



ENERGY TO CARE *SUCCESS STORY*

UW Health American Family Children's Hospital
UW Health University Hospital

How UW Health has gone beyond audits and technology to engage key stakeholders and perpetuate sustainable behaviors

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UW HEALTH AMERICAN CHILDREN'S HOSPITAL UW HEALTH UNIVERSITY HOSPITAL

An integrated health system of the University of Wisconsin-Madison

Location: Madison, Wisconsin | **Square Footage:** 3.7 million total (American Family Children's Hospital – 400,000; University Hospital – 3.3 million) | **Inpatient Beds:** 531

Pediatric Beds: 61 | **Maintenance Staff:** 132

Team:

- Shannon Bunsen, Sustainability Specialist
- John Puckett, Facilities Engineering Manager
- Joel Wish, Former Director of Health Psychology, Co-Founder of Green STEPS

Overview

In the summer of 2015, the American Society for Healthcare Engineering (ASHE) of the American Hospital Association recognized 23 medical facilities nationwide for significantly cutting energy consumption. The University of Wisconsin Health (UW Health) received this notable recognition, collectively, for two outstanding facilities: American Family Children's Hospital (AFCH) and University Hospital. UW Health received an ASHE Energy to Care Award for its work to slash energy use, reduce operational costs, and free-up more resources for patient care.

UW Health's story is unique in many ways, leveraging people, passion, and the power of community in a true grassroots fashion. This effort started in 2008. At the time, UW Health Chaplain Penny Andrews, Director of Health Psychology Joel Wish, and Nurse Karen Cooper were attending "Improvement by Design" (a program for staff to identify and facilitate movement toward a specific project/goal for the organization). This group of three quickly identified shared frustration for a lack of "green" initiatives, particularly as the surrounding community was taking a greater interest in sustainability.

They produced a written statement and action plan addressing how to initially organize to reduce the footprint of the facility and calling for collaboration between departments in this effort. They met with individual department directors one on one to float their idea about collaboration, to identify key players, to define common ground, and to set initial priorities. The group began meeting regularly and soon developed a mission and vision. This grassroots movement gained traction and Green STEPS (Simple Things, Eco-Positive Solutions) was born. Today, Green STEPS is referred to as the Environmental Sustainability Committee and has more than 40 members (including external partners).

PASSION, NOT NECESSARILY SENIORITY, SPARKED THE MOVEMENT

"We were on the periphery," said Wish, now former director of health psychology, "But we were passionate about our cause, and we communicated it."

Shannon Bunsen, now UW Health's sustainability specialist, plays a critical role in their story. She originally came on board in a part-time student role in July 2010. Through a convincing proposal, informed by the Sustainability Roadmap for Hospitals, she illustrated the possibilities created with a full-time sustainability position. She succeeded in her cause, becoming UW Health's first full-time sustainability program coordinator in 2012.

Facilities Engineering Manager John Puckett joined UW Health in early 2013. He would lead the effort to complete an investment-grade energy audit and help devise a plan to increase energy efficiency, using maximum incentive dollars to help reduce the initial investment.

How has UW Health dramatically reduced EUI, saving nearly \$500,000 at AFCH and University Hospital? What barriers have they faced and overcome? How are they sustaining the course? What's next? This is UW Health's Energy to Care Success Story.

Objectives

As the Environmental Sustainability Committee was formed, they identified their vision and general objectives.

To support UW Health's mission of advancing health without compromise, principally through social responsibility, doing what is best for the communities we serve through policy advocacy, health care delivery, public health, and environmental sustainability.

*The Environmental Sustainability Committee is committed to helping UW Health meet its current needs without compromising the ability of future generations to meet their needs. The Committee will help **make sustainability a foundation of strategic planning and decision making** at UW Health. Working together, we will turn UW Health into a national leader for health care sustainability.*

Their strategy has always been culture change first. "We knew that growing teams and changing minds and behavior had to happen before we really got started on setting targets," Bunsen said.

They did not set specific energy target reductions initially, rather they focused on building their overall sustainability program and people to champion specific aspects. They are now beginning to set specific energy target goals after establishing the foundation of their culture shift.

Solutions

When Bunsen was a student, prior to assuming her full-time position, she proposed the inclusion of "environmental sustainability" in the organization's mission statement. This statement would help create both awareness and accountability to the organization's commitment to sustainability. Once Bunsen's dedicated sustainability position became full-time, she continued the grassroots movement by building more alliances and leveraging the newly formed Environmental Sustainability Committee.

PROGRAMS IMPLEMENTED

When Puckett joined UW Health as the Facilities Engineering Manager in 2013, Bunsen and Puckett quickly aligned efforts. They sought an investment-grade energy audit to help achieve energy savings through the retrocommissioning process. They presented their findings to the executive council and received funding for measures with a conservatively defined ROI of two years or less.



FUNDING IS OFTEN A PRIMARY BARRIER

Because of competing priorities. Bunsen and Puckett petitioned for contingency dollars, since their timing was in between budget cycles. They did not want to project incentive dollars to the executive committee since they didn't have a firm figure to provide; nor did they want incentive dollars to factor into ROI. They wanted the incentive dollars to perpetuate efficiency efforts by applying toward future projects. Bunsen and Puckett collaborated with the fiscal department to set up a new account for "sustainability," funded through incentive dollars. UW Health was able to qualify for over \$330,000 for the retrocommissioning project in 2013, 2014, and 2015 through Focus on Energy (www.focusonenergy.com) in Madison, Wis.

GETTING BUY-IN

Fortunately for UW Health, buy-in was not as difficult as might be expected when introducing something "new."

"So many employees were already passionate about helping the environment. They just needed tools and resources to make an impact," Bunsen said. Green STEPS, the original Environmental Sustainability Committee, helped provide these resources. Green STEPS identified "Green Champions" (i.e., sustainability ambassadors) across the organization. Their roles include helping to communicate, inspire others, celebrate success, and recruit more people across disciplines. Individual champion work is highlighted internally with a sustainability newsletter.

The cross-disciplinary Environmental Sustainability Committee (ESC) convened a strategic planning session in January of 2015. Puckett noted, "It's important to recognize where we are today, what's been effective, and how to make a sustainable practice."

To further develop UW Health's sustainable practice, the group created the following sub-committees:

- **Energy & Water:** This team works closely with UW Health's employee-driven Green Teams, makes key purchasing decisions and identifying other ways to cut down on water and energy waste.
- **Waste:** The UW Health Waste Team finds ways to conserve resources through reuse, recycling, recovery, and proper disposal.
- **Outreach:** The Outreach Team shares and promotes UW Health's sustainability stories and successes as leaders in the community.

- **Green Standards:** The UW Health Green Standards Team is responsible for finding and recommending sustainable business practice standards. The environmental impact of products, services, and processes are evaluated using state or federal regulations and industry best practices so UW Health can choose healthy, safe, environmentally preferable, and sustainable options.

ENERGY & WATER SUBCOMMITTEE

The Energy & Water team comprises personnel across various disciplines inside the organization and outside, including planning, D&C, information services, an engineering firm, and public relations. The subcommittee meets bimonthly on off months when the whole sustainability team meets. The agenda is to review corporate-level energy and water use; provide updates on existing projects; introduce new agenda items brought from business partners; and discuss sharing outcomes of projects internally and externally.

WHAT THEY DID DIFFERENTLY

UW Health's team did several things right:

- Looked at long-term impact
- Engaged broad range of people as champions in the process
- Intentionally targeted the people in the spaces most affected by their work
- Communicated proactively, prior to doing the work, the benefit of the work
- Shared and celebrated successes internally and externally
- Exceeded expectations of two-year ROI; most efforts paid back in one year or less, which gave them momentum to celebrate and continue

Results/Impact

After a full year of the ESC in action, in addition to completion of the Phase One retrocommissioning project, UW Health has saved \$486,124, projecting a 0.9 year payback (and 0.3 after incentives). The energy impact of these savings is equivalent to 903 passenger vehicles taken off the road, or 391 homes' energy use for one year!

IMPACT FROM ENERGY TO CARE AWARD

Bunsen said, "The day we returned from receiving the Energy to Care Award at the ASHE conference, we did a follow-up presentation for our executive leadership regarding the success of the retrocommissioning project to-date. News spread!"

After receiving the award, leadership, for the first time, asked what THEY could do to support the sustainability efforts—to sustain momentum.

LESSONS LEARNED

Puckett said, "There is great potential embedded within the existing organization. Acknowledging that this potential exists, being open to listening to and giving credit to those who may be on the periphery, recognizing their passions—all this can lead to effective change." He points to the following key components of success:

- Engage a much broader base of stakeholders in the whole process, including brainstorming, implementation, reporting, and celebration.
- Sustain the efforts through team building, engagement, and celebration.

"It's a journey—an ongoing journey—that is needed to engage others in the process and identify others who are interested to participate and engage them," Puckett said.

What's next for UW Health?

After this project's successful completion, UW Health applied the same principles and lessons learned at two of their ambulatory locations that had been identified as good candidates for retrocommissioning: West Clinic and the Digestive Health Center.

REAL TIME MONITORING

UW Health hopes to continue to change staff's behavior. Toward this end, they are planning to integrate utility meters with software to display real-time energy and water consumption to staff and the public. The intention is to educate the occupants of UW buildings on their consumption and further engage them in conservation efforts. This will allow for greater transparency and the opportunity to broadly share progress toward shared sustainability goals. Green Teams and Champions will help promote this tool at their sites and help facilitate competitions between sites. In the end, everyone wins because we all realize the benefits of reduced energy and water use.

CONTINUOUS COMMISSIONING

UW Health is also recruiting the engineering firm that helped with the original project to perform continuous commissioning services at the University Hospital and American Family Children's Hospital in an effort to maintain improved building performance over time. They will review and compare energy consumption to predicted trends, perform quarterly site visits, and work with internal facility staff to correct any issues and/or pursue any additional opportunities that may arise.

BROADER LOOK AT SUSTAINABILITY

The organization is starting to review vendor product specifications to ensure top tier efficiency in their respective categories, while not compromising patient care and compliance with the FGI *Guidelines*.

COMPETITION

To further increase engagement, the Green Champions will help facilitate competition across the organization—all hospitals will compete for better energy management and reduction of cost. Through publicizing the stories, they hope to gain greater visibility for the "leading" hospitals and offer incentive for other hospitals to up their game!

**The Energy to Care program, sponsored by Johnson Controls, encourages hospitals across the country to reduce their energy consumption by 10 percent or more over their baseline energy consumption. Since 2009, hospitals participating in the Energy to Care program have tracked more than \$67 million in energy savings. The free program includes a robust energy-benchmarking tool in addition to the awards. ASHE congratulates these hospitals for their leadership in reducing energy consumption.*



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**The American Society for Healthcare Engineering (ASHE)
of the American Hospital Association**

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