

ENERGY TO CARE *SUCCESS STORY*

Kaiser Permanente: Energy Champion

By Ed Avis

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Kaiser Permanente System

Total facilities: 39 hospitals, 695 medical offices

Total employees: 217,415

Members of Kaiser plans: 11.8 million

The Kaiser Permanente System, which has 39 hospitals spread across eight states and the District of Columbia, is known for its innovative and effective clinical services. But the organization is equally innovative and effective in its sustainability efforts.

“There has been a lot of activity regarding saving energy at Kaiser,” says Dave Lockhart, who is currently a support service administrator on Kaiser’s Roseville campus, and previously served two and a half years in Kaiser’s headquarters. “I’ve been with Kaiser for 26 years. I am very passionate about energy conservation, and the organization is very engaged.”

Lockhart says Kaiser Permanente took big steps in sustainability about seven years ago, shortly after the Roseville campus was expanded to triple its size.

“At that time Kaiser Permanente made some bold goals in regards to greenhouse gases,” Lockhart says. “We committed to a 30 percent reduction versus the 2008 baseline. We also made a goal of a 10% reduction of EUI (energy use intensity) by 2020, based on the 2010 baseline.”

Goals like those required a focused effort, and it began while the expansion was being planned. For example, when two new buildings were being designed for the campus, the architects suggested separate central plants for each building. Lockhart knew it would be more efficient to expand the existing plant that served the entire campus. His vision prevailed – and the design included cogeneration, to make it even more efficient.

A “green team” was established shortly after that project in 2013, and the team helped make sustainable thinking a part of the regular routine. They sponsored Earth Day events, planted trees, held a fashion show featuring recycled materials and celebrated their first year of obtaining the coveted ENERGY STAR® rating.

California’s five-year drought, which ended in 2017, brought sustainability into even sharper focus. For example, Kaiser instituted a program to switch many of its water fixtures to low-flow. “I don’t know how many million gallons of water that saved,” Lockhart says, “but we met our 10% reduction goal five years earlier than expected.”

Another initiative around that time introduced monitoring-based commissioning, a fault detection and diagnostic software system, to Kaiser’s facilities.

“We kicked off our pilot in 2015,” Lockhart remembers. “We started with four pilot sites of different sizes and ages. Now we’re rolling it out to the rest of the system. We already have 83 buildings in the program. It really has been a phenomenal tool for us to work with.”

The software sits on top of each building automation system (BAS) and analyzes the data.

“Then it tells you in plain English what’s wrong,” Lockhart says. “For example, it might say, ‘You’ve got a heating valve stuck open and its costing you \$46 a day.’ So now our engineers don’t need to spend any time troubleshooting, just validate and repair. The engagement and results are really improving the performance of these facilities.”

Kaiser’s sustainability goals became even bolder a few years ago, Lockhart says.

“In 2016 they came out with a new goal that by 2025 we would be carbon positive,” he says, “So we’re installing solar in a lot of sites and purchasing wind and solar power.”

The on-site renewable power purchases alone will result in over 27,000 tons of carbon dioxide reduced by 2021, Lockhart says. However, Kaiser’s efforts to reduce demand have been even more successful: They’ve saved over 35,000 tons with demand reduction.

“You can buy all the sustainable power you want, but until you fix the demand side, it doesn’t make sense,” Lockhart says. So, his personal goal is to get as many medical centers as possible ENERGY STAR rated by 2020.

One key way Kaiser has reduced demand is through its Utility Optimization Program. Lockhart explains that that program kicked off about five years ago with a two-day energy audit at one Kaiser location that resulted in \$172,000 in savings.

“For example, we discovered that they had vacated the entire fourth floor of a large clinic building, but they were still conditioning the air and lighting it,” he says. “We turned that off and saved \$42,000 a year. We also found stairwells with overcooling, and a newer steam system that was recently installed for humidification that did not have any load. So we shut it down for an estimated savings of \$24,000. We also used interval data to identify two clinics with high utility charges on the weekends, even though they were closed on the weekends!”

The Utility Optimization Program is now available throughout Kaiser. “We identify an energy champion in each medical center. We bring in a team to conduct Level 1 energy audits and demonstrate to their leadership what they can do. From there the team is empowered to continue their energy saving program, usually resulting in ENERGY STAR certification.”

The energy champions are encouraged to earn their Certified Energy Manager status, and they are provided with the Utility Optimization playbook. The playbook includes tabs on setting goals, validating meters, setting schedules, and other elements of a successful sustainability campaign. For the past three years, all of the champions have met monthly to share best practices and tips.

Lockhart’s efforts to improve Kaiser’s sustainability are not all work, however. “The big thing this year is head-to-head energy challenges,” Lockhart says. “Whoever reduces the most over the year wins, and the loser buys the winner a barbecue meal. It’s simple and cheap, but we have so much fun and it really engages the teams.”

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. This 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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