
Date: May 4, 2020
To: Environmental Quality Commission
From: Richard Whitman, Director
Subject: Item D: Greenhouse Gas Reduction Workplans for 2020 and 2021 (Informational)
May 7, 2020, EQC meeting

Why This is Important In response to direction from the Oregon legislative Emergency Board and Oregon Governor Brown, DEQ has taken several steps to begin a new phase of developing programs designed to reduce greenhouse gas emissions in Oregon. DEQ will brief the commission on these steps, and describe the processes by which we intend to develop policy proposals for consideration by the EQC over the next 18 months.

Background In 2019 and again in 2020, the Oregon legislature considered broad, economy-wide legislation that would have capped greenhouse gas emissions in Oregon, and required reductions in those emissions over time at rates set to correspond to what is needed on a global scale to avoid raising average temperatures by more than 1.5 degrees Celsius (2.7 degrees Fahrenheit). That legislation (House Bill 2020 in 2019, and Senate Bill 1530 in 2020), also would have created a market-based approach to achieving these reductions, by auctioning allowances (permits to emit), with revenues then used to invest in programs to reduce GHG emissions and to help communities adapt to rising temperatures and changing climate.

The legislature was unable to act on “cap and invest” proposals. However, on March 9, the legislative Emergency Board authorized \$5 million for Oregon DEQ to begin work on reducing greenhouse gas emissions under existing legislative authorities, including hiring ten permanent staff to speed the effort. And, one day later, on March 10, Governor Kate Brown issued Executive Order 20-04, directing DEQ and the EQC along with a broad set of other agencies, to use existing authorities to reduce greenhouse gas emissions by 45 percent by 2035, and by 80 percent by 2050.

DEQ will submit a report to Governor Brown on May 15th, as required by the Executive Order, detailing the work needed to extend existing programs and to develop new ones. The purpose of this agenda item is to brief the commission on the Executive Order and the specific program development efforts that will be undertaken over the course of the coming eighteen months.

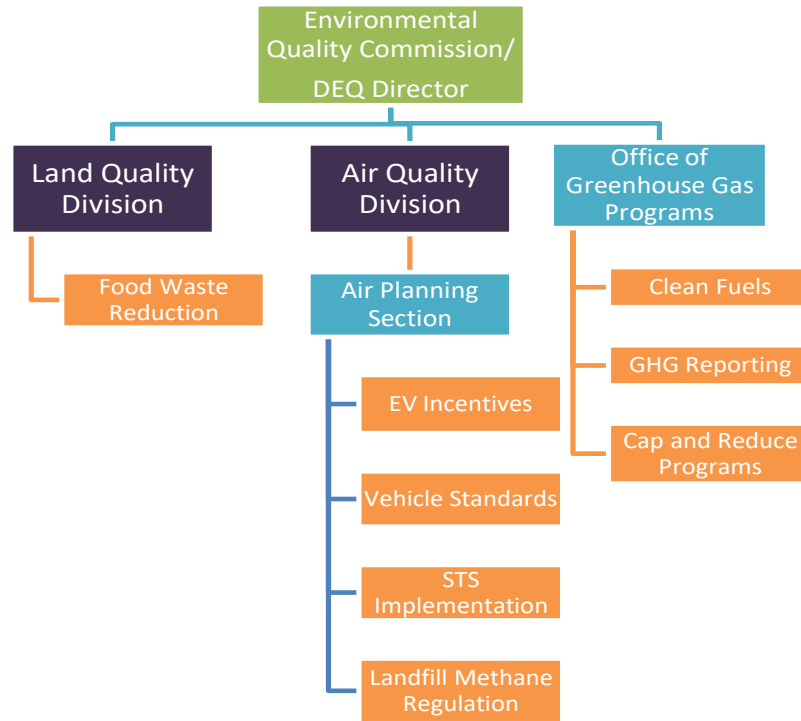
Directives to DEQ and EQC Under Executive Order 20-04, DEQ and the EQC have five specific responsibilities for reducing greenhouse gas emissions:

1. Extending the Clean Fuels Program beyond 2025, and increasing the carbon intensity reductions required by the program from a ten percent reduction in 2025 to a 25 percent reduction by 2035.
2. Establishing greenhouse gas emission limits across key sectors of Oregon's economy, and then reducing those limits over time to achieve a 45 percent reduction in emissions by 2035. Specifically, the Executive Order calls for new "cap and reduce" regulations for large stationary sources; transportation fuels (gasoline and diesel); and for other fossil fuels including natural gas.
3. Establishing requirements for reducing methane emissions at landfills, based on regulatory requirements in bordering states.
4. Establishing requirements that will help reduce greenhouse gas emissions in the transportation sectors in conjunction with actions by the Oregon Department of Transportation (ODOT), the Department of Land Conservation and Development (DLCD) and the Oregon Department of Energy (ODOE) under the Statewide Transportation Strategy (STS). These actions will reduce the amount of vehicle travel over time, increase vehicle efficiency, and accelerate the use of lower carbon fuels.
5. Establishing programs to reduce food waste in Oregon by at least fifty percent.

In addition to these specific directives, the Executive Order also directs all agencies to consider and integrate climate change, climate change impacts, and the state's GHG emissions reduction goals into their planning, budgets, investments and policy-making decisions. While carrying out these actions, agencies are to:

- Prioritize actions that reduce GHG emissions in a cost-effective manner;
- Prioritize actions that will help vulnerable populations and impacted communities to adapt to climate change impacts; and
- Consult with the Environmental Justice Task Force when evaluating climate change mitigation and adaptation priorities and actions.

Organization of GHG Programs at DEQ To carry out the effort required by EO 20-04, DEQ is drawing from multiple resources including the new funding and positions approved by the legislature, as well as existing resources in the Air Quality Division and the Land Quality Division. To ensure that this work receives guidance and prioritization a new Office of Greenhouse Gas Programs, OGGP, has been formed, as shown below, reporting directly to the DEQ Director. The OGGP is responsible for the new Cap and Reduce Programs, as well as the extension of the Clean Fuels Program. The work to implement the Statewide Transportation Strategy and to adopt landfill methane regulations is housed in the Planning section of the Air Quality Division. The work to reduce food waste is housed in the Materials Management Program in the Land Quality Division.



Office of Greenhouse Gas Programs

Colin McConnaha is the manager of the new DEQ Office of Greenhouse Gas Programs. This new office includes existing staff from the Greenhouse Gas Reporting program and Clean Fuels program, as well as current and new staff who will develop the Cap and Reduce Programs.

Statewide Transportation Strategy, EV Rebate, Vehicle Standards, and Landfill Methane Programs

Michael Orman is the manager for the Planning Section of the Air Quality Division, and will continue to oversee the EV Rebate, Statewide Transportation

Strategy and vehicle standards subprograms. The Landfill Methane program is a new focus for DEQ.

Clean Fuels

The 2009 Oregon Legislature passed House Bill 2186 authorizing the EQC to adopt rules to reduce the average life cycle carbon intensity of Oregon's transportation fuels by 10 percent over a 10-year period. The bill, however, had a sunset date of Dec. 31, 2015. In 2012, Governor John Kitzhaber asked the DEQ to develop rules to implement the program, and later that year DEQ began requiring fuel providers to register with the department and report on the volume and carbon intensity of their fuels. In early 2015, the EQC adopted rules beginning the program, setting a ten-year period between 2015 and 2025 for a ten percent reduction in carbon intensity. Later that year, Governor Kate Brown signed SB 324, removing the sunset of the program. Finally, in 2017 the Oregon Legislature passed House Bill 2017 to add cost containment provisions for the program.

Since its inception in 2015, the Clean Fuels Program has successfully advanced the availability of lower carbon transportation fuels in Oregon. Fuel suppliers meet the standard either by blending low-carbon biofuels with gasoline and diesel, or by investing in proven technologies like electric vehicles, biogas made from waste, biodiesel and other clean fuels. In 2019, the average cost per gallon of fuel of the program was just over 2.5 cents. In 2018, the program reduced GHG emissions in Oregon by almost 1.3 million metric tons – close to a five percent reduction in transportation emissions. In addition to the GHG reduction results of the program, developing new lower-carbon fuel supplies is also helping Oregon's economy by reducing the amount that Oregonians pay out-of-state petroleum producers for fuel. Under current rules, the program is designed to reduce the life-cycle carbon intensity of transportation fuels by ten percent by 2025.

Executive Order 20-04 directs DEQ and the EQC to take actions necessary to amend the LCFS to reduce the average amount of GHG emissions per unit of fuel energy by 20 percent below 2015 levels by 2030, and by 25 percent below 2015 levels by 2035. DEQ will begin analyzing potential scenarios for supply of lower carbon fuels later this year, along with projected economic and health impacts, as it scopes out key policy issues and program options for the commission to consider. DEQ expects that rule recommendations will come before the EQC no later than late 2021.

**Cap and
Reduce
Programs**

Executive Order 20-04 directs DEQ and the EQC to develop three programs to set limits on GHG emissions from particular segments of Oregon’s economy, and to then reduce those limits over time in a way that is consistent with reducing overall GHG emissions by at least 45 percent by 2035 and 80 percent by 2050. The three sectors are: (a) large stationary sources of GHG emissions (mainly industrial facilities); (b) transportation fuels; and (c) other liquid and gaseous fuels, including natural gas.

For large stationary sources, there are two main origins of GHG emissions: (a) emissions from the combustion of fossil fuels (mainly natural gas in Oregon); and (b) emissions from chemical reactions in manufacturing processes. GHG emissions can be reduced by energy efficiency measures, changes in fuels, and process changes including more efficient use of materials.

Transportation is the largest segment of GHG emissions in Oregon, and has been growing both in its share of the total and absolute terms over the past several years as a result of increases in both population and the amount of travel. Transportation GHG emissions can be reduced in a number of ways, including by improving the efficiency of vehicles (both passenger and freight), by moving more goods by more efficient modes, by reducing the carbon intensity of fuels (as with the Clean Fuels Programs, and by reducing the amount of travel – particularly single occupancy passenger car travel.

For natural gas and other liquid (home heating oil) and gaseous (propane) fuels, the main opportunities for reducing GHG emissions include increasing energy efficiency, and lowering the carbon intensity of fuels (including by blending renewable fuels).

For all three segments, to the extent energy can be derived from lower carbon sources, including both fuels and electricity, GHG emissions can be reduced.

**Statewide
Transportation
Strategy
Implementation**

In addition to agency-specific directives, the Executive Order also instructs four agencies to work together to implement the *Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction*. The STS is Oregon’s roadmap for greenhouse gas reduction in the transportation sector. It was developed by the Oregon Department of Transportation in close partnership with the Department of Land Conservation and Development, the Oregon Department of Energy, and DEQ coming out of the Oregon Sustainable Transportation Initiative (OSTI), which originated with the passage of Senate Bill 1059 in 2010. SB 1059 directed ODOT and DLCDC to develop tools and, for DLCDC and its policy-making body LCDC, regulations to help certain urban areas in Oregon reduce transportation GHG emissions. The agencies completed the Strategy in 2013 after a three-year process of extensive engagement and technical analysis by agency staff. The Strategy address all aspects of transportation-related emissions, including the movement of people on the ground and in the air, as well as the movement of freight on all transportation

modes. The STS is designed to achieve a 60 percent reduction in transportation GHG emissions by 2050 – meaning that other complimentary actions may be needed in addition to full implementation of the STS to address transportation GHG emissions, particularly in the area of freight-related emissions, which continue to grow more rapidly than the rest of the sector.

The STS includes five categories of action for GHG emissions reduction:

- **Vehicles and Fuels:** Promoting a transition to more fuel-efficient vehicles, improvements in engine technologies, and reductions in the carbon intensity of fuels. Example elements include Zero Emission Vehicle (ZEV) programs, electric vehicle charging infrastructure, fleet turnover to a greater share of electric or low carbon fuel vehicles, Clean Fuel Standards, and low carbon fuels.
- **Systems and Operations:** Addressing intelligent transportation systems and other innovative approaches to improving the flow of traffic, reducing delay on transportation systems, and providing people with information that helps them drive more fuel efficiently or avoid significant delays.
- **Transportation Options:** Supporting lower-emission modes through investments in public transportation, bicycle and pedestrian, and transportation demand management programs. Example elements include providing park-and-ride facilities, promoting ride-matching services, adding biking and walking infrastructure, enhancing passenger rail services, and increased public transportation service.
- **Land Use:** Focusing on infill and mixed-use development in urban areas to reduce demand for vehicle travel, expand non-auto travel mode choices for people in Oregon, and enhance the effectiveness of public transportation and other modal options.
- **Pricing and Markets:** Addressing the true costs of using the transportation system and pricing mechanisms for incentivizing less travel or travel on more energy efficient modes. Strategies in this category support a transition to more sustainable funding sources to maintain and operate the transportation system, pay for environmental costs and provide market incentives for developing and implementing efficient ways to reduce emissions.

**Landfill
Methane**

Executive Order 20-04 directs DEQ and the commission to reduce methane emissions from landfills and, specifically, to align Oregon's actions with the most stringent standards and regulatory practices of neighboring states. This directive is related to other portions of the order regarding the prevention of food waste, which is a major source of methane emissions in landfills. Oregon already has

The California Air Resource Board enacted stringent methane emissions regulations in 2018, as part of a strategy to reduce emissions from short-lived climate pollutants that included methane. The underlying legislation for that regulatory response included laws directing the reduction of the amount of organic matter allowed in state-operated landfills in California.

In Washington, methane emissions at landfills are regulated as greenhouse gases by the Department of Ecology's Air and Climate section. Methane was included as one of the greenhouse gases to be tracked, and emissions reduced over time, by 2020 legislation. Prior legislation in 2019 also established food waste prevention and recovery goals, as a means to prevent methane emissions, and the Ecology is working with the Washington State Departments of Health and Agriculture to develop a reduction plan by Oct. 1, 2020.

**Reducing Food
Waste**

Food waste is a major source of GHG emissions, both as a result of direct emissions from wasted food, and even more importantly as a result of potential avoided emissions that go into producing, transporting, and handling food that is never used. Studies demonstrate that preventing food waste is one of the most cost-effective means of reducing GHG emissions. Households account for just over fifty percent of food waste. The remainder is from commercial food service.

There are two basic means of reducing these emissions: (a) by preventing food waste in the first place; and (b) by recovering value from wasted food by composting or through energy generation via anaerobic digestion. DEQ has been working in both areas for a number of years, in partnership with grocers, restaurants, local governments and other states.

**Policy
Development
Processes**

Nearly all aspects of the work to implement EO 20-04 will require significant policy development with a high degrees of public interest. Although many policy questions have been examined in past legislative work in this area, and DEQ and the EQC will benefit from this prior work, implementing the Executive Order will be more constrained as it must occur within the limits of existing legislative authorizations.

DEQ and the EQC are committed to doing this work in an open and transparent way, and building in multiple opportunities for engagement. We believe it is particularly important to design a policy development process that has input from Oregon's tribes, and from environmental justice communities to assure that those perspectives are well-represented.

DEQ expects the policy development work related to DEQ/EQC responsibilities under the Executive Order to include the following general components, organized by sub-program area.

- Clean Fuels Program: The Clean Fuels Program is likely to conduct multiple rulemakings in the course of implementing EO 20-04. The first rulemaking and associated stakeholder engagement is focused on opportunities to accelerate the generation of credits from transportation electrification. That rulemaking will begin in the summer of 2020. A second rulemaking will address the new carbon intensity targets established in the order (20 percent below 2015 levels by 2030 and 25 percent below 2015 levels by 2035). While this rulemaking is not expected to begin until late 2021, DEQ will contract for technical analysis beginning in 2020 to inform that policy development work. The technical analyses will explore transportation fuel scenarios, opportunities for additional credit generation, and the environmental and health benefits attributable to the program. The agency will ensure opportunities for stakeholders to engage as these technical analyses and the subsequent rulemaking processes unfold.

Additionally, House Bill 2017 (2017) requires that DEQ conduct a comprehensive review of the Clean Fuels Programs and to deliver that program review to the Legislature in February 2022. DEQ will provide opportunities for stakeholders to inform that program review process.

- Cap and Reduce Programs: On May 15, DEQ will release a preliminary draft report to the Governor that, among other things, describes how the agency will approach the development of GHG cap and reduce programs. The report will discuss three phases:
 - Phase 1: Process engagement. DEQ confers with a range of interests about what systems will allow for effective input into

policy development given budget and social distancing constraints (May and June 2020). Includes overview webinars, Environmental Justice Task Force consultation, and public comment opportunity.

- Phase 2: Scoping. DEQ holds a variety of workshops and listening sessions to gather input about the scope of work in each area, potential policy constructs, associated issues. (June – November 2020).
 - Phase 3: Rulemaking/Program Development. Rules advisory committees consider key program design options, along with fiscal impacts and other considerations, and develop recommendations for EQC consideration. For non-regulatory programs, DEQ and partners develop work plans for consultation with the EQC (December 2020 – November 2021).
- Statewide Transportation Strategies: DEQ, in partnership with the ODOE, DLCD and ODOT expects to release an inter-agency work plan in June. The plan will identify key STS nearer-term strategies the agencies propose to prioritize in the coming two to five years. DEQ will coordinate the scoping for this work with the scoping for the cap and reduce proposal for transportation fuels.
 - Landfill Methane Regulations: The development and implementation of regulations to control methane emissions from landfills will require a formal rulemaking. In advance of initiating a rulemaking the agency will identify and engage with potentially affected owners and operators of landfills as it assesses the regulations of bordering states and begins to scope potential Oregon regulations. The agency intends to initiate the rulemaking in the fall of 2020 and to bring proposed rules the commission in the summer of 2021.
 - Food Waste Reduction Efforts: EO 20-04 establishes a goal of reducing food waste by 50 percent by 2030. In order to reach that goal, the state will need to both maximize the prevention of food waste and the recovery of food waste, this will, in turn, require using known methods and identifying new strategies. While efforts to reduce food predate the order, DEQ intends to engage in a strategic planning process, in partnership with stakeholders, to determine exactly how to accelerate prevention and recovery efforts in order to meet a 50 percent reduction by 2030 target.

**Upcoming
Reports**

Each element of Executive Order 20-04 requires a report to the Governor's Office in May, with some directives including June follow-up reports. DEQ will provide informational updates to the commission at each regular meeting.

Some directives will require specific commission action, for rulemaking or other policy-making activities, in late 2020 and the remainder of the state biennium ending June 30, 2021.

Attachments

- A. March 10, 2020, Executive Order 20-04
- B. Nov. 12, 2019, letter from Governor Brown regarding the Sustainable Transportation Strategy



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**DIRECTING STATE AGENCIES TO TAKE ACTIONS TO REDUCE AND
REGULATE GREENHOUSE GAS EMISSIONS**

WHEREAS, climate change and ocean acidification caused by greenhouse gas (GHG) emissions are having significant detrimental effects on public health and on Oregon's economic vitality, natural resources, and environment; and

WHEREAS, climate change has a disproportionate effect on the physical, mental, financial, and cultural wellbeing of impacted communities, such as Native American tribes, communities of color, rural communities, coastal communities, lower-income households, and other communities traditionally underrepresented in public processes, who typically have fewer resources for adapting to climate change and are therefore the most vulnerable to displacement, adverse health effects, job loss, property damage, and other effects of climate change; and

WHEREAS, climate change is contributing to an increase in the frequency and severity of wildfires in Oregon, endangering public health and safety and damaging rural economies; and

WHEREAS, the world's leading climate scientists, including those in the Oregon Climate Change Research Institute, predict that these serious impacts of climate change will worsen if prompt action is not taken to curb emissions; and

WHEREAS, the Intergovernmental Panel on Climate Change has identified limiting global warming to 2 degrees Celsius or less as necessary to avoid potentially catastrophic climate change impacts, and remaining below this threshold requires accelerated reductions in GHG emissions to levels at least 80 percent below 1990 levels by 2050; and

WHEREAS, Oregon, as a member of the U.S. Climate Alliance, has committed to implementing policies to advance the emissions reduction goals of the international Paris Agreement; and

WHEREAS, GHG emissions present a significant threat to Oregon's public health, economy, safety, and environment; and



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WHEREAS, the transition from fossil fuels to cleaner energy resources can significantly reduce emissions and increase energy security and the resilience of Oregon communities in the face of climate change; and

WHEREAS, emissions from the transportation sector are the single largest source of GHG emissions in Oregon; and

WHEREAS, actions to reduce GHG emissions in Oregon's transportation sector will provide substantial public health co-benefits by reducing air pollutants from the combustion of gasoline and diesel fuel that are harmful to human health; and

WHEREAS, the rapid transition from internal combustion engines to zero-emission vehicles will play a key role in reducing emissions from the transportation sector and advancing the state's GHG emissions reduction goals; and

WHEREAS, zero-emission vehicles provide multiple benefits to Oregonians, including lower operating, maintenance, and fuel costs, and lower emissions of GHGs and other pollutants; and

WHEREAS, the Legislature established ambitious goals for the adoption of zero-emission vehicles in Senate Bill 1044 (2019); and

WHEREAS, rapid actions and investments by Oregon's utility sector to reduce GHG emissions and improve the resilience of the energy system in the face of climate change and wildfire risk can reduce risks for utility customers; and

WHEREAS, transitioning the traditional natural gas supply to renewable natural gas can significantly reduce GHG emissions; and

WHEREAS, energy efficiency standards in the built environment can reduce operating costs, save renters and homeowners money on their utility bills, improve the comfort and habitability of dwellings, and reduce GHG emissions; and

WHEREAS, product energy efficiency standards reduce costs for consumers, save energy, and reduce GHG emissions; and





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WHEREAS, in the absence of effective federal engagement on these issues, it is the responsibility of individual states to take immediate actions to address climate change and ocean acidification; and

WHEREAS, after thorough hearings within the Oregon Legislature, a majority of both chambers support addressing climate change, and the failure of the Oregon Legislature to attain quorum has thwarted legislative action to achieve science-based GHG emissions reduction goals; and

WHEREAS, given the urgency and severity of the risks from climate change and ocean acidification, and the failure of the Legislature to address these immediate harms, the executive branch has a responsibility to the electorate, and a scientific, economic, and moral imperative to reduce GHG emissions and to reduce the worst risks of climate change and ocean acidification for future generations, to the greatest extent possible within existing laws; and

WHEREAS, existing laws grant authority to state agencies to take actions to regulate and encourage a reduction of GHG emissions in a variety of circumstances; and

WHEREAS, the Legislature through the Emergency Board took action on March 9, 2020, to provide permanent funding to the executive branch to pursue executive action on reducing GHG emissions; and

WHEREAS, considering climate change in agency planning and decision making will help inform decisions regarding climate change risks and avoid higher mitigation and adaptation costs in the future; and

WHEREAS, all agencies with jurisdiction over the sources of GHG emissions will need to continue to develop and implement programs that reduce emissions to reach the state's GHG goals; and

WHEREAS, all agencies with jurisdiction over natural and working landscapes in Oregon will need to prepare and plan for the impacts of climate change and take actions to encourage carbon sequestration and storage; and



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WHEREAS, the Legislature previously established the goal of achieving GHG levels “at least 75 percent below 1990 levels” by 2050, and our State has an urgent, moral obligation to set and achieve more ambitious GHG reduction goals.

NOW, THEREFORE, IT IS HEREBY DIRECTED AND ORDERED:

1. **State Agencies.** The following state commissions and state agencies are subject to the directives set forth in this Executive Order:
 - A. Business Oregon;
 - B. Department of Administrative Services (DAS);
 - C. Department of Consumer and Business Services Building Codes Division (BCD);
 - D. Department of Land Conservation and Development (DLCD) and Land Conservation and Development Commission (LCDC);
 - E. Environmental Justice Task Force;
 - F. Environmental Quality Commission (EQC) and Department of Environmental Quality (DEQ);
 - G. Oregon Department of Agriculture (ODA);
 - H. Oregon Department of Energy (ODOE);
 - I. Oregon Department of Fish and Wildlife (ODFW);
 - J. Oregon Department of Forestry (ODF);
 - K. Oregon Department of Transportation (ODOT) and Oregon Transportation Commission (OTC);
 - L. Oregon Global Warming Commission;
 - M. Oregon Health Authority (OHA);
 - N. Oregon Water Resources Department (OWRD);
 - O. Oregon Watershed Enhancement Board (OWEB); and
 - P. Public Utility Commission of Oregon (PUC).



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2. **GHG Emissions Reduction Goals.** Consistent with the minimum GHG reduction goals set forth in ORS 468A.205(1)(c), this Executive Order establishes science-based GHG emissions reduction goals, and calls for the State of Oregon to reduce its GHG emissions (1) at least 45 percent below 1990 emissions levels by 2035; and (2) at least 80 percent below 1990 emissions levels by 2050.

3. **General Directives to State Agencies.** From the date of this Executive Order, the state commissions and state agencies listed in paragraph 1 are directed to take the following actions:
 - A. **GHG Reduction Goals.** Agencies shall exercise any and all authority and discretion vested in them by law to help facilitate Oregon's achievement of the GHG emissions reduction goals set forth in paragraph 2 of this Executive Order.

 - B. **Expedited Agency Processes.** To the full extent allowed by law, agencies shall prioritize and expedite any processes and procedures, including but not limited to rulemaking processes and agency dockets, that could accelerate reductions in GHG emissions.

 - C. **Agency Decisions.** To the full extent allowed by law, agencies shall consider and integrate climate change, climate change impacts, and the state's GHG emissions reduction goals into their planning, budgets, investments, and policy making decisions. While carrying out that directive, agencies are directed to:
 - (1) Prioritize actions that reduce GHG emissions in a cost-effective manner;
 - (2) Prioritize actions that will help vulnerable populations and impacted communities adapt to climate change impacts; and
 - (3) Consult with the Environmental Justice Task Force when evaluating climate change mitigation and adaptation priorities and actions.

 - D. **Report on Proposed Actions.** The following agencies are directed to report to the Governor by May 15, 2020, on proposed actions within their statutory authority to reduce GHG emissions and mitigate climate change impacts: DEQ, DLCD, ODA, ODOE, ODFW, ODF, ODOT, OWRD, OWEB, and PUC.

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- E. Participation in Interagency Workgroup on Climate Impacts to Impacted Communities. The Governor's Office will convene an interagency workgroup on climate impacts to impacted communities to develop strategies to guide state climate actions, with participation by the following agencies and commissions: DEQ, DLCD, ODA, ODF, ODFW, ODOE, ODOT, OHA, OWEB, OWRD, PUC, Environmental Justice Task Force, Oregon Global Warming Commission, Oregon Parks and Recreation Department, and Oregon Sustainability Board.
4. Directives to the Environmental Quality Commission and the Department of Environmental Quality. In addition to the general directives set forth in paragraph 3, the EQC and DEQ are directed to take the following actions:
- A. Oregon's Clean Fuel Standards. Pursuant to its authority under ORS 468A.265 *et seq.* and other applicable laws, the EQC and DEQ shall take actions necessary to amend the low carbon fuel standards, and the schedule to phase in implementation of those standards, with the goal of reducing the average amount of GHG emissions per unit of fuel energy by 20 percent below 2015 levels by 2030, and 25 percent below 2015 levels by 2035.
- B. Clean Fuel Credits for Electrification. The EQC and DEQ are directed to advance methods accelerating the generation and aggregation of clean fuels credits by utilities that can advance the transportation electrification goals set forth in Senate Bill 1044 (2019).
- C. Sector-specific GHG Cap and Reduce Program. Pursuant to its authority under ORS 468A.005 *et seq.* and other applicable laws, the EQC and DEQ shall take actions necessary to:
- (1) Cap and reduce GHG emissions from large stationary sources of GHG emissions, consistent with the science-based emissions reduction goals set forth in paragraph 2 of this Executive Order;
 - (2) Cap and reduce GHG emissions from transportation fuels, including gasoline and diesel fuel, consistent with the science-based emissions reduction goals set forth in paragraph 2 of this Executive Order; and

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- (3) Cap and reduce GHG emissions from all other liquid and gaseous fuels, including natural gas, consistent with the science-based emissions reduction goals set forth in paragraph 2 of this Executive Order.
 - D. Regulation of Landfill Methane Emissions. The EQC and DEQ shall take actions necessary to reduce methane gas emissions from landfills, as defined in ORS 459.005(14), that are aligned with the most stringent standards and requirements for reducing methane gas emissions from landfills adopted among the states having a boundary with Oregon.
 - E. Reduction of Food Waste. The EQC and DEQ are directed to take actions necessary to prevent and recover food waste, with the goal of reducing food waste by 50 percent by 2030, to reduce GHG emissions resulting from such waste, including but not limited to engaging with states and other jurisdictions, industry, food retailers, and brand manufacturers to develop and implement strategies to prevent and recover food waste.
 - F. Timeline and Implementation.
 - (1) No later than May 15, 2020, DEQ shall submit a report to the Governor regarding an estimated timeline for rulemaking necessary for implementing the directives of paragraph 4(A)–(B) and paragraph 4(D)–(E), above.
 - (2) DEQ shall submit a preliminary report to the Governor by May 15, 2020, regarding program options to cap and reduce emissions from large stationary sources, transportation fuels, and other liquid and gaseous fuels that can commence no later than January 1, 2022. A final report shall be due by June 30, 2020.
 - (3) Reports submitted pursuant to paragraph 4 of this Executive Order also should detail DEQ's plans to engage impacted communities during the rulemaking process, in a manner consistent with ORS chapter 183.
5. Directives to the Public Utility Commission of Oregon. In addition to the general directives set forth in paragraph 3, the PUC is directed to consider the following factors and values, consistent with state law:

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- A. Statement of Public Interest. It is in the interest of utility customers and the public generally for the utility sector to take actions that result in rapid reductions of GHG emissions, at reasonable costs, to levels consistent with the GHG emissions reduction goals set forth in paragraph 2 of this Executive Order, including transitioning to clean energy resources and expanding low carbon transportation choices for Oregonians.
- B. Regulatory Considerations. Executive Order 00-06, which ensures that the PUC maintains its independence in decision making, is reaffirmed. The directives in this Executive Order are consistent with Executive Order 00-06. When carrying out its regulatory functions, the PUC is directed to:
- (1) Determine whether utility portfolios and customer programs reduce risks and costs to utility customers by making rapid progress towards reducing GHG emissions consistent with Oregon's reduction goals;
 - (2) Encourage electric companies to support transportation electrification infrastructure that supports GHG reductions, helps achieve the transportation electrification goals set forth in Senate Bill 1044 (2019), and is reasonably expected to result in long-term benefit to customers;
 - (3) Prioritize proceedings and activities, to the extent consistent with other legal requirements, that advance decarbonization in the utility sector, and exercise its broad statutory authority to reduce GHG emissions, mitigate energy burden experienced by utility customers, and ensure system reliability and resource adequacy;
 - (4) Evaluate electric companies' risk-based wildfire protection plans and planned activities to protect public safety, reduce risks to utility customers, and promote energy system resilience in the face of increased wildfire frequency and severity, and in consideration of the recommendations made by the Governor's Council on Wildfire Response 2019 Report and Recommendations;



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- (5) Convening periodic workshops for purposes of assisting electric companies, consumer-owned utilities, and operators of electrical distribution systems to develop and share best practices for mitigating wildfire risk; and
- (6) In cooperation with Oregon Housing and Community Services, establish a public process to address and mitigate differential energy burdens and other inequities of affordability and environmental justice, including rate design and other programs to mitigate energy burden.

6. **Directives to the Department of Consumer and Business Services Building Codes Division.** In addition to the general directives set forth in paragraph 3, BCD is directed to take the following actions:

- A. **Energy Efficiency Goal for New Construction.** BCD, through its advisory boards and committees, and in cooperation with ODOE, is directed to adopt building energy efficiency goals for 2030 for new residential and commercial construction. That goal shall represent at least a 60 percent reduction in new building annual site consumption of energy, excluding electricity used for transportation or appliances, from the 2006 Oregon residential and commercial codes.
- B. **Code Progress and Updates.** BCD, through its advisory boards and committees, and in cooperation with ODOE, is directed to evaluate and report on Oregon's current progress toward achieving the goal for new residential and commercial buildings, pursuant to paragraph 6(A) of this Executive Order, and options for achieving steady progress toward the goal over the next three code cycles (2023, 2026, and 2029). Pursuant to its authority under ORS 455.500, BCD also is directed to update the Reach Code on the same timeline. No later than September 15, 2020, BCD should submit a report to the Governor on current progress and options for achieving the goals over the next three code cycles. The report should be updated every three years thereafter.
- C. **Baseline Metrics and Reductions.** BCD, in cooperation with ODOE, is directed to agree on metrics, based on best practice and academic research, to inform the baseline and reductions associated with the code updates set forth in paragraph 6(B).



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7. **Directives to the Oregon Department of Energy.** In addition to the general directives set forth in paragraph 3, ODOE is directed to take the following actions:
- A. **Energy Efficiency Standards.** ODOE is directed to pursue emissions reductions by establishing and updating energy efficiency standards for products at least to levels equivalent to the most stringent standards among West Coast jurisdictions, including grid-connected appliances that can be utilized to manage end-use flexible electrical loads. ODOE also is directed to periodically evaluate and update those standards, as practicable, to remain at least equivalent to the most stringent standards among West Coast jurisdictions.
 - B. **Rulemaking.** ODOE is directed to take actions necessary to establish and update energy efficiency standards for products sold or installed in Oregon that include but are not limited to the following:
 - (1) High CRI fluorescent lamps;
 - (2) Computers and computer monitors;
 - (3) Faucets;
 - (4) Shower heads;
 - (5) Commercial fryers;
 - (6) Commercial dishwashers;
 - (7) Commercial steam cookers;
 - (8) Residential ventilating fans;
 - (9) Electric storage water heaters; and
 - (10) Portable electric spas.
 - C. **Timeline.** Any rulemaking necessary to implement the directives set forth in paragraph 7(B) should be completed by September 1, 2020.
 - D. **Third-Party Validation for Cost Savings.** ODOE, in cooperation with BCD, is directed to contract with a third party consulting firm to assess cost implications, including long-term energy cost savings, of the energy efficiency and building code actions set forth in paragraph 6(A)–(B) of this Executive Order.



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8. **Directives to the Department of Administrative Services.** In addition to the general directives set forth in paragraph 3, DAS is directed to take the following actions:
- A. **Procurement Model for Zero-Emission Vehicles.** DAS is directed to develop a statewide policy and plan for state agencies to follow for procuring zero-emission vehicles, which local governments and special government bodies may use as a model program for furthering adoption of zero-emission vehicles for their fleets. The model program shall provide for a rate of procurement of zero-emission vehicles consistent with the findings and goals set forth in ORS 283.398 and the provisions of ORS 283.327. The model program may provide for DAS to participate in, sponsor, conduct, or administer cooperative procurements in accordance with ORS 279A.200 to ORS 279A.225, under which DAS, local governments, and special government bodies may procure zero-emission vehicles.
 - B. **GHG Implications of Contracting.** DAS is directed to review existing state procurement laws and practices to identify potential improvements that can reduce GHG emissions, consistent with the GHG reduction goals set forth in paragraph 2 of this Executive Order. DAS shall provide a report to the Governor no later than September 15, 2020, detailing options.
 - C. **GHG Reduction Goals and Electrification Goals.** DAS is directed to support the state in meeting the GHG reduction goals set forth in paragraph 2 of this Executive Order, and the zero-emission vehicle adoption goals set forth in Senate Bill 1044 (2019), through the rapid conversion of state fleets to zero-emission vehicles, and the expansion of electric vehicle charging infrastructure for public buildings. DAS shall provide a report to the Governor no later than September 15, 2020, detailing its plan.
9. **Directives to the Oregon Transportation Commission, Oregon Department of Transportation, Land Conservation and Development Commission, Environmental Quality Commission, and Oregon Department of Energy.**

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- A. In a letter from the Governor, dated September 23, 2019, the OTC, LCDC, EQC, and ODOE were directed to prioritize implementation of the Statewide Transportation Strategy, adopted by the OTC. Those agencies are further directed to include the following elements in their implementation of the Statewide Transportation Strategy:
- (1) Establishment of GHG emissions reduction performance metrics; and
 - (2) Amendments to the Transportation Planning Rule that direct changes to the transportation plans of metropolitan planning areas to meet GHG reduction goals.
- B. ODOT and DLCD are directed to identify and implement means to provide financial and technical assistance to metropolitan planning areas for amendment to transportation and land use plans that meet the state GHG reduction goals, or more stringent goals adopted by a metropolitan planning area.
- C. Implementation of the directives set forth in paragraph 9(A)–(B) shall be at the highest level within the agencies, with regular and direct reporting to the Governor. The first report shall be made to the Governor no later than June 30, 2020.
10. **Directives to the Oregon Department of Transportation**. In addition to the general directives set forth in paragraph 3, ODOT is directed to take the following actions:
- A. In consultation with DEQ, ODOE, other appropriate state agencies, and public utilities, ODOT is directed to conduct a statewide transportation electrification infrastructure needs analysis, with particular focus on rural areas of the state, across use types and vehicle classes, to facilitate the transportation electrification goals set forth in Senate Bill 1044 (2019). The study should be completed no later than June 30, 2021.
 - B. ODOT is directed to develop and apply a process for evaluating the GHG emissions implications of transportation projects as part of its regular capital planning and Statewide Transportation Improvement Program planning processes. ODOT shall provide a report on the process to the Governor no later than June 30, 2021.



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11. **Directives to Oregon Health Authority.** In addition to the general directives set forth in paragraph 3, OHA is directed to take the following actions:
 - A. OHA is directed to deliver a report to the Governor, the Oregon Global Warming Commission, and the Environmental Justice Task Force no later than September 1, 2020, on the public health impacts of climate change in Oregon, with particular emphasis on the risks faced by vulnerable communities, including Oregon's nine federally recognized Native American tribes, communities of color, low income communities, and rural communities. OHA is directed to update the report annually.
 - B. OHA is directed to study the impacts of climate change on youth depression and mental health in Oregon and deliver a report to the Governor no later than June 30, 2021.
 - C. OHA and the Oregon Occupational Safety and Health Administration (OSHA) are directed to jointly develop a proposal for standards to protect workplace employees from exposure to wildfire smoke and excessive heat. The proposal should be completed no later than June 30, 2021.

12. **Directives to Oregon Global Warming Commission.** In addition to the general directives set forth in paragraph 3, the Global Warming Commission is directed to take the following actions:
 - A. In coordination with ODA, ODF, and OWEB, the Oregon Global Warming Commission is directed to submit a proposal to the Governor for consideration of adoption of state goals for carbon sequestration and storage by Oregon's natural and working landscapes, including forests, wetlands, and agricultural lands, based on best available science. The proposal shall be submitted no later than June 30, 2021.
 - B. Consistent with its reporting requirements in House Bill 3543 (2007), the Oregon Global Warming Commission shall also include reporting on progress toward the GHG reduction goals set forth in paragraph 2 of this Executive Order, and the zero-emission vehicle adoption goals set forth in SB 1044 (2019).



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13. **Effectiveness.** This Executive Order will remain in effect unless and until it is superseded by statute or another Executive Order.

Done at Salem, Oregon, this 10th day of March, 2020.

Handwritten signature of Kate Brown in blue ink.

Kate Brown
GOVERNOR



ATTEST:

Handwritten signature of Bev Clarno in blue ink.

Bev Clarno
SECRETARY OF STATE

DATE: November 12, 2019
TO: Oregon Transportation Commission

[Original signature on file]

FROM: Kristopher W. Strickler,
Deputy Director

SUBJECT: **Agenda C** – Statewide Transportation Strategy Implementation

Requested Action:

Review direction from the Governor’s Office to develop a multi-agency implementation plan for the *Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Reduction*. Receive an overview of the Statewide Transportation Strategy and implementation efforts to date. Discuss next steps.

What is the STS?

The [*Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction*](#) (STS) is Oregon’s roadmap for greenhouse gas (GHG) reduction in the transportation sector. It was developed by the Oregon Department of Transportation in close partnership with the Department of Land Conservation and Development (DLCD), Oregon Department of Energy (ODOE), and Oregon Department of Environmental Quality (ODEQ). The STS was completed in 2013 after a three-year extensive stakeholder engagement and technical analysis process. The STS address all aspects of transportation-related emissions, including the movement of people on the ground and in the air, as well as the movement of freight on all transportation modes. Five categories were identified to reduce emissions, including:

- **Vehicles and Fuels** – Strategies in this category promote a transition to more fuel-efficient vehicles, improvements in engine technologies, and reductions in the carbon intensity of fuels. Example elements include Zero Emission Vehicle (ZEV) programs, electric vehicle charging infrastructure, fleet turnover to a greater share of electric or low carbon fuel vehicles, Clean Fuel Standards, and low carbon fuels.
- **Systems and Operations** – Strategies in this category address intelligent transportation systems and other innovative approaches to improving the flow of traffic, reducing delay on transportation systems, and providing travelers with information that helps them drive more fuel efficiently or avoid significant delays.
- **Transportation Options** – This category supports lower emission modes through investments in public transportation, bicycle and pedestrian, and transportation demand management programs. Example elements include providing park-and-ride facilities, promoting ride-matching

services, adding biking and walking infrastructure, enhancing passenger rail services, and a significant growth in public transportation service.

- **Land Use** – Strategies in this category focus on infill and mixed-use development in urban areas to reduce demand for vehicle travel, expand non-auto travel mode choices for Oregonians, and enhance the effectiveness of public transportation and other modal options.
- **Pricing Funding and Markets** – This category addresses the true costs of using the transportation system and pricing mechanisms for incentivizing less travel or travel on more energy efficient modes. Strategies in this category support a transition to more sustainable funding sources to maintain and operate the transportation system, pay for environmental costs and provide market incentives for developing and implementing efficient ways to reduce emissions.

Many of the elements in these categories require legislative action; are under the authority of the Oregon Department of Transportation (ODOT), other state agencies (ODEQ, ODOE, or DLCD) or local jurisdictions; fall to the private sector; or are reliant on market forces and actions by transportation system users to drive change. In recognition of ODOT's part, the Agency developed an implementation plan in 2014. Progress towards the implementation plan and overall STS vision was evaluated in 2018. Both the implementation plan and monitoring report are described below.

On August 16, 2018, the Oregon Transportation Commission adopted an amendment to incorporate the *Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emission Reduction* into the Oregon Transportation Plan. The new language reads:

Strategy 4.1.2

To reduce transportation-related greenhouse gas emissions, pursue strategies identified in the *Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Reduction*, incorporated herein by reference.

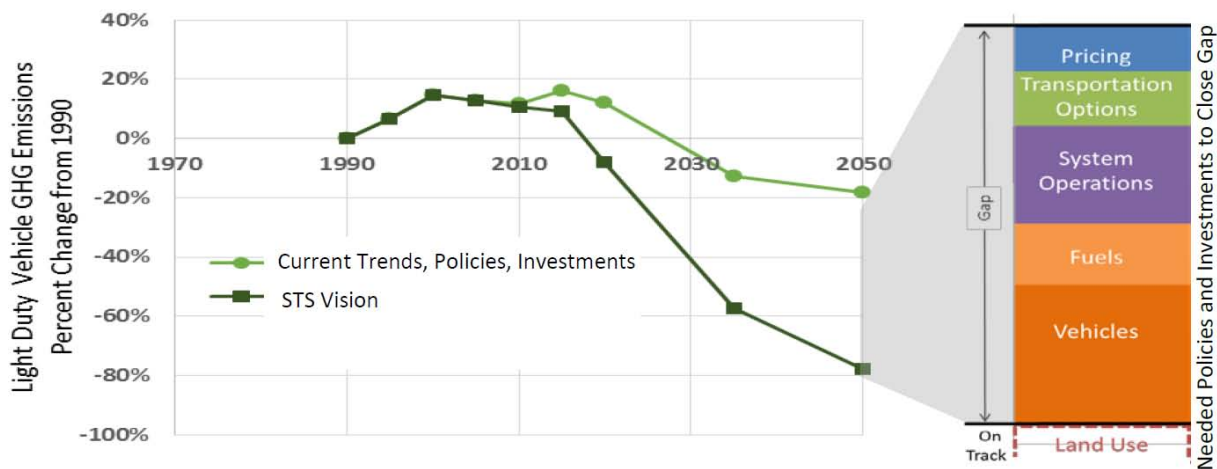
What has ODOT Done Since the STS was Completed in 2013?

In the months following completion of the STS in 2013, ODOT worked with internal staff and external stakeholders to develop an Agency-focused [STS Short-Term Implementation Plan](#), which was completed in early 2014. Implementation efforts focused on complementing or enhancing existing initiatives, reprioritizing work, and incorporating consideration of the STS into ODOT business. The Implementation Plan identified seven actions including: efforts around electric vehicle charging infrastructure and information, EcoDrive education, OReGO and transition to a vehicle miles traveled fee, scenario planning for local jurisdictions, intelligent transportation system (ITS) deployment, statewide plan integration, and coordination with stakeholders.

In 2018, ODOT completed a 5-year [STS Monitoring Report](#) detailing the work ODOT has done to implement the STS and Oregon's overall progress in achieving the STS vision. The Monitoring Report identified the work that ODOT did in accordance with the Short-Term Implementation Plan as well as other efforts. Progress was made in all seven categories of implementation, such as Real Time ITS in

the Portland metropolitan area, West Coast Electric Highways, and scenario planning in five of the state’s Metropolitan Planning Organizations (MPOs). In addition, the Monitoring Report highlighted additional efforts that supported STS implementation, including: increased transit and biking and walking investments, a new statewide Transportation Options program (e.g. vanpool, ridematching, and congestion management work), and more.

These activities along with efforts by local jurisdictions and others were then compared to the overall progress needed to achieve the STS vision. The report shows that progress on vehicles and fuels fell far short of where it needs to be according to the STS vision, while transportation options were making some progress, and land use was on track. Progress towards the overall STS vision is shown in the graphic below along with the relative gap of each category.



The graphic shows that emissions increased but are anticipated to decrease long term given continued investments in transportation options, systems operations, and more. Some of the progress made (as described in the preceding paragraph) but was dampened by restraining forces, like fuel price. Fuel prices were much higher in 2012/2013 when the STS was created. Additionally people are holding onto their cars longer and less fuel efficient cars remain on Oregon’s roadways. These restraining forces outweigh driving forces (work done to date) in the short term and leaves a gap between the anticipated progress in GHG reduction and the STS vision.

The 2018 STS Monitoring Report concluded that the STS is still the right roadmap for Oregon and that the gap can be filled. However, it is clear that additional efforts are needed to achieve the STS vision.

The monitoring report was shared with the OTC in April 2018. At that time ODOT committed to continuing the actions listed in the Short-Term Implementation Plan and described in the Monitoring Report.

What is the Direction Given by the Governor?

To help close the gap to the STS vision and in recognition that there are many implementation authorities in achieving the STS vision, Governor Kate Brown sent a letter to the agency directors and

commission chairs of ODEQ, ODOE, DLCD, and ODOT urging a multi-agency commitment to implementation of the STS (Attachment 1). The state agencies have been asked to explore the following actions:

- The establishment of GHG emissions reduction performance measures
- Implementing a Transportation Planning Rule that directs transportation plans of metropolitan jurisdictions to meet their GHG reduction targets
- That ODOT identifies options for financial and technical assistance to the metropolitan jurisdictions to utilize in crafting transportation/land use scenario plan(s) that meets their GHG reduction target
- That responsibility for the implementation and integration of the STS be at the highest level of the agency, with regular and direct reporting to the Governor's Office and respective commissions.

In response to the letter, ODOT staff is engaging with the OTC to provide an overview of the STS and determine next steps.

What Are the Next Steps?

This November agenda item is intended to provide a high-level grounding in the STS and start the conversation on next steps. Staff also proposes that the OTC host a multi-agency workshop in December to collaborate on an approach moving forward and identify preliminary implementation action ideas. Agency directors and staff will engage, with the support of Oregon Solutions, in subsequent discussions to refine and develop implementation actions.

A draft mid-term multi-agency implementation plan will be brought back to the OTC in spring 2020.

Attachments:

- Attachment 1 – September 23, 2019 letter on Statewide Transportation Strategy Implementation from Governor Brown.

Additional information on the STS, scenario planning, and efforts related to GHG reduction can be found on the Oregon Sustainable Transportation Initiative website at:

<https://www.oregon.gov/ODOT/Programs/Pages/OSTL.aspx>

Copies to:

Jerri Bohard	Travis Brouwer	Tom Fuller	Bob Gebhardt
Cooper Brown	Lindsay Baker	Amanda Pietz	Brian Dunn
Erik Havig	Michael Rock	Brian Hurley	Tara Weidner