



Energy Productivity Success Stories

Washington State Drives Energy Efficiency through Benchmarking Public Buildings

SUMMARY

In 2014, the State Energy Office was directed by Executive Order 14-04 – the *Washington Carbon Pollution Reduction and Clean Energy Action* – to increase public building efficiency. This order brought together a broad group of agencies that agreed achieving 100 percent benchmarking compliance was a necessary step towards increasing public building efficiency. With support from a U.S. Department of Energy State Energy Program Competitive Awards grant, the state created the Interagency Energy Workgroup and provided dedicated staffing support to address the lack of a centralized system for benchmarking and compliance. This support included the state Department of Enterprise Services and Office of Financial Management, and Washington State University (WSU). The Interagency Energy Workgroup created and promoted a process for increasing energy efficiency in public buildings.

COMPANY/ORGANIZATION BACKGROUND

The Washington State Department of Commerce's State Energy Office is a leader in providing energy policy support, analysis, and information for the governor, legislature, and other stakeholders on key energy efficiency issues.

CHALLENGES

Despite the necessary expertise and strong legislative support, participation in benchmarking public buildings remained extremely low. The majority of public facilities were not benchmarked, and those that were eventually stopped reporting because monthly manual entries were time consuming, there was no compliance enforcement, and there was no apparent value to tracking this consumption data. In early 2014, less than 7 percent of the required benchmarking sites within the state's forty nine executive and small cabinet agencies were populating current data within Portfolio Manager, a free web-based tool created by the state to track and report building energy use.

A second barrier to achieving 100 percent benchmarking compliance was the lack of an internal method to determine how many sites that were required to report benchmarking data actually existed. Because of the way the initial 2009 energy efficiency law was written, large groups of buildings residing on a master-metered campus could be benchmarked as a single site. While that was a logical way to capture data for campuses without having to expend money on sub-meters, it was impossible to track because the State Facility Inventory System did not provide campus groupings.

SOLUTION

Initial efforts focused on completing benchmarking via a centralized process through partnership with utilities; as a result, benchmarking compliance increased from 7 to 37 percent. After determining that this centralized process was too cumbersome, the State Energy Office led an effort supported by WSU and the Smart Buildings Center to identify exactly how many required "target sites" existed within the state executive agencies. This effort involved high-level mapping and assumptions using the Facilities Inventory System database to categorize similar WSU campuses and compare those sites to data found within the Portfolio Manager. Several months later, the first "Benchmarking Yardstick" was presented as a rough assessment of compliance, and indicated that approximately 25 percent of required executive agency sites were



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benchmarked. This first yardstick was presented to the Governor's Office by the directors of the Department of Commerce and Department of Enterprise Services, creating high-level awareness and further amplifying progress.

With support from the Governor's Office, the Interagency Energy Workgroup expanded its efforts and subsequently hosted a well-attended webinar, created a set of instructions specific to benchmarking, and distributed an Agency Facility Status report. The report identified the buildings or campuses that were required to benchmark, and provided a survey whereby each agency could confirm or correct their campus groupings, building conditioning status, and utility payment. With the survey results in hand, for the first time the state was able to identify that there were 219 target sites operated by executive agencies that were required to be benchmarked. These 219 target sites included energy consumption for over 2,000 individual buildings.

RESULTS & BENEFITS

Washington State knew there was inherent value in the ability to evaluate building stocks' energy intensity and track changes in energy consumption over time, but until these recent efforts was unable to obtain the participation needed to make the energy efficiency program as effective as possible. The work undertaken by the Interagency Energy Workgroup allowed Washington State executive agencies to increase their benchmarking compliance from less than 7 percent in 2009 to over 80 percent by 2014. Further efforts are underway to perform data quality assessment and data analytics using this new benchmarking data, which can point the state towards the best opportunities for energy efficiency gains – a capability not previously possible.