

Samaritan Health Services–50001 Ready

WHY 50001 READY?

The U.S. Department of Energy's 50001 Ready program is a self-paced, no-cost way for organizations to build a culture of structured energy improvement that leads to deeper and sustained energy and GHG savings. Recognition is available for facilities and organizations that self-attest to the implementation of an ISO 50001-based energy management system without external audits or certifications.

Overview

Samaritan Health Services, located in Oregon and founded in 1997, is a nonprofit regional health system providing care to over 265,000 residents of the mid-Willamette Valley and central coast. This case study features two Samaritan hospitals that achieved 50001 Ready status: Samaritan Albany General Hospital (Albany) and Samaritan Lebanon Community Hospital (Lebanon), each named for the Oregon city in which they are based.

In 2019, Samaritan joined a strategic energy management (SEM) program through Energy Trust of Oregon. The SEM program provides coaching, sharing of best practices with peers, and tailored tools for monitoring progress. In joining the SEM program, Samaritan began by addressing interior and parking lot lighting, running a technical analysis study of its Albany hospital, and securing energy-efficient replacements for end-of-life equipment. The nonprofit system's engagement with this program eventually led to their SEM coach suggesting that Samaritan look into 50001 Ready for additional resources.

“Being part of 50001 Ready provided a foundation of knowledge and a set of tools that we didn't have previously. Knowing what we know now, it is easier to take proactive steps toward energy efficiency while maintaining patient satisfaction.”

– Michael Martin, Engineer II, Energy Champion,
Samaritan Lebanon Community Hospital



Samaritan Health Services energy management team. Brian Drager, Electrician; Russell Dickerman, HVAC & Boilers; Michael Martin, Energy Champion; Arlen Emmert, Executive Sponsor; Layne Hayes, Plant Services Manager.
Photo credit: Jim Fryman.

Solutions

Financial and operational sustainability were key motivators for Albany's and Lebanon's pursuit of 50001 Ready status. Reductions in consumption led to reduced costs, and equipment upgrades reduced the risk of equipment failure. Minimizing costs and maximizing equipment reliability is essential for healthcare facilities. Customer satisfaction and patient comfort also were among the two hospitals' top reasons for engaging with the 50001 Ready program. Energy-efficient HVAC, for example, not only reduces operational costs but increases customer comfort as well. Additionally, Albany and Lebanon were keenly aware that hospitals are significant consumers of energy and sought to shrink their carbon footprints and impact on natural resources, aiming for a 2% annual reduction in energy use over the next five years.

Given the rise of healthcare costs and the ever-evolving nature of reimbursements, healthcare systems have a strong incentive to reduce operating costs, and increased energy efficiency is one pathway toward this goal.

Key Takeaways: Implementing a 50001 Ready Energy Management System

- ▶ **Prior experience:** Before engaging with 50001 Ready, Albany was already ISO 9001-compliant for having a robust quality management system, which facilitated the hospital's implementation of an energy management system and recognition as 50001 Ready. Albany and Lebanon also had the benefit of a preexisting relationship with Energy Trust, an organization that helped the Samaritan facilities achieve 50001 Ready status through its SEM program.
- ▶ **Data-tracking:** Albany and Lebanon kept four years' worth of energy savings data, which the facilities presented to upper management while making the case for pursuing 50001 Ready status. Being able to demonstrate cost reduction helped build the business case. Administrative support, in turn, made 50001 Ready easier to implement. In the words of an Albany team lead, "Documentation has been a lifesaver." During the implementation process, meters will be added to spaces such as the boiler room so that the team can gain an even better understanding of energy usage and trends.
- ▶ **Obstacles and opportunities:** The Albany and Lebanon facilities found Tasks 1 and 2 from the 50001 Ready Navigator to be especially helpful. Together, those tasks accounted for the strategic issues and legal requirements needed to successfully implement an energy management system, as well as the interested parties whose resources and support proved useful in the effort.
- ▶ **A diversified team:** Both facilities benefitted from an engaged executive sponsor and committed energy champions, while also drawing on the expertise of the facilities' electricians and HVAC and boiler technicians to implement 50001 Ready. Directly involving technicians meant that desired operational changes were quickly achieved.

- ▶ **External expertise:** Third-party energy audits and outside vendors were indispensable in finding solutions. While developing a new boiler room central utility plan at Albany, team members presented relevant information to a vendor, who then provided insight into possible areas of improvement, including areas Albany would not have known about without the vendor's expertise. For example, Albany learned that, by eliminating the need for a stack reheat box, the facility could extend the life of its boiler water. Furthermore, when a well was due for replacement at Lebanon, an outside vendor suggested pairing a variable frequency drive with the new well, a suggestion that led to a 35% reduction in daily pump energy use.

Other Benefits

Different levels of air pressure are needed for the various rooms in the Albany and Lebanon hospitals. Operating rooms require positive pressure, for example, while some pharmacy rooms must be kept at negative pressure. Both facilities previously ran equipment at 100% capacity to maintain the pressure levels necessary for each environment, but 50001 Ready helped the hospitals develop a better understanding of their HVAC systems, which led to bringing that percentage down to an average of 30% capacity. Following the removal of coils from an old glycol system, the drives on the HVAC units dropped to 24-34% of maximum speeds, maintaining building comfort and meeting outdoor air requirements while enhancing energy efficiency and reducing the need for active maintenance.

50001 Ready has also enabled Albany and Lebanon to get ahead of the curve by collaborating with the purchasing department to specify energy efficient equipment for all future purchases.

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