

# Clean Buildings Performance Standard

Tier 1 and Tier 2 Review

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Clean Buildings Team

4/16/2024



Washington State  
Department of  
**Commerce**

# We strengthen communities



HOUSING AND  
HOMELESSNESS



INFRASTRUCTURE AND  
BROADBAND



SMALL BUSINESS  
ASSISTANCE



ENERGY



PLANNING AND TECH  
ASSISTANCE



COMMUNITY SERVICES



CRIME VICTIMS AND  
PUBLIC SAFETY



ECONOMIC  
DEVELOPMENT

# Meet the Building Performance Staff

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**Emily Salzberg**

Clean Buildings Managing Director

**Incentive  
Program**

**Data**

**Technical  
Assistance**

**Program**

**Josette  
Gates**

**Kyoung-Jin  
Lee**

**Luke  
Howard**

**Annalyn  
Bergin**

Derek  
Cockle

Brittany  
Wagner

Paul  
Currington

Michael  
Stoneway

Judy  
Darst

Donny  
Westfall

James  
Witherington

Aletha  
McGee

Jeff  
Rasmussen

Vacant

# Agenda

1

## Tier 1

- Recap
- Roles and Responsibilities
- Compliance Schedule
- Compliance Paths and Requirements
- Exemptions
- Penalties
- Incentive Program
- Support and Resources

Q&A

2

## Tier 2

- Compliance Schedule
- Exemptions
- Roles and Responsibilities
- Compliance Requirements
- Incentive Program
- Penalties
- Support and Resources

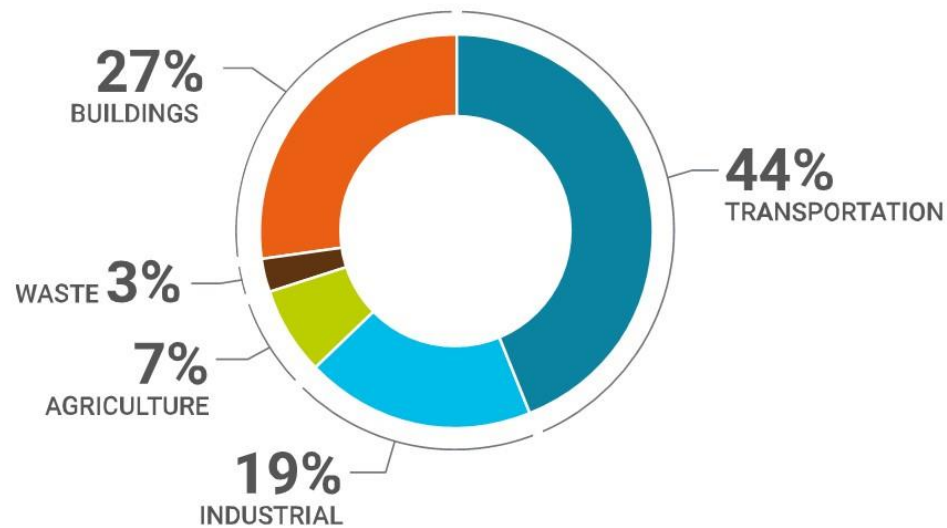
Upcoming Events

Q&A

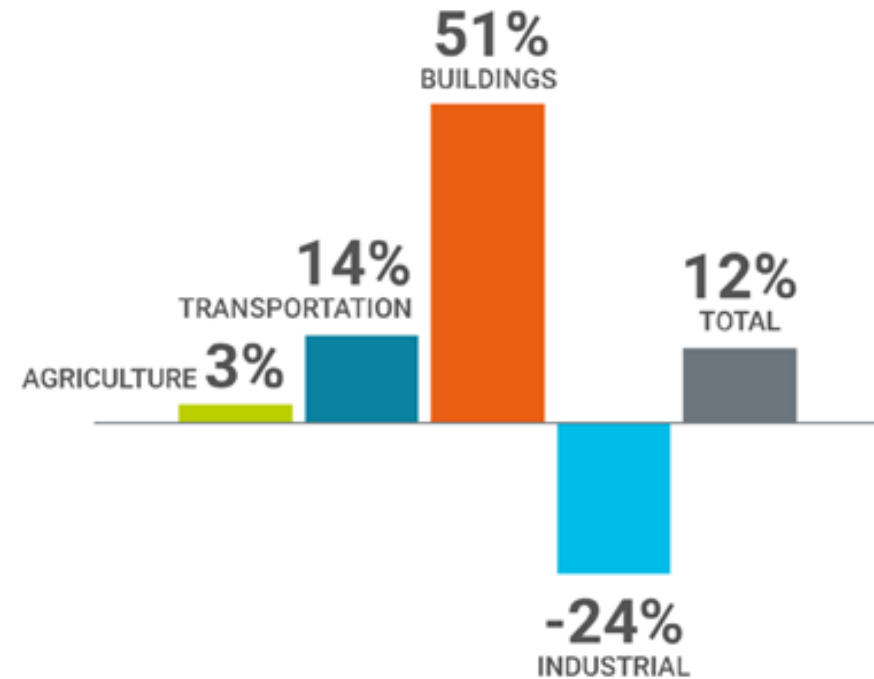


# Reducing emissions from existing buildings

Buildings are the second largest source of greenhouse gas emissions in Washington (2015)



As Washington's population has grown, greenhouse gas emissions from buildings jumped significantly from 1990-2015



# Clean Buildings Performance Standard

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- Based on ASHRAE Standard 100-2018
- WAC 194-50 – Rules for compliance and administrative requirements.
  - Amendment to Standard 100
- **Tier 1 Buildings**
  - Buildings over 50k sq ft excluding parking
- **Tier 2 Buildings**
  - Buildings between 20 and 50,000 square feet
  - Multifamily over 20,000 square feet

## **Commerce charged with:**

- Rulemaking
- Notifying building owners
- Administering incentives
- Supporting mandatory compliance

# Clean Buildings Rulemaking 2019-2024



2019

HB1257: Clean Buildings Act

2020

Clean Buildings Performance Standard Tier 1 Rulemaking

2022

HB5722: Clean Buildings Expansion

2023

CBPS Tier 2 Rulemaking

HB1390: District Energy Systems

2024

HB1390: Decarbonizing the District Energy Systems Rulemaking



# Tier 1 Covered Buildings

Compliance, Incentives, and Penalties



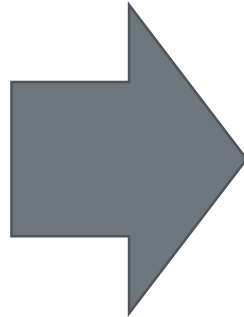
Complete Chapter [HTML](#) [PDF](#)

Chapter 194-50 WAC

WASHINGTON STATE DEPARTMENT OF COMMERCE ADOPTION AND AMENDMENT OF ASHRAE STANDARD 100, 2018

WAC Sections

<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-001</b>	Foreword.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-010</b>	ASHRAE Standard 100, 2018—Section 1—Purpose.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-020</b>	ASHRAE Standard 100, 2018—Section 2—Scope.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-030</b>	ASHRAE Standard 100, 2018—Section 3—Definitions.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-040</b>	ASHRAE Standard 100, 2018—Section 4—Compliance.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-050</b>	ASHRAE Standard 100, 2018—Section 5—Energy management plan.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-060</b>	ASHRAE Standard 100, 2018—Section 6—Maintenance and operation.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-070</b>	ASHRAE Standard 100, 2018—Section 7—Energy-use analysis and target requirements.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-080</b>	ASHRAE Standard 100, 2018—Section 8—Audits.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-090</b>	ASHRAE Standard 100, 2018—Section 9—Requirements.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-110</b>	ASHRAE Standard 100, 2018—Section 11—References.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-120</b>	Normative Annex C Forms.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-130</b>	Normative Annex L—Operations and maintenance implementation.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-140</b>	Normative Annex X—Investment criteria.
<a href="#">HTML</a>	<a href="#">PDF</a>	<b>194-50-150</b>	Normative Annex Z—Washington state reporting requirements.



# Washington State Clean Buildings Performance Standard

February 2024 Version, includes covered buildings Tier 1 and Tier 2

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# CBPS Breakdown

## Structure:

- Sections 1, 2 and 3 – Purpose, Scope and Definitions
- Section 4 – Compliance Requirements
- Section 5 – Energy Management Plan
- Section 6 – Operations and Maintenance Requirements
- Section 7 – Building Energy Use Intensity Target (EUI<sub>t</sub>) setting
- Section 8 – Energy Audit Requirements
- Section 9 – Implementation and Verification
- Normative Annex L – Operations and Maintenance Implementation
- Normative Annex X – Investment Criteria
- Normative Annex Y – Tier 2 Administrative Procedures
- Normative Annex Z – Tier 1 Administrative Procedures

New Section!

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February 2024 Version, includes covered buildings Tier 1 and Tier 2

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# Tier 1 Buildings

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A ***tier 1 covered building*** is a building where the sum of nonresidential, hotel, motel, and dormitory floor areas exceeds fifty thousand gross square feet, excluding the parking garage area.

A ***building complex*** is defined within the CBPS as a group of buildings interconnected by conditioned spaces on contiguous property.

# Tier 1 vs Tier 2

## Tier 1

- Buildings greater than 50,000 square feet
- Does not include multifamily residential buildings
- Benchmarking, EMP and O&M, Performance Metric
- Mandatory compliance begins in 2026 for buildings over 220,000 square feet

VS

## Tier 2

**Size**

- Buildings 20,000 to 50,000 square feet

**Multifamily**

- Includes multifamily residential buildings greater than 20,000 square feet

**Requirements**

- Benchmarking, EMP and O&M program

**Compliance Date**

- Mandatory reporting July 1, 2027



# Tier 1 Compliance Schedule

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A building owner of a covered commercial building must meet the following reporting schedule for complying with the standard and every five years thereafter:



**Tier 1 - Buildings more than 220,000 gross sq. ft, June 1, 2026**



**Tier 1 - Buildings more than 90,000 – less than 220,001 gross sq. ft, June 1, 2027**



**Tier 1 - Buildings more than 50,000 – less than 90,001 gross sq. ft, June 1, 2028**

Building Manager	Building Operator	Energy Manager
<p>The person responsible for maintaining the building, its envelope, and its energy-using systems. The building manager may also be the person responsible for expending funds on capital improvements to the building.</p> <p><b><u>Other responsibilities:</u></b></p> <ul style="list-style-type: none"> <li>Compliance with the requirements of the operations &amp; maintenance (O&amp;M) program and the energy management plan (EMP)</li> </ul> <p><b><u>Qualifications</u></b> No specific qualifications needed for compliance</p>	<p>The person or persons who have responsibility to inspect, operate, and maintain the building systems and components that fall within the scope of this standard.</p> <p><b><u>Other responsibilities:</u></b></p> <ul style="list-style-type: none"> <li>Fulfill the objectives and goals of performance (such as minimizing equipment failures, ensuring ongoing efficient operation, and performing identified maintenance requirements) as defined in the O&amp;M program.</li> </ul> <p><b><u>Qualifications</u></b> No specific qualifications needed for compliance</p>	<p>The individual who has responsibility for ensuring that energy use in the building is minimized without compromising the indoor environmental quality (building indoor air quality, thermal comfort, visual acuity and comfort, sound quality).</p> <p><b><u>Other responsibilities:</u></b></p> <ul style="list-style-type: none"> <li>Develop and maintain the energy management plan (EMP)</li> <li>Verification compliance with the target EUI</li> <li>Ensure tenant improvements do not increase net energy use inconsistent with space type</li> <li>Create, maintain and report Energy Star Portfolio Manager records</li> <li>Conduct technical, policy-related planning related to energy efficiency</li> <li>Purchase energy for spaces under their control</li> <li>Public relation matters related to energy</li> <li>Implement results of energy audits and EEMs</li> <li>Evaluate energy efficiency of proposed new construction, facility expansion, remodeling, or new equipment purchases</li> <li>Review building O&amp;M procedures for optimal energy management</li> <li>Adhere to energy codes and standards</li> <li>Report regularly to management and other stakeholders</li> <li>Develop and implement an energy efficiency plan according to Section 9.1</li> <li>Signature on Form A</li> </ul>

<b>Qualified Energy Auditor*</b>	<b>Qualified Person*</b>
<p>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:</p> <ul style="list-style-type: none"> <li>(a) A licensed professional architect or engineer.</li> <li>(b) A Building Energy Assessment Professional (BEAP) certified by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE);</li> <li>(c) A Certified Energy Auditor (CEA) certified by the Association of Energy Engineers (AEE).</li> </ul> <p><b><u>Responsibilities:</u></b></p> <ul style="list-style-type: none"> <li>• Complete an energy audit in accordance with Section 8 of the standard</li> <li>• Complete and submit an audit summary in accordance with Normative Annex Z</li> <li>• Verify energy savings calculations of each EEM</li> <li>• Verify that the combined savings of multiple EEMs accounts for interactive effects</li> <li>• Review the commissioning report and certify that the EEMs are functioning as intended (may also be performed by the Qualified Person)</li> <li>• Certify that the energy savings of the package of EEMs meets or exceeds projected energy savings in accordance with Section 9</li> </ul>	<p>A person having training, expertise and three years professional experience in building energy use analysis, and any of the following:</p> <ul style="list-style-type: none"> <li>(a) A licensed professional architect or engineer in the state of Washington;</li> <li>(b) A person with Building Operator Certification (BOC) Level II by the Northwest Energy Efficiency Council (NEEC);</li> <li>(c) A building commissioning professional certified by an ANSI/ISO/IEC 17024:2012 accredited organization;</li> <li>(d) A qualified energy auditor;</li> <li>(e) A certified energy manager (CEM) in current standing, certified by the Association of Energy Engineers (AEE)</li> <li>(f) An energy management professional (EMP) certified by the Energy Management Association (EMA).</li> <li>(g) A person with South Seattle College Sustainable Building Science Technology Bachelor of Applied Science degree, or as approved as equivalent by the AHJ.</li> </ul> <p><b><u>Responsibilities:</u></b></p> <ul style="list-style-type: none"> <li>• Determine whether or not the building seeking compliance has an energy use intensity target (EUI<sub>t</sub>)</li> <li>• Establish the energy use intensity target (EUI<sub>t</sub>)</li> <li>• Submit forms as specified in Normative Annex Z documenting compliance</li> <li>• State in writing on Form A that the Energy Management plan (EMP) and Operations and Maintenance (O&amp;M) program requirements have been developed, implemented and maintained</li> <li>• Review the commissioning report and certify that the EEMs are functioning as intended (may also be performed by the Qualified Energy Auditor)</li> <li>• Signature on Form A</li> </ul>

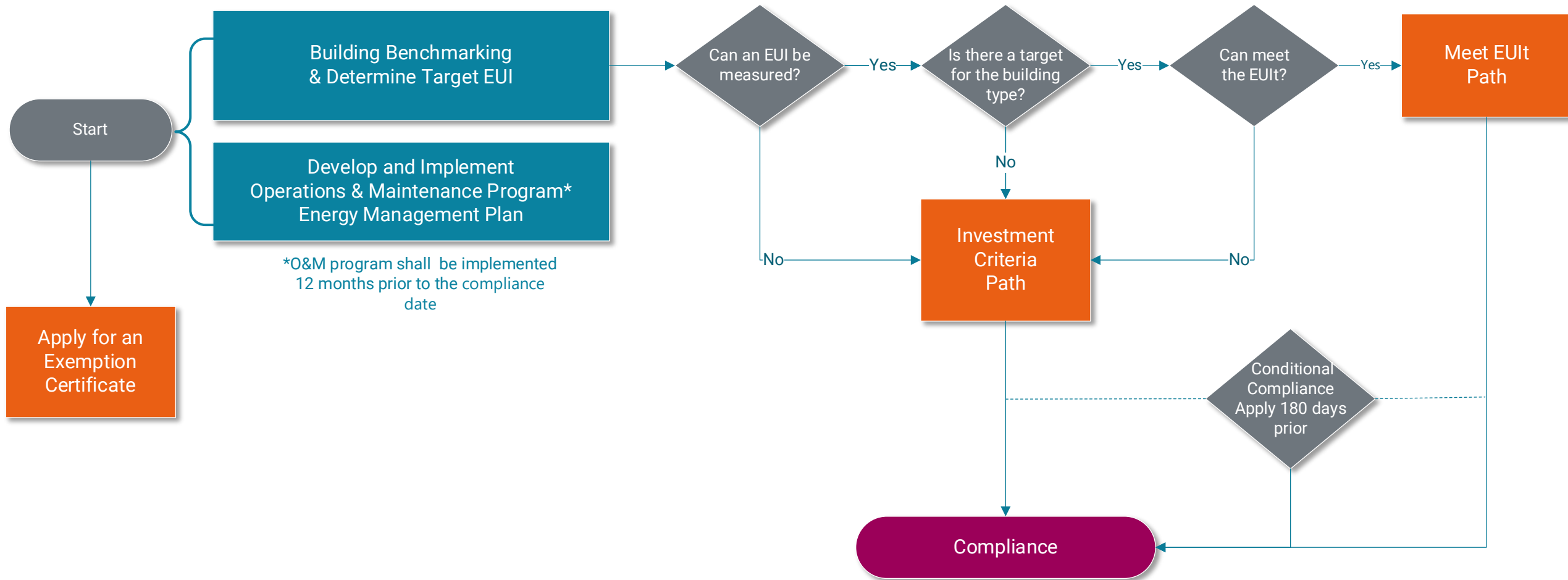
# Getting Started

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1. Is your building exempt?
2. Read and learn about the CBPS
3. Build your team
4. Access the CBPS Portal
5. Benchmark the building
6. Determine the compliance path
7. Develop and implement the EMP and O&M
8. Submit compliance documentation



# Tier 1 Compliance path





# Tier 1 Exemptions

## Criteria

- At least 50% of the conditioned floor area is unoccupied
- Less than 50,000 square feet of conditioned space
- More than 50% of floor area designated as Factory Group F or High Hazard Group H by the Washington state edition of the International Building Code (WA IBC)
- Agricultural structures
- Building is pending demolition
- Financial hardship

- **Exemption Application Timeframe.** Applications for exemptions may be submitted no sooner than three years prior to the compliance date and submitted to the *AHJ* no later than 180 days prior to the compliance date.
- **Exemption Certificate Validity.** Exemptions certificates are only valid for the current compliance review cycle.

## Energy Management Plan

A living document that describes a building's energy performance. It typically consists of the following:

- Building energy metering and reporting
- Energy-Use Intensity (EUI) reporting
- Energy Efficiency Measure (EEM) Implementation
- Operations and maintenance considerations for energy managers
- Communication responsibilities

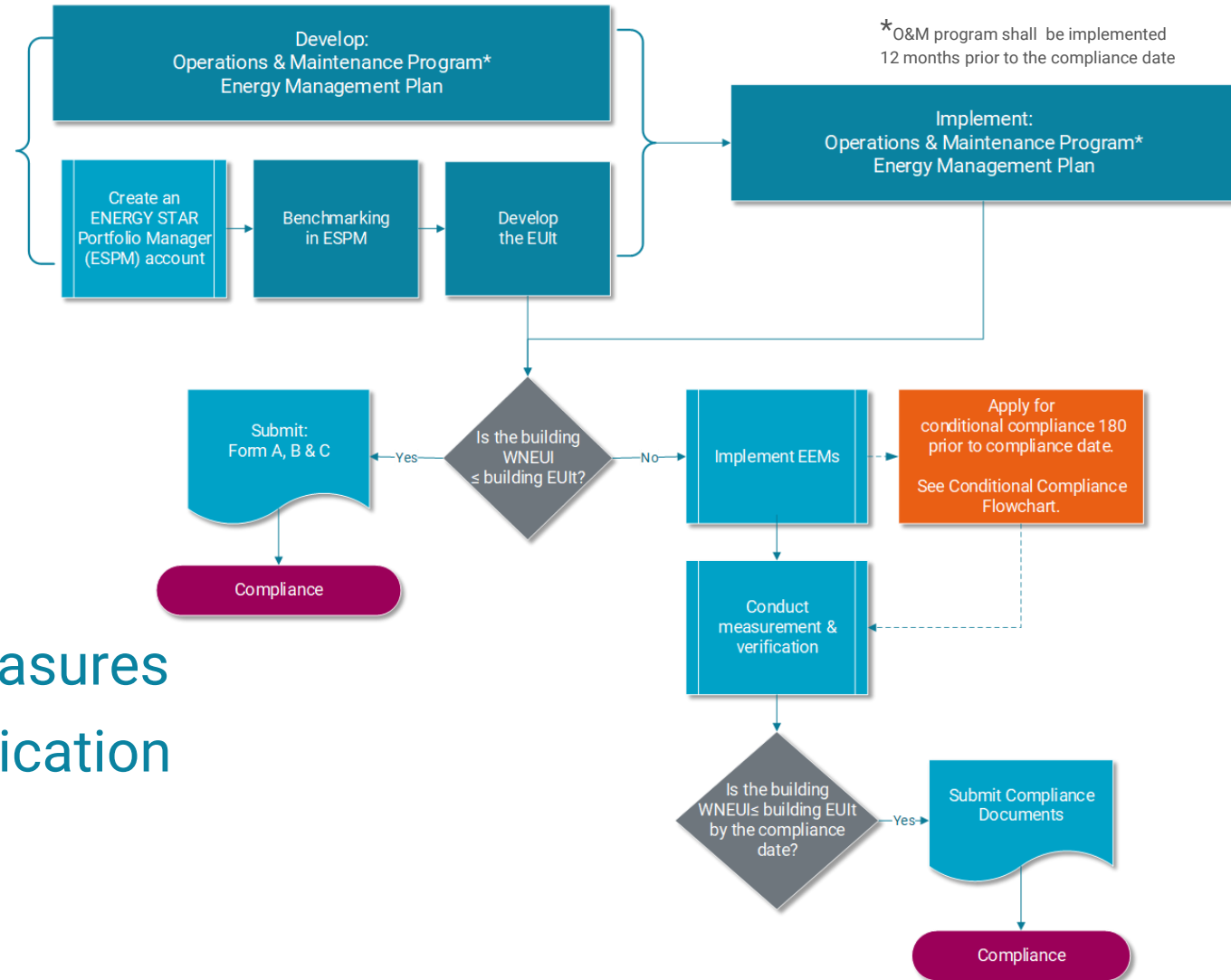
## Operations and Maintenance Program

A living document used to ensure energy-efficient operation and minimize failure of building systems and components throughout their service lives.

- Documented in Section 6 and Normative Annex L of the CBPS.
- Is a component of the Energy Management Plan.
- Lists inspection and maintenance requirements for specific systems and equipment.
- Establishes responsibilities for individuals operating and maintaining the equipment, components and its systems.

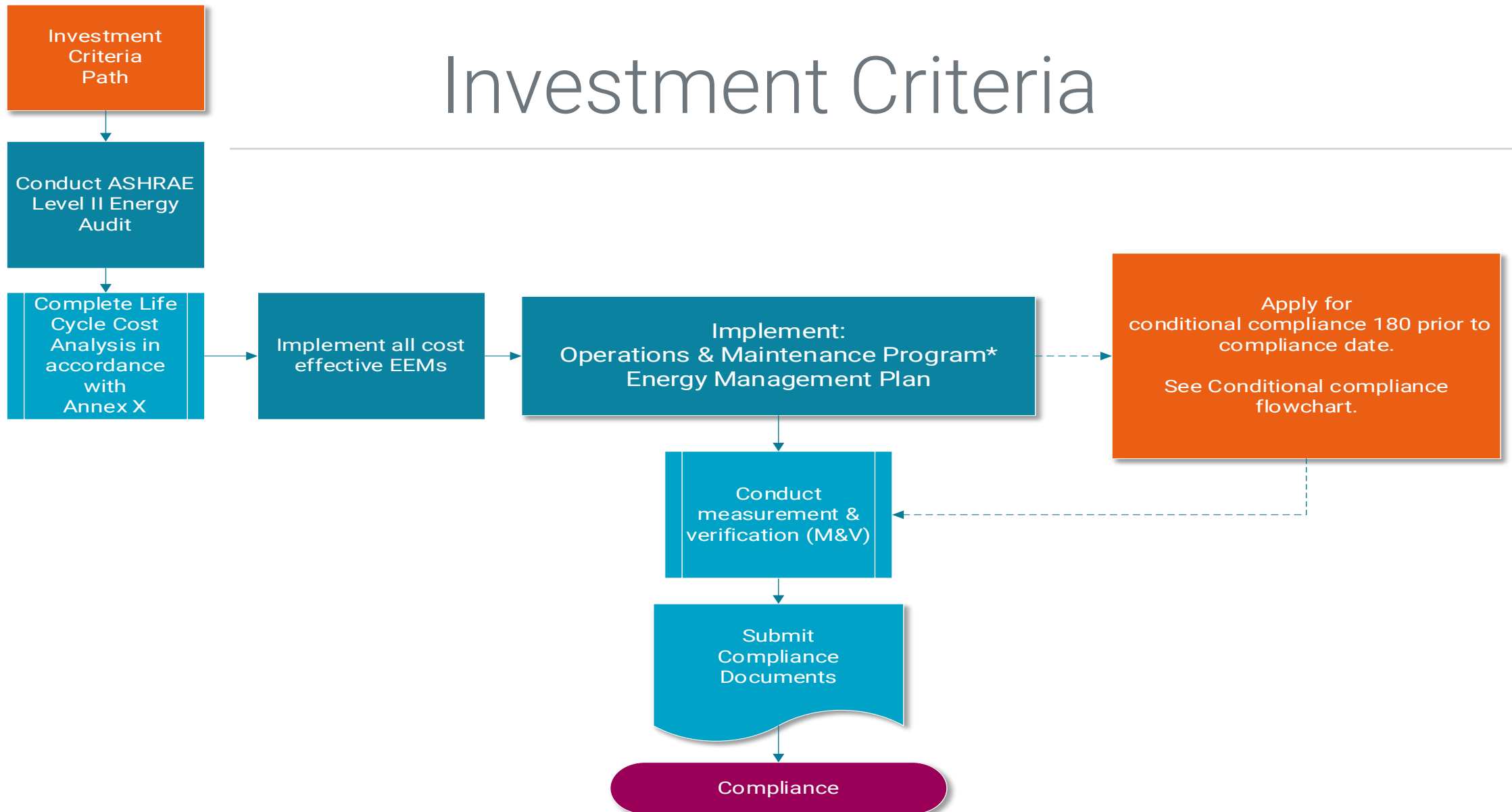
# Meeting the EUI<sub>t</sub>

- Create an ESPM account
- Benchmark
- Determine your EUI target
- Compare EUI with EUI<sub>t</sub>
- Implement energy efficiency measures
- Conduct measurement and verification
- Submit compliance documents





# Investment Criteria



# Investment Criteria

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- Shall be the compliance performance metric when any of the following conditions exist:

EUI not measureable in  
accordance with  
Section 5.2

EUI cannot be  
calculated in  
accordance with  
Section 7.2

EUI cannot be met  
through cost effective  
EEMs

# Process – Energy Audit

- Energy Audit (Section 8)
  - ASHRAE Level 2
  - Performed by a qualified energy auditor



***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:

1. A licensed professional architect or engineer
2. A Building Energy Assessment Professional (BEAP) certified by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
3. A Certified Energy Auditor (CEA) certified by the Association of Energy Engineers (AEE)

# Process – Economic Analysis

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- All energy efficiency measures (EEMs) identified in the energy audit shall be evaluated for cost effectiveness in accordance with Normative Annex X.
- The analysis shall be performed using the life cycle cost analysis (LCCA) tool (Form F) provided by Commerce.
  - LCCA based on NIST 135
- Identify an optimized bundle of EEMs to be implemented.



# Process – Implementation of EEMs

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- Implement all cost-effective EEMs in accordance with Section 9
- Commission all EEMs in accordance with Section 9.1.2.3

Commissioning report shall be reviewed and certified by ***qualified energy auditor*** or ***qualified person*** as defined by the standard



# Process – Verification of Savings

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Compliance is verified when the qualified energy auditor or qualified person verifies that:

- 12 consecutive months data demonstrates 75% of projected savings of the audit have been realized

Or

- For buildings that cannot measure EUI: the methods of the International Performance Measurement & Verification Protocol, Concepts and Options for Determining Energy and Water Savings Volume I11 options A through D have been implemented

# Tier 1 Compliance Pathways and Associated Forms

Exemption	Meeting the EUI <sup>1</sup>	Investment Criteria	
		with a measurable EUI	without a measurable EUI
<ul style="list-style-type: none"> <li>Form H<sup>1</sup></li> <li>Supporting Documentation<sup>2</sup> (minimum 2)</li> </ul>	<ul style="list-style-type: none"> <li>Form A<sup>1</sup></li> <li>Form B<sup>1</sup></li> <li>Form C<sup>1</sup></li> <li>Operations and Maintenance Program(O&amp;M)<sup>2</sup></li> <li>Energy Management Plan (EMP)<sup>2</sup></li> <li>O&amp;M Reporting Tool<sup>3</sup></li> <li>EMP Reporting Tool<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Form A<sup>1</sup></li> <li>Form B<sup>1</sup></li> <li>Form C<sup>1</sup></li> <li>Form D<sup>2</sup></li> <li>Form F<sup>2</sup></li> <li>Operations and Maintenance Program<sup>2</sup></li> <li>Energy Management Plan<sup>2</sup></li> <li>O&amp;M Reporting Tool<sup>3</sup></li> <li>EMP Reporting Tool<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>Form A<sup>1</sup></li> <li>Form B<sup>1</sup></li> <li>Form C<sup>1,4</sup></li> <li>Form D<sup>2</sup></li> <li>Form F<sup>2</sup></li> <li>Operations and Maintenance Program<sup>2</sup></li> <li>Energy Management Plan<sup>2</sup></li> <li>O&amp;M Reporting Tool<sup>3</sup></li> <li>EMP Reporting Tool<sup>3</sup></li> </ul>

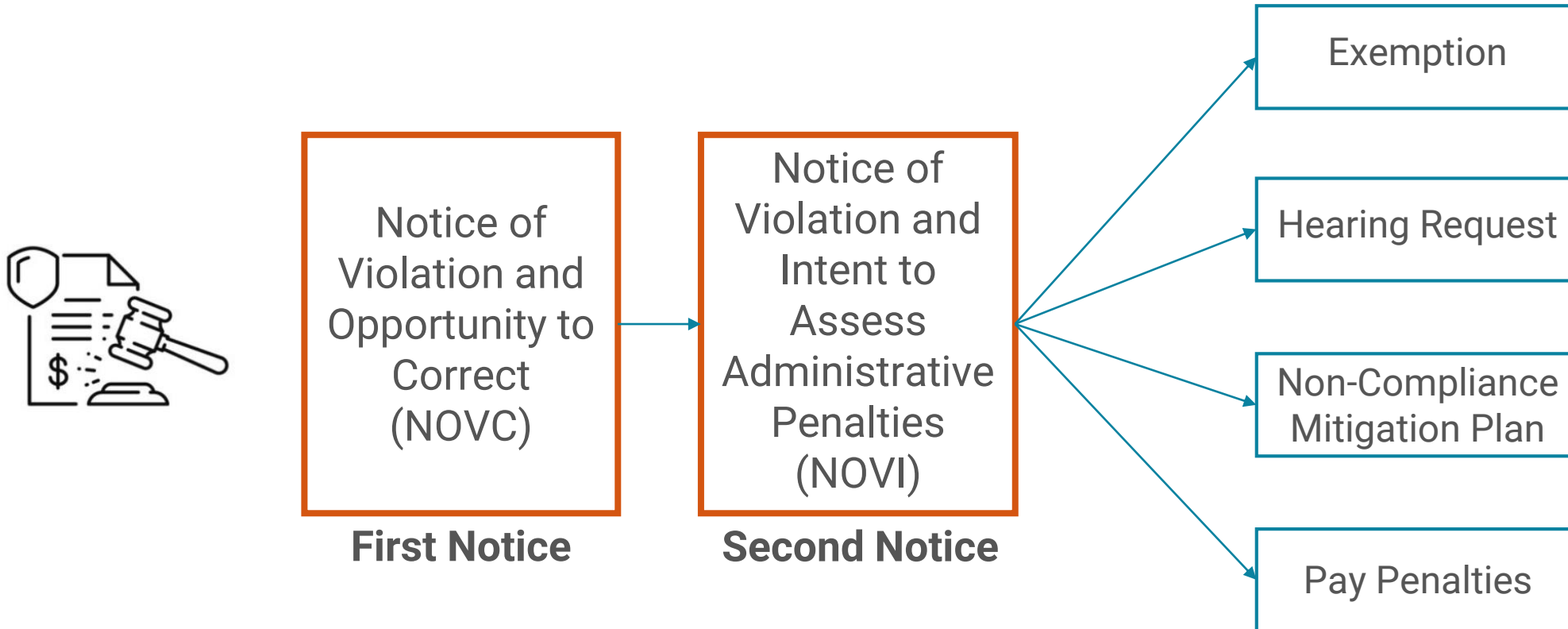
1 Built into Portal Workflow

2 The whole document shall be uploaded into the portal.

3 The O&M and EMP Reporting Tools are documents required for early compliance applications.

4 Enter a Reason Statement in notes section of portal application, describing why an EUI cannot be measured for the building.

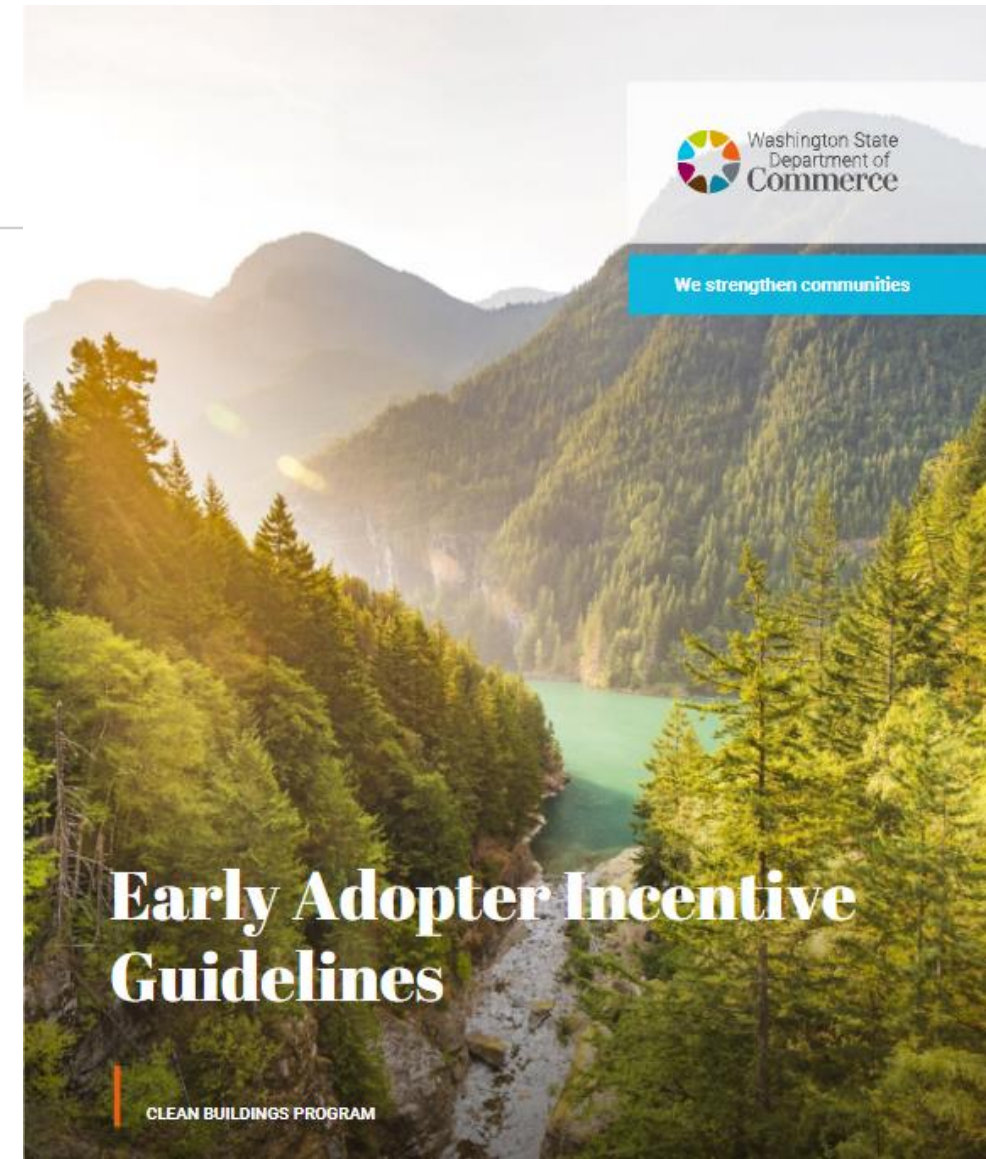
# Tier 1 Penalties



# Tier 1 Early Adopter Incentive Program

Provides incentives for early adoption of the Clean Buildings Performance Standard/CBPS

- \$0.85/sq ft of GFA, paid by utilities
- 75 million authorized for this program
- Application and reporting requirements on website
- Program end dates:
  - June 1, 2025 for buildings >220k
  - June 1, 2026 for buildings >90k to 220k
  - June 1, 2027 for buildings >50k to 90k

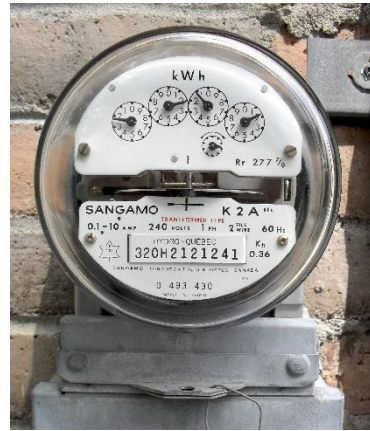




# Tier 1 Early Adopter Incentive Program



50,000 sq ft +



15 energy use  
intensity (EUI)  
or more above  
the target



Participating  
Utility



Comply with  
Clean Buildings  
Standard



# Outreach, Education, and Support

## Outreach

- Building Owner Notifications
- CB Bulletins
- Presentations
- Conferences and events
- Workgroups and meetings
- Targeted outreach
- Partnerships with local government

## Education

- Clean Buildings website
- Guidance Document Library
- Live Q&A sessions
- Targeted trainings and webinars
- Recorded video trainings
- Future training program for qualified energy managers

## Customer Support

- CB Portal and Technical Assistance
- Customer management
- Meeting requests
- Support and resources webpage
- Industry partnerships for technical assistance
- Directory of qualified energy auditors and qualified persons

# No-Cost Support

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## Clean Buildings Team

## Utility Provider

- Accelerator Programs

## Energy Star Portfolio Manager

- Customer Support and trainings

## Smart Building Center/Building Potential

- Help Desk

### Contact

**Emily Salzberg**

Buildings Unit Managing Director

Email: [Buildings@Commerce.wa.gov](mailto:Buildings@Commerce.wa.gov)

Phone: 360-725-3105

- **Submit questions & request support**  
[Clean Buildings Customer Support Form](#)
- **Download**  
[Clean Buildings Performance Standard – Integrated Document](#)

### Subscribe

To sign up for updates or access your subscriber preferences, please enter your contact information below.

★Email Address

Submit

# Questions & Answers

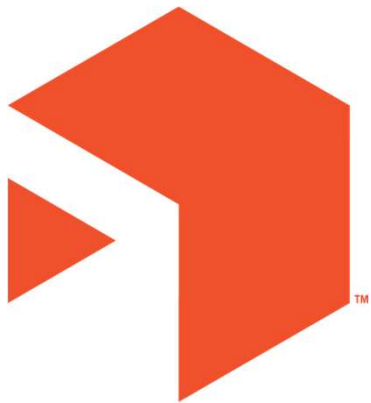
[buildings@commerce.wa.gov](mailto:buildings@commerce.wa.gov)





## ► Envisioning a World with Net-Zero Carbon Emissions

Building Potential's mission is to eliminate carbon emissions from building energy use through market-based thought leadership, education, and advocacy.



Building Potential



# Programs

- Smart Buildings Center
- Building Operator Certification (BOC)
- Tool Lending Library
- Remote Learning Library
- YouTube Training Series
- Clean Buildings Performance Standard Helpdesk



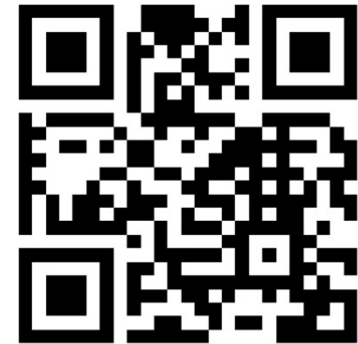
# Building Operator Certification® (BOC)

## THE ESSENTIAL CREDENTIAL

- Leading training and credentialing program for building engineers and maintenance personnel
- Graduates gain skills to make their buildings more:
  - Comfortable
  - Efficient
  - Environmentally friendly
- Graduates help their organizations substantially cut operating costs (as much as \$20,000 per year)



Photo courtesy of Resource Media



Building Potential





# Tool Lending Library

Often the first step is achieving operational excellence is gaining an understanding of how systems in the building are actually operating.



- Diagnostic & Monitoring Tools
- 85 Tool Types
- Online reservation system
- Loan period up to 4 weeks
- Local pickup or shipped



**FREE!!!**



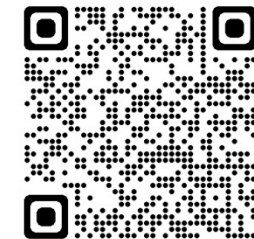
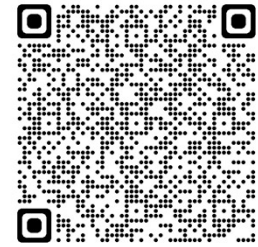
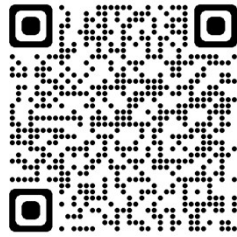
# Smart Buildings Center Clean Buildings Performance Standard Helpdesk

## Offering

- Resources
- Training videos
- One-on-One consultation



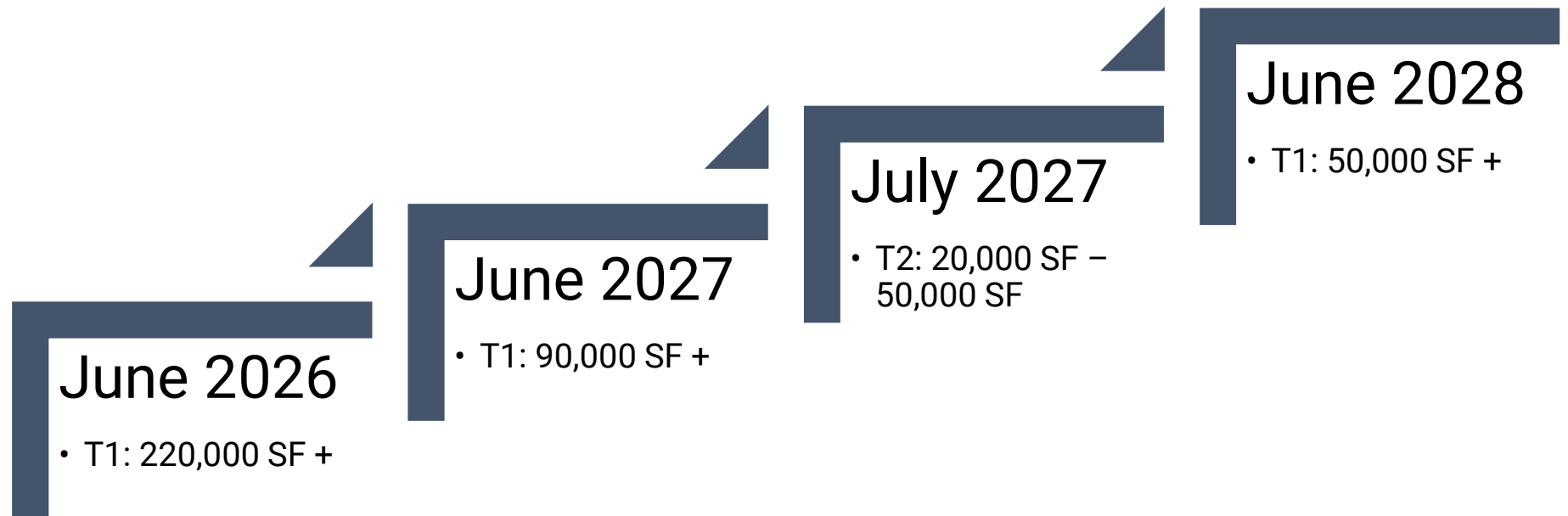
# Clean Buildings Resources





**It is not too early to get the ducks in a row**

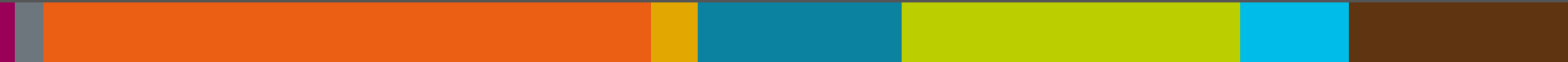
# It is time to act now



Thank  
you

# Tier 2 Covered Buildings

Compliance, Incentives, and Penalties





# What is a Tier 2 building?

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A building where the sum of multifamily residential, nonresidential, hotel, motel, and dormitory floor areas exceeds 20,000 gross square feet, but does not exceed 50,000 gross square feet, excluding the parking garage area. Tier 2 covered buildings also include multifamily residential buildings where floor areas are equal to or exceed 50,000 gross square feet, excluding the parking garage area.

# CBPS Breakdown

## Structure:

- Sections 1, 2 and 3 – Purpose, Scope and Definitions
- Section 4 – Compliance Requirements
- Section 5 – Energy Management Plan
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New Section!

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# Building Notification



# Compliance Schedule

A building owner of a covered commercial building must meet the following reporting schedule for complying with the standard and every five years thereafter:



**Tier 1 - Buildings more than 220,000 gross sq. ft, June 1, 2026**



**Tier 1 - Buildings more than 90,000 – less than 220,001 gross sq. ft, June 1, 2027**



**Tier 2 - Buildings more than 20,000 – less than 50,001 gross sq. ft and MF , July 1, 2027**



**Tier 1 - Buildings more than 50,000 – less than 90,001 gross sq. ft, June 1, 2028**



## Tier 2 Exemptions

### Criteria

- At least 50% of the conditioned floor area is unoccupied
- Less than 20,000 square feet of conditioned space
- More than 50% of floor area designated as Factory Group F or High Hazard Group H by the Washington state edition of the International Building Code (WA IBC)
- Agricultural structures
- Building is pending demolition
- Financial hardship

- **Exemption Application Timeframe.** Applications for exemptions may be submitted no sooner than two years prior to the compliance date and submitted to the *AHJ* no later than 180 days prior to the compliance date.
- **Exemption Certificate Validity.** Exemptions certificates are only valid for the current compliance review cycle.



# Tier 2 Responsible Parties



## Building Owner

An individual or entity possessing title to a building. In the event of a land lease, the building owner is the entity possessing title to the building on leased land.



## Qualified Energy Manager

An individual designated by the *building owner* who:

- (a) Has two years of experience, including educational and/or professional experience, with commercial *building* operations and/or *building* energy management in addition to successful completion of clean buildings tier 2 training program as specified by the *AHJ*; or
- (b) Meets the definition of a *qualified person*.

# Tier 2 Requirements

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Benchmarking

Operations & Maintenance Program

Energy Management Plan



# Tier 2 Getting Started

- Determine the qualified energy manager (QEM)
- QEM calculates the building's energy use intensity (EUI)



- Develop and implement the energy management plan
- Develop and implement the operation and maintenance program



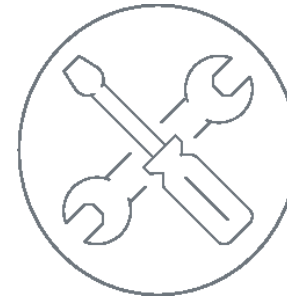
## Benchmark



## Set a target

- QEM determines the building's energy use intensity target (EUI<sub>t</sub>)

## EMP and O&M



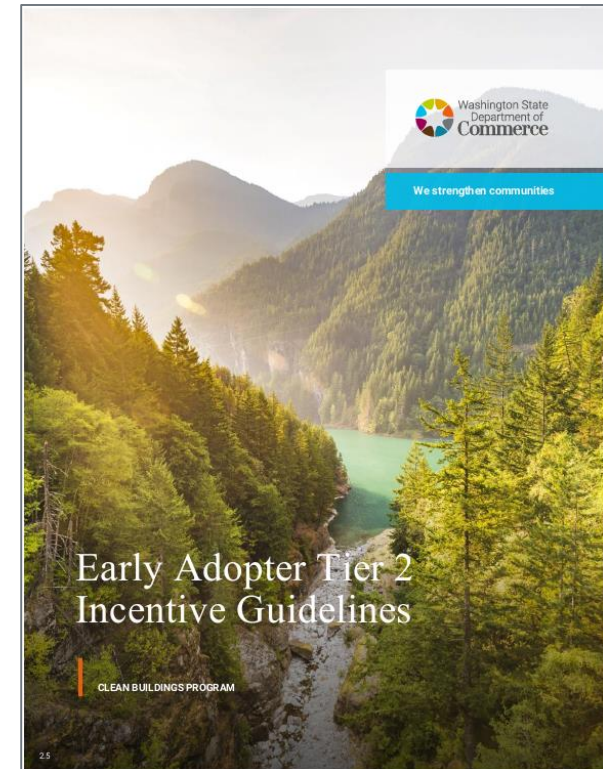
## Comply

- Attest the EMP and O&M have been established
- Submit compliance documents

# Tier 2 Incentive Program

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- Incentivizes completion of reporting requirements
- Program launches July 1, 2025 and ends June 1, 2030
- \$150 million available for incentives.
- \$0.30 cents per gross square foot



# Penalties

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- Administrative penalty not to exceed 0.30/SF

# Tier 2 Penalties



Notice of Violation,  
Opportunity to  
Correct, and Intent to  
Assess Penalties  
(NOVCI)

*Building Owners may be eligible  
to apply for Early Adopter  
Incentive Program*

Compliance

Exemption

T2 Conditional  
Compliance

Request  
Hearing

Pay  
Penalties

# No-Cost Support

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## Clean Buildings Team

## Smart Building Center/Building Potential

- Help Desk

## Energy Star Portfolio Manager

- Customer Support and trainings

### Contact

**Emily Salzberg**

Buildings Unit Managing Director

Email: [Buildings@Commerce.wa.gov](mailto:Buildings@Commerce.wa.gov)

Phone: 360-725-3105

- **Submit questions & request support**  
[Clean Buildings Customer Support Form](#)
- **Download**  
[Clean Buildings Performance Standard – Integrated Document](#)

### Subscribe

To sign up for updates or access your subscriber preferences, please enter your contact information below.

**\*Email Address**

**Submit**

# Upcoming

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- **Clean Buildings Workshop: Incentive Program**
  - May 9, 1:30-2:30 pm

# Questions & Answers

[buildings@commerce.wa.gov](mailto:buildings@commerce.wa.gov)





# Thank you!

Clean Buildings Team  
BUILDING@COMMERCE.WA.GOV



Washington State  
Department of  
**Commerce**

[www.commerce.wa.gov](http://www.commerce.wa.gov)





# **ENERGY EFFICIENCY INCENTIVES IN THE INFLATION REDUCTION ACT — WA CLEAN BUILDINGS**

# PRESENTER

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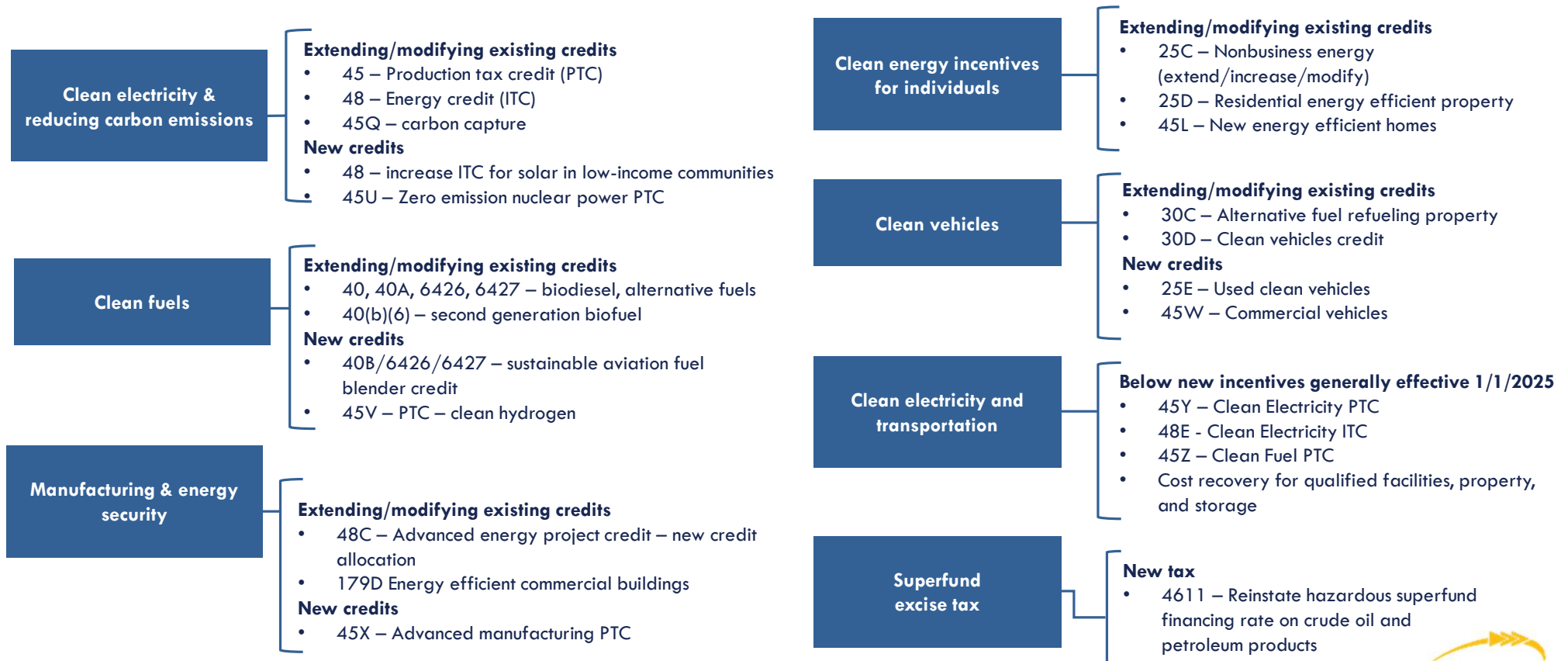
# THE CLIMATE ECONOMY

\$560 billion of energy incentives according  
to the Congressional Budget Office

\$1.7 trillion of energy incentives according  
to private reports



# INFLATION REDUCTION ACT OF 2022 – CLEAN ENERGY ROADMAP

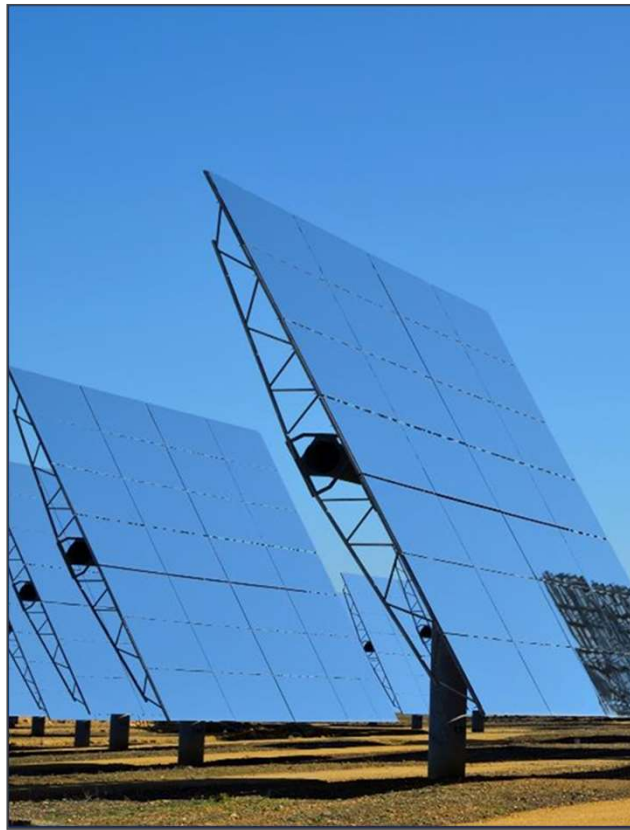


# WHAT DOES THE IRA INCENTIVIZE?

## ENERGY EFFICIENCY



## RENEWABLES



## DECARBONIZATION







# ENERGY EFFICIENCY

New Energy Efficient Home Credit (§45L)

Energy Efficiency Commercial Buildings (§179D)



# SECTION 179D ENERGY EFFICIENT DEDUCTION

*Section 179D* allows for a tax deduction of up to \$5.65 per square foot for HVAC, building envelope and lighting projects.



# 179D ENERGY EFFICIENT DEDUCTION – TWO WAYS



## Private

- Extended permanently
- Building owners or tenants
- Form 3115 back to January 1, 2006
- Eligible every 3 years

## Designers - Tax Exempt Entities

- Extended permanently
- Designers of government, Indian tribal government and certain tax-exempt entities
- Architects, Engineers and Contractors
- Amended returns in open tax year
- Eligible every 4 years

## ENERGY EFFICIENT COMMERCIAL BUILDINGS DEDUCTION – PRIOR VS. TODAY

### SECTION 179D PRIOR

- \$1.80-\$1.88 deduction per square foot
- Lighting, HVAC and Envelope
- Life-time cap
- Started in 2006 and has since been made permanent
- Applies to private owners, and designers of government buildings

### SECTION 179D IN THE IRA

- Status quo for 2022
- Starting in 2023 through 2032:*
  - Base Deduction: \$0.50 to \$1.00 per SF
  - Bonus Deduction: \$2.50 to \$5.00 per SF
  - Whole building model incorporating Lighting, HVAC and/or Envelope
  - **Four-year cap for tax exempts / 3-year cap for privately owned**
  - Applies to private owners, and designers of government, Indian tribal government and certain tax-exempt entities buildings

# 179D ENERGY EFFICIENT BUILDINGS DEDUCTION – AFTER 1/1/23

Improvement Over ASHRAE 90.1 Baseline	Deduction Available per SF	
	Base Credit	Bonus Credit <sup>1</sup>
25%	\$0.50	\$2.50
26%	\$0.52	\$2.60
27%	\$0.54	\$2.70
...	...	...
48%	\$0.96	\$4.80
49%	\$0.98	\$4.90
50%	\$1.00	\$5.00
<sup>1</sup> Bonus credit if prevailing wage and apprenticeship requirements are met.		

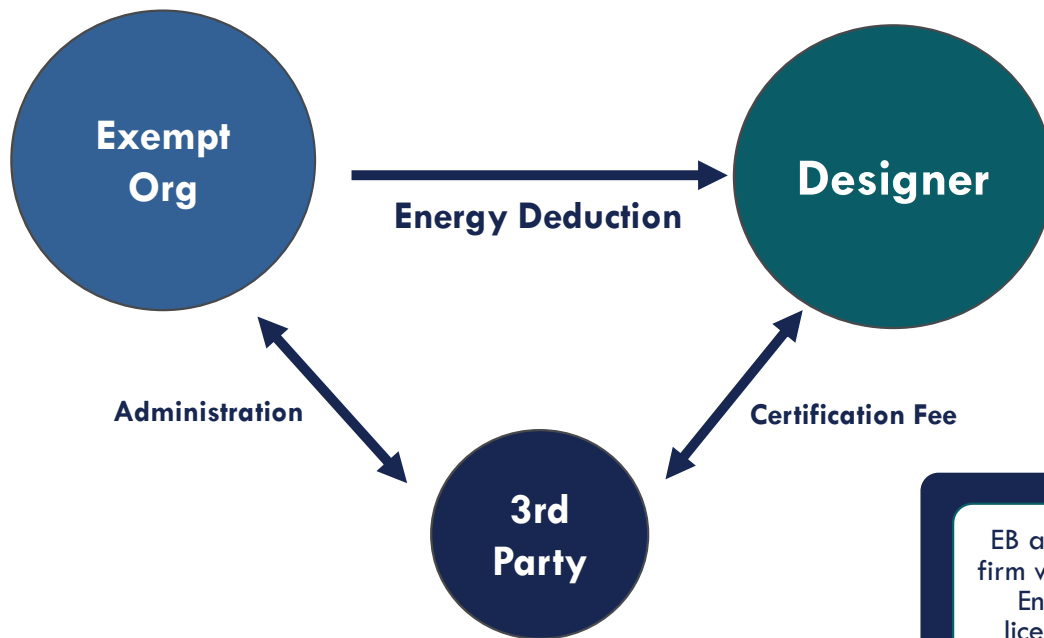
## HOW THE 179D DEDUCTION IS CALCULATED

- ASHRAE 90.1-2001: Projects first occupied 1/1/2006 – 12/31/2015.
- ASHRAE 90.1-2007: 1/1/2016 – 12/31/2026.
- ASHRAE 90.1-2019: 1/1/2027 and beyond.



# ENERGY INCENTIVE PROGRAM

## Energy Efficient Commercial Buildings (Section 179D)



The Exempt Organization assigns an Allocation Letter to the designer(s) at their “sole discretion” under penalties of perjury.

EB as a third-party firm with Professional Engineers (P.E.) licensed in all 50 states

“Designer(s)” such as the Architect, Engineer, General Contractor, Subcontractors (HVAC, Electrical, Structural)

Exempt Organization such as Healthcare, K-12, Higher Education, Government, Senior Living



# 179D – ALLOCATION LETTER

## Allocation Letter

Government-Owned Building Information				
Property Address	City, State Zip	Placed in Service	Cost of Property	Amount Allocated

Governmental Building Owner Authorized Representative Information	
Agency:	
Representative Name:	
Mailing Address:	
City, State Zip:	
Telephone:	

[FIRM] Representative Information	
Company:	
Representative Name:	
Mailing Address:	
City, State Zip:	
Telephone:	

Under penalties of perjury, I declare that I have examined this allocation, including accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this allocation are true, correct, and complete.

### Agreed to and Accepted:

\_\_\_\_\_  
Governmental Representative

\_\_\_\_\_  
Date

\_\_\_\_\_  
[FIRM] Representative

\_\_\_\_\_  
Date



### Designers of Governmental Buildings:

- Current year:
  - Other Deductions with attachment.
- Prior year:
  - Amended returns for open tax years.
- An allocation letter is always required.





# WHO IS A DESIGNER?

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## *Designer of Government-Owned Buildings.*

“...A designer is a person that creates the technical specifications for installation of energy efficient commercial building property....”

“...A designer may include, for example, an architect, engineer, contractor, environmental consultant or energy services provider who creates the technical specifications....”

“...A person that merely installs, repairs, or maintains the property is not a designer.”

# 179D – CASE STUDY – GOVERNMENTAL (PRE IRA)



## Elementary School - Renovation:

- Building Highlights:
  - HVAC Retrofit
  - New Control Systems
  - DCV

Results: The entire 96,000 SF building qualified for \$1.80/SF deduction.  
\$172,800 deduction for the designer.

# 179D – CASE STUDY – NON-PROFIT OWNED (IRA)



## Healthcare Facility - Renovation:

### Building Highlights:

- Heating: 90 AFUE Boiler
- Cooling: 0.5 kW/ton IPLV Chiller
- Lighting: LED fixtures and daylighting sensors

Results: The entire 325,000 SF building qualified for a \$5.36/SF deduction.  
\$1,742,000 deduction for the designer.





# CLEAN ENERGY

Investment Tax Credit (§48)

Production Tax Credit (§45)

# ENERGY CREDITS

## Clean Energy Investment Tax Credit (Section 48)



**Investment in equipment that produces energy from alternative sources:**

- Solar
- Wind
- Geothermal+
- Fuel Cells
- Microturbines
- Combined heat and power systems
- Equipment that recovers waste energy
- Energy storage
- Biogas
- Microgrid controllers\*
- Electrochromic Glass\*

# ENERGY CREDITS & INCENTIVES

## Clean Energy Investment Tax Credit (Section 48)

### Credit Percentage

- Basic credit = 6%
- If wage rules met = 30%
- If domestic content = + 10%
- In energy community = + 10%
- Additional bonuses for solar and wind with an environmental justice allocation.

### Basis Considerations

- Cost Segregation Needed
- Section 263A (UNICAP)
- Interconnected property
- Dual use property (TR 1.48-9)
- Basis reduction 50% of credit
- Tax-exempt bonds reductions
- Federal grant funding



# ADDITIONAL CONSIDERATIONS

- **Beginning of Construction Date**
  - For certain properties, rules change after 12/31/2024
  - Phase out in starts in 2026 (i.e. 75% of credit amount available).
- **Placed in Service Date**
- **Monetizing the credits – Direct Pay & Transferability**
  - 6417: Direct Pay
  - 6418: Monetization
- **Tax Equity Financing Structures**
- **Financing Impacts**
  - Tax-exempt bonds - up to a 15% haircut of benefit
  - Federal grant impacts



# HOW WE CAN HELP

## Discovery call

- Scope of the project – square footage, estimated costs
- Location and size of the energy property

## Phase I

- Memo outlining estimate credit and requirements
- Still in preliminary Design phase

## Phase II/Full Analysis

- Beginning of construction
- Support during construction through IRS filings



# ENERGY INCENTIVE CONSULTING

## Eide Bailly Value Add

400,000 square foot addition and renovation of a medical facility

### Mech. Engineer (Ground Source Only)

First Cost	\$17,000,000
IRA Credit	\$5,100,000
<b>Net First Cost</b>	<b>\$11,900,000</b>

### Eide Bailly (Ground Source Only)

First Cost	\$17,000,000
IRA Credit	\$15,600,000
<b>Net First Cost</b>	<b>\$1,400,000</b>

### AEC Benefit:

- Unfair competitive advantage
- \$2,144,000 179D Deduction ( $\$5.36 \times 400,000$ )



# DECARBONIZATION

Alternative Refueling Infrastructure (§30C)  
Qualified Clean Commercial Vehicles (§45W)



# ENERGY CREDITS & INCENTIVES

## ELECTRIC COMMERCIAL FLEET

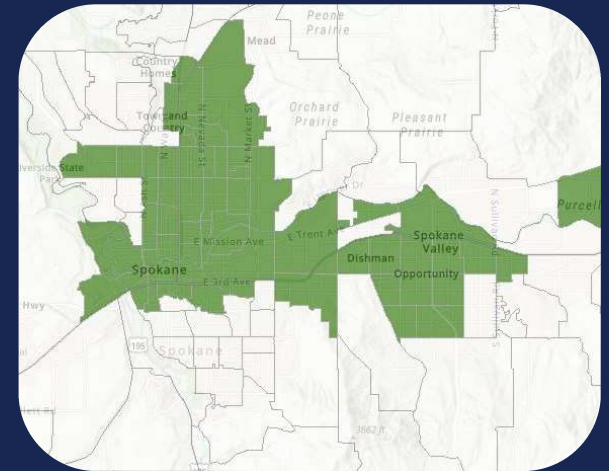
- Section 45W.
- Under 14,000 lbs, up to \$7,500 per vehicle.
- Over 14,000 lbs, up to \$40,000 per vehicle.

## EV INFRASTRUCTURE

- Section 30C.
- Alternative fuel vehicle refueling and charging property.
- Located in low-income and non-urban areas.
- 6% or 30%.
- Up to \$100,000 per charging unit.

## LOW INCOME COMMUNITIES

[NMTC Public Viewer - InVision \(cdfifund.gov\)](#)



# ENERGY EFFICIENCY INCENTIVES- SUMMARY

## Privately Owned

- Section 179D
  - up to \$5.65/sf tax deduction
- Section 45L
  - \$500 to \$5,000/unit tax credit
- Section 48/30C
  - up to 50% of the direct and indirect costs as a tax credit

## Non-Taxpaying Entities

*After 1/1/2023*

- Section 179D
  - up to \$5.65/sf tax deduction can be allocated to a designer of the energy efficient property (Architect/Engineer)
- Section 48/30C
  - up to 50% of the direct and indirect costs as a rebate from the government

## HOW WE CAN HELP

- **Discovery call**
  - Scope of the project – square footage, estimated costs
  - Location and size of the energy property
- **Phase I**
  - Memo outlining estimate credit and requirements
  - Still in preliminary Design phase
- **Phase II/Full Analysis**
  - Beginning of construction
  - Support during construction through IRS filings







# WHAT WILL \$1.7 TRILLION DO?

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REWARD BEHAVIOR

CHANGE BEHAVIOR





## REWARD BEHAVIOR

- Placed-into-service on 1/15/23
- EC Glass - \$240k credit
- 179D Deduction – 50k SF, \$268k





## CHANGE BEHAVIOR

- Geothermal for heat and cooling
- Prevailing wage rules met
- Domestic content requirements met
- \$1.2M Credit
- \$214k 179D Deduction

# QUESTIONS?



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