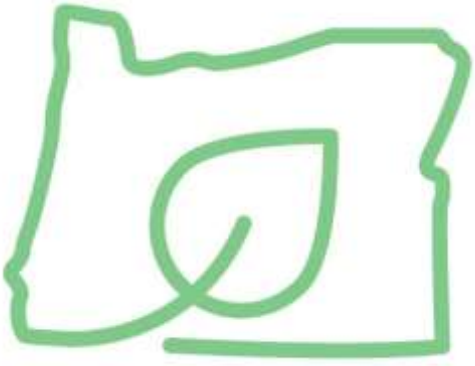
Oregon Department of Transportation

DRAFT Climate Action Plan
2021-2026



Oregon Department of Transportation
Climate Office
July 2021

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Executive Summary

The Oregon Department of Transportation (ODOT) recognizes of the importance of reducing carbon emissions from transportation and the impacts climate is having on moving people and goods in the state. Climate change poses a significant threats to Oregon's economy, environment, and way of life. Flooding, landslides, and wildfires are only a few signs that Oregon's climate is changing. These events are becoming more frequent and have resulted in road closures, infrastructure damage, and hundreds of staff hours in clean-up. Impacts to the transportation system cost the state hundreds of millions each year and are far reaching to the traveling public and state economy. Transportation accounts for the largest share of greenhouse gas (GHG) emissions in the state and increasing GHG emissions will only exacerbate the impacts of climate change on the transportation system.

The Climate Action Plan is the ODOT's 5-year plan for work to address the impacts of climate change and extreme weather on the transportation system. The plan includes actions ODOT is taking between 2021-2026 to reduce greenhouse gas emissions from transportation, improve climate justice and make the transportation system more resilient to extreme weather events.

Policy & Investment
Incorporate climate change and emissions reductions considerations is ODOT's policy and investment framework

Managing Demand
Provide alternative transportation options to manage demand and reduce vehicle congestion

Electrification
Support EV adoption and expand changing infrastructure to meet Oregon's EV goals

Clean Vehicles & Fuels
Transition to more efficient vehicles and support the adoption of alternative fuels

Pricing
Sustainable funding sources to maintain and operate the system, and to recover from the climate impacts

System Efficiency
Increase efficiency through infrastructure investment, safety improvements and operations practices

Adaptation
Increase resiliency to climate impacts and extreme weather events, such as flooding, landslides, and wildfires

Sustainability
Utilize sustainable products and fuels, reduce energy consumption, and reduce the agency's carbon footprint.

Agency Partnerships
Engage in partnerships and provide support to other state agencies and local jurisdictions

Monitoring & Data
Monitor the progress towards achieving emissions reduction and climate change goals

The Climate Action Plan consolidates efforts across the agency into a strategic approach to help Oregon achieve a cleaner transportation future and provides a framework for the agency to continue the work moving forward. Substantial efforts are needed to reduce the amount of carbon that comes from the transportation sector in order to achieve a cleaner and more sustainable future. The actions included in the Climate Action Plan were identified based on agency goals and priorities, as well as stakeholder

feedback on important emissions reduction actions for the agency. ODOT is committed to reducing transportation emissions and addressing the impacts of climate change. The agency will revisit the Climate Action Plan in five years' time to identify the next suite of actions needed to continue reducing transportation emissions and support Oregon's climate goals.

Introduction

Climate is a critical lens by which ODOT will make decisions and investments, balanced alongside other important considerations like equity, safety, and the economy. ODOT recognizes of the importance of reducing carbon emissions from transportation and the impacts climate is having on moving people and goods in the state. Climate change poses one of the most significant threats to Oregon's economy, environment, and way of life. Flooding, landslides, and wildfires are only a few signs that Oregon's climate is changing.

These events are becoming more frequent and have resulted in road closures, infrastructure damage, and hundreds of staff hours in clean-up. Impacts to the transportation system cost the state hundreds of millions each year and are far reaching to the traveling public and state economy. Transportation accounts for the largest share of greenhouse gas (GHG) emissions in the state, constituting around 40% of GHG emissions. Increased GHG emissions will only exacerbate the impacts of climate change and efforts are needed to reduce the amount of carbon that comes from the transportation sector. We must take substantial and swift action to reduce carbon in order to achieve a cleaner and more sustainable future.

Climate Action Plan Overview

The Climate Action Plan is ODOT's 5-year plan for work to address the impacts of climate change and extreme weather on the transportation system. The plan includes actions ODOT is taking between 2021-2026 to reduce greenhouse gas emissions from transportation, improve climate justice and make the transportation system more resilient to extreme weather events. The Climate Action Plan is unique to ODOT's work, and only contains actions under the agency's authority and the partnerships the agency is engaged in. The actions included in the plan were identified based on agency goals and priorities, as well as stakeholder feedback on important emissions reduction actions for the agency. The plan contains a number of actions related to transportation electrification and electric vehicles, walking and bicycling, public transit, system efficiency, pricing and tolling, low carbon construction, addressing climate justice, measuring progress and making the transportation system more resilient.

Actions in the Climate Action Plan are organized into ten categories:

- Policy & Investment
- Managing Demand
- Electrification
- Pricing
- System Efficiency
- Clean Vehicles and Fuels
- Adaptation
- Sustainability
- Agency Partnerships
- Monitoring and Data

The Climate Action Plan consolidates efforts across the agency into a strategic approach to help Oregon achieve a cleaner transportation future and provides a framework for the agency to continue the work moving forward. ODOT is committed to address the impacts of climate change, reduce transportation emissions and help achieve Oregon's climate goals. To support this commitment ODOT will revisit the

Climate Action Plan in five years' time to identify the next suite of actions needed to continue reducing transportation emissions and support Oregon's climate goals.

ODOT's Commitment to Climate Action

ODOT's efforts to address the impacts of climate change and extreme weather events are guided by a number of commitments and directives. These directives and commitments contain a variety of specific goals, priorities and requirements that inform the investments and work of the agency.

Statewide Transportation Strategy

The Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction, also known as the STS, was initiated out of legislative direction to examine ways that the transportation sector can reduce greenhouse gas (GHG) emissions and help achieve Oregon's GHG reduction goals. The STS was completed in 2013 in collaborative partnership with local governments, industry representatives, metropolitan planning organizations, state agencies and other stakeholders. In 2018, the Oregon Transportation Commission adopted an amendment to incorporate the STS as part of the Oregon Transportation Plan.

The STS is a state-level scenario planning effort that examines all aspects of the transportation system, including the movement of people and goods, and identifies a combination of strategies to reduce greenhouse gas, or GHG, emissions. The STS contains six categories and 133 individual strategies and elements that support reduced transportation emissions in Oregon. The categories include:

- Vehicle and Engine Technology Advancements
- Fuel Technology Advancements
- Systems and Operations Performance
- Transportation Options
- Efficient Land Use
- Pricing, Funding and Markets

The STS identifies a variety of effective GHG emissions reduction strategies in transportation systems, vehicle and fuel technologies, and urban land use patterns. Key actions include cleaner vehicles and fuels (e.g. electric vehicles), low carbon modes (transit, bike, walk, etc.), close proximity of housing to jobs (land use), pricing (e.g. vehicle miles traveled charge), and demand management strategies (e.g. telecommuting).

Climate Office

The ODOT Climate Office was formed in recognition of the importance of reducing carbon emissions from transportation and the impacts climate is having on Oregon's transportation system, and therefore the ability to move people and goods in the state. By forming a Climate Office, ODOT is consolidating efforts into a strategic approach to help Oregon achieve a cleaner transportation future. The mission of the ODOT Climate Office is to identify and pursue actions that reduce transportation GHG emissions and

the Agency's carbon footprint. The Office is also charged with helping the Agency understand, and begin to prepare for and respond to the impacts of climate and extreme weather.

To accomplish this, the Climate Office will work across ODOT Divisions to educate, develop and institutionalize a climate lens and strategies into the ways the Agency plans for, invests in, builds, manages, maintains, and supports the multi-modal transportation system of Oregon. Staff will also work with other state agencies and local agency partners to find collaborative approaches and solutions, connect with stakeholders, and learn best practices from other states.

Oregon Executive Order 20-04

In March 2020, Governor Brown issued Executive Order 20-04 boosted Oregon's goals to reduce GHG emissions to at least 45 percent below 1990 emissions levels by 2035 and to at least 80 percent below 1990 emissions by 2050. The Executive Order directs several state agencies, including ODOT, to take immediate actions to address climate change. The Executive Order directs ODOT to add a GHG reduction lens to project investment decisions in the Statewide Transportation Improvement Program planning process, conduct a statewide needs analysis for transportation electrification charging infrastructure, and provide reporting on progress.

Every Mile Counts

The Every Mile Counts effort is a long-term commitment to collaborative climate action by Oregon Department of Transportation (ODOT), Department of Land Conservation and Development (DLCD), Department of Environmental Quality (DEQ), and Department of Energy (DOE). The Every Mile Counts work plan was developed by ODOT, DLCD, DEQ and DOE to identify actions to reduce greenhouse gas (GHG) emissions from transportation and to bring Oregon closer to achieving the emission reduction goals. The agencies have agreed to dedicate the staff and resources needed for short-term and long-term implementation actions. This level of coordination ensures that the agencies are moving in the same direction to reduce GHG emissions and there is no duplication of efforts, allowing agencies to jointly leverage resources to more effectively implement the STS and work to achieve the emission reduction goals.

Strategic Action Plan

The 2021-2023 Strategic Action Plan, describes ODOT's priorities, goals and outcomes for the next three years, and prepares the agency to meet the transportation demands of the future. ODOT is committed to developing a modern, reliable transportation system that serves all Oregonians. Oregon's future transportation system will be efficient, innovative and technologically advanced. It will offer a wide range of choices to promote a healthy environment and serve users with diverse needs, including those the system has not served well in the past.

The Strategic Action Plan identifies three main priorities:

- Equity– Prioritize diversity, equity and inclusion by identifying and addressing systemic barriers to ensure all Oregonians benefit from transportation services and investments.

- Modern Transportation System – Build, maintain and operate a modern, multimodal transportation system to serve all Oregonians, address climate change, and help Oregon communities and economies thrive.
- Sufficient and Reliable Funding – Seek sufficient and reliable funding to support a modern transportation system and a fiscally sound ODOT.

Nested within each priority are goals that provide a framework to deliver on the priorities simultaneously. At the heart of the Strategic Action Plan are near-term strategic outcomes designed to advance multiple goals concurrently. While the Modern Transportation System priority and goals directly addresses the impacts climate change, a number of the goals and strategic outcomes support emissions reduction, addressing climate justice and improving resilience of the transportation system. Following the completion of the Strategic Action Plan in 2023, ODOT will continue to advance the goals, priorities and outcomes in the plan across the work of the agency.

Climate Action Plan Process and Development

To identify actions for the Climate Action Plan, ODOT investigated the work across the agency to identify short term opportunities for work to support the agency's commitment to climate action and reduce transportation emissions. ODOT staff identified a number of potential actions and opportunities across the business lines of the agency to support this work. In order to ensure ODOT conducts the correct mix of actions over the next five years, ODOT engaged with external stakeholders to prioritize the potential actions and opportunities for inclusion in the plan.

Stakeholder Engagement

ODOT distributed a survey to over to over 800 members and representatives of Local Governments, Transportation Industry, Construction Industry, Trucking Industry, Climate Justice, and Social Equity Groups in Oregon, and hosted two webinars open to interested individuals. The survey and webinars asked stakeholders to rank categories of emissions reductions actions by importance, and identify the type of projects, programs, and actions for ODOT to conduct in the next five years.

Feedback on Types of Climate Actions

Survey and webinar feedback indicated that engaging in actions to directly reduce emissions, and incorporating emissions reduction and climate change into agency policy and investment frameworks are the most important steps for ODOT to take in the next five years. Actions such as expanding electric vehicle charging, supporting walking and bicycling, expanding public transit service, and reducing ODOT's carbon footprint were identified by stakeholders as key actions to reduce transportation emissions. Incorporating emissions reduction and climate change into agency policy and decision making processes are critical to ensure ODOT continues its commitment to climate action by dedicating funds and resources for emissions reduction actions. Feedback from the survey and webinars also indicated that ODOT should make the existing transportation system more efficient and invest in walking, bicycling and public transit access before building new roadways.

The survey and webinar participants also identified and provided comments on a number of specific projects, programs, and actions for ODOT to conduct to reduce transportation emissions and address the impacts of climate change.

Incorporating the Feedback

ODOT utilized the feedback provided by stakeholders, alongside with agency goals and responsibilities to identify the final actions contained in the Climate Action Plan. Much of the feedback received was in line with current agency efforts to reduce transportation emissions and address the impacts of climate change. The final mix of actions contained in the Climate Action Plan reflects the feedback provided by stakeholders balanced with ODOT's ongoing commitments to equity, safety, and the economy.

ODOT 5-Year Climate Actions

The following list of actions represents the work ODOT is committed to conduct between 2021 and 2026 to reduce emissions from transportation, address equity and climate justice, and make the transportation system more resilient to extreme weather events. The agency's work to address the impacts of climate change is continually evolving, moving forward ODOT will continue to identify efforts and opportunities to help achieve Oregon's climate goals. Additional information on the details for each of the actions is contained in *Appendix A. ODOT Climate Action Plan; 5-Year Actions.*

Policy & Investments

Incorporating climate change and emissions reductions considerations into ODOT's policy and investment framework is critical to ensure ODOT establishes a long term vision and foundation to guide transportation system development and investment. Agency policy guides the development of the transportation system that is represented through investments at the state and local level.

- Oregon Transportation Plan Update
- Greenhouse Gas Emissions Evaluation for the Statewide Transportation Improvement Program (STIP)
- Funding for Public Transit & Active Transportation
- Integrating Climate Goals with Federal and State funding opportunities
- Addressing Equity
- Climate Justice Approach
- Equitable Engagement Compensation Policy

Managing Demand

Managing demand on the transportation system by providing alternative transportation options is a key component of reducing emissions from vehicles. These travel options can reduce congestion and vehicle emissions, increased safety, lower transportation costs of individuals, and decreased wear and tear on other parts of the transportation system.

- Net-Zero Transit Consultation Pilot
- Oregon Passenger Rail Program

- Intercity Transit Service
- Transportation Options Outreach
- Micro Mobility and MaaS
- Oregon Transit and Housing Study
- Pedestrian and Bicycle Performance Measures and Data Implementation Framework
- Active Transportation Needs Inventory Implementation and Update
- Agency Telecommuting Goals and Targets

Pricing

The current costs of the transportation system are not fully recovered by the fees and costs paid by users of the system. Transitioning to more sustainable funding sources to maintain and operate the transportation system, and to recover from the environmental impacts of climate change is necessary for ODOT to provide an efficient and reliable transportation system for Oregon.

- Oregon Toll Program
- OReGO Implementation
- True Cost Pricing Studies

Electrification

Electrifying Oregon's transportation system supports one of the most effective ways to reduce vehicle emissions, which is transitioning to more zero emission vehicles for every mile driven. ODOT is a leader in facilitating the electrification of our transportation system. ODOT's goal is to triple the number of electric vehicles on Oregon roads by 2023, and to expand statewide electric vehicle charging infrastructure by 10-percent by the end of 2025. Opportunities for hydrogen fuel cell electric vehicles are included in this category because hydrogen fuel cells can be used to power electric motors for various types of vehicles.

- Transportation Electrification Infrastructure Needs Analysis Study and Implementation
- Electric Vehicle Charging Grant Opportunities
- Electric Micro-mobility Strategy
- Hydrogen Pathway Overview
- Oregon Transportation Electrification Activity Maps (OR TEAMS)
- West Cost Electric Highway Update

Clean Vehicles and Fuels

Increasing the operating efficiency of multiple transportation modes through transitions to more fuel-efficient vehicles, adoption of alternative fuels, and other vehicle technological advancements are also key for reducing vehicle emissions. ODOT is working to identity opportunities to transition to alternative fuel vehicles and other vehicles that are not dependent on higher emission fuels. ODOT also works to identify opportunities to enhance and expand the infrastructure to support the use of alternative fuels.

- ODOT Light Vehicle Fleet Transition

- FHWA Alternative Fuel Corridor Designations
- Support for Alternative Fuel Transit Vehicles

System Efficiency

Enhancing the efficiency of the of the transportation system through technology, infrastructure investment, safety improvements and operations management keeps the existing system fully optimized for all modes of travel. Improved system efficiency results in reduced congestion and emissions from vehicle idling, improves vehicle throughput and fuel consumption, and provides the needed safety measures to support walking and bicycling.

- ARTS Safety Improvements
- Intelligent Transportation System Upgrades
- Traffic Signals Management Enhancements
- Truck Parking Info Management System
- Connect Oregon Freight Efficiency Enhancements

Adaptation

The impacts from climate change on our transportation system are projected to increase and ODOT needs to be ready to respond. Climate impacts to transportation can include: extreme storms events and flooding, rising sea levels and storm surge, coastal erosion and landslides, and higher temperatures and wildfire risks. Through adaptation planning and research ODOT is taking the steps necessary to be prepared and make the transportation system more resilient to these hazards.

- Statewide Adaptation Risk and Vulnerability Assessment, and Operational Roadmap
- Applying Climate Change Information to Hydrological and Coastal Design
- Coastal Resilience Policy and Adaptation Strategies
- Coastal Landslide and Bluff Retreat Monitoring

Sustainability

Sustainability is a key ODOT priority to address the impacts of climate change. The agency is working to identify opportunities to utilize sustainable products and fuels, reduce energy and water consumption, recycle materials and equipment, and reduce the agency's carbon footprint. Sustainable practices are also incorporated into how ODOT plans, designs and builds transportation programs and projects.

- Agency GHG Inventory
- LED Lighting for Street Lights
- Solar Opportunities
- Agency Sustainability Plan & Annual Reports
- Climate opportunities from surplus properties

Agency Partnerships

Reducing transportation emissions and achieving Oregon's climate goals requires collaboration across all sectors and levels of government. Many of the actions needed to reduce transportation emissions are

outside the authority of the agency. To address these barriers ODOT is committed to engage in partnerships and provide support to other state agencies and local jurisdictions to reduce emissions from transportation.

- Transportation Growth Management Program
- Every Mile Counts
- Local GHG Reduction Planning Support
- ODOT ZEV Interagency Action Plan Responsibilities
- Employee Commute Options Rulemaking
- Transit Partnerships with State Agencies and Organizations

Monitoring and Data

Monitoring progress is necessary to ensure that ODOT is on track to meet Oregon's GHG reduction goals and to effectively steer resources towards this effort. To effectively monitor this progress requires continued advancements in the data sources and analysis tools used to measures reductions in transportation and increased resiliency of the transportation system.

- Climate & Emission Reduction Performance Metrics
- GHG Reduction Guidance Small Urban and Rural Communities
- VisionEval Implementation & Enhancements
- GHG Tools, Analysis & Data
- Medium and Heavy Freight Vehicle Data for Alternative Fuels Planning
- Adaptation Performance Measures
- Transit Key Performance Measures