



West Coast Climate & Materials Management Forum

December 7, 2023

End of Year Membership Meeting

Zoom Logistics and Technical Orientation

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- For closed captioning of today's discussion, please select the closed captioning icon at the bottom of your screen.
- Please email hannah.stroud@erg.com if you experience any technical difficulties with Zoom.
- There will be informal/round-robin presentations today with the hope of audience participation to add to the knowledge shared.
- Today's session will be recorded and shared at a later date through the Forum website at www.westcoastclimateforum.com



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West Coast Climate Forum Webinar Series Disclaimer

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This webinar is being provided as part of the West Coast Climate and Materials Management Forum Webinar Series. The Forum is a collaboration of state, local, and tribal governments. We invite guest speakers to share their views on climate change topics to get participants thinking and talking about new strategies for achieving our environmental goals. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

Please note the opinions, ideas, or data presented by speakers in this series do not represent West Coast Climate and Materials Management Forum members policy or constitute endorsement by the forum.

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A collaboration of state, local, and tribal governments with the mission to:

- Develop ways to institutionalize sustainable materials management practices.
- Develop tools to help jurisdictions reduce the greenhouse gas emissions associated with materials



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Today's Agenda

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- Climate Pollution Reduction Grants (CPRGs)
- Consumption-based Emissions Inventories (CBEIs)
- Recent legislation and regulation in support of climate change and materials management
- New reports and resources released this year on climate change and materials management
- Q&A: conversation with the audience
- Next Steps



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EPA's Climate Pollution Reduction Grants (CPRG): Overview

CPRG program objectives:

- Create comprehensive pathways for **reducing pollution** and ensuring that investments maximize benefits
- Provide flexible planning resources for jurisdictions to maximize emission reductions
- Drive **transformative and scalable decarbonization efforts** in key sectors and across jurisdictions

CPRG is comprised of two phases:

Phase 1 (Non-Competitive) Planning Grants to develop strong climate pollution action plans (\$250M)

Phase 2 (Competitive) Implementation Grants to put plans into action (\$4.6B)



CPRG Timeline

Phase 1

Priority Climate Action Plan (PCAP)

- Due March 1, 2024

Comprehensive Climate Action Plan (CCAP)

- Due mid-2025

Status Report and Update

- Due mid-2027

Phase 2 Implementation Grant Due April 1, 2024

- Implementation Grant prioritizes actions with measurable GHG reductions from 2025-2030
- Funded actions must be named in PCAP



CPRG Planning Grant Awardees

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Washington

Washington Department of
Commerce

Seattle-Tacoma-Bellevue, WA
Metro Area

Oregon

Oregon Department of
Environmental Quality

Portland-Vancouver-Hillsboro,
OR-WA Metro Area

California

California Air Resources
Board

Bakersfield, CA Metro Area

Fresno, CA Metro Area

Los Angeles-Long Beach-
Anaheim, CA Metro Area

Oxnard-Thousand Oaks-
Ventura, CA Metro Area

Riverside-San Bernardino-
Ontario, CA Metro Area

Sacramento-Roseville-
Folsom, CA Metro Area

San Diego-Chula Vista-
Carlsbad, CA Metro Area

San Francisco-Oakland-
Berkeley, CA Metro Area

San Jose-Sunnyvale-Santa
Clara, CA Metro Area



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CPRG and Materials Management – The Opportunity

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- (1) PCAPs and CCAPs represent an opportunity to **integrate** consumption-based emissions inventories, materials management into regional and state-wide **climate action planning**
- (2) Materials management projects with significant climate impacts (e.g. food waste prevention) are **eligible for Phase 2 implementation grants**



Climate Pollution Reduction Grants: Oregon

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- Priority Climate Action Plan (PCAP) under development
 - Consultation with Global Warming Commission December 11
 - Public review/comment planned for January
- Materials Management content currently under consideration for inclusion:
 - Built environment/embodied carbon
 - Food waste prevention and recovery
 - Reduction in single-use plastics
 - Engineering controls for landfill methane



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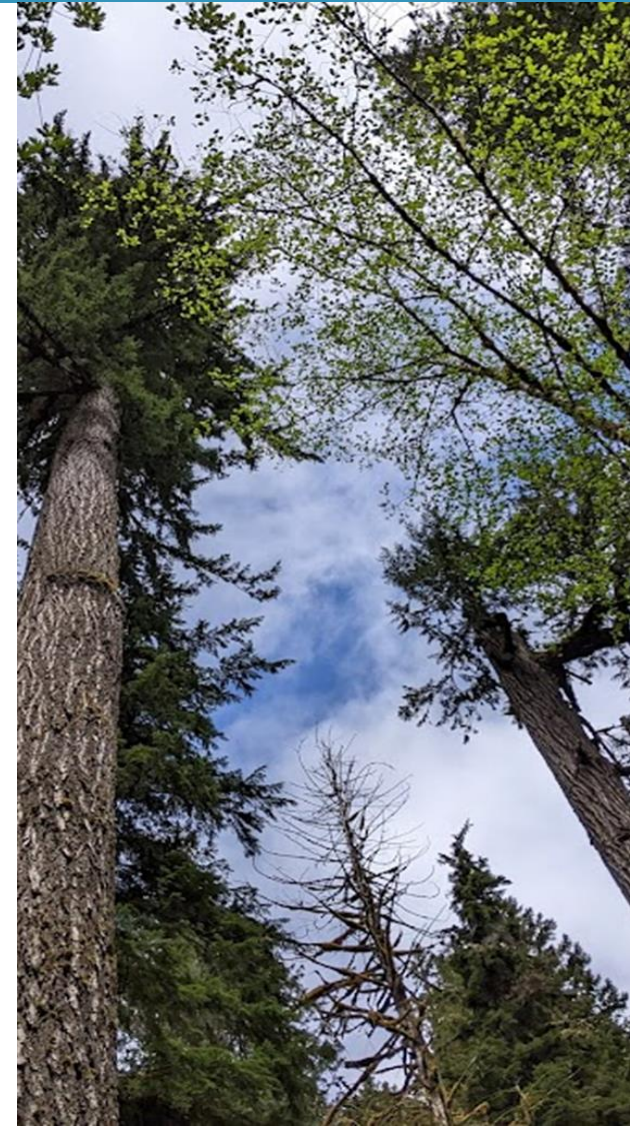
Climate Pollution Reduction Grants: Washington

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- Led by Dept of Commerce, with Dept of Ecology
 - [Commerce CPRG page](#)
 - [Public Survey](#) in process – due December 15
 - Coordination between State and Municipal Puget Sound Region
 - Draft PCAP expected in January – public review
- Materials Management content proposed includes:
 - **Food waste prevention; organics recovery and end-use**
 - Methane tracking and reduction, including at landfills
 - Built environment/embodied carbon



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Climate Pollution Reduction Grants: Seattle-Tacoma-Bellevue MSA

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- Led by Puget Sound Clean Air Agency, for 4-county area
- Draft Priority Climate Action Plan (PCAP) expected in January
- Public survey in process – due December 15
- Coordination between State and Municipal Puget Sound Region
- Materials Management content proposed includes:
 - Puget Sound Regional Emissions Analysis Consumption Based Emissions Inventory Results (4 counties and Seattle)
 - Food: low carbon production and procurement, waste prevention and rescue, repurposing, composting
 - Lifecycle emissions of goods: reuse, repair, share
 - Embodied emissions of building materials: optimizing use and design, deconstruction, building material reuse, low carbon materials
 - Waste management e.g. methane capture at landfills



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Many applicants are still investigating how to quantify GHG reductions, as a recent technical assistance forum revealed

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WCCMMF Content to Support CAPs

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westcoastclimateforum.com/resources

Including Embodied Carbon in Climate Action Plans



Food Waste and Climate Action Plans

Resource:

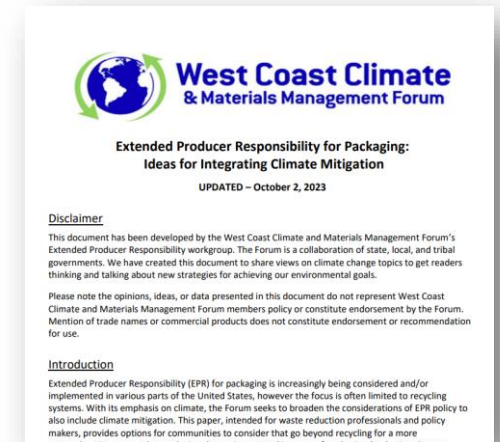
- FAQ: Including Scope 3 emissions in CAPs
- Report: EPR for Packaging: Ideas for Integrating Climate Mitigation

2023 Webinars:

- March: Built Environment West Coast state updates and federal funding overview
- April: Consumption based emissions inventories in CAPs
- June: Including embodied carbon in buildings in CAPs
- September: Food Waste and CAPs

Consumption Working Group:

- Monthly conversations



**More to come
in 2024!**



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Consumption-Based Emissions Inventory Updates



Consumption-based analyses have a lot of synonyms

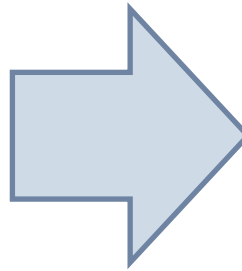
17

spillover effects
embodied emissions
consumption-based accounting
eeio. scope 3 emissions
mrio
environmentally extended input output
cbei
supply chain emissions
emissions embodied in trade



Consumption-based analyses convert local money spent into global impacts

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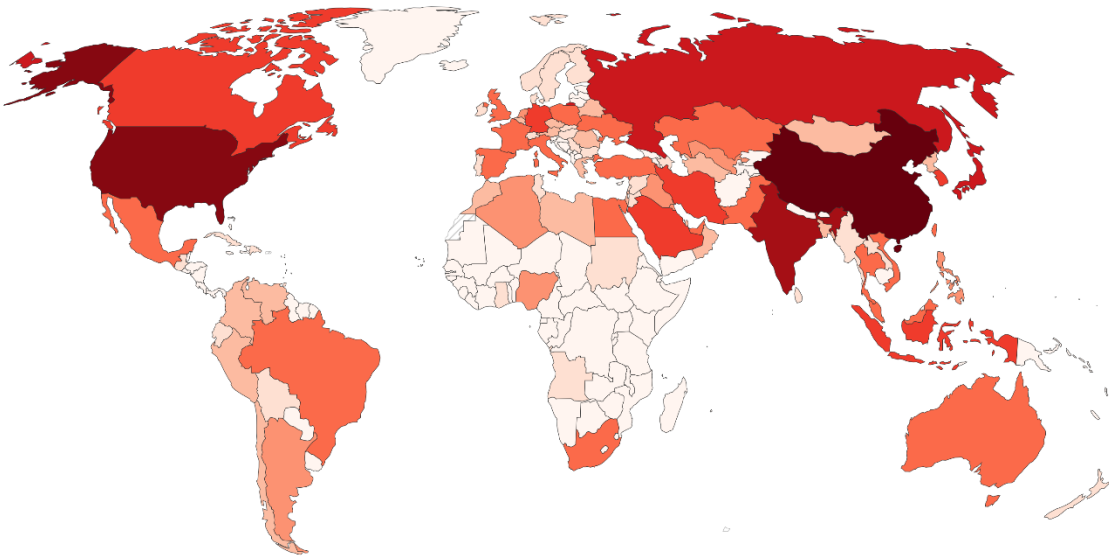
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It reveals who is ultimately responsible for emissions – no matter where they happen

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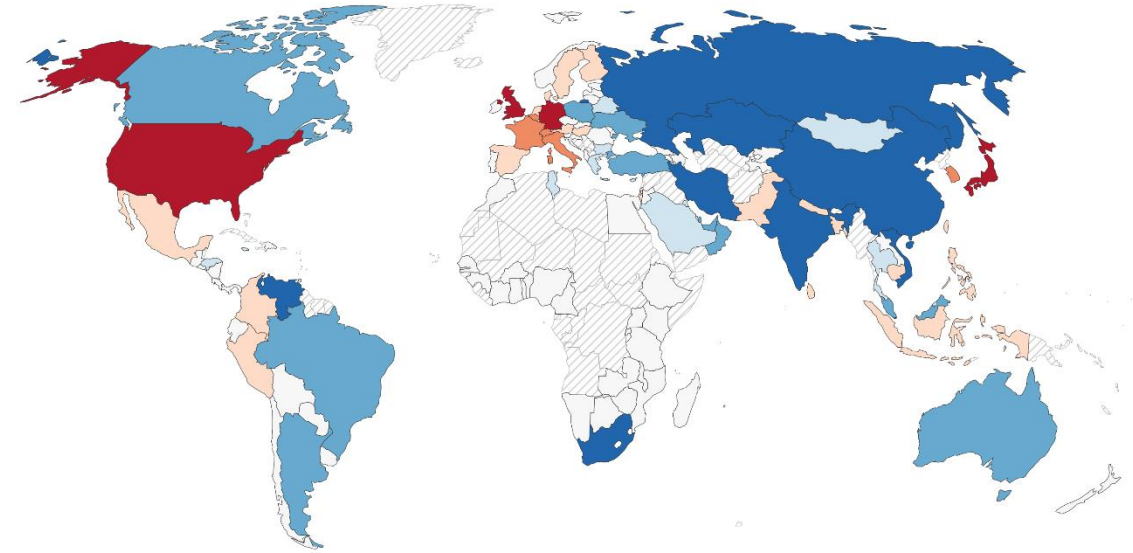
Annual CO₂ emissions, 2021

Carbon dioxide (CO₂) emissions from fossil fuels and industry. Land use change is not included.



CO₂ emissions embedded in global trade, 2020

This is measured as the net import-export balance in tonnes of CO₂ per year. Positive values (red) represent net importers of CO₂. Negative values (blue) represent net exporters of CO₂.



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source: ourworldindata.org

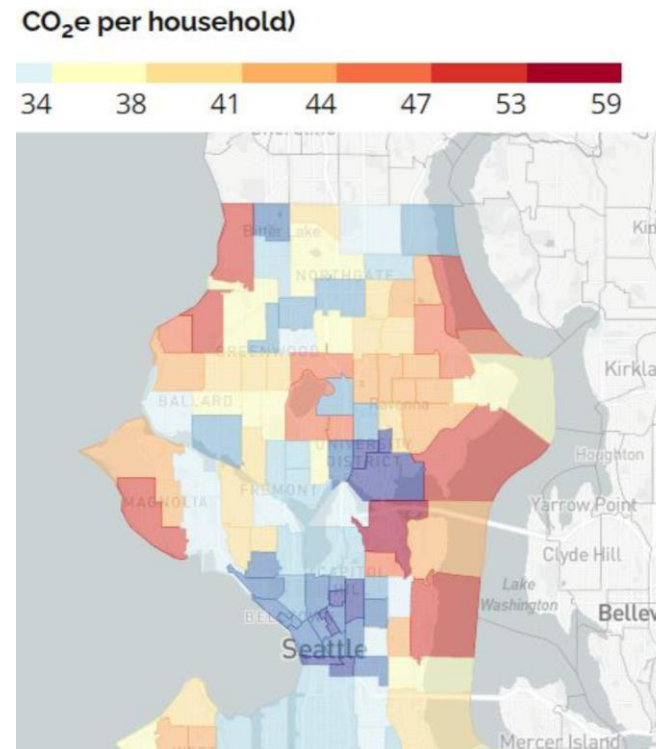
It reveals sources of impacts that were previously difficult to identify – and gives us new policy options

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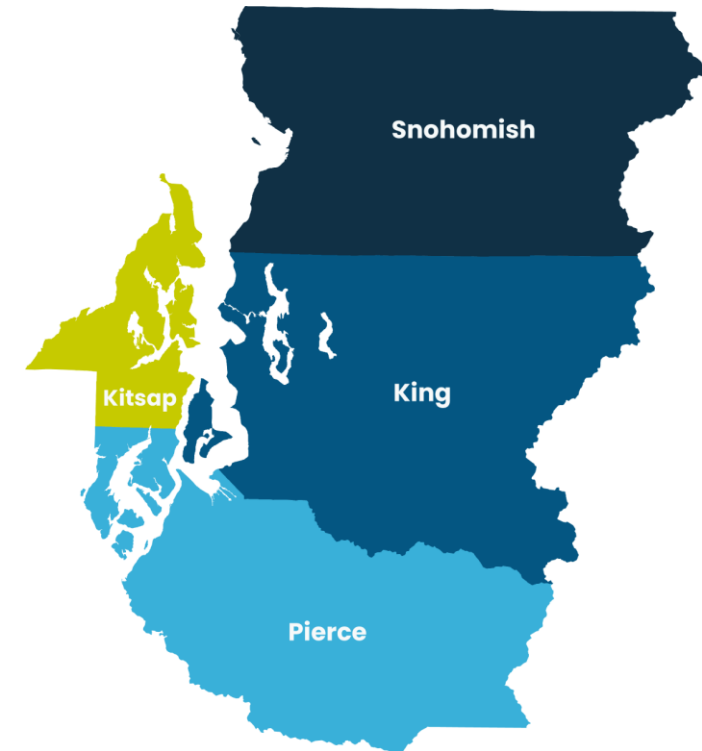


- In review!

CBEI Update: Puget Sound Regional Emissions Analysis

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- Puget Sound Regional Emissions Analysis included CBEI analysis for Seattle, King County, Snohomish County, Pierce County, and Kitsap County for 2019
- Using the best available approach from the CoolClimate Network at UC Berkeley, analysis was prepared by EcoDataLab and Stockholm Environment Institute



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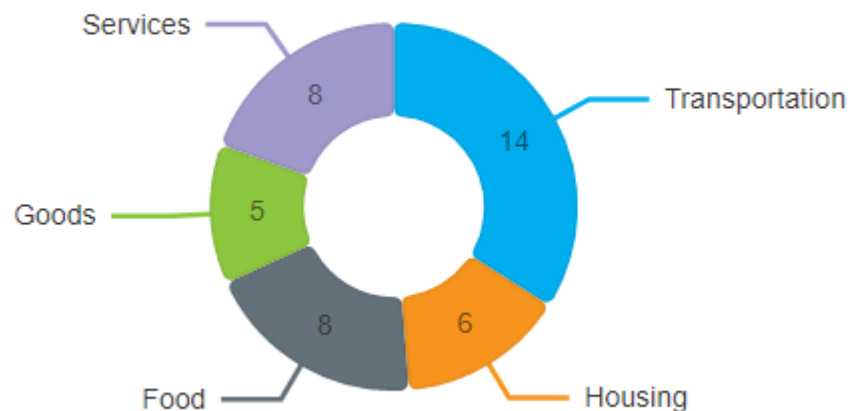
CBEI Update: Puget Sound Regional Emissions Analysis

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King County Community Consumption Based Emissions Inventory

Puget Sound Regional Emissions Analysis - Illustrative Data

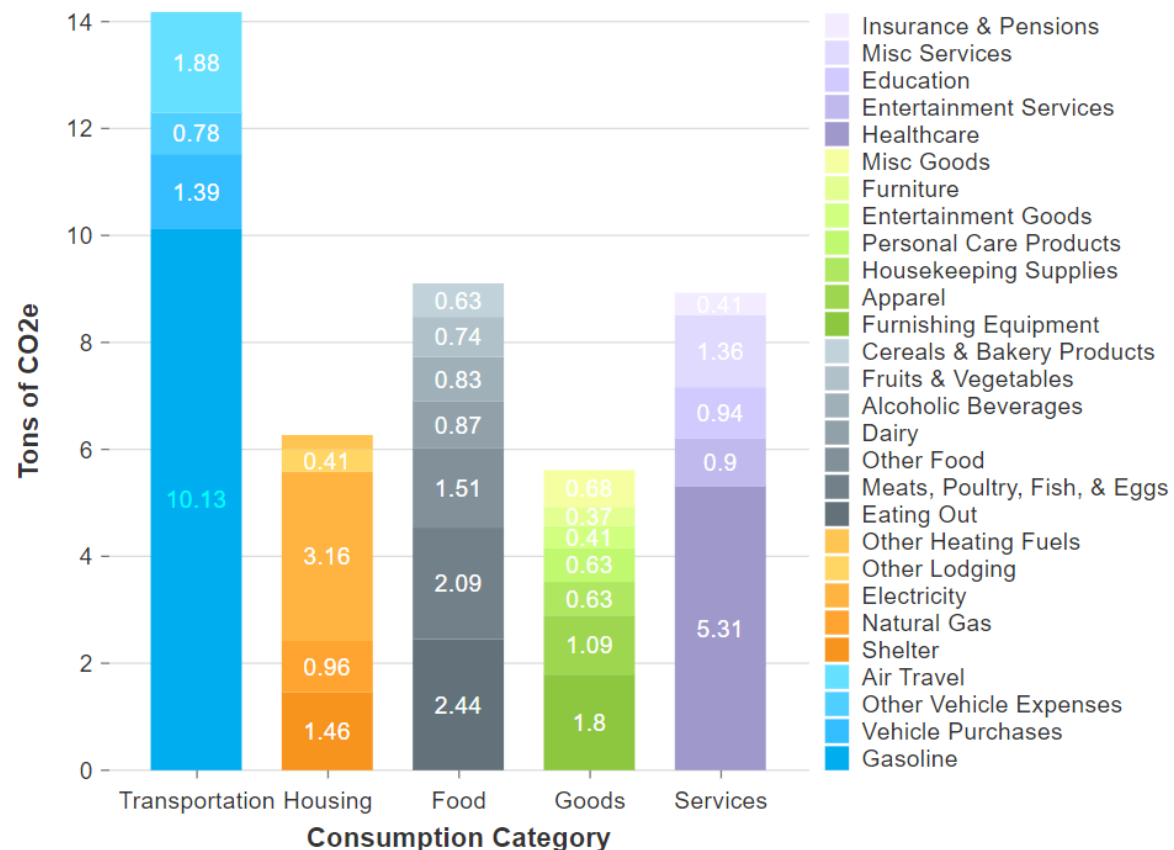
Emissions Categories Breakdown



~42 MTCO₂e/household
~38 million MTCO₂e countywide



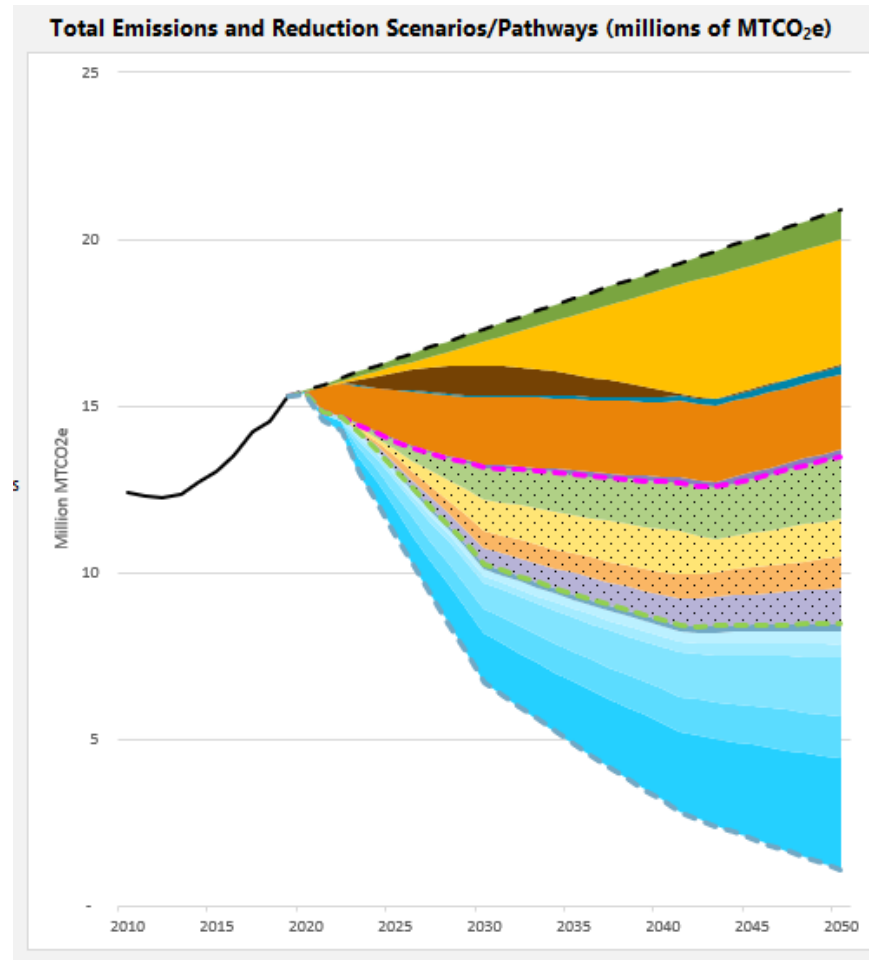
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CBEI Update: Puget Sound Regional Emissions Analysis

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- Focused on household consumption
- Accounts for key existing climate policies
- Analyzes how consumption changes can be a part of GHG reduction efforts



(1) **No action future scenario:** forecasted growth assuming no change in household emissions

(2) **Federal, state, & regional policies:** emissions after accounting for effects of existing federal, state, regional policies (same as territorial)

Existing policies & goals:

- PSRC Vision 2050
- WA EV sales law
- Federal CAFE + Washington CFS and CCA
- WA Energy Code
- WA Clean Energy Transformation Act
- Aviation Industry 2050 Net Zero Plan

(3) **Household consumption changes and reduced supply chain waste:** emissions after reducing and shifting consumption

Household consumption changes:

- Housing energy & construction consumption shifts
- Vehicle & travel consumption shifts
- Food consumption shifts
- Goods consumption shifts

Reduced supply chain waste:

- Reduced food and clothing supply chain waste

(4) **Decarbonization of supply chains:** remaining emissions if national & world economies decarbonize in line with Washington State targets



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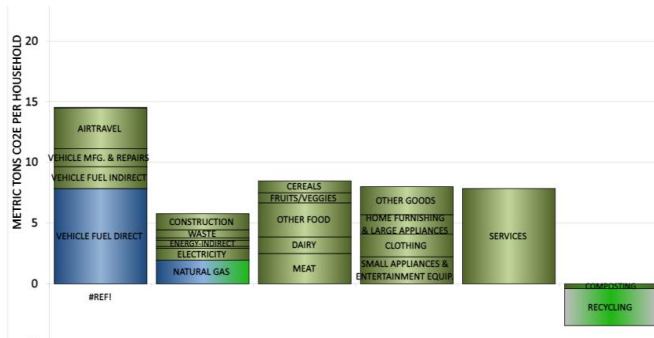
CBEI Update for California Local Governments

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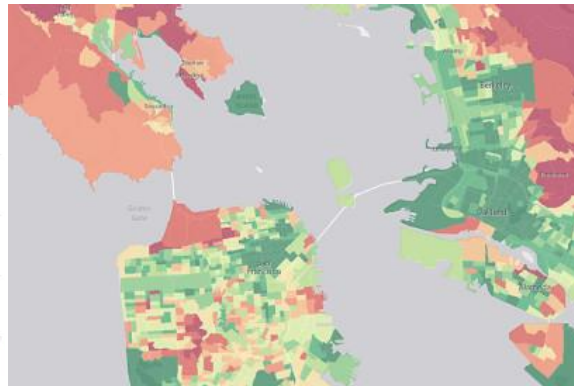
UC Berkeley Renewable and Appropriate Energy Lab / Cool Climate Network

Funded by California Climate Action Seed Grant

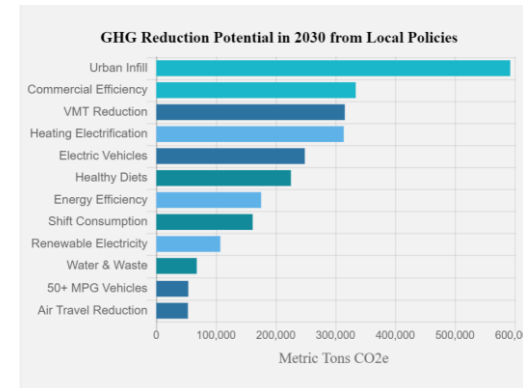
Territorial & Consumption Based Emissions Inventories



Equity Indicators



Scenario Analysis & Planning Tools



Journalism

The Climate Impact of Your Neighborhood, Mapped

By Nadia Popovich, Mira Rojanasakul and Brad Plumer Dec. 13, 2022

New data shared with The New York Times reveals stark disparities in how different U.S. households contribute to climate change. Looking at America's cities, a pattern emerges.

Emissions Footprint of the Average Household
20 30 40 50 60 70 tons of CO₂e, per household
NATIONAL AVERAGE



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If interested, email miya@stopwaste.org

Oregon Policy Study (HB 3409 (2023), Section 52)

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OPPORTUNITIES TO REDUCE OREGON'S CONSUMPTION-BASED GREENHOUSE GAS EMISSIONS

SECTION 52. (1) The Department of Environmental Quality, in consultation with the Oregon Climate Action Commission, shall evaluate opportunities to reduce Oregon's consumption-based greenhouse gas emissions. The department shall present its findings in a report submitted in the manner provided in ORS 192.245, and may include recommendations for legislation, to the interim committees of the Legislative Assembly related to the environment, and the commission, no later than September 15, 2024.

(2) The report under this section must:

- (a) Update Oregon's consumption-based greenhouse gas emissions inventory;
- (b) Identify opportunities to reduce consumption-based greenhouse gas emissions through materials management or other state programs or policies;
- (c) Include recommendations for regularly updating the consumption-based greenhouse gas emissions inventory; and
- (d) Evaluate the effects of consumption-based greenhouse gas emissions reductions, taking into account economic, social and environmental factors.



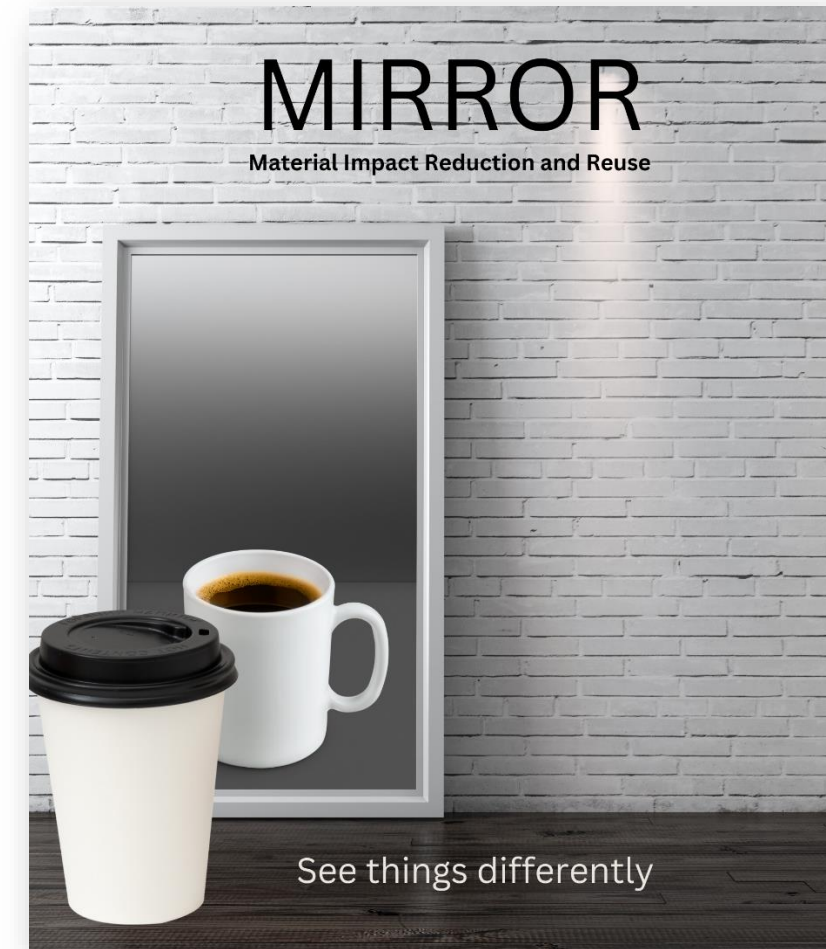
Legislative/Regulation Updates



Oregon: Recycling Modernization Act (2021) Rulemakings

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- Rulemaking 1 (completed Nov. 16, 2023)
 - Recycling acceptance lists, convenience standards and performance standards informed by LCA
 - “Practicability” benchmark for responsible end markets and impact reduction (market preferences) informed by social cost assessment. See OAR 340-090-0670(5)(c)(A) & <https://www.oregon.gov/deq/recycling/Pages/Material-Lists.aspx> (“Scenario Analysis”)
- Rulemaking 2 (in process, scheduled for completion Nov. 2024):
 - Funding for upstream impact reduction: “Material Impact Reduction and Reuse – Oregon” (“MIRROR”)
 - Standards for impact assessment and disclosure (incentives and mandates)

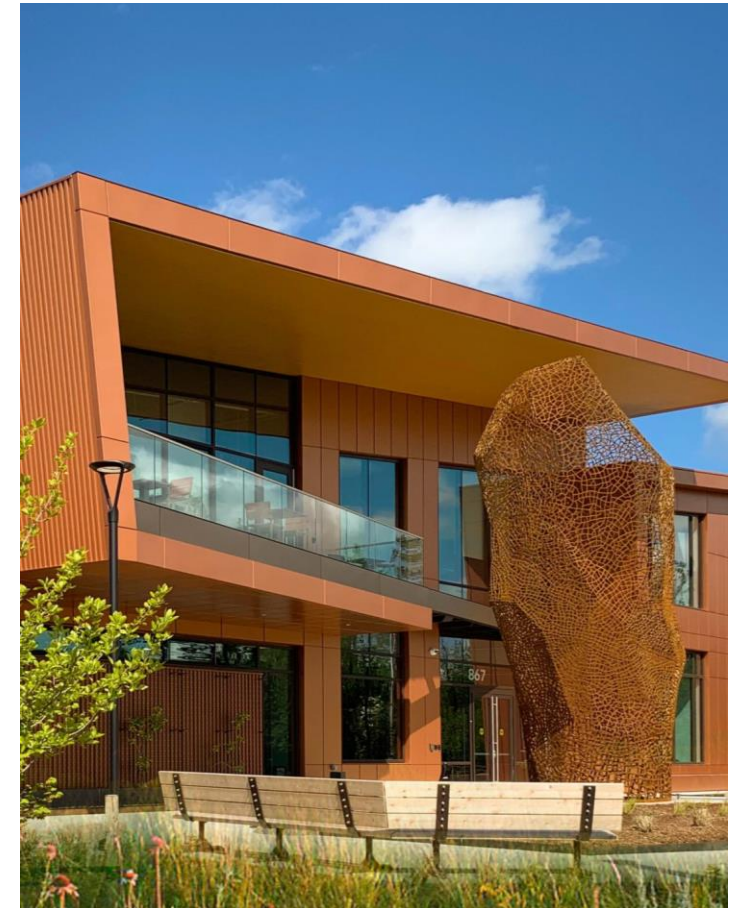


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Oregon: Embodied Carbon/Built Environment

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- “Buy Clean” (HB 4139 (2022))
 - ODOT contractors to submit EPDs for covered products by Dec. 31, 2025
 - EPDs can be used to score bids starting in 2027
 - Grant program to offset costs of complying with disclosure requirement
- State Construction
 - HB 3409 (Section 18) requires DAS to develop and implement sustainable design guidelines (including material selection) for capital projects >\$1 million
 - Guidelines under development, scheduled for completion next year
- Additional policy study
 - HB 3409 (Section 7) requires Building Codes Division to report on opportunities to reduce embodied carbon through building codes and other means



GBD Architects



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California Climate + Materials Management Legislation

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- SB 54: Plastic Pollution Prevention and Packaging Producer Responsibility Act (2022)
- SB 244: Right to Repair: electronics
- AB 43: GHG emissions: building materials: embodied carbon trading system
- CALGreen: Embodied Carbon requirements added for 100+ SF nonresidential
- AB 529: Adaptive Reuse Projects
- SB 253: Climate Corporate Data Accountability Act

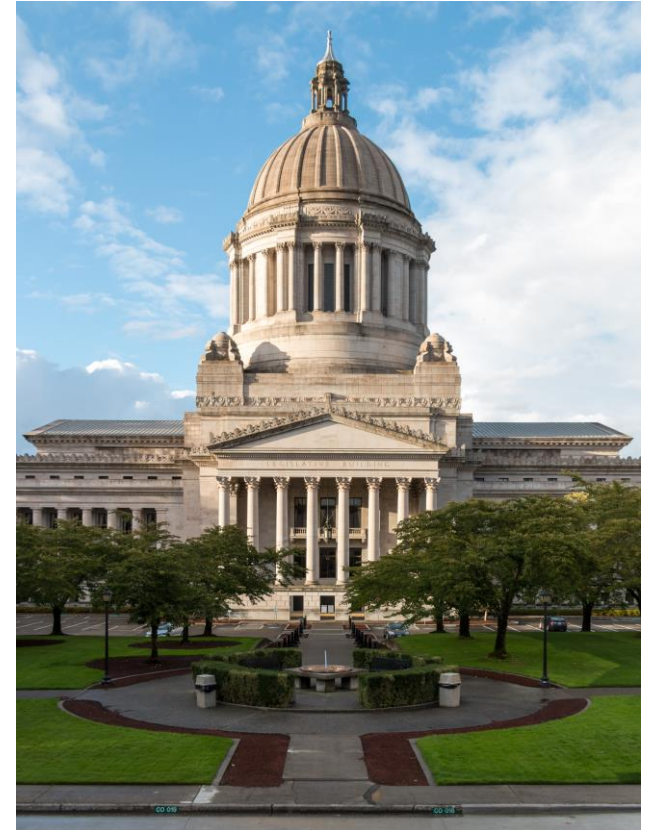


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Washington Climate and Materials Bills & Laws

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- Washington Recycling and Packaging (WRAP) Act
 - EPR for PPP – 4th year of bill. Draft includes:
 - Reuse fund and source reduction of plastic components
 - Post-consumer recycled content
- EPR Law for batteries passed in 2023
 - EV battery study for future bill
- EPR bills for wind turbine blades; appliances; clean lighting



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Washington's Organic Management Law

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Collection & management

1. Business organics management
2. Residential and non-residential collection

Processing

3. Recycled organics facility siting
4. Compostable product labeling

Markets

5. Compost procurement and reporting
6. Agricultural organic material purchases

Prevention

7. Good Samaritan laws
8. Washington Center for Sustainable Food Management



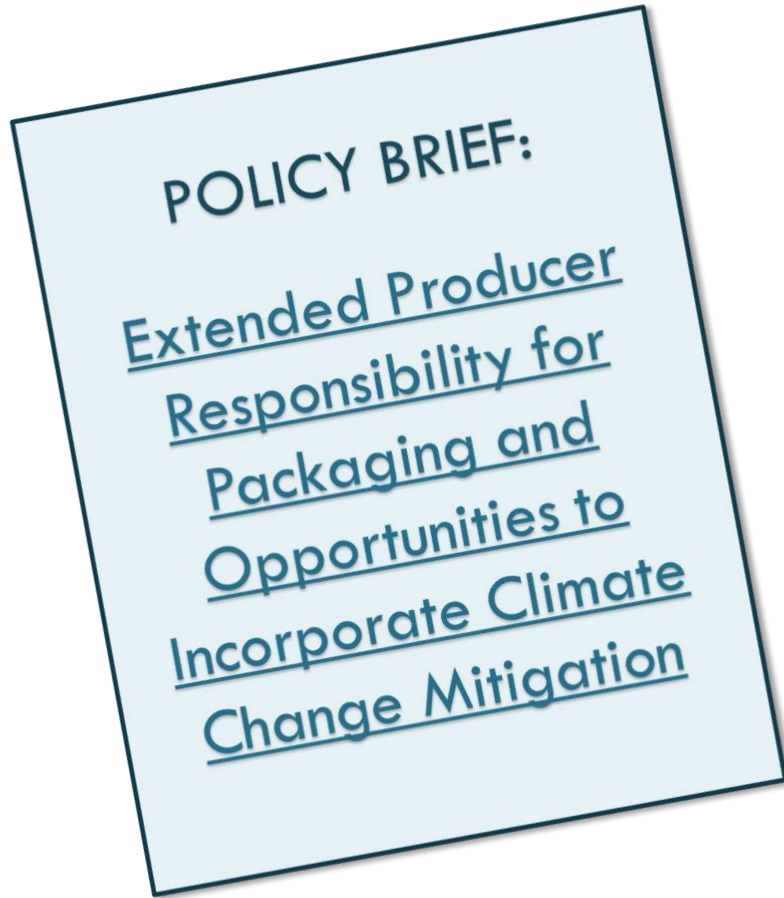
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New Reports Released in 2023



Updated Forum Policy Brief

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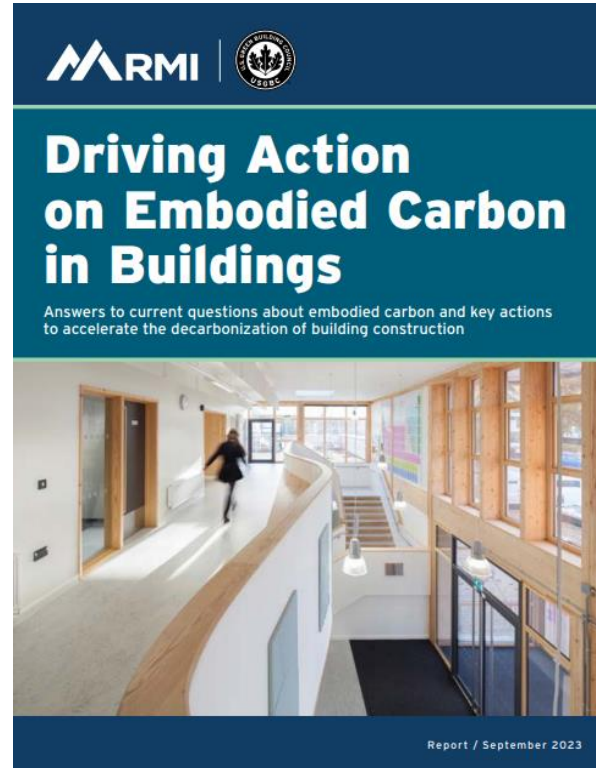
- Provides four concepts to consider in EPR for Packaging bills to address climate change mitigation
 1. Fund waste prevention and reuse
 2. Set goals/mandates for waste prevention / reuse
 3. Require evaluation and disclosure of impacts
 4. Optimize recycling
- Now annotated with citations in support of these concepts
- Updated paper circulated broadly
- [Waste Dive article](#) published Nov 22



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New Reports Released This Year

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Sharing from the Audience

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Please put your responses in the Chat box to the questions that follow.

NOTE in your response which letter you are responding to (A, B, C, or D)

- A. What are you/your organization doing now in this space?
- B. What might you be able to share/advance/support?
- C. Where are gaps in information or tools that you can help fill and create?
- D. Is there a topic (like a certain piece of legislation) that you heard mentioned but would like a full webinar on?



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THANK YOU!

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