

Brad Shaw stands near Swedish Issaquah's heat recovery chiller, an energy-efficient technology that was optimized with Monitoring Based Commissioning. Energy savings since optimization continue to be impressive.

Swedish Issaquah analyzes data to cut energy use by more than 7%

A case study of PSE's Monitoring Based Commissioning program

Customer background

Swedish is the largest nonprofit health care provider in the greater Seattle area with five hospital campuses. The Issaquah campus consists of two buildings totaling more than 366,000 square feet and is licensed for 175 beds.

Energy challenges and opportunities

When construction of Swedish Issaquah was completed in 2011, the hospital earned commercial new construction incentives from PSE that offset a majority of costs to build the hospital beyond energy code at the time.

Recently, Swedish Issaquah leadership set a goal to decrease the hospital's energy use intensity (EUI) even further. They're getting there through work on multiple fronts, including a Monitoring Based Commissioning (MBCx) program supported by PSE incentives. It continues to be a great way to meet the hospital's EUI goal with minimal capital investment.

Energy savings at a glance



ELECTRIC SAVINGS

1,481,909 kWh

That's enough to power
123 homes for a year.



PSE INCENTIVES PAID

\$130,091



ENERGY COST SAVINGS

\$95,000

Metrics and incentive amount are cumulative from July 2021 to April 2023.

“To be successful with MBCx, you need a solid team in place that has time to analyze the data, prioritize findings and opportunities identified, and then take necessary actions. With that team in place, results can be amazing. They certainly have been for us.”

Brad Shaw
Building automation engineer at Swedish Issaquah

How PSE helped

Our MBCx energy-efficiency program incentivizes collecting and analyzing energy data to evaluate building performance and make adjustments accordingly. Incentives include an implementation incentive, which can offset a significant portion of costs associated with setting up the program. They also include two performance year incentives, which are based on savings realized at the meter.

For Swedish, upfront investments in their building automation system (BAS) and HVAC systems were needed to support MBCx data requirements. Their implementation incentive from PSE covered 90% of those costs. In July 2021, the MBCx program began with full support from hospital leadership.

What makes the Swedish MBCx project remarkable is the cohesive partnership between Swedish, their energy contractors and PSE engineers. Swedish and their mechanical contractor, UMC, brought in PSE to maximize energy savings and incentive potential. All three parties meet monthly to track progress and prioritize adjustments, for which PSE provides accountability and funding. Swedish's building automation engineer drives the energy-saving adjustments, utilizing the hospital's system specialist and in-house facilities technicians whenever possible to keep costs down.

“Our purpose in doing MBCx was to meet our energy-reduction mandates, not just from hospital leadership but also the state. The data automation with MBCx makes benchmarking and reporting for Clean Buildings Law compliance much easier. It's a wonderful benefit.”

Andrew Davis
Chief real estate officer at Swedish Issaquah

Results

In July 2021, Swedish's EUI was around 115. The goal was to reduce it to 100. At the end of May 2023, after less than two years of MBCx, EUI was down to 101.5 and dropping. The hospital has achieved record lows for electricity use.

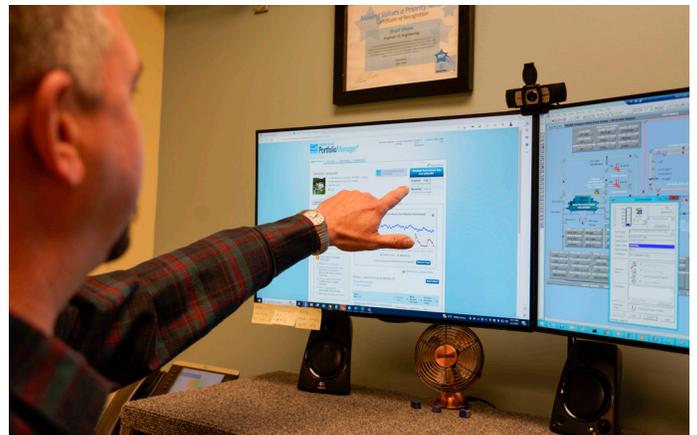
In January 2023, outside air temperatures in Issaquah were a record-low 26 degrees Fahrenheit. The hospital's efficient heat recovery chiller, installed at construction and optimized with MBCx, provided all needed space- and water-heating needs. That meant natural-gas boilers were not used at all to meet demand — a huge efficiency accomplishment.

“Even with a high-performing building, we keep finding ways to optimize. We still have work to do, but I'm confident this hospital can be the first to reach an EUI under 100. It's just a matter of time, and it's great to have PSE involved.”

Martin Clinton
Building performance services manager at UMC

Start your energy-management journey

Learn more about PSE's Monitoring Based Commissioning program at pse.com/mbcx. Or get in touch with the program directly at commissioning@pse.com.



Careful monitoring of the building automation system shows Swedish Issaquah where to make energy-saving adjustments, helping EUI steadily decrease.



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