SHOWCASE PROJECT: ASTRAZENECA CERTIFIES TO SEP 50001 FOR THIRD TIME AND ACHIEVES GOLD STATUS

SOLUTION OVERVIEW

AstraZeneca is a global, science-led biopharmaceutical company dedicated to delivering life-changing products that advance world health and help fight and cure disease. The company is committed to ambitious environmental, climate, and energy efficiency goals. Its “Ambition Zero Carbon” plan calls for the company to be carbon-neutral by 2025.

AstraZeneca first pursued Superior Energy Performance 50001 (SEP 50001) certification at its Gaithersburg campus (formerly MedImmune) nearly a decade ago as part of its broader corporate energy efficiency strategy. The Gaithersburg campus set up a robust energy management system using the globally recognized ISO 50001 standard, tracked its energy performance improvements, and had the results independently verified. Collectively, these buildings house a workforce of approximately 3,600 people.

“It’s 2021, and many new options are around to optimize performance and efficiency. ISO 50001 and SEP 50001 help us find valuable opportunities, gain management support, and meet our targets.”

Mike Dieterich, Associate Director Energy & Sustainability, AstraZeneca

In 2014, AstraZeneca’s Gaithersburg campus became the first biomedical facility in the world to achieve SEP 50001 certification at the Silver performance level, improving its energy performance 8.5% over three years and saving $420,000 on energy bills annually. To achieve the SEP 50001 certification, the campus earned certification to the ISO 50001 standard and secured third-party verification of its energy performance improvements. Since 2014, the campus has recertified to SEP 50001 twice. The 2020 recertification brought the campus Gold-level recognition, reflecting an ongoing commitment to energy management and affirming the power of a robust energy management system to continuously improve energy performance and expand savings year after year.

LOCATION

Gaithersburg, Maryland

SOLUTIONS

The Gaithersburg campus’ mature energy management system continues to deliver energy and cost savings. In recertifying to SEP 50001 every three years, the Gaithersburg team aims for a five-percent improvement in energy performance; in the most recent recertification, the team surpassed that goal by improving its energy performance 5.2%. The energy measurement systems put in

place for SEP 50001 regularly monitor progress toward internal targets and guide decision making. Each year, a cross-functional team sets site-level targets for energy, water, and waste, then collaborates to achieve them. The team also meets with management quarterly to make a status report and discuss plans.

SEP 50001 ENERGY MANAGEMENT STRATEGIES

- **Energy management leadership:** Energy management at the Gaithersburg campus is closely tied to the site's carbon and water reduction efforts. The energy, carbon, and water team, which includes representatives from engineering, facilities, and sustainability, is responsible for implementing and maintaining the energy management system. Representatives of other teams, such as taxation, sourcing, lab operations, global engineering, global technical services, and global compliance, also share their expertise as needed.
- **Big data, big savings:** The team took a deep dive into climate control data campus-wide, adjusting temperature set points (occupied/unoccupied), chilled water temperatures, and other variables to minimize energy waste and optimize each building's internal climate to its schedule and function. In addition, the team collected airflow data and discovered areas where air exchange was greater than it needed to be, allowing them to reduce HVAC system energy use by 10 to 15%.
- **Collaboration:** While SEP 50001 helps the energy, carbon, and water team identify potential savings opportunities and monitor results, AstraZeneca's annual goals provide motivation. Corporate targets help the sustainability team overcome internal barriers and obtain staff and leadership support. The team also invites third parties to assess potential impacts of their recommended changes on their colleagues' work in support of AstraZeneca's core mission.
- **Energy management approach supports water and waste goals**: The energy, carbon, and water team found that best practices under the energy management system also help reduce water use and waste generation. The team applied the ISO 50001 process to its water and waste assessments and identified additional opportunities to improve performance in those areas. As a result, the team's waste and water conservation efforts have been able to set—and achieve—more ambitious goals than originally expected.
- **Getting the word out:** The team uses a variety of approaches to publicize their accomplishments and keep key stakeholders on board. To engage management, the team organized its suggested energy improvements into action plans for different types of equipment, such as lighting, compressed air, or HVAC. To keep staff aware of their accomplishments and motivated to achieve the SEP 50001 goals, the team posted updates on AstraZeneca's internal social network and created a "sustainability wall" that displays the site's progress and awards—like the SEP 50001 seal. Finally, the team exchanges ideas and solutions with AstraZeneca's Macclesfield, UK, campus, which is also ISO 50001 certified.
- **X marks the spot:** The team used DOE's Energy Treasure Hunt to help staff identify small energy savings that add up in a big way. Examples include putting a shutdown timer on pinball machines in the lounges, setting the printers to enter sleep mode when not in use, and sharing equipment among teams.

BENEFITS

As the Gaithersburg energy team continues to pursue energy improvements through the SEP 50001 framework, the team members increasingly appreciate the transferability of its methods to meeting waste and water goals. AstraZeneca's ambitious goals pushed the Gaithersburg campus to break new ground for biomedical facilities by achieving first Silver status (2014) then Gold (2017 and 2020) under SEP 50001. In turn, these achievements support new corporate policies to accelerate progress toward the company's zero-carbon goal.

OTHER BENEFITS

Annual Energy Use	Annual Energy Cost
Energy Savings	**Cost Savings**

AstraZeneca’s Gaithersburg campus re-certified to SEP 50001 in 2021, improving energy performance 5.2% over three years. Photo credit: AstraZeneca.

The campus consists of research space, a manufacturing lab, offices, and a daycare center (pictured above) for employees’ children. Photo credit: AstraZeneca.