

# Glenbard Wastewater Authority—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

The Glenbard Wastewater Authority (GWA) treats raw sewage for approximately 90,000 residents of the Village of Glen Ellyn, located in Illinois. Staffed by 17 full-time employees and five part-time employees, GWA's primary treatment facility is comprised of 16 buildings. This facility averages a daily flow of 16 million gallons and has a design flow of 47 million gallons. Further, the facility's treatment processes include screenings, clarification, and disinfection, among many others. Off-hours unmanned operability of the plant is possible through the use of a Supervisory Control and Data Acquisition System (SCADA), which enables staff to control and monitor treatment processes. A 2.4 megawatt (MW) natural gas backup electrical generation system improves the utility's overall resiliency by enabling the plant to run in the event of a power outage.

In 2019, GWA enrolled in a strategic energy management program with the facility's electric utility, ComEd, and Cascade Energy. This three-year program marked the beginning of a systematic approach to energy management by GWA, and it equipped participating staff with the tools needed to identify potential efficiency improvements in lighting, heating and cooling, and the maintenance of unoccupied remote buildings. Afterwards, through DOE's Sustainable Water Infrastructure of the Future (SWIFT) Initiative, GWA worked with the DOE 50001 Ready and Better Plants programs and with Advanced Energy to continue energy management efforts. Prior to engaging in this program, GWA had a long history of evaluating energy efficiency opportunities when discussing capital projects. This approach made 50001 Ready a natural programmatic fit for the facility.



Aerial view of GWA's Advanced Wastewater Treatment Facility. Photo credit: Glenbard Wastewater Authority

***"50001 Ready gave us the freedom to tailor energy management to our own facility and empowered us to internally lead on strategies and solutions to be implemented. It helped us enhance an energy-efficient culture. Staff are also more empowered to look at and think about solutions."***

—Matt Streicher, Executive Director  
Glenbard Wastewater Authority

## Solutions

In addition to cost savings, GWA's reasons for engaging with 50001 Ready also included incorporating carbon reduction, environmental preservation, and a desire to immerse employees in the facility's long-standing energy efficiency culture.

Buy-in was easy to secure, with leadership staff having a strong track record of prioritizing energy efficiency, as well as respecting staff members' time. Due to the latter, GWA's energy team leadership aimed to minimally impose on staff's schedules by working to integrate as many tasks as possible within staff's everyday duties. Altogether, staff time dedicated to pursuing 50001 Ready status for the treatment facility came to about 60 hours, with the exception of GWA's environmental resource coordinator, who dedicated an additional 60 hours to energy mapping and modeling. Energy policy goals included the reducing of filter backwash content. GWA achieved this by running a drum motor that led to an 8% reduction in energy use.

### Key Takeaways: Implementing a 50001 Ready Energy Management System

- ▶ **Leveraging the familiar:** GWA used preexisting hierarchies to organize their energy team, regularly communicating with the facility's energy committee, director, executive director, administrative staff, and superintendents, who would then relay information to their own staff. This interdepartmental approach took advantage of established lines of communication to streamline information delivery and task management.
- ▶ **Documenting progress:** Regular check-ins enabled staff to track projects, ensuring everyone was on target to achieve their goals. These check-ins also included discussion of future projects, such as how to accomplish the facility's first audit. By openly and consistently sharing successes and challenges, the energy team was able to lean on the expertise of their colleagues, lending support in service of their collective standards.
- ▶ **Identifying opportunities:** In using DOE's 50001 Ready Navigator tool, GWA staff found the energy mapping exercises to be most beneficial for their needs. Taking stock of the finer details of the facility's operations – such as tracking runtimes and evaluating energy bills – ensured that staff were capturing the system accurately. Having numbers at hand also allowed them to determine the facility's biggest energy users, some of which were impacting energy use in ways that previously had gone unnoticed.



GWA staff. Photo credit: Glenbard Wastewater Authority

- ▶ **Harnessing data visualization:** Energy team leaders took the data gathered through the mapping and modeling process and then translated it visually to present to staff. Graphic representations of energy and fiscal metrics, making them more approachable and digestible, and (in the case of GWA) serving as an impetus for increased staff awareness and engagement. The energy team noticed that staff began thinking more about operations and how plant activities impact energy use downstream, strengthening GWA's culture of commitment to energy efficiency.

***"50001 Ready offered an actual framework we could implement. Having the ability to build procedures for operations, log when we're operating outside of our norm, and implement an energy management system for long-term use is invaluable."***

– Ashley Staat, Environmental Resource Coordinator  
Glenbard Wastewater Authority

### Other Benefits

Since achieving 50001 Ready status at its treatment facility, GWA staff have witnessed how this program and achievement can help build community. They were recognized in a public newsletter that was shared village-wide with residents, GWA staff, and the board. The response was overwhelmingly positive. The board expressed eagerness to see GWA not only achieve carbon neutrality but also sustain it, and 50001 Ready will help them stay on the path.

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