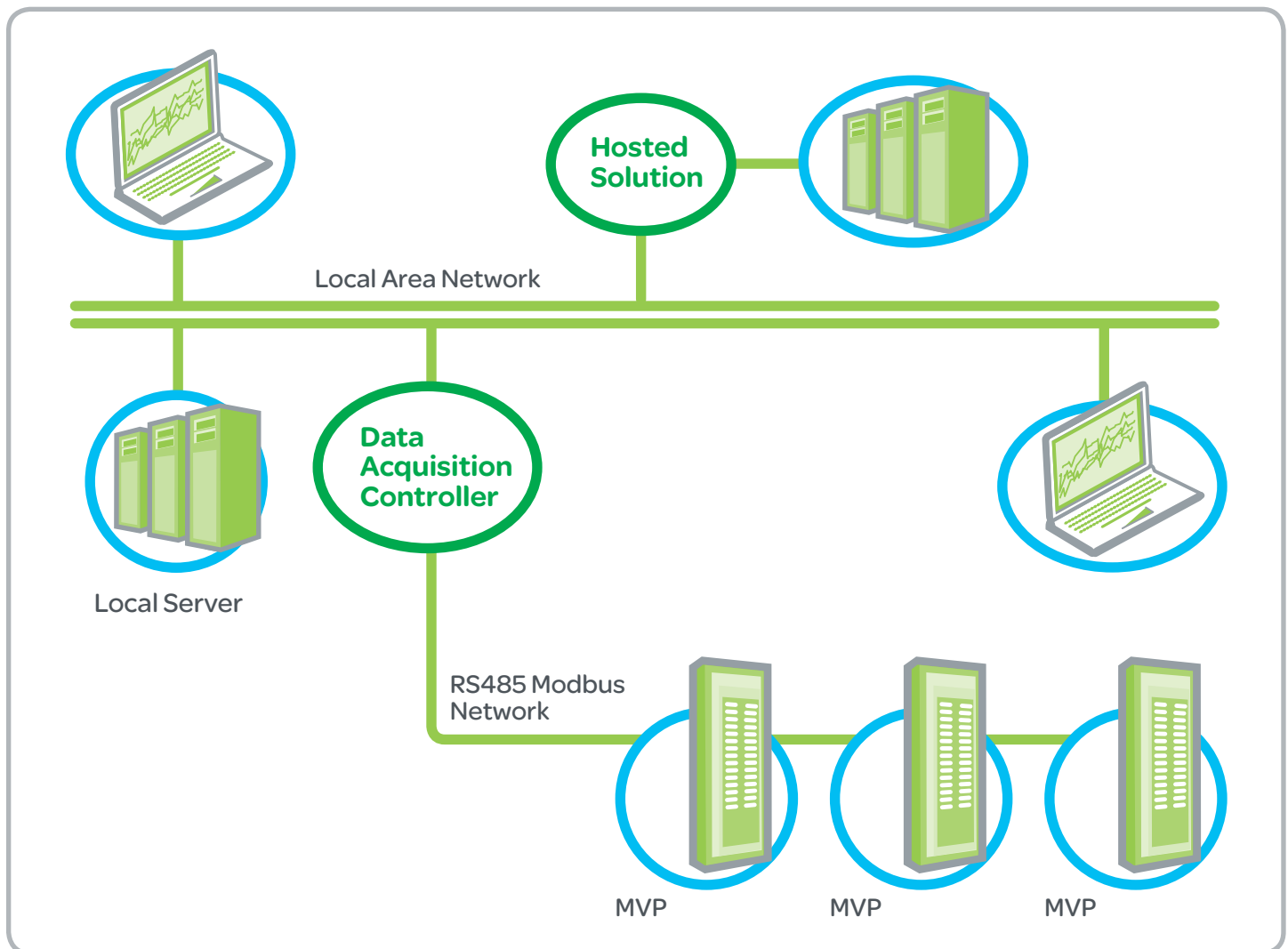
- > Start with measurement (you don't change what you don't know, you don't know what you don't measure)
- > Use the "necessary only" energy and only when "necessary" thanks to automation and control
- > Make permanent improvements to processes, maintaining consistent performance through monitoring and maintenance services
- > Remember, many measures are easy to install with a low implementation cost and a quick payback

Schneider Electric Offers Powerlink MVP With Energy Insight, With the Option of Integrating MVP

MVPs deliver real-time data utilizing open and industry-standard protocols. This standards-based approach allows for integration to building and energy management systems.

Schneider Electric offers Energy Insight as well as other energy and building management solutions to help you understand the hidden energy usage obtained from the MVPs.

MVP System Architecture



Whatever management software you choose or have today, the goal is to make the integration straightforward and uncomplicated so that you can unlock the power of the granular detail the MVP provides. The MVP architecture's simple, open approach has the needs of future-ready enterprise in mind.

Make Powerlink MVP Part of Your Sustainability Program



Knowledge is power. Insights and understanding of how you are using your power is what leads to sustainability.

With MVPs, building occupants and visitors can monitor, compare, and translate real-time energy data into easy-to-understand viewlets and dashboards. Users can track a building's energy use to see how changes in occupancy affect consumption. Marquis displays using data from MVPs also allow visitors to translate energy consumption into different units, such as gallons of gasoline, pounds of carbon, and even acres of rainforest.



To learn how Powerlink MVP can help you cut energy costs, email powersolutions@schneider-electric.com

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