

DELAWARE CENTRALIZED BENCHMARKING & PROJECT PRIORITIZATION

SOLUTION OVERVIEW

Facing \$35 million in energy bills, the Governor of the State of Delaware in 2009 took key steps to make the state a leader in clean energy and sustainability. Delaware adopted EPA's Portfolio Manager as its primary mechanism to create an inventory of state buildings and begin tracking their energy performance. The state looks across a single repository of the state portfolio's energy performance data to identify and mobilize building upgrades with the highest potential energy savings, cost savings, and environmental benefit. This centralized benchmarking and tracking database became the backbone of Delaware's clean energy strategy.

GOAL

Achieve a 30-percent reduction in energy consumption in state-owned facilities by the end of 2015 based on 2008 levels

BARRIER

Lack of a centralized repository to access and evaluate the energy performance of state buildings and initiate energy efficiency retrofits

SOLUTION

Delaware utilized EPA's Portfolio Manager to benchmark state building energy use, analyze building energy performance and strategically identify and prioritize retrofit projects

OUTCOME

In five years, Delaware benchmarked 80 percent of its buildings, achieving a 17-percent energy use reduction with average annual improvement of 3 percent annually

POLICIES

Executive Order 18 (EO 18) of 2010 (Leading by Example towards a Clean Energy Economy & Sustainable Natural Environment) requires all of Delaware's executive branch state agencies and departments to reduce their energy consumption by 30 percent by the end of 2015. EO 18 directed the state Office of Management and Budget (DE OMB), in collaboration with the Department of Natural Resources and Environmental Control (DNREC), to create a system and procedures to benchmark, monitor, and track the energy use and carbon emissions of state

facilities.

Further, these two agencies used the Portfolio Manager data and analysis to evaluate and prioritize energy retrofit projects for all of the state agencies. The Order also established the Sustainability Managers Workgroup, comprised of representatives from each agency and co-chaired by DE OMB and DNREC, as the central hub in that system for information sharing, assistance, and reporting among state agencies.

Tools:

- [Sustainability Managers Workgroup Description](#)

PROCESS

Establishing the Benchmarking, Tracking and Evaluation System

Executive Order 18 outlined the management structure for achieving the state's energy use reduction goal. It established the lead agencies (DE OMB and DNREC), which co-chair the central coordinating body also designated in EO 18, the Sustainability Managers Workgroup. Cabinet-level support and oversight comes from the Governor's Cabinet Committee on Energy, who selected a member of the existing staff of their respective agencies to participate in the Sustainability Managers Workgroup. Those selected as Sustainability Managers are generally agency managers with responsibility over facilities, operations, and/or contracts. The Workgroup met monthly for the first year of the Executive Order and now meets quarterly.

As its first task, the Workgroup prepared a system implementation plan for Cabinet approval within three months. The approved plan included four major steps:

1. Select a benchmarking program

The Workgroup recommended EPA's Portfolio Manager, a free online benchmarking and tracking tool that fit the state's needs for record capacity and energy sources tracked.

2. Define the Building Portfolio and Gather/Consolidate Building Energy Information

Because the state's building data had not been collected before, the Workgroup started from scratch to assemble the buildings that comprise the state's entire portfolio. Sustainability Managers contacted fiscal offices for utility providers and account numbers. Reporting staff then contacted utility providers for monthly bills. Using existing insurance reports, utility bills, state property lists, and maintenance information, the Workgroup developed an asset inventory, in which buildings were listed by agency and prioritized based on square footage. The detailed inventory included information on age, building condition, building type, number of floors, street address, and utility data. Sustainability Managers then verified the buildings for which their individual agency paid the bills and/or provided maintenance and reviewed the facilities each had responsibility over to establish baseline energy use.

3. Establish Database Standards

The Energy Resource Manager at DE OMB set database maintenance standards and a quarterly schedule for review and reporting of facility improvements. After comparing quarterly meter consumption to energy use projections, the Manager also recommended corrective actions for metering problems. If a multiple-building facility had metering or data collection issues such as a master meter, for example, the DE OMB Manager recommended sub-meters be installed on individual buildings. Installation was either funded by individual agency capital budgets or rolled into the agency's facility upgrade projects.

4. Offer Benchmarking Training

Sustainability Managers learned the mechanics of benchmarking and specifically of Portfolio Manager in training designed by the Workgroup chairs and members themselves. In turn, Sustainability Managers offered group and one-on-one training to their agency staff responsible for data entry. The Workgroup's centrally designed training was consistent across agencies, assuring that all involved staff had adequate expertise.

How It Works

With energy information for each building and the ability to compare buildings, the Workgroup designed a "hub and spoke" benchmarking, tracking and evaluation system for effective operations and analysis. Individual agencies enter the monthly energy performance data for their buildings directly into Portfolio Manager (decentralized spokes), while analysis across the entire state's building portfolio happens in the Workgroup (centralized hub) and is easily communicated back to the agencies.

Benchmarking, tracking and evaluation of building data and upgrade opportunities occurred in four phases:

1. Decentralized Data Entry

Within each agency the Sustainability Manager is responsible for the data entry process. Delaware agencies populate separate Portfolio Manager accounts monthly with their respective energy consumption data. Each agency is required to report on at least 50 percent of its building square footage and include all buildings larger than 3,000 square feet. The DE OMB Energy Resource Manager, as the Portfolio Manager lead, helps agencies through the process by educating agency staff on the information needed and answering questions as needed.

2. Data Compilation and Scrubbing

The DE OMB Energy Resource Manager and the Workgroup provide a quality control review of the data to ensure it is complete and accurate. They report trends, anomalies, and any significant changes in consumption back to the agencies for review and remedy.

3. Centralized Data Analysis and Project Prioritization

In the next phase of the process, the central Sustainability Managers Workgroup analyzes the agency-collected data to plan ongoing maintenance & operations, mitigation of greenhouse gas emissions, and opportunities for renewable energy deployment. In the first round of analysis, the Workgroup also followed these steps to develop a central plan to prioritize facility upgrades across agencies:

- a. Each Sustainability Manager compiled a preliminary list of the facilities in the individual agency that should undergo audits.
- b. The Workgroup developed criteria for prioritizing energy audits across the state based on facility attributes such as building size, energy consumption, and age. The Workgroup also identified criteria that may exclude facilities from energy audits, such as function, size, energy consumption, or age.
- c. Each Sustainability Manager applied the selected criteria to the individual agency list to produce a prioritized department energy audit list.
- d. The Workgroup merged individual agency lists into a statewide master audit priority list.

Today each agency maintains and updates its own priority list for upgrades.

4. Centralized Project Mobilization

With the central audit priority list in hand, the Workgroup pursued the fourth and most important phase of the process: mobilizing priority projects for actual savings. The Workgroup worked with the Delaware Sustainable Energy Utility (DESEU), a first of its kind non-profit organization created by the state in 2007 to help residents and businesses save money by using clean energy and efficiency. The Workgroup partnered with DESEU through the organization's Energize Delaware initiative to establish audit schedules for the priority retrofit projects and identify funding sources to move them forward. DESEU leverages multiple funding sources such as tax-exempt bonds and leases, Regional Greenhouse Gas Initiative (RGGI) funds, fees and interest on financing, and fees for services.

OUTREACH

Delaware used a media blitz to inspire agencies for the kickoff of the state's clean energy and sustainability campaign. The Governor's Office led the charge with public media blasts and press releases over the first few months of the effort. The Governor's Office also simultaneously distributed fact sheets and filled agency facilities with posters to generate buzz about the initiative. DE OMB posts its own agency's results online quarterly and overall portfolio performance on the website annually.

The Sustainability Managers Workgroup maintains the campaign's momentum as the information hub for agencies. Per EO 18 direction, the lead agencies and the Workgroup developed a program to educate state employees about strategies and tactics to achieve the EO's 30-percent energy use reduction goal. Today individual agencies carry out information campaigns on their own schedules as needed, with the Workgroup as an available guide or resource for materials. The campaigns highlight the benefits of energy consumption both in the workplace and at home through three different channels:

- E-mail blasts to agencies communicating the overall desired outcomes of the Executive Order and ways to benefit from energy efficiency at home,
- Posters and signs throughout participating facilities displaying energy-saving tips and energy efficiency projects, and
- Green Committees intra-agency groups made up of agency staff with whom the Workgroup communicates about participation in EO 18 and the benefits of energy initiatives.

Finally, a Cross-Agency Facilities Management Group, comprised of facilities maintenance, accounting, and fiscal officers across agencies, meets regularly to share innovative techniques for implementing energy savings policies, procedures, and standards.

Tools:

- [Division of Facilities Management \(DFM\) website](#)
- [Department of Natural Resources and Environmental Control \(DNREC\) website](#)
- [Department of Technology & Information \(DTI\) “Go Green” Initiative website](#)
- [Turn Words into Action Energy Poster](#)
- [Conservation Media](#)
- Press releases from the Governor’s Office:
 - [Sample release](#)

MEASURING SUCCESS

Delaware evaluates the success of its benchmarking and tracking system through metrics that show progress toward its EO 18 energy reduction goal: site energy use intensity (EUI), site total energy use (kBtu), site electric use (kWh/quarter), site natural gas use (therms), and weather-normalized source change from baseline percentage.

Sustainability Managers in each agency report quarterly on their agency’s progress toward EO 18’s energy use reduction goal, using a standardized reporting template created by the Workgroup. Workgroup co-chairs from the two lead agencies (DE OMB and DNREC) compile the individual agency reports into a single quarterly report, which is then submitted to the Governor’s Cabinet Committee on Energy. Annual energy performance metrics for the complete portfolio are reported on the state’s website. At monthly Workgroup meetings and via e-mails, the OMB co-chair reports progress on each of the EO task areas and files those reports to a secure cloud platform, accessible by the Sustainability Managers.

Tools:

- [State of Delaware Benchmarking & Tracking website](#)
- [ENERGY STAR Portfolio Manager](#)
- [Executive Order 18 Quarterly Report Template](#)

OUTCOMES

Delaware has achieved nearly a 17-percent energy use reduction from the 2008 baseline – over the past five years, an average annual improvement rate of more than three percent. Twenty percent of this achievement resulted from approximately 40 building retrofits recommended directly as a result

of data analysis in Portfolio Manager. Portfolio Manager now houses 80 percent of Delaware's portfolio (234 of the state's approximately 300 buildings), allowing the state to prioritize state retrofit projects and drive toward its energy savings goal. Moreover, since becoming a Better Buildings Challenge partner three years ago, Delaware has been recognized for excellence in data quantity, quality, and transparency.



