Draft Oregon Priority Climate Action Plan

January 2024

State of Oregon
DEQ Department of Environmental Quality

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OREGON
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Executive Summary

Oregon is already experiencing the devastating effects of climate change. Extreme weather events, chronic heat and drought, flooding and intense wildfires are impacting everyone in Oregon. In March 2020, Governor Brown signed Executive Order 20-04, directing state agencies to take action to reduce and regulate greenhouse gas emissions toward meeting reduction goals of at least 45% below 1990 emissions levels by 2035. Achieving these reductions requires enormous effort and investments throughout Oregon's economy and landscape. Oregon has a good start in reducing climate pollution, and the Climate Pollution Reduction Grant program offers a historic opportunity to make investments that will be critical to achieving those goals.

DEQ
State of Oregon
Department of
Environmental
Quality

The Oregon Departments of Environmental Quality and Energy developed this draft Priority Climate Action Plan as part of an Environmental Protection Agency Phase 1 Climate Pollution Reduction Grant. The grant program is one of many funding opportunities provided in the federal Inflation Reduction Act.

The EPA has stated objectives to prioritize grant funds: 1) that achieve maximum reductions in greenhouse gas emissions while driving benefits to surrounding communities, and 2) to invest in measures that are ready to receive funds to use over the next several years. Oregon has taken those objectives to heart, and that is reflected in the framework of our state's plan. This plan is ***not*** designed to address all the necessary and needed actions for emission reductions in Oregon. Instead, it has been developed to achieve the most reductions in the short term so that longer term planning, engagement, and development can be a future focus.

DEQ and ODOE selected the measures included in this plan to meet EPA's criteria provided in the implementation grant notice guidance on how to prioritize greenhouse gas reductions over the next several years. This plan utilizes the work already done in Oregon by building on existing analyses, policies and programs. This plan is also intended to guide how Oregon will engage with EPA on its Phase II Implementation Grant application that will be submitted later this year. Lastly, this plan also contains Tribal priority measures in support of grant application submissions.

The three main areas identified in this plan for EPA grant funding are 1) transportation, 2) residential and commercial buildings, and 3) waste and materials management. These categories contribute the most to greenhouse gas emissions in Oregon and were identified in prior climate planning efforts as key areas to focus reduction efforts.

Transportation is the single largest source of GHGs, both in Oregon and across the United States. In Oregon, transportation accounts for at least 35% of state emissions. Incentivizing zero-emission vehicles in all classes of vehicles will achieve significant reductions in GHGs. Co-benefits include improved public health in communities that are nearest to transportation corridors by lowering tailpipe emissions of criteria pollutants and toxic air pollutants such as diesel particulate matter.

Residential and Commercial Buildings account for 34% of the state's GHGs. Incentives are needed to improve the efficiency of existing and new buildings, promote the transition to clean equipment and appliances, and increase building weatherization. Co-benefits include improved indoor air quality, including from wildfire smoke, and lower costs due to more efficient homes and buildings.

The handling of **Waste and Materials** is another major contributor of GHGs in Oregon and the nation. Incentives will reduce embodied carbon in the built environment, reduce the wasting of food and the emissions from producing that food, and increase investments in food waste recovery infrastructure and landfill gas controls. Reducing emissions in this category offers co-benefits for Oregonians, including vulnerable communities.

This draft priority plan lays out the critical measures that will leverage federal investments to accelerate Oregon emissions reductions efforts- for a vibrant environment, for the health of our communities, and a sustainable future.

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Acronyms and Abbreviations

Acronym or Abbreviations	Definitions
CBEI	Consumption Based Emissions Inventory
CCAP	Comprehensive Climate Action Plan
CPRG	Climate Pollution Reduction Grants
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
GO	Governor's Office
LIDAC	Low Income Disadvantaged Communities
MSA	Metropolitan Statistical Area
MMT CO2e	Million Metric Tons of Carbon Dioxide Equivalent
OCAC	Oregon Climate Action Commission (previously Oregon Global Warming Commission)
ODEQ	Oregon Department of Environmental Quality
ODOE	Oregon Department of Energy
OSES	Oregon Statewide Energy Strategy
PCAP	Priority Climate Action Plan
SEI	Sector Based Emissions Inventory
TIGHGER	Transformational Integrated Greenhouse Gas Emissions Reduction Project Report

Introduction

Climate change is already harming Oregon. Its communities, particularly the most vulnerable who are the least resourced to adapt or relocate, and are most impacted by wildfires, floods, drought, and extreme heat that are degrading the health and livelihoods of Oregonians.

Oregon requires immediate and sustained investments to reduce greenhouse gas emissions and address climate change. Climate Pollution Reduction Grants are a transformational opportunity to fund pathways to clean technologies, invest in critical infrastructure, and address upstream waste generation to improve the quality of life for those who live, work, and play in Oregon.

Oregon's Priority Climate Action Plan aligns with the U.S. Environmental Protection Agency's 2022-2026 Strategic Plan, which centers tackling the climate crisis, addressing environmental injustices, and protecting our communities. Greenhouse gases must be reduced in the next five years and to achieve that goal the authority to pursue key measures in the PCAP must already exist and programs and project must be shovel ready. It is also imperative that the most vulnerable of Oregon's communities, including those with lower income and who are disadvantaged, must be prioritized to receive the greatest benefits. The measures in this plan were chosen to address historical injustices by reducing diesel and related transportation pollution, capturing harmful emissions from landfills, and incentivizing more energy efficient homes.

The PCAP also aligns with The Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050. The U.S. strategy prioritizes electrifying vehicles, rapidly improving energy efficiency by replacing appliances, and reducing greenhouse gases from waste.

> The rapid timeline to produce this PCAP means that this draft version does not contain all of the sections required of the full plan. Rather it outlines Oregon's chosen approach to maximizing GHG reductions in the short-term by utilizing the current set of key measures that are needed to meet the goals for future funding opportunities such as the Phase II Implementation Grant.

This PCAP is intended to be a guide for the Phase II Implementation Grant application. It is not intended to be a comprehensive list of policy and program recommendations for Oregon to reduce emissions. The measures identified in this PCAP supplement and build on – but do not replace - the goals, strategies and efforts of Oregon's long-term climate action planning, nor is the plan intended to negate or diminish any of the state's ongoing efforts. Addressing climate change needs to occur throughout the economy, in every community, and consider both immediate reductions as well as long-term strategies. While the PCAP is designed to achieve the most reductions in a short term, Oregon's follow-up planning efforts to create a Comprehensive Climate Action Plan will focus on providing the essential engagement with local communities, long-term planning, and supporting local community projects that are essential to achieve the state's climate goals.

Climate Pollution Reduction Grant overview

The grant provides $5 billion in grants to states, local governments, Tribes and territories to develop and implement ambitious plans for reducing greenhouse gas emissions and other harmful air pollution. The U.S. Environmental Protection Agency is authorized to implement this work under Section 60114 of the Inflation Reduction Act. EPA has organized the program

into two phases. Phase I provides $250 million for noncompetitive planning grants and Phase II provides $4.6 billion for competitive implementation grants for eligible entities to put their plans into action.

Through the grant, EPA seeks to achieve three broad objectives for Phase 1:

- Tackle damaging climate pollution while supporting the creation of good jobs and lowering energy costs for families.
- Accelerate work to address environmental injustice and empower community-driven solutions in overburdened neighborhoods.
- Deliver cleaner air by reducing harmful air pollution in places where people live, work, play and go to school.

Priority Climate Action Plan overview

The PCAP is the first required deliverable to EPA under Phase 1, the planning grant phase. It is a narrative report that includes a focused list of near-term, high-impact, implementation-ready actions that will reduce greenhouse gases. It also includes a quantitative analysis of GHGs that will be reduced by implementation of those actions. The PCAP is intended to lay the groundwork for Oregon's application to access the Phase II implementation funding grants. This draft PCAP highlights measures and actions that are best suited for the competitive funding opportunity and demonstrates that Oregon is ready to utilize this federal funding to meet the state's climate goals by amplifying the strengths of existing efforts.

EPA requires multiple elements to be included for the PCAP:

- A GHG inventory
- Quantified GHG reduction measures
- Quantified co-benefit reduction measures
- A low-income and disadvantaged communities benefits analysis
- A review of authority to implement
- A benefits analysis
- Intersection with other funding
- Workforce planning

The PCAP should also support investment in policies, practices and technologies that reduce emissions, create high-quality jobs, spur economic growth and enhance the quality of life for all those who live, work and play in Oregon.

Approach for developing the Priority Climate Action Plan

The PCAP was developed through the collaborative effort led by the Oregon Department of Environmental Quality, Oregon Department of Energy, and the Governor's Office. It builds on several existing efforts to identify the largest sources of climate pollution in Oregon and reduction strategies to achieve the state's climate goals. Oregon plans to submit a single state-led application that mirrors this PCAP and therefore is focusing on measures that meet EPAs guidance for the implementation grants to ensure that our plan is the most competitive for the limited amount of grant awards in Phase II. [3]

Oregon DEQ is fortunate to have distinct approaches to inventorying the state's sources of greenhouse gas emissions - a sector-based emissions inventory and a consumption-based emissions inventory. Each provide a different perspective on the sources of GHGs and when analyzed together paint a comprehensive picture of our state's activities that contribute the highest emissions of GHGs and therefore, where reductions are needed most.

Developing the PCAP leveraged the data from those GHG inventories and on various climate planning efforts conducted over the last two decades at the state, Tribal, and local levels.

Most recently, the Oregon Global Warming Commission (renamed the Oregon Climate Action Commission, or OCAC as of Jan. 1, 2024) published the *Roadmap to 2030*, with recommendations for state climate action moving forward. The Commission recommended updated greenhouse gas goals to reflect the best available science and provided an outline of how the state can achieve an accelerated 2030 greenhouse gas reduction goal of 45% below 1990 levels. Beyond 2030, the Commission recommended the state achieve at least a 70% reduction by 2040, and 95% by 2050. In addition, the OCAC recommended achieving net zero emissions by 2050, or as soon as practicable, and net negative emissions thereafter.

The *Roadmap to 2030* recommended six overarching strategies for maintaining and increasing Oregon's climate action ambition:

1. Support robust and continuous implementation of existing climate programs and regulations.
2. Adopt updated state greenhouse gas goals consistent with the best available science.
3. Advance a set of additional climate actions that can help Oregon meet an accelerated greenhouse gas emission reduction goal of 45 percent below 1990 levels by 2030.
4. Support further study and analysis to continue to guide effective climate action over time.
5. Strengthen governance and accountability for Oregon climate action.
6. Position Oregon to take full advantage of federal investments in climate action.

Development of the PCAP focused on the first strategy that prioritizes programs and pathways that exist and are best aligned for CPRG implementation funding. This is in alignment with guidance from EPA. The PCAP also prioritizes measures and actions where there is existing authority to implement, can achieve quantifiable reductions in the next five years, have clear co-benefits, and are ready for implementation. The PCAP also includes actions that could be scaled to benefit multiple communities throughout Oregon, particularly in or near environmental justice communities as defined by EPA.

Other existing efforts that guided PCAP development include the Statewide Transportation Strategy (STS) - a 2050 vision for reducing greenhouse gas emissions, local jurisdiction climate action planning, the Resilient Buildings Taskforce, the Climate Change Vulnerability Assessment, and plans and procurement strategies for energy sector climate emission reductions and community benefits captured in Oregon utilities' integrated resource and clean energy plans.

Oregon is implementing several climate mitigation actions including the adoption of Advanced Clean Trucks and Advanced Clean Cars II regulations and the Clean Fuels Program (a low carbon fuel standard). In addition, Oregon has a rich history in land use planning, building design, materials management, and transportation options that put the state in a strong position to leverage federal funds to achieve meaningful climate pollution reduction.

The development of the PCAP has been on a short time scale so we are utilizing feedback from recent efforts to inform this plan. Other state agencies, Tribes and local jurisdictions provided input and shaped the PCAP. Collaboration with the Metropolitan Regional Government is also critical to align goals and avoid duplication of actions since they are leading the local PCAP effort with the Portland-Hillsboro-Vancouver Metropolitan Statistical Area, the only MSA in Oregon large enough to be eligible for planning funds under CPRG. A more comprehensive description of engagement activities that have supported the development of the PCAP can be found in the Collaboration section.

Scope of the Priority Climate Action Plan

The scope of the PCAP is focused on laying the necessary groundwork in preparation for the Phase II CPRG Implementation Grant application due to EPA April 1, 2024. Therefore, the PCAP does not represent an exhaustive list of measures that are needed to meet the state's greenhouse gas reduction goals. Omission from the PCAP does not negate the importance of that work but rather indicates that it may not align as closely to the EPA guidance for Phase II.

Beyond the PCAP, Oregon is working towards the next deliverable, the Comprehensive Climate Action Plan. More information on the comprehensive plan can be found in the Next Steps section of this document.

Priority Climate Action Plan elements

The main elements included in the draft PCAP are Oregon's GHG inventories, Tribal nation priority measures, state priority measures, a low income and disadvantaged communities benefits analysis, and a section on collaborations. The final PCAP will quantify greenhouse gas reductions and other co-benefits of priority measures and include the remaining sections that are currently under development.

Greenhouse gas emissions inventories

Oregon is in a strong position to address climate pollution as the state has been developing its emissions inventories for many years to understand the contributions and associated measures, actions and regulations that are needed to achieve the necessary reductions to meet the state's climate goals. This includes both a sector and consumption-based inventory as well as extensive work to assess regulations and programs for readiness and reductions.

Sector-based greenhouse gas emissions inventory

Oregon is in a strong position to address climate pollution as the state has been developing its emissions inventories for many years to understand the contributions and associated measures, actions and regulations that are needed to achieve the necessary reductions to meet the state's climate goals. This includes both a sector and consumption-based inventory as well as extensive work to assess regulations and programs for readiness and reductions.

DEQ developed a statewide sector-based inventory of major sources of GHG emissions. This includes emissions produced in Oregon from transportation, residential, commercial, industrial and agriculture sectors, including electricity produced elsewhere but used in state. The sector-based inventory was prepared using the following data resource(s):

- EPA's State Inventory Tool
- Data reported to Oregon's Greenhouse Gas Reporting Program
- Data reported to EPA's Greenhouse Gas Reporting Program
- Estimates of additional waste-sector emissions developed by Oregon DEQ's Materials Management Program

The Oregon sector-based inventory includes the following sectors and gases:

Sectors

- Transportation
- Electricity consumption
- Residential and commercial
- Industry
- Agriculture

Greenhouse Gases (across all sectors)

- carbon dioxide
- methane
- nitrous oxide
- fluorinated gases (F-gases) including hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride

Table 1 includes Oregon GHG emissions in million metric tons (MMT) of carbon dioxide equivalents (CO_2e) by economic sector. Please see Appendix A for additional sector details and GHG emissions by source.

Table 1 Oregon Greenhouse Gas Emissions in MMT CO2e by Economic Sector

Sector Totals	1990	2021
Transportation	21	22
Electric Power Consumption	17	18
Residential and Commercial	6	8
Industry	8	7
Agriculture	7	7
Total Emissions (Sources)	57	61

Consumption-based greenhouse gas emissions inventory

Oregon's consumption-based inventory estimates the global, life-cycle emissions associated with satisfying consumption by households and governments as well as business capital formation (including construction). Oregon was the first subnational government in North America to perform this type of analysis, publishing its first consumption-based inventory (covering calendar year 2005) in 2011, and subsequently updating the inventory for calendar years 2010 and 2015, along with a first-order estimate of consumption-based emissions for 1990.

The consumption-based inventory was prepared using a variety of data resource(s), including but not limited to:

- EPA's national inventory
- Oregon's sector-based inventory

- International emissions factors produced by the Center for International Climate Research
- The IMPLAN economic modeling system
- Multiple other data points published by various federal government agencies, such as the U.S. Department of Energy, EPA, U.S. Bureau of Transportation Statistics, Federal Highway Administration, U.S. Maritime Administration, and Federal Aviation Administration

Additional methodological information for the consumption-based inventory can be viewed on DEQ's website.[1]

Oregon's most recent consumption-based inventory estimates emissions by four broad meta-categories, 16 broad categories, 62 sub-categories, and 536 different commodity sectors. Emissions are estimated by life-cycle stage (at the category level), type of consumer (household, government, business capital), and location (Oregon, other-US, other countries). Top-line emissions estimates at the category level are provided in Table 2 below for 2005, 2010 and 2015. Additional information on consumption-based emissions can be viewed on DEQ's website.[2]

[1] Oregon's Greenhouse Gas Emissions though 2015: An assessment of Oregon's sector-based and consumption-based greenhouse gas emissions

[2] DEQ's Oregon Greenhouse Gas Emissions

Table 2. Category-level consumption-based GHG emissions in million metric tons for Oregon, 2005 – 2015

Categories	2005	2010	2015
Vehicles and parts	18.5	16.1	17.8
Food and beverages	9.7	11.3	11.8
Appliances	11.7	12.9	11.0
Services	5.6	7.0	10.4
Construction	5.3	5.6	6.7
Healthcare	4.2	5.4	6.1
Other manufactured goods	5.4	4.6	4.6
Transportation services	3.5	4.0	4.4
Electronics	3.7	2.9	3.4
Retailers	2.2	2.3	3.3
Furnishings and supplies	3.4	3.1	3.1
Lighting and fixtures	2.9	1.7	1.6
Clothing	1.9	1.5	1.1
Wholesale	0.8	0.6	1.1
Water and wastewater	0.3	0.5	0.5
Other	0.4	0.6	1.9
Total	79.6	80.2	88.7

Note: Totals may not add exactly due to rounding.

Sector- and consumption-based inventory comparison

Comparing both inventories, you can see points of overlap as well as unique contributions and areas that need the most focused reductions:

- **Transportation** is the single-largest contributor to both inventories: 35% of the sector-based inventory, and 25% in the consumption-based inventory, if you add together “vehicles and parts” with “transportation services”.
- **Residential and commercial buildings** contribute 34% in the sector-based inventory. These are mostly emissions associated with electricity and fuels used to heat, cool, and power buildings. Again, there is considerable overlap here with the consumption-based inventory such as operating residential, commercial, and government buildings including appliances and lighting. Emissions associated with construction – both construction activities themselves as well as “embodied carbon” in construction materials – contributes 8% in the consumption-based inventory.
- **Food and beverage** is the second-largest category in the consumption-based inventory at 13%. The parallel categories in the sector-based inventory include emissions from in-state farms, ranching and food manufacturing.

The following sections of this document highlight both Tribal and State priority measures to reduce greenhouse gas emissions that consider the GHG inventories, potential reductions, and feasibility in a five-year timeline.

Tribal Nations Priority Measures

Priority measures from Tribes who want to participate are listed below, for the sole purpose of pursuing funding through Phase II of the CPRG implementation grant. These measures are in addition to State Priority Measures that also align with Tribal priorities included in subsequent pages. The Affiliated Tribes of Northwest Indians is developing a PCAP that will cover the over 50 Northwest Tribal governments from Oregon, Washington, Idaho, Northern California, Southeast Alaska and Western Montana. Tribes in Oregon can apply for implementation funding using either ATNI's PCAP, Oregon's PCAP, and in some cases Metro's Regional PCAP. All priority measures are rooted in Tribal sovereignty, the right of American Indians and Alaksa Natives to govern themselves. All Tribal measures would be implemented by Tribal governments including potential partnerships with surrounding municipalities. Table 3 summarizes submitted Tribal PCAP priority measures.

Table 3. Tribal PCAP Priority Measures for CPRG Implementation Funding

Priority Tribal Measures
Transportation
Transit improvements, clean diesel, and bus electrification
Non-motorized Transportation
Walking and biking trails and safety infrastructure
Materials and Waste
Food and biological waste diversion
Natural and Working Lands
Implementation of restoration treatments
Pulp tree innovation and processing

Transportation measures

Measure: Tribal transit service improvements

Tribes operating transit services for their communities provide transportation to and from the surrounding municipalities. These services are part of Oregon's transportation sector goals, and expanding services would contribute to the reduction of GHG emissions. Tribal governments would most likely implement the measure in collaboration with surrounding municipalities. This measure includes increasing route service and purchasing electric buses and charging infrastructure.

Metrics: Ridership, number of routes provided, and utilization of electric buses are the primary metrics for tracking progress of this measure.

Co-benefits: improved air quality, traffic and safety improvement, and increased transportation access.

Intersection with other funding: Funding for this measure exists through U.S. Bureau of Indian Affairs and Tribal Transit competitive grants for core transit functioning. Far more need exists than funding is available to support these measures.

Workforce: Additional bus drivers and administrative staff to implement expansion would provide additional quality jobs with benefits to the local communities.

EPA Strategic Plan goals: 1: Tackle the Climate Crisis, 2: Take Decisive Action to Advance Environmental Justice and Civil Rights, and 4: Ensure Clean and Healthy Air for All Communities.

Measure: Increasing non-motorized transportation

Trails for walking and biking improve safety and increase utilization of non-carbonized travel. Tribal community centers are often isolated from other municipalities. Non-motorized travel along existing roads can be dangerous. Improving walking and biking trails that connect municipalities improves opportunities for non-carbonized transportation. This measure includes trail development for increased non-motorized transportation.

Metrics: Community use surveys and trail utilization counts are the primary metrics for tracking progress for this measure.

Co-benefits: Improved connection between communities, alternative routes, access to recreation opportunities, improved health outcomes for trail users, and local air quality improvements.

Intersection with other funding: Safe Routes to School funding could be matched with other funding to support this measure.

Workforce: Local construction workers will be required to implement this measure and it is highly likely that construction firms would either be Tribal member owned or would employ significant numbers of Tribal members.

Alignment with EPA Strategic Plan goals: 1: Tackle the Climate Crisis, 2: Take Decisive Action to Advance Environmental Justice and Civil Rights, and 4: Ensure Clean and Healthy Air for All Communities.

Materials and waste measures

Measure: Food and biological waste diversion

Biological materials entering landfills decompose anaerobically and create methane, a potent greenhouse gas. Initiatives to divert food waste and other biological material from landfills will prevent the creation of methane and contribute to reducing greenhouse gas emissions. This Tribal Priority measure includes the use of biodigesters, food waste collection, and community composting for Tribal communities.

Metrics: Food waste collection quantities, fuel generation from biodigesters, and composting outputs are the primary metrics for tracking progress for this measure.

Co-benefits: Reducing soil amendment needs, improving soil health, improving air and water quality, and workforce development opportunities.

Intersection with other funding: Federal waste management funds exist to cover core functioning of waste removal. Expanding opportunities would allow for composting and anaerobic digestion. State grants for materials management are also slated to become available in 2024 to match with other funding sources.

Workforce: This measure would involve the creation of entry- and mid-level jobs requiring training that is likely to include large equipment operations and waste management skills.

Alignment with EPA Strategic Plan goals: 1: Take the Climate Crisis, 2: Take Decisive Action to Advance Environmental Justice and Civil Rights, 4: Ensure Clean and Healthy Air for All Communities, and 6: Safeguard and Revitalize Communities.

Natural and working lands measures

Measure: Implementation of restoration treatments

Tribes have tremendous potential to contribute to carbon sequestration through natural and working lands, which include farm, forest, and rangelands, as well as riparian and wetland areas that are often found within or adjacent to these lands. A recent Oregon Climate Action Commission report, "Foundational Elements to Advance the OGWC's Natural and Working Lands Proposal," set a goal to sequester an additional 5 $MMTCO_2e$ annually in Oregon's natural and working Lands by 2030, and at least 9.5 $MMTCO_2e$ annually by 2050. Tribal working lands are managed in a way that preserves carbon sequestration potential, and increasing lands under Tribal management would directly contribute to these emissions reductions goals.

This measure would include restoration treatments on acquired properties, expanded invasive species management, and land acquisition for conservation practices.

Metrics: Acreage receiving native plant restoration, seed sourcing for restoration projects, tonnage of invasive species removal, and property acquisition are the primary metrics to track success for this measure.

Co-benefits: Increased food security and greater connection to First Foods habitat and harvest, improved air and water quality, improved soil health, and flood control and drought mitigation.

Intersection with other funding: EPA, Bonneville Power Administration, and Bureau of Indian Affairs funds are currently used for riparian and working lands management, but there are restrictions that create a barrier to additional and necessary work. Expanding opportunities would improve the ability for Tribes to sequester carbon on working lands.

Workforce: This measure would increase jobs available to both Tribal and non-Tribal workforces and would be skilled or entry jobs with training available.

Alignment with EPA Strategic Plan goals: 1: Tackle the Climate Crisis, 2: Take Decisive Action to Advance Environmental Justice and Civil Rights, 4: Ensure Clean and Healthy Air for All Communities, 5: Ensure Clean and Safe Water for All Communities, and 6: Safeguard and Revitalize Communities.

Measure: Pulp tree innovation and processing

Removal of small diameter trees, also known as pulp trees, from forests under active management are an essential part of creating healthy and resilient forests. Until recently, pulp trees have been removed and sent to chipping and pulp mill processers for secondary use. However, following a recent change in these industries, small diameter wood will no longer be accepted for processing. Unless alternative processing options are identified and implemented, these small diameter trees are likely to be piled and burned as “slash” along with other forest thinning materials. The carbon emissions likely contributed from forest management activities across the Pacific Northwest from this shift in wood processing options has yet to be calculated but is likely to be substantial.

Metrics: Tonnage of small diameter trees diverted from slash burning and processing equipment with volume of end product are the primary metrics to track success for this measure.

Co-benefits: Improved air quality, reduced wildfire risk, improved forest resilience, enhanced communities and economies, and workforce development and job creation.

Intersection with other funding: EPA, Bonneville Power Administration, and Bureau of Indian Affairs funds are currently used for riparian and working lands management, but there are restrictions that create a barrier to additional and necessary work. Expanding opportunities would improve the ability for Tribes to sequester carbon on working lands. Funding available to support research capacity would be provided through partnerships with USDA Agricultural Research Service and OSU Columbia Basin Agricultural Research Center.

Workforce: Much restoration work is done by Tribal staff or by subcontractors associated with Tribal government. These projects would increase the number of jobs available to both Tribal and non-Tribal workforces and would be skilled or entry jobs with training available.

Alignment with EPA Strategic Plan goals: 1: Tackle the Climate Crisis, 2: Take Decisive Action to Advance Environmental Justice and Civil Rights, 4: Ensure Clean and Healthy Air for All Communities, 5: Ensure Clean and Safe Water for All Communities.

State priority measures and actions

Oregon's greenhouse gas emissions inventories clearly show that the highest contributing categories are transportation, residential and commercial buildings, and waste and materials. Therefore, we have focused our measures on addressing those categories.

We understand that EPA wants ambitious measures that will achieve significant cumulative GHG reductions by 2030 and beyond; measures that will achieve substantial community benefits and measures that can be "scaled up" across multiple jurisdictions.

The measures in this section have been identified as "priority measures" for the sole purposes of pursuing funding through CPRG implementation grants. This list is not exhaustive of the State of Oregon's priorities. Instead, the priority measures included in this PCAP meet the following criteria, as stated in the notice of funding opportunity:

- The measure is implementation ready, meaning that the design work for the policy, program, or project is complete enough that a full scope of work and budget can be included in a CPRG implementation grant application.
- The measure can be completed in the near term, meaning that all funds will be expended, and the project completed, within the five-year performance period for the CPRG implementation grants.
- Positive impacts on low-income and disadvantaged communities.

Table 4 summarizes the priority measures for this draft PCAP.

Table 4. Oregon PCAP Priority Measures for CPRG Implementation Funding

Priority Measure	Implementing Agency/ Partner	Geographic Scope
Transportation		
Light-duty vehicle incentives for low- and moderate-income households	Oregon DEQ	Statewide
Medium- and heavy-duty vehicle and infrastructure incentives	Oregon DEQ/ Oregon Department of Transportation	Statewide
Residential and Commercial Buildings		
Incentives to build more energy-efficient housing	Energy Trust of Oregon and Consumer-Owned Utilities	Statewide
Incentives for early or voluntary adoption of Building Performance Standard requirements	Oregon Department of Energy	Statewide
Incentives for residential heat pump installation	Oregon Department of Energy	Statewide
Weatherization assistance	Oregon Housing and Community Services/Oregon Health Authority/Energy Trust of Oregon/Consumer-Owned Utilities	Statewide
Materials and Waste Management		
Food waste prevention and recovery grants, infrastructure, and replacements	Oregon DEQ, Energy Trust of Oregon, local governments.	Statewide
Grants to reduce embodied carbon in buildings	Oregon DEQ, Energy Trust of Oregon, local governments.	Statewide
Accelerate transition to reusable materials	Oregon DEQ, local governments.	Closed-loop reuse systems (e.g., school cafeterias) statewide/ open-loop in higher density communities.

All measures, not just the priority measures, that have been submitted or generated from past work, and have been reviewed or are currently under review, are listed in Appendix B.

Transportation measures

The transportation sector is the leading source of greenhouse gases in Oregon, contributing 35% of the overall emissions. Light-duty vehicles are currently responsible for an estimated 12.1 million metric tons (MMT) of GHGs annually or approximately 56% of all transportation GHGs (figure 1). Medium- and heavy- duty vehicles are currently responsible for an estimated 7.4 MMT of GHGs annually or approximately 34% of all transportation GHGs.

Additionally, these vehicles also contribute to high levels of localized criteria pollutants such as fine particulate matter and nitrogen oxides and toxic air pollutants such as diesel particulate matter that represent an on-going public health challenge for communities nearest to roadways.

A key action to achieving the state's GHG reduction goals and improving health impacts is to accelerate the adoption of zero emission vehicles, or ZEVs, in all vehicle classes, especially passenger vehicles and small trucks in the light-duty category and fleet trucks and buses in the medium- and heavy-duty category. Oregon has already adopted the Advanced Clean Cars II and Advanced Clean Trucks regulations that require an increasing percentage of new vehicle sales to be zero emissions, but additional incentives are needed to speed up the transition.

Light-duty vehicles

Light-duty vehicles are currently responsible for an estimated 12.1 MMT of GHGs annually or approximately 56% of all transportation GHGs. To speed up the transition from gasoline cars to electric vehicles, the Oregon Legislature created the Oregon Clean Vehicle Rebate Program to provide rebates to Oregonians for the purchase or lease of an EV. The rebate program was designed to encourage higher adoption of EVs, reduce air pollution and advance progress toward the state's GHG reduction goals. The program offers two different types of rebates: a *Standard Rebate* available to all Oregon residents that purchase or lease a new eligible vehicle and a *Charge Ahead Rebate* for Oregon residents with low or moderate incomes and purchase or lease a new or used eligible vehicle. The Charge Ahead Rebate offers a higher rebate amount for lower income households to make ZEVs accessible to all Oregon residents.

DEQ began implementing the rebate program in 2018 and participation in the rebate programs has steadily grown since its inception. Over 29,000 rebates have been awarded as of November 2023, reducing nearly 875,000 MMT of carbon dioxide (CO_2).

Light-duty vehicle incentives for low- and moderate-income households

The popularity of the rebate program has outpaced the level of funding that the Oregon legislature has been able to provide, leading to a temporary suspension in 2023. Future suspensions are anticipated as demand for the rebates continues to outpace funding, resulting in fewer low-income households being able to afford cleaner transportation choices. In accordance with the EPA guidance, the PCAP proposes to direct any CPRG funds for the rebate program to the Charge Ahead Rebate program to target the lower income communities of Oregon. Without the additional funding, Oregon risks stalling the transition to ZEVs, not achieving the associated GHG emission reductions, and leaving lower income households behind in the transition to ZEVs.

Increased funding to the Charge Ahead portion of the rebate program aligns with California's transition to an EV incentive program for low- and moderate-income residents, and Washington's emerging EV incentive program. Additionally, the program is supported by a growing number of EV chargers through programs such as the West Coast Electric Highway, additional highway charging through the National Electric Vehicle Infrastructure funding and community charging incentives through the Oregon Department of Transportation, as well as increasing private investments. These shared investments mean that lower income households along all the U.S. West Coast are more reliably able to access EVs and charge them.

Co-benefits

- **Improved air quality:** In addition to ZEVs producing zero tailpipe GHG emissions, they also do not emit tailpipe criteria air pollutants such as nitrogen oxides (NOx) and particulate matter (PM 2.5).
- **Public health benefits:** Improvements in air quality will also reduce asthma rates, heart attacks and strokes, lung cancer and premature deaths, especially in those living nearest to transportation corridors. Many communities of color and lower income communities who are at greater risk due to increased exposure to transportation pollution will benefit from this transition.
- **Decreased lifetime costs:** ZEVs have fewer parts than a gasoline engine and thus have lower costs to maintain them. In addition, electricity costs less than gasoline so when both the lower maintenance and fuel costs are considered, the lifetime cost of a ZEV is lower to the consumer.
- **Reduced noise pollution:** ZEVs are much quieter than their combustion counterparts and help to reduce noise pollution.

Intersection with other funding

The rebate program receives funding from a portion of the Privilege Tax, which is collected on the sale of a new vehicle. Currently, the rebate program receives 45% of the annual Privilege Tax revenue, or no less than $12 million a year. Based on the revenue received in 2023, the program anticipates receiving about $15 million in future years. Due to demand outpacing funding, the program anticipates being significantly underfunded in the coming years. ZEV sales in Oregon have more than doubled over the past few years and are anticipated to continue growing due to increased demand for electric vehicles but are still not meeting the state's goals for GHG reductions. Additionally, Oregon's adoption of the Advanced Clean Cars II regulation, which requires manufacturers to produce and deliver increasing percentages of zero emission vehicles, starting with a 35% zero emission requirement in 2026, increases vehicle model options for consumers. While this sales mandate means more vehicle options for Oregon consumers, the rebate helps ensure new EV purchases especially for lower-income Oregon households.

Workforce

The rebate program helps accelerate the development and growth of ZEVs. The new manufacturing and maintenance needs for ZEVs necessitates a diverse and highly skilled workforce, ranging from engineers specializing in battery technology and software developers to technicians able to service the diagnostics of the vehicles. Manufacturers need to ensure their labor force has access fair wages and safe working conditions. As the demand for ZEVs continues to grow and is supported by the rebate program, it provides opportunities for a growing job market focused on electric vehicle technology.

Medium- and Heavy-Duty Vehicles

Medium- and heavy- duty vehicles are currently responsible for an estimated 7.4 MMT of GHGs annually or approximately 34% of all transportation GHGs in Oregon.

A key action to achieve the state's GHG reduction goals is to accelerate ZEV adoption in high-emission fleets of medium and heavy-duty trucks and buses. More incentives are necessary to support fleets by providing funding for ZEV fueling infrastructure.

Medium- and Heavy-Duty Vehicle and Infrastructure Incentives

Transitioning medium- and heavy- duty vehicles from diesel to ZEVs poses two significant problems: 1) providing infrastructure to fuel these vehicles must be part of the plan; and 2) it will be very expensive. Oregon has laid the foundation to address these issues through existing grant and rebate programs, but the level of funding is clearly not sufficient to meet the need. The PCAP proposes to direct CPRG funds to supplement three existing DEQ programs that can accept additional funding at any time:

- Medium- and Heavy-Duty Vehicle Rebate Program – The 2023 Oregon Legislature created the Medium- and Heavy- Duty Rebate Program with an allocation of $3 million and direction to DEQ to develop rules to administer the program. The goal is to lower the price of new medium- and heavy- duty vehicles ZEVs by providing a rebate directly to the purchaser. Legislative direction includes that 40% of this funding to benefit environmental justice communities. Currently, DEQ estimates that up to 35 medium- and heavy- duty ZEVs can receive rebates through its initial funding which is a good start but not nearly sufficient to meet the needs of the industry.
- Oregon Zero Emission Fueling Program – The 2022 Oregon Legislature created this program and allocated $13.3 million to expand Oregon's network of EV charging infrastructure that can support medium- and heavy- duty vehicles. Tribes and Certification Office for Business Inclusion and Diversity- certified applicants receive a higher level of funding for their projects. DEQ received over $34 million in requests for this one-time opportunity which clearly shows the need for additional funding.
- Diesel Emissions Mitigation Grant Program - This grant program was initially established to receive Oregon's share of the VW settlement fund but has now evolved to be able to accept other funds. It houses most of DEQ's incentives to reduce harmful diesel particulate matter, a critical environmental justice issue for communities that live closest to the state's freight corridors, by requiring the scrapping and replacement of the state's dirtiest diesel trucks. Grant proposals DEQ received, outpaced funding by $106.3 million over the past three years and current funds will be exhausted in approximately two years if there is no additional funding.

All of these programs can immediately accept additional funding and produce significant GHG reductions.

Co-benefits

- Improved Air Quality: In addition to ZEVs producing zero tailpipe GHG emissions, they also do not emit tailpipe criteria air pollutants such as NOx and PM 2.5 nor do they emit toxic air pollutants such as diesel PM.
- Public health benefits: Improvements in air quality will also reduce asthma attacks, heart attacks and strokes, lung cancer and premature deaths, especially in those living nearest to transportation corridors. Many communities of color and lower income communities who were at greater risk due to increased exposure to transportation pollution will benefit from this transition.

Intersection with other funding

As outlined above, DEQ administers three programs that have current funding but inconsistent and insufficient future funding:

- Medium- and Heavy- Duty Rebate Program – $3 million one-time allocation of state general funds.

- Diesel Emissions Mitigation Grant Program – $72.9 million one-time allocation of VW settlement funds over ten years (from 2017-2027).
- Oregon Zero Emissions Fuels Program – $15 million one-time allocation of state general funds.

Workforce

Oregon currently has the workforce required to implement the scale of rebates, grants, and charging projects and has capacity to scale the programs with additional funding. Oregon DEQ is a dues-paying member of key workforce development associations, including:

- Professional Business Development Group
- Oregon Association of Minority Entrepreneurs
- National Association of Minority Contractors

These groups collectively focus on training and empowering Black, Indigenous and people of color, or BIPOC, individuals and businesses to gain access to apprenticeship and journey programs in the trades. DEQ supports their efforts and provides them with information and technical assistance for all available incentive programs.

More work is needed to ensure that funded projects utilize BIPOC-owned and led businesses in medium- and heavy- duty ZEV assembly and deployment with a focus on electricians, mechanics, and drivers to safely operate and maintain new equipment.

Residential and commercial building measures

Heating and cooling of buildings accounts for a substantial portion of Oregon's annual greenhouse gas emissions. Oregon has a number of existing programs that help address these emissions and is also in the process of standing up new ones. Some of these programs are run by state agencies while others are led by utilities or third parties such as the Energy Trust of Oregon. Demand for these programs is higher than current program funding can address.

As a result, additional funding is needed for incentives to improve the efficiency of buildings, promote energy efficient appliances, and increase building weatherization. In addition, most federal funding under the Inflation Reduction Act and the Infrastructure Investment and Jobs Act is focused on existing residential buildings, leaving a gap in funding for both commercial building measures and new residential construction measures. Additional funding through the CPRG program could help fill these gaps.

Beyond emissions reductions, substantial co-benefits can also be realized from improving the energy-efficiency of buildings including reductions in air pollution leading to public health benefits, cost savings from reduced energy use, indoor air quality improvements, increased comfort in cold and warm seasons, and job creation.

Incentives for building more energy-efficient housing

The state is experiencing both a climate crisis and a housing crisis. Energy efficient homes can help address both. Governor Tina Kotek's Executive Order 23-04 sets a statewide housing production goal of 36,000 housing units per year over the next ten years to meet the state's severe housing shortage. This is approximately double the state's average production over the past five years. The order also directs that more than 50% of the annual statewide production

target of 36,000 homes must be affordable to households making less than 80% of the area median income.

Climate resilient and energy efficient homes can save their occupants money on energy bills and reduce greenhouse gas emissions from the building sector. Oregon currently has a base building code as well as a Reach Code for residential buildings. The Reach Code encourages construction of more energy efficient buildings - approximately 10% more efficient than the base building code. To encourage more energy efficient construction, incentives can be provided for developers to include energy efficiency measures that meet or exceed the Reach Code.

Energy Trust of Oregon and consumer-owned utilities have existing programs that provide incentives for building above the base building code. Additional funding for these programs can enable them to support efficiency measures in more buildings.

Intersection with other funding

CPRG implementation funds would build on existing state and utility-funded programs as well as supplement other federal funding, which is focused on existing buildings, not new construction. As a result, this funding would fill an important gap.

Workforce

Designing, producing, installing, and maintaining energy-efficient appliances and other home energy-efficient measures and products already support almost 40,000 jobs. Oregon. Further, building a skilled workforce of family-wage energy auditors, HVAC contractors, installers, and others will be necessary to support the new activity enabled by this funding. The state is pursuing federal funding through the IRA and IIJA to support workforce development in this area.

Incentives for early or voluntary adoption of Building Performance Standard requirements

Existing commercial buildings substantially contribute to Oregon's greenhouse gas emissions. Recognizing this, the Oregon Legislature directed the Oregon Department of Energy to develop a building performance standard to regulate the energy consumption of many existing commercial buildings.

ODOE is required to adopt rules specifying the standard by Dec. 31, 2024. Tier 1 buildings (including hotel, motel, and nonresidential buildings equal to or larger than 35,000 square feet) need to comply with the BPS starting June 1, 2028, with a phase in through June 1, 2030, based on building square footage. Tier 2 buildings need to start providing energy benchmarking reports July 1, 2028 – but do not need to comply with the BPS. Tier 2 buildings include: hotel, motel, and nonresidential buildings larger than 20,000 square feet and less than 35,000 square feet, in addition to multifamily residential, schools, dormitories, universities, and hospitals that are equal to or greater than 35,000 square feet.

The state legislature provided $2 million for ODOE to establish and administer an incentive program for early and voluntary adopters of building requirements. It is expected that this will impact tens of thousands of buildings across the state. Additional funding for early and voluntary adopters to comply with the building performance standard requirements would accelerate

adoption and reduce GHG emissions more quickly. Women and minority-owned businesses can also be prioritized with the additional funding.

Intersection with other funding

Most existing federal funding is focused on residential buildings, not commercial buildings. As a result, this funding would fill an important gap.

Workforce

Designing, producing, installing, and maintaining energy-efficient appliances and other building energy-efficient measures/products help support job creation. Workforce development funding through the IRA and IIJA will help bolster Oregon's energy efficiency workforce.

Incentives for residential heat pump installation

Heat pumps are an important home equipment to reduce greenhouse gas emissions as they help reduce energy usage. The Oregon Department of Energy currently operates two heat pump incentive programs – the Oregon Rental Home Heat Pump Program and the Community Heat Pump Deployment Program. These programs currently have state funding of $15 million and $10 million, respectively. The Rental Home Heat Pump Program funding is already half gone, and there are many more homes that would benefit from heat pump installation. In addition, these heat pump incentive programs currently only serve existing buildings, but a change to the rules could allow for incentives for heat pump installation in new construction.

Intersection with other funding

While there is other federal funding for heat pumps, that funding is still insufficient to meet the need in Oregon. The state has a legislatively set goal of 500,000 new heat pumps installed by 2030. It is estimated that the $117 million in federal Home Energy Rebate funding from the Inflation Reduction Act for Oregon will be able to reach 13,000 households – which is only 1% of Oregon's 1.7 million households. In addition, this existing funding is mostly targeted to existing buildings, not new construction – which could be included in the state heat pump incentives programs. As a result, this funding would fill important gaps.

Workforce

Designing, producing, installing, and maintaining energy-efficient heat pumps and related energy-efficient measures and products help support job creation. In 2023, the Oregon legislature established the Energy Efficient Technologies Information and Training program and fund to prioritize workforce and contractor training, education, and awareness of programs, rebates, and the need for heat pumps and other energy efficiency upgrades. This state program will support the development of a workforce capable of delivering these additional incentives.

Weatherization assistance

Weatherization is a powerful tool to reduce greenhouse gas emissions from existing buildings by reducing energy usage. Weatherization not only makes existing buildings more energy efficient, but it also makes other energy efficiency measures more effective. For example, installation and operation of a heat pump (see measure above) in a home that is not weatherized will not be as effective in reducing energy usage as one that is in a weatherized home. Similarly, the co-benefits of the heat pump such as improved indoor air quality and comfort also vary by the weatherization status of the home.

Oregon currently has a number of existing weatherization programs. These include state agency run programs such as Oregon Housing and Community Service's Weatherization Assistance Program and Oregon Health Authority's Healthy Homes Grant Program. In addition, there are utility ratepayer funded programs. The demand for weatherization assistance is higher than these programs currently fund. Additional funding could be used to expand the reach and impact of these programs and accelerate their reductions in GHG emissions.

Intersection with other funding

Oregon already receives federal funding for weatherization assistance, but the demand/need well outpaces the funding. In addition, the HOMES and HEEHRA programs will provide Oregon with new funding that could involve weatherization, but it is estimated that it will only be able to reach about 1% of Oregon's households. As a result, additional funding is needed and will fill an important gap.

Workforce

Designing, producing, installing, and maintaining weatherization measures and products help support job creation.

Co-Benefits for Residential and Commercial Building Measures

Each of these actions share co-benefits by:

- Increasing energy efficiency reduces the need to build and use power plants, thereby reducing associated air pollution, leading to public health benefits.
- Using less power results in energy costs savings and can help alleviate energy burden (percent of household income spent on home energy bills). In the 2022 Biennial Energy Report, the Oregon Department of Energy found that Oregonians could save about 50% on home heating costs with a heat pump compared to electric resistance heat.
- Quality of life is also impacted by increasing comfort during cold and warm seasons. Oregon's heat pump programs were established after a 2021 heat dome in which at least 100 Oregonians died of heat-related illness, many in their own homes. A recent study commissioned by the Oregon Department of Energy found that many Oregonians do not have adequate cooling equipment, including 58% of residents living in mobile or manufactured homes, publicly supported housing, or recreational vehicles. Heat pumps can provide both heating and cooling, which can be potentially lifesaving.
- Designing, producing, installing, and maintaining energy efficient equipment and appliances, and other energy-efficient measures/products, also help support family-wage job creation.

Waste and materials management measures and actions

Oregon has a long history of policies to manage its materials and wastes. The 2050 Vision for Materials Management is the state's formally adopted plan for sustainable materials management and is based on Oregon's groundbreaking consumption-based emissions inventory. This approach allows the state to develop a broad scope of strategies to manage the materials it consumes and the wastes that it generates.

This PCAP draws heavily from Oregon's long-term materials management vision in several of priority measures including food, buildings, and landfills. Food and beverage categories contribute 11.8 MMT CO_2e and these emissions can be reduced through reduction of food waste and loss, as well as food waste recovery. Construction activities contribute another 6.7 MMT CO_2e and emissions can be reduced through incentives for lower-carbon materials and

designs, and support for manufacturers producing low-carbon materials. Other opportunities involve reducing fugitive emissions of methane from landfills and expanding infrastructure such as commercial dishwashing facilities to support the ongoing transition from single-use plastics to reusables.

Reduction of greenhouse gas emissions in the lifecycle of food

Food is the second largest source of GHGs generated by people in Oregon and contributes almost 12 MMT of CO2e in the consumption-based emissions inventory. EPA estimates that one-third of all food produced or imported is wasted which is why Oregon has prioritized reducing the wasting of food as the best approach for reducing GHGs.

Food waste grants, infrastructure, and replacements

There are several ways to reduce wasted food, but DEQ has chosen to focus on the following actions for the PCAP:

- **Expand the Pacific Coast Food Waste Commitment**: The PCFWC is an unprecedented public-private partnership featuring some of the nation's largest food businesses alongside local, state, and provincial governments all working collaboratively toward a shared ambition of effective, industry-wide actions that prevent and reduce wasted food along the West Coast.
- **Increase food waste recovery infrastructure**: Anaerobic digestion and composting are two ways to reduce emissions from the decomposition of wasted food. Funding from CPRG would be used for grants to build or expand infrastructure as associated with anaerobic digestors and compost facilities such as materials handling, processing, odor abatement, or electricity generating equipment. While there is significant interest in large-scale food waste recovery systems, DEQ would also use CPRG funds to support smaller-scale infrastructure, including in underserved communities, to encourage localized collection of food waste for composting that supports local food production.
- **Replace old refrigerators in low-income housing**: Upgrading household refrigerators is shown to reduce food waste, energy use, and emissions of harmful ozone-depleting refrigerants. The Energy Trust of Oregon is an independent nonprofit that works with utilities, their customers, community-based organizations, and local governments to provide clean energy solutions. Many of its programs already focus on replacing inefficient appliances and refrigerators in low-income housing, and it would be ready to receive grant funds from CPRG to expand these programs.

Co-benefits

Reducing GHGs from the food system can also lead to the system itself becoming more efficient.

- Preventing food from being wasted can increase the amount of nutritious, fresh food available and lower costs.
- Replacing refrigerators will reduce energy costs.
- Increase in the collection of food waste means that less organic material will end up in a landfill, thus reducing methane emissions.
- Increase in anaerobic digesters means more methane will be collected and used to produce renewable fuel or electricity.

- Increase in composting means an increase availability of compost to farmers which produces healthier soils and lower use of chemical fertilizers.

Intersection with other funding

The jurisdictions that participate in the Pacific Coast Collaborative (the states of California, Oregon, and Washington and the province of British Columbia) currently provide the majority of funding for the PCFWC. There is much desire to expand the work to more areas of focus and to other jurisdictions but that being held back due to lack of funding. Expanding the PCFWC will make the commitment stronger and more effective.

Workforce
Expanding the infrastructure for food waste recovery could create additional jobs in the collection and management of food waste through composting and digestion. Many of these industries are located in rural and underserved communities.

Reduction of embodied greenhouse gases emissions of the built environment

Building materials account for 8% of Oregon's consumption-based greenhouse gas emissions. These emissions are associated with the extraction, manufacturing, transport, construction, and disposal of these materials, and are often referred to as "embodied carbon". Oregon currently requires the Oregon Department of Transportation projects to follow a Buy Clean Policy that includes the collection of Environmental Product Declarations, or EPDs, for concrete, asphalt, and steel. Executive Order 17-20 directs state building projects to reduce the embodied carbon of building materials for new construction and significant renovations.

Oregon is a member of the Pacific Coast Collaborative, PCC. The PCC's Low Carbon Construction Task Force is developing an Action Plan to advance low-carbon materials and methods in building and construction projects to reduce the embodied carbon of the built environment. Funding from CPRG would directly support that collaborative effort.

Grants to reduce embodied carbon in buildings

State agencies and/or local governments could issue grants to developers, building owners, and building product manufacturers to fund:

- The conversion of commercial buildings to affordable housing which supports the reuse of existing buildings rather than new construction, where feasible. In addition to embodied GHG emissions reductions, this provides an incentive in support of Governor Kotek's housing production goals and HB 2984 which requires local governments to allow the conversion of a building from commercial to residential use.
- Grants would provide financial incentives to build smaller, more efficient housing for new construction and incentives for renovations of existing buildings. In addition to embodied GHG emissions reductions from building smaller, this provides an incentive in support of HB 2001 (2019) which allows for duplexes or quadplexes on single-family zoned lots in cities of a certain population throughout Oregon.
- The inclusion of low-carbon building materials in projects where the lower-carbon material comes at a cost premium.

- The switch from high to low global warming potential refrigerants in new construction, renovations, and existing building system upgrades.
- The start-up and expansion for manufacturing bio-based materials with lower levels of embodied carbon such as hemp, wood fiber insulation, and timber products like cross-laminated timber.

Co-benefits

- Incentives to renovate old commercial buildings into affordable housing and build smaller housing units will increase the number of housing units available on the market. This helps address the housing crisis and the Governor's housing production goals while making them healthier, cleaner, and more affordable.
- Incentives to build smaller housing units and increase density supports local land use and transportation plans that focus on increasing livability and reducing the amount of driving and their related emissions.
- Incentives to increase demand for lower-embodied carbon building materials will improve the air quality surrounding those cleaner manufacturing facilities in nearby communities.

Intersection with other funding

EPA's grant program for Reducing Embodied Greenhouse Gas Emissions for Construction Materials and Products provides grants for the development of robust EPDs and other funding categories that support the development of EPDs. This grant will support the development of critical data which will support implementation of the CPRG measure outlined above, by providing "gap funding" where lower-carbon materials carry a higher price and providing the data necessary to understand GHG emissions reductions from whole building reuse and using lower carbon materials. The CPRG measure outlined here does not focus on development of EPDs.

Workforce

This action could generate manufacturing jobs to make low-embodied carbon building materials and may increase the number of construction jobs in the residential and commercial construction sectors. Jobs related to bio-based materials such as hemp and wood products particularly are beneficial in rural communities.

Improving the capture of landfill gas

Landfills remain one of the largest sources of methane emissions in the state. Methane has a high global warming potential, 28 times more than carbon dioxide, and has a particularly acute impact in the short-term. While Oregon has recently adopted regulations that require the monitoring of methane at the landfill and the capture of landfill gas at some landfills, additional opportunities exist at both regulated and non-regulated landfills in the state. Further regulatory action should be considered to address these unregulated emissions along with providing incentives to promote early voluntary action. CPRG funding would enable the state to issue

grants to enable these updates to landfill owners or operators to install the necessary infrastructure such landfill gas capture systems, flares, generators, or upgrading equipment.

Grants for analysis and installation of controls

Even prior to the installation of a landfill gas control system, the landfill owner and operator must perform a detailed plan to conduct a site assessment and feasibility analysis and complete an engineering design. CPRG funding could be used to offset these planning costs as well as to purchase and install a landfill gas control system. Potential co-benefits include:

- When landfill gas is captured and destroyed in a flare, other air pollutants such as particulate matter and other volatile or compounds are also destroyed.
- When landfill gas is captured and used in a generator to produce renewable electricity, it can either be sold to a local utility for additional revenue or be used on-site to displace other energy uses.
- When landfill gas is captured and used in vehicles such as buses or garbage trucks, the landfill owner may be eligible to generate credits in the Oregon Clean Fuels Program which can be sold for revenue.

Intersection with other funding

There is no other dedicated funding available for this work.

Workforce

This measure will generate jobs in landfill gas monitoring, engineering and maintenance.

Reduction in single-use plastic

Reducing use of single-use plastic provides opportunities to reduce greenhouse gas emissions as well as a variety of other impacts. It is also a priority for the White House Council on Environmental Quality. There is however a potential for burden shifting, so it is important to replace single-use items with alternatives that have lower overall impacts. Oregon's Plastic Pollution and Recycling Modernization Act already calls for the establishment of a new program, Material Impact Reduction and Reuse – Oregon or MIRROR project, to reduce the environmental impacts of covered products, including packaging and food service ware through means other than recovery. DEQ has proposed administrative rules that will generate funding for this new program beginning in late 2026.

Accelerate transition to reusable materials

CPRG funding could be used by DEQ and local governments to fill an initial funding gap and jump-start MIRROR with pilot projects that would both accelerate the transition to reusables and provide important information, experience and context that would allow for a more successful and robust launch of larger MIRROR project in late 2026.

This measure will reduce the use of single-use plastics, which has been a priority consideration for many Oregon legislators in the last several years; it will also reduce the environmental impacts of materials at all stages of their life cycle, consistent with the *2050 Vision for Materials Management*, which serves as the state's adopted plan for sustainable materials management.

Co-benefits

- Potential for reductions in other life cycle environmental impacts.

Intersection with other funding

DEQ has proposed a rule concept for MIRROR that would generate approximately $4 million in late 2026, $8 million in 2027, and $11.5 million in 2028 and annually thereafter. Note all figures are in 2021$ and will be adjusted for inflation. This rule is authorized by statute but has not yet been adopted. It is scheduled for consideration by DEQ's governing board, the Environmental Quality Commission, in November 2024. If adopted, revenues would begin in late 2026. CPRG funding could be used to bridge the implementation funding gap between 2024 and 2026.

Workforce

Reusables create workforce development opportunities in managing dishware and the design/operation of information technology systems for inventory management.

Supporting EPA's strategic goals

All of the key actions identified in the PCAP support EPA's goal to tackle the climate crisis by reducing GHG emissions as well as improving air quality by reducing co-pollutants. The actions were also chosen to address environmental justice through program design, direct benefits, and energy efficient homes.

Light duty and medium-heavy duty transportation measures support EPA's strategic plan by:

- Reducing emissions that cause climate change by promoting ZEV Adoption, reducing tailpipe emissions.
- Promoting environmental justice through equitable access to clean transportation, targeted incentives for disadvantaged communities, addressing environmental health disparities, addressing barriers to participation.
- Lowering criteria pollutants through ZEV adoption to improve air quality and health outcomes.

Commercial and Residential building measures support the EPA strategic plan by:

- Reducing GHG emissions by increasing building energy efficiency.
- Promoting environmental justice and civil rights at the federal, Tribal, state, and local levels, by supporting affordable housing and reducing energy burden low-income residents.
- Increasing indoor air quality by installing heat pumps and home weatherization as well as reduction of fossil fuel combustion.

Waste and Materials Management measures support the EPA strategic plan by:

- Reducing GHG emissions through diverting landfill waste and incentivizing landfill controls to reduce methane.
- Promoting local food production and the development of resilient local food systems.

- Improving air quality and reducing localized pollution and health impacts by reducing burning through wood and forest products utilization.

Due to the time constraint for development, this draft PCAP does not have the completed emissions reduction values for each action completed. However, these measures were chosen in part due to their high GHG reduction potential determined in previous reports and analysis including: Oregon Climate Action Commissions Roadmap to 2030 and its companion TIGHGER Report.

Low-income and disadvantaged communities' benefits analysis

The priority measures contained in this PCAP not only reduce GHG emissions but also provide opportunities to address public health inequities for those living in areas most impacted by climate change. Cases of heart disease, cancer, obesity, and diabetes have a higher rate of incidence in low-income and disadvantaged communities.[3] By addressing the social determinants of health through implementing climate policy, the cost of climate mitigation and adaptation efforts are reduced.

As defined by EPA for the purposes of the CPRG, low-income and disadvantaged communities are defined as any community that is identified as disadvantaged by the Climate and Economic Justice Screening Tool. This tool uses datasets, indicators of burden, in eight categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. The tool uses this information to identify communities that are overburdened and underserved so they can be prioritized in development and implementation opportunities.

These communities are particularly vulnerable to the climate impacts and risks that Oregon is facing including drought, wildfire, extreme weather events, flooding, and extreme heat and urban heat island effect. This PCAP aims to deliver equitable GHG reductions in and for low-income and disadvantaged communities while also improving public health, promoting economic development, creating jobs, building resiliency, building energy efficient housing, and creating sustainable food systems.

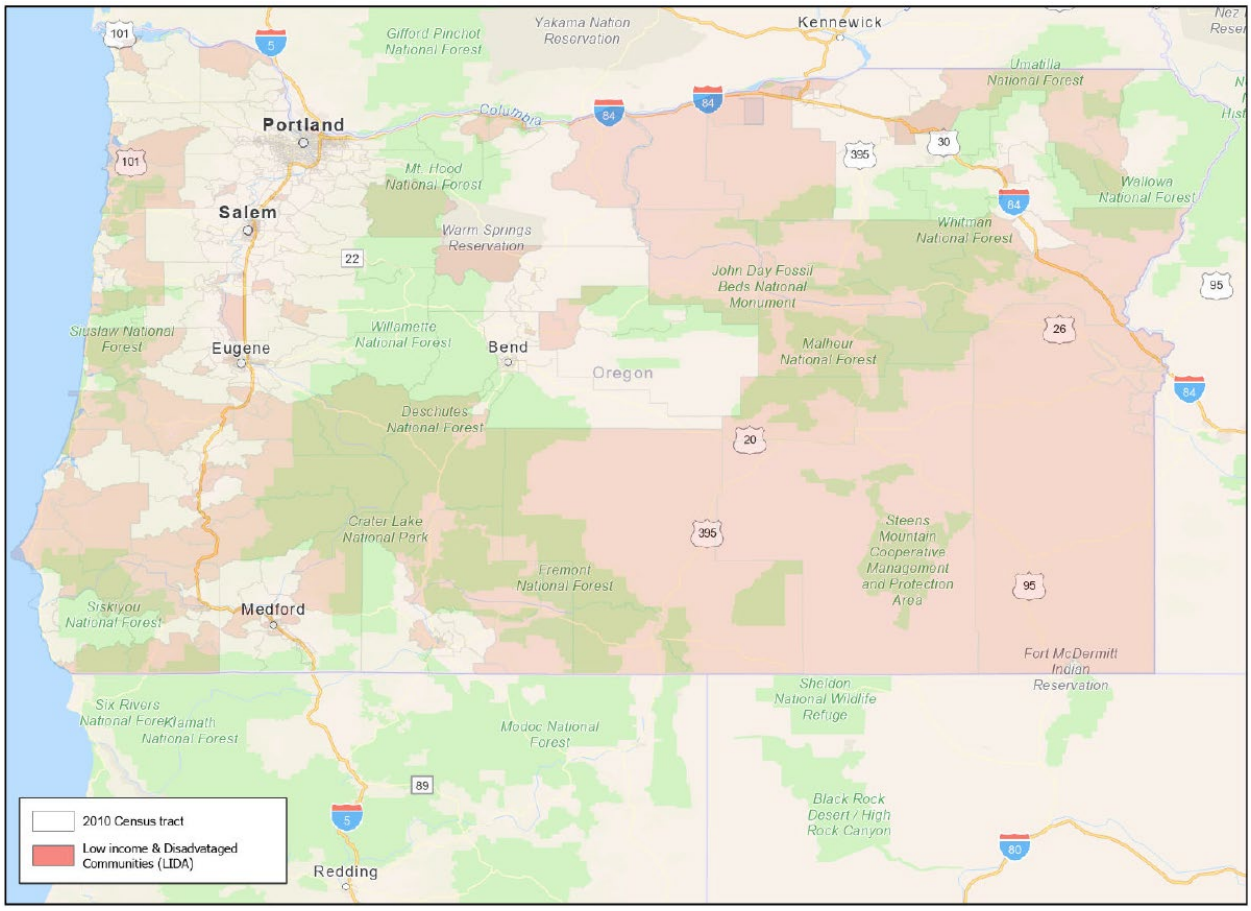
Over 28% of Oregon's census tracts, 233 out of 834, are considered disadvantaged. The map below shows these communities and their location throughout Oregon.

Identifying LIDAC tracts in Oregon

[3] Romanello M., Di Napoli C., Drummond P., et al. The 2022 report of the lancet countdown on health and climate change: health at the mercy of fossil fuels. *Lancet.* 2022;400:1619–1654.

DEQ used data from EPA's Climate and Economic Justice Screening Tool to compile the census tracts in Oregon that are overburdened and underserved. Figure 4 is a map of Oregon showing the LIDAC tracts. DEQ also examined the number of LIDAC tracts and population by county throughout Oregon which can be seen in Table 5. See appendix C for a complete list of statewide LIDAC census tracts in Oregon.

Figure 4: Low income and disadvantaged communities (LIDAC) within census tracts in Oregon



The U.S. Census Bureau's American Community Survey defines "low income" as the percent of a census tract's population in households where the household income is at or below 200% of the Federal poverty level. The Climate & Economic Justice Screening Tool methodology identifies communities that are disadvantaged if they are in census tracts that are at or above the 90th percentile for metrics related to health, housing, energy as well as communities at or above the 65th percentile for low income, described above. Figure 4 illustrates the 233 census tracts (2010) that contain communities in Oregon which qualify as both low income and disadvantaged.

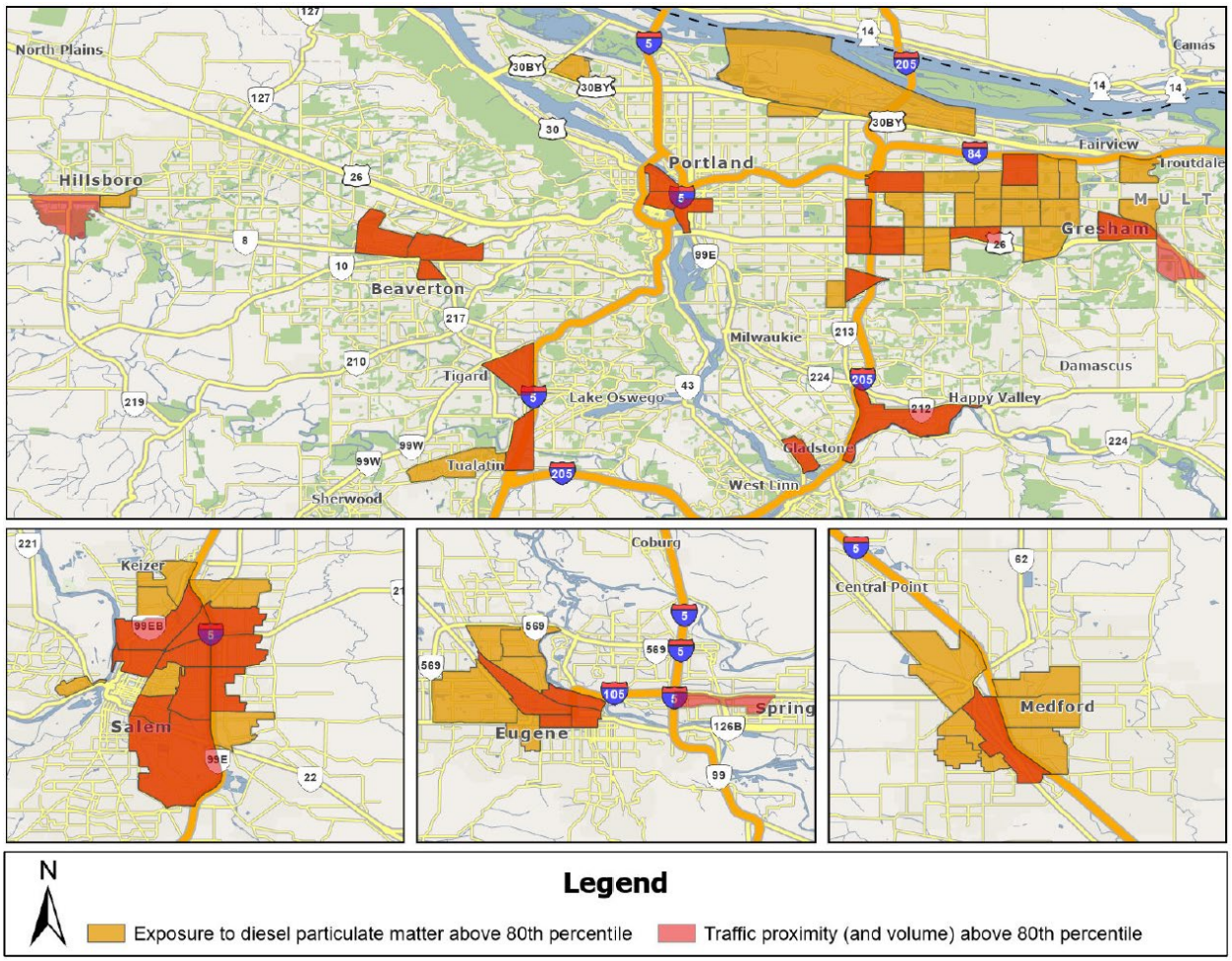
Table 5: Population and number of LIDAC tracts per county in Oregon.

County	Population	# LIDAC Tracts	County	Population	# LIDAC Tracts
Baker County	10,612	4	Lake County	7,837	2
Benton County	4,570	1	Lane County	127,624	31
Clackamas County	7,098	3	Lincoln County	22,949	7
Clatsop County	9,734	3	Linn County	53,431	9
Columbia County	23,242	4	Malheur County	30,412	7
Coos County	39,424	6	Marion County	117,430	18
Crook County	11,203	2	Morrow County	11,303	2
Curry County	12,461	3	Multnomah County	185,124	33
Deschutes County	12,792	2	Polk County	5,529	2
Douglas County	65,550	13	Sherman County	1,642	1
Gilliam County	1,878	1	Tillamook County	20,244	6
Grant County	7,189	2	Umatilla County	42,032	8
Harney County	7,267	2	Union County	7,373	2
Hood River County	5,721	1	Wallowa County	5,076	2
Jackson County	80,794	17	Wasco County	10,100	3
Jefferson County	7,051	2	Washington County	32,517	8
Josephine County	60,724	11	Wheeler County	1,415	1
Klamath County	35,780	11	Yamhill County	14,571	3

Source: Climate & Economic Justice Screening Tool, Council on Environmental Quality

All the measures in this PCAP have statewide impacts by reducing GHG emissions and increasing co-benefits. Measures contained in this PCAP positively impact some areas more than others, for example incentivizing the adoption of ZEVs will have a more localized impact such as near transportation corridors shown in Figure 5. Tables 6 and 7 show the number of tracts that are 80th percentile or higher for traffic proximity and diesel particulate matter exposure.

Figure 5: Low-income and Disadvantaged Communities - Traffic Proximity and diesel particulate matter exposure above 80th percentile



The Climate & Economic Justice Screening Tool defines the metric “traffic proximity and volume” as the number of vehicles (average annual daily traffic) within 500 meters of major roads. Data at the 2010 census tract level expresses this metric as a percentile of all census tracts. The metric “diesel particulate matter exposure” represents the mixture of particles in diesel exhaust in the air in units of microgram per cubic meter and data are provided as a percentile of all census tracts. Figure 5 illustrates the number of census tracts in Oregon contain Low income and Disadvantaged Communities near major highway corridors that experience more than 80% higher annual daily traffic and/or exposure to diesel particulate matter compared to all census tracts in Oregon. The census tracts highlighted in orange represent the low income and disadvantaged communities that are impacted by both significant traffic and greater

exposure to tailpipe emissions from medium and heavy-duty vehicles traveling along the highway corridors in Oregon.

Table 6: Number of LIDAC census tracts in Oregon greater than 80th percentile for traffic proximity and volume.

County	# LIDAC Tracts
Clackamas County	2
Jackson County	1
Lane County	6
Lincoln County	1
Linn County	2
Marion County	10
Multnomah County	12
Washington County	6

Source: Climate & Economic Justice Screening Tool, Council on Environmental Quality

Table 7: Number of LIDAC tracts in Oregon greater than 80th percentile of all census tracts for exposure to diesel particulate matter.

County	# LIDAC Tracts
Clackamas County	2
Jackson County	7
Lane County	9
Linn County	4
Marion County	16
Multnomah County	30
Polk County	1
Washington County	7

Source: Climate & Economic Justice Screening Tool, Council on Environmental Quality

Other actions such as those that promote the installation of energy efficient appliances and heat pumps will impact rural areas shown in Figure 6. Table 8 shows total population and number of LIDAC tracts in Oregon designated as rural by U.S. Census Bureau.

For the 2010 Census, the Census Bureau delineated geographical areas using urban-rural classification methodology. Among other criteria, the population of an Urbanized Area must be 50,000 people or more. County level data provided indicates that eight of 36 counties in Oregon qualify as “urban areas”, and “rural” encompasses the remaining 28 counties. To identify the rural census tracts in Oregon, each census tract ID was assigned the urban-rural designation for each county. Figure 6 illustrates the 105 Low Income and Disadvantaged Communities (LIDAC) in Oregon that are in census tracts located in a rural county.

Figure 6: Low-income and Disadvantaged Communities – Rural Designated 2010 Census Tracts

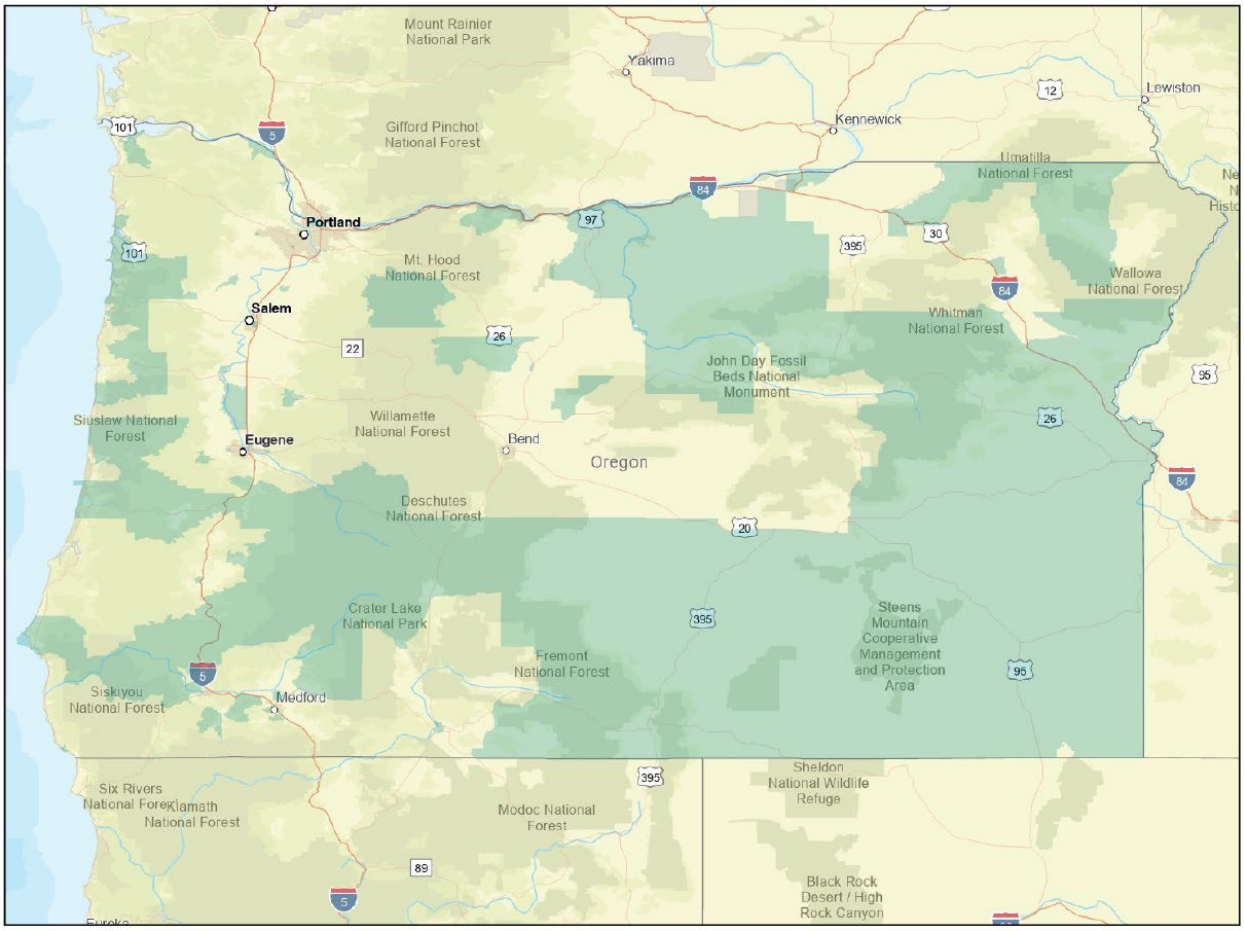


Table 8: Total population and number of LIDAC tracts in Oregon designated as rural by U.S. Census Bureau.

County	Total Population	# LIDAC Rural Tracts
Lane County	37,550	11
Douglas County	36,901	9
Malheur County	30,412	7
Umatilla County	29,023	6
Klamath County	26,110	9
Jackson County	24,138	5
Lincoln County	18,862	6
Columbia County	16,606	3
Linn County	15,381	2
Josephine County	12,780	4
Tillamook County	11,610	5
Baker County	10,612	4
Wasco County	10,100	3
Clatsop County	9,734	3
Marion County	9,167	2
Yamhill County	8,762	2
Lake County	7,837	2
Union County	7,373	2
Curry County	7,230	2
Jefferson County	7,051	2
Hood River County	5,721	1
Wallowa County	5,076	2
Benton County	4,570	1
Washington County	4,532	2
Crook County	4,344	1
Clackamas County	3,424	2
Morrow County	2,926	1
Harney County	1,991	1
Grant County	1,885	1
Gilliam County	1,878	1
Sherman County	1,642	1
Wheeler County	1,415	1
Multnomah County	1,249	1

Source: Climate & Economic Justice Screening Tool, Council on Environmental Quality

Impacts of priority measures on low-income and disadvantaged communities

Each measure in this PCAP provides overall GHG reductions, additional co-benefits either directly or indirectly, as well as positive impacts to LIDAC areas.

Light-duty vehicle incentives for low- and moderate-income households

This action targets LIDAC communities by directing additional funding to Oregon's EV rebate program, specifically the Charge Ahead Rebate for low- and moderate-income households. To be eligible to receive a Charge Ahead Rebate, a household's income must be less than 400% of the federal poverty guideline. Because low-income households are more likely to rely on the secondary used vehicle market, the Charge Ahead Rebate was designed specifically to allow for rebates towards both new and used ZEVs, thereby ensuring that ZEVs can be affordable.

Oregon's EV rebate program is currently working with a contractor to engage with low-income and disadvantaged communities as indicated by EJ Screen and EPA's Climate and Economic Justice Screening Tool to promote the Charge Ahead Rebate. The contractor will coordinate with community-based organizations to better understand the barriers to EV adoption and to share information about the Charge Ahead Rebate.

By further incentivizing the transition to ZEVs in LIDAC communities, improvements in air quality and public health benefits can also be realized especially in communities along high traffic corridors.

Medium- and heavy-duty vehicle incentives, grants and infrastructure

The Medium- and Heavy-Duty ZEV Rebate program is designed to ensure equitable access to rebates by requiring that at least 40% of the funds be allocated to vehicles located in communities disproportionately burdened by diesel pollution. This is consistent with the Justice40 Initiative set forth in Executive Order 14008.

Both the Diesel Emissions Mitigation and Oregon Zero Emissions Fuels grant programs prioritize projects located in LIDAC communities based on individual project's ability to reduce diesel emissions in areas with the highest diesel emissions, vulnerable populations, and population density.

Both the Oregon Zero Emissions Fuels grant program and the Medium- and Heavy-Duty ZEV Rebate program also provide additional funding support for Minority, Women and Disadvantaged Business Enterprise applicants by dedicating a percentage of available revenue for projects that benefit vulnerable populations.

By further incentivizing the transition to ZEVs in LIDAC communities, improvements in air quality and public health benefits can also be ensured.

Incentives for building more energy-efficient housing

Building more energy-efficient housing lowers energy costs which benefits LIDAC communities, especially those who are energy burdened. Specifically, this action supports ensuring that newly constructed affordable housing for those making less than 80% of the Area Median Income will be more energy efficient and therefore more affordable to live in. More energy-efficient housing

will also provide public health benefits to LIDAC communities by improving indoor and outdoor air quality.

Incentives for early or voluntary adoption of Building Performance Standard requirements

This measure would be implemented in a way that prioritizes incentives for women and minority-owned commercial buildings.

Incentives for residential heat pump installation

Transitioning to heat pumps lowers energy costs which benefit LIDAC communities, especially those who are energy burdened. This action includes funding for Oregon's Rental Home Heat Pump Program which provides for a higher level of incentives to low- and moderate-income households. Heat pumps will also provide public health benefits to LIDAC communities by improving indoor and outdoor air quality.

Weatherization assistance

Weatherization increases the energy-efficiency of homes. Therefore, there is a cost savings from using less energy to heat and cool homes, which benefits LIDAC communities, especially those who have high energy burden. Existing state agency weatherization programs that would be funded under this action are focused on low-income households. More energy-efficient housing will also provide public health benefits to LIDAC communities by improving indoor and outdoor air quality.

Food waste grants, infrastructure, and replacements

Improved food access while reducing food waste reduces household expenses Also possible economic opportunity in underserved communities that develop highly localized composting businesses and food production.

Embodied carbon grants

Lower cost for the construction of more sustainable buildings will result in higher affordability for housing that has reduced climate impacts. This should also result in upstream economic opportunities related to bio-based materials such as hemp, wood fiber insulation, and timber products like cross-laminated timber.

Grants for installation of landfill controls

Potential benefit to residents that live near landfills; impacts are site specific.

Accelerate transition to reusable materials

This action is an opportunity to focus on creating economic opportunities for disadvantaged communities. Provision of infrastructure in support of school cafeteria programs could prioritize schools serving lower income populations and normalize behaviors involving reuse and durability.

Collaborations

Upon receiving the CPRG grant award, DEQ set up an Oregon CPRG website, a CPRG email address (CPRG@deq.oregon.gov) and a CPRG list serve for notifications (over 1,100 signed up as of this draft PCAP). The state conducted intergovernmental coordination and outreach in the development of this PCAP. This section describes the framework DEQ and ODOE used to support robust and meaningful engagement strategies to ensure representation from interested parties and overcome obstacles to engagement, including linguistic, cultural, institutional, geographic, time constraints, and other barriers.

Identification of interested parties

The State of Oregon has many existing efforts, organizations, and interested parties engaged on climate action. ODEQ, ODOE, and the Governor's Office looked to existing avenues for engagement on CPRG, while balancing an extremely tight timeline required of the grant.

Oregon is a diverse state with diverse needs and goals. As seen below there is an extensive and diverse list of potential interested parties and we hope to grow relationships with all of these entities and more in the duration of the CPRG planning efforts.

- Other state agencies;
- Local jurisdictions;
- Tribal Nations;
- Metropolitan planning organizations;
- Economic development organizations;
- Environmental advocates;
- Industrial associations;
- Automotive associations;
- Utilities;
- Agricultural associations;
- Waste management organizations;
- Industrial organizations;
- Consumer advocates;
- Local elected officials;
- Community-based organizations;
- Chambers of commerce;
- Other interested organizations; and
- Residents of Oregon.

Interagency and Intergovernmental Coordination

In May 2023, DEQ began meeting weekly with ODOE and the Governor's Office, the two primary collaborators on the CPRG effort. A memo was shared from the Governor's Office with all natural resource agency directors to inform them of the effort, ask for their interest in collaboration, and determine a best point of contact. Individual meetings were held with the interested agencies to better understand potential for collaboration and areas of interest in participation in the PCAP and CCAP processes.

Early outreach was also conducted with the nine federally recognized Tribes in Oregon. None of the nine received direct CPRG planning grants from EPA, meaning it was critical to include Tribal priorities in the state's planning process. Formal letters were later sent to the nine Tribal Council Chairs and corresponding Natural Resource Department staff. Funds are available in the CPRG planning grant for Tribal engagement and in this vein, DEQ is working to develop Intergovernmental Agreements to formalize coordination with those interested Tribes over the course of the four-year CPRG planning grant award. The Affiliated Tribes of Northwest Indians also received a CPRG planning grant and monthly meetings were held between State of Washington, State of Oregon, ATNI, Metro, Puget Sound Air Agency, and EPA to coordinate and support one another.

Coordination calls with Metro, the lead agency for the Portland-Hillsboro-Vancouver MSA, occurred at least monthly throughout the duration of the PCAP development. The state supported this collaboration by attending Metro's engagement activities, supported in contractor selection, as well as collaboratively considered various actions best suited for either the state's PCAP or the MSA PCAP.

Oregon has one local air agency, Lane Regional Air Protection Agency, and the state participated in monthly calls hosted by the growing local coalition including LRAPA and local Lane County partners.

The state reached out to the League of Oregon Cities and the Association of Oregon Counties to inform local jurisdictions of the CPRG program. This engagement led to a webinar, survey, and multi-day tabling activities at the league's annual conference.

Individual calls and conversations were held with over 20 other local jurisdictions to inform them of the CPRG program, learn from local climate planning efforts and priorities, and develop relationships to that can grow in the state's CCAP efforts.

Outreach plan

The compressed timeline required for delivery of the state's PCAP to EPA on March 1, 2024 allowed for limited, but meaningful engagement with those that are eligible to apply for the CPRG Implementation Grant opportunity. Those entities eligible to apply for the implementation grant phase include states, municipalities, Tribes, Tribal consortia, and territories. Additionally, meaningful community engagement with low-income and disadvantaged communities will continue to be a priority for the state in CPRG planning efforts. The state will continue to look to grow existing relationships and avenues for engagement with low-income and disadvantaged communities through trusted community-based organizations and partners.

The state has also been guided by the extensive feedback received during previous engagement on climate action in Oregon, such as, but not limited to:

- Oregon's Climate Protection Program – the cap and invest regulation to reduce GHG emissions by 90% by the year 2050 (two-year rulemaking with over 7,000 public comments)
- Oregon's Climate Friendly and Equitable Communities Program
- Portland Clean Energy Fund's five-year Climate Investment Plan
- Oregon Climate Action Commission's Roadmap to 2030 and the Transformational Integrated GHG Emissions Reduction Project Report

Strategies to Overcome Barriers to Participation

The state has funds available to help overcome barriers to engagement through the CPRG planning grant. Funds are available for translation services, stipends for participation in listening sessions, food and event space rental, and tabling and participation in community events. A combination of in-person and virtual events has also overcome the barrier of geographic representation, ensuring that individuals can attend, even in the case they are not able to physically get to a location. In selecting meeting locations, it is extremely important to consider places that are trusted by community, accessible by community, and flexible for community needs.

The largest barrier to participation that the State experienced was the timeline required for delivery of the State PCAP by March 1, 2024. For the continued CPRG efforts of developing the State's Comprehensive Climate Action Plan, due to EPA Summer 2025, the state will deploy as many strategies for engagement as possible, focusing efforts with low income and disadvantaged communities and engaging interested community-based organizations.

Additionally, the CPRG planning team will align where possible on efforts led by the Governor's Environmental Justice Council to engage with communities on Oregon's Environmental Justice mapping tool.

Outreach and coordination documentation

Table 9 provides a log of interagency and intergovernmental coordination and engagement with interested parties associated with the development of this PCAP.

Table 9. Outreach and Coordination Log

Date	Topic	Organizations Involved	Outreach Method	Outcome(s)
Weekly	Planning team coordination calls	ODEQ, ODOE, GO		
Monthly	Washington, Oregon, ATNI, MSA, and EPA coordination calls	States, MSAs, Affiliated Tribes of NW Indians, and EPA	Region 10 listserv	
Monthly	Oregon and MSA coordination calls	Oregon and Metro Regional Government		
4/24/23	Overview of Phase I Application	State agency partners, local jurisdictions, other interested parties	Email listservs	Engaged with over 30 individuals. Shared EPA website on resources, CPRG timeline, and State's workplan
5/22/23	CPRG Phase I Update	Oregon Climate Action Commission	Engage at existing virtual meeting	
9/27/23	CPRG Update	House Committee on Climate, Energy, and Environment	In person presentation to legislators.	
9/28/23	CPRG Update	Senate Committee on Climate, Energy, and Environment	In person presentation to legislators	
10/5/23 - 10/6/23	Listening Session on Priority Actions	Confederated Tribes of Umatilla Indian Reservation	Email listservs, posters, and word of mouth	Engaged with over 30 individuals.
10/11/23- 10/12/23	Invitation for Collaboration and Feedback	League of Oregon Cities Conference Attendees	Engage by tabling and conversations at LOC conference	Engaged with over 50 individuals.
10/17/23	Invitation for Collaboration and Feedback	Oregon Tribal Environmental Forum Attendees	Engage at annual forum coordinated by a hosting Tribe and EPA	Engaged with over 20 individuals.
10/19/23	Invitation for Collaboration and Feedback	9 federally recognized Oregon Tribes	Letters to Tribal Leadership and Natural Resource Staff	

Date	Topic	Organizations Involved	Outreach Method	Outcome(s)
10/31/23	Priority Measures Feedback	League of Oregon Cities Membership	LOC membership email – virtual and survey	
12/11/23	PCAP and Phase II Orientation	Oregon Climate Action Commission	Engage at existing virtual meeting	
1/11/24	Overview of Draft PCAP	Public	Webinar	TBD
1/5/24 – 1/26/24 (planned)	Feedback collected via survey on Draft PCAP	Public	Survey	TBD

Next Steps: Oregon's Comprehensive Climate Action Plan

This plan does not represent the whole of Oregon's climate needs and does not negate or diminish the many ongoing efforts to mitigate Oregon's climate pollution that are not addressed in this document. Addressing Oregon's climate pollution must be holistic, throughout the economy- at local, regional, and state levels. The PCAP is not designed to address all of the necessary actions for emission reduction in Oregon. Instead, it is designed to identify the actions that offer the most significant reductions in the short term that can be achieved with additional federal funding. DEQ and ODOE continue to review activities that have been submitted as well as analyze associated reductions and program costs. The final draft of this PCAP will only include those actions that will be competitive for Phase II CPRG funding implementation grant awards.

Due to the constraints on the scope of the PCAP, there are two key aspects that need to be addressed through future work- carbon sequestration efforts and developing and funding local community level actions to reduce emissions. Both of these actions are imperative to progress, but do not fit well in the federal objectives for CPRG implementation funds. Oregon hopes to identify climate mitigation opportunities in those two areas through the development of the Comprehensive Climate Action Plan.

CPRG planning is a four-year grant and concludes with EPA in August 2027. The next step in this grant is the development of Oregon's Comprehensive Climate Action Plan.

Building on the PCAP, implementation of which will help the state reach the 2030 milestone, Oregon will develop the CCAP to help achieve the state's climate goals, particularly the 2040 and 2050 goals. The CCAP will consist of five workstreams, some of which are already underway:

1. The development of an Oregon Statewide Energy Strategy that identifies areas for improved alignment of energy policy, regulation, implementation, financial investment, and technical assistance to achieve decarbonization.
2. A GHG emissions reduction policy gap analysis of sources and sectors.
3. A Natural and Working Lands Carbon Sequestration Inventory.
4. Continuation of community engagement to identify the barriers faced by Oregon's environmental justice communities to accessing and benefiting from clean energy projects and programs and to identify the GHG mitigation measures that are of most interest and benefit to those communities.
5. Oregon's Comprehensive Climate Action Plan, which will synthesize the findings of the efforts listed above to identify recommended policies and actions to achieve Oregon's 2040 and 2050 climate goals and develop metrics to track progress toward achieving them.

Coordinating entities each have directives and expertise to lead the development of these five workstreams and are eager to continue this important climate action with engagement from as many interested parties as possible. In addition, subsequent to the workplan the state submitted to EPA for the CCAP back in April, the Legislature provided direction and resources via House Bill 3409 (2023) and HB 3630 (2023) relevant to some of the anticipated deliverables, which will

be reflected in the CCAP work ahead. Please visit DEQ's Climate Pollution Reduction Grant website for additional information on the workplan and more details on individual workstreams.

Funding acknowledgement

This project has been funded in part by EPA under assistance agreement 02J38701 to DEQ. The contents of this document do not necessarily reflect the views and policies of the EPA, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

Appendix A: Additional sector-based emissions data

Table 10 is a further breakdown from Table 1, of Oregon's Greenhouse Gas Emissions by Economic Sub-Sector or Category. Table 11 details emissions of specific GHG across all sectors.

Table 10. Oregon Greenhouse Gas Emissions in MMT CO_2e by Economic Sub-Sector or Category

Sector/Source	1990	2021
Transportation		
Motor Gasoline	11.61	12.00
Distillate Fuel	4.55	7.31
Jet Fuel, Kerosene	1.25	0.74
Natural Gas	0.49	0.28
Residual Fuel	1.75	0.00
Lubricants	0.24	0.11
Aviation Gasoline	0.04	0.04
LPG	0.04	0.00
Jet Fuel, Naphtha	0.08	0.00
Passenger & Light Vehicles (CH4)	0.06	0.01
Non-Road Vehicles & Equipment (CH4)	0.02	0.02
Heavy-Duty Vehicles (CH4)	0.00	0.00
Natural Gas Distribution (sector share)	0.04	0.02
Passenger & Light Vehicles (N2O)	0.46	0.08
Non-Road Vehicles & Equipment (N2O)	0.09	0.12
Heavy-Duty Vehicles (N20)	0.01	0.04
Refrigerants, A/C, Fire Protection Use	0.00	0.87
Electric Power Consumption		
Transportation Light Rail Electricity Use	0.00	0.01
Industrial Electricity Use	5.98	5.19
Residential Electricity Use	5.93	6.82
Commercial Electricity Use	4.66	5.81
Residential and Commercial		
Residential Natural Gas Combustion	1.26	2.37
Commercial Natural Gas Combustion	1.11	1.60
Commercial Petroleum Combustion	0.79	0.67
Residential Petroleum Combustion	0.77	0.24
Waste Incineration	0.08	0.10
Residential Coal Combustion	0.00	0.00
Commercial Coal Combustion	0.00	0.00
Municipal Solid Waste Landfills	1.15	1.40
Natural Gas Distribution (sector share)	0.20	0.29
Municipal Wastewater	0.23	0.33
Residential Combustion Byproducts (CH4)	0.06	0.20
Commercial Combustion Byproducts (CH4)	0.02	0.03

Sector/Source	1990	2021
Waste Incineration	0.00	0.00
Compost	0.00	0.05
Fertilization of Landscaped Areas	0.06	0.08
Residential Combustion Byproducts (N2O)	0.01	0.03
Waste Incineration	0.01	0.01
Compost	0.00	0.05
Commercial Combustion Byproducts (N2O)	0.00	0.01
Municipal Wastewater	0.08	0.13
Refrigerants, Aerosols, Fire Protection Use	0.00	0.58
Industrial		
Natural Gas Combustion	2.60	2.71
Petroleum Combustion	2.58	1.37
Cement Manufacture	0.22	0.48
Coal Combustion	0.13	0.12
Ammonia Production and Urea Consumption	0.07	0.03
Waste Incineration	0.07	0.03
Iron & Steel Production	0.70	0.03
Soda Ash Production & Consumption	0.03	0.03
Limestone and Dolomite Use	0.01	0.01
Lime Manufacture	0.09	0.05
Pulp & Paper wastewater	0.00	0.00
Natural Gas Distribution & Production	0.26	0.69
Industrial Landfills	0.07	0.26
Combustion Byproducts	0.03	0.03
Food Processing Wastewater	0.01	0.01
Waste Incineration	0.00	0.00
Combustion Byproducts	0.05	0.05
Waste Incineration	0.00	0.01
Nitric Acid Production	0.00	0.02
Semiconductor Manufacturing	0.36	0.97
Refrigerant, Foam, Solvent, Aerosol Use	0.00	0.15
Aluminum Production	0.31	0.00
Agriculture		
Urea Fertilization	0.06	0.14
Liming of Agricultural Soils	0.03	0.06
Enteric Fermentation	2.63	2.75
Manure Management	0.31	0.34
Agricultural Residue Burning	0.01	0.01
Agricultural Soil Management	3.33	3.21
Manure Management	0.14	0.16
Agricultural Residue Burning	0.00	0.00
Total Emissions	**57.26**	**61.38**

Table 11. Oregon GHG emissions in MMT CO_2e by Gas and Source

Gas/Source	1990	2021
CO2		
Motor Gasoline	11.61	12.00
Distillate Fuel	4.55	7.31
Jet Fuel, Kerosene	1.25	0.74
Natural Gas	0.49	0.28
Residual Fuel	1.75	0.00
Lubricants	0.24	0.11
Aviation Gasoline	0.04	0.04
LPG	0.04	0.00
Jet Fuel, Naphtha	0.08	0.00
Light Rail Electricity Use - Other	0.00	0.01
Industrial Electricity Use	5.98	5.19
Residential Electricity Use	5.93	6.82
Commercial Electricity Use	4.66	5.81
Residential Natural Gas Combustion	1.26	2.37
Commercial Natural Gas Combustion	1.11	1.60
Commercial Petroleum Combustion	0.79	0.67
Residential Petroleum Combustion	0.77	0.24
Waste Incineration	0.08	0.10
Residential Coal Combustion	0.00	0.00
Commercial Coal Combustion	0.00	0.00
Natural Gas Combustion	2.60	2.71
Petroleum Combustion	2.58	1.37
Cement Manufacture	0.22	0.48
Coal Combustion	0.13	0.12
Ammonia Production and Urea Consumption	0.07	0.03
Waste Incineration	0.07	0.03
Iron & Steel Production	0.70	0.03
Soda Ash Production & Consumption	0.03	0.03
Limestone and Dolomite Use	0.01	0.01
Lime Manufacture	0.09	0.05
Pulp & Paper wastewater	0.00	0.00
Urea Fertilization	0.06	0.14
Liming of Agricultural Soils	0.03	0.06
CH4		
Passenger & Light Vehicles	0.06	0.01
Non-Road Vehicles & Equipment	0.02	0.02
Heavy-Duty Vehicles	0.00	0.00
Natural Gas Distribution (sector share)	0.04	0.02
Municipal Solid Waste Landfills	1.15	1.40

Gas/Source	1990	2021
Natural Gas Distribution (sector share)	0.20	0.29
Municipal Wastewater	0.23	0.33
Residential Combustion Byproducts	0.06	0.20
Commercial Combustion Byproducts	0.02	0.03
Waste Incineration	0.00	0.00
Compost	0.00	0.05
Natural Gas Distribution & Production	0.26	0.69
Industrial Landfills	0.07	0.26
Combustion Byproducts	0.03	0.03
Food Processing Wastewater	0.01	0.01
Waste Incineration	0.00	0.00
Enteric Fermentation	2.63	2.75
Manure Management	0.31	0.34
Agricultural Residue Burning	0.01	0.01
N2O		
Passenger & Light Vehicles	0.46	0.08
Non-Road Vehicles & Equipment	0.09	0.12
Heavy-Duty Vehicles	0.01	0.04
Fertilization of Landscaped Areas	0.06	0.08
Residential Combustion Byproducts	0.01	0.03
Waste Incineration	0.01	0.01
Compost	0.00	0.05
Commercial Combustion Byproducts	0.00	0.01
Municipal Wastewater	0.08	0.13
Combustion Byproducts	0.05	0.05
Waste Incineration	0.00	0.01
Nitric Acid Production	0.00	0.02
Agricultural Soil Management	3.33	3.21
Manure Management	0.14	0.16
Agricultural Residue Burning	0.00	0.00
HGWP		
Refrigerants, A/C, Fire Protection Use	0.00	0.87
Refrigerants, Aerosols, Fire Protection Use	0.00	0.58
Semiconductor Manufacturing	0.36	0.97
Refrigerant, Foam, Solvent, Aerosol Use	0.00	0.15
Aluminum Production	0.31	0.00
Total (Sources) Emissions	**57.26**	**61.38**

Appendix B: Compiled actions submitted for Oregon Priority Climate Action Plan inclusion

The table below includes actions that have been submitted to the CPRG team to consider for inclusion in the PCAP. This list is not comprehensive and does not the verbal actions that have been provided to this team.

Table 12. Compiled actions submitted for Oregon PCAP inclusion consideration

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
DEQ	Oregon Clean Vehicle Rebate Program - Charge Ahead Component	A key method to meeting Oregon's GHG reduction goals and improving health impacts is to accelerate electric vehicle adoption. The Oregon Clean Vehicle Rebate Program provides rebates to Oregonians for the purchase or lease of an electric vehicle. Due to demand outpacing the limited program funding, DEQ had to temporarily suspend the program in 2023 and anticipates future annual suspensions. To create more rebate program stability for low- and moderate-income households, Oregon is requesting additional funds from CPRG. This funding will be dedicated to rebate program's Charge Ahead rebate, which provides a higher rebate amount to low- and moderate-income households and low-income service providers. This will increase ZEV access and better ensure no one is left behind in the transition to ZEVs.
DEQ	Oregon Zero Emission Fueling Infrastructure Grant	
DEQ	Medium- and Heavy-Duty Vehicle Rebate (change to Medium- and Heavy- Duty Vehicle Incentive)	Funds will support the Diesel Emissions Mitigation program and expand the Medium- and Heavy-Duty Incentive funding. DEQ currently has statutory authority, implementation capacity, and limited funding available for these incentive programs.
DEQ	Medium- and Heavy- Duty Charging Infrastructure	Funds will expand the already existing Oregon Zero Emission Fueling Program
DEQ, local governments	Jumpstart ORS 459A.941	Grants to Expand Reusable Food Serviceware and Packaging (single use plastics reduction). Also referred to as the Material Impact Reduction and Reuse – Oregon program.

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
DEQ, local governments	Landfill Gas Control Grants	Grants to help landfills evaluate opportunities to reduce fugitive methane emissions and then reduce emissions, limited to actions not otherwise required by federal or state laws ("beyond compliance").
Local government, CBOs	Food Waste Recovery Infrastructure	Grants to build or expand infrastructure such as anaerobic digestion and compost facilities. Would support traditional commercial recovery, as well as more local, “grassroots” food waste collection and recycling efforts.
DEQ	Pacific Coast Food Waste Commitment	Direct funding that would build on a successful three-state program that helps food sector businesses reduce the wasting of food.
DEQ , other state agencies, local government, CBOs	Community Composting/ Agriculture	Grants for targeted efforts to build and expand smaller-scale infrastructure in underserved communities to encourage localized collection of food waste for composting that supports local food production.
DEQ, other state agencies	Replace old refrigerators in low-income housing	Potential pass-through funds to the Energy Trust of Oregon and other community-based organizations. Improving household refrigerators is shown to reduce food waste; also reduces energy use and emissions of refrigerants.
Local governments, DEQ	Conversion of commercial buildings to residential	Grants to support conversion of commercial buildings to residential. Offices, hotels, and other commercial buildings that are vacant or underutilized can be converted into much needed housing. However, the projects do not always pencil for developers due to the needs for upgraded systems, envelopes, or seismic to support the new use. These grants can provide a source of gap funding to incentivize whole building reuse and conversion when possible. Reuse of existing buildings can result in a 40% to 75% reduction in embodied GHG emissions compared to new construction.
Local governments, DEQ	Financial incentives for construction or renovation of space efficient housing	Building smaller not only can increase the density, availability, and affordability of housing to address the housing crisis, it can reduce embodied GHG emissions by 20% 40% and can support access to public transit and services. Smaller housing can include ADU's, quadplexes (as allowed per HB 2001, 2019), conversions, and multifamily apartment buildings. Financial incentives can incentivize developers to build smaller housing.
Local governments, DEQ	Grants for low carbon building materials in projects	Low carbon building materials are available on the market for many product categories. In some cases, these products are cost-neutral, but in other cases they are not. When these materials have been specified on projects, they risk being replaced with

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
		lower-cost, higher-carbon materials through the value engineering process. This action will provide grants to support keeping those materials in building projects when they risk value engineering. Using low carbon building materials can results in 20% to 60% embodied GHG emissions reductions.
Local governments, DEQ	Grants for switching from high to low GWP refrigerants	Current and emerging low global warming potential refrigerants have the potential to replace 67% to 82% of hydrofluorocarbons refrigerants by 2050. This action will provide grants to support the switching from high to low GWP refrigerants in new construction, renovations, and existing building system upgrades.
Business Oregon, DEQ	Support for start-up and expansion of low-GWP bio-based building materials manufacturing	Low-GWP bio-based materials support reduction in overall embodied GHG emissions of building projects such as hemp and wood fiber insulation. This action will provide grant funding to support bio-based material manufacturers who need start up funding or funding to support expansion to reach market potential.
Oregon Housing and Community Services (OHCS)	Manufactured Home Replacement	https://www.oregon.gov/ohcs/mmcrc/Documents/MHR-Program-Guide.pdf
Oregon Health Authority (OHA)	Healthy Homes Grant Program	Low-income households and communities impacted by environmental justice factors . HB 2842 directs the Oregon Health Authority to provide grants to a wide array of third-party organizations, which in turn provide financial assistance to eligible homeowners and landlords to repair and rehabilitate dwellings to address climate and other environmental hazards, ensure accessible homes for disabled residents, and make general repairs needed to maintain a safe and healthy home.
ODOE	Heat Pump Rebate Program	The Oregon Rental Home Heat Pump Program provides rebates and grants for the installation of heat pumps and related upgrades in dwellings used as residential tenancy (rentals) and manufactured dwellings or recreational vehicles located in a rented space.
Smaller cities		Find ways for smaller cities to scale climate pollution reduction strategies.
TriMet	Technical Assistance	We may need technical assistance in quantifying GHG reduction measures from multiple sources for a successful grant application. Such as how to factor in corridor transit capital improvements, transitioning from renewable diesel to battery electric or fuel cell hydrogen buses and the charging infrastructure

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
		needed to support that fleet - into one application or proposal.
TriMet	Implement Zero-emission Bus Rapid Transit	The 82nd Avenue corridor, served by the Line 72 bus, is one of TriMet's highest ridership bus lines, but also the route with the most transit delay. This neighborhoods along this corridor have some highest concentrations of diesel particulate matter in the region and many vulnerable communities live along this transit route. This route is one of TriMet's top priorities to transition from diesel buses to zero-emission buses. Transitioning the bus fleet to zero-emissions on this corridor will be part of the 82nd Avenue Transit Project, a bus rapid transit project planned for the corridor that will be operational by 2029.
Oregon Watershed Enhancement Board (OWEB)	Rural and Urban bioswales	OWEB has been discussing how to support more projects in urban areas to connect more closely with low-income and disadvantaged communities and address emerging issues such as the impacts of tire chemicals on salmon and steelhead in urban streams. Possible projects could include bioswales and establishing additional tree and shrub buffers/canopy. Traditionally these projects have not competed well against projects proposed in rural areas because urban projects tend to be more expensive.
Port of Portland		The Port is in many stages of various climate pollution reduction strategy planning and implementation. Key strategies that would benefit from CPRG implementation funding are ship to shore power, cargo handling equipment electrification, fleet vehicle electrification, and electric ground support (at airport).
Oregon Department of Land Conservation and Development (DLCD, local governments	Climate-Friendly and Equitable Communities	Climate-Friendly and Equitable Communities program provides technical assistance to local governments to update comprehensive plans and zoning codes to encourage walkable, bikeable, and transit-oriented development. The program is the local component of the Statewide Transportation Strategy and is designed to ensure that Oregon's metropolitan areas meet the state's greenhouse gas reduction goal.
DLCD	Community Green Infrastructure Fund	Community Green Infrastructure Fund provides grants for planning and developing community green infrastructure projects or green infrastructure economic development projects, developing or supporting native seed banks or native plant nurseries, and supporting and implementing green infrastructure master plans.

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
DLCD	Oregon Coastal Habitat Conservation and Restoration	Oregon Coastal Habitat Conservation and Restoration Program supports acquisition, restoration and engineering planning for projects that result in the protection or restoration of high priority natural ecosystems, enhance species or habitats of diversity, and build coastal resiliency. These projects support sequestration, adaptation and mitigation measures.
DLCD	Oregon Coastal Management Program	Oregon Coastal Management Program provides technical support to coastal communities to develop climate action plans that may include implementable projects that can reduce climate pollution.
DLCD	Estuarine Resilience Action Plans	Estuarine Resilience Action Plans are technical resources provided by the agency for local governments that include conservation and restoration projects that not only result in blue carbon benefit, but also improved infrastructure and community health.
Oregon Department of Fish and Wildlife (ODFW)	Natural and Working Lands	ODFW is working with other state agencies and the Oregon Global Warming Commission to develop projects and plans that will implement the state's forthcoming Natural and Working Lands Carbon Sequestration Goal. There is an initial $10 million available in the state's Natural and Working Lands Fund and the agencies have identified a short list of projects that greatly exceeds that amount. The CPRG funds could be used to leverage the state's investment of General Fund in the Natural Working Lands Fund by focusing the types of projects identified by the commission in this process.
ODFW	Carbon sequestration and working lands	The Global Warming Commission has a draft report that lists possible recommendations for activities on the landscape that will sequester more carbon in natural and working lands. A strong linkage could be made between this planning process and the work of the Global Warming Commission.
ODFW	Multiple	The ODFW Carbon Reduction Plan identifies specific actions and targets to reduce the department's: electricity use; fuel combustion of vehicles, boats, equipment, and HVAC systems; fugitive emissions from refrigerants; as well as to increase carbon sequestration in ODFW Wildlife Areas. Project proposals that overlap with CPRG program goals include: upgrading equipment to "energy star" efficiency in the more than 70 ODFW facilities statewide, converting to lower-emitting heavy equipment in the department's wildlife areas and hatcheries across the state, and incorporating renewable energy at agency campuses. Increasing carbon sequestration at ODFW Wildlife Areas is also a

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
		potential source of projects for the CPRG program as GHG reduction measures. The approximately 200,000 acres of lands managed by ODFW sequester approximately 61,000 tonnes of equivalent carbon dioxide per year. Habitat restoration projects at ODFW Wildlife Areas could enhance carbon sequestration rates, particularly those that have been recently affected by fire.
ODFW	Multiple	ODFW has been heavily engaged in monitoring opportunities, galvanizing partnerships, and applying for Infrastructure Investment and Jobs Act and Inflation Reduction Act funds since their inceptions. ODFW identified 6 focal themes or areas that aligned with the intent of the IIJA/IRA and whose outcomes would have considerable benefits for natural resources in Oregon, and has submitted or collaborated on more than 87 grant applications submitted to 17 different IIJA and IRA grant programs. Several of these focal areas have overlap with the CPRG targets, including water resiliency in the Rogue, natural resource conservation in the Klamath Basin, wildlife connectivity corridors, and wildlife habitat restoration. ODFW selects project/grant applications following a suite of criteria, including benefits for climate resiliency and underserved communities. ODFW staff can provide assistance on the CPRG development if needed. See our ODFW IIJA/IRA website (https://dfw.state.or.us/IIJA/) for more information on ODFW's strategies.
City of Philomath	EV Charging	Opportunities in Philomath include, EV charging stations at city Hall, library, police department, public works yard, schools, fire department, and downtown; EV fleet for municipal vehicles, police vehicles; plus storage on municipal, school, and fire department buildings
Oregon Department of Transportation (ODOT)	Expand ODOT's Community Charging	Public charging infrastructure is not currently growing fast enough to meet future statewide EV targets. The Oregon Department of Transportation's Transportation Electrification Infrastructure Needs Analysis found that a five-fold increase in public charging is needed in Oregon by 2025, and more than a 40-fold increase by 2035. In 2023, ODOT launched its Community Charging Rebates program to increase access to Level 2 charging stations in Oregon communities.

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
ODOT	Oregon Micromobility Accelerator	Micromobility options, which broadly encompass bicycles, e-bikes, e-scooters and other small mobility devices, are growing in popularity but funding is needed to expand access to these options for historically disadvantaged communities. This action is made of up two key components: 1) supporting both the continuation and expansion of existing shared micromobility systems in Portland and Eugene as well as the creation of new systems in other cities; and 2) incentivizing the adoption and use of e-bikes through a statewide rebate program.
ODOT	Oregon Zero Emissions Transit Expansion and Fare Free Transit Program	This action will jointly procure 20 battery electric transit vehicles and provide funding to enable 10 transit agencies to implement fare free transit service for three years. This action will advance a number of state priorities. The provision of electric busses and charging equipment will be awarded on a competitive basis to transit agencies, doubling the number of battery electric transit buses in operation in Oregon. The project advances the state's goal of minimizing transportation's negative role in climate change through enabling broad electrification of the transportation system.
ODOT	State Fleet Electrification	Electrifying the state's fleet vehicles is a key goal of the Statewide Transportation Strategy and the Oregon Transportation Plan and will reduce greenhouse gas emissions from government operations and the construction of transportation projects. In addition, Oregon House Bill 2017 requires state agencies to transition their fleets to zero emission vehicles but there has been limited funding to date to achieve this mandate.
DEQ	Air Curtain Incinerator	Capital funding for ACI purchases to be used as an alternative to pile burning.
DEQ, ODOE, Oregon Business Development Department (OBDD)	Biomass Utilization	Funding for Policy and market development that would expand renewable biomass in Oregon - including pathways for allowing for federal feedstocks within the renewable fuel standards
ODOE, Public Utility Commission (PUC)	Biomass Utilization- RECs	Funding for policy and market development that would expand the use of renewable biomass in Oregon - including the creation of an add-on or multiplier for qualified biomass within the Renewable Energy Certificates of the Oregon's Renewable Portfolio Standard.
DEQ, Oregon Department of	Alternatives for woody debris	Capital funding for alternative woody debris management that utilizes alternative treatment options

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
Forestry (ODF), DLCD		(e.g. masticators, chippers, mulchers, firewood banks) that reduce GHG emissions related to woody debris management and urban/community forestry.
DEQ, DLCD, local governments, OBDD	Biomass Utilization Campuses	Capital funding to support the development of Biomass Utilization Campuses (Hubs).
ODF, OBDD	Marketing for mass timber/ sustainable products	Funding for policy and market development for utilization of mass timber and other sustainable forest products to be used in affordable housing development.
DEQ	Emission Control Devices	Pilot funding for advanced emissions control devices with priority given to projects involving a pollution control facility and also feature a manufacturing component
DEQ, ODF, DLCD, etc.	Marketing for Biomass Utilization (GHG and co-benefit)	Funding for market research focused on regional collaboration for biomass utilization that demonstrate GHG reduction and other co-benefits for forest derived woody feedstock utilization. (e.g., Cellulose nanocrystals , carbon-negative hydrogen, or other cellulose fibers)
ODOE, PUC	RNG Full Potential by 2050	Renewable Natural Gas Use at Full Potential by 2050 (47.5 tBTU by 2050, with 10.6 tBTU from Oregon, and 36.5 tBTU from imports)
ODOE, PUC	Wz 95% Existing Commercial by 2040	Weatherize 95% of Existing Commercial Building Envelopes by 2040 (to achieve 50% reduction in energy use)
ODOE, PUC	Wz 95% Existing Res by 2040	Weatherize 95% of Existing Residential Building Envelopes by 2040 (to achieve 50% reduction in energy use)
ODOE	IND RH2 70% by 2050	Industrial Renewable Hydrogen Adopted by 70% by 2050
ODOE	Rooftop Solar	Rooftop Solar 16.3 TWh by 2035
ODOE, PUC	Non-CPP Ind EE 50% by 2050	Improve Energy Efficiently of Existing Non-CPP Covered industrial facilities by 50% by 2050
DEQ, ODOT	MD/HD Zero Emission Plan by 2050	Implement the Medium and Heavy Duty Vehicle Zero Emission Plan by 2050 (beyond advanced Clean Trucks) (ending fuel shares of: 60% EV, 20% Hydrogen, 20% Biodiesel; and Hybrid has 10% Fuel Cell EVs)
Bulding Development Code (BDC), ODOE	Com Code Reduction 60% by 2030	Commercial Code Energy Reduction 60% by 2030
ODOE, PUC	100% HP &WH in New Res by 2025	100% Heat Pumps & Water Heaters in New Residential Homes by 2025

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
ODOE, PUC	70% Electrification Ind Process by 2050	Electrification of Industrial Process Loads 70% by 2050
BCD, ODOE	Res Code Reduction 60% by 2030	Residential Code Energy Reduction 60% by 2030
ODOE, UC	RH2 Injection 15% by 2035	Injection of 15% Renewable Hydrogen Into Distribution System by 2035
ODOT	Increase Amtrak Ridership	Increase Amtrak Ridership
ODOT, DLCD	Carshare Increases by 2035	Carshare Increases in Urban Areas by 2035
ODOE, PUC	Existing Res Buildings 100% HP by 2043	100% of Existing Residential Homes retrofitted with Heat Pumps by 2043
ODOE, PUC	Existing Res buildings 100% HPWH by 2043	100% of Existing Residential Homes retrofitted with Heat Pump Water Heaters by 2043
ODOE, PUC	100% HP & 50% WH in New Com by 2025	100% Heat Pumps and 50% Water Heaters in New Commercial by 2025
DEQ, ODOT	50% Off-Road Vehicle Sales ZEVs by 2035	50% of New Off-road Vehicles Sales (farm, forestry, construction, and recreation) are ZEVs by 2035, 100% by 2050
DEQ, ODOT	100% New Buses are ZEVs by 2035	100% of New Transit Buses are ZEVs by 2035
ODOT, DEQ, DLCD	10% Micro-mobility by 2035	Implement an Electric Micro-Mobility Strategy, E-Bikes & E-Scooters Gain 10% Mode Share in Portland Metro and Eugene Counties by 2035
ODOE, PUC	Home Fuel Cells 5% by 2030	Fuel Cells in 5% of Residential Homes by 2030
ODOE, PUC	Existing Com Buildings 100% HP by 2043	100% of Existing Commercial Buildings Retrofitted with Heat Pumps by 2043
ODOE	Solar on New Buildings	Increase Integrated Solar Generation on New Building Facades 4 TWh by 2035
DEQ	Food Waste Program	Food Waste Program Diverting 50% of Organics and Capturing Methane by 2030
ODOE, PUC	Water Systems EE 20% by 2035	Water Systems improve Energy Efficiency 20% by 2035
ODOT, DLCD	Congestion Pricing	Congestion Pricing Achieves at 10% Transport Mode Shift Away from private cars to transit in Multnomah, Lane, and Washington Counties by 2035
ODOE, PUC	Res 25% Energy Storage	Energy Storage of 14 kWh in 25% of Residential Homes by 2035

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
DLCD	Reduced Res Floor Area	Reduced Residential Floor Area of New Homes
DLCD	Higher Urban Res Density	Higher Residential Density in Urban Areas
ODOE, PUC, DEQ	5% Fuel Share Biomass Pyrolysis by 2035	5% of Fuel Share from Pyrolysis of Biomass by 2035
ODOE, PUC	Existing Com Buildings	100% of Existing Commercial Buildings retrofitted with Heat Pump Water Heaters by 2043
ODOT, DLCD, DEQ	10% Mode Shift	Transfer 10% medium-duty vehicle miles traveled to light-duty. Electric micro-mobility in urban counties by 2035
ODOE, PUC	Backup Battery Storage	Diesel backup power 100% conversion to battery storage by 2035
ODOE, PUC	Non-Heating Equip Elect in All Comm by 2035	All new appliance sales for commercial buildings are electric by 2035
ODOE, PUC	Non-Heating Equip Elect in All Res by 2035	All new appliance sales for residential buildings are electric by 2035
ODOE	Small Scale Renewables Projects through the Community Renewable Energy Grant Program	Supplement an existing C-REP incentive program with an additional incentive fund to support the construction of additional small-scale renewable energy projects in Oregon that would reduce GHG emissions, reduce air pollution and create public health benefits, and promote resilience. The calculation of GHG emission reductions from projects would be straightforward. Grants would be awarded on a competitive basis and priority will be given to projects that support program equity goals, demonstrate community energy resilience, and include energy efficiency and demand response. At least half of the grant funds will be awarded for projects that serve environmental justice communities, including communities of color, lower-income communities, rural communities, and others. There are no other state programs that directly incentivize the construction of small-scale renewable energy projects.
ODOE	Diesel Backup Replacement with Solar and Energy Storage through the Community Renewable Energy Grant Program	Add to existing C-REP incentive program an additional incentive fund dedicated to the deployment of additional solar and/or energy storage projects that would replace onsite diesel backup generators in the public sector in Oregon, and incentivize the selection of solar and/or storage for new backup power, to reduce air pollution and create public health benefits, reduce GHG emissions, and promote resilience. The calculation of GHG emission reductions and air quality

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
		improvements from public agency projects would be straightforward. Grants would be awarded on a competitive basis and priority will be given to projects that support program equity goals, demonstrate community energy resilience, and include energy efficiency and demand response. At least half of the grant funds will be awarded for projects that serve environmental justice communities including communities of color, lower-income communities, rural communities, and communities burdened by diesel pollution. There are no other state programs that directly incentivize the construction of energy storage projects replacing diesel generators.
ODOE	Residential Energy Storage through the Solar Plus Storage Rebate Program	Add to existing Solar Plus Storage Rebate Program an additional incentive fund dedicated to the deployment of additional residential PV-coupled and stand-alone energy storage projects (not associated with a solar PV project) that would reduce air pollution and create public health benefits, reduce GHG emissions, and promote resilience. The calculation of GHG emission reductions and air quality improvements from projects would be straightforward. Rebates would be awarded on a first-come-first-served basis. A set-aside budget and priority would be given to projects that support program equity goals and serve environmental justice communities, including communities of color, lower-income communities, and rural communities. There are no other state programs that directly incentivize the construction of energy storage projects.
ODOE	Commercial & Industrial Energy Efficiency Programs	Supplement the existing ETO and consumer-owned utility commercial & industrial energy efficiency incentive programs with additional incentive funds to procure additional energy efficiency projects. Incentives could target environmental justice communities, including communities of color, lower-income communities, and rural communities. The calculation of GHG emission reductions and air quality improvements from projects would be straightforward.
ODOE	Energy Efficiency & Renewables Projects through the Public	Supplement the existing PPC Industrial Self-Direct Program with additional incentive funds for large industrial customers in investor-owned utility service territories to procure additional energy efficiency and

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
	Purposes Charge (PPC) Large Electric Consumer Public Purpose Program (Industrial Self-Direct Program):	renewable energy projects. Incentives could target environmental justice communities, including communities of color, lower-income communities, and rural communities. The calculation of GHG emission reductions and air quality improvements from projects would be straightforward.
ODOE	Energy Efficiency Projects through the Public Purposes Charge (PPC) Schools Program	Supplement the existing PPC Schools Program with additional incentive funds for school districts in investor-owned utility service territories to procure additional energy efficiency projects. The calculation of GHG emission reductions and air quality improvements from projects would be straightforward. A portion of the funds could be reserved to accomplish program equity goals and serve environmental justice communities, including communities of color, lower-income communities, and rural communities.
ODOE	EV School Buses through the Public Purposes Charge (PPC) Schools Program	Supplement the existing PPC Schools Program with additional grant funds for school districts in investor-owned utility service territories to help procure additional EV school buses that replace diesel buses to reduce GHG emissions and reduce air pollution creating public health benefits. The calculation of GHG emission reductions and air quality improvements from projects would be straightforward. A portion of the funds could be reserved to accomplish program equity goals, serve environmental justice communities, including communities of color, lower-income communities, and rural communities. There are no other state programs that directly provide grants for EV school buses.
Lane County	Lane County Integrated Material and Energy Recovery Facility at Short Mountain Landfill	The facility would recover 70% of materials, process recyclables, recover organic waste and convert it to renewable natural gas, and divert of 110,000 tons of material from the landfill.
Grant program could be administered by any eligible entity	Commercial and Industrial Building Energy Innovation	Funding would provide incentives to commercial and industrial owners to convert gas-powered appliances, boilers to electric, install HVAC systems, and replace refrigerators with energy efficient models.
Jurisdictions, LTD, Schools	Fleet Vehicle and Machinery Conversion and Infrastructure	Replace fleet vehicles and machinery with electric and install charging infrastructure.

Agency (if applicable)	Program/ Activity Name	Submitted actions and programs for PCAP consideration
Jurisdictions	EV Island Project	Create one or more charging stations with DC Fast Chargers and a variety of plugs for both passenger and medium/heavy duty vehicles near transit corridors.
	Multi-Family Housing EVSE Installations	Install Level 2 chargers at multi-family housing locations.
Lane County	Building Decarbonization	Residential Building Decarbonization targeting EJ communities/J40 tracts of Lane County/ Low-income households w/ support from City of Eugene, Lane County
DEQ	School Bus electrification	Purchase electric school buses throughout the state
Portland Public Schools	School Renovations	Climate resilient renovations/ energy efficiency for schools

Appendix C: Oregon Low-income and disadvantaged communities census tracts by county

DEQ used data from EPA's Climate and Environmental Justice Screening Tool to compile the census tracts for the state of Oregon that are identified in the tool as overburdened and underserved. The following table shows a complete list of statewide LIDAC census tracts by county.

Table 13. LIDAC census tracts identified my tract number and county

County	Census Tract
Baker County	41001950300
Baker County	41001950100
Baker County	41001950600
Baker County	41001950200
Benton County	41003000600
Clackamas County	41005021900
Clackamas County	41005022108
Clackamas County	41005980000
Clatsop County	41007950100
Clatsop County	41007950300
Clatsop County	41007950600
Columbia County	41009970200
Columbia County	41009970800
Columbia County	41009970300
Columbia County	41009970700
Coos County	41011000100
Coos County	41011000700
Coos County	41011001000
Coos County	41011001100
Coos County	41011000900
Coos County	41011000504
Crook County	41013950200
Crook County	41013950300
Curry County	41015950100
Curry County	41015950400
Curry County	41015950302
Deschutes County	41017000200
Deschutes County	41017000900
Douglas County	41019210000
Douglas County	41019010000

County	Census Tract
Lincoln County	41041950304
Lincoln County	41041951800
Lincoln County	41041950400
Lincoln County	41041950100
Lincoln County	41041951600
Lincoln County	41041951000
Lincoln County	41041951500
Linn County	41043020400
Linn County	41043030401
Linn County	41043030600
Linn County	41043020500
Linn County	41043030904
Linn County	41043030402
Linn County	41043030800
Linn County	41043020801
Linn County	41043020802
Malheur County	41045970300
Malheur County	41045970900
Malheur County	41045970400
Malheur County	41045970600
Malheur County	41045970200
Malheur County	41045970500
Malheur County	41045970700
Marion County	41047001602
Marion County	41047001801
Marion County	41047000502
Marion County	41047000701
Marion County	41047010306
Marion County	41047001503
Marion County	41047001601

County	Census Tract
Douglas County	41019050002
Douglas County	41019100000
Douglas County	41019120000
Douglas County	41019090000
Douglas County	41019030000
Douglas County	41019200000
Douglas County	41019180000
Douglas County	41019140000
Douglas County	41019160000
Douglas County	41019190000
Douglas County	41019020000
Gilliam County	41021960100
Grant County	41023960200
Grant County	41023960100
Harney County	41025960100
Harney County	41025960200
Hood River County	41027950400
Jackson County	41029000300
Jackson County	41029000202
Jackson County	41029000100
Jackson County	41029000203
Jackson County	41029001302
Jackson County	41029003001
Jackson County	41029000201
Jackson County	41029001301
Jackson County	41029001002
Jackson County	41029001601
Jackson County	41029001602
Jackson County	41029000405

County	Census Tract
Marion County	41047000501
Marion County	41047001604
Marion County	41047001701
Marion County	41047010304
Marion County	41047010305
Marion County	41047000400
Marion County	41047001000
Marion County	41047000600
Marion County	41047000300
Marion County	41047000900
Marion County	41047001502
Morrow County	41049970200
Morrow County	41049970100
Multnomah County	41051008202
Multnomah County	41051008302
Multnomah County	41051009302
Multnomah County	41051009701
Multnomah County	41051010405
Multnomah County	41051008301
Multnomah County	41051010001
Multnomah County	41051007300
Multnomah County	41051009000
Multnomah County	41051009202
Multnomah County	41051009301
Multnomah County	41051009801
Multnomah County	41051008400
Multnomah County	41051009101
Multnomah County	41051008100
Multnomah County	41051009604

County	Census Tract
Jackson County	41029000501
Jackson County	41029000502
Jackson County	41029002000
Jackson County	41029002600
Jackson County	41029000800
Jefferson County	41031940000
Jefferson County	41031960201
Josephine County	41033361100
Josephine County	41033361400
Josephine County	41033360701
Josephine County	41033361200
Josephine County	41033360100
Josephine County	41033360900
Josephine County	41033360600
Josephine County	41033360702
Josephine County	41033361600
Josephine County	41033360800
Josephine County	41033360500
Klamath County	41035970200
Klamath County	41035971600
Klamath County	41035971200
Klamath County	41035970600
Klamath County	41035970900
Klamath County	41035971900
Klamath County	41035970100
Klamath County	41035971500
Klamath County	41035971800
Klamath County	41035970500
Klamath County	41035971700

County	Census Tract
Multnomah County	41051009605
Multnomah County	41051009606
Multnomah County	41051009603
Multnomah County	41051000602
Multnomah County	41051004001
Multnomah County	41051009803
Multnomah County	41051010304
Multnomah County	41051007400
Multnomah County	41051001602
Multnomah County	41051005100
Multnomah County	41051008600
Multnomah County	41051010410
Multnomah County	41051010411
Multnomah County	41051010600
Multnomah County	41051001101
Multnomah County	41051010408
Multnomah County	41051009702
Polk County	41053005100
Polk County	41053020203
Sherman County	41055950100
Tillamook County	41057960200
Tillamook County	41057960800
Tillamook County	41057960600
Tillamook County	41057960400
Tillamook County	41057960500
Tillamook County	41057960700
Umatilla County	41059940000
Umatilla County	41059950600
Umatilla County	41059950800

County	Census Tract
Lake County	41037960200
Lake County	41037960100
Lane County	41039001902
Lane County	41039001201
Lane County	41039001301
Lane County	41039001803
Lane County	41039001904
Lane County	41039000705
Lane County	41039000707
Lane County	41039000708
Lane County	41039002504
Lane County	41039003301
Lane County	41039003302
Lane County	41039004502
Lane County	41039004200
Lane County	41039002700
Lane County	41039003201
Lane County	41039001500
Lane County	41039004300
Lane County	41039004403
Lane County	41039001302
Lane County	41039002101
Lane County	41039002102
Lane County	41039002800
Lane County	41039003400
Lane County	41039004100
Lane County	41039001400
Lane County	41039003900
Lane County	41039000500
Lane County	41039001903
Lane County	41039004000
Lane County	41039002600
Lane County	41039000904

County	Census Tract
Umatilla County	41059951000
Umatilla County	41059950100
Umatilla County	41059950700
Umatilla County	41059950900
Umatilla County	41059950200
Union County	41061970700
Union County	41061970800
Wallowa County	41063960200
Wallowa County	41063960300
Wasco County	41065970500
Wasco County	41065970400
Wasco County	41065970600
Washington County	41067031402
Washington County	41067032003
Washington County	41067032005
Washington County	41067031300
Washington County	41067032409
Washington County	41067032501
Washington County	41067030700
Washington County	41067031100
Wheeler County	41069960100
Yamhill County	41071030801
Yamhill County	41071030502
Yamhill County	41071030601