DEPARTMENT OF ECOLOGY
State of Washington

EITE Joint Advisory Group meeting #4

July 24, 2025

Agenda

Purpose

- *Present key aspects of the draft materials shared today*
- *Provide an opportunity for clarifying questions and initial comments*

Reminders

- ***Members:** Please rename yourself as needed and include your affiliation*
- ***Attendees:** please use chat only for Zoom technical issues*

1. Welcome and meeting overview
2. Information sharing and updates
   - Default EITE Allocation: Illustrative scenarios
   - Overview of Eastern Research Group (ERG) final report (expected to be published on July 24)
   - Update on preliminary environmental justice evaluation
3. Document 6 discussion: Draft recommendations
4. Next steps
5. Public comment opportunity

Introductions

Facilitation team – Ross Strategic

- Susan Hayman - Advisory Group Facilitator
- Heather Christopher – Joint Meetings & Advisory Group Support

Ecology staff

- Adrian Young – Cap-and-Invest Industrial Policy Lead
- Andrew Hayes – Cap-and-Invest Policy Section Manager
- Isabel Hanify – Cap-and-Invest Industrial Policy Planner
- Jihan Grettenberger – Cap-and-Invest Outreach Specialist

EITE Industries Advisory Group members

- Adam Diamond – Nutrien
- Brandon Houskeeper– Alliance of Western Energy Consumers
- Brent Downey – Kaiser Aluminum
- Brian Wood– Nippon Dynawave Packaging
- Bryan Vickers– Glass Packaging Institute
- Christopher Collins – HF Sinclair
- Chris Matuszak – Collins Aerospace
- Dallas Scholes – Par Pacific and U.S. Oil & Refining
- David Heller – Cardinal FG Company
- Jackie White – Northwest Pulp & Paper Association
- Jarod Cook – Lamb Weston
- Jessica Spiegel – Western States Petroleum Association
- Jim Verburg – bP America
- Joshua Estes– Association of Western Pulp and Paper Workers
- Russ Simonson (for KC Klosterman) – Ash Grove Cement
- Kristin Marshall – Boeing
- Pamela Barrow – Food Northwest
- Tarah Erickson – Nucor Steel Seattle
- Paul Butkus– Packaging Corporation of America
- Perry Hanson – J.R Simplot Company
- Sally Hurst – TSMC Washington
- Sourabh Pansare – Phillips 66 Company
- Tad Koscielak – Matheson Tri Gas

EITE Policy Advisory Group members

- Altinay Karasapan – Climate Solutions
- Carly Michiels – Washington Public Ports Association
- Dan Wilson – United Steelworkers Union - Local 338
- David Mendoza – The Nature Conservancy
- Donny Donovan – IAM District 751
- Isaac Kastama – Clean and Prosperous
- Kassie Markos – Puget Sound Energy
- Keith Curl-Dove – Washington Conservation Action
- Richard May – SEI Fuel Services (7-Eleven)
- Steve Taylor– Cowlitz Public Utility District No. 1
- *2 delegates from the EITE Industries Advisory Group*

Report timeline and engagement approach

Aug–Dec 2024 (Phase 1)

☑ Completed

- Collected information, and identified factors affecting EITE allocation & decarbonization
- Established advisory groups
- Convene Tribal forum
- Convene public meeting

May–Aug 2025 (Phase 2)

- Develop and test draft findings and recommendations
- Discuss policy impacts
  - Advisory groups
  - Small group meetings
  - Tribal forum
  - Public meeting

Feedback due Sept. 3, 2025

Sept–Nov 2025 (Phase 3)

Ecology prepares and submits final report to the Legislature.

Ongoing: Engagement with Tribes, Environmental Justice Council, and community groups

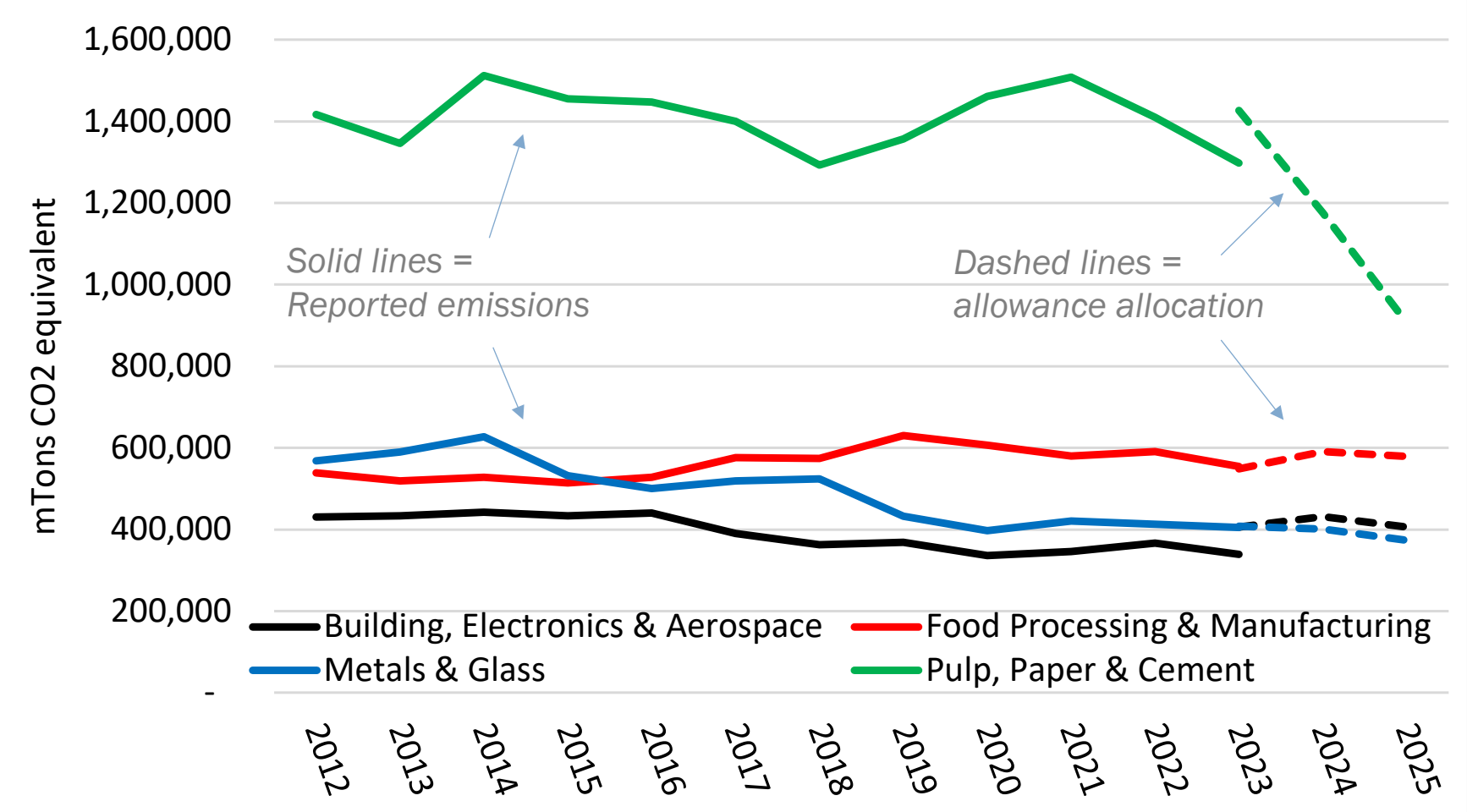
Information sharing and updates

- Default EITE Allocation: Illustrative scenarios
- Overview of Eastern Research Group (ERG) final report
- Update on preliminary environmental justice evaluation

Default EITE allocation policies

Data inputs and initial assumptions for market analysis

Data inputs: EITE greenhouse gas emissions and no-cost allowances from 2012 to 2025



Emissions for 2012-2022 reflect total reported facility emissions less biogenic emissions.

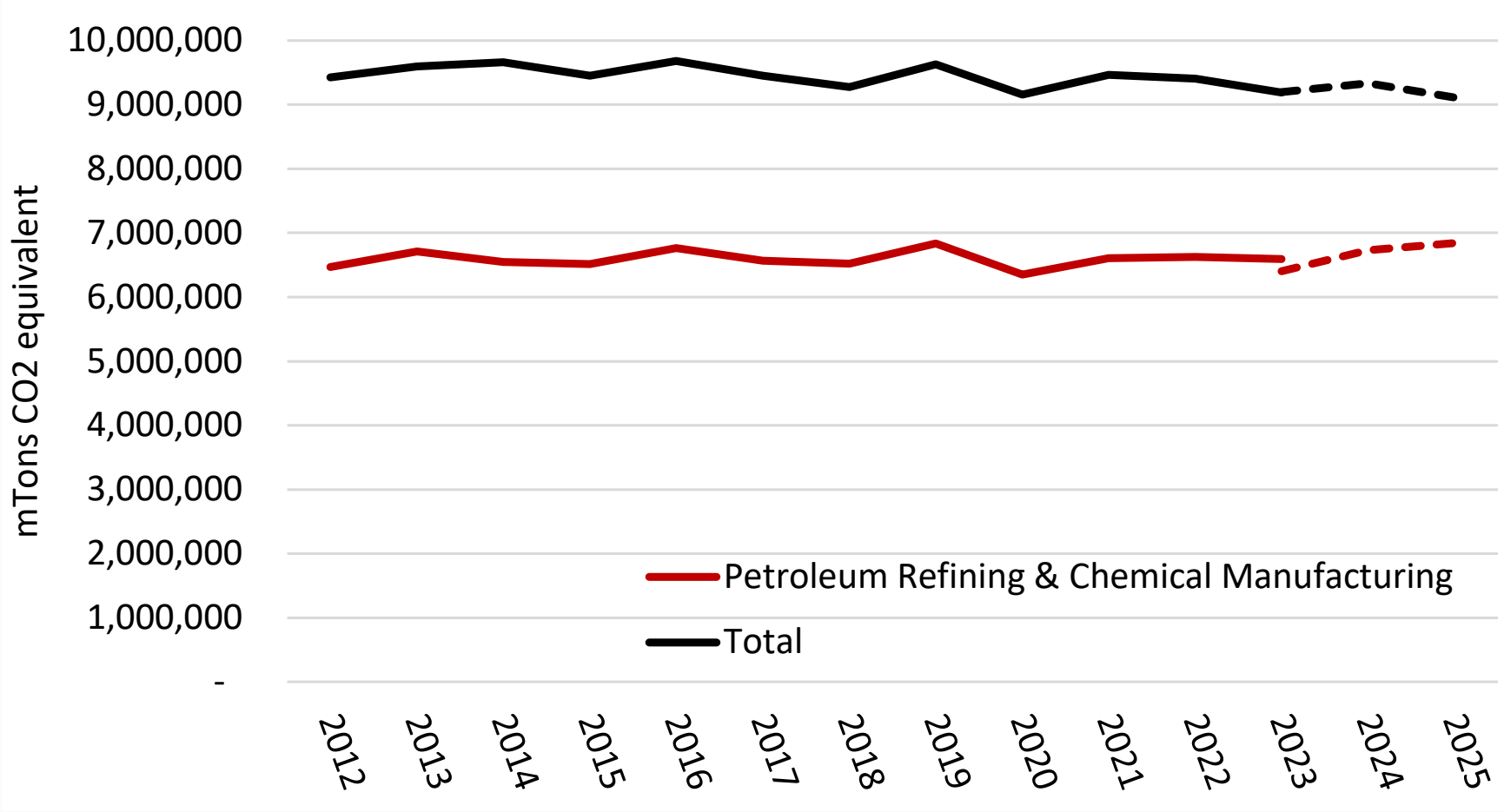
Emissions for 2023 based on facility-verified covered emissions.

Allowance allocations based on vintage 2023,vintage 2024 and vintage 2025 no cost allowance allocations for EITEs.

Note: allocation data does not account for the 'true-up' of allowance allocation based on actual 2024 and 2025 production.

mTons CO2 = metric tons of carbon dioxide equivalent

Data inputs: EITE greenhouse gas emissions and no-cost allowances from 2012 to 2025



Emissions for 2012-2022 reflect total reported facility emissions less biogenic emissions.

Emissions for 2023 based on facility verified covered emissions.

Allowance allocations based on vintage 2023,vintage 2024 and vintage 2025 no cost allowance allocations for EITEs.

Note: allocation data does not account for the 'true-up' of allowance allocation based on actual 2024 and 2025 production.

mTons CO2 = metric tons of carbon dioxide equivalent

‘Default’ EITE allocation policy in CCA: Data input and assumptions

- First step is developing inputs and assumptions for EITE allowance allocation based on existing policies:
  - Allowance allocation based on legislated reduction schedules for 2023-2034 and ‘default’ reduction schedule for 2025-2050 (as show in table)
  - Annual program allowance budgets follow original cap trajectory (not yet HB 1975)
  - Assumes no sale of price ceiling units

Years	Reduction schedule for EITE allocation
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%)

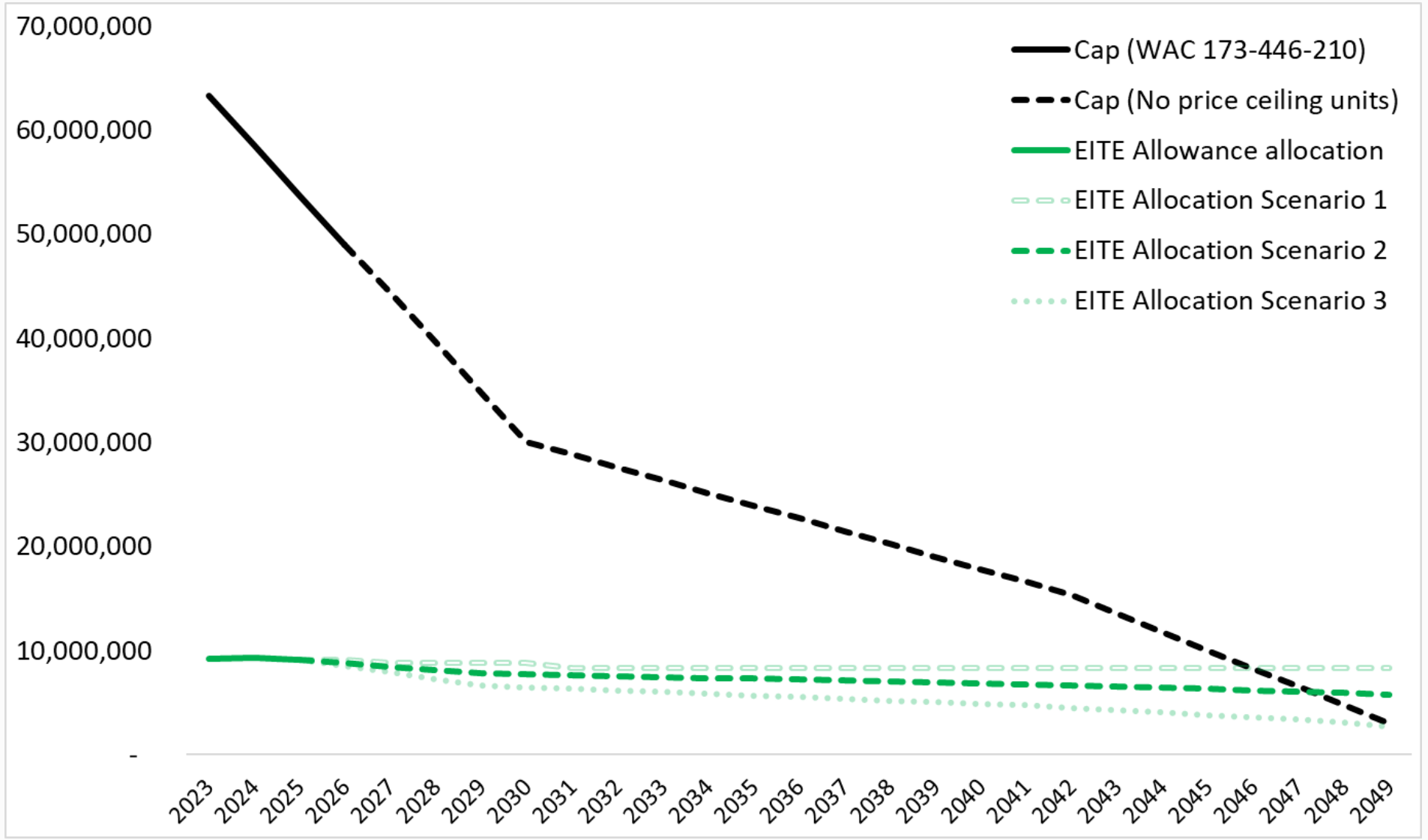
‘Default’ EITE allocation policy in CCA: Production assumptions

- Non-refinery EITE allowances based on facility 2025 production*
- Refinery allowance allocations have three simplified scenarios**
  - **Scenario 1 - Constant refinery output** (based on 2025 production, any reduction of in-state consumption offset by increased exports)
  - **Scenario 2 - Constant refinery exports** (exports remain steady at 40%, remaining production declines in line with cap as in-state fuel consumption declines)
  - **Scenario 3 - Refinery operations decline with cap** (total production declines in line with cap and proportional to declining in-state fuel consumption)

* EITE allowance allocation is based on annual production not emissions

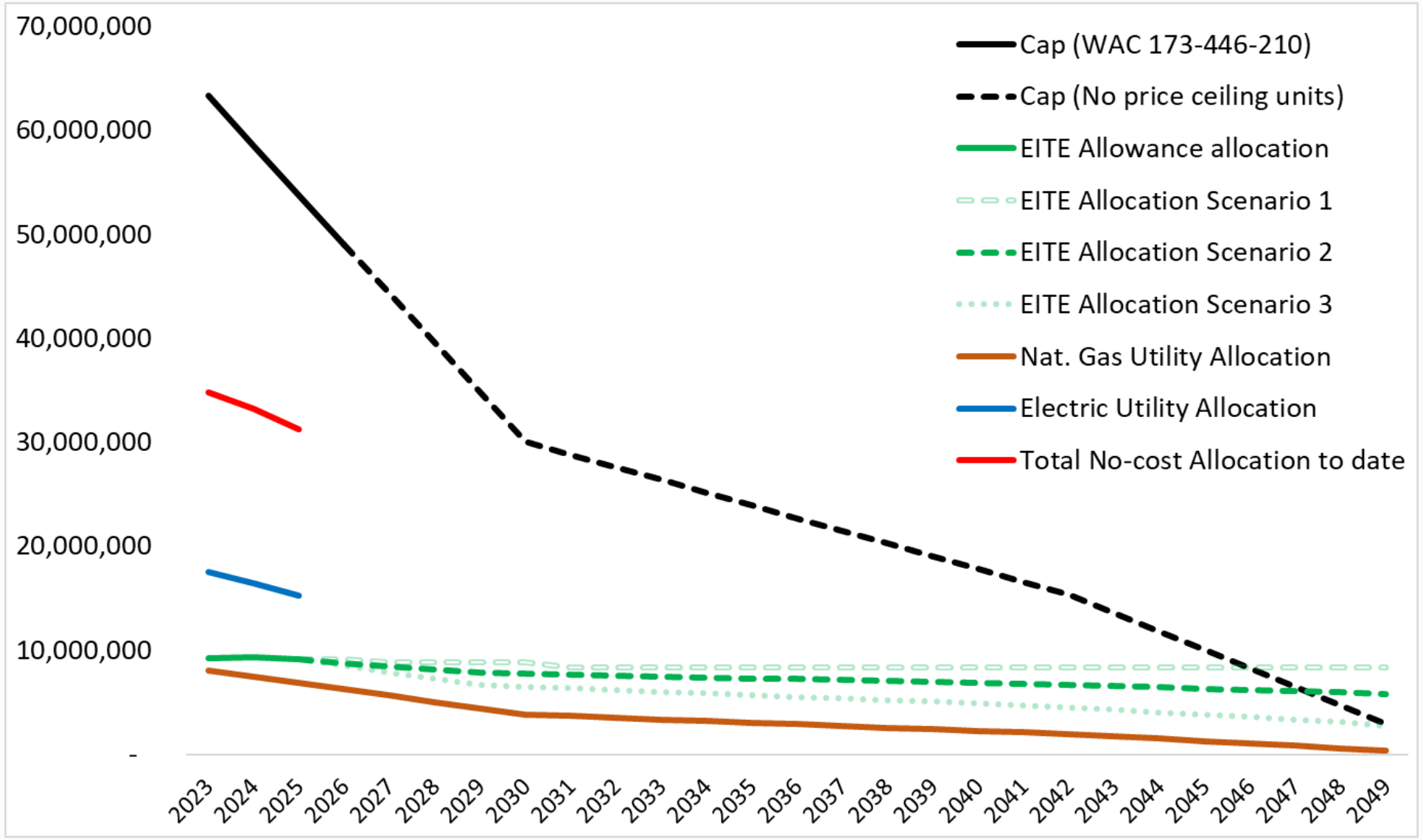
** Informed by data in 2025 legislative report: Washington State Refinery Economic Impact Study

Illustrative scenario: default EITE policies



mTons CO2 = metric tons of carbon dioxide equivalent

Illustrative scenario: default EITE policies and total no cost allocation to date



Eastern Research Group (ERG) Report

ERG report

- Report was developed through a contract with the Eastern Research Group (ERG)
- Provides information on environmental justice and economic impacts of EITE facilities on the communities where they are located as well as applicable statewide impacts
- Includes analysis of how these impacts may change due to Cap-and-Invest Program policies

Link: Report by ERG: Environmental justice and economic/market information on emissions-intensive, trade-exposed (EITEs) facilities in Washington (July 2025)

Air pollution impacts

- EITEs were responsible for 13.3% of total reported greenhouse gas emissions in WA in 2023 (14% of total emissions covered under the Cap-and-Invest Program)
- Greenhouse gas emissions from any CCA covered entities most strongly correlated with carbon monoxide, nitrous oxides, and sulfur dioxide
- EITEs accounted for 20.9% of sulfur dioxide emissions and 8.6% of nitrous oxide emissions statewide
- Largest contributors to air pollution in WA are Particulate matter 2.5 and 10
  - EITEs contribute 0.8% and 0.4% respectively (main sources include wildfires, wood burning, road dust)

Pollutant	EITE total (tons)	State total (tons)	EITE % of state
Carbon monoxide	7,108	1,446,622	0.5%
Ammonia	268	36,022	0.7%
Nitrous oxides	12,483	145,209	8.6%
Particulate matter 10	1,468	352,868	0.4%
Particulate matter 2.5	1,191	145,444	0.8%
Sulfur dioxide	2,657	12,716	20.9%
Volatile organic compounds	4,494	349,882	1.3%

Source: Statewide 2022 CAP emissions data from ERG report

Health impacts based on CO–Benefits Risk Assessment (COBRA)

ERG used EPA's COBRA to assess changes in air pollution

Scenario: 6% reduction in emission from criteria air pollutants from EITEs in 2034

Findings for 2034

- The associated value of health benefits is estimated to be between $34.4 to $50.2 million.
- King County would have the greatest health benefits from the reduction in criteria air pollutant emissions, based on the high population in the county
- Chart shows other health outcome benefits

Health Outcomes	Source County- Total Avoided Incidence	Statewide- Total Avoided Incidence
Total mortality (low estimate)	0.3	1.6
Total mortality (high estimate)	0.4	2.4
Total asthma symptoms	155.7	1,049.8
Total asthma onset	0.9	6.3
Total emergency room visits	0.4	2.5
Total hospital admittance	0.1	0.7
Total onset	6.3	43.2
Minor restricted activity days	101.0	542.9
Work loss days	66.9	92.0
School loss days	17.1	492.7

Source: County and Statewide Avoided Incidence by Health Outcome in 2034 from ERG report

Current economic impacts

ERG used IMPLAN, an Input-Output economic impacts analysis software, to understand the current economic contribution of EITEs in Washington

Key Findings

- EITE industrial sectors contribute to Washington economy (direct, indirect, induced)
  - $73 billion output (revenue)
  - 85,000 jobs (full time, part time and seasonal employment)
  - $5 billion in tax revenues

Further information on sector-level and county-level impacts is provided in the report.

Projected economic impact assessment

ERG used IMPLAN to estimate the economic impacts (direct, indirect and induced) of existing EITE allocation policy from 2023-2034 using two 'worse-case' scenarios:

1. EITEs unable to passthrough estimated CCA compliance costs (or reduce emissions)

Estimated reductions

- $273 million in output (revenue)
- 248 jobs*
- $17 million in tax revenues

**Includes full-time, part-time time and seasonal employment*

2. EITEs passthrough 50% of estimated CCA compliance costs (without reducing emissions)

Estimated reductions:

- $255 million in output (revenue)
- 646 jobs*
- $25 million in tax revenues

Further information on sector-level and county-level impacts is provided in the report.

This slide was updated after the advisory meeting on July 24

Market analysis and industry profiles

ERG compiled information on market structure and competitive dynamics for nine industrial sectors classified as EITE in Washington State

- Contribution to WA's GDP in 2023 from these sectors ranged from 0.15% to 3.69%*
  - Lowest GDP contribution: Metal manufacturing
  - Highest GDP contribution: Aerospace manufacturing
- Value of international exports from WA in 2024 by these sectors ranged from $70 million to $17.5 billion**
  - Lowest export value: Glass manufacturing
  - Highest export value: Aerospace manufacturing

* data is based on 6-digit NAICS codes, which capture all firms operating in these industrial sectors, not just EITE facilities
** includes exports from NAICS codes and goods exported from WA ports that aren't necessarily produced in state

Market analysis and industry profiles

- Most key competitors of EITEs domestically and internationally are in jurisdictions with a lower average carbon price than Washington or no carbon pricing policies
- Competitors with carbon pricing policies typically have carbon leakage mitigation policies for their EITEs (e.g. free allowance allocation)

Further details on the nine industrial sectors can be found in the ERG report

How this data and analysis will inform Ecology's report

- Provides important contextual information around the economic and environmental justice impacts of the EITE allocation policies in the Cap-and-Invest Program
- Provides information to inform our preliminary environmental justice evaluation
- Data and methods could also be used to assess policy options for EITE allowance allocation in 2035-2050

Preliminary environmental justice evaluation

Environmental justice considerations for EITEs

- Can emit large amounts of harmful air pollutants
- Allocation policy may influence pace of greenhouse gas emission reductions
- Limits auction revenues
- Impacts on local jobs
- Some EITEs are located within or nearby Tribal Reservations and overburdened communities

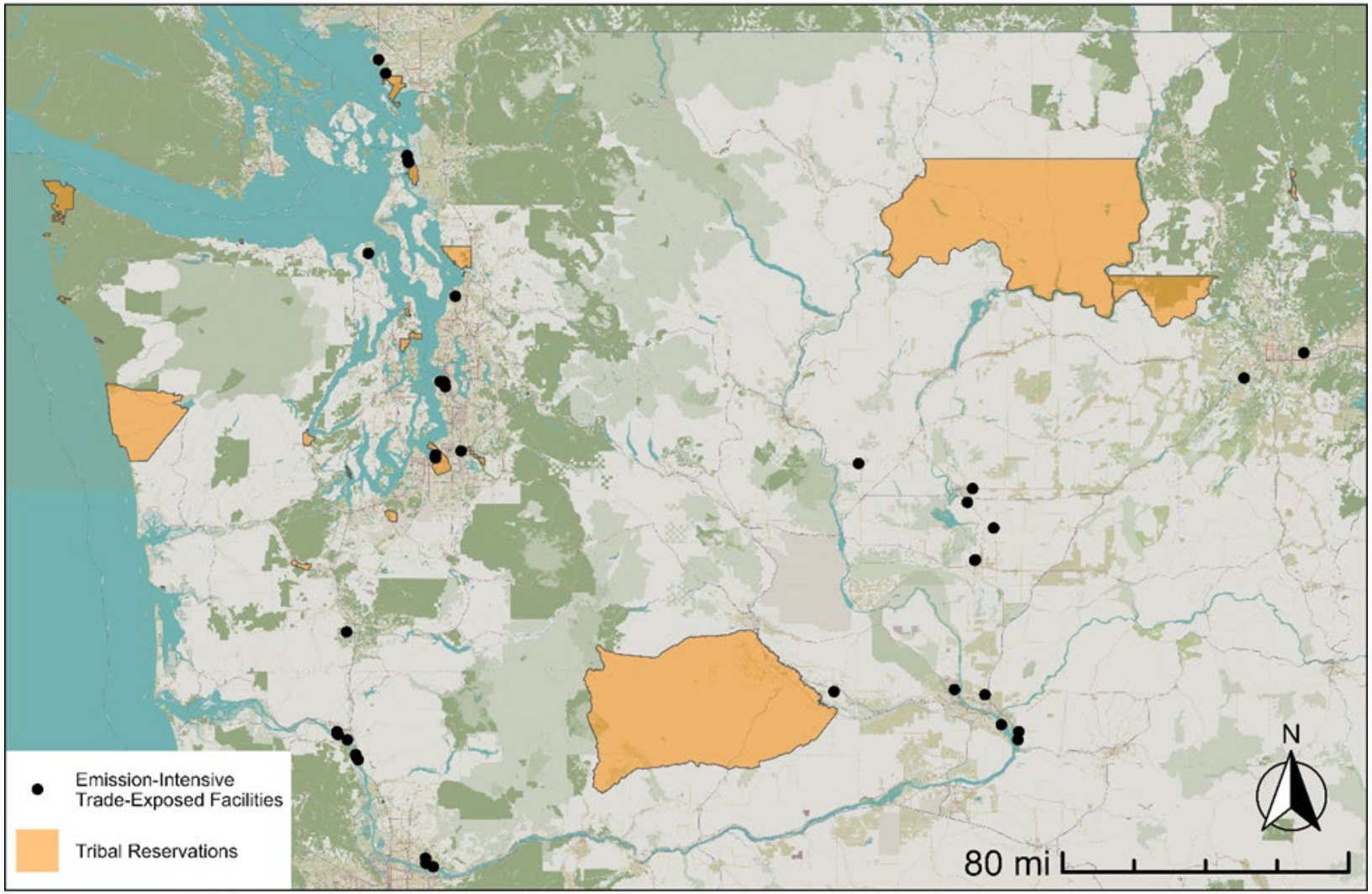
CCA environmental justice requirements related to EITEs

- 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: WAC-173-446-600(7)(d)

Methodology for preliminary environmental justice evaluation

- Identified impacted communities including Tribes, overburdened communities, and vulnerable populations near EITE facilities, using the Washington Environmental Health Disparities Map
- Invitation to share information and feedback on potential environmental and economic impacts
- Analyzed ERG data to understand how EITE facilities could affect air quality, health, jobs, and local economies in these communities

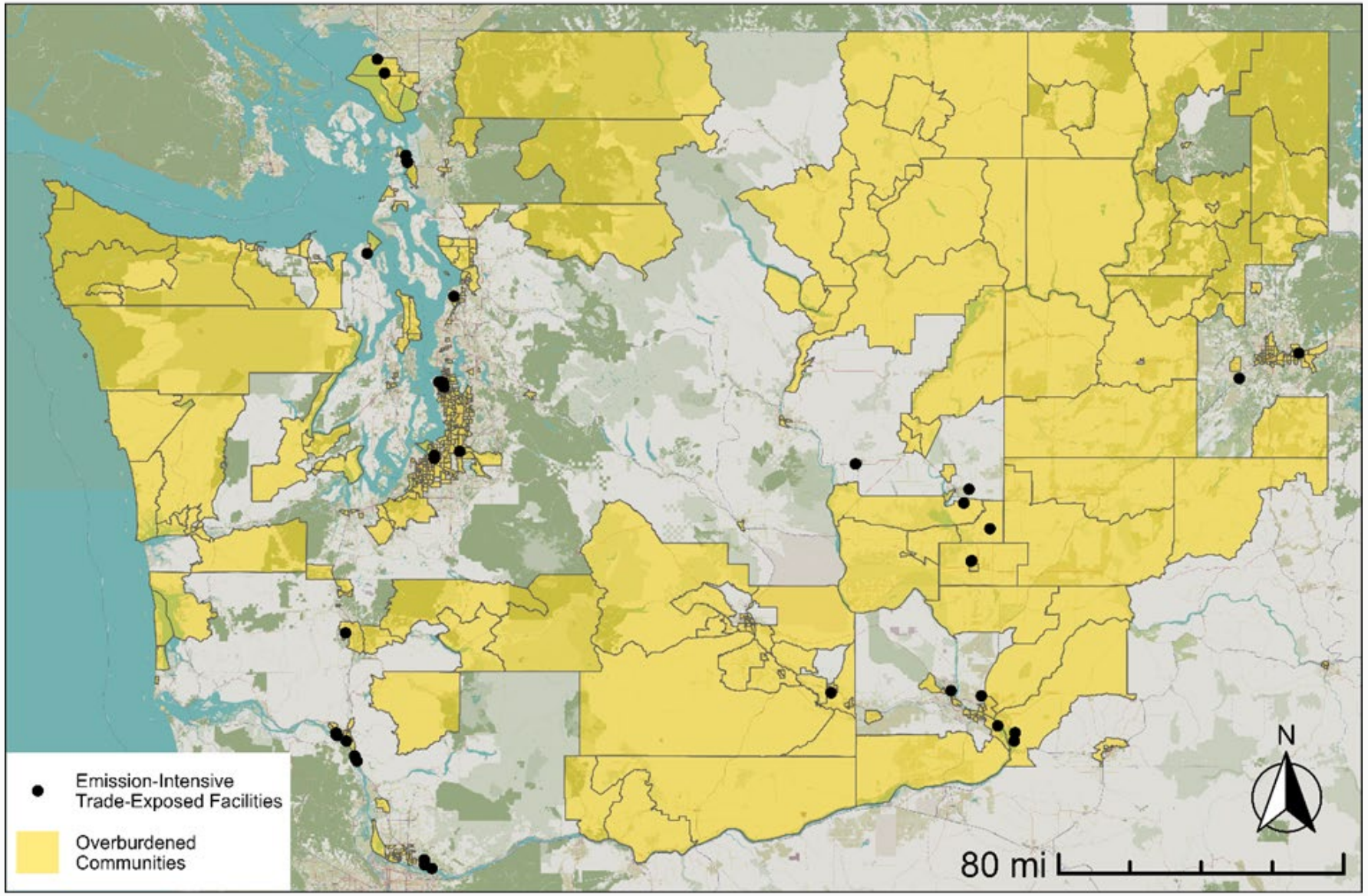
EITEs near Tribal Reservations



Tribal Reservation	EITE Facilities within 15 miles
Puyallup Reservation	Georgia-Pacific Gypsum U.S. Oil & Refining Co. Boeing Company-Auburn
Swinomish Reservation	HF Sinclair Puget Sound Refinery Marathon Anacortes Refinery Air Liquide Hydrogen Plant Matheson-Anacortes
Lummi Reservation	BP Cherry Point Refinery Phillips 66 Ferndale Refinery
Yakima Reservation	Dairygold-Sunnyside
Muckleshoot Reservation	Boeing Company-Auburn U.S. Oil & Refining Co Georgia-Pacific Gypsum
Tulalip Reservation	Boeing Commercial Airplanes

Source: EITEs within or nearby Tribal Reservations from ERG report

EITEs near Overburdened Communities (OBCs)



- 20 EITEs located within OBCs
- 15 EITEs located within 3-miles of OBCs

Of those 35 EITEs, 10 are in OBCs highly impacted by air pollution and 4 are within 3-miles of OBCs highly impacted by air pollution

Map of overburdened communities and EITE facilities from ERG report

Next steps for the preliminary environmental justice evaluation

- Provide written comments by **Sept. 3**
- Invitation to meet with Tribes, communities, and environmental organizations, and community members
- Track and integrate feedback into the final report

Draft materials:

Document 6: Draft recommendations

Context

RCW 70A.65.110(4)(a) required Ecology to:

a) Review global best practices for avoiding emissions leakage

b) Evaluate benchmarking methods for EITEs

c) Describe potential approaches for determining how allowances are allocated to EITEs from 2035-2050

Draft materials released today:

- Document 6: draft recommendations
- Draft table of contents

Overview

- Provides nine draft recommendations regarding the approach for allocating allowances to EITEs from 2035-2050.
- Grouped under the four policy design considerations identified in Document 5
- Includes information on complementary measures that could be progressed alongside Cap-and-Invest to support EITE decarbonization.
- Opportunity for advisory group members and other interested parties to provide feedback on the draft recommendations and potential complementary policies and strategies.

Method

- Reviewed best practices policies for avoiding leakage and maintaining competitiveness of EITEs under carbon pricing programs and methods for benchmarking EITE greenhouse gas emissions (Document 1 and 2)
- Developed a two-step assessment framework for identifying and assessing potential policy options (Document 3)
- Identified four policy design considerations for allocating allowances to EITEs from 2035-2050 that were used to identify policy options (Document 4)
- Staff used this assessment framework to assess 16 policy options for allocating allowances to EITEs from 2035-2050 (Document 5).

Method

- Based on findings of the draft assessment in Document 5 and feedback from advisory groups:
  - In principle support to continue provide no-cost allowances to EITEs from 2035 onwards to mitigate leakage risk
  - Requested further information and engagement to better understand differences between policy options and their impacts
- Staff assume draft recommendations would be progressed in 2026 to inform policy development (if supported by Legislature)

Policy Design Consideration 1:

Establish a level playing field for EITEs producing within the jurisdiction

Draft Recommendation 1.1 – The Legislature should maintain Ecology's authorization to provide no-cost allowances to EITEs from 2035 onwards provided it aligns with program objectives, allowance budgets, and emissions limits.

Recommendation would include:

- Extension of the existing statutory authority for Ecology to provide no-cost allowances to EITEs from 2035 onwards
- Requirement for Ecology to ensure design and implementation of EITE allowance allocation aligns with annual allowance budgets and other applicable program objectives, including supporting the achievement of statewide emissions limits.

All the other draft recommendations are contingent on the implementation of this recommendation.

Policy Design Consideration 1:

Establish a level playing field for EITEs producing within the jurisdiction

Draft Recommendation 1.2 – Ecology should monitor developments in carbon pricing policies in key jurisdictions and relevant federal policies as part of periodic program evaluations, including developments in carbon border adjustment mechanisms or alternative policies to address leakage risk.

Recommendation would include:

- Closely monitoring policy developments in linked jurisdictions or jurisdictions with which Washington contemplates linkage
- Monitoring developments in carbon border adjustment mechanisms or alternative policies to address leakage risk that could complement or supplant no-cost allowance allocation over time.

Policy Design Consideration 2:

Identifying and targeting assistance for EITEs in Washington that are most at risk of leakage

Draft Recommendation 2.1 – Ecology should develop an objective approach for assessing leakage risk for EITEs in Washington and assess the impacts of implementing an assistance factor that targets allowance allocation based on this objective approach.

Recommendation would include:

- Identifying quantitative and/or qualitative criteria and methods to objectively assess leakage risk for EITEs in Washington.
- Assessing leakage risk associated with electricity purchases by EITEs.
- Determining how to differentiate leakage risk associated with different industrial activities or sectors in Washington
- Assessing the impacts of implementing an assistance factor based on leakage risk
- Seeking input from EITE representatives and subject matter experts on the above

Policy Design Consideration 2:

Identifying and targeting assistance for EITEs in Washington that are most at risk of leakage

Draft Recommendation 2.2 – Ecology should assess the implementation requirements and impacts of providing no-cost allowances to EITEs for addressing leakage risk associated with purchased electricity.

Recommendation would include:

- Analyzing data on purchased electricity by EITEs and associated emissions.
- Assessing methods for determining the amount of no-cost allowances required to mitigate leakage risk from purchased electricity.
- Assessing options/impacts of delineating electric load associated with purchased electricity by EITEs from load used to calculate no-cost allowances for electric utilities.
- Assessing implementation requirements and impacts of providing no-cost allowances to EITEs for purchased electricity.
- Seeking input from EITEs, electric utilities, and subject matter experts

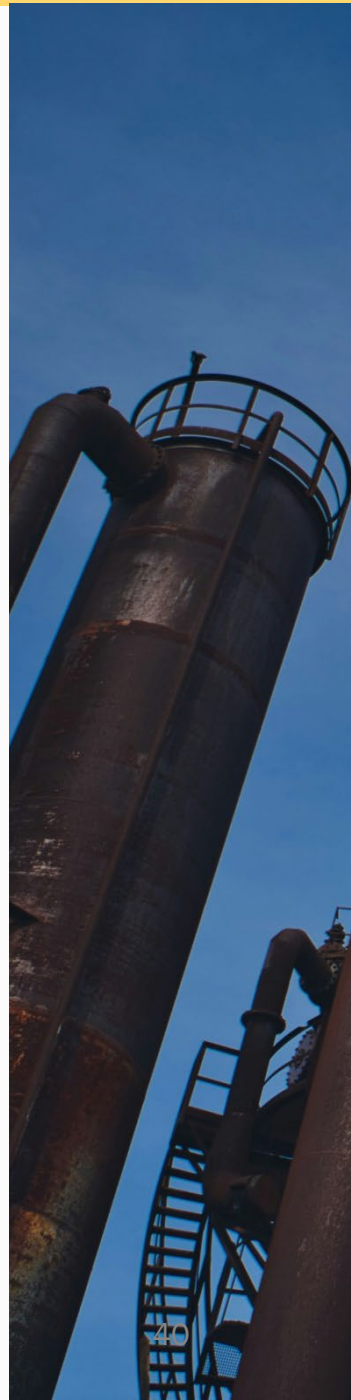
Policy Design Consideration 3:

Maintain decarbonization incentives for EITEs and reward efficient production

Draft Recommendation 3.1 – Ecology should assess the implementation requirements and impacts of adopting product-based benchmarks or alternative methods for establishing allocation baselines for EITE allowance allocation.

Recommendation would include:

- Assessing the potential design of product-based benchmarks for EITEs in WA
- Assessing the potential design of at least one alternative method for establishing allocation baselines
- Assessing the implementation requirements associated with establishing product-based benchmarks and alternative methods for establishing allocation baselines.
- Assessing the impacts of retaining existing allocation baselines compared to implementing product-based benchmarks or alternative methods for establishing allocation baselines.
- Seeking input from EITE representatives and subject matter experts.



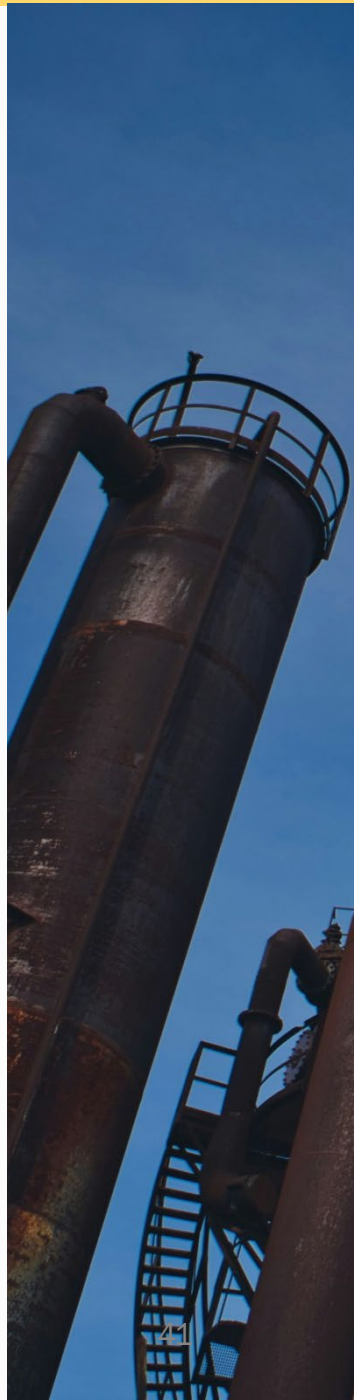
Policy Design Consideration 3:

Maintain decarbonization incentives for EITEs and reward efficient production

Draft Recommendation 3.2 – Ecology should assess the implementation requirements and impacts of using consignment to require EITEs to invest some of the value of their no-cost allowances in decarbonization projects.

Recommendation would include:

- Assessing potential design of criteria and methods for EITEs to demonstrate how consigned allowances will be invested in projects that decarbonize operations and reduce greenhouse emissions.
  - Including consideration of project timelines, facility turnarounds, and permitting requirements.
- Assessing impacts and implementation requirements for EITEs to demonstrate how consigned allowances will be invested in projects that decarbonize their operations.
- Seeking input from EITE representatives and subject matter experts.



Policy Design Consideration 4:
Align with the program cap and emissions limits

Draft Recommendation 4.1 – Ecology should assess the policy design requirements and impacts of implementing a cap adjustment factor to ensure EITE allowance allocation aligns with program allowance budgets and net-zero emissions limits.

Recommendation would include:

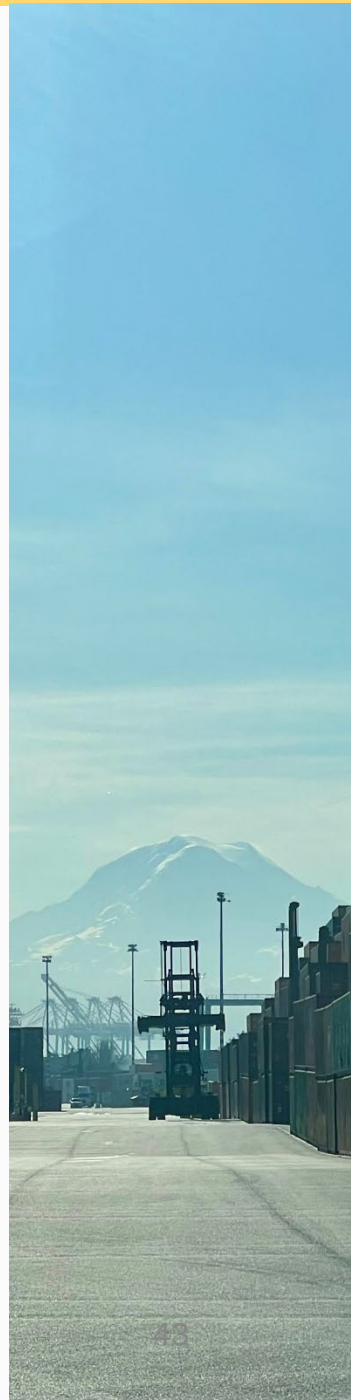
- Undertaking market analysis to determine what cap decline factor would need to be applied to ensure EITE allowance allocation aligns with annual allowance budgets and auctioned allowance requirements
- Assessing options and impacts of applying a cap adjustment factor, including whether is it applied uniformly across emissions years and/or uniformly across EITE sectors.
- Undertaking analysis to determine how total no-cost allowances provided to EITEs and electric and natural gas utilities, as well as the allowances distributed by Ecology via auction, will align with the annual allowance budgets and auctioned allowance requirements

Policy Design Consideration 4:
Align with the program cap and emissions limits

Draft Recommendation 4.2 – Ecology should assess at least one alternative policy option that would achieve a similar outcome as a cap adjustment factor.

Recommendation would include:

- Assessing potential design of at least one alternative policy option that could achieve a similar outcome as a cap adjustment factor.
- Using this alternative policy to assess and compare the impacts of implementing a cap adjustment factor.



Other considerations:
Environmental justice and economic impacts

Draft Recommendation 5.1 – Ecology should assess the environmental justice and economic impacts of proposed policy options in the draft recommendations and interactions with existing CCA policies.

Recommendation would include:

- Assessing local and statewide impacts on air pollution, community health, tax revenues and employment, including impacts on overburdened communities and Tribes
- Assessing the interactions between the proposed policy options with existing environmental justice requirements in the CCA and Cap-and-Invest Program
- Analyzing impacts of proposed policy options on auction proceeds
- Engaging with overburdened communities and Tribes and following all applicable requirements of the HEAL Act.
- Assessing alignment of proposed policies with existing policies in the CCA and related state climate policies for achieving statewide emissions limits.

Complementary policies to support decarbonization and emission reductions

- Staff have identified some complementary policies that could potentially be pursued to support the decarbonization of EITEs in Washington
  - For example, policies and strategies in the draft Comprehensive Climate Action Plan
- List of potential complementary policies to support decarbonization and emission reductions are provided in Appendix 1 of Document 6
- Ecology seeking feedback on whether these policies should be considered by the Legislature
- Will consider feedback received on draft Comprehensive Climate Action Plan alongside feedback received on EITE report materials

Summary of Document 6

- Nine draft recommendations regarding the approach for allocating allowances to EITEs from 2035-2050:
  - Two draft recommendations under each of the four Policy Design Considerations
  - One draft recommendation addressing environmental justice and economic impacts
- Assumes recommendations would be progressed in 2026 with input from EITEs and subject matter experts
- Includes information on complementary measures that could potentially support EITE decarbonization and emissions limits

Considerations when reviewing documents

- What questions and feedback do you have about the draft recommendations?
- What feedback do you have on potential complementary measures to support decarbonization by EITEs?
- Are there other issues that should be considered when implementing the recommendations?
- What other information would help you in preparing written comments by September 3?

Questions and comments

Next steps

- EITE Policy Advisory Group meeting
  - July 30 from 9:00 a.m. to 11:00 a.m.
- EITE Industries Advisory Group
  - July 31 from 9:00 a.m. to 11:30 a.m.
- Final feedback/comment
  - Submit via the electronic comment platform by Sept. 3

Facility located outside of Washington

Public comment opportunity

Guidelines for providing public comment

- Please use “raise hand” button or share in the chat to indicate that you wish to provide a comment
- Up to two minutes per person
- 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 comment platform

Thank you!

Adrian Young
Cap-and-Invest Industrial Policy Lead
CCAEITEIndustries@ecy.wa.gov

Resources

- Meeting materials (draft documents, presentations, recording)
- Notifications on EITEs and the report
- EITE Industries webpage