

School District Cuts Energy Use, Estimates \$30,000 in Annual Savings

Case Study



School City of Hammond reduces energy usage with Cisco Energy Management.

EXECUTIVE SUMMARY

Customer Name: The School City of Hammond

Industry: K-12 school district

Location: Hammond, Indiana

Business Challenge

- Understand energy usage throughout school district
- Reduce energy consumption through elimination of wasteful habits, institution of best practices

Network Solution

- Cisco Energy Management for Distributed Office

Business Results

- Energy usage can be assessed in all devices throughout district facilities
- Annual power consumption reduced by 35 percent, \$3,500 savings in energy costs due to new usage guidelines and best practices

Business Challenge

America's schools spend more than US\$7.5 billion annually on energy, according to a July 2013 report based on a study by the Emily Hall Tremain Foundation. That's more than schools spend on textbooks and computers combined. In fact, energy costs are the largest operating expense for school districts behind salaries and benefits. In recent years, these costs have increasingly strained school budgets. IT plug loads, from computers, copiers, printers and other devices plugged into outlets, constitute one of the top three electricity end uses after lighting and cooling. As much as 30 percent of a school district's total energy is used inefficiently or unnecessarily.

The School City of Hammond is an urban K-12 school district located in northwest Indiana with a total enrollment of approximately 13,800 students. It comprises 24 facilities that include 15 elementary schools, two middle schools, four high schools, one vocational center, an administration building, and a maintenance and warehousing facility, all totaling just over three million square feet.

With a utility expenditure of more than \$3.5 million annually, the school district's energy manager, Mark Hennessee, had plenty of opportunity to reduce costs associated with energy. But although he was spearheading several sustainability initiatives, Hennessee had no insight into how much energy was consumed by the devices being used by students, teachers, and administrators across the district's 24 facilities. He knew that, with an abundance of devices and end users, many devices, such as computers, were left on and consuming energy unnecessarily during nights and weekends.

According to Hennessee, "The challenge was, how do we gain insight into the amount of energy that computers and other devices are using across the entire district and, knowing that, what is the best way to reduce waste and drive down costs?"



Network Solution

Hennessee discovered Cisco Energy Management and decided to try a pilot program of the Cisco® solution to first establish a baseline of energy consumption and an indication of teacher, student, and staff behavior across the district.

“Initially, the most appealing feature of Cisco Energy Management was that we could get up and running quickly, without adding a complex, time-consuming new technology to our IT department,” says Hennessee. “The fact that Cisco Energy Management is agentless and doesn’t require installing software on each device was a big deciding factor.”

After deploying Cisco Energy Management within as little as an hour on either a physical or virtual machine running inside the network, Hennessee soon discovered that as many as 1,800 devices were left on after hours during the school week. Although more employees would power down on Friday afternoons, as many as 1,200 devices were left on over the weekend.

“It was eye opening to see how much energy was consumed by PCs that were not even being used,” he says. “Cisco Energy Management quickly showed us that there were several ways we could drastically cut energy use and reduce costs. It also allowed us to identify that older PCs were drawing power in the 80-100 watt range while newer PCs were down to 50 watts. Cisco Energy Management gives us actual data on energy consumption and utilization by device, make, and model, which is information we can use in prioritizing which devices get upgraded.”

With this newfound insight into consumption, Hennessee was able to easily create policies through Cisco Energy Management to automatically power down all devices at a specified time. Unique policies were assigned for devices based on the different needs for each of the district’s locations. For example, the elementary schools’ computers, only needed to operate from 8:20 a.m. until 3:30 p.m., while some employees at the administration building work later and require shutdowns at 7 p.m.

Business Results

With Cisco Energy Management, the School City of Hammond is consuming 35 percent less power and is projecting an annual savings of \$31,500. Because the solution provides Hennessee with a complete picture of energy consumption and savings, he is able to recoup rebate money from the local utility provider’s customer incentive program and expects to show savings of 147,000 kilowatt-hours, which will result in a \$10,500 incentive check.

According to Hennessee, “Cisco Energy Management has given us a great deal of visibility into our energy consumption and usage patterns and shown us that energy management can be done easily and seamlessly to deliver a significant return on investment in both reducing our carbon footprint and cutting costs. After using Cisco Energy Management for four months now, I can’t think of anything it doesn’t do to help monitor, analyze, and reduce energy consumption.”

For More Information

For more information on Cisco Energy Management, contact ask-energymanagement@cisco.com.



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