

Boise School District, ID – 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 Boise School District is made up of 51 schools comprised of over 4.6 million square feet of buildings, employs about 4,000 staff members, and serves 22,500 students. As evidence of the district's long-standing interest in energy efficiency, it set up a Resource Conservation Office in 1997 to reduce energy consumption. Over the years, the district invested in several energy projects to take advantage of discounts offered by Idaho Power. Like most school districts, Boise had little in-house expertise in energy management and no formal structure for analyzing or improving energy use.

Solutions

In 2017, the Boise School District set up a Sustainability Committee and encouraged the formation of a student-led Green Team at each school. In the same year, the district joined a cohort of Idaho school districts pursuing continual energy improvement as a sustainability model. The consulting firm Strategic Energy Group (SEG), under the auspices of Idaho Power, coached the cohort on how to monitor energy use and manage energy use within the schools.

In 2019, SEG introduced the **cohort** to the 50001 Ready energy management framework and the potential for recognition by the U.S. Department of Energy (DOE). Boise High School was the first school in the district to achieve 50001 Ready designation in April 2019 and was able to re-attest in October 2020. By January 2021, seven more buildings, including five junior high schools, and two high schools, were recognized as 50001 Ready.



Capital High School, Boise School District. *Courtesy: Boise School District*

In early 2023, the district re-attested nine buildings to 50001 Ready, including two high schools and seven junior high schools, with more on the horizon. Between January 2017 and May 2021, the buildings engaged in Boise School District's Continuous Energy Improvement Program and reduced their annual energy usage by 11.73%. **By 2023, the district had saved over 9 million kilowatt hours of energy, translating to \$560,000 of savings.** Participating in 50001 Ready allowed them to plan each step in their efficiency improvement process and see the energy savings firsthand.

The initial focus on the district's larger schools has created a groundswell of support around energy efficiency and sustainability. The district now employs a full-time sustainability staff member and has installed Green Teams at all sites, with Green Team Leads receiving a leadership stipend. They are thrilled with the success of the program and plan to incorporate water conservation in the coming years.

"It is validating for the school teams to see what we're doing and accomplishing in terms of our reducing our environmental impact. 50001 Ready has helped us take meaningful steps toward our goals."

– Alison Ward,
Boise School District Sustainability Supervisor

Key Takeaways: Implementing a 50001 Ready Energy Management System

- ▶ **Energy Management Team:** Boise School District's Energy Management Team is headed by its Sustainability Supervisor. Additionally, the Assistant Supervisor, Custodial Supervisor, and HVAC Supervisor are invaluable in planning efficiency improvements. Custodial staff at participating schools have also helped implement sustainability initiatives.
- ▶ **Student Leadership and Contributions:** Each school has a student Green Team that proposes project ideas on how to make their sites more sustainable. Any student can bring ideas to their school's Green Team members ("Green Ambassadors"), who then engage the Green Team Lead to advocate for the suggested solutions (for example LED lighting). Green Team project selection is based on the students' excitement, the district's capacity, and the greenhouse gas impact. Recently, a Green Team Lead noticed interior lights illuminated in a school building over the weekend. By knowing whom to contact and coordinating efforts, the team was able to resolve the issue on the very same day.
- ▶ **Data-Based Continual Improvement:** The district has detailed electrical usage data for its 16 schools participating in the Idaho Power Cohort. Staff found it helpful to visualize the schools' energy use using dashboards as well as district created 'heat maps' that show data such as hourly kilowatt use in school buildings. With such tools at their disposal, The Energy Management Team and student volunteers can gain a clearer idea of how to best direct their efforts.
- ▶ **Big Savers:** Replacing pneumatic HVAC control systems with direct digital controls made a huge difference in the district's efficiency. The district can now shut down each school's HVAC system remotely at 7 pm each night, so staff don't need

to remember to do so. Schools also removed two lamps from each hallway lighting installation, which reduced their electrical usage while still providing adequate lighting. Over five weeks of holiday breaks, the district shut down HVAC systems and involved staff and students in unplugging and powering down, saving around 900,000 kilowatts of electricity.



Green Ambassadors from Hawthorne Elementary's Green Team, the Earth Nerds. Courtesy: Misha Smith, Hawthorne Elementary

- ▶ **Procurement:** Idaho Power has worked with the Boise School District to incentivize and implement energy-efficient capital-intensive projects. These include new or upgraded building operating system controls, roof replacements, construction, renovation, or expansion projects, as well as lighting upgrades.

Other Benefits

In the Boise School District, students not only participate in sustainability projects but also take on leadership roles to research, propose, and implement initiatives to reduce energy use and waste. Student involvement both strengthens the energy management system and attracts positive attention from parents and community members.

"As a school district, we have a unique opportunity. We're developing a more comprehensive climate curriculum and witnessing how students can carry it out into their homes and communities."

– Alison Ward,
Boise School District Sustainability Supervisor

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