

Energy Efficiency

Using Cloud Connectivity to Take Control of Energy Consumption



There is probably not a building occupant alive that has never been guilty of wasting energy.

As for the buildings themselves? Many are double-digit energy hogs most of the time. In fact, according to the Buildings Performance Institute Europe (BPIE), buildings account for about **40% of total energy consumption**.¹

That's the bad news. The good news is that there are plenty of ESOs (Energy Saving Opportunities). And, by combining a **good action plan** with **advanced technologies**, it's likely building owners like you can **reduce energy usage** at double-digit rates.

Energy Performance Regulations

Energy efficiency is a global issue with far-reaching consequences. It's also a complex undertaking with governing bodies, local agencies, and associations around the world each playing a part to build a more sustainable future.

In the work to shape energy policies, launch initiatives, and set key legislation, various regulations, guidelines, and mandates have emerged, which directly affect those who own and operate buildings.

For example, the European Union (EU) has a goal of improving energy efficiency by 32.5% by 2030.² Part of the plan to do so includes Member State energy efficiency obligations. The fact that 97% of the EU's buildings will require upgrades in order for the it to reach a full decarbonization by 2050 means building owners will need to implement energy efficiency measures to renovate existing buildings, as well as apply the newest standards when constructing new buildings.³

Because directives and provisions are continually being updated, it's incumbent upon building owners to stay informed. This white paper is intended to help you keep up with metering, which is one of the key opportunities to modernize and transform energy performance.

What Is Metering?

Metering is the use of sensors, devices, apps, and smart technologies to measure and collect data points and information about building- and tenant-level energy usage.

Metering allows building owners to identify ESOs, so they can be proactive in taking corrective actions to improve building efficiency and engage tenants in energy-saving initiatives.



Energy Efficiency Opportunities by the Numbers

With 40% total energy consumption in the EU and 76% of electricity use in the U.S.⁴, the building sector is wide open for energy efficiency improvements.



Why Cloud Connectivity Matters

It's been said that "what gets measured gets managed." This could not be truer – especially for building owners who are looking to increase energy efficiency.

The fact is, to maximize savings, you need insight.

That's where connectivity comes in. With connected devices that are cloud-enabled and connected to a device cloud, you can control all your energy-related devices from a central location, as well as remotely.

Connectivity expands your ability to **view, understand, and translate data** into actionable insights. While it's true that without it you can get information from the device; it's also true that the information you get can be both limited in scope and independent of the bigger picture.

Connectivity opens wide your ability to see the big picture like total energy usage to the finer details, such as which circuit uses the most energy or how much power a certain system is using.

Sources

- 1 https://www.bpie.eu/wp-content/uploads/2020/08/BPIE_Guide-on-Building-Policy_Final.pdf
- 2 https://ec.europa.eu/info/news/energy-efficiency-first-accelerating-towards-2030-objective-2019-sep-25_en
- 3 https://www.bpie.eu/wp-content/uploads/2017/12/State-of-the-building-stock-briefing_Dic6.pdf

- 5 https://www.euneighbours.eu/sites/default/files/publications/2020-03/MJ0220185ENN.en_.pdf
- 6 https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52014DC0015

7 https://achieving-zero.org/

⁴ https://www.energy.gov/sites/prod/files/2017/03/f34/qtr-2015-chapter5.pdf

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How Integrated Connectivity Works

Connecting your metering devices to a Cloud Energy Metering System adds further visibility and insight from metering in many different locations.

The best way to do that is by using an industrial gateway product, such as the **MSA FieldServer**. The FieldServer enables your energy metering sensors and devices to communicate to your cloud metering system.

Plus, FieldServer's proven BACnet IoT Gateway allows you to interface with a wide variety of building automation systems. So, you get seamless connection and real-time, contextualized intelligence to put you on the path to optimizing energy usage.

Action Plan for Lowering Energy Costs

- Install FieldServer
- Determine data points for your meters
- Connect to your Cloud Energy Management System or MSA Grid FieldServer Manager
- Benchmark current usage
- □ Establish energy-savings and efficiency goals
- Measure and track energy performance
- Log and trend energy-related activities
- Take a proactive role in improving efficiencies
- Lempower tenants to champion energy-saving habits

What Steps Will You Take to Increase Energy Efficiency?

The FieldServer protocol gateways transform the way building, facility, and plant managers make environmentally conscious and business-smart decisions about energy usage – all while maintaining compliance with government mandates. With FieldServer's proven BACnet IoT gateway and industrial IoT solutions, you get seamless, cloud-based connection to a Cloud Energy Metering system for real-time, contextualized intelligence that helps reduce energy waste.

MSA offers a full range of options for System Integrators. So, wherever you are on your journey to the cloud, remember that cloud security matters. To learn more, talk with your **MSA Safety representative** today.





Energy-Saving Technologies

Advanced technologies let building owners better understand energy usage based on metering in order to identify ESOs and support energy efficiency efforts and green initiatives.



MSA Grid Cloud Connectivity





MSA—**The Safety Company**

Our business is safety. We've been the world's leading manufacturer of high-quality safety products since 1914. MSA products may be simple to use and maintain, but they're also highly sophisticated devices and protective gear—the result of countless R&D hours, relentless testing and an unwavering commitment to quality that saves lives and protects millions of hard working men and women each and every day. Many of our most popular products integrate multiple combinations of electronics, mechanical systems and advanced materials to help ensure that users around the world remain protected in even the most hazardous of situations.

Our Mission

MSA's mission is to see to it that men and women may work in safety and that they, their families and their communities may live in health throughout the world.

MSA: WE KNOW WHAT'S AT STAKE.

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice.

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