

# Oregon Building Performance Standards

Tier 2 Buildings Advisory Committee  
August 28, 2024



OREGON  
DEPARTMENT OF  
ENERGY

# USING WEBEX



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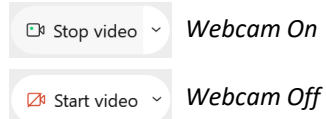


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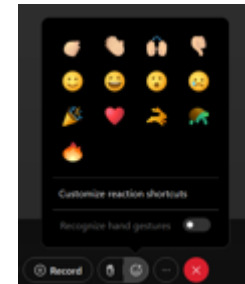
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# Today's Agenda

- I. Introduction
- II. Building Performance Standard (BPS)  
Overview
- III. Reviewing House Bill 3409 and Tier 2  
Buildings
- IV. Timelines
- V. Energy Benchmarking Requirements
- VI. Tier 2 BPS Evaluation Considerations
- VII. Closing and Next Steps



# OREGON DEPARTMENT OF ENERGY

Leading Oregon to a safe, equitable, clean, and sustainable energy future.

## Our Mission

The Oregon Department of Energy helps Oregonians make informed decisions and maintain a resilient and affordable energy system. We advance solutions to shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations.

## What We Do

On behalf of Oregonians across the state, the Oregon Department of Energy achieves its mission by providing:

- A Central Repository of Energy Data, Information, and Analysis
- A Venue for Problem-Solving Oregon's Energy Challenges
- Energy Education and Technical Assistance
- Regulation and Oversight
- Energy Programs and Activities

## Member Introduction

- **Name**
- **Organization**
- **Interest in committee**
- **Question: What are you looking forward to in September?**

# Building Performance Standards - Introduction

# BUILDING PERFORMANCE STANDARDS

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- Building Performance Standard (BPS) policies are an emerging type of policy that establishes:
  - Specific performance levels that buildings must achieve
  - Timeframe by which buildings must meet the target
- Important tool for reducing energy use and emissions from the existing building sector
- Key part of helping the jurisdictions meet climate goals
- Complementary to energy codes
- Adopted by jurisdictions and applied to existing commercial and multifamily buildings

# BUILDING PERFORMANCE STANDARDS

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## Program components include:

Scope – *size, type, exceptions?*

Performance Metrics – *site energy, source energy, GHG, water?*

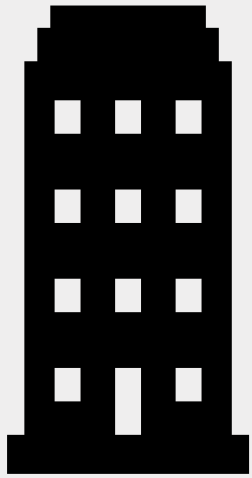
Targets – *by building type, climate zone, how aggressive, basis?*

Compliance and Phasing – *First in, compliance pathways?*

Implementation Mechanisms – *documentation, database?*



# BPS KEY CONSIDERATIONS



Building Performance Standards require certain buildings and owners to meet certain performance targets by a specified date.



## Align and Establish Goals

- Alignment with decarbonization goals
- Performance metrics



## Determine Covered Properties

- Property Types
- Exemptions and Accommodations



## Consider Compliance Approaches

- Compliance Approaches
- Enforcement for Non-compliance



## Provide Support to Building Owners

- Technical Support
- Funding Support

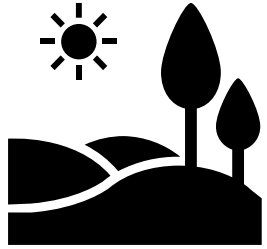


## Establish Reporting Requirements

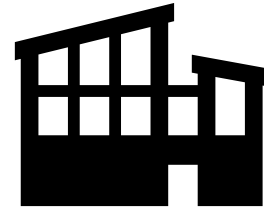
- Reporting Mechanism
- Access to Historical Data

# BENEFITS OF BUILDING PERFORMANCE STANDARDS

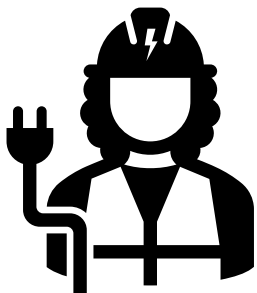
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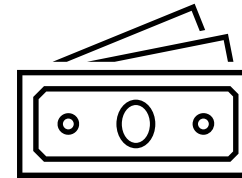
Energy use and greenhouse gas emissions reductions to support climate goals



Improved heating, cooling, ventilation, and lighting systems in buildings to use less energy and improve indoor air quality and comfort



Support local workforce and jobs to improve building performance through investment in energy efficiency measures and technology

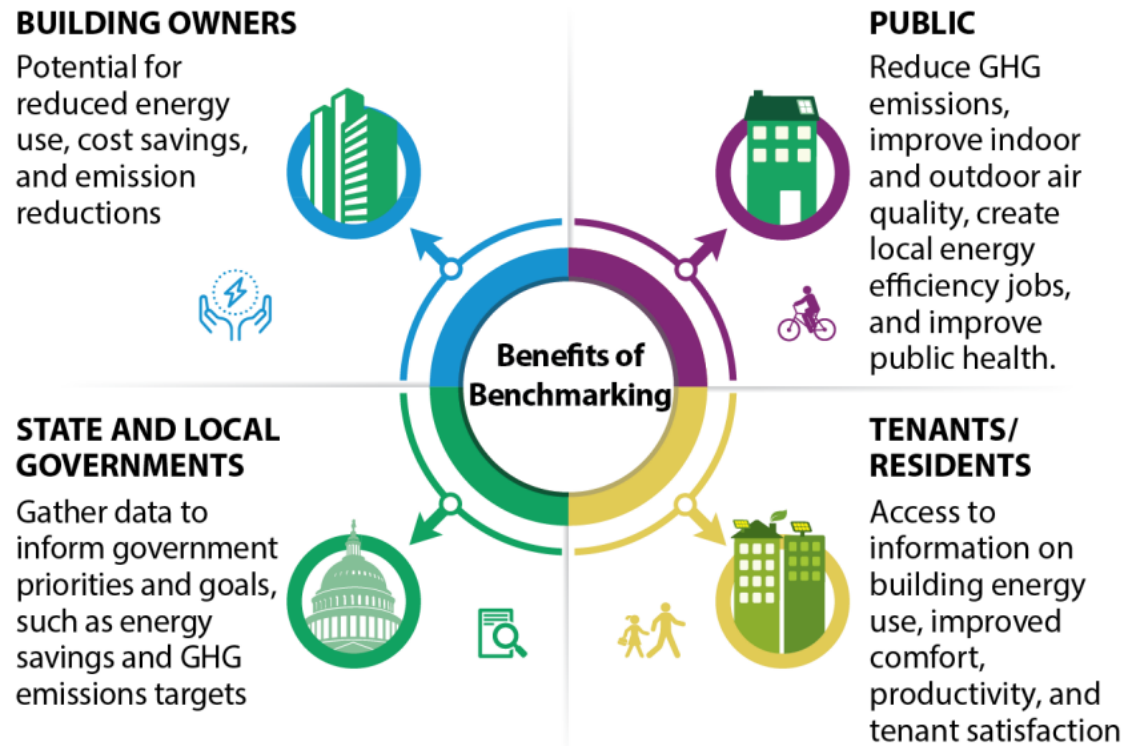


Implementation of cost-effective energy measures to reduce operating costs for building owners and tenants

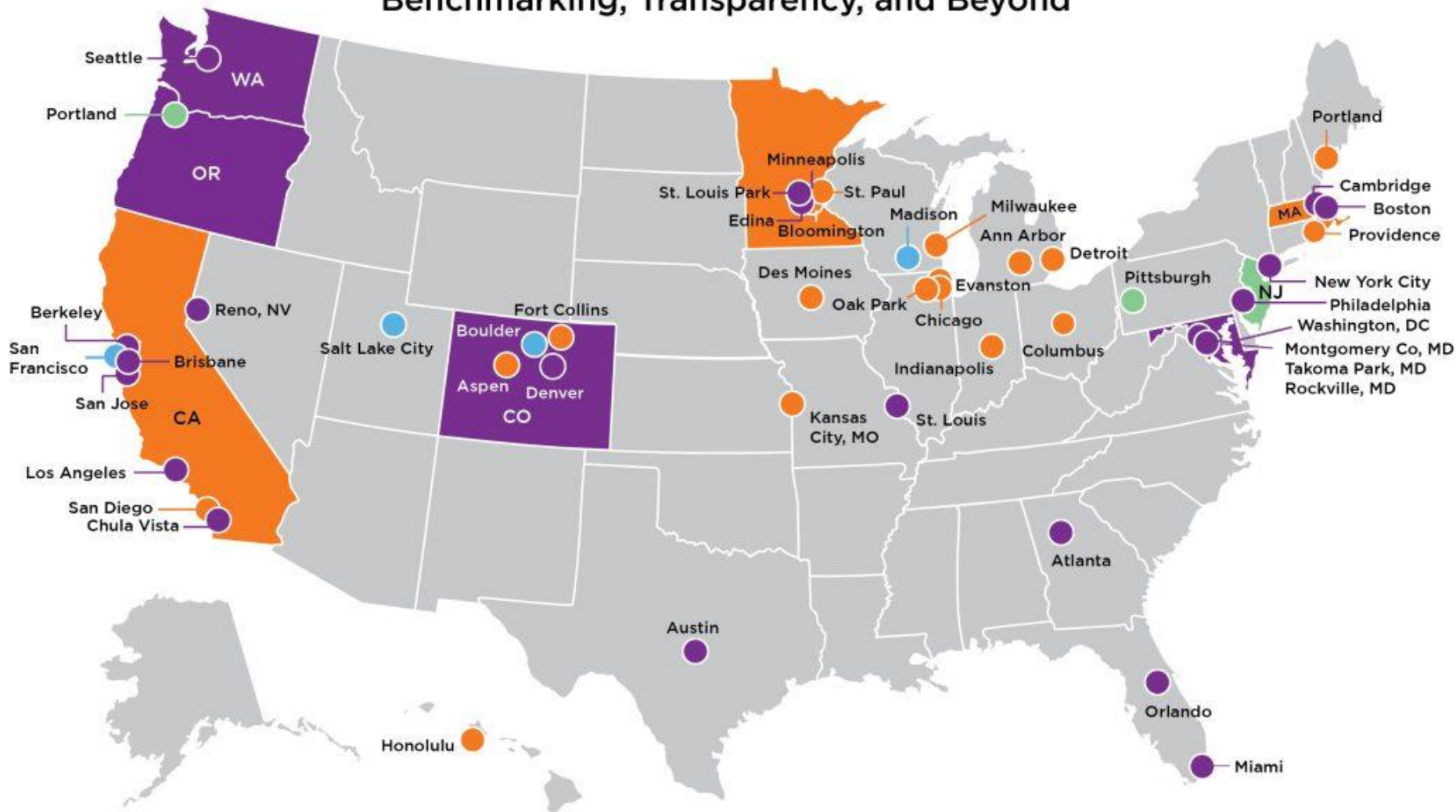
# BUILDING ON ENERGY BENCHMARKING

- Building performance standards often build upon energy benchmarking by acting on the energy use information to lead to improvements

## The Benefits of Benchmarking



# U.S. City, County, and State Policies for Existing Buildings: Benchmarking, Transparency, and Beyond

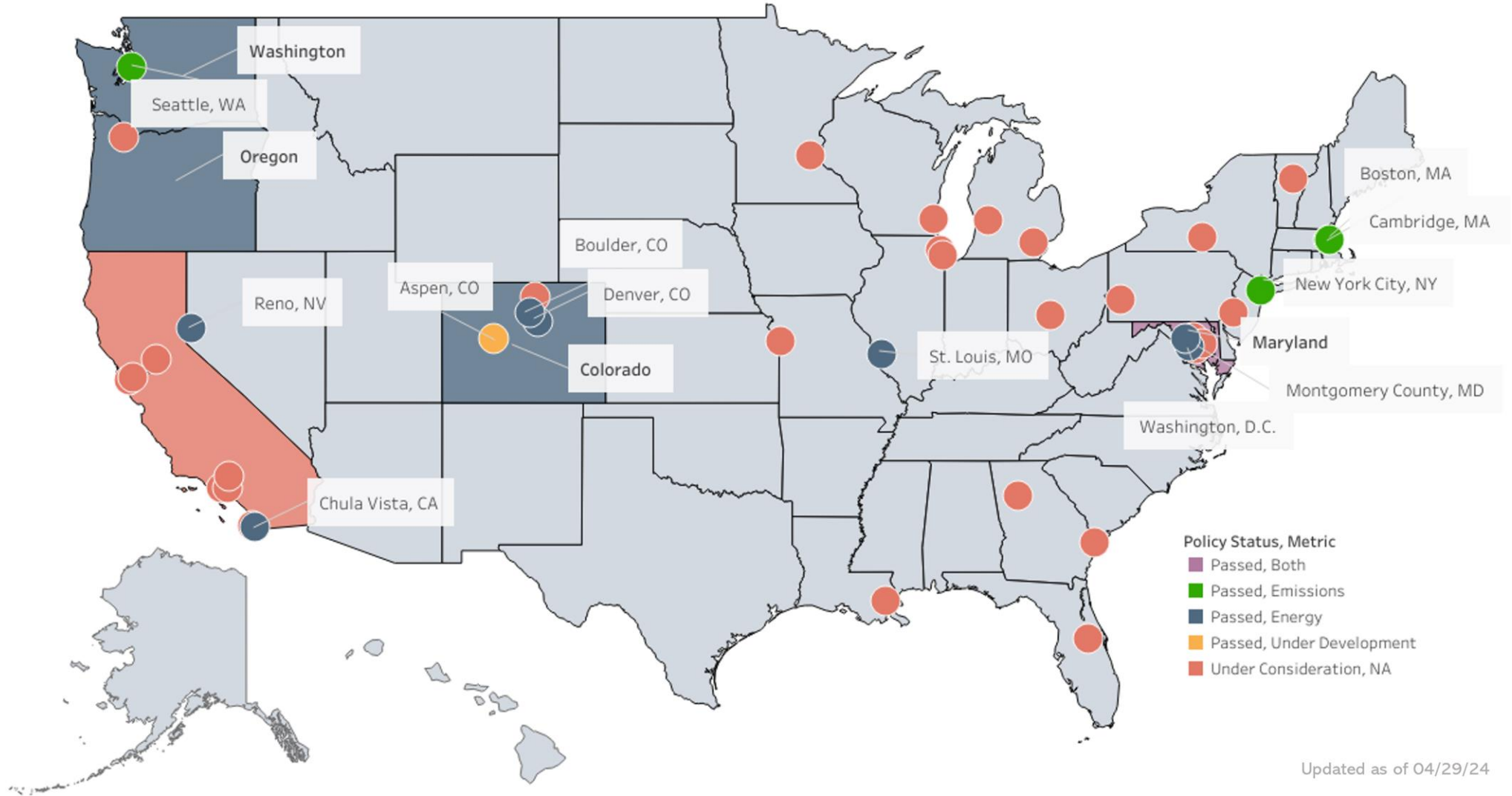


- Benchmarking required for public and commercial buildings
- Benchmarking required for public, commercial, and multifamily buildings
- Benchmarking and additional actions required for public and commercial buildings
- Benchmarking and additional actions required for public, commercial, and multifamily buildings



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# State and Local Building Performance Standards



# Reviewing House Bill 3409

# HOUSE BILL 3409

82nd OREGON LEGISLATIVE ASSEMBLY--2023 Regular Session

## Enrolled House Bill 3409

Sponsored by Representatives RAYFIELD, MARSH, PHAM K, Senators DEMBROW, LIEBER; Representatives ANDERSEN, BOWMAN, CHAICHI, DEXTER, GAMBA, GRAYBER, HARTMAN, HOLVEY, HUDSON, KROPP, LEVY E, MCLAIN, NELSON, NERON, NGUYEN H, NOSSE, REYNOLDS, SOSA, TRAN, WALTERS, Senators CAMPOS, MANNING JR, PATTERSON, SOLLMAN

CHAPTER .....

AN ACT

Relating to climate; creating new provisions; amending ORS 352.823, 468A.210, 468A.215, 468A.220, 468A.225, 468A.230, 468A.235, 468A.240, 468A.245, 468A.250, 468A.255, 468A.260, 469.754, 469.756 and 530.050 and sections 1 and 5, chapter 655, Oregon Laws 2019, and sections 2, 10, 14, 17, 21, 23, 24 and 29, chapter 86, Oregon Laws 2022; and declaring an emergency.

Be It Enacted by the People of the State of Oregon:

### DESIGNATED STATE AGENCY PROGRAMS FOR ENERGY EFFICIENCY IN BUILDINGS

**SECTION 1.** (1) The Legislative Assembly finds that:

(a) Energy consumption in residential and commercial buildings accounted for 34 percent of annual greenhouse gas emissions in this state in 2021, according to the Department of Environmental Quality;

(b) Space and water heating account for 64 percent of an average residential building's energy use;

(c) Heat pumps provide both heating and cooling benefits that keep people safe during extreme weather events that are becoming more frequent and more intense as a consequence of climate change;

(d) Electric heat pumps can provide up to three times more heat energy than the electrical energy the heat pumps consume, which makes heat pumps the most energy efficient space heating option available in the market;

(e) Upgrading space and water heating appliances with contemporary heat pump technologies can help people to save money on household energy bills;

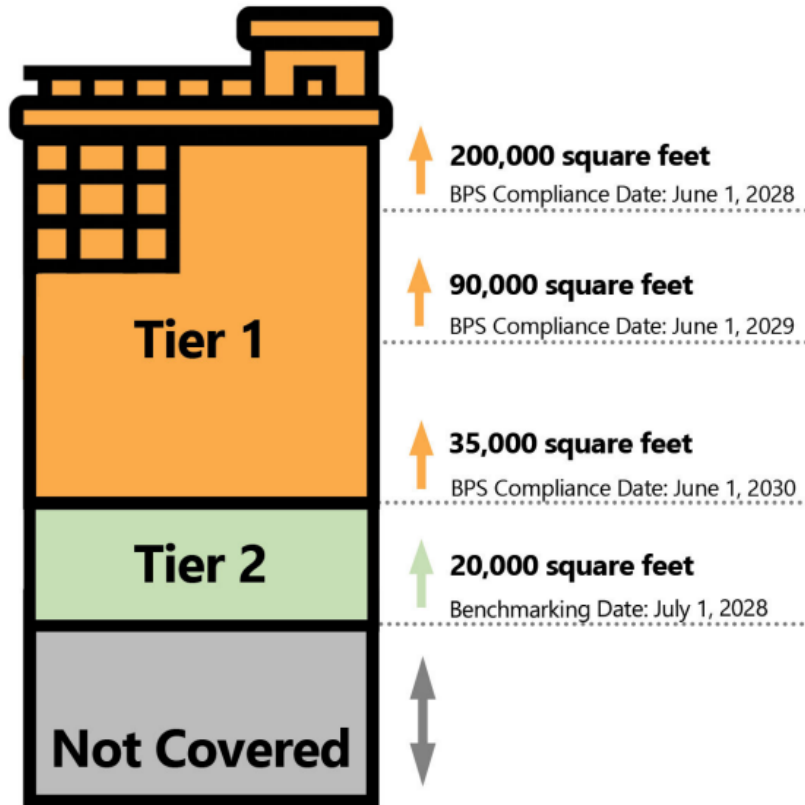
(f) Existing and forthcoming state and federal incentive programs will assist in energy efficiency improvements in homes and buildings, including adoption of energy efficient heating and cooling appliances;

(g) Many residents of this state suffer from disproportionately high energy burdens, and environmental justice communities face greater barriers to purchasing and installing heat pumps and other energy efficient appliances; and

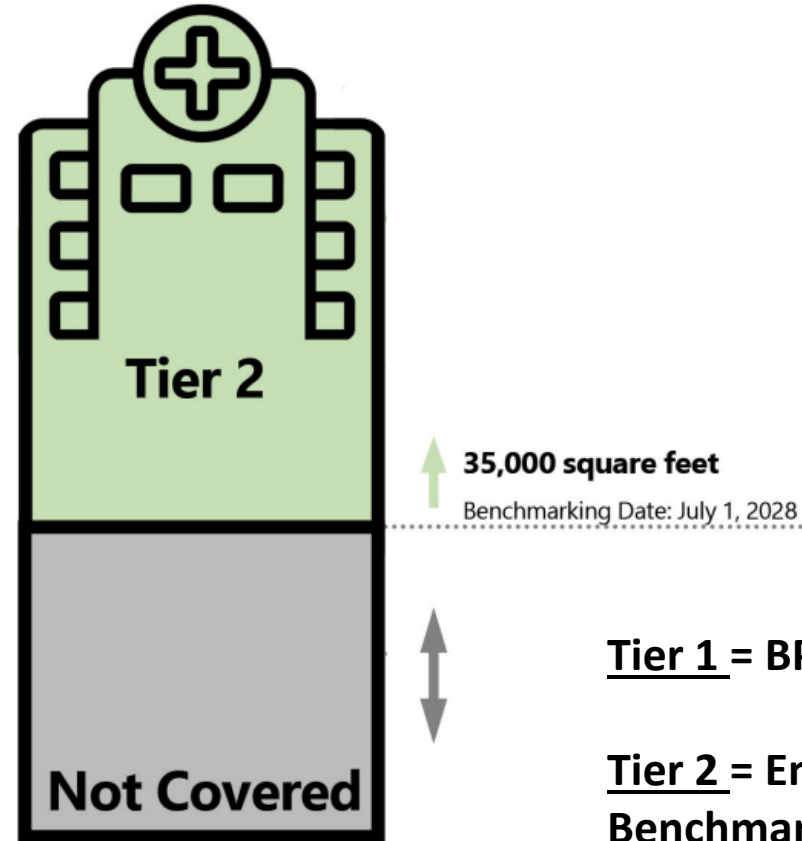
- BPS is part of HB 3409 from the 2023 Legislative Session
- This policy addresses energy use and emissions from existing commercial buildings, which account for nearly 20% of energy use in Oregon.
- It will require many large commercial buildings to enhance energy management practices and implement efficiency measures to meet energy use targets and will be modeled after ASHRAE Standard 100.
- Will be administered by ODOE
- Modeled after Washington state program

# BUILDING PERFORMANCE STANDARDS - SCOPE

## Commercial (Non-Residential), Hotels, and Motels



## Multifamily Residential, Hospitals, Schools, Dormitories, and University Buildings



Tier 1 = BPS Compliance

Tier 2 = Energy  
Benchmarking / Reporting



# TIER 1 AND TIER 2 BUILDINGS

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**Tier 1 building** means a building in which the sum of gross floor area for hotel, motel and nonresidential use equals or exceeds 35,000 square feet, excluding any parking garage.

**Tier 2 building** means:

1. A building with gross floor area, excluding any parking garage, that equals or exceeds 35,000 square feet and that is used as a multifamily residential building, a hospital, a school, a dormitory or university building; or
2. A building in which the sum of gross floor area for hotel, motel and nonresidential use exceeds 20,000 square feet but does not exceed 35,000 square feet, excluding any parking garage.

# BUILDING SIZE REFERENCES



~ 35,000-45,000 square feet

~ 100,000 square feet



# HOUSE BILL 3409 – SECTION HIGHLIGHTS

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## Section 8

- Definitions
- Tier 1, Tier 2 buildings
- “Energy use intensity” means a measurement that weather normalizes a building’s **site energy use** relative to the building’s size, calculated by dividing the total net energy the building consumes in one year by the building’s gross floor area, excluding any parking garage, and that is reported in **thousands of British thermal units per square foot per year**.
- “Net energy use” means the sum of metered and bulk fuel energy that enters a building, minus the sum of metered energy that leaves the building

# HOUSE BILL 3409 – SECTION HIGHLIGHTS

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## Section 9

- Direction to ODOE for administrative rules, establishes BPS criteria
- Adopt rules for BPS, using ASHRAE Standard 100 as a model, that:
  - Seeks to maximize GHG emissions from covered commercial buildings
  - Includes EUI Targets for specific types of buildings
  - Offers conditional compliance pathway (energy management plan, audits, etc.)
- Develop EUI targets that are not more stringent than the average energy use intensity for each covered commercial building occupancy classification, adjusting as necessary for a covered commercial building's unique energy-using features;
- May require utilities, eligible building owners, and other entities to aggregate data for covered commercial buildings that have multiple meters

# HOUSE BILL 3409 – SECTION HIGHLIGHTS

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## Section 15

- Sets initial rulemaking deadline of December 31, 2024 to establish a requirement and standards for owners of Tier 2 buildings to provide data that would enable ODOE to establish a benchmark for energy use in, and GHG emissions from, Tier 2 buildings
- ODOE to cooperate with Department of Education on schools data
- ODOE to notify Tier 2 building owners by July 1, 2025
- Tier 2 building owners to provide ODOE with energy benchmarking data by July 1, 2028 and every 5 years thereafter

# HOUSE BILL 3409 – SECTION HIGHLIGHTS

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## Section 15 (continued)

- By July 1, 2029, ODOE shall evaluate and use the Tier 2 data to calculate average energy use and GHG emissions for Tier 2 building categories
- By July 1, 2025 ODOE to establish and consult an advisory committee to identify financial and nonfinancial implications of an energy performance standard for Tier 2 buildings
- By October 1, 2030 ODOE to report to Governor and Legislative Assembly on a recommendation for a cost-effective energy performance standard for Tier 2 buildings, including costs and challenges

## Section 16-17

- Establishes incentives program for early or voluntary compliance

# TIER 2 BUILDINGS

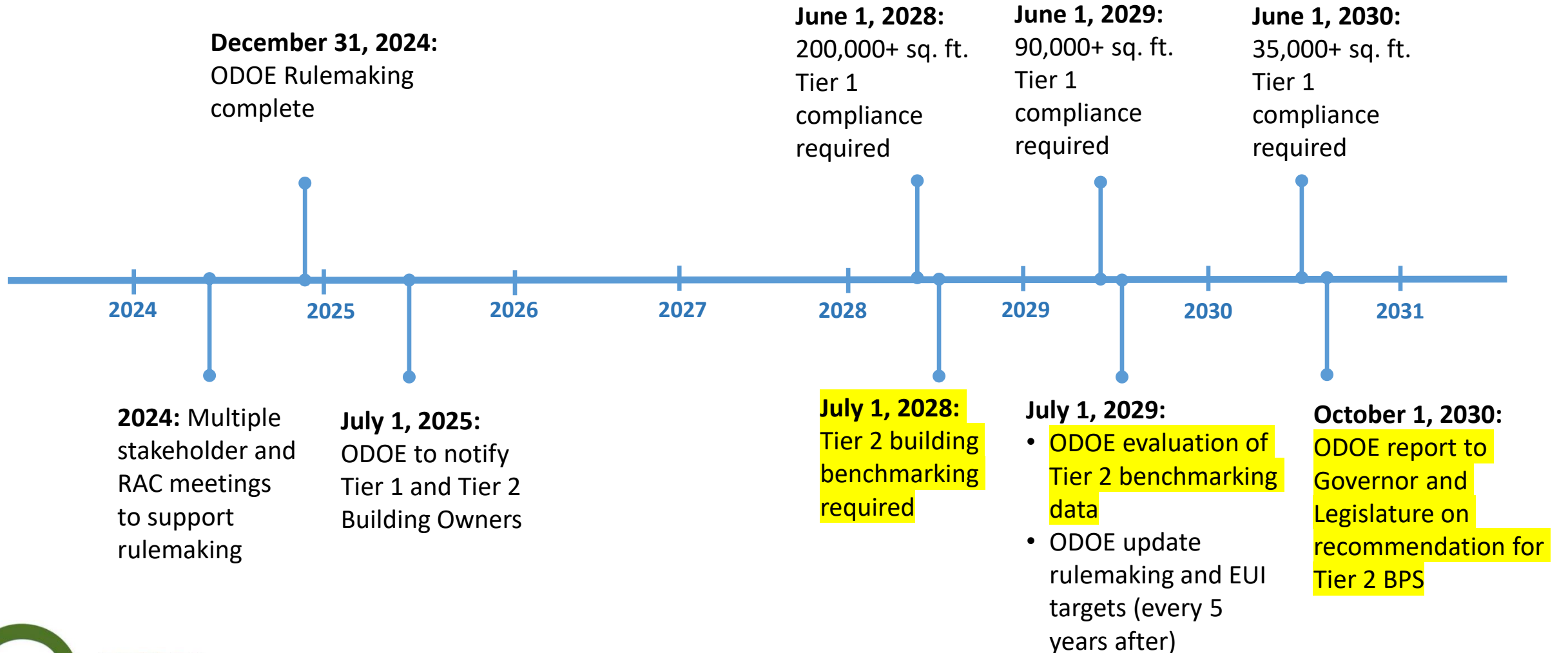
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- *Not later than October 1, 2030, the department shall submit a report to the Governor and to an interim committee of the Legislative Assembly related to energy that:*
  - (a) Recommends a **cost-effective** energy performance standard for tier 2 buildings; and*
  - (b) Includes estimates of costs to eligible building owners, and challenges that eligible building owners would face, in implementing an energy performance standard for tier 2 buildings.*

# Timeline



# BPS PROGRAM TIMELINE – KEY DATES



# 2024 RULEMAKING ACTIVITY

	2024											
	January	February	March	April	May	June	July	August	September	October	November	December
RAC Meeting		2/21		4/24	5/22	6/26	7/17	8/21	9/4			
Public Meeting			3/21			6/5			9/11			
ODOE File Draft Rules with SOS									by 9/30			
Rulemaking Comments Open												
Rulemaking Hearing											X	
Final Rules Filed												by 12/31

# Tier 2 Building Energy Reporting

# TIER 2 BUILDING ENERGY REPORTING

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## Key Components

- Requirement is for basic building benchmarking and associated information required for reporting energy and benchmarking using Energy Star Portfolio Manager on or before July 1, 2028
- ODOE aims to minimize the need for duplicate reporting
- Oregon Tier 2 buildings are not proposed to require:
  - Energy Management Plans
  - Operations and Maintenance Plans(note: these are required in Washington State Tier 2 buildings)

# UTILITY DATA AGGREGATION

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HB 3409, Section 9(2)(a)(B) - ODOE:

*(B) May:*

*(iii) Require utilities, eligible building owners and other entities to aggregate data for covered commercial buildings that have multiple meters and to report or, as appropriate, provide the aggregated data for reports under section 10 of this 2023 Act.*

- This is primarily to address data availability for owners of buildings with multiple meters under individual tenant accounts to enable reporting of energy data (for Tier 1 and Tier 2 Buildings) and determination of compliance (for Tier 1 Buildings)
- Are additional state rules required to address this? If so, what level of detail? Do processes already exist to ensure that owners can obtain access to aggregated data?

# UTILITY DATA AGGREGATION - CONSIDERATIONS

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- Data availability
- Privacy
  - Aggregation thresholds
  - Mitigate risk of re-identification of individual consumption data
  - Authorization / tenant authorizations
- Manual vs automated process – resources involved
- Data retention
- Frequency and format of data requests
- Response time
- Meter identification responsibility

# Tier 2 Buildings Considerations

# A FEW QUESTIONS FOR THE ADVISORY COMMITTEE

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- What are key considerations for ODOE and this committee to keep in mind as we go through this process for evaluating a performance standard for Tier 2 buildings?
- Are there particular datasets that would help inform and identify the costs and challenges? Are there gaps we should explore?
- What are some preliminary categories of “financial and nonfinancial implications of an energy performance standard for Tier 2 buildings”?
- Would quarterly meetings starting in 2025 generally work for this group?





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# Thank You

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<https://www.oregon.gov/energy/save-energy/Pages/BPS.aspx>

<https://www.oregon.gov/energy/Get-Involved/Pages/BPS-Rulemaking.aspx>