



# EITE Industries Advisory Group

Meeting 1: August 22, 2024

# Welcome!

## EITE Industries Advisory Group:

### 1<sup>st</sup> Meeting

#### Ecology staff

- Jihan Grettenberger – Facilitator
- Adrian Young – Cap-and-Invest Industrial Policy Lead
- Andrew Hayes – Cap-and-Invest Policy Section Manager
- Joel Creswell – Climate Pollution Reduction Program Manager

# Meeting basics

- Meetings are open to the public and recorded
- Advisory Group members will appear as “Panelists” in the Zoom meeting
- Members of the public will appear as “Attendees”
- Attendees may unmute and provide comment in the public comment portion of the meeting
- Meeting materials and summary notes will be published on the [Advisory Group webpage](#)



# Agenda – Meeting #1

- Member Introductions
- Group charter, purpose, and expectations
- Background and context for EITE allocation
- Report to legislature on EITE allocation 2035-2050
- Overview of EITE Industries in WA
- Wrap up and next steps
- Public comment opportunity





# Member introductions

- Please share:
  - Name
  - Position and affiliation
  - EITE Industries you represent





# EITE Industry Advisory Group

Purpose, expectations and important details

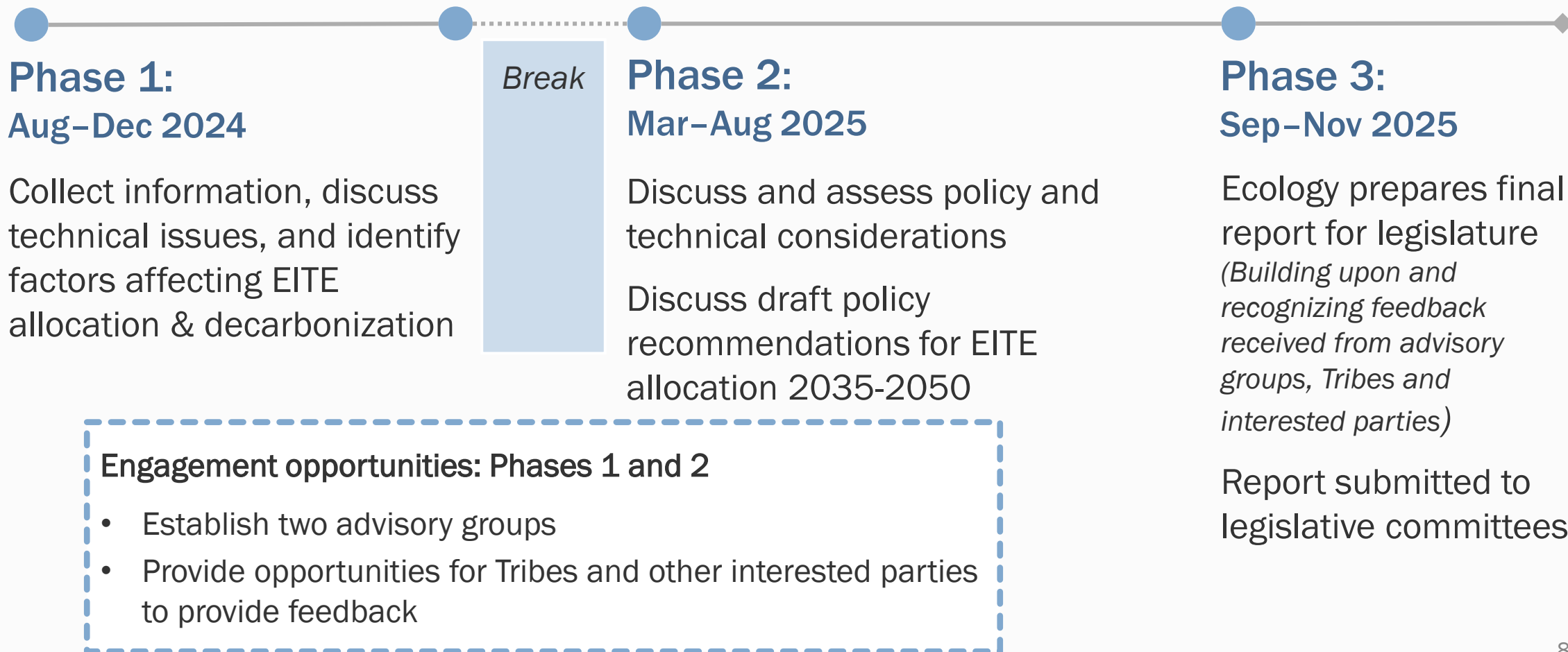


# Purpose of EITE Industries Advisory Group (IAG)

- Composed of 23 members representing EITE Industries within Cap-and-Invest Program
- Provide input on a report to the Legislature related to the allocation of no-cost allowances to EITEs from 2035 to 2050.
- Ecology will use input to inform its report to the legislature, in tandem with input from other interested parties.



# Timeline and engagement approach





# Charter details to note

- Advisory Group not asked to reach consensus – not a decision-making body
- Participation does not imply endorsement for any actions taken by Ecology
- Members can send a delegate to attend a meeting on their behalf with notice to Ecology
- Members who change employment/affiliation must notify Ecology as soon as possible
- Format/composition of Advisory Group may be modified in early 2025 in advance of further meetings



# Market Sensitive Information

- Cap-and-Invest Program creates a multimillion-dollar market for GHG emission allowances
- Ecology required to guard against bidder collusion and minimize the potential for market manipulation ([RCW 70A.65.100](#))
- Registered entities must avoid disclosing or discussing certain auction information, like bidding strategies ([WAC 173-446-317](#))
- Market sensitive information can affect prices of allowances. Examples include:
  - confidential business information, “insider information” and “market position”
- Ecology will exercise due diligence to ensure all potentially market influencing information is managed appropriately



# Anti-trust statement

- Meeting participants may be competitors and subject to antitrust laws
- Parties participating in the Advisory Group are committed to compliance with all applicable antitrust laws
- Discussions which might be misconstrued as price fixing, customer or market allocation, attempts to alter the competitive open bidding season, or boycott of suppliers and customers are not allowed
- Discussions of other competitively sensitive subjects are not allowed
- If any meeting participant has any questions regarding these antitrust considerations then that person should consult their legal counsel





# EITE Industries represented on Advisory Group

EITE Industry	No. Members
Aerospace	2
Cement	1
Chemicals	1
Computer and Electronics	1
Food	3
Metals	2
Nonmetallic minerals	1
Paper	4
Petroleum Refining	4
Multiple	1

Organization Type	No. Members
Facility/Covered Entity	14
Industry/Trade Association	6

- Question: Any EITE industries not adequately represented?

# Discussion

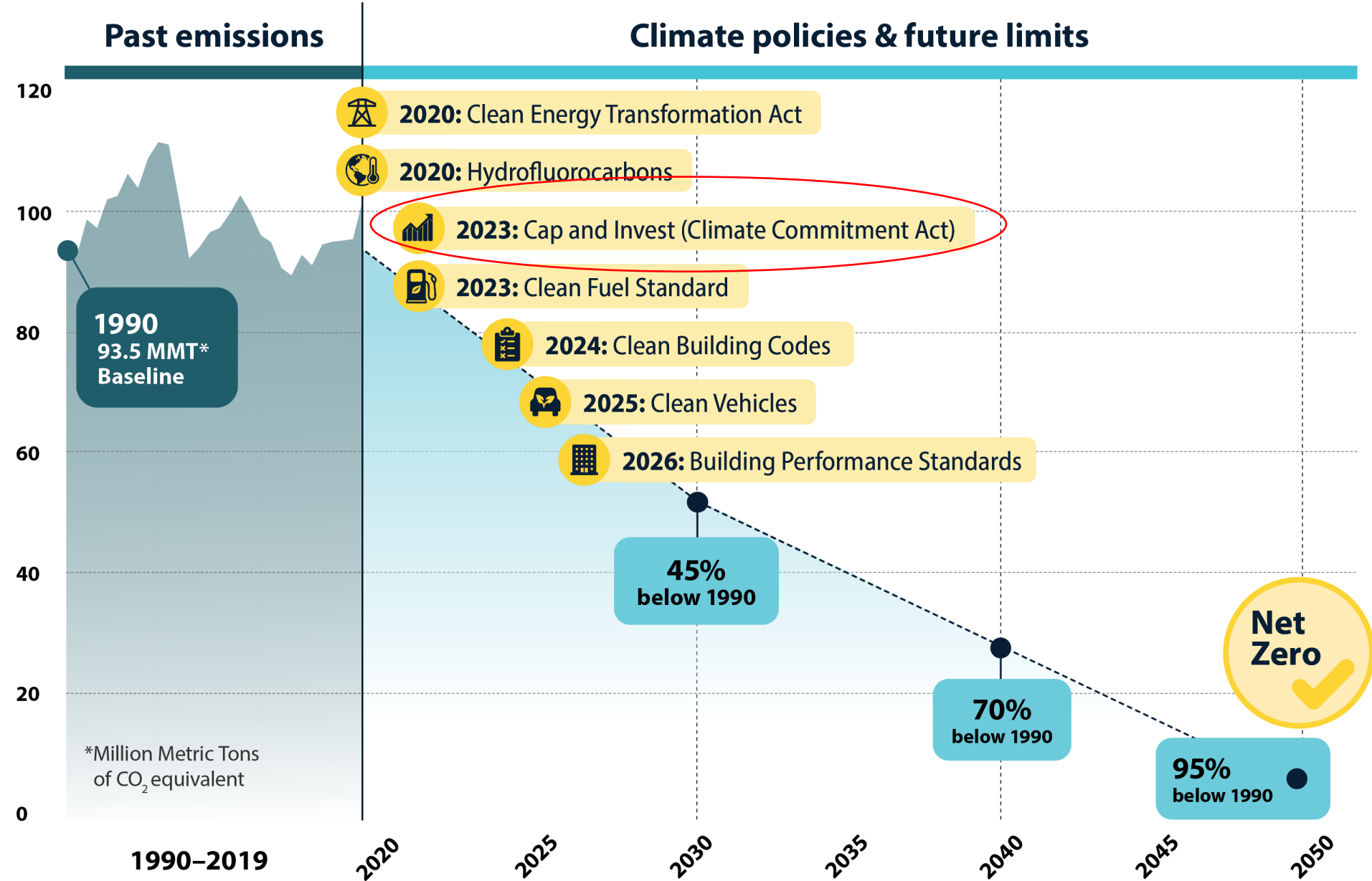
- Any other questions or concerns about anything in the charter or the composition of this advisory group?



# Cap-and-Invest Program Overview



# How Washington is cutting pollution 95% by 2050

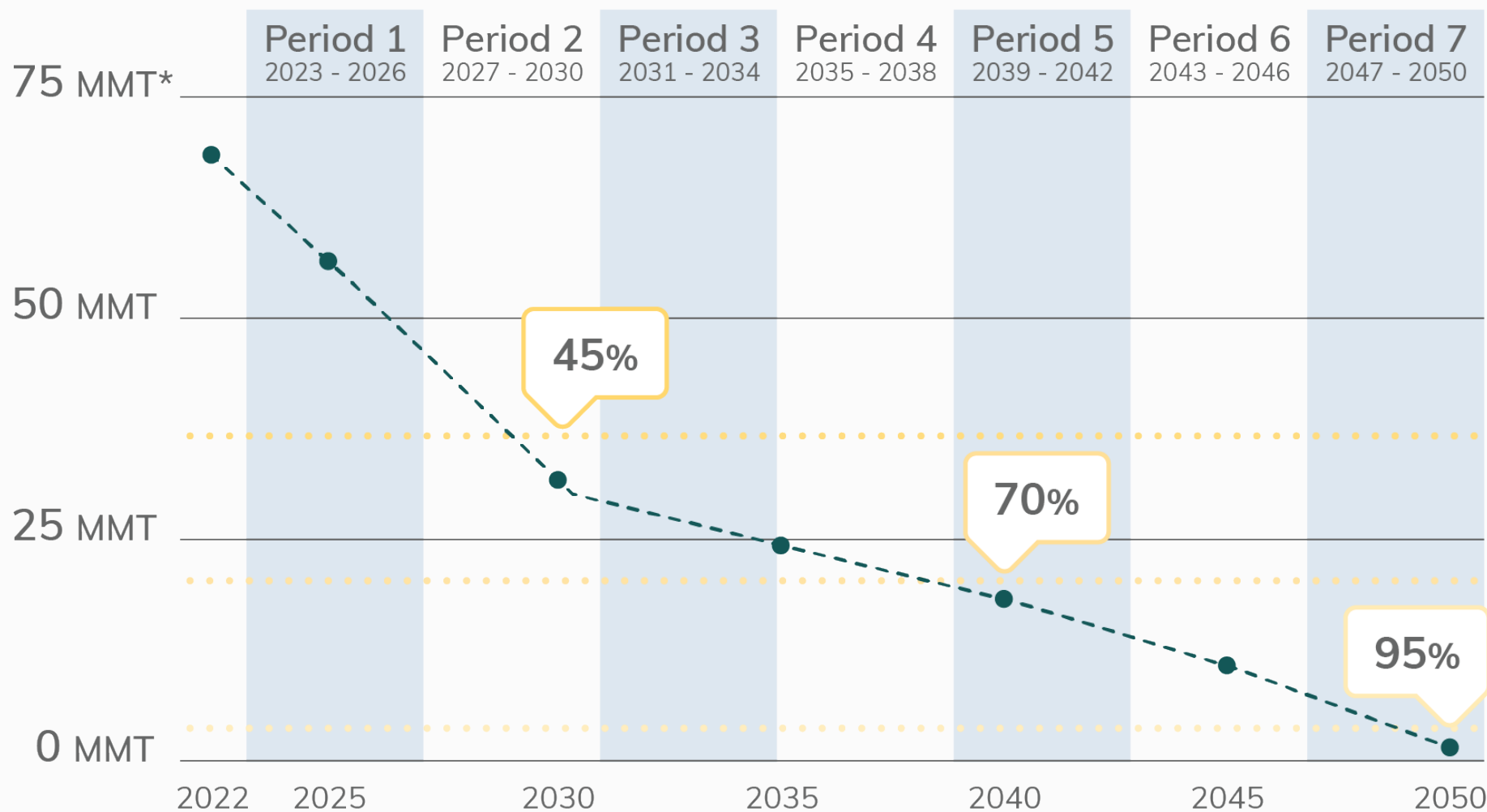


# Cap-and-Invest

- Program launched Jan. 1, 2023
- Caps emissions, cap declines over time
  - Emissions cap = allowance budget
  - One allowance = one metric ton of CO<sub>2</sub>e
- Entities must obtain allowances equal to “covered emissions”
  - Four-year compliance periods + annual deadlines
- Some entities receive no-cost allowances
  - Consignment by natural gas and electric utilities



# Emissions cap reductions



\*MMT = million metric tons of CO<sub>2</sub> equivalent 17



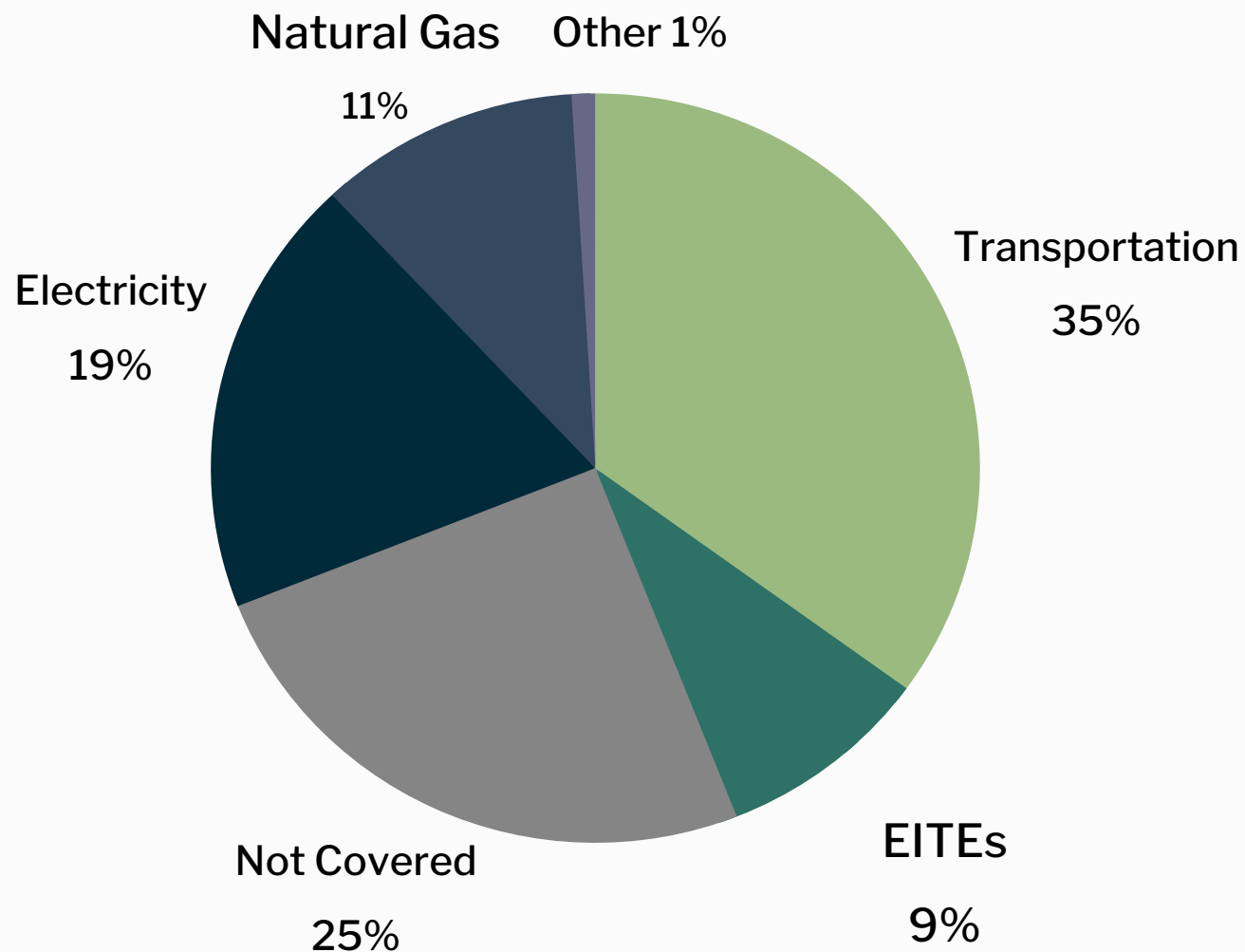
# What's “covered”?

## Covered emissions - 75%

- Facilities emitting 25,000+ metric tons CO<sub>2</sub>e annually
- Gasoline and on-road diesel
- Electricity consumed in WA
- Natural gas
- 2027 - Waste-to-energy facilities
- 2031 - Railroads

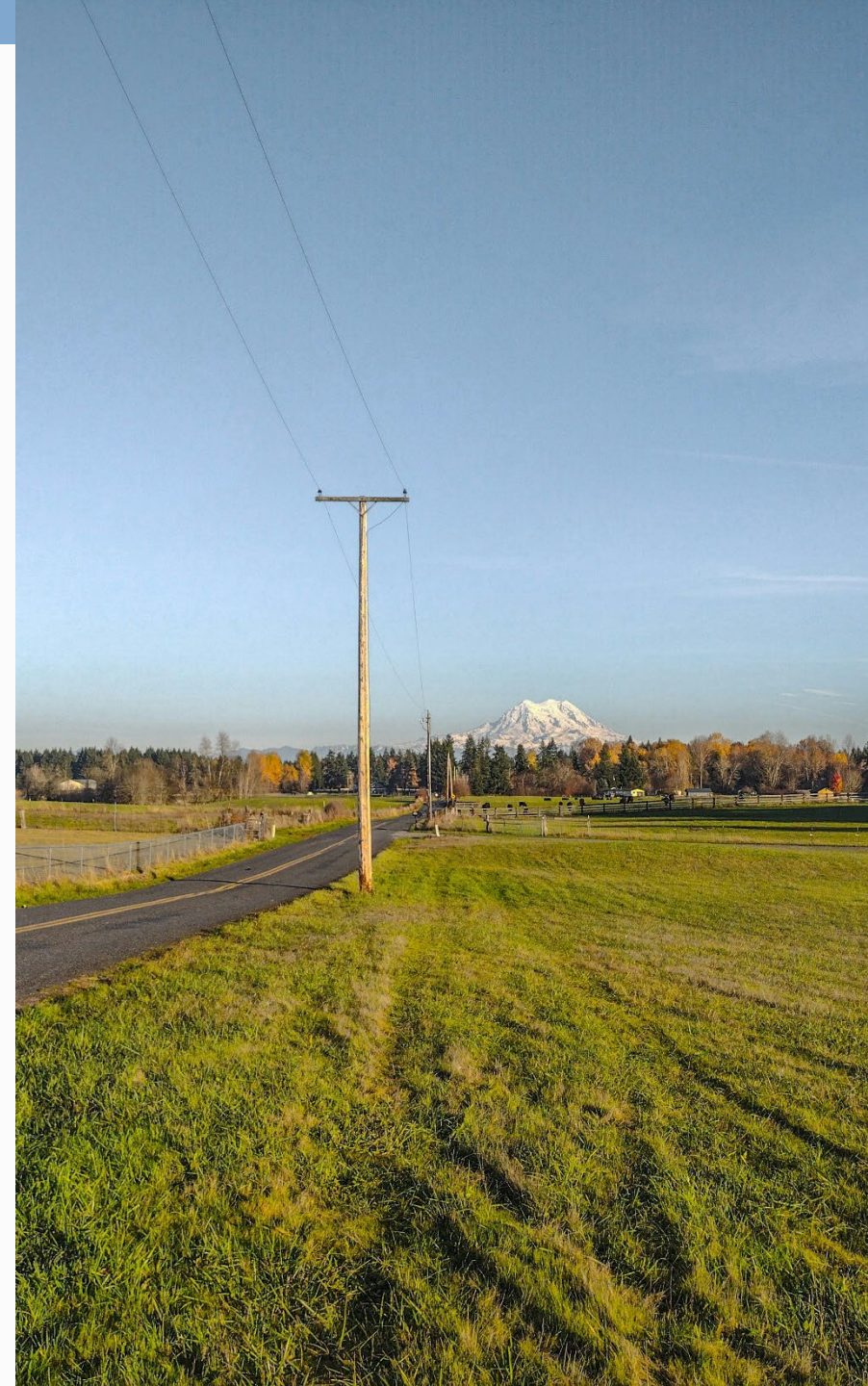
## Not covered - 25%

- Facilities emitting less than 25,000 metric tons CO<sub>2</sub>e
- Exempt fuels: Agricultural ops, maritime, aviation, etc.



# Auctions and compliance

- 6 quarterly auctions, 2 reserve auctions
- 3 more auctions in 2024
- First compliance deadline Nov. 1, 2024
  - 30% of allowances due for 2023 emissions
- \$2.6 billion in auction revenue



# CCA auction proceeds

**CERA**

**Carbon  
Emissions  
Reduction  
Account**

**CIA**

**Climate  
Investment  
Account**

**AQHDIA**

**Air Quality &  
Health Disparities  
Improvement  
Account**

All revenue to be appropriated by the Legislature: further information at [climate.wa.gov](https://climate.wa.gov)

# Air quality & Environmental Justice

- Ecology must expand monitoring and improve air quality in overburdened communities and Tribal lands
- Improving air quality will happen in stages over multiple years
- Ecology is engaging with communities as we expand the WA air monitoring and provide community grants
- More protective air quality requirements



- |                               |                              |                                |
|-------------------------------|------------------------------|--------------------------------|
| 1. Ellensburg                 | 6. Moxee Valley              | 12. Tri-Cities to Wallula      |
| 2. Everett                    | 7. Northeast Puyallup        | 13. Vancouver                  |
| 3. George & West Grant County | 8. North Seattle & Shoreline | 14. Wenatchee & East Wenatchee |
| 4. South King County          | 9. South Seattle             | 15. East Yakima                |
| 5. Mattawa                    | 10. Spokane & Spokane Valley | 16. Lower Yakima Valley        |
|                               | 11. South & East Tacoma      |                                |



# Linkage process & timeline

**First half of 2023**

Linkage Exploratory Process



**Fall 2023**

Decision to Pursue Linkage

**2024 through 2025**

Align Market Policies

Environmental Justice Assessment



**2025 or later**

Linkage Agreement

California and Québec would need to go through their own processes before linking with WA



# Cap-and-Invest Program

Emissions-intensive, trade-exposed industries (EITEs)

# What are EITEs?

- Industries that face unique challenges in reducing emissions in early years of Cap-and-Invest
- Manufacturing facilities with high energy needs and high GHG emissions that face significant national and global competition for their products
- About 40 facilities in Washington qualify as EITEs, including producers of paper, food, building materials, airplanes, semiconductors, and transportation fuels
- List of active EITEs is published on Ecology's [website](#)



# EITE allowance allocation

- EITEs receive no-cost allowances until 2034
  - 9.2 million allowances in 2023\* (~15% of 'cap')
- Intended to protect jobs and investments and avoid 'leakage'
- Most carbon trading programs take this approach to EITEs
- Natural gas and electric utilities also receive no-cost allowances
  - 23.5 million allowances in 2023 (~37% of cap)

*\*Preliminary allocation, to be finalized in October 2024*





# Calculation of EITE allowances

- Approach set out in the CCA ([RCW 70A.65.110](#)) and program rule ([WAC 173-446-220](#))
- Number of allowances is based on EITE facility's baseline emissions and total production each year:
  - Baseline emissions reflect average emissions per unit of product by each EITE facility during 2015-2019
  - Allowances to EITEs updated each year to reflect actual production ('output-based allocation')
- Total no-cost allowances to EITEs declines over time through 2034 (as shown in table opposite)

Years	No cost allowances to EITEs
2023-2026	100% of baseline emissions
2027-2030	97% of baseline emissions
2031-2034	94% of baseline emissions

# EITEs are subject to the cap

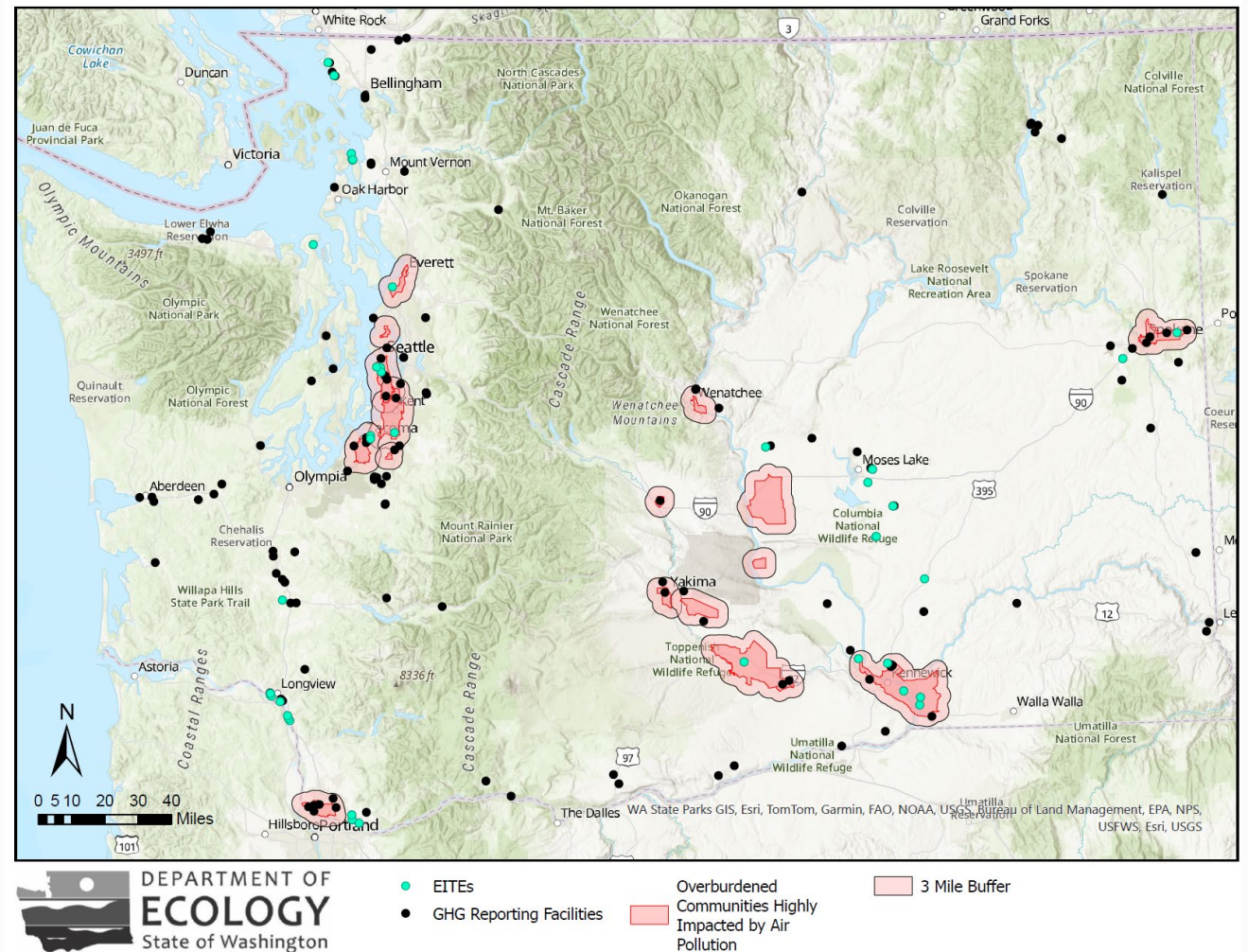
- EITEs are *still* required to reduce GHG emissions and help achieve Washington's net zero goal by 2050, but have a longer lead time
- Short-term incentive to lower emissions through efficiency:
  - EITEs can save any extra allowances for future use or sell them on secondary market
- An EITE with covered emissions exceeding its no-cost allowances must purchase additional allowances to meet its compliance obligation





# Environmental justice considerations for EITEs

- EITEs can emit large amounts of “criteria” air pollutants or “co-pollutants” that are known to harm human health
- Some EITEs are located within or nearby Tribal Lands and overburdened communities
- EITE allocation policy may influence pace of emission reductions by EITEs
- Limits auction revenues
- Preliminary EJ assessment



# CCA Environmental Justice

## Requirements related to EITEs

- Ecology must consider air quality in overburdened communities when making decisions on petitions for EITE designation under [WAC-173-446A](#)
- Newly constructed EITE facilities must mitigate impact on particle pollution in overburdened communities: [RCW 70A.65.020\(3\)](#)
- Offsets use can be restricted for EITE facilities that contribute substantively to cumulative air pollution in overburdened communities



# Industrial Decarbonization in Washington

Washington's State Energy Strategy and  
clean industry updates

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Stephanie Celt

SENIOR ENERGY POLICY SPECIALIST

AUGUST 22, 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 AND FACILITIES



CRIME VICTIMS AND  
PUBLIC SAFETY



ECONOMIC  
DEVELOPMENT



# 2021 Washington State Energy Strategy

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Transportation



Buildings



Industry and Workforce



Electricity

<https://www.commerce.wa.gov/energystrategy>

# Meeting energy needs and aligning with climate policy

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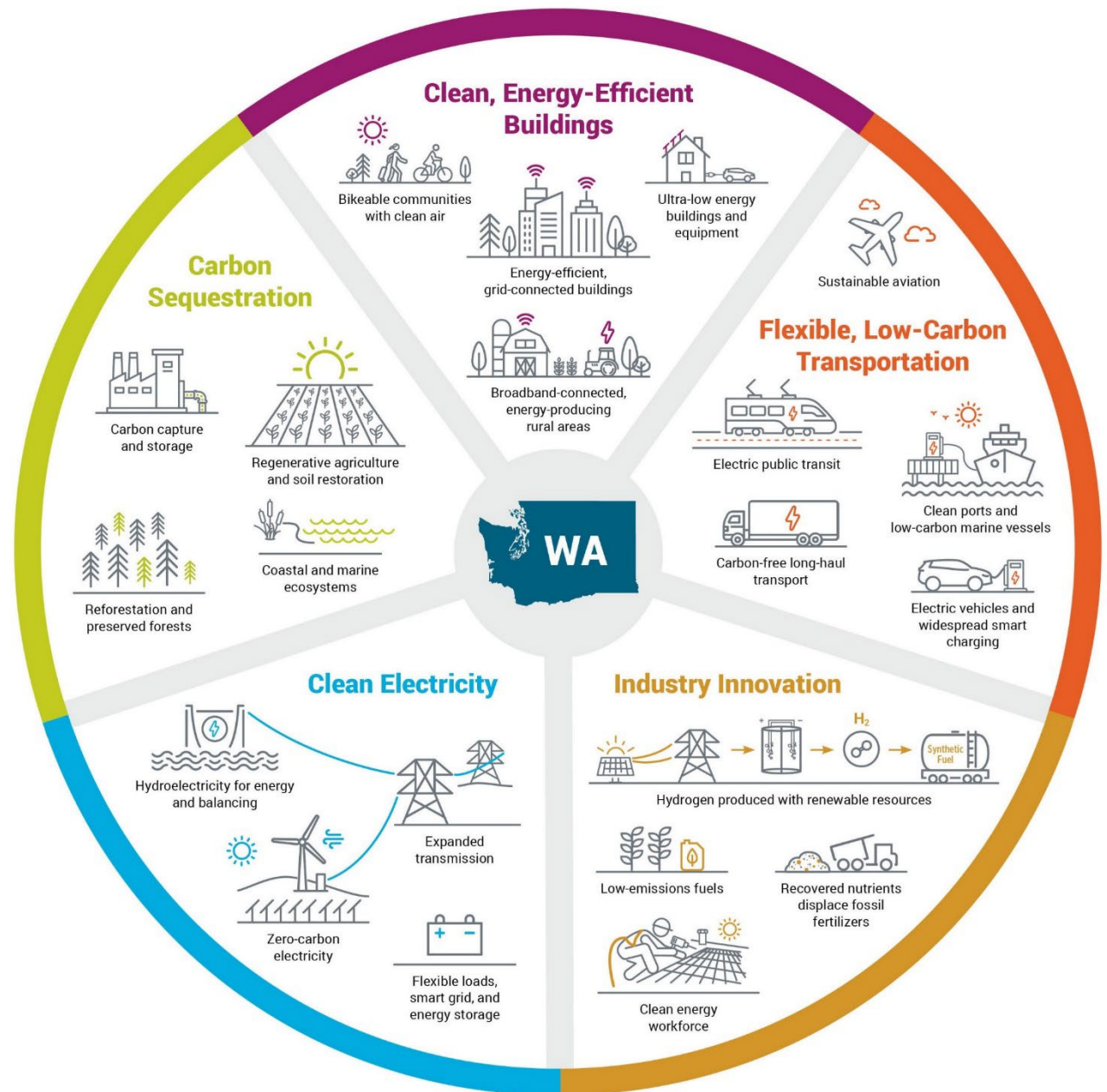
- **Maintain reasonable and fair prices and sufficient supply of energy**
  - Competitive and equitable energy economy, serving all communities
- **Align strategy with clean electricity laws**
  - Energy Independence Act (I-937, 2006)
  - Clean Energy Transformation Act (SB 5611, 2019)
    - After 2025, no coal in resource mix
    - By 2030, greenhouse neutral electricity supply
    - By 2045, 100% renewable or non-emitting sources
- **Align strategy with greenhouse gas emissions limits (HB 2311, 2020)**
  - By 2030, 45% below 1990 levels
  - By 2040, 75% below 1990 levels
  - By 2050, 95% below 1990 levels and achieve net-zero emissions.



## WASHINGTON STATE 2050

# Net-Zero Vision

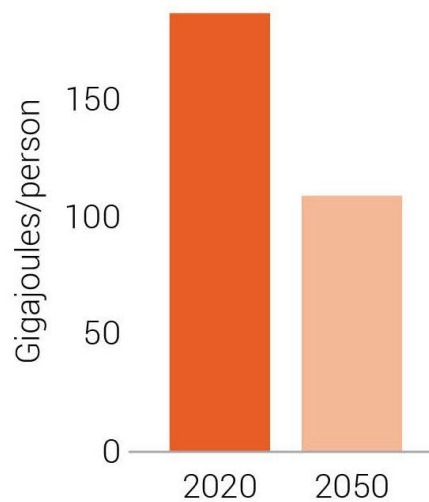
A blueprint for how we can meet our state's climate goals to nearly eliminate the use of climate-threatening fossil fuels by 2050, while growing a prosperous economy and maintaining affordable and reliable energy supplies.



# Five decarbonization strategies

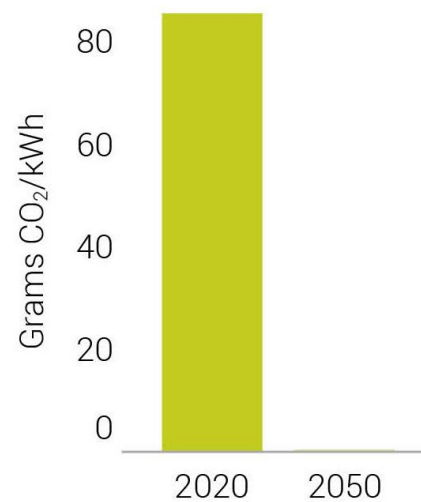
## Energy Efficiency

Energy Consumption  
(Gigajoules/person)



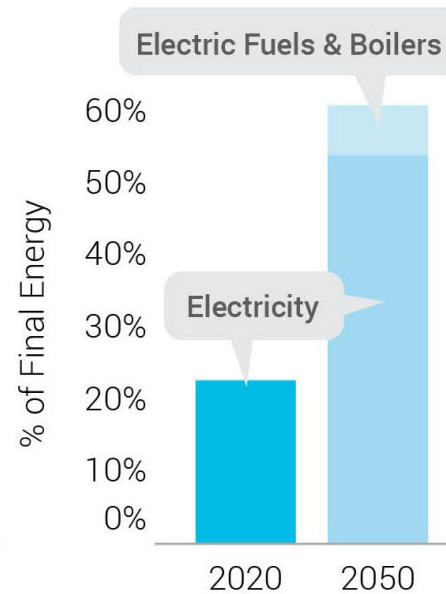
## Clean Electricity

Electricity Carbon  
Intensity  
(Grams CO<sub>2</sub> per kWh)



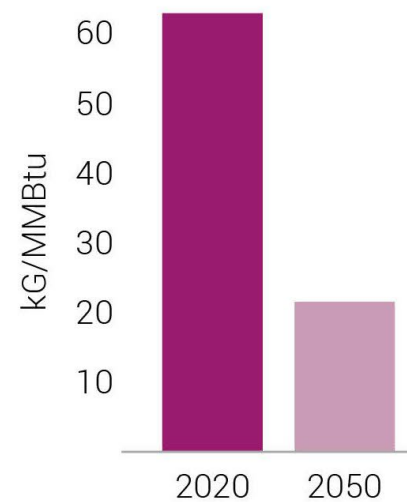
## Electrification

Electricity Share of  
Total Energy  
(% of Final Energy)



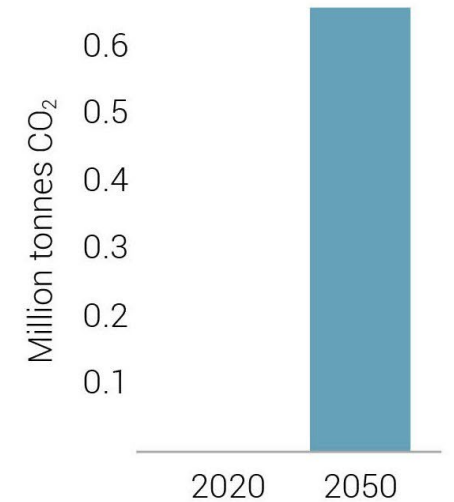
## Clean Fuels

Fuels Carbon Intensity  
(kG/MMBtu)



## Carbon Sequestration

(Million tonnes CO<sub>2</sub>)



# Decarbonizing the industrial sector


**1%** improvement  
in efficiency per year through **2050**



⚡ Fuel switching to electricity by 2050 in:

**50%**   
of process heating

**100%**   
of machine drives

**75%**    
of building heating  
and cooling

GHG EMISSION  
REDUCTIONS



**19**  
MMT

**2020**

**11**  
MMT

**2030**

**0**  
MMT

**2050**

- Washington's significant demand for clean fuel requires an investment in clean fuels industry
- Large quantities of synthetic fuels required in 2030 to reach the target of 45% below 1990 emissions by 2045
- Significant fraction of carbon stream used to produce synthetic fuels comes from industrial carbon capture

# Office of Renewable Fuels

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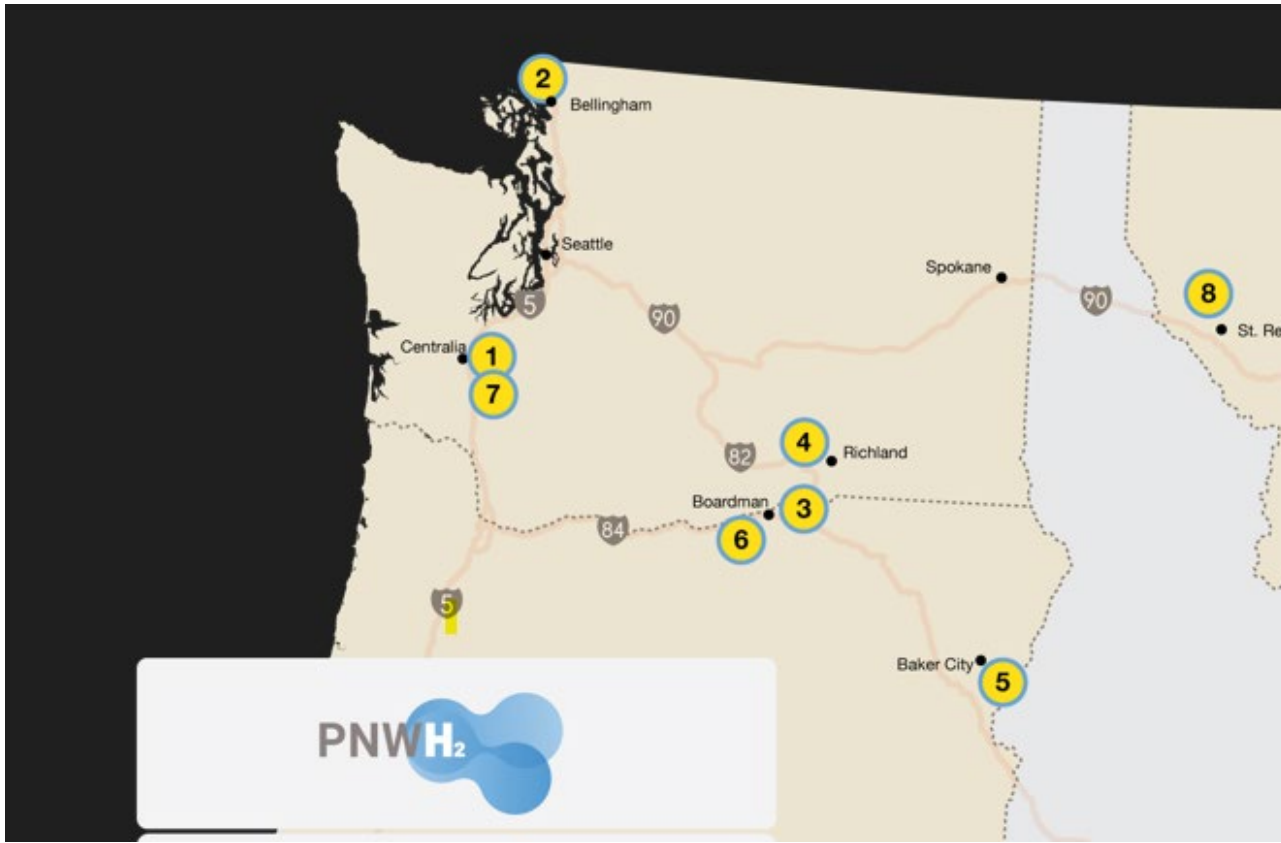
- **Staff and operations**
  - Senior Energy Policy Specialist – Hydrogen and Renewable fuels
  - Public Engagement Specialist, Hydrogen and Renewable Fuels
  - NEW Sustainable Fuels Policy Specialist
  - Collaboration between Energy, Economic Development, Director's Office, Tribal Affairs
- **Research including 2024 legislative report**
- **Contributions to PNW H2Hub**
- **Support for hydrogen and renewable fuels ecosystem – workforce, incentives, storage**



Adobe Stock



# Pacific Northwest Hydrogen Hub



- PNWH2 expects to have eight project locations in the PNW
- Up to \$1BN award from DOE – beginning Phase 1 August 2024
- Green electrolytic hydrogen exclusively
- Planned for use in hard to decarbonize sectors, including industry (heavy-duty transport, fertilizer production, power)

# Other Commerce updates and grants

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- **Hard to Decarbonize Sector Grants**
  - \$20M
  - Including iron, steel, aluminum, cement, concrete, glass, pulp and paper, food and beverage, wood and building products, aerospace, electronics, chemicals, and heavy duty transportation (road, aviation, maritime).
  - Must anticipate being able to reduce GHGs in WA by or before 2030.
- **Climate Pollution Reduction Grant (CPRG) modeling**
  - Modeling industrial decarbonization strategies
  - Can propose projects for federal funding
- **Refinery Economic Impacts study**
- **State Industrial Strategy development**
  - Assessing opportunities to decarbonize existing industries while attracting new
  - Develop a state industrial strategy



Washington State  
Department of  
**Commerce**

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



# Thank you!

Stephanie Celt

SENIOR ENERGY POLICY SPECIALIST

[Stephanie.Celt@commerce.wa.gov](mailto:Stephanie.Celt@commerce.wa.gov)

360-819-3521



# Report to the Legislature

## EITE Allowance Allocation 2035-2050



# Report on EITE allocation: 2035-2050

- The Legislature has not specified the approach to EITE allocation for 2035-2050
  - Difficult to anticipate technologies and compliance options
  - Ecology proposed legislation in 2021 to address this gap; the bill ([HB 1682](#)) did not pass
- Ecology must compile a report that offers information and recommendations on how best to proceed (due Dec. 2026)
- Legislature will need to determine the approach to EITE allocation for 2035-2050 by 2027 legislative session
- Ecology aiming to submit report by Nov. 2025

Years	No cost allowances to EITEs
2023-2026	100% of baseline emissions
2027-2030	97% of baseline emissions
2031-2034	94% of baseline emissions
2035-2050	Not specified in CCA (default is 94%)

# Ecology's report will focus on:

- ✓ Best practices for avoiding 'leakage' of emissions
- ✓ Opportunities and barriers for decarbonization of EITEs in Washington
- ✓ Alternative methods for measuring the emissions generated by EITEs per unit of production (i.e. baseline emissions for EITEs)
- ✓ How to determine the amount of allowances EITEs receive in 2035-2050
- ✓ Implications for environmental justice outcomes, including local air quality impacts, and statewide emissions limits
- ✓ Potential impacts on Cap-and-Invest revenues

# EITE IAG: Work Program Phase 1

## Meeting 2: Oct. 17<sup>th</sup> Theory and practice of carbon leakage policies

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- How EITE allocation in WA (and other jurisdictions) works
- Global approaches for preventing leakage within carbon pricing policies
- Issues and limitations of carbon leakage policies

## Meeting 3: Nov. 14<sup>th</sup>\* Decarbonization challenges and opportunities for EITEs in WA

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- Decarbonization options and pathways for EITE industries in WA
- Policies and programs to enable industrial decarbonization
- Key constraints and opportunities for decarbonization of EITEs in WA

## Meeting 4: Dec. 19<sup>th</sup>\* GHG emission baselines and benchmarks for EITE facilities

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- How GHG baselines are determined in WA and comparisons with other jurisdictions
- Approaches for establishing GHG emission benchmarks for industrial/EITE facilities
- Role of best available technology analysis in determining GHG emission benchmarks

# Discussion

- Any feedback on topics being addressed in the report any other matters we might want to consider?
- Feedback on work program for Phase 1?





# Timeline: report and advisory groups

## Phase 1:

Aug–Dec 2024

Collect information, discuss technical issues, and identify factors affecting EITE allocation & decarbonization

EITE Industries AG

EITE Industry & Facility perspective

EITE Policy AG

Program & Statewide perspective

*Break*

## Phase 2:

Mar–Aug 2025

Discuss and assess policy and technical considerations

Discuss draft policy recommendations for EITE allocation 2035-2050

EITE Industries AG

EITE Policy AG

## Phase 3:

Sep–Nov 2025

Ecology prepares final report for legislature

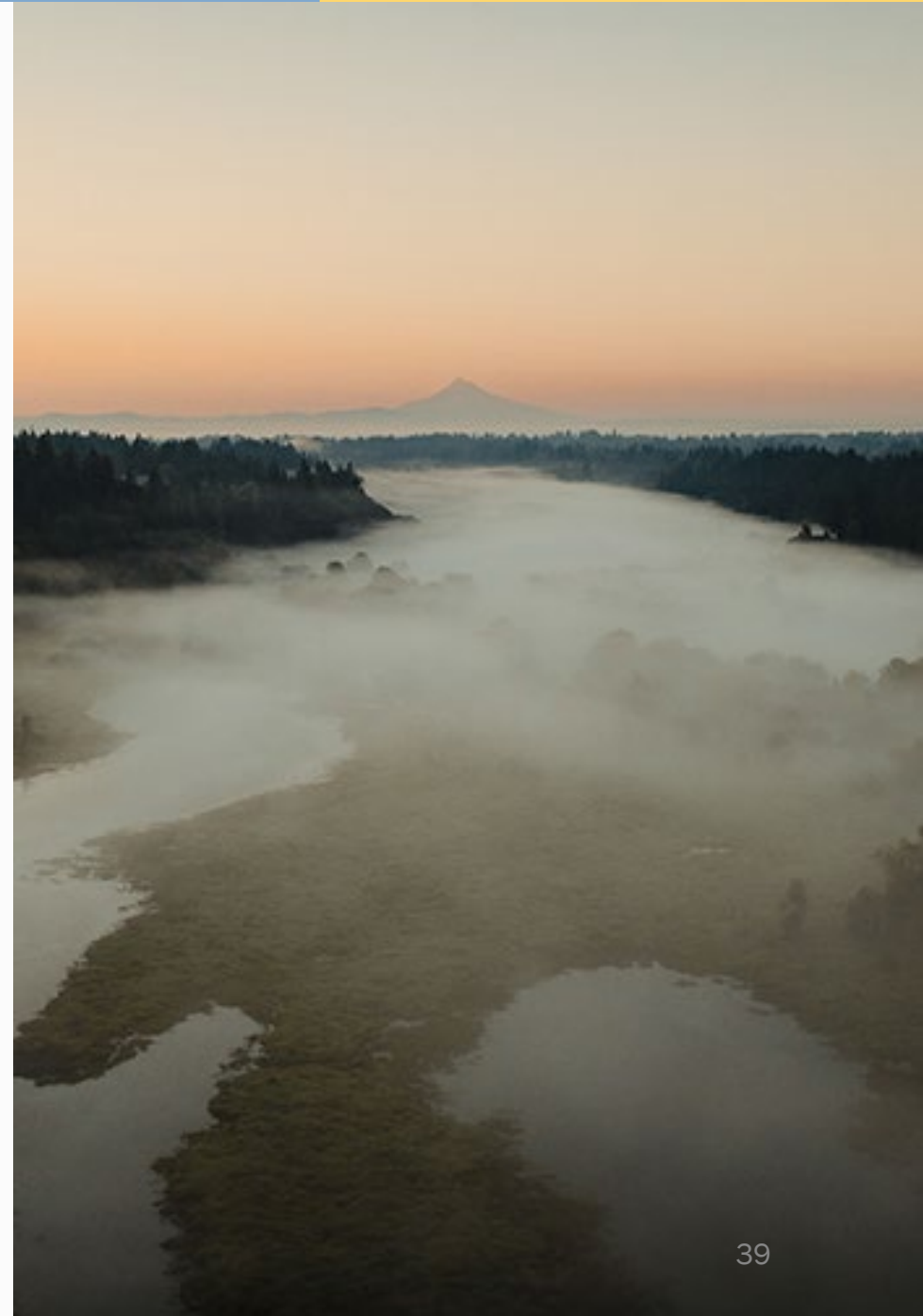
Report submitted to legislative committees

Other engagement opportunities: Tribes, EJ Council, overburdened communities

# Discussion

- EITE representation on the Policy Advisory Group:
  - One delegate from EITE Industries Advisory Group (plus one alternate delegate)
  - Delegate would attend Policy Advisory Group meetings (1<sup>st</sup> meeting on September 19<sup>th</sup> optional)
  - Provide EITE perspective in the Policy Advisory Group when applicable
- Nominations
- Vote on delegates via form emailed out

Email [CCAEITEIndustries@ecy.wa.gov](mailto:CCAEITEIndustries@ecy.wa.gov) by Monday if no longer interested in being a delegate



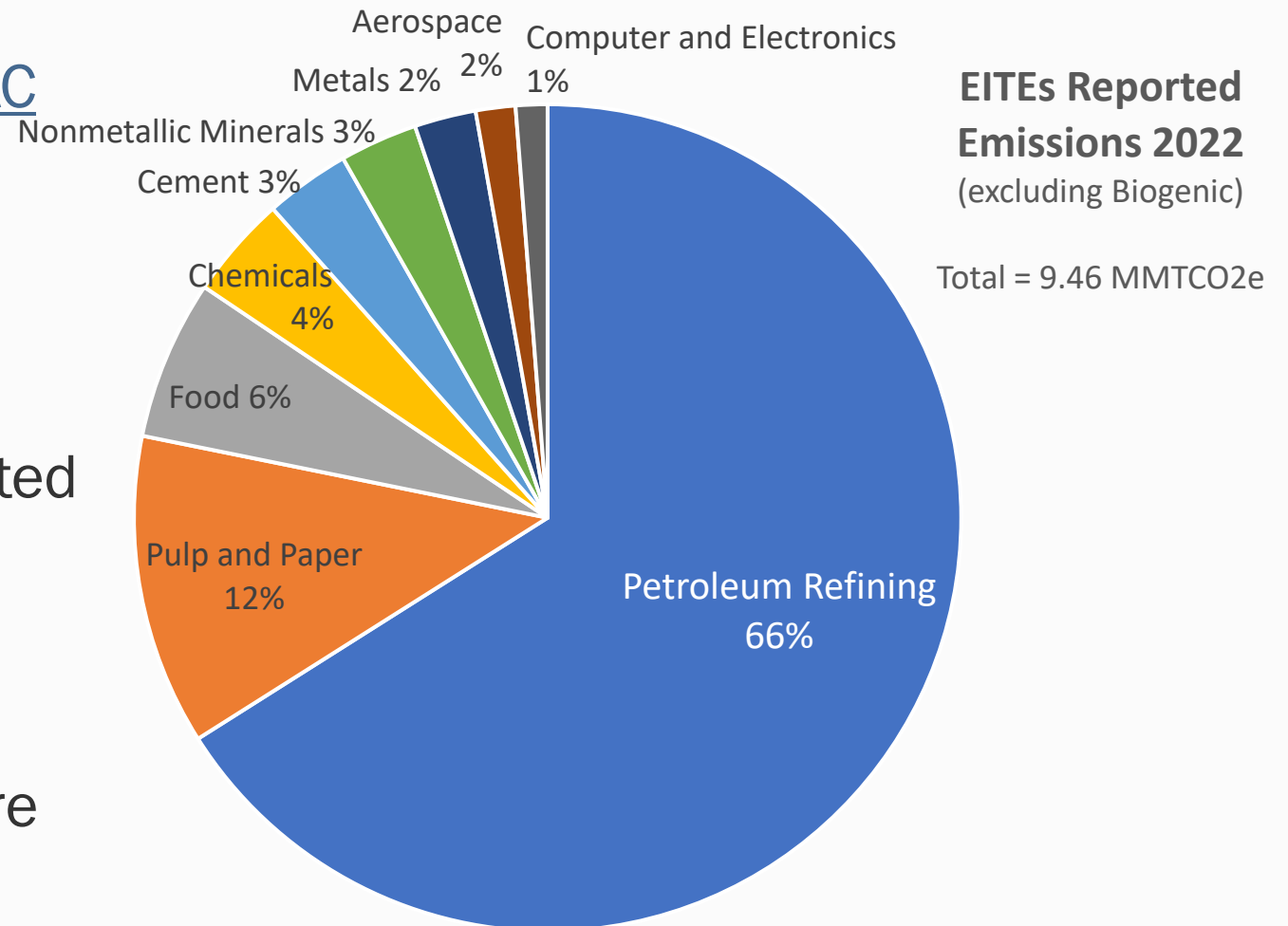


# ELTE industries in Washington

Reported emissions and related information

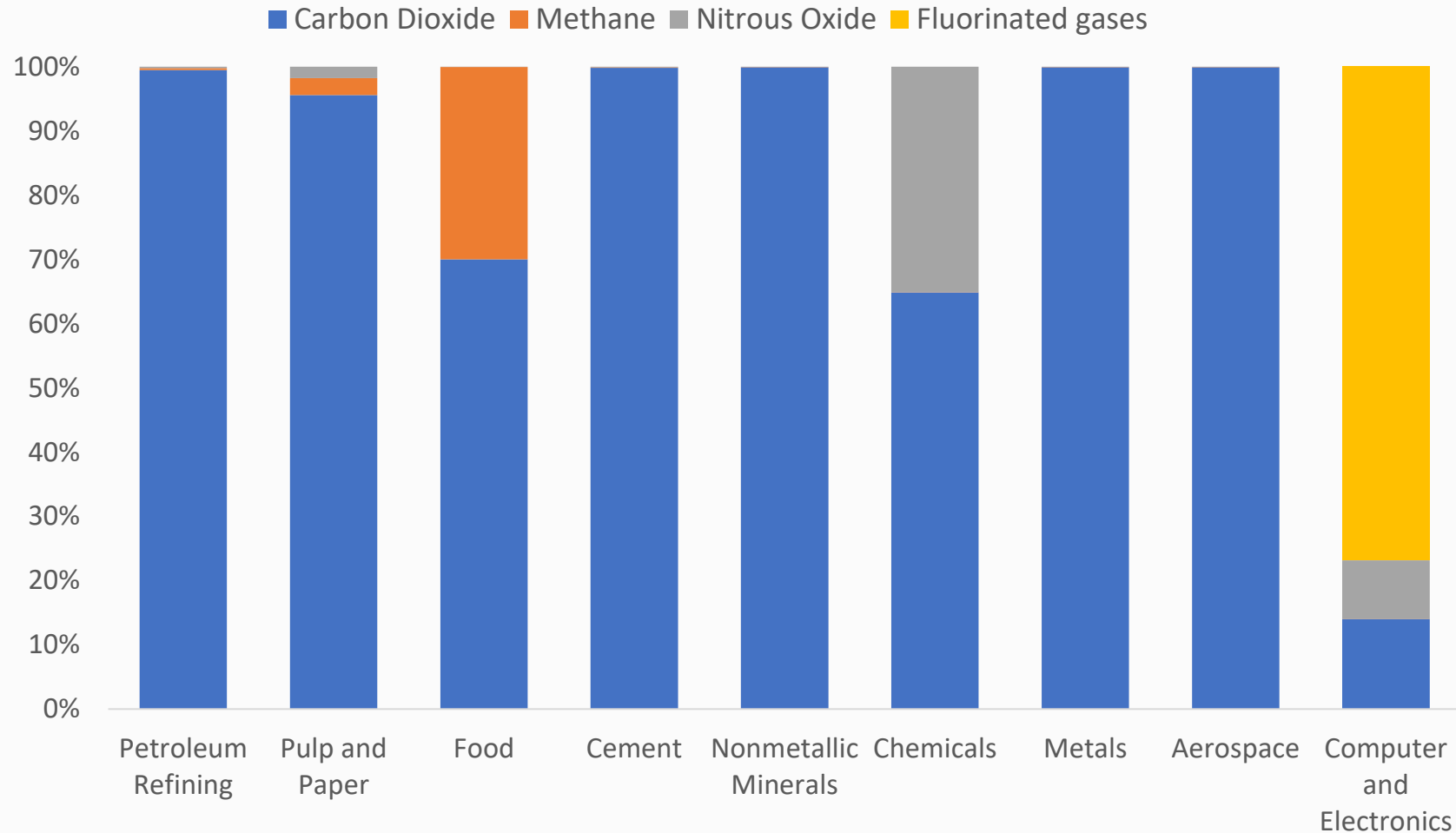
# Reported emissions from EITEs

- Covered emissions defined in [WAC 173-446-040](#):
  - exceptions include: biogenic, agricultural, aviation & marine fuels
- EITE emissions generally associated with onsite combustion of fossil fuels or other process emissions
- Total EITE reported emissions (excluding biogenic) for 2022 were 9.4 MMTCO<sub>2</sub>e



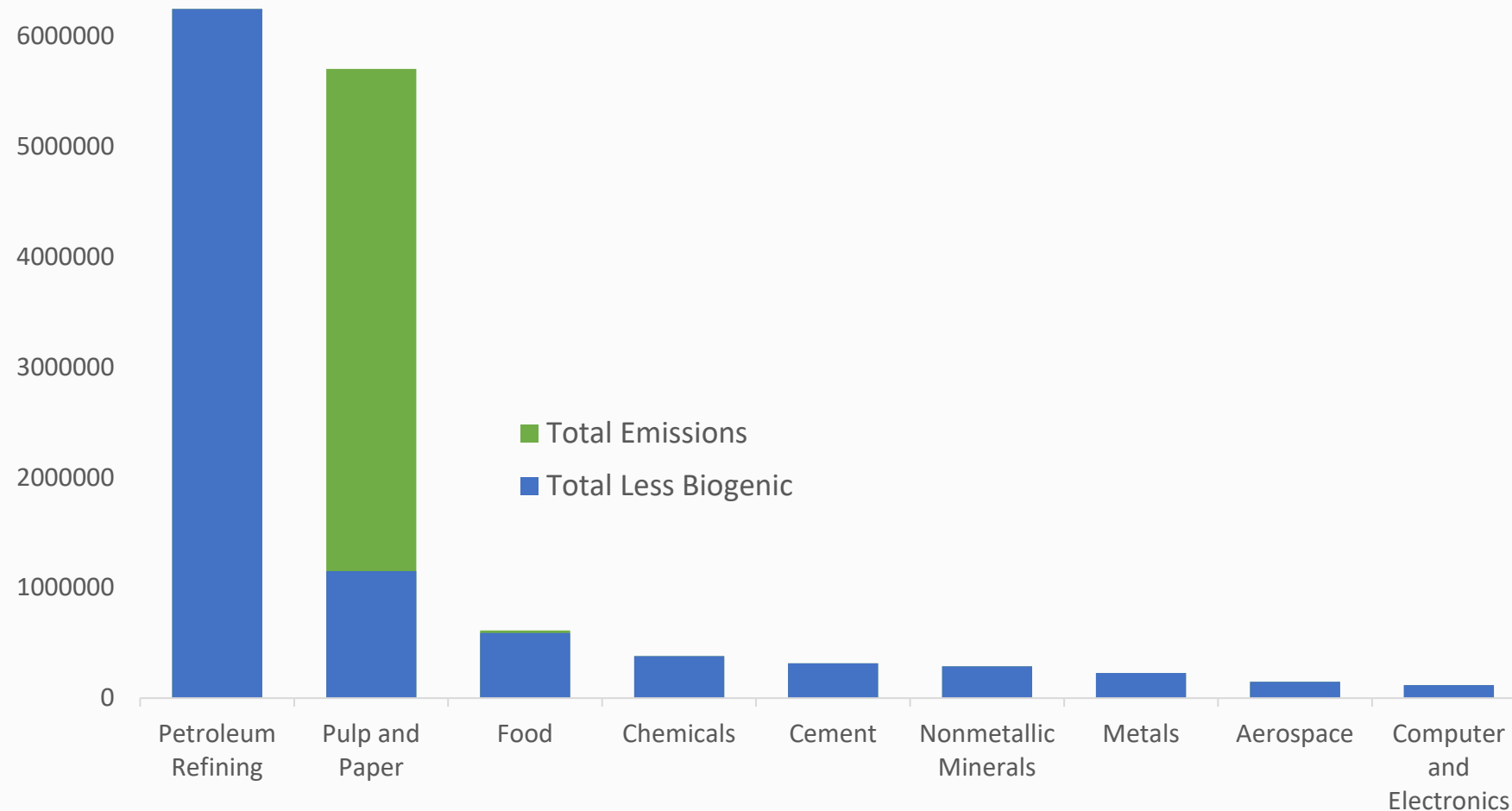


# Reported EITE emissions: 2022



- Carbon dioxide largest proportion of total GHG emissions (ex. biogenic)
- Methane and nitrous oxide = 30-35% of emissions in food and chemicals
- Fluorinated gases = 76% of emissions from computer & electronics

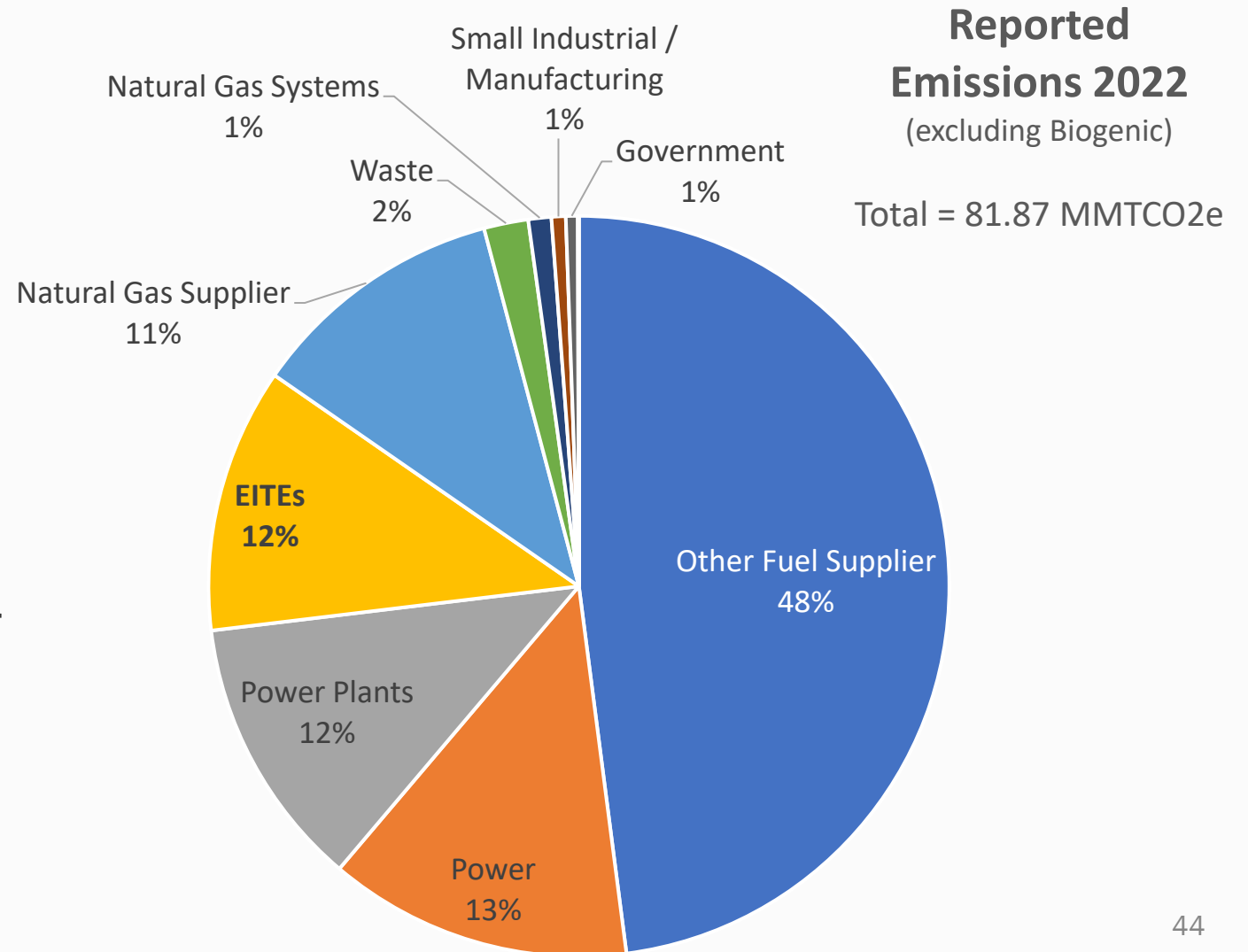
# Reported EITE emissions: 2022



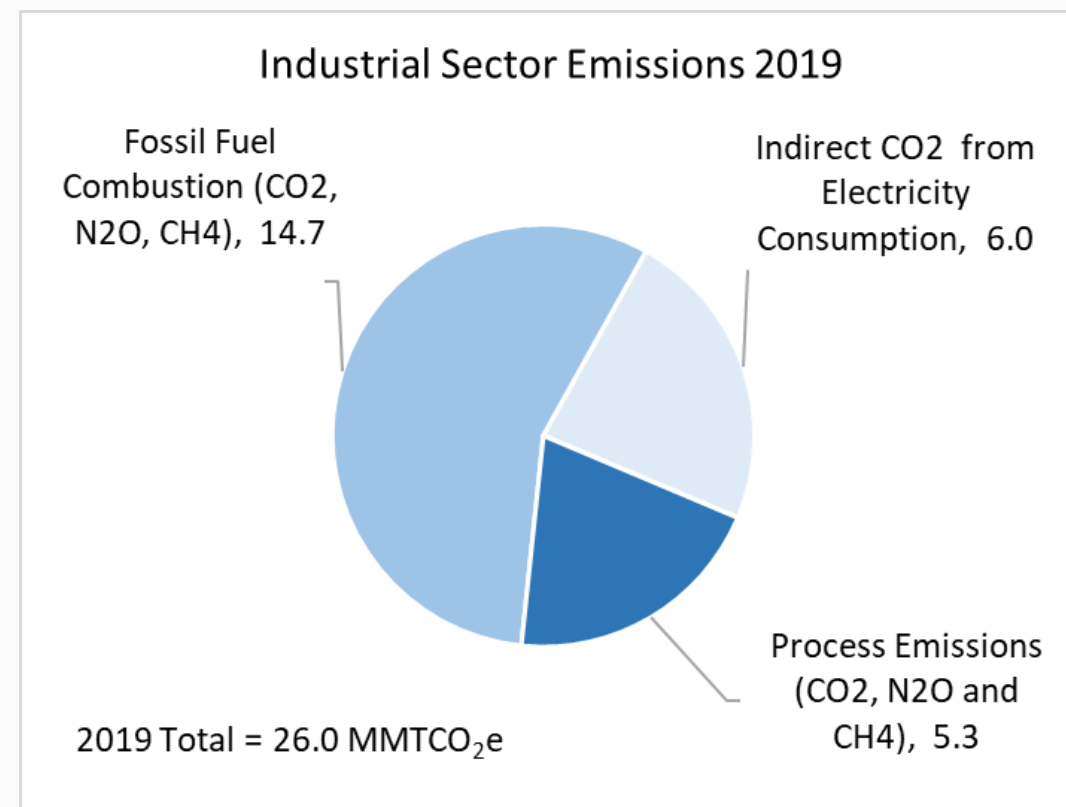
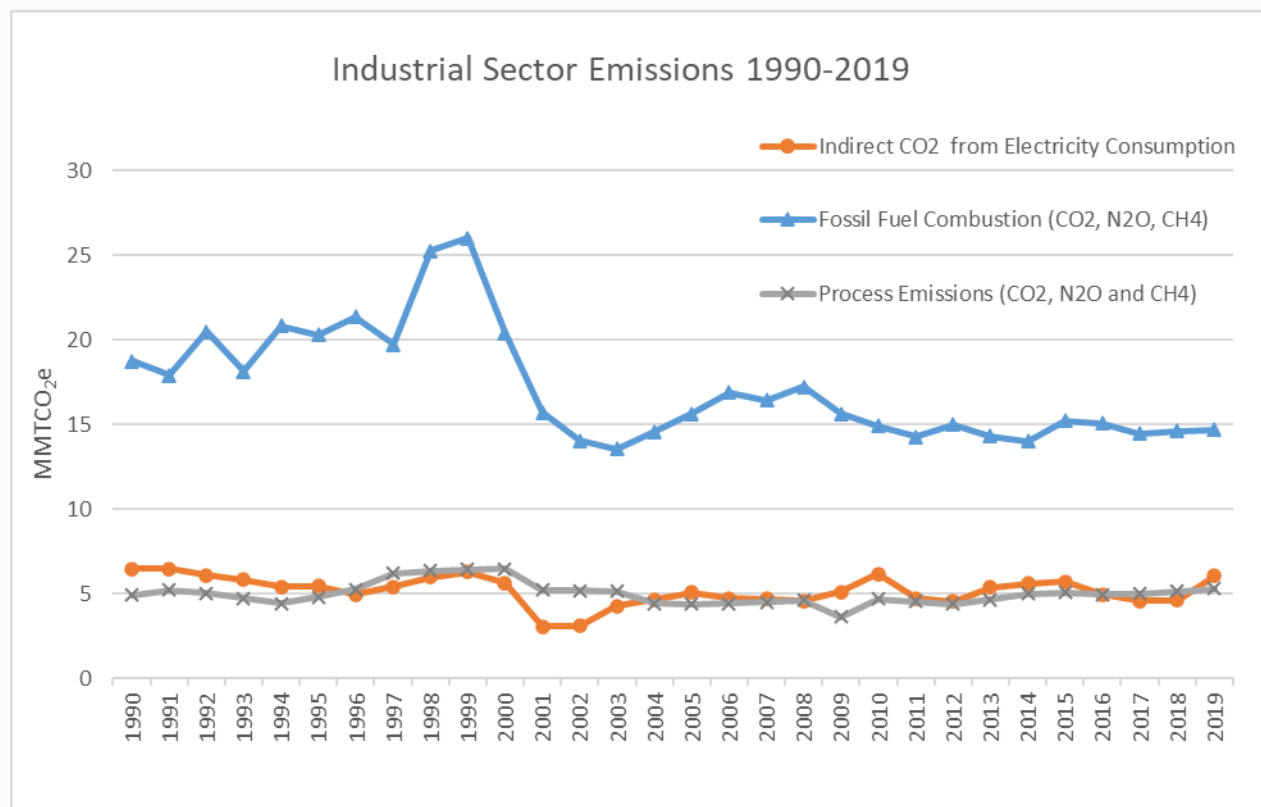
- Pulp and paper, and food reported biogenic emissions in 2022
- Biogenic not covered emissions under CCA, but can impact local air quality

# 2022 emissions from all reporters

- EITEs represented 12% of total reported emissions in 2022
- Other fuel suppliers were largest proportion at 48%
- When combined, electric power and power plants were 25%



# GHG Inventory: 2019 industrial sector emissions





# Emissions intensity of production

- Reported emissions published by Ecology does not indicate emissions intensity of production by EITEs
- Requires consideration of production data alongside emissions to determine the emissions intensity per unit of production
- Production data generally considered confidential business information (CBI) and not published
- EPA published carbon intensity data for certain industrial sectors in 2021 (including cement, flat glass, container glass)
- California has also developed 90 product-based benchmarks derived from production and emissions data for EITE sectors in CA

# Next steps

- Meeting #2: October 17, 9 a.m.-12:30 p.m. PST.
- Topic: Theory and practice of carbon leakage policies
  - Presentations include Resources for the Future and International Carbon Action Partnership
- First EITE Policy Advisory Group meeting: September 19

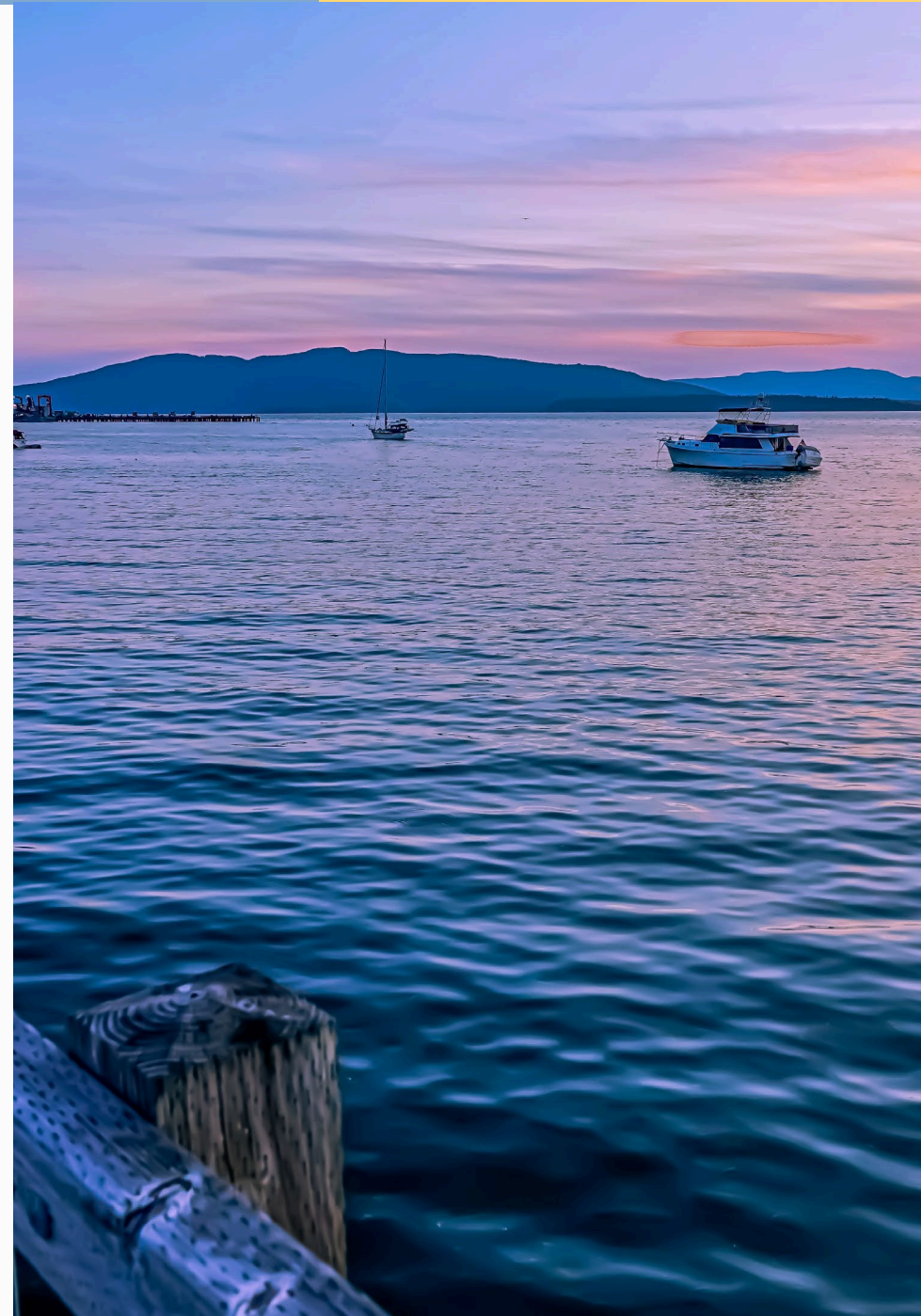




# Public comment opportunity

## Guidelines for providing public comment

- Up to two minutes per person
- Host will unmute you and begin timer
- Please keep the comments related to EITEs and the report to the Legislature
- Ecology will not respond to comments in this meeting
- To submit written comments, use our [digital comment platform](#)
- Please use “raise hand” button to indicate that you wish to provide a comment







# Thank you!

If you have additional questions or comments, please send them to:

**Adrian Young**

Cap-and-Invest Industrial Policy Lead

[CCAETEIndustries@ecy.wa.gov](mailto:CCAETEIndustries@ecy.wa.gov)