Climate Protection Program: Rulemaking Advisory Committee Meeting 2

Feb. 17, 2021 9 a.m. - 4:30 p.m.



Oregon Department of Environmental Quality

RAC #2 Agenda

Time	Торіс
9:00 a.m.	Welcome, Meeting Ground Rules and Public Comment Opportunities
9:30 a.m.	Remarks by Director Whitman
9:45 a.m.	Information on emissions associated with electricity use
10:00 a.m.	Reflections and updates from RAC#1
10:15 a.m.	Update on health, equity, and co-benefits assessment
10:45 a.m.	Break
11:00 a.m.	Information on understanding how the Climate Protection Program would work
11:30 a.m.	Discussion of the role of compliance flexibility mechanisms (break-out sessions)
12:45 p.m.	Lunch
1:15 p.m.	Public Comment Period #1
1:45 p.m.	Discussion on understanding point of regulation
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3:15 p.m.	Break
3:30 p.m.	Review of three initial modeling policy scenarios
4:00 p.m.	Next Steps
4:05 p.m.	Public Comment Period #2



DEQ

DEQ and Kearns & West

Oregon DEQ

Colin McConnaha Manager, Office of GHG Programs

Nicole Singh Senior Climate Policy Advisor

Lauren Slawsky Climate Policy Analyst

Matthew Espie Climate Policy Analyst

Chloe Brown Greenhouse Gas Programs Analyst

Matthew Davis Senior Policy Analyst

Kearns & West

Sylvia Ciborowski Senior Director / Facilitator



Participation Tips

Thank you for joining us today!

- Please join audio by either phone or computer, not both.
- RAC members: stay on mute when not speaking, and please join us on video if able
- Public: please stay on mute and please join us on video only when you're speaking
- For discussion and comments, use "Raise Hand" button to get in the queue; if joined by phone press *9
- Say your name and affiliation before speaking
- Move around and take care of yourself as needed!
- For Zoom technical issues, send chat message to host



How to Raise Hand

Look for the Raise Hand in the Participants Tab





Public Participation Protocols

- Public participation is welcome thank you!
- Two public comment periods
 - 1:15 1:45 p.m.
 - 4:05 4:30 p.m.
- Time for public comment, though primary purpose is RAC discussion
- When making comments, please respect time limits and ground rules
- Welcome to provide written comments
 - GHGCR2021@deq.state.or.us
 - Requested by February 26th



Committee Discussion Guidelines

- Honor the agenda and strive to stay on topic
- Provide a balance of speaking time
- Listen to understand and ask questions to clarify
- Stay engaged and be open about your perspective and experience
- Address issues and questions focus on substance of comments
- Bring concerns and ideas up for discussion at the earliest point in the process



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DEQ

Emissions Associated With Electricity

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



Emissions Associated With Electricity

- Why is DEQ proposing to not regulate these emissions in <u>this</u> program?
 - Most fossil fuel electricity emissions are generated out of state
 - Lack authority to regulate out of state emissions
 - Regulating just in-state generation creates significant leakage risk
- Conclusion: limited EQC makes this program a poor fit for Oregon's electricity sector that is already expected to make significant reductions



Questions? Comments?

How to raise hand: RAC members





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Updates from RAC #1

- Received multiple suggestions for improvement
 - -Last RAC meeting
 - -Follow-up comments
 - -Selected interviews with facilitator
- Finding ways to incorporate and implement these suggestions



RAC Interviews

- Interviewed a sampling of RAC members in January
- Purpose was to identify hopes and expectations and ideas for a constructive RAC process



Hopes and Visions of Success

Process

- All perspectives fairly considered
- Encourage collaborative effort between different interest groups at the table
- Center equity
- Safe space for participation

General support for goals

- Some suggestions on modifications of existing goals



Hopes and Visions of Success

Rulemaking process

- Result in a strong and effective climate program
- Shape rules that achieve GHG emissions reductions
- Balance costs equitably between interests
- Design rules with the understanding of who will bear climaterelated impacts
- Include achievable and implementable targets
- Avoid complexity
- Informed by best available science
- Arrive at practical policies and maintain affordability



Equitable Outcomes

Hopes

- Acknowledge historical inequities and support healthier communities for frontline, BIPOC, and indigenous people
- Consider how rules will affect rural communities
- Maximize benefits to most impacted communities
- Ensure impacted community voices and needs are considered
- Avoid rules that would disproportionally impact small businesses

Ideas for equitable outcomes

- Invite perspectives from Tribal, environmental justice, and frontline communities early on
- Call on stakeholder interest groups who have not provided comments to encourage input
- Provide opportunity first for clarifying questions
- Ensure meeting materials are easily accessible



Issues to Address & Process Suggestions

Key issues

- Policy issues (e.g., staff leanings, impacts on businesses)
- RAC process (e.g., size of group and diverse interests, different types of expertise and experiences)

Process

- Specific suggestions offered for:
 - Presentation and meeting materials
 - Facilitation and meeting format
 - Virtual meeting considerations
 - Other logistics



RAC #2 Meeting Objectives

- Develop a shared understanding of program framework
- Maximize value of advisory committee participation
 - Increase discussion among members
 - Empower all members to share insights, experiences, and expertise
- Identify any areas of agreement on current DEQ leanings for program design



RAC Work Plan Updates





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Modeling: Health, Equity, Co-Benefits

- Multiple components to modeling study
 - Recent focus on multi-sector emission modeling
 - Highlight other components
- Potential public health impacts
 - Any regional air quality impacts (EPA COBRA Tool)
 - Any changes in co-pollutant emissions and other info from sector modeling
 - Also informed by Oregon-specific data
- Types of potential health impacts
 - Avoided hospital visits
 - Reduction in premature mortality
 - Changes in respiratory impacts
 - Work days lost



Modeling: Health, Equity, Co-Benefits

- Co-benefits and equity assessment
 - Early stages
 - Goal is to better analyze equitable outcomes and broader program impacts for key indicators
- Informed by
 - Other modeling results
 - Literary and data resources
 - Conversations with environmental justice and community based organizations on indicators



Modeling: Health, Equity, Co-Benefits

Potential Key Indicators

Health

Actions that directly improve human health by reducing exposure to pollutants and improving indoor air quality

Economic

Actions that reduce energy costs, increase energy reliability and security, and create "green" employment opportunities

Environmental

Actions that increase carbon sequestration, preserve or restore native habitat, increase resilience of natural systems

Societal

Actions that increase transportation efficiency, access to recreation spaces, and opportunities for socioeconomic mobility



Clarifying Questions? Comments?

How to raise hand: RAC members





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DEQ

How CPP Would Work: Overview

- How would this program work in practice?
- How do emissions reductions program that use "caps" actually prevent pollution?
 - Doesn't assign limits by individual entities
 - Assigns a limit for a group of entities
 - Doesn't tell entities how to reach limits, but the group must get there



How CPP Would Work: Overview

- Considerations
 - Enforceable limits on emissions—the goal line is firm
 - Doesn't specify the how-many ways to get down the field
 - Cost savings, innovation, flexibility
 - Sends a clear signal to businesses that investments in pursuing alternatives is worth it
 - Emission reductions lead to benefits, but doesn't necessarily result in same benefits for all
 - Benefits don't flow equally, but disproportionately



How CPP Would Work: In Practice

Every year, the emissions cap will decline toward a target.



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



Entities could comply using a combination of approaches:

- Reduce emissions
- Buy instruments through trading
- Invest in alternative compliance options



How CPP Would Work: In Practice

What would this look like in practice?

In a fictional example, the cap in Year 1 could be 40 metric tons of emissions, meaning DEQ has 40 compliance instruments to distribute.

Imagine the program covers only four 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 Stationary source



Entity D Transportation fuel supplier



How CPP Would Work: In Practice



Clarifying Questions? Comments?

How to raise hand: RAC members





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DEQ

Why Compliance Flexibility Mechanisms?

- What is the purpose of flexibility mechanisms?
- How do they work?
- How do they help achieve program goals?
 - Achieving significant emissions reductions
 - Promoting benefits and alleviating burdens for EJ and impacted communities
 - Containing costs
- DEQ current leaning
 - Can play an important role in achieving program goals, if <u>correctly</u> <u>designed</u>
 - Multiple tools, multiple options, opportunities
 - Banking, trading, alternative compliance, multi-year compliance periods





Equity

Emissions

What is Banking?

 Regulated entities who do not use all of their compliance instruments can hold them to use in future years or compliance periods




Why Allow Banking?

Enabling greater emissions reductions

- Incentivizes earlier emissions reductions
- Enables DEQ to set stronger program targets

Promoting equity

 Earlier reduction of emissions and co-pollutants means earlier benefits for Oregon communities

Containing costs

Mitigation against uncertainty, weather variability, and other risks

• DEQ Leaning

Banking without expiration



What is trading?

- Regulated entities can buy and sell compliance instruments
- Not clear trading will be heavily used, as entities can also bank compliance instruments

Illustrative Example:

Sale of compliance instruments from fuel supplier to natural gas utility





Why Allow Trading?

Enabling greater emissions reductions

 Provides more flexibility in where emissions reductions occur, which enables DEQ to set stronger targets

Promoting equity

- Enables greater reductions, and therefore greater benefit for Oregon communities
- Reduction pace by regulated entities will vary, although all face pressure to reduce as fewer compliance instruments are distributed

Containing costs

- Allows regulated entities to find lowest-cost emissions reductions
- Ability to sell is an incentive to reduce emissions early

DEQ Leaning

- Broad trading flexibility



What is Alternative Compliance?

- DEQ could develop or authorize types of projects that reduce emissions, such as:
 - Purchasing electric vehicles
 - Constructing electric vehicle charging stations
 - Installing electric heat pumps in residences
- DEQ could create rules so that these projects benefit Oregon communities, with a focus on environmental justice and impacted communities
- Regulated entities could invest in these types of projects as an additional compliance option



Why Allow Alternative Compliance?

- Enabling greater emissions reductions
 - Flexibility enables DEQ to set stronger targets

Promoting equity

- Opportunity for DEQ to create Oregon-specific protocols that encourage investments in impacted communities (can reduce copollutants in communities)
- Reduction pace by regulated entities will vary, although all face pressure to reduce as fewer compliance instruments are distributed

Containing costs

- Would likely reduce compliance costs
- Could drive investments within Oregon's communities

DEQ Leaning

- Include alternative compliance
- No leaning yet on allowable percentage
- DEQ seeks for alternative compliance to benefit Oregon communities



What is a Multi-Year Compliance Period?

- Provides greater flexibility for timing of emissions reductions
- Does not change total emissions reductions required
- Partial submittal of compliance instruments can be required annually within a compliance period

Illustrative example

2-year compliance period for regulated entity with emissions of 105,000 MT CO_2 e the year before the program starts

	Compliance Instruments Received from DEQ	Actual Emissions (MT CO ₂ e)	Compliance Instruments Used to Demonstrate Compliance
Year 1	100,000	102,000	0
Year 2	90,000	88,000	190,000
Total Compliance Instruments/Allowable Emission	190,000	190,000	190,000



Why Use Multi-Year Compliance Periods?

- Enabling greater emissions reductions
 - Flexibility enables DEQ to set stronger targets

Promoting equity

- Enables greater reductions, and therefore greater benefit for Oregon communities
- Stronger program targets mean earlier reduction of emissions and co-pollutants, benefitting Oregon communities

Containing costs

- Provides for more transition and reduces uncertainty in first years of the program
- Helps mitigate annual weather variation

• DEQ Leaning

- 3-year compliance periods

Breakout Rooms

- Members of the public will remain in the main room while RAC members are in breakout group sessions
- RAC members: when returning to the main room, press "Leave Breakout Room", NOT "Leave Meeting"





Questions and Feedback

- General questions and comments on flexibility mechanisms
- Discussion questions:
 - Which mechanism (i.e., banking, trading, alternative compliance, multi-year compliance period) do you find the most effective for supporting emissions reductions, containing costs, and equitable outcomes? Which do you find the least effective in achieving these goals? Why?
 - 2. What other compliance period lengths might be considered? Why?
 - 3. What are your thoughts on whether/how the program could include structuring alternative compliance options to drive investments that reduce greenhouse gases in ways that most benefit Oregon's impacted communities?



Breakout Groups In Progress

- RAC breakout group session in progress
- RAC members will return to the main session at ~12:30pm for report out presentation



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DEQ

Public Comment Period

- Public comment period: 1:15 1:45 p.m.
- Raise your hand if you'd like to make a comment
- When making public comments, please:
 - Respect time limits as assigned
 - Use respectful language
 - Address issues and questions—focus on substance
 - When possible, relate comments to topics on the RAC agenda
- Members of the public welcome to provide written input to GHGCR2021@deq.state.or.us by Feb. 26





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Key Sectors



Fuel suppliers: deliver non-natural gas fuels (gasoline, diesel, propane, etc.) used in Oregon



Natural gas suppliers: sell or deliver natural gas used in Oregon

- Natural gas utilities
- Natural gas marketers
- Interstate pipeline companies



Stationary sources: facilities located in Oregon with air contamination source permits

 Emit greenhouse gases on-site from fuel combustion and/or industrial processes



Where are fuels and emissions?

Natural gas & fuel suppliers bring fossil fuels into Oregon and deliver to users

Users like stationary sources combust fuels, point of greenhouse gas and co-pollutant emissions





Point of Regulation

- Point of regulation
 - Points at which emissions are regulated, who must comply with the program
 - Varies by sector
 - Fuel supplier, natural gas supplier, stationary source
 - Influences total emissions covered and where emissions are located
- DEQ aims to design point of regulation within context of our program goals



DEQ will rely on data collected in the Greenhouse Gas Reporting Program to track emissions and progress in the Climate Protection Program:

- Fuel suppliers: total with data by fuel type
 - DEQ does not have data on fuel end users
- Natural gas suppliers: total with data from utilities and interstate pipeline companies

- DEQ does not have data on natural gas marketers

- Stationary sources: total, natural gas use, total for other fuel use, and industrial process emissions
 - DEQ does not have data on very small sources of emissions nor data on fuel use by type other than for natural gas



Connections to Equitable Outcomes

 Environmental and programmatic impacts are disproportionately borne by environmental justice and impacted communities

Co-pollutants

Poor air quality impacts the health of local communities:

- Along transportation corridors
- In neighborhoods located near stationary sources

Greenhouse Gases

Certain communities are experiencing the first and worst impacts of climate change:

- Most vulnerable and least able to adapt
- e.g. increasing numbers and intensities of wildfire

Costs

Emissions reduction policies can result in disproportionate costs to some consumers:

- Higher energy burden for lower income households
- Fewer low-carbon alternatives in rural areas



Points of Regulation under Consideration

DEQ Leaning:

- Fuel suppliers with emissions above a threshold for inclusion for fuels delivered and used in Oregon, including liquid fuels/propane used at stationary sources
- Natural gas utilities for gas delivered and used in Oregon
 - Further consideration needed regarding point of regulation for large stationary source users of natural gas
- Large stationary sources with emissions above a threshold for inclusion for on-site industrial process emissions
- Leaning informed:
 - DEQ/EQC authority
 - Available data
 - Equity considerations
 - Small business considerations
 - Public input
 - Administrative burden of program



Questions and Feedback

- General questions and comments on point of regulation
- What are your thoughts on benefits of regulating all natural at natural gas utilities?
- Do you see any additional benefit to regulating natural gas for large stationary sources at the source, instead of the utility?
- Do you have any additional thoughts or comments on the DEQ leanings for point of regulation?



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DEQ

Modeling Program Options

- Begin with "reference case" to represent the effects of current regulations
 - Represents a best guess of what future may look like without a new greenhouse gas emissions reduction program
 - Serves as a baseline to compare to against policy scenarios
- Next, various "policy scenarios" are modeled and compared to the reference case
 - Multiple policy cases to represent varying program design options
 - Focus is on difference and directionality between reference and policy cases, not absolute numbers



Policies included in Reference Case

- Assumes policies, programs, and regulations that are currently in effect
- Transportation and mobile sources
 - Oregon Clean Fuels Program: 10% reduction in transportation fuel carbon intensity by 2025
 - CAFE Standards: federal corporate average fuel economy standards from 2016 rulemaking
 - Senate Bill 1044: Electric vehicle load impacts from light-duty zero emission vehicle regulations and vehicle sales by 2035
- Pollutants with high global warming potentials
 - U.S. AIM Act: 85% consumption/production reduction by 2035 relative to annual average 2011-2013 baseline



Policies included in Reference Case

Electricity generation and consumption

- Senate Bill 1547: renewable portfolio standard (RPS) of 50% by 2040 and no coal generation attributed to OR past 2030
- Adjacent state policies impacting Oregon generation mix: California's Senate Bill 100 goal of 100% renewable electricity by 2045; Washington Clean Energy Transformation Act (CETA); and others
- Energy efficiency programs: included in utility IRP data and used as IPM input assumptions

Natural gas supply and consumption

- Senate Bill 98: large utilities (NW Natural) transition to 30% zero-emitting renewable natural gas (RNG) by 2050
- Energy efficiency programs: included in utility IRP data and used as model input assumptions



Reference Case: High-Level Results





Reference Case: High-Level Results

Reference Case: Greenhouse Gas Emissions Million MT CO2e





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Reference Case: High-Level Results

	Emissions (Million MT CO2e)			Percent Change					
Sector	1990	2018	2030	2040	2050	1990- 2030	1990- 2050	2018- 2030	2018- 2050
Transportation	20.5	24.1	21.7	16.5	14.3	6%	-30%	-10%	-41%
Natural Gas	5.5	7.5	7.1	6.7	6.2	31%	14%	-5%	-17%
Industrial	5.6	4.3	4.9	5.5	6.3	-12%	12%	13%	45%
Electricity	16.6	16.7	7.8	8.4	8.3	-53%	-50%	-53%	-51%
Residential and Commercial	3.5	4.4	5.1	5.5	5.9	48%	69%	17%	35%
Agriculture	6.5	6.7	6.6	6.7	6.8	2%	5%	-2%	1%
Total	58.1	63.8	53.3	49.4	47.8	-8%	-18%	-16%	-25%

Note: totals may not sum due to rounding.



Reference Case: Key Takeaways

- Transportation
 - Emissions declines due to Clean Fuels Program and CAFE standards
 - Still projected to be the largest source of in-state emissions by 2050
 - Largest decreases in gasoline and diesel uses seen after 2040
- Natural gas
 - Emissions remain relatively flat
 - Moderate decline over time due to renewable natural gas procurement (Senate Bill 98)
- Industrial
 - Emissions increases over time driven by growth in cement manufacturing and high global warming potential materials (such as those used in semiconductor manufacturing)
- Deeper dives on future policy scenario results



Reference Case: Key Takeaways

Key takeaways for emissions from other sectors:

- Electricity
 - Emissions continue to decline through 2035 due to increased renewables and coal no longer attributed to Oregon in 2030 (Senate Bill 1547)
 - After 2035, electric load increases from electric vehicles, though emissions remain relatively flat due to lower-emitting power
- Residential and commercial
 - Emission increases driven by fugitive methane releases in gas distribution and high global warming potential materials (refrigerants)
- Deeper dives on future policy scenario results



Clarifying Questions?

• ICF available today to answer questions



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11:30 a.m.	Discussion of the role of compliance flexibility mechanisms (break-out sessions)
12:45 p.m.	Lunch
1:15 p.m.	Public Comment Period #1
1:45 p.m.	Discussion on understanding point of regulation
2:30 p.m.	Updates on modeling, reviewing reference case results
3:15 p.m.	Break
3:30 p.m.	Review of three initial modeling policy scenarios
4:00 p.m.	Next Steps
4:05 p.m.	Public Comment Period #2



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Initial Modeling Policy Scenarios

- Intent is to inform program design
- Focus on questions for which modeling is potentially most helpful
- Do not represent final or complete program design proposals
- Not able to represent all program details and variability in modeling
 - Often have to include simplifying assumptions for modeling
- Trying to understand potential effects by only changing one or two assumptions
 - Might see significant difference in results or no differences at all



Policy Scenario Common Assumptions

Assumptions the same in each scenario

Кеу Торіс	3 Initial Policy Scenarios		
Cap Application	One cap applied across all sectors (regulated sectors and therefore scopes of regulated emissions vary by scenario)		
Trading Allowed?	Yes and trading across sectors can occur		
Banking Allowed?	Yes; unlimited through time		
Alt. Compliance Options Allowed?	Yes and annual supply is assumed to be available up to allowable % (allowable % varies by scenario)		
Expanded Complementary Policies	Clean Fuels Program assumed to expand from current 10% by 2025 target to 25% by 2035		



Policy Scenario Differing Assumptions

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	
Regulated Sectors	Natural gas utilities; non-natural gas fuel suppliers; large stationary sources with process plus natural gas emissions >=25,000 MTCO2e	Natural gas utilities; non-natural gas fuel suppliers; large stationary sources with process emissions >=25,000 MTCO2e	Natural gas utilities; non-natural gas fuel suppliers with emissions >=300,000 MT CO2e; large stationary sources with process emissions >=25,000 MTCO2e	
Sector Exclusions	Landfills, electric generators, stationary source process emissions below threshold; interstate natural gas not regulated at stationary sources	Landfills, electric generators, stationary source process emissions below threshold; all interstate natural gas; fuels used for aviation	Landfills, electric generators, stationary source process emissions below threshold; all interstate natural gas; fuels used for aviation; fuel suppliers below threshold	
Natural Gas Point of Regulation	Natural gas regulated at stationary sources if process plus natural gas emissions are above the threshold, otherwise natural gas used at stationary sources is regulated upstream at utility supplier; all other natural gas emissions (such as residential use) is regulated upstream at supplier (utility)	All natural gas regulated upstream at supplier (utility), not a stationary source (as they are regulated for process emissio above threshold only)		
Allowable Use of Alt. Compliance	Up to 5% of compliance obligation per year	Up to 10% of compliance obligation per year	Up to 25% of compliance obligation per year	



Next Steps for Contracted Study

- Review initial 3 policy scenario results

 Emissions, economic, public health, co-benefits and equity
- To be presented at March and April RAC meetings for review and discussion
- Inform development of a 4th policy scenario
- Final results should be available at May RAC meeting



Clarifying Questions? Comments?

• ICF available today to answer questions


RAC #2 Agenda

Time	Торіс
9:00 a.m.	Welcome, Meeting Ground Rules and Public Comment Opportunities
9:30 a.m.	Remarks by Director Whitman
9:45 a.m.	Information on emissions associated with electricity use
10:00 a.m.	Reflections and updates from RAC#1
10:15 a.m.	Update on health, equity, and co-benefits assessment
10:45 a.m.	Break
11:00 a.m.	Information on understanding how the Climate Protection Program would work
11:30 a.m.	Discussion of the role of compliance flexibility mechanisms (break-out sessions)
12:45 p.m.	Lunch
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4:05 p.m.	Public Comment Period #2



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Next Steps: Written Comments

- DEQ accepting written comment on today's discussion items
- Discussion questions also available on rulemaking website
- Please submit comments by end of day Feb. 26, 2021 to GHGCR2021@deq.state.or.us
- Next rulemaking advisory committee meeting (#3)

- Mar. 18, 2021, 9 a.m. to 4:30 p.m. PT



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RAC Meeting Resources

Sign up for meeting notifications: https://public.govdelivery.com/accounts/ORDEQ/subscriber/new ?topic_id=ORDEQ_655

Rulemaking webpage:

www.oregon.gov/deq/Regulations/rulemaking/Pages/rghgcr2021 .aspx

Rulemaking contact: GHGCR2021@deq.state.or.us

Modeling study webpage: www.oregon.gov/deq/ghgp/Pages/modelingstudy.aspx



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Public Comment Period

- Public comment period: 4:05 4:30 p.m.
- Raise your hand if you'd like to make a comment



- When making public comments, please:
 - Respect time limits as assigned
 - Use respectful language
 - Address issues and questions—focus on substance
 - When possible, relate comments to topics on the RAC agenda
- Members of the public welcome to provide written input to GHGCR2021@deq.state.or.us by Feb. 26

