

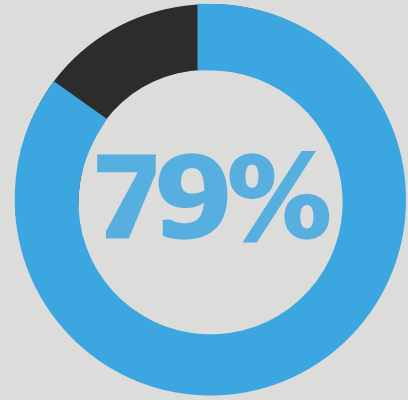


Blue  
Pillar®

# ENERGY NETWORK OF THINGS™ SERIES

The Next Big Thing in IT: Energy IoT





**79%**  
**OF ORGANIZATIONS**  
say reaching energy  
management goals will create  
a competitive advantage<sup>1</sup>



**85%**  
**OF ENERGY  
MANAGERS**  
say it's important to  
improve data collection<sup>2</sup>

## IT Has a New Job Description

Most IT professionals know all too well that times are changing quickly. The dawn of the digital age is upon us. Every day, countless organizations come closer to total digital transformation, finding new ways to capitalize on the ubiquity of mobile devices, cloud computing, process automation, and “big data” analytics. The convergence of it all has given rise to the Internet of Things (IoT), a global nervous system connecting and gathering intelligence from billions of everyday objects – from TVs and treadmills to cars and office buildings.

In this brave new world where everything is technology and technology is everything, the role of the IT department is evolving to serve a higher purpose. Once seen as the company’s hardware supplier and password police, today’s IT organization plays an increasingly influential role in business strategy, as digital transformation and IoT reveal amazing opportunities for cost savings, customer service, operational efficiency, and revenue creation.

## Energy and Facilities Management Needs IoT

The potential applications of IoT stretch across every industry, but there may be no better candidate than the field of energy and facilities management. Nearly all companies have a growing need to gain greater control over the energy systems that provide power, light, heating and cooling to their facilities. And IoT opens the door for the IT team to make an immediate and meaningful impact in this area.

## Three Trends Bringing IT and Energy Management Together

### 1. Sustainability is a top priority.

Today’s companies understand that reducing energy consumption isn’t just good PR, it’s good business.

### 2. Digital transformation is here.

The Internet of Things enables remote analysis and automation of almost anything, anywhere, including energy systems.

### 3. IT is more strategic than ever.

Digital transformation thrusts the IT team into the spotlight as a leader of technology-driven business initiatives that touch every area of the organization. One greenfield opportunity will be a close partnership between IT and energy facilities managers.

# A Powerful Opportunity

Now more than ever, large organizations are paying close attention to the way they use energy. With the Energy Information Administration predicting an 18 percent rise in electricity rates through 2040, companies are actively seeking ways to reduce consumption. Likewise, as failures in the power grid become more common, they're looking for solutions to safeguard business continuity. And as they are held to a higher standard of sustainability, they're working to minimize their impact on the environment and become more self-sufficient.

## The Challenge: Disjointed Information

The key to effective energy management is information – details about building operations and square footage, how various pieces of equipment consume or produce energy, and the oscillating impacts of local electricity rates.

Traditionally, the responsibility for gathering and making sense of all this data has fallen to local facilities managers, and more recently, to dedicated corporate sustainability executives and energy managers. Despite the increased focus on reducing consumption, however, most companies are still very much in the dark. They lack a clear and complete picture of their energy usage, because the revealing data they need is fragmented across far-flung facilities and siloed in systems that aren't

connected. At the same time, they lack the central controls to implement energy-saving changes based on detailed information from the field. As the meter runs, companies collectively lose billions of dollars per year to uncontrolled, unnecessary energy usage.

## The Solution: An Energy Network of Things

The technology to overcome these problems exists today, and the IT department will play the lead role in its deployment.

Through the principles of IoT, nearly any piece of energy-consuming or -producing equipment – from chillers and boilers to solar panels and lighting systems – can be interconnected in an “Energy Network of Things™.”

In this new paradigm, old, legacy equipment can become “smart” via retrofittable sensors. As data from smart facilities systems and energy assets is captured, integrated and analyzed, companies gain unprecedented insights into their energy needs and usage, and can finally take command of their energy spending, increase the resiliency of their facility and become more self-sufficient.

# 6

**MILLION**

commercial buildings and industrial facilities in the United States<sup>1</sup>

# \$400

**BILLION**

combined annual energy costs of commercial and industrial facilities<sup>2</sup>

# 40%

percentage of all U.S. greenhouse gas emissions that are caused by commercial and industrial buildings<sup>3</sup>

# 30%

portion of energy in commercial and industrial buildings used inefficiently or unnecessarily<sup>4</sup>

## SOURCES

1 Energy Information Administration

2 U.S. Department of Energy

3 U.S. Environmental Protection Agency

4 <https://www.energystar.gov/buildings/about-us/facts-and-stats>

# Bringing Energy Management into the Light

When technologists, facility directors and energy managers come together, good things happen. The IT organization provides the technical expertise that facilities and sustainability professionals need to convert facilities equipment into an intelligent energy ecosystem. With an interconnected Energy of Network of Things, companies can centralize and simplify the job of energy management, elevating all of their facilities to a higher standard of operations and cost-efficiency.

## How the Energy Network of Things Creates Competitive Advantages

### **Reduced energy costs.**

A complete, centralized view of energy performance at every facility enables informed, real-time decision-making about facilities planning and energy management. For large organizations with many properties, even a small efficiency improvement across the board can save hundreds of thousands of dollars per year.

### **Reduced capital spending.**

Nearly any piece of energy equipment – regardless of make, model or age – can be connected to the Energy Network of Things, which means companies don't need to spend millions to replace functional infrastructure.

### **Reduced environmental impact.**

Scaling back on energy consumption equates to shrinking each facility's carbon footprint, a key performance indicator in most organizations' sustainability goals.

### **Stronger business continuity.**

Power outages can have devastating consequences on productivity and customer satisfaction. But an intelligent system of connected equipment can detect problems, issue early warnings, self-correct and engage backup power sources to minimize the risks and achieve greater energy reliability and resiliency.

### **Energy self-sufficiency.**

Today's technology even allows some facilities to live entirely "off the grid," generating and managing their own power through devices they control.

### **New revenue streams.**

Utilities' demand response programs compensate organizations that voluntarily reduce energy consumption and/or switch to backup power generation during peak times.

## IoT Concepts Connecting all Energy Equipment = The Energy Network of Things™

An Energy Network of Things platform can turn even the oldest facilities equipment into smart devices that share information, respond to remote commands, and make automatic adjustments. Any energy-consuming or power-generating device can be linked.

### WHAT IS BEING CONNECTED:

- Meters (water, gas, electric)
- Boilers
- Chillers
- HVAC equipment
- Lighting systems
- Generators
- Automatic transfer switches
- Solar panels
- Wind turbines
- Fuel cells
- Combined Heat and Power (CHP)
- Energy storage



## IoT Security a Chief Concern



# 39%

**OF TECHNOLOGY EXECUTIVES**

say privacy and security concerns are the biggest barrier preventing investments in IoT.<sup>1</sup>

# 56%

**OF EXECUTIVES**

say it is “unlikely or highly unlikely” that their organization would be able to detect a sophisticated attack.<sup>2</sup>

## Smart Planning for Smart Buildings

When approached the right way, the *Energy Network of Things™* presents a clear path to achieve any number of business goals. Like most technology initiatives, however, a lack of advanced planning and a cohesive implementation methodology can lead to little more than a wasted investment in a system that never lives up to the hype. From the onset, IT teams should work closely with facility managers, operations executives, energy managers, and third-party vendors to understand the organization’s current energy infrastructure and arrive at a set of shared objectives with a clear plan for execution. When it comes to selecting an energy IoT technology provider, IT departments should look for an experienced partner with the proven ability to deliver a fully compatible, user-friendly and highly secure platform.

## Five Essential Features of an Energy IoT Platform

### **Simplicity of implementation.**

The benefits of any new technology are diminished if it takes hundreds of hours of complex programming to bring it online and keep it working. Customers building an energy IoT infrastructure should look for a platform that is as close to “plug and play” as possible.

### **Compatibility of equipment.**

Organizations should ensure the platform they’re considering can connect, monitor, manage and control all of their existing energy assets, regardless of make, model or vintage.

### **Robust security built in.**

Leading energy IoT platforms acknowledge that taking sensitive information online involves risk, and thus they counteract that threat proactively with the tightest possible security protocols to prevent cyber-attacks. The best platforms have built-in cybersecurity control to neutralize intrusion attempts.

### **Open, vendor-agnostic connectivity.**

An energy IoT platform shouldn’t be limited to communicating with certain brands of hardware and software. Customers can only achieve the full potential of IoT through a system that allows them to collect, share, and analyze data in concert with all existing equipment and applications. There should be no need to “rip and replace” existing, legacy facilities infrastructure.

### **Multi-site sharing.**

One of the most meaningful benefits of an energy IoT platform - and a must-have capability - is the power to aggregate and share energy information from many facilities, whether it’s three buildings spread throughout the city, or 500 sites around the world.

## SOURCES

1 Business Insider | <http://www.businessinsider.com/internet-of-things-survey-and-statistics-2015-12> EIA | <http://www3.epa.gov/statelocalclimate/local/topics/commercial-industrial.html>

2 EY | [http://www.ey.com/Publication/vwLUAssets/EY-cybersecurity-and-the-internet-of-things/\\$FILE/EY-cybersecurity-and-the-internet-of-things.pdf](http://www.ey.com/Publication/vwLUAssets/EY-cybersecurity-and-the-internet-of-things/$FILE/EY-cybersecurity-and-the-internet-of-things.pdf)



# The Facility of the Future™ is an IT Initiative

As digital transformation sweeps across every aspect of modern business, today's IT professionals have enormous influence on the fortunes of organizations everywhere. Energy management, in particular, is ripe for disruption and eager to implement IT's technical guidance.

Through the power of the energy IoT, the challenges of connecting legacy energy equipment have been solved. Every energy asset can be networked and operate in an open framework where ubiquitous connectivity is simplified, and apps can be interchangeable. Data can be fed from every connected device to smart dashboards that provide incredible granularity as well as "big picture" insights. Robust security can be built-in to protect devices and equipment from potential attacks.

Put it all together, and the result is a more efficient, more informed, more successful organization. This is the future of facilities and energy management. At Blue Pillar, we believe this is the right of every organization - not the privilege of a select few.

Get started on this path today by talking to Blue Pillar. With our Energy Network of Things™ platform, free energy management dashboards, ability to speak the language of facilities management, and relationships with Retail Energy Service Providers, the Facility of the Future™ is much closer to reality than you might realize.

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Ready to get started?  
We speak facility.  
Contact us at  
**[info@bluepillar.com](mailto:info@bluepillar.com)**  
and we'll help you start  
a conversation with  
your facility team.

# TAKE CONTROL OF YOUR FACILITY'S ENERGY FUTURE TODAY

Learn more about our award-winning energy  
network of things platform at [www.bluepillar.com](http://www.bluepillar.com)





Blue Pillar is the leading Energy Network of Things provider for distributed energy networks. Our award winning Aurora platform, and patented deployment methodology is the first solution to connect behind-the-meter distributed energy resources by self-prescribing secure IoT networks that enable real-time control of assets and collection of energy data. Using Aurora, hundreds of the world's most complex facilities operators have increased their energy resiliency, efficiency or self-sufficiency efforts including Duke University Medical Center, Tenet Healthcare and Houston Methodist. Energy service providers have been able to offer new services to their Commercial and Industrial (C+I) customers by centrally monitoring, managing, and dispatching behind-the-meter assets with Aurora. Blue Pillar was recognized as one of the 15 fastest growing energy tech companies in North America by the Deloitte Fast 500™. Learn how Blue Pillar can help you take control of your energy future faster and more affordably by visiting [www.bluepillar.com](http://www.bluepillar.com) or on Twitter at [@bluepillarinc](https://twitter.com/bluepillarinc).