

Bridging the Gap between Facilities and IT to Reduce Energy Costs across the Enterprise

Introduction

Energy is one of the largest unmanaged expenses in any organization. Organizations around the world are quickly discovering the power of enterprise energy management systems for gaining detailed visibility and control over their plug load, the vast majority of which is composed of IT devices.

When it comes to implementing an enterprise energy management system, it is essential to have collaboration between the facilities and IT groups within an organization. Though these departments deliver different services to the organization, they operate very similarly. Yet they rarely have the opportunity to work with one another. The IT department focuses on delivering compute services to all of the people in the organization, whereas the facilities department provides management of physical space and power. (See Figure 1)

Figure 1. Bridging the Gap between Facilities and IT



Both departments strive to deliver a reliable and stable service to the rest of the enterprise. The energy concerns of each department are different, however. Facility managers need to make sure that costs are kept as low as possible, while still delivering the necessary amount of power to the company. IT is under pressure to deliver ever increasing computing capabilities to the business, while also maintaining service-level agreements.

The challenge here lies in the fact that an energy management implementation requires that IT act as a service provider to the facilities department, since the facilities organization is typically the economic benefactor. Facility management hasn't traditionally had the opportunity to work with IT as a service provider, because it generally doesn't have many projects that require IT for implementation.

In order to begin building a bridge between IT and facilities, it is important to understand some primary differences between these groups.

Some Primary Differences between Departments

Energy Capacity Planning

When facilities plans for energy needs, the determination is based on power per square foot or power per user. They typically use a standard power calculation of X watts per square foot, based on office building, data center, and so on, or allocation of power per user. This metric allows facilities to determine the energy needs of a building.

IT generally does not worry about the amount of power needed until or unless it needs more.

Device Management

Although building management systems automate many of the larger devices in the facility, the majority of devices in facilities are manually managed.

In IT, there is not a single device that isn't managed by something. IT typically has thousands of devices to manage, but facilities have hundreds of large devices.

Budget

The network-connected energy management platform is an IT product, but facilities typically gets the budget relief of any energy savings. In general, IT does not own the energy management budget in the company; facilities does.

Since energy is provided, managed, and budgeted through facilities, this department now has to utilize IT as a service organization the same way all of the other business units do. We believe that there is plenty of common ground between these departments, making this an opportunity for both groups to collaborate on reducing energy consumption and providing a more sustainable IT infrastructure.

Learning to Speak the Language

Though each of these departments has a different perspective on energy (facilities making sure that costs are kept as low as possible, while still delivering the necessary amount of power to the company; IT delivering ever increasing computing capabilities to the business, while also maintaining service-level agreements), they are not as incompatible as they appear on the surface. Bridging the gap between facilities and IT begins with understanding that each speaks a different language.

While the term **control points** might be alien to the IT department, the IT equivalent, IP addresses, is just as unfamiliar to the facilities team. We believe that learning to speak the native language of the department being addressed will go a long way toward building a collaborative atmosphere between the two departments.

By simply understanding the vernacular, facilities and IT teams can more easily collaborate and advance energy management initiatives for the organization. Table 1 is a reference table to help facilities and IT teams find common ground and start a meaningful conversation.

Table 1. Terminology to Help Facilities and IT Understand Each Other

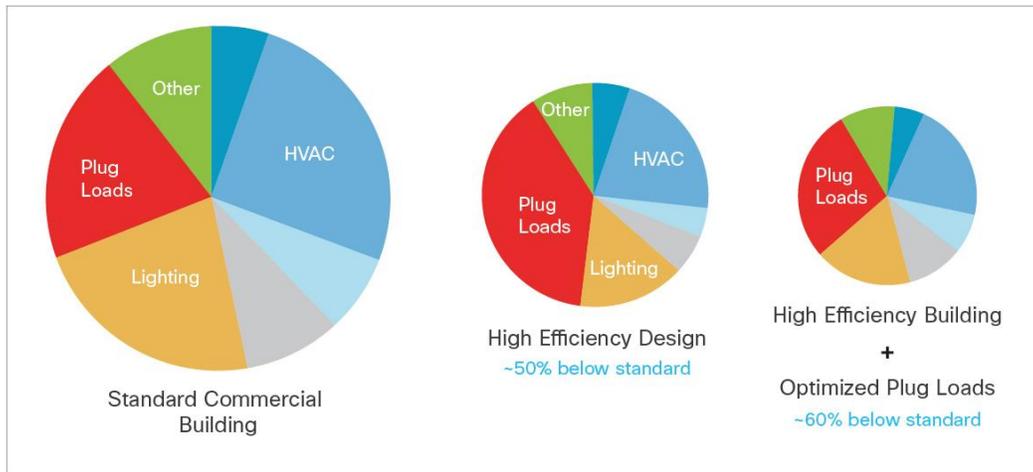
Term	Facilities	IT
Transport	Serial interfaces RS242, 422, 485, and more	Ethernet
Control systems	Building management systems, facilities management systems	Systems management, network management systems
Device references	Control points	IP addresses
Protocols	BACnet, Modbus, and dozens of other open and proprietary protocols	TCP/IP
Environment	Hundreds that are more manually managed	Thousands of devices typically automated

One area of focus for the facilities department that doesn't really have a corresponding IT term is **plug load**. Simply put, this is the amount of energy pulled from any electrical outlet in a building. In enterprise buildings, the plug load is typically utilized at 40 to 60 percent of the entire energy usage, and the remaining percentage is used by the building for lighting; heating, ventilation, and air conditioning systems (HVAC); and so on. Of the plug load, 60 to 80 percent is utilized by IT devices. (See Table 2 and Figure 2)

Table 2. Comparing Facilities and Plug Load

Building Type	Facilities	Plug Load
Office	60%	40%
Data center	40%	60%

Figure 2. Comparing Facilities and Plug Load



By learning to understand the terms and primary concerns of each team, both facilities and IT will have the basic building blocks to understand each other's roles and begin a dialogue to identify energy savings opportunities within the organization.

We have covered the differences in both the focus areas and the terminology barriers between facilities and IT. Now it's time to take a look at the similarities between the two departments and the collaboration needed to successfully implement an enterprise wide energy management solution. As with all other collaborative relationships, it is easiest to build a team effort on common ground.

Both facilities and IT provide critical services to the rest of the organization, and, although providing very different resources, each department works in a similar way. Often projects developed in other departments do not involve IT as an important part of the implementation until the last minute, leaving IT scrambling for resources at the last minute. Along the same vein, facilities is only involved by IT when it runs out of available power and the situation is critical. With data centers running out of space and power at a rapid rate, energy management has become a growing challenge for IT departments.

Because energy management solutions run on the network, facilities might see it as an IT product. Because facilities realizes the budgetary relief of energy management, IT might view it as a facilities product. However, it's important to remember that energy management is not department specific. From facilities management devices (HVAC and lighting) on the facilities side and computing devices (PCs, monitors, switches, routers, servers, VoIP phones, and printers) on the IT side, enterprise energy management spans the entire organization.

Making sure there is enough capacity to meet the demands of the IT organization for years to come is an effort that must be undertaken by both departments, as a team. Because managing energy efficiency is critical to IT's ability to maintain SLAs, as well as facilities' ability to plan for and deliver sufficient power to the enterprise as a whole, neither department can afford to pass up the opportunity to collaborate in the implementation of an enterprise energy solution.

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