Powerful Facility
Energy Conference

From Mandate to Purposeful Maintenance

How to use the Clean Buildings Performance Standards to meet your facility goals

AKA “Clean Buildings 201”

Sustaining Sponsors: PSE Puget Sound Energy · Seattle City Light · Snohomish County PUD Public Utility District No. 1 · IFMA Seattle Chapter International Facility Management Association

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Rebecca Sheppard

Devin Malone

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What does Millig know about Clean Buildings?

Millig is an **engineer-led** planning, design, and general contractor company.

We work primarily with **public clients** to address facility and campus core **infrastructure needs** through **modernization projects**.

We are a pre-selected ESCO through the Department of Enterprise Services Energy Program, and a Washington Small Business.

We are currently working with five counties, three school districts, two hospitals, two Fortune 100 clients, and one college on Clean Buildings or decarbonization planning and compliance.

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Bad Idea: Ignoring the Law

- Waiting won't change the law
- Waiting will cost you

Better Idea: Following Others

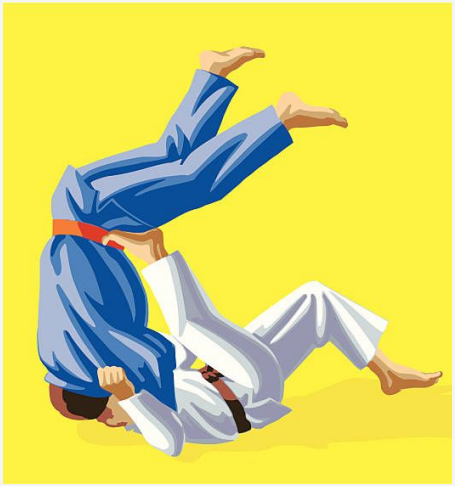
- Waiting will cost you

Bad Idea: Protesting the Law

- Getting mad won't effect change

Better Idea: Influence the Law

- Commerce isn't out to get you. Constructive criticism is heard.



Better Idea: Make the Law Work for You

- Use the State's power to your benefit!
- Use this as an excuse to address your priorities, not tick a box

Why this presentation?

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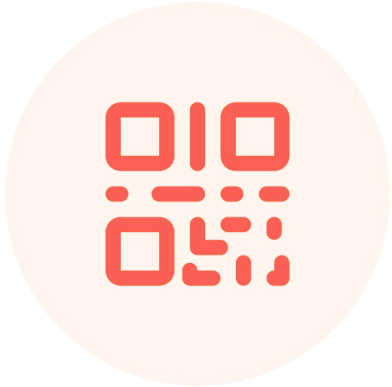

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Which of these best describes your department?

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What are the Clean Buildings Performance Standards?

The objective is to lower costs and pollution from fossil fuel consumption in the state's existing covered buildings and multifamily buildings - WA Department of Commerce

“Cost-Effective” is the Key Phrase Today

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True or False: The Clean Buildings Performance Standards are an “unfunded mandate”

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What are the Clean Buildings Performance Standards?

- Applies to buildings >20,000 sq.ft. First deadline 2026.
- Buildings must either meet Energy Use Intensity targets (EUIt) by implementing Energy Efficiency Measures (EEMs),
- **OR** invest in all EEMs with life-cycle savings (**"cost-effective" measures**).
- For equipment with remaining service life, investments can be delayed.
- Buildings must reapply for compliance every five years.
- Non-compliant buildings can be fined!

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A Simple Way to Understand and Comply With the Standards

Have a Plan for Your Buildings

You'll need an Operations & Maintenance Program, an Energy Management Plan (including a capital investment plan). Can overlap with Study & Survey, BCA.

Think Life-Cycle Costs, not First Costs

When making investments, choose equipment with lowest life-cycle costs, not lowest first costs.

Capital Investment Only if it Saves You Money

Not an "unfunded" mandate, but a "self-funded" mandate.

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What the Standards can Mean for You

From Sideshow to Center Stage

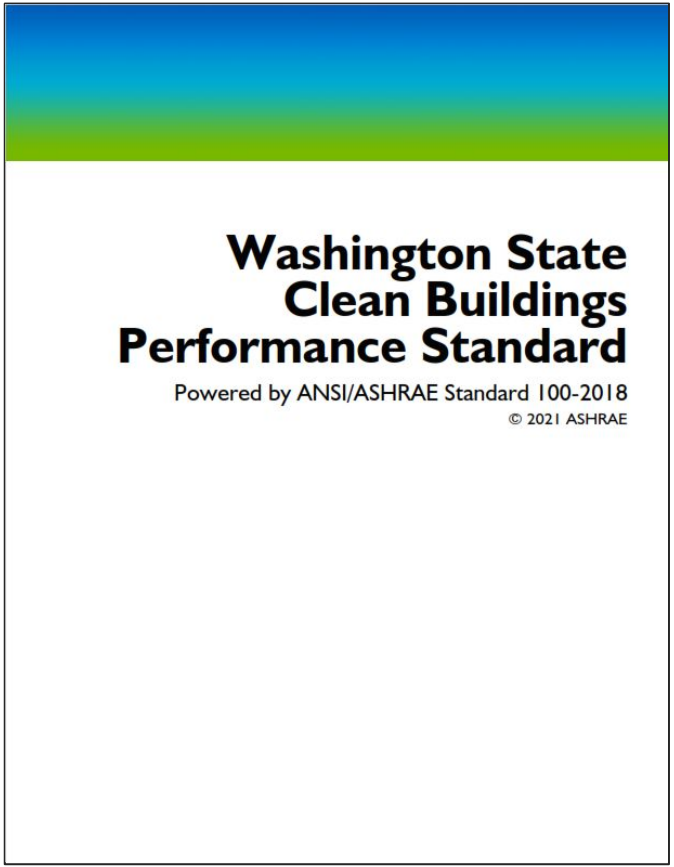
Facilities, operation, and capital planning will be more important than ever.

From Reactive to Proactive

Execution of the O&M Program and EMP means staying ahead of your equipment and making investments that reflect your priorities, not handling emergencies.

Better Building Performance

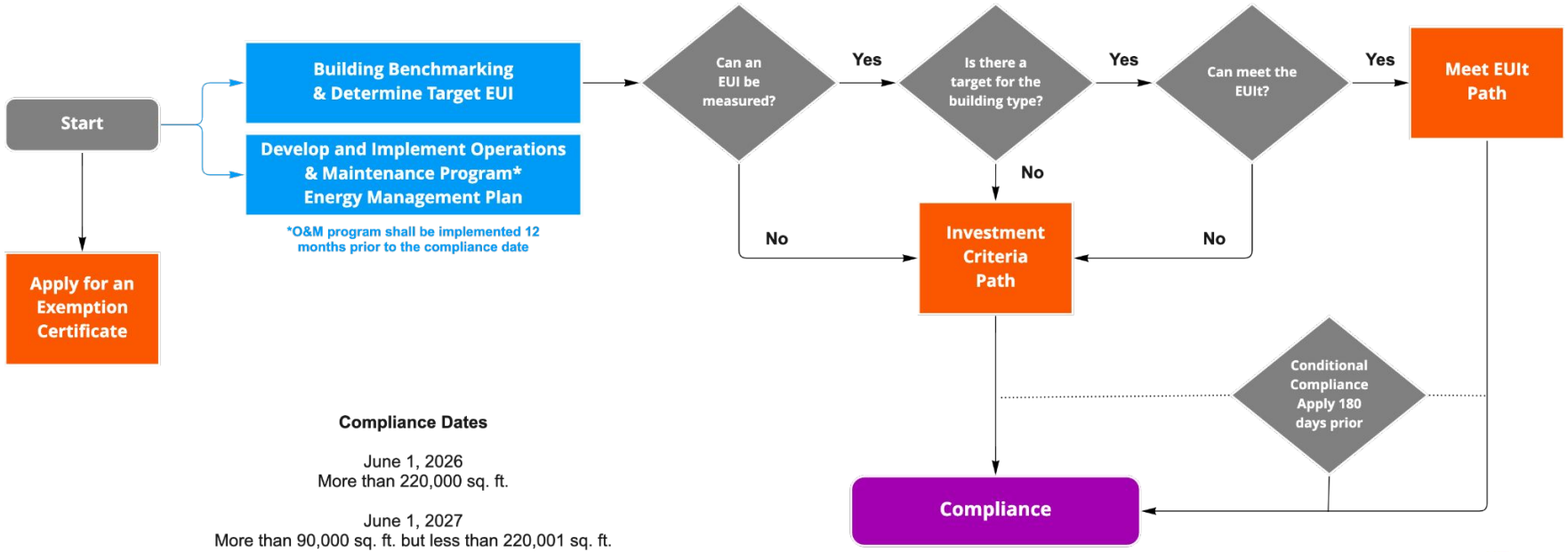
Planned, intentional investment and maintenance of your buildings will reduce bills and improve the experience of your occupants.



The “Integrated Document”

Describes the Standards in detail.

The (most) definitive answers to your questions.



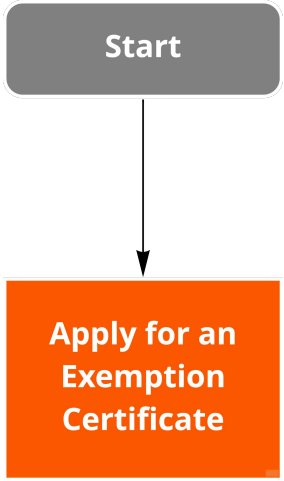
Compliance Dates

June 1, 2026
More than 220,000 sq. ft.

June 1, 2027
More than 90,000 sq. ft. but less than 220,001 sq. ft.

June 1, 2028
More than 50,000 sq. ft. but less than 90,001 sq. ft.

Washington State Department of Commerce

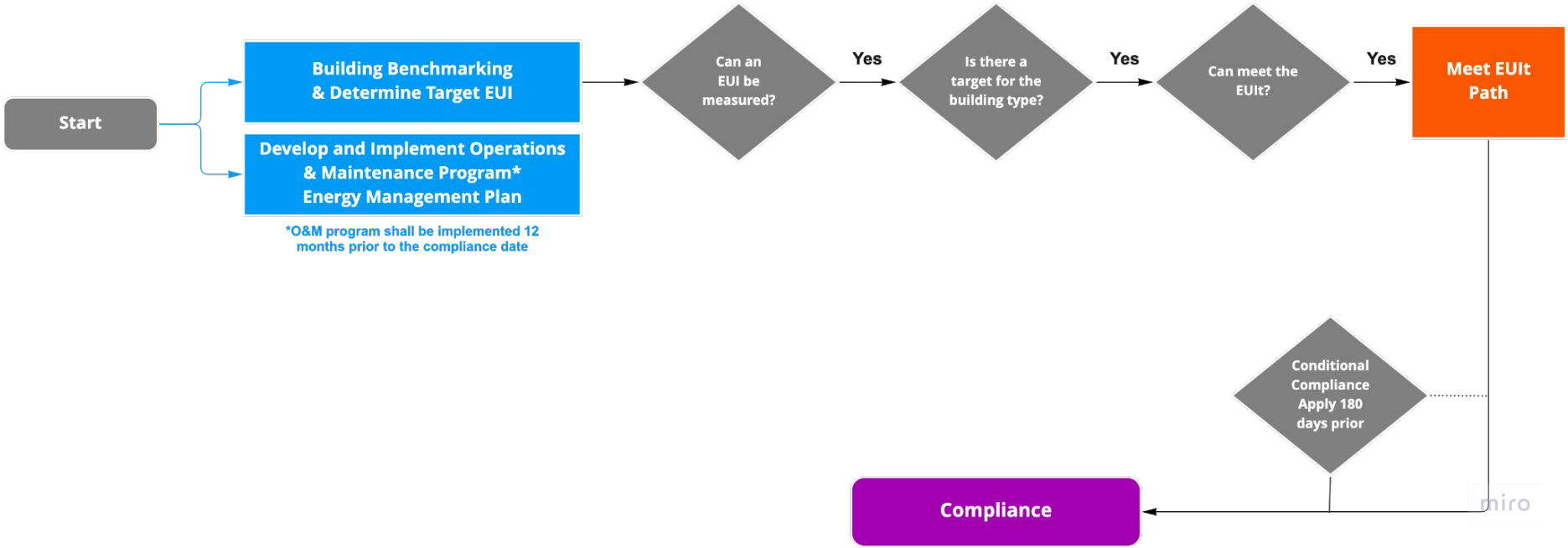


Compliance Through Exemption

See Page 56 of Integrated Document. Commerce to issue rules clarifications by end 2022.

- Exemptions primarily for buildings that are not in use or not actually covered
- The building is “pending demolition”
  - *Current definition is demolition permit. Planned demolition is NOT “pending.” However, expect a revised conditional compliance path for these buildings.*
- The building meets a condition of “financial hardship”
  - *“An immediate and heavy financial need which cannot be satisfied from other reasonable available resources and which are caused by events that are beyond their control.”*
  - *“K-12 schools that are able to document that they have pursued all options to finance compliance with the standard and are unable to do so may be able to apply for an exemption for financial hardship. This exemption may be granted by Commerce once a compliance cycle and will need to be reapplied for in future compliance cycles if funding is not able to be secured.”*

Compliance Through EUIt



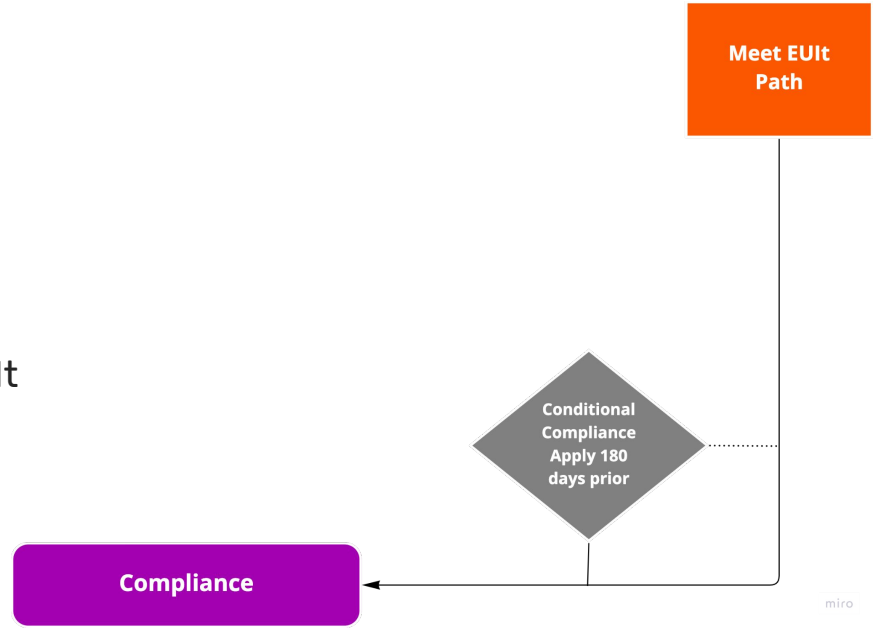
EUIt Path Only Requires Investments that Save Money

The “Meet EUIt Path” Orange Box:

1. Current EUI < EUIt

OR

2. Perform ASHRAE Level II audit, identify EEMs
    a. Implement projects to reduce EUI below EUIt
    b. Implement all “cost-effective” EEMs



EUIt Path Only Requires Investments that Save Money

From the Integrated Document:

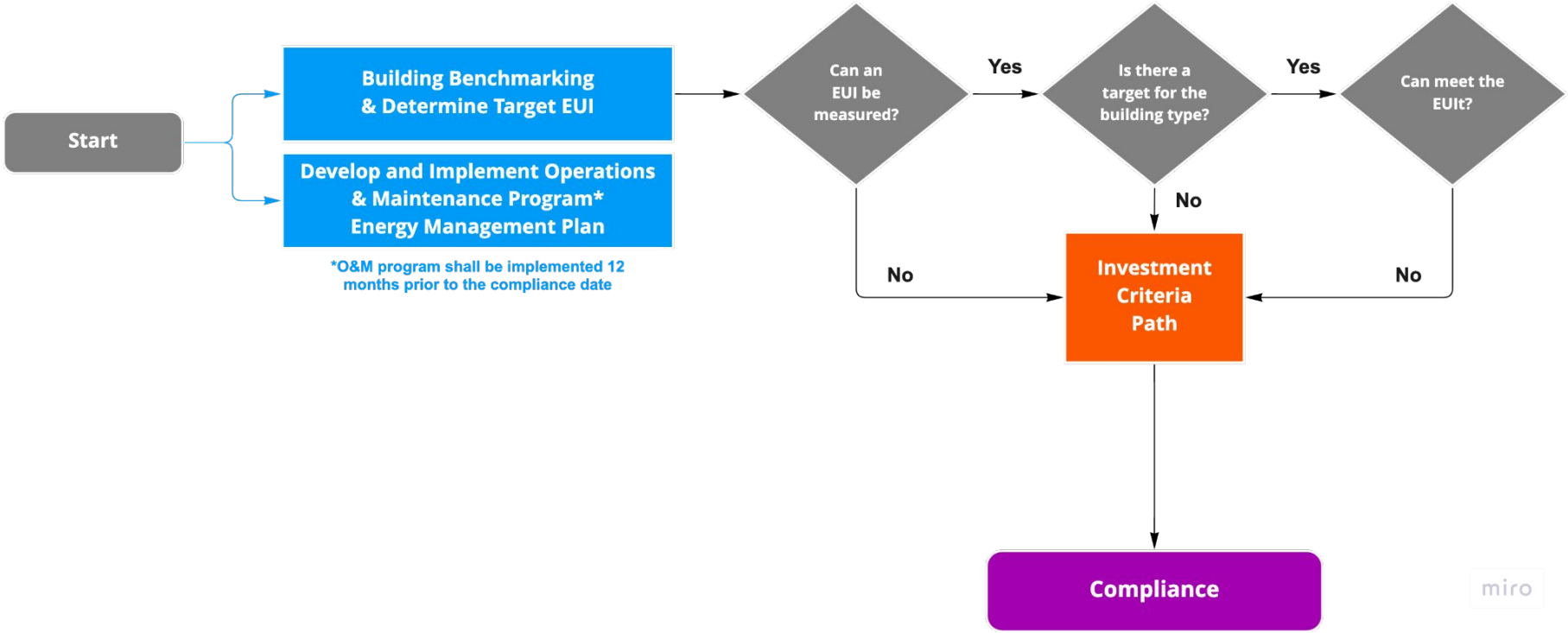
9.1.1.1 … energy efficiency measures (EEMs) identified from the energy audit shall be implemented in order to meet the building's energy target. Develop a written plan for maintaining the building's energy-use intensity (EUI) at or below the energy target

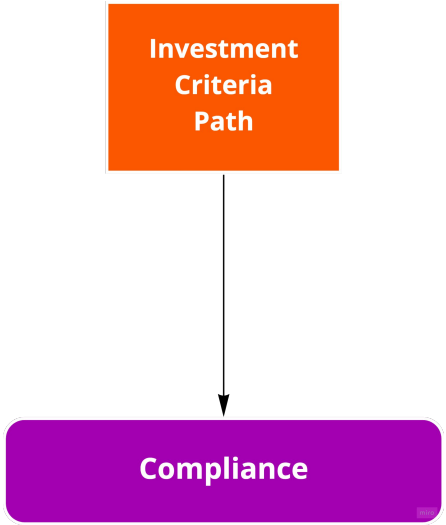
Exceptions to 9.1.1.1:

1. *Buildings may demonstrate compliance by implementing all of the EEMs that achieve the investment criteria in Normative Annex X (Investment Criteria)*

Spoiler: Normative Annex X explains that EEMs must a) save money and b) only applies to equipment beyond its service life.

Compliance Through Investment





Steps to Compliance Through Investment

The “Investment Criteria Path” Orange Box:

1. Perform ASHRAE Level II audit, identify EEMs
2. Implement all “cost-effective” EEMs

Investment Criteria Path

Meet EUIt Path

Identifying cost-effective EEMs

See “Normative Annex X” in the Integrated Document

1. Perform ASHRAE Level II Audit, identify all potential EEMs
2. Screen EEMs using a simple payback analysis. If simple payback > expected life of EEM, EEM can be excluded from further consideration
3. Screen remaining EEMs using Life-cycle Cost Assessment
    a. First costs, Financing costs, Annual energy costs, Escalation & discount rates, Tax credits & deductions, utility incentives, grants, etc., Expected periodic replacements, Estimated recurring **non-energy costs (e.g. maintenance)**, Project contingency…
4. Implement cost-effective EEMs according to the Energy Management Plan
    a. Not before equipment end-of-life! *“… the building owner is not required to replace a system or equipment before the end of the system or equipment’s useful life” - Integrated Document X2.3.2.2*

Investment Criteria Path

Meet EUIt Path

Make Compliance Work for You

1. Perform ASHRAE Level II Audit, identify all potential EEMs
2. Use this audit to create a roadmap for your facility
    a. Prioritize your problems
    b. Identify solutions
    c. Schedule implementation
    d. Estimate budgets
3. Use the audit results and Clean Buildings requirements to support change at your organiztion - it's a way to make sure you get the funding you need!

"We have to comply with this program, and the way we comply is to have a plan to save money in our buildings. We'll solve a lot of other problems at the same time! Here's the roadmap to get us there."

Let’s Summarize what the Standards Mean for You

Have a Plan for Your Buildings

The Operations & Maintenance Program and Energy Management Plan are simply tools to maintain your equipment and plan its replacement.

The Standards are an Opportunity

Facility infrastructure and capital planning often take a back seat to other priorities. The Clean Buildings Standards are your chance to go from reactive to proactive.

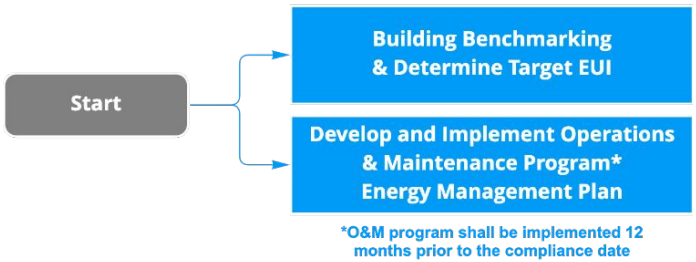
Think Life-Cycle Costs, not First Costs

When making changes in your buildings, choose equipment with lowest life-cycle costs. Only measures that save money need to be implemented, and only if equipment is beyond its service life.

Start ASAP!

Bond campaigns fail. Partners get busy. Equipment lead times are longer than ever. **Start today by benchmarking your buildings** to ensure that you get your first choice of partners and avoid penalties. The DES Energy Office and your utility are great resources.

Step One: Do this now! Benchmark, O&M Program, EMP



These Utilities have Free Programs

- SnoPUD
- Puget Sound Energy (PSE)
- Seattle City Light
- Avista
- Pacific Power

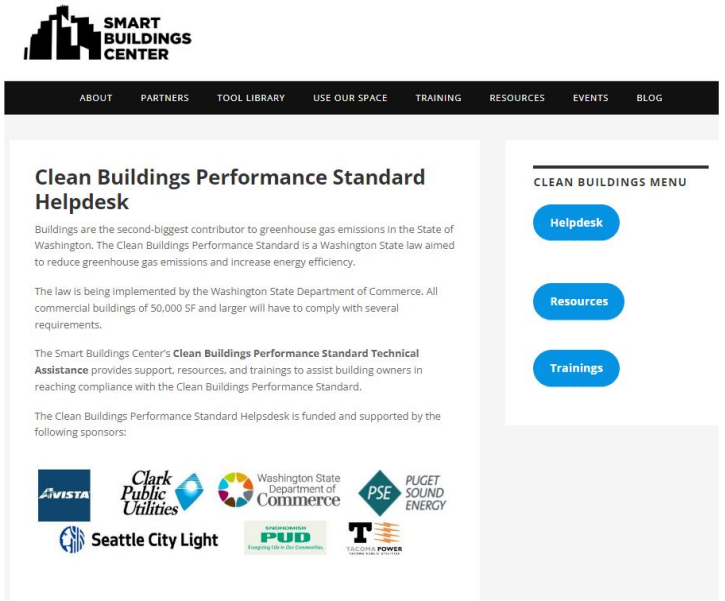
Benchmark your building at www.energystar.gov

- Search for the Portfolio Manager Quick Start Guide

The Smart Buildings Center Clean Buildings Performance Standard Help Desk is Free

- Free individual consultation
- Training videos
- Resources

https://www.smartbuildingscenter.org/resources/clean-buildings-performance-standard/



The Clean Building Standards are your opportunity to go from reactive emergency management to proactive maintenance

- Fewer complaints
- Lower utility bills
- More staff and help where you need it
- No more emergency boiler replacements over winter break
- No more buying discontinued parts or coolant on eBay
- An environment that helps your students, staff, coworkers and community thrive

Make the Standards work for you.

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Audience Q&A Session

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What is your key takeaway from today's session?

ⓘ Start presenting to display the poll results on this slide.

Need More Help?

Scan with your phone camera to email Devin right now!

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Scan with your phone camera to email Rebecca right now!

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Scan with your phone camera to visit the Help Desk!

Smart Buildings Center Clean Buildings Performance Standard Helpdesk

Free individual consultation
Training videos
Resources

Thank You

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Partner Sponsor: BetterBricks

Latest Updates

- HB 1777
  - Allows school districts to partner with ESCOs to finance, own, and maintain energy efficiency measures
  - Has passed out of house and will go to Senate
- SB 5057
  - Delays Tier I buildings (>50,000 sq. ft.) deadlines by one year
  - Creates work group to analyze the financial impact of compliance on Tier I buildings
  - *Must pass Senate by Wednesday*
- Proposed Commerce rule change
  - Extends window to apply for exemption from one year prior to deadline to three years
  - Public hearing on April 25
  - Final rulemaking in June

Qualified Energy Auditor

A person acting as the auditor of record having training, expertise and three years professional experience in building energy auditing and any one of the following:

- A licensed professional architect or engineer.
- An energy auditor/assessor/analyst certified by ASHRAE or the Association of Energy Engineers (AEE) for all building types.

Responsibilities:

- Completion of an energy audit in accordance with Section 8 of the standard
- Completion and submittal of an audit summary in accordance with Annex Z
- Verify energy savings calculations of each EEM
- Verify that the combined savings of multiple EEMs accounts for interactive effects
- Review the commissioning report and certify that the EEMs are functioning as intended (may also be performed by the Qualified Person)
- Certify that the energy savings of the package of EEMs meets or exceeds projected energy savings in accordance with Section 9

Qualified Person

A person having training, expertise and three years professional experience in building energy-use analysis and any of the following:

- A licensed professional architect or engineer in the juris-diction where the project is located
- A person with Building Operator Certification (BOC) Level II by the Northwest Energy Efficiency Council
- A certified commissioning professional
- A qualified energy auditor
- A certified energy manager (CEM) in current standing, certified by the Association of Energy Engineers (AEE)
- An energy management professional (EMP) certified by the Energy Management Association.

Responsibilities:

- Determine whether or not the building seeking compliance has an energy use intensity target (EUIt)
- Establish the energy use intensity target (EUIt)
- Submit forms as specified in Normative Annex Z documenting compliance
- State in writing on Form A that the Energy Management plan and Operations and Maintenance program requirements have been developed, implemented and maintained
- Review the commissioning report and certify that the EEMs are functioning as intended (may also be performed by the Qualified Energy Auditor)
- Signature on Form A

O&M Program Contents

"Normative Annex L" in Integrated Document

- Inventory of Items
- Maintenance Plan
- Performance Objectives
- Condition Indicators
- Inspection & Maintenance Tasks

Energy Management Plan Contents

“Section 5: Energy Management Plan” from the Integrated Document

- Calculation of building energy use
- Energy Use Intensity (EUI) calculation
- Designed and current number of occupants, operating hours, and energy using equipment
- Energy audits and recommended Energy Efficiency Measures (EEMs)
- List of implemented EEMs
- Communication plan for building occupants
- Training plan for O&M personnel
- Capital management plan
- Contact list
- Lighting schedule & satisfaction survey