Cleaning & Maintenance Management

Energy Efficiency Through Modernization

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Sustainability
How cosmopolitan ideals helped an aging school become more sustainable.

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When the operators of Chemawa Indian School, the oldest continuously operating boarding school in the United States, decided to bring their facility into the twenty-first century, they wanted to make their campus as energy efficient and sustainable as possible.

Those goals can be quite an undertaking for even a brand-new school, but for an institution that is more than 120 years old, some might think it was next to impossible.

One step school administrators took to reach these goals was to install a sustainability "dashboard" system to monitor electricity, water and gas usage — among other things — throughout the 400-acre campus.

This system features a 19-inch monitor located in one of the school's maintenance rooms, but the same information is available online and can be accessed on any of the school's computers.

Some of the items the system monitors include:

- Water flow and use in specific buildings and locations around the campus
- Real-time electricity and gas use for a variety of locations and buildings throughout the campus
- Daily, weekly, monthly and annual energy and water use statistics; this information can be monitored by students and staff as well as maintenance employees
- The level of greenhouse gas emissions being generated by the school's energy usage
- Energy and water usage in specific high-use areas such as dormitories and kitchens
- Historical energy use comparisons
- Calculators that can compute the possible savings that could be created via various "what if" scenarios

- Environmental tips.

Goals And Findings

The goals the school hopes to achieve via the use of this dashboard system are as simple as they are crucial to the ongoing operation of the facility.

The first goal was simply to find out how much water, gas and electricity are actually used on campus.

School administrators understood that if they wanted to manage their resource use, they had to have some way to measure that usage.

But, as is so often the case, the actual "numbers" regarding this were often unknown or overlooked unless there was a significant spike in usage or, just the opposite, a surprising decline.

In fact, as is true of most facilities, even when such information was tracked, the focus of administrators was typically on the costs involved rather than on where, how or how much energy or water was being used.

A dashboard system can provide this information, which can empower decision makers to make sure that energy, water and natural resources are used efficiently and sustainably.

For instance, in the case of the boarding school system, administrators noticed unusual spikes in energy use at several times during the day.

When they investigated, they found that the school had a number of electric water heaters that were sometimes activated by preprogrammed schedules rather than being controlled by the actual need for hot water.

Adjusting these systems and replacing the outdated technology they used alleviated this problem and improved the school's energy efficiency.

Using a "what if" scenario, the school also realized that if they installed motion sensor lighting throughout the campus, along with dimmer controls on key lighting fixtures, the conservation of electricity and resultant cost savings could be significant — far outweighing installation costs for the new systems.

This idea has since been incorporated throughout the facility.

JanSan Implications

A large, multi-building facility with a sizeable student body such as this boarding school can obviously take advantage of the kind of sustainability dashboard system discussed here.

But, can JanSan companies, and specifically JanSan distributors, use the same technology to earn a profit while also protecting the planet?

The answer seems to be a resounding "Yes."

Distributors can now integrate similar dashboards into their own business operations and, just as with this school and scores of other facilities, discover many ways to reduce energy use, become more sustainable and cut operating costs.

The goal when using such a system, just as with the boarding school discussed earlier, is to help administrators and managers make "commonsense" changes that benefit the facility, its employees and users, the local community and the environment — while also reducing operating costs.

The dashboard system provides the benchmarks managers need in order to have a firm grasp on where, when and how natural resources are being used in their business operations, what the potential environmental impact of such usage is and where to look when improvements can be made.

Stephen P. Ashkin is president of The Ashkin Group LLC, a consulting firm specializing in greening the cleaning industry, as well as Sustainability Tool LLC, an electronic dashboard that allows JanSan companies to measure, track and report their facility's environmental impacts. Ashkin is also coauthor of both The Business of Green Cleaning and Green Cleaning for Dummies. Ashkin began his work on green cleaning in 1990 and today is thought of as the "father of green cleaning." For more information, visit www.AshkinGroup.com.