

Clean Buildings Legislative Report



2024 report per RCW 19.27A.210 and RCW 19.27A.220

CLEAN BUILDINGS

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Report to the Legislature

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Executive summary

Overview

In 2019, Washington became the first state to establish a statewide performance standard for existing large buildings. Buildings are the fastest growing source of greenhouse gas emissions in Washington State, and the second biggest carbon polluter behind only transportation. The Clean Buildings unit, within the Washington State Department of Commerce (Commerce), is committed to dramatically reducing greenhouse gas emissions in buildings by helping building owners meet the state's clean energy standard.

This report summarizes the work to date in establishing and implementing Washington's energy performance standard for existing large buildings and administering the early adopter incentive program.

Commerce currently estimates over 8,366 buildings will need to comply with the Clean Buildings Tier 1 requirements. Of those, 1,174 buildings are over 220,000sq. ft. and will need to choose a [compliance pathway](#) by June 1, 2026. The Clean Buildings online portal allows those building owners to upload building information and energy data, streamlining the process significantly.

Barriers to implementation and solutions:

Last year, building owners commented that a big barrier to applying to the incentive program was the high cost of conducting energy audits on all their buildings. This year, the Legislature allowed Commerce to offer an [Audit Incentive for Publicly Owned Buildings](#). This will help cover all or part of the cost of these energy audits.

Additionally, Commerce is requesting that the Legislature increase the \$0.85 per square foot incentive cap to provide a greater financial incentive. Commerce believes that enhancing the incentive will motivate building owners to apply to the program. This is based on consistent feedback from building owners stating that the incentive cap, on average, would only cover 2.6% of the overall construction costs for building improvements. The average cost to a building owner to meet the energy performance standard is \$2M.

Goals for 2024:

1. Data: Continual improvement of the Clean Buildings portal to automate data transfer by allowing connections to outside data sources
2. Outreach: Increase outreach and education to building owners on compliance pathways
3. Technical Resources and Tools: Develop online energy management tools to help building owners track and plan for building improvements

Legislative mandate

This report satisfies specific requirements of [Chapter 285, Laws of 2019](#).

Section 3(14):

By January 15, 2022, and each year thereafter through 2029, the department must submit a report to the governor and the appropriate committees of the legislature on the implementation of the [State Energy Performance Standard](#) established under this section. The report must include information regarding [the adoption of the ANSI/ASHRAE/IES standard 100-2018 as an initial model](#), the [financial impact to building owners](#) required to comply with the standard,

[the amount of incentives](#) provided under sections 4 and 5 of this act, and any other significant information associated with the implementation of this section.

Section 4(12):

..the department must report to the appropriate committees of the legislature on the results of the incentive program under this section and may provide recommendations to improve the effectiveness of the program.

Expansion bill

In 2022, the state enacted the Clean Buildings Expansion law (SB 5722 [Chapter 177, Laws of 2022](#)). This law creates Tier 2 buildings, which includes buildings between 20,000 and 50,000 square feet and all multifamily buildings over 20,000 square feet. The first phase of this law is focused on benchmarking, energy management and operations, and maintenance plan reporting. The law also authorized a new incentive program for Tier 2 buildings.

Commerce is required to submit a report to the Legislature and governor in 2029 with recommendations for building performance standards for Tier 2 buildings, which would not take effect until after the 2031 legislative session concludes. Our 2023 key findings are below. Our recommendations for 2024 are at the end of the report, beginning on page 13.

Next steps

Below are Commerce's next steps based on building owner feedback

- Data opportunities: Broaden the building dataset to find more opportunities to reduce greenhouse gas emissions in buildings. These opportunities include lower energy use, fuel selection, and on-site generation of electricity.
- Ongoing database development: The Clean Buildings database now allows building owners to apply for exemptions online. Commerce greatly improved the user-experience by automatically pulling in Energy Star Portfolio data directly into the Clean Buildings Portal eliminating the need for a separate form. GIS will be integrated into the database next year, showcasing an accurate visual of the statewide building distribution.
- Technical assistance: Commerce continues to create resources that simplify the Clean Buildings Performance Standard based on input from stakeholders. These resources make the Standard more accessible. Continued focus on technical assistance for building owners and the industry will result in better compliance. Statewide customer support is critical for successful implementation.

Introduction

Background

The building sector is the state's second largest source of carbon pollution, second only behind the transportation sector. The building sector is also the fastest growing source of greenhouse gas emissions in Washington. As our population grows, so does the number of new homes and businesses. Investment in building energy efficiency is the most cost-efficient way to significantly reduce greenhouse gas emissions from the building sector. One solution to cutting building emissions lies in energy efficiency – the fastest, cheapest way to cut carbon emissions and other harmful pollution from the built environment. Another solution is to electrify end uses including space and water heating, and cooking.

The Clean Buildings bill ([Chapter 285, Laws of 2019](#)) aims to lower costs and emissions from fossil fuel consumption in the state's existing buildings, especially large buildings. The law requires the Washington State Department of Commerce (Commerce) to develop and implement an energy performance standard for these buildings and to provide incentives to encourage efficiency improvements. Washington is the first state to establish a statewide performance standard for existing large buildings. Colorado has since passed similar legislation and several other states are considering such laws.

The Legislature directed Commerce to adopt the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Standard 100-2018 as a reference standard and to establish energy use intensity targets (EUI) specific to Washington's climate zones for different building occupancy types. Energy use intensity is measured in British Thermal Units (BTUs) per square foot per year.

All covered buildings in the state are required to benchmark their current energy use through Energy Star's Portfolio Manager, which is a free tool supported by the U.S. Environmental Protection Agency. All covered buildings are required to produce energy management and operations and maintenance plans. Those buildings determined to be over the EUI by building type are then required to produce and implement a building improvement plan to bring their EUI to their target, or demonstrate that the owners have implemented cost effective measures that reduce their EUI to their target.

Owners demonstrate compliance on a five-year cycle according to administrative and reporting procedures developed in [WAC 19450-150](#). Compliance dates for Tier 1 buildings vary by building size:

- June 1, 2026 Buildings over 220,000 square feet
- June 1, 2027 Buildings between 90,000 and 220,000 square feet
- June 1, 2028 Buildings between 50,000 and 90,000 square feet

The Legislature charged Commerce with conducting rulemaking to establish administrative rules for the law, creating a database of covered buildings in the state, notifying building owners of the requirements of the law, establishing an incentive program for early adopters of the standard and providing customer support to the industry.

Progress

At the program inception in 2021, Commerce identified 15,020 buildings that could be subject to the mandatory requirements of the law. After a deeper quality assurance on the covered buildings list, Commerce identified 6,657 buildings that would not be covered, reducing the buildings covered by 44%. Commerce currently has [8,363](#) buildings in the database and expects that number to stay consistent as we continue communications with building owners.

The new online [exemption](#) process is a big step toward refining the data. Available since July, it allows building owners to apply for an exemption from the performance standard. This streamlining greatly reduces the number of hours our team will have to spend reaching out to owners individually.

Commerce also streamlined the online user experience by automatically pulling Energy Star Portfolio data directly into our Clean Buildings Portal. Building owners no longer have to fill out a separate form to send us this data. This automation quickly and accurately fulfills each building owner's benchmarking requirement while reducing the number of hours program staff have to spend entering data.

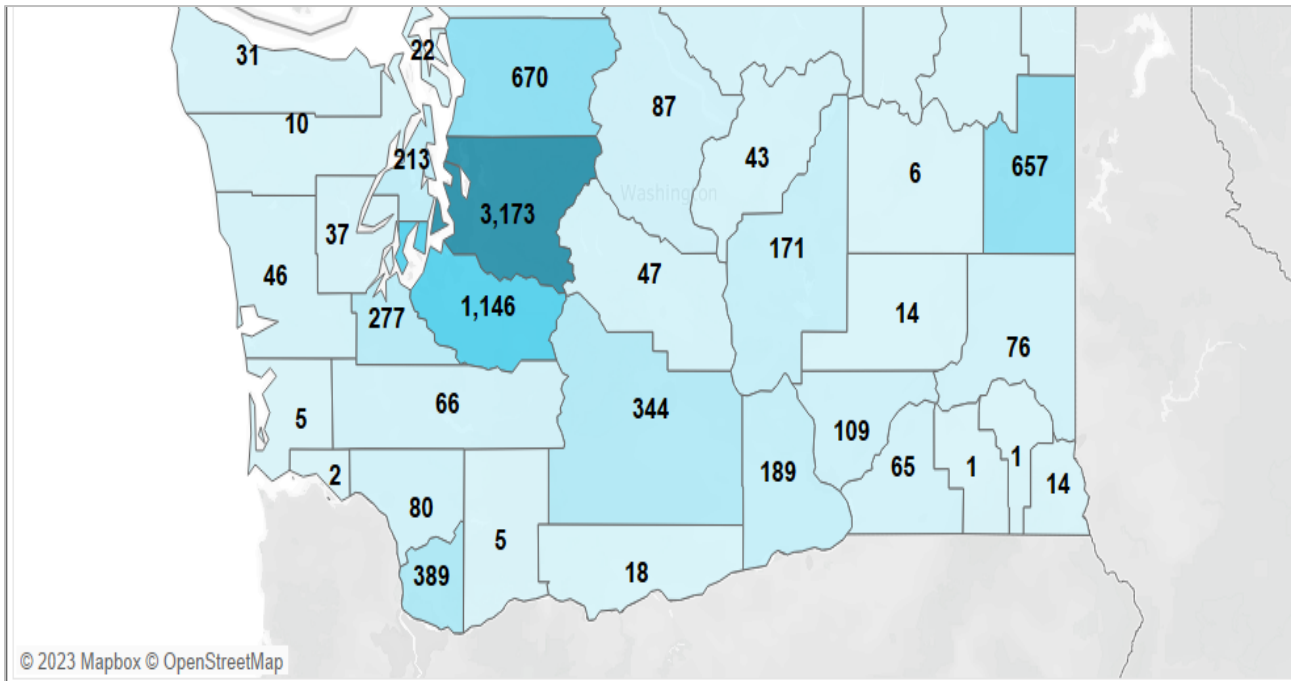
This year Commerce completed 39 county web map applications to show Tier 1 buildings for each county. The [map](#) will prepare the program for the expansion to include Tier 2 buildings. Staff are reviewing assessor data, updating building square footage, and communicating with building owners as needed. GIS should be integrated into our database next year.

Building owner notification

The Clean Building team continues to refine the list of Tier 1 buildings. Staff meet with building owners, property managers and building personnel to gather information about their buildings. Commerce staff are still receiving and reviewing building plans and updating the database. Commerce staff are also reviewing buildings in selected counties where building square footage is suspected to be in error. This is helping us create a more accurate list of covered buildings.

Staff continue to perform data quality checks and update building owner information. As a result, letters are sent regularly to newly identified building owners regarding the Clean Buildings Performance Standard and the incentive program.

Figure 1. Possible covered Tier 1 buildings by county



Incentive program

[RCW 19.27A.220](#) requires Commerce to administer an Early Adopter Incentive Program for early compliance with the Clean Buildings Performance Standard. The Legislature authorized \$75 million for participating utilities to offer as incentives to building owners for early compliance. Eligible buildings can also receive utility conservation incentives, in addition to other financing mechanisms.

To be eligible for the incentive program, buildings must be served by at least one electric utility, gas company or thermal energy company participating in the program. Buildings must be at least 15 EUI (energy use intensity) over the target by building type. Buildings that demonstrate early compliance with the standard may receive 85 cents per gross square foot of floor area. Participating utilities pay this incentive directly to the building owners.

The incentive program launched on July 1, 2021. As of September 2023, Commerce have approved five incentive applications with 22 applications waiting to be finalized. Owners will be installing a wide range of measures including new solar arrays, heat pumps, updating HVAC controls, replacing failing windows, upgrading lighting, and replacing end-of-life systems.

Commerce believes that enhancing the incentive will motivate building owners to apply to the program. Preliminary construction costs for buildings applying for the Early Adopter Incentive Program average \$2,010,358. Initial incentive calculations average to 2.6% of the construction costs for building improvements.

In the many conversations Commerce had with buildings owners since 2021, they told us that the cost of the Level II Audit was a barrier to applying to the program. Last year Commerce asked the Legislature to address this. The 2023 Legislature passed the [Audit Incentive for Publicly Owned Buildings](#). Thanks to this legislation, Commerce will offer an energy audit incentive. The funding, which begins later this year, will be used to cover part or all of the cost of conducting an investment-grade energy audit. The program will reserve a portion of

the funding for public buildings in overburdened communities. Funded at \$20M, this program has the potential to serve several thousand large public buildings before the mandatory compliance deadline of 2026.

Commerce continues to provide customer assistance for the incentive program by helping users establish their Energy Star Portfolio Account for benchmarking building energy use and giving tutorials on the Department of Energy's Energy Asset Score tool for reporting building audit information.

Customer support and outreach

Customer service is one of the most important ways Commerce maintains our relationship with building owners. It's important to support them by responding to their questions quickly and clearly. Stakeholder and building owner feedback suggests that collective understanding of the program has increased significantly over the last year.

Commerce's partnership with the Smart Buildings Center Education Program (SBCEP) has been very helpful in developing tools and resources for stakeholders. The SBCEP plays a big role in educating building owners and operators on smart building practices and technologies. They've held workshops, trainings, created videos and web-based content, and maintain a page on their [website](#) dedicated to the Clean Buildings program.

A few of our partnership successes include:

1. Developing a free tool kit through the Tool Lending Library to support clean buildings bill compliance
2. Expanding Tool Lending Library presence in eastern Washington and southwestern Washington
3. Developing and hosting smart buildings trainings, including digital training videos posted to the Smart Buildings Center's [YouTube channel](#)
4. Enhancing the smart buildings curriculum for building operators
5. Ongoing quarterly outreach through marketing partners

The Clean Buildings Team worked with a number of other compliance advocates to help the program reach more building owners than it could have alone. These successes included:

- City of Issaquah launching a new Clean Buildings Incentive Program providing no-cost consultant services to improve energy efficiency
- King County cities, Puget Sound Energy (PSE), and energy consultants hosted a Clean Building Symposium to discuss the latest advancements and best practices in creating energy-efficient and sustainable buildings

The program is also promoting The Clean Buildings Accelerator program that provides building owners with a wide range of personalized assistance from some of the largest utilities in the state: [Avista Corp](#), [Pacific Power](#), [Puget Sound Energy](#), [City of Seattle](#), and [Snohomish County](#).

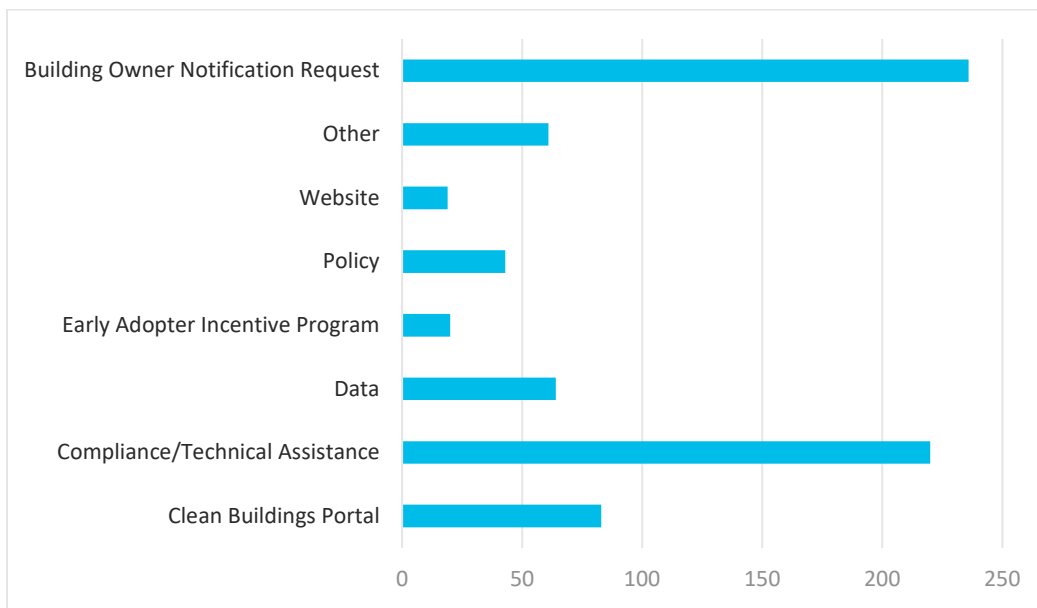
When owners sign up for the Clean Buildings Accelerator program they receive:

1. Guidance for Clean Buildings Law compliance

2. Assistance in setting up your Energy Star Portfolio Manager account and PSE’s EnergyCAP tool for automatically benchmarking your building(s). By using PSE’s EnergyCAP tool, owners can bring the cost of benchmarking down to zero.
3. Tailored coaching, virtual energy scans of space- and water-heating systems, and prioritization of energy-saving opportunities
4. Templates for the required energy-management plan and operations-and-maintenance plan

As of September 2023, the Clean Buildings Team has responded to more than 840 documented and logged support requests between January and September of 2023. Commerce staff offers one-on-one support for all stakeholders, from small businesses to large corporations. Our relationships with stakeholders improve every time they reach out for assistance.

Figure 2. Requests for assistance by type



Stakeholders engage with the Clean Buildings Team through our customer support forms, virtual training seminars, and Q&A sessions. These events have been popular and effective in educating building owners and their representatives.

The program continues to create self-led educational resources, training videos, tools and guidance documents to help stakeholders understand the complexities of the Clean Buildings Performance Standard.

Resources created this year include:

- New sections of the [Frequently Asked Questions page](#)
- Seven [guidance documents](#) to navigate different exemption types
- Energy Management Plan reporting tool
- Operations and Maintenance reporting tool

The Clean Buildings Team also actively participated in several workgroups with higher education representatives, utility providers, state facilities managers, and industry professionals. Our staff remain

accessible to provide presentations for associations, organizations, and businesses. In 2023, the Clean Buildings Team presented at a variety of different events such as:

- Puget Sound Energy Commercial Strategic Energy Management Awards
- WA State Alliance of YMCA's meeting
- Smart Building Exchange
- Building Owners and Managers Association (BOMA) meeting
- School district meetings
- County-level facilities managers meetings
- Commercial energy management professionals meetings
- State Board or Community and Technical Colleges meetings

Technical support

The Clean Buildings Program provides considerable technical support to building owners, utilities and industry professionals. It's critical that people understand the technical requirements of the standard so that they can comply with it. Stakeholders often need technical help with compliance forms, creating and connecting their Energy Star Portfolio Manager account, understanding their EUI and EUIt, calculating square footage, applying requirements for multiple buildings connected by shared heating sources, determining the responsible party for compliance, and many other topics.

Support is provided in several formats, including webinars, [guidance documents](#), one-on-one meetings, Q&A, emails and phone calls through the Clean Buildings hotline. The need for technical support will be even greater once the program expands to Tier 2 buildings: those between 20,000– 50,000 sq. ft. and all multifamily buildings over 20,000 sq. ft. Building owners will be notified in July of 2025 and the mandatory reporting deadline is July 2027. Commerce has increased staffing for our support team this year, which has already had a positive impact.

Technical support is the key to turning our goal of reducing greenhouse gas emissions into a reality. Building owners have very real and complex problems. Our team researches and develops guidance to address these challenges. Decarbonization district heating systems, sub-metering, compliance cycles, and multiple property ownership are just some of the issues the program is addressing.

Commerce staff continue to schedule virtual meetings tailored to specific inquiries. These meetings are issue-focused and include a wide range of stakeholders, depending on the topic. Many industry professional associations include our technical team in their own workshops and workgroups. A number of these activities are recorded and posted on our website as an added resource to help stakeholders better understand the performance standard.

Clean Buildingsworkgroup

A clean buildings workgroup was formed in the FY23-25 Capital budget to analyze the costs of Tier 1 compliance for certain building types, including higher education, state-owned buildings, and more. Membership organizations are listed in the capital budget and will include at least 20 participants. There are two key deliverables for the workgroup:

- Analysis report of financial investments by December 15, 2023
- Final report with recommendations by September 1, 2024

Commerce posted an RFP on July 7, 2023, to hire a consultant to assist with the financial impact analysis work and facilitation of the workgroup. After a public procurement process, Commerce contracted with SBW Consulting, Inc. The workgroup expects to begin meeting in early fall of 2023.

The workgroup will meet approximately 10-15 times and conclude by September 2024. Participants are expected to attend approximately one meeting a month.

Recommendations for the September 2024 report will focus on helping building owners attain compliance. Such recommendations will include, but are not limited to:

- Identifying energy efficiency investments or other strategies for increasing energy efficiency in the buildings sector
- Providing a cost-benefit analysis of options, including energy efficiency, to meet the goal of reducing greenhouse gas emissions from the buildings sector
- Recommendations to balance financial investments while maximizing clean energy benefits for the state, including any statutory changes that may be necessary

Commerce will keep stakeholders up to date on workgroup progress and findings through the regularly published Clean Buildings Bulletin and our program webpages.

Rulemaking

Commerce conducted two rulemaking sessions this reporting year. The first was an emergency rule change regarding the covered building exemption timeline. The second was rulemaking for Tier 2 buildings. The program also expects to file a notice of proposed rulemaking (CR-101) before the end of 2023 to initiate rulemaking related to provisions in [House Bill 1390](#) (Chapter 291, Laws of 2023). This bill focuses on decarbonization planning for district energy systems and includes an alternate Clean Buildings compliance pathway for buildings connected to these systems.

Commerce filed an emergency rule change (CR-103e) under [WSR 2305-101](#) effective February 15, 2023. The rule previously gave building owners up one year to apply for an exemption. Building owner feedback indicated that exemption decisions need to be received earlier in order to make capital decisions. With this rule change, applications for exemptions may be submitted no sooner three years prior to the compliance date and submitted to Commerce no later than 180 days prior to the compliance date. This rule was made permanent June 2023.

If buildings meet one of the exemption criteria in [RCW 19.27A.210\(7\)\(c\)](#), building owners can now apply for an exemption three years prior to their scheduled compliance date.

Tier 1 buildings over 220,000 sq. ft. can apply for an exemption beginning June 1, 2023

Tier 1 buildings over 90,000 sq. ft. can apply for an exemption beginning June 1, 2024

Tier 1 buildings over 50,000 sq. ft. can apply for exemption beginning June 1, 2025.

Additionally, Commerce held six rulemaking workshops for the Tier 2 program in 2023. Staff covered many technical topics such as customer support, equitable program design, and how reporting requirements will

work. Each rulemaking workshop was followed by a two-week comment period. Over the rulemaking period, Commerce received 54 comments focused on funding, technical assistance, treatment of condominiums, and clarifying connecting buildings. Thirty-nine organizations, including trade associations, environmental advocates, local governments, utilities, businesses, and individual building owners and tenants submitted these comments.

Table 1. Workshop topics and number of attendees

Workshop topic	Attended
Rulemaking Kick-off: Introduction to the Clean Buildings Expansion	259
Customer Outreach, Technical Support and Benchmarking	134
Energy Management Plan and Operations and Maintenance	139
Annex Y and Administrative Requirements	99
Tier 1 Amendments	130
Cumulative Review	185

The cumulative review concluded the Tier 2 rulemaking workshops. Stakeholders were given four opportunities to attend the cumulative reviews. One was virtual and three were held in person in Seattle, Spokane and Kennewick. These meetings were attended by a total of 184 people.

A diverse group of stakeholders attended these workshops, including building owners, representatives from utilities, architects, engineers, non-profit entities, higher education, and many trade and membership organizations. All workshop materials were posted online and followed up with a two-week public comment period. Each workshop included opportunities for input and discussion.

After speaking with thousands of building owners during the last two years, a number of changes to the Tier 1 rules were proposed. These changes will make it clearer for owners of the state’s largest buildings to understand how to achieve compliance in 2026.

Highlights

- Clarified the definition of certain types of structures
- Rewrote and clarified benchmarking requirements
- Clarified definitions of connected buildings and campus-level buildings.

The Tier 2 rulemaking process will be complete by the end of 2023. Commerce will file proposed rules (CR-102) in October, host a hybrid public hearing in November, and file final rules (CR-103) in December.

Recommendations

Commerce has three key thematic recommendations for implementing the standard.

Data

- Integrate GIS into the Clean Buildings Portal
- Continue quality assurance on covered buildings lists and building details to better understand the state's building stock and make recommendations on how to improve the standard.

Outreach

- Create simpler and more accessible resources to explain the Clean Buildings Standard
- Research additional assistance opportunities to support building owners struggling to apply for the incentive program
- Provide more customer support and technical assistance to building owners to aid in early compliance with the law before mandatory compliance dates.

Technical Resources and Tools

- Develop web-based Energy Management Plan, Operations and Maintenance program, and Benchmarking program tools/resources
- Expand Accelerator type programs statewide
- Analyze completed projects to produce case studies for early adopter incentive program projects