

Office of GHG Programs: Climate Protection Program Update

Item I

March 25-26, 2021

Environmental Quality Commission meeting

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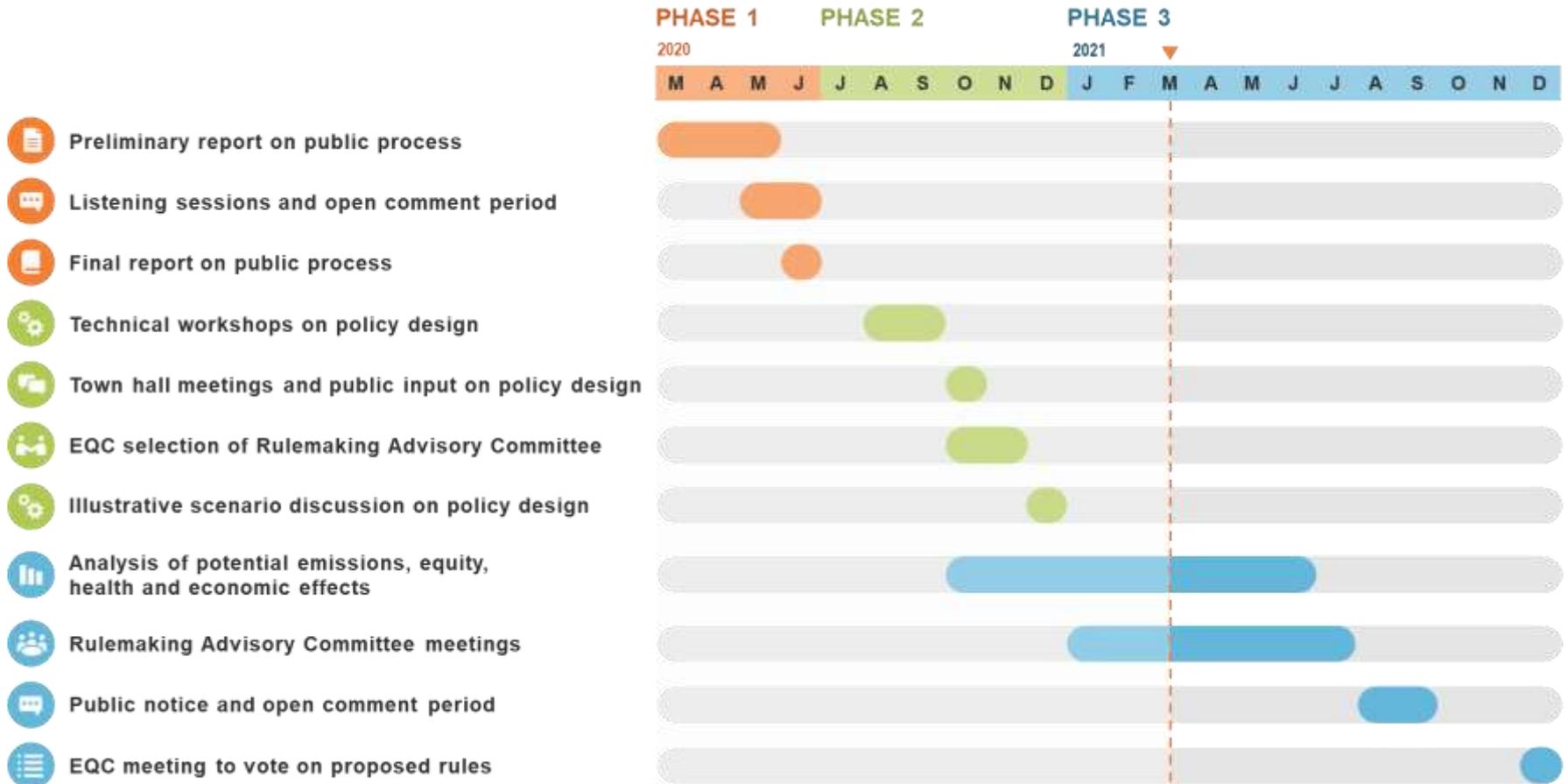
Climate Protection Program

- New program to establish **limits on GHG emissions** from fossil fuels in Oregon
 - Enforceable
 - Declining
- Reduces emissions from:
 - Fuel used for transportation
 - Largest source of emissions
 - Other fossil fuel including
 - Natural gas
 - Diesel in non-road uses
 - Propane

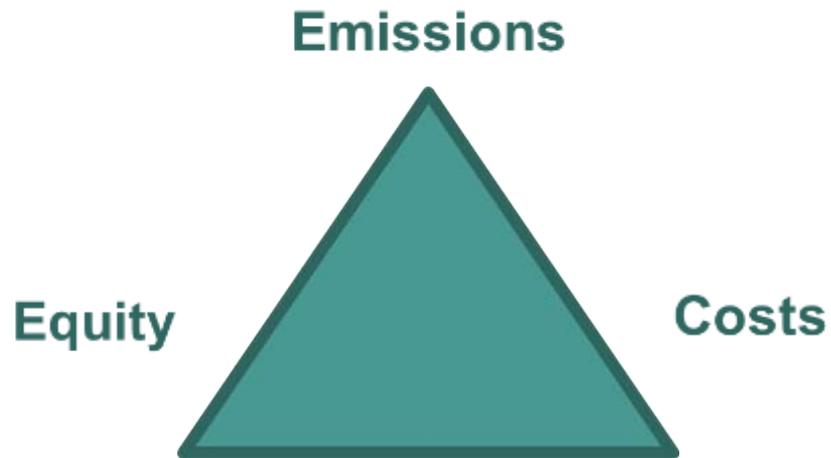


Climate Protection Program Development

Three Phase Approach: Preliminary, Scoping, Rulemaking



Climate Protection Program Goals



- Achieving significant emissions reductions
- Promoting benefits and alleviating burdens for EJ and impacted communities
- Containing costs to business and consumers

Phase 3: Rulemaking Activities

Winter 2021

RAC: Convening, policy proposals, and initial modeling results.



Summer 2021

RAC: Final modeling results, fiscal impacts, and draft rules.



Nov. 2021

DEQ submits staff report and proposed rules to EQC.



Spring 2021

RAC: Draft rules, policy proposals, and modeling results.



Aug. to Oct. 2021

Public notice and open comment period. DEQ to host public hearings in September.



Dec. 2021

EQC meeting to consider proposed rules



Rulemaking Advisory Committee

- ECQ approved 34-member committee
- Provide diverse perspectives on policy proposals, potential fiscal, environmental justice, public health and economic impacts
- Meetings are open to the public
 - Opportunity for comment at each
- Seven meetings planned
 - Convened three times so far
 - Over 150 attendees at each meeting
 - Latest meeting March 18, 2021

Equity Considerations

Environmental justice and impacted communities

- Systemic neglect
- Disproportionate pollution and health impacts
- Disproportionately bear climate change burdens

EJ and impacted communities face more risks than others:



- ↑ Greater pollution exposure
- ↑ Greater impacts of climate change
- ↓ Less representation in public processes
- ↓ Less access to new, clean technologies

Equity Considerations

Climate Protection Program aims to promote benefits and minimize risks in these communities



Reduces co-pollutants from fuels like diesel, leading to health benefits



Mitigate disproportionate increases to energy costs related to program



Promote processes that allow for meaningful engagement and acknowledge historical inequities



Learn how to support equitable outcomes and support communities

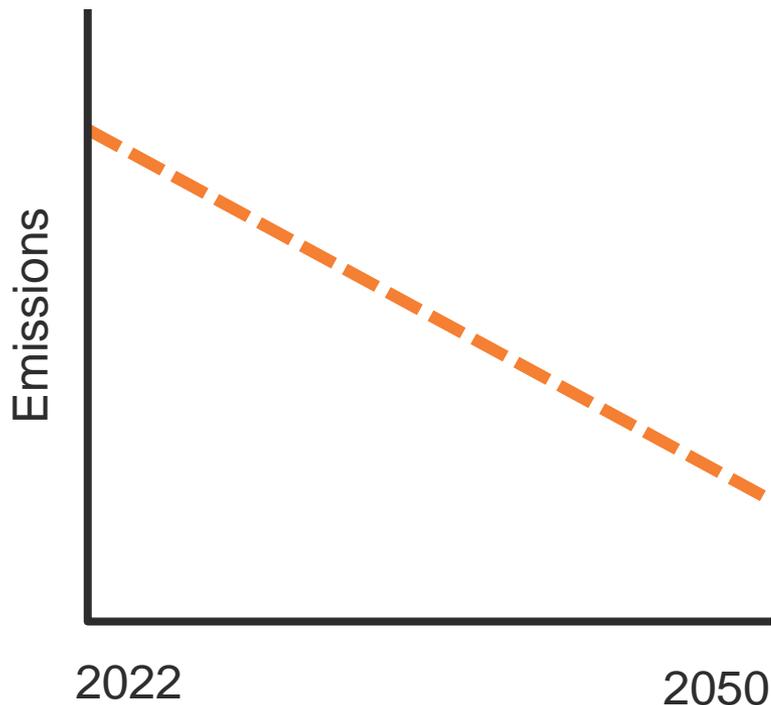
Climate Protection Program : Framework

How do emissions reduction programs with caps or limits prevent pollution?

- Assigns a total limit for regulated entities
 - Enforceable limits on emissions
- Doesn't specify the how
 - Doesn't dictate how individual entities achieve reductions
 - Many ways to reach this goals
 - Cost savings, innovation, flexibility
- Clear signal that pursuing alternatives is worth it

How CPP Could Work: In Practice

Every year, the emissions **limit** will decline toward a target.



DEQ will distribute a number of **compliance instruments** to match the cap each year, meaning both decrease over time.



1 compliance instrument



1 metric ton allowable emissions

Example:

- Year 1: Cap 30 million tons, DEQ distributes 30 million instruments
- Year 2: Cap 25 million tons, DEQ distributes 25 million instruments

How CPP Could Work: In Practice

What would this look like in practice?

In a fictional example: DEQ has 40 compliance instruments to distribute to four regulated entities.

Each one receives **10** compliance instruments from DEQ. Because they all emitted **12** metric tons last year, each will need to reduce their emissions.



Entity A
Natural gas utility



Entity B
Transportation fuel supplier



Entity C
Transportation fuel supplier



Entity D
Natural gas utility

How CPP Could Work: In Practice



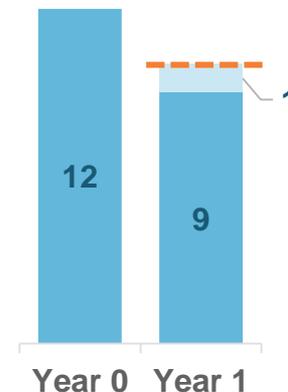
Entity A Natural gas utility

Reduces emissions by using more renewable natural gas



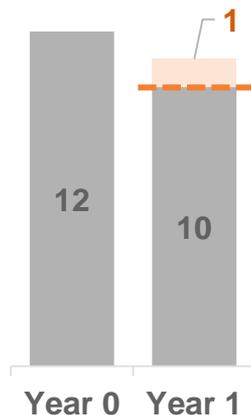
Entity B Transportation fuel supplier

Reduces emissions earlier by increasing mix of biofuels, sells extra to Entity D



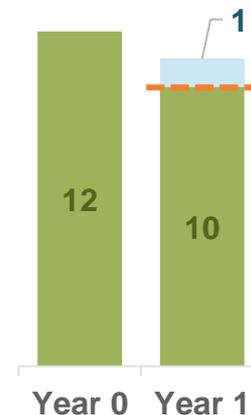
Entity C Transportation fuel supplier

Cannot make enough immediate reductions, but could invest in community climate projects



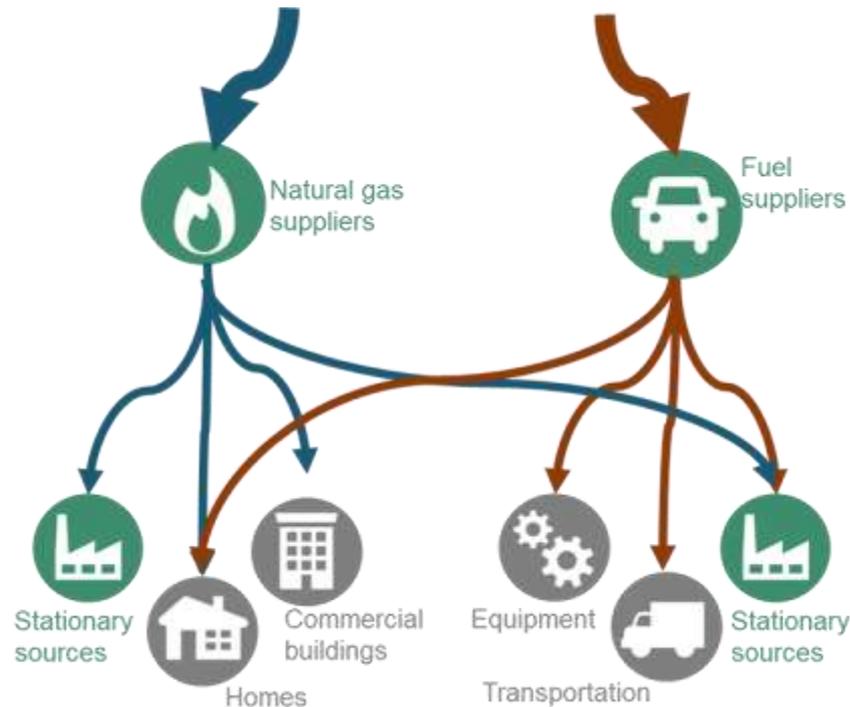
Entity D Natural gas utility

Cannot make enough immediate reductions, buys from Entity B



How CCP Could Work: In Practice

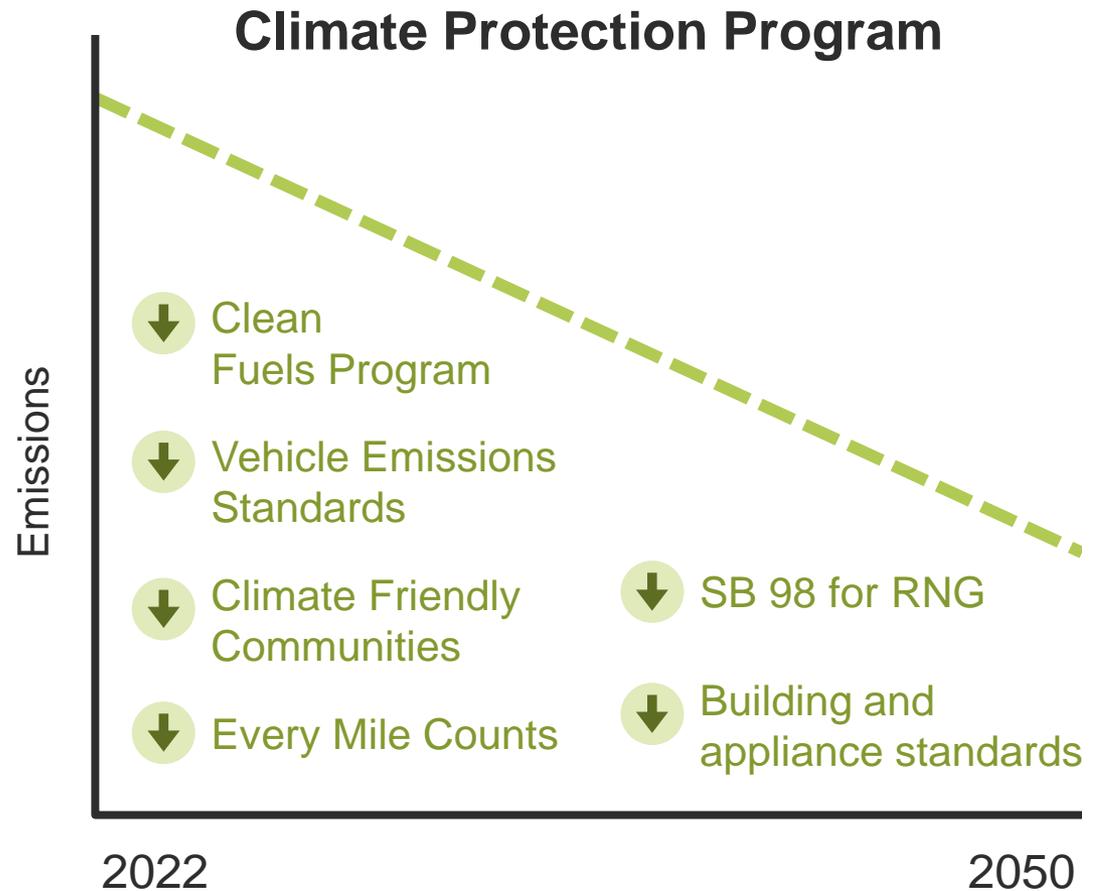
- Leverages multiple federal, state, and local programs reducing emissions
- Critical as fossil fuels are used throughout the economy



How CPP Would Work: In Practice

Leverages greenhouse gas reductions from programs that drive down emissions

- Helps entities comply with CPP
- CPP emission limits drive further emissions reductions



Emissions Associated With Electricity

- Critical sector of Oregon's economy
- Increasingly important in decarbonizing economies
- Multiple efforts underway in Oregon, public and private, to reduce these emissions
- DEQ focused on enforceable limits on fossil fuels used in Oregon, including:
 - Gasoline
 - Diesel
 - All uses of natural gas except in-state power plants

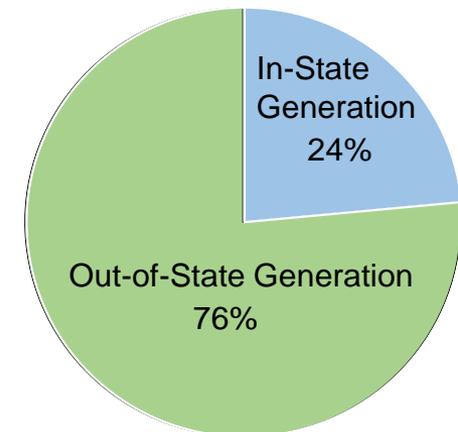
Emissions Associated With Electricity

Why is DEQ proposing to not regulate these emissions in this program?

- Most fossil fuel electricity emissions generated outside of Oregon
- EQC lacks authority to regulate out of state emissions
- Regulating in-state generation only creates significant leakage risk
- CPP a poor fit for electricity sector regulation
- Sector poised to make significant emissions reductions
 - Without appropriate structure, CPP could send contradictory signals or create disincentives which interfere with reductions

Emissions Associated with Electricity Use

16.7 Million Metric Tons CO₂e in 2018



CPP: Key Program Design Issues

- Identified several design elements critical for program success:
 - Emission reduction targets and cap
 - Cost containment and flexibility measures
 - Community climate investments
- Continue to discuss, review and incorporate comments from RAC and public
- Attempt to understand how different design choices interact with program goals

CPP: Emissions Reduction Targets

- Heard strong preference for mass-based limits, not an intensity-based standard
 - Easier to quantify
 - More suited for tracking progress toward goals
 - More directly achieve emissions reductions
- Discussions have focused on a mass-based limit which would reduce emissions by at least 80 percent by 2050
 - Emission limit would decline each year
 - Interim emission reduction targets could further define early annual decline in the limits

CPP: Cost Containment Elements

Cost containment elements should:

- Support equitable outcomes
- Lower potential cost increases
- Support significant reductions
- Drive investments within Oregon

Key considerations:

- Mitigating increased energy and fuel costs for and consumers
- Mitigating risk that businesses could move out of Oregon
- Understanding potential benefits and risks for environmental justice and impacted communities

CPP: Cost Containment Elements

Discussions on:

– Banking

- Regulated entities who don't use all of their compliance instruments could hold them to use in future years

– Trading

- Regulated entities could buy or sell unused compliance instruments

– Compliance Period

- Period regulated entities track emissions and demonstrate compliance

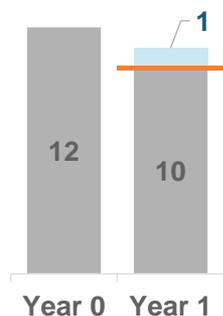
– Community Climate Investments

Community Climate Investments

- Regulated entities could fund investments in projects that reduce emissions in Oregon's communities
- 1 credit could be used to comply with 1 MT CO₂e of emissions

Illustrative example

Transportation Fuel Supplier



How Investments Could Work

- DEQ-certified third parties could receive funds from regulated entities and invest in projects reducing emissions in Oregon communities
- Could require all projects in Oregon
- Could certify one or more third parties as recipients of funds
 - Eligibility criteria
 - Reporting requirements
- Could prioritize projects in environmental justice and impacted communities

How Investments Could Work

- DEQ could establish a price for each credit
 - Supports variety of projects in different communities equally
- Potential project options could include:
 - Expanding public transit operations and availability
 - Installing electric heat pumps and water heaters
 - Energy efficiency
 - Electrifying school and transit buses
 - Converting local delivery fleets to non-fossil fuels

Modeling Analysis

- Emissions, economic, health and equity modeling
- Selected results
 - Greenhouse gas emissions projections by sector to 2050
 - Public health incidence metrics and monetized avoided costs
 - Economic impacts
 - Sector-specific job impacts, gross state product
 - Equity and co-benefits assessment
 - Qualitative assessment of potential changes along key indicators
- Initial modeling scenarios informed by RAC and stakeholder input
- Don't represent final or complete program design proposals

Modeling Policy Scenarios

Key Topic	Policy Scenario 1	Policy Scenario 2	Policy Scenario 3
Cap and Trajectory	Straight line to 80% by 2050	45% by 2035 80% by 2050	50% by 2035 90% by 2050
Trading Allowed?	Yes	Yes, excluding stationary sources	Yes
Banking Allowed?	Yes; unlimited through time		
Regulated Sectors	<ul style="list-style-type: none"> - Natural gas utilities - Non-natural gas fossil fuel suppliers - Large stationary sources with process emissions $\geq 25,000$ 	<ul style="list-style-type: none"> - Natural gas utilities - Non-natural gas fossil fuel suppliers - Large stationary sources with process emissions plus natural gas emissions $\geq 25,000$ 	<ul style="list-style-type: none"> - Natural gas utilities - Non-natural gas fuel suppliers with emissions $\geq 300,000$ - Large stationary sources with process emissions $\geq 25,000$
Natural Gas Point of Regulation	<p>All natural gas regulated at utility.</p> <p>Stationary sources are only regulated directly for process emissions above threshold.</p>	<p>Regulated at stationary sources if emissions are above threshold. Natural gas used at smaller stationary sources is regulated at utility supplier.</p>	<p>All natural gas regulated at utility.</p> <p>Stationary sources are only regulated directly for process emissions above threshold.</p>

Modeling Policy Scenarios

Key Topic	Policy Scenario 1	Policy Scenario 2	Policy Scenario 3
Expanded Complementary Policies	Clean Fuels Program assumed to expand from current 10% by 2025 target to 25% by 2035*		
Allowable Use of Alternative Compliance	Up to 25% of compliance obligation per year	Up to 5% of compliance obligation per year	Up to 25% of compliance obligation per year

*DEQ intends to open a rulemaking in 2021 to develop expanded Clean Fuels Program targets

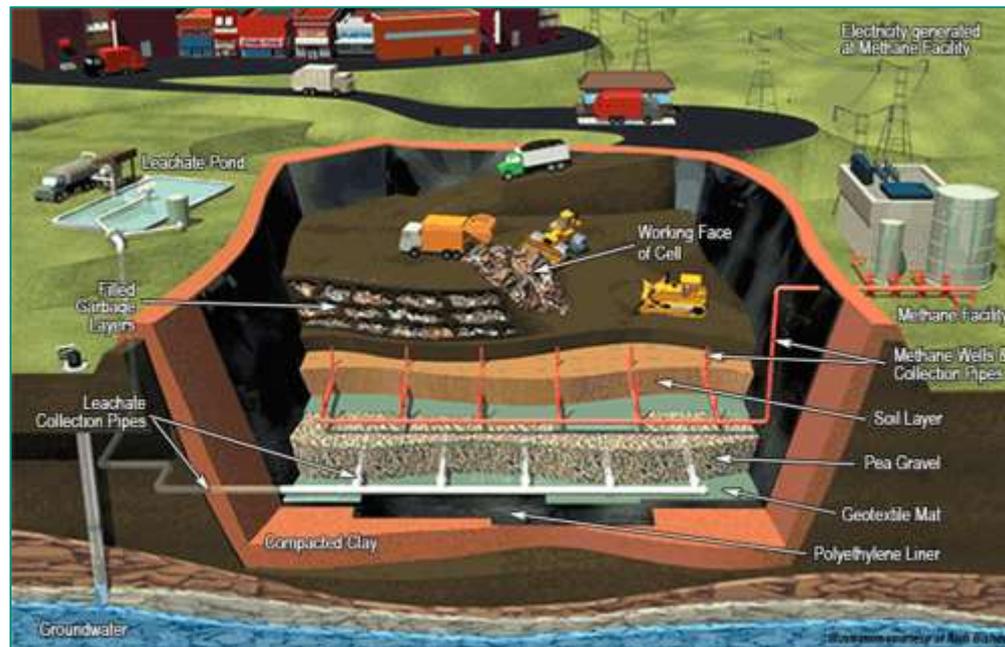
Questions?

Landfill Methane Reduction

Environmental Quality Commission Briefing

Goals of Rulemaking

- **Reduce Methane Emissions from Landfills**
 - Investigate requirements at neighboring states and establish more stringent requirements to obtain greenhouse gas reductions.



*Source: Metro Waste Authority: <https://www.mwatoday.com/news/garbage/landfill-construction.aspx>

Rulemaking Timeline

- **Rules Advisory Committee**
 - Held two RAC meetings
 - Currently reviewing draft rules
 - Final meeting on April 16, 2021
- **Fiscal Advisory Committee Meeting**
 - Scheduled for April 16, 2021
- **Public Comment and Hearing**
 - Scheduled in May
- **EQC Consideration**
 - Draft rules presented to EQC in July



Rulemaking Highlights

- **More extensive data collection**
 - Requiring earlier reporting and testing
 - Help track rule implementation
- **Looking for flexibility but maintaining stringency of standards**
 - Post-shutdown monitoring to ensure methane generation remains low
- **Including Municipal and Industrial landfills**

Every Mile Counts: Updates

Environmental Quality Commission Briefing

STS and EMC Roadmap

**Office of the Governor
State of Oregon**

EXECUTIVE ORDER NO. 20-04

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 well-being 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 various impacts of climate change will worsen if progress continues to not take 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 requesting below this threshold requires substantial 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 ambitious 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

**Oregon Statewide
Transportation Strategy**
Change the Way We Drive to Reduce Greenhouse Gas Emissions

Executive Summary

Oregon Sustainable Transportation Initiative (OSTI)
Approved March 10, 2019

EVERY MILE COUNTS
Reducing Greenhouse Gas Emissions from Transportation in Oregon

One of the best ways to reduce the carbon emissions that cause climate change is to **modify the way we travel**. Oregon is developing strategies and designs to encourage cleaner ways of getting from Point A to Point B, including increasing public transit options, promoting land use that encourages walking and biking, and supporting cleaner fuel options for driving.

KEY OBJECTIVES
Reduce Vehicle Miles Traveled Per Capita
Support Use of Cleaner Vehicles and Fuels
Consider Greenhouse Gas Emissions in Decision-Making

PRIORITY ACTIONS
Transportation electrification, expand electric vehicle rebate program, identify needed charging infrastructure
Cleaner fleet, expand market-based Clean Fuel Program, providing data and information on the use of cleaner alternative fuels for freight traffic, and developing a roadmap and strategy to support alternative fuel adoption
Transportation options: Explore employer options to reduce driving, such as telecommuting, parking regulations, and employee incentives
Land greenhouse gas reduction planning: Plan and build sites where Oregonians can walk, bike, and take transit to get where they need to go.

**Nov. 2019 –
EMC Formed**

**July 2020 –
EMC Work
Plan Finalized**

**Dec. 2020 –
Equity
Workshop #1**

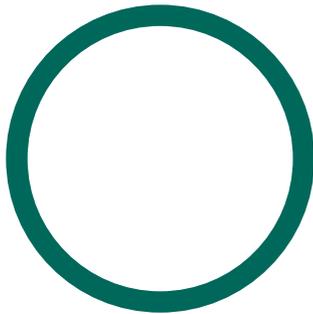
**Feb. 2021 –
Equity
Workshop #2**

**July 2022 –
Final Report /
New Work
Plan**

Work Plan Implementation



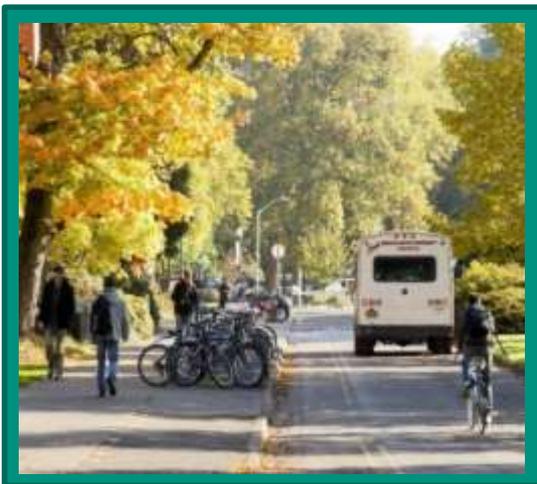
EMC – Memorandum of Understanding



- At least a 10 year commitment
- Work Plan every two years
- Implementation teams
- Quarterly check-ins
- Accountability mechanisms
- Public engagement

EMC - Objectives

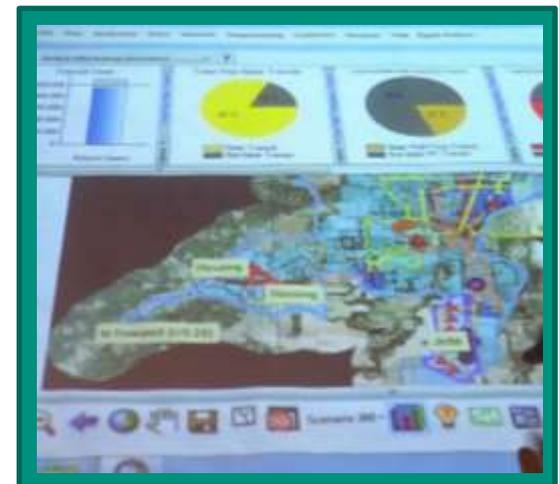
- Reduce GHG emissions
- Integrate climate justice and equity considerations



Reduce VMT Per Capita



Clean Vehicles and Fuels



GHG Emissions in Decision-Making

EMC - Equity Workshops

- Focused stakeholder conversations on
- developing:
 - Equity Guiding Principles
 - Equitable Outcomes
- Met December 2020 and February 2021
- Reviewing summary notes and survey feedback to update and revise principles and outcomes

EMC Actions

Lead Actions:

Advanced Clean Trucks
and Low NOx Rulemaking

Commute Options Rulemaking

Alternative Fuels Study

Clean Fuels Program Expansion



Lead Actions:

Transportation Electrification
Infrastructure Needs Analysis (TEINA)

Performance Measures



Lead Actions:

Interagency ZEV Action Plan



Lead Actions:

Transportation Planning Rules (TPR)

Scenario and Local Climate
Pollution Reductions Planning

Parking Management

