

Group ‘saving planet two buildings at a time’



In a recent column on the UI’s progress toward goals articulated in its Climate

Action Plan, I noted that Ben McCall, the associate director of the Institute for Sustainability, Energy and Environment, had called special attention to the role of a team at Facilities and Services known as the Retrocommissioning Group.

Since then, through conversations on campus and elsewhere, I’ve been reminded that few people know much about the group or the work they do. Given our long-term interests of conserving resources and saving money, that’s too bad, because the UI personnel who do retrocommissioning are champions of both.

So let me bring you up to speed.

In a nutshell, retrocommissioning refers to a process of analyzing the energy-dependent systems in a building — HVAC and lighting — and then doing what’s necessary to get those systems operating as efficiently as possible.

Facilities and Services first formed a team dedicated exclusively to retrocommissioning in 2007. It was composed of five people and was led by Karl Helmink, an engineer with long experience in HVAC. Their tongue-in-cheek slogan then was “Saving the planet one building at a time.” Since then, the group has grown to 20 people, and it now

operates in two teams, so they’ve updated their slogan to “Saving the planet two buildings at a time.” Both teams include engineers, field technicians, tradesmen and student interns.

The teams typically spend about two months on a building, and they employ a highly systematic approach. Their work entails a thorough analysis of available documentation on mechanical systems by engineers and a comprehensive investigation of operating conditions, equipment and more by field technicians and tradesmen.

Members of the team also confer with representatives from the facilities where they work throughout the process to make sure their needs are met. “When our work is finished,” said Helmink, “they’ve got to be happy with the building.”

One straightforward thing the retrocommissioning teams do is identify maintenance issues that tend to multiply in overlooked places as facilities age — things like clogged ducts, stuck dampers, damaged coils and worn out sensors.

Beyond attending to such issues, they also focus on ensuring that lights and heating and cooling are on only as they are needed, rather than around the clock. Toward this end, they install occupancy sensors wherever they can.

Such tuneups can have really amazing impacts.

The greatest reduction in energy use from one year to the next? A whop-

ping 56 percent, achieved at the Admissions and Records Building. But even the average reduction in energy use following retrocommissioning is an amazing 28 percent. And because retrocommissioning has now been conducted at more than 50 campus facilities, the cost savings are really adding up, too.

Over the past seven years, the work of the Retrocommissioning Group has saved the university more than 22 million dollars on energy costs.

Critical readers might wonder whether the gains achieved by retrocommissioning are lost over time; I’m happy to report they are not. That’s because the process also involves adding buildings to a centralized computer system monitored by a team member, who can dispatch crews to fix significant problems as they arise.

So, for example, if a valve gets stuck open leaving heat on when it’s not supposed to be, it takes little time for the problem to be discovered.

In fact, Helmink pointed out, problems are often corrected before building users are even aware of them. Kind of makes you wish you could have the Retrocommissioning Group work at your home.

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