



Written Comments

Greenhouse Gas Emissions Program 2021 Rulemaking: Advisory Committee Meeting 5

This document is a compilation of written comments received related to the fifth meeting of the advisory committee for the Greenhouse Gas Emissions Program 2021 Rulemaking to develop a new Climate Protection Program. Comments related to this meeting received after the cutoff will be included with comments from the next advisory committee meeting.

Comments

Avista and Cascade Natural Gas.....	1
Ed Staub & Sons Petroleum.....	28
Gary Richardson.....	29
International Emissions Trading Association.....	30
League of Oregon Cities.....	34
League of Women Voters of Oregon.....	35
Myrna Judd.....	36
Northwest Pulp & Paper Association.....	37
NW Natural.....	43
OLCV Metro Climate Action Team.....	49
Oregon Business for Climate.....	51
Oregon Environmental Council.....	61
Oregon Farm Bureau.....	68
Oregon Fuels Association.....	70
Oregon Manufacturers and Commerce.....	73
Oregon Sierra Club.....	76
Oregon Trucking Association.....	79
Pacific Propane Gas Association.....	80
Phillips 66.....	82
Rogue Climate.....	85
Roseburg Forest Products.....	94
Shell Energy North America.....	97
Southern Oregon Climate Action Now.....	99
The Nature Conservancy.....	112
Western States Petroleum Association.....	113
WSCO Petroleum.....	117
Yamhill County.....	118



Analysis of Oregon's Cap-and-Reduce Program GHG Emissions Reductions

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Disclaimer

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This memo describes modeling that Guidehouse conducted to understand how the adoption of different greenhouse gas emissions reduction technologies could affect statewide emissions in Oregon. The analysis presented does not examine health or economic impacts of program policies, the banking or trading of compliance instruments, or the purchase of alternative compliance instruments such as Community Climate Investment credits.

Guidehouse

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Executive Summary

In response to Governor Brown's Executive Order 20-04, the Oregon Department of Environmental Quality (DEQ) has engaged stakeholders and the public in the development of a cap-and-reduce program to regulate greenhouse gas (GHG) emissions from gas utilities, fuel providers, and industry sources. The DEQ has stated three goals for the cap-and-reduce program: to reduce GHG emissions, to contain costs, and to promote equity. This analysis focuses on the first of the program's three goals: the GHG emissions reductions mandated by EO 20-04. This memo describes the methodology and results of Guidehouse's independent modeling (under contract to Avista and Cascade) to understand the economywide energy and emissions impacts of the proposed program.

Background

The DEQ and its contractor use modeling tools to forecast the impacts that a cap-and-reduce program may have on GHG emissions, public health, and the economy. The DEQ has modeled a Reference Case that forecasts future conditions based on existing regulations prior to adoption of a cap-and-reduce program. The DEQ has also modeled program options in three policy scenarios and compared the scenario outcomes to the Reference Case to inform its rulemaking. DEQ's contractor presented summary assumptions and results of this modeling activity to DEQ's Rulemaking Advisory Committee (RAC) in a series of meetings since January 2021.

Among other RAC stakeholders, Avista and Cascade have raised questions about the transparency of DEQ's modeling analysis. Additional concerns have surfaced regarding DEQ's focus on a collection of compliance pathways centered on electrification while not sufficiently considering resource adequacy concerns and emerging hydrogen technologies. Stakeholders are also concerned that:

- The DEQ has been slow to provide the records and assumptions underlying its analysis
- The DEQ's default approach to GHG reductions would shift emissions from regulated sources (stationary sources, gas utilities, and fuel suppliers) to sources not regulated by DEQ (electric generators)
- DEQ's scenario results do not account for emissions leakage to the electric sector that result from electrification of the heating and transportation sectors

The body of this memo describes these concerns in more detail.

Independent Modeling

Avista and Cascade contracted with Guidehouse to develop a transparent model that examines the economywide energy use and emissions impacts of the proposed cap-and-reduce program. This analysis is not intended to serve as a substitute for DEQ's analysis, but rather to provide a transparent and system-wide view of GHG reduction scenarios to assist RAC members in their rulemaking efforts. Guidehouse used publicly available data to develop a Guidehouse Reference Case forecast, which assumes that policies in place on January 2021 remain in force and no new policies are implemented to reduce GHG emissions. On May 20, 2021, the DEQ provided details about its model in response to a public records request made by the Northwest Gas Association on April 8. Guidehouse examined the information provided by DEQ and confirmed that key assumptions and results for the Guidehouse and DEQ Reference Cases are

aligned. Guidehouse used its Reference Case as the basis for modeling policy scenarios in a manner similar to DEQ’s modeling, but with greater consideration of the impacts that a cap-and-reduce program would have on emissions from sectors beyond the regulatory purview of DEQ.

Guidehouse modeled the emissions outcomes of the three policy scenarios presented by DEQ and one additional policy scenario developed by Avista & Cascade that is focused on low carbon gas deployment. Each scenario is defined by a GHG emissions reduction target and an array of GHG reduction interventions that are deployed to reduce GHG emissions. Table 1 summarizes the GHG reduction technologies assumed in each of the four scenarios. The Guidehouse model introduces these emissions reduction technologies as interventions to the Guidehouse Reference Case, and the model calculates the collective energy and emissions impacts of each scenario’s technology mix. For this analysis, Guidehouse assumed an electric generation mix matching the High Renewable WECC Future forecast presented in Portland General Electric’s *Integrated Resource Plan 2019*. This forecast assumes a high penetration of renewables at levels exceeding current renewable portfolio standards (RPS), as well as some amount of gas-fired generation to maintain system reliability and meet peaking needs.

Table 1. Policy Scenario Summary

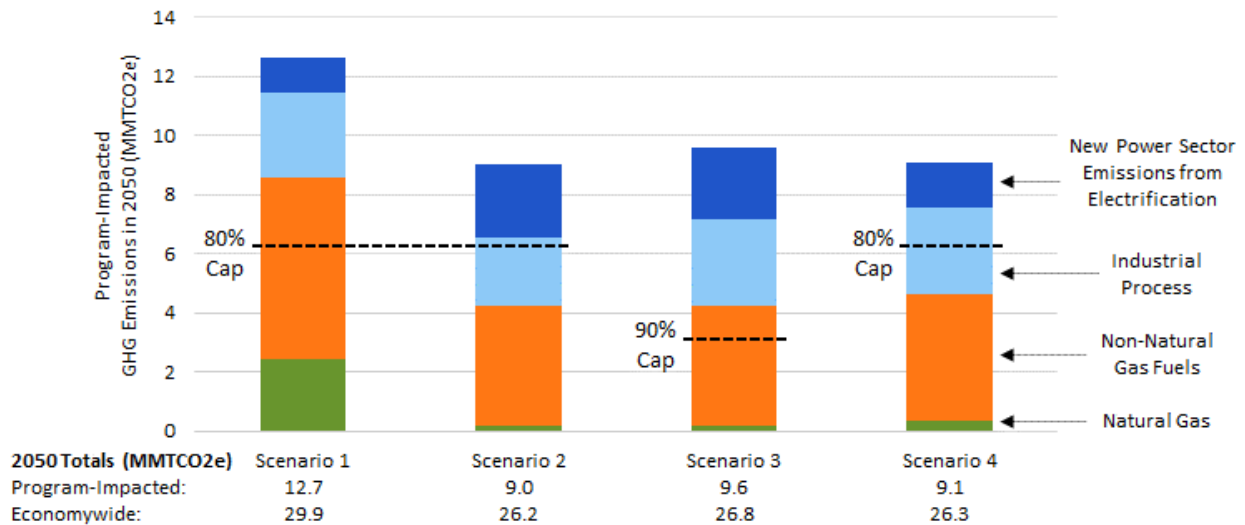
	Scenario 1	Scenario 2	Scenario 3	Scenario 4 (developed by Avista & Cascade)
GHG emission cap	80% by 2050	80% by 2050	90% by 2050	80% by 2050
Trading allowance	Allows trading	Limited trading	Allows trading	Allows trading
Alternative compliance instrument allowance	Up to 25%	Up to 5%	Up to 25%	Up to 25%
Includes hydrogen (H ₂) technology	No	No	No	H ₂ -enriched natural gas (HENG), and industrial H ₂
Renewable natural gas (RNG) portion of gas supply	Moderate	High	High	High
Energy efficiency improvements in all sectors	High	High	High	High
Electrification of building heat and hot Water	Moderate	High	High	Low
Electrification of industrial processes	Moderate	High	High	Moderate

Figure 1 presents the 2050 GHG emissions outcomes of the four scenarios modeled in this analysis, and it includes incremental electric sector emissions data that has not been provided in DEQ’s analysis. The dark blue bars on the chart show the increase in annual GHG emissions from the electric sector resulting from the program’s electrification activities. Figure 2 presents the portion of total 2050 energy use from each fuel type for the four scenarios considered. These figures illustrate that:

- Policy scenarios that include high levels of end use electrification (e.g., scenarios 2 and 3) will have high levels of emissions leakage (2.4 MMTCO₂e/year) to the electric sector.
- Policy scenario 1 results in the highest 2050 emissions, in part because it has a moderate level of RNG adoption and does not consider technologies such as hydrogen.

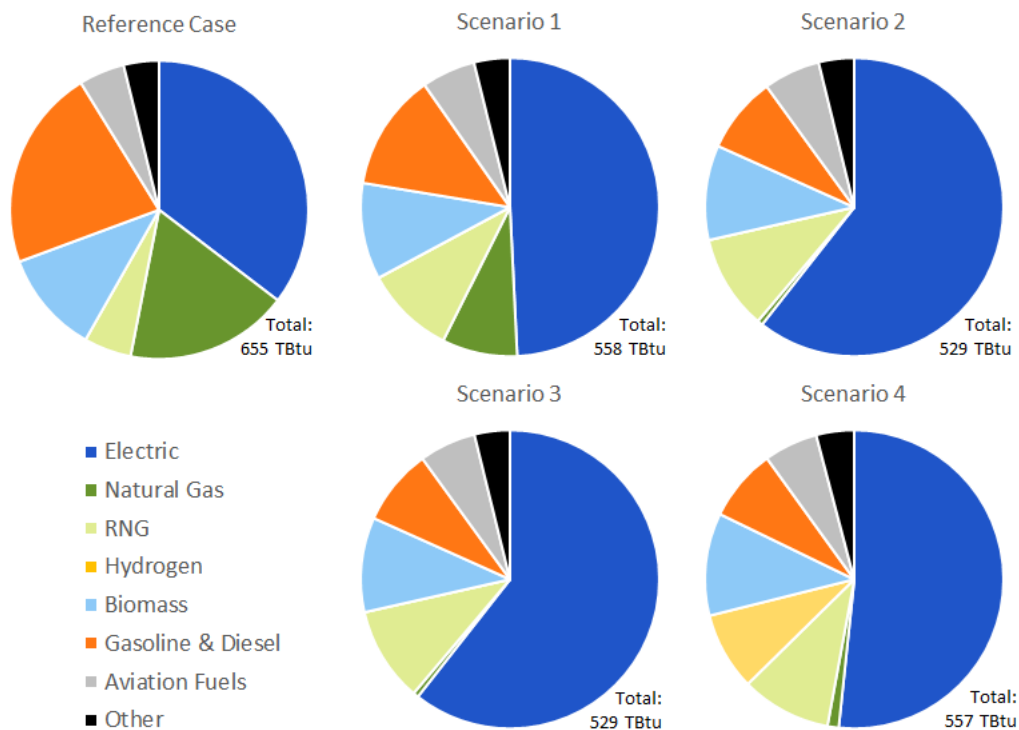
- Through application of low carbon gas technologies and limited electrification, policy scenario 4 provides a high level of GHG reductions with low emissions leakage.
- Of the scenarios considered, policy scenario 4 provides GHG reductions comparable to scenario 2 and provides the lowest economywide emissions intensity, in terms of total emissions per total energy use.

Figure 1. Projected 2050 GHG Emissions Affected by Cap-and-Reduce Program, for Four Policy Scenarios



Source: Guidehouse analysis

Figure 2. Total 2050 Energy Use by Source, for Four Policy Scenarios



Source: Guidehouse analysis

Conclusions and Recommendations

The fourth policy scenario that Guidehouse modeled emphasized the delivery of low carbon gas through deployment of RNG and hydrogen technology. This low-carbon gas scenario delivers GHG reductions comparable to the high electrification modeled in Scenario 2. Guidehouse has previously analyzed and reported how the gas system contributes to US energy system resilience.¹ In a decarbonized future, gas networks would continue to support the reliability and resiliency of Oregon's broader energy system by transporting and distributing low carbon gas and hydrogen.

- **Recommendation:** The DEQ should develop and present to the RAC a scenario in which emerging low carbon fuel technologies are used to deliver GHG emissions reduction with minimal impacts to the electric sector. DEQ's analysis of policy alternatives should consider the reliability and resilience benefits of maintaining diverse energy delivery systems, including the gas network.

In contrast to DEQ's presentation of policy scenario results, Guidehouse found that scenarios with high levels of electrification do not eliminate GHG emissions from Oregon's economy unless Oregon's power sector fully decarbonizes the electricity supplied to its customers. The DEQ's policy scenarios do not meet the intended goal of reducing overall GHG emissions to the levels mandated by EO 20-04. Rather, the DEQ's scenarios effectively shift GHG emissions from one group (within DEQ's purview) to another group (outside of DEQ's purview) resulting in net reductions system-wide which do not meet the mandates by EO 20-04.²

- **Recommendation:** To adequately inform the RAC's decision-making, the scenario results presented by DEQ should describe the economywide emissions impacts of the proposed cap-and-reduce program.

Meeting the statewide goals of EO 20-04 will require emissions reduction from sectors outside the proposed scope of the cap-and-reduce program. The proposed Community Climate Investment (CCI) program provides an avenue for investment in GHG reductions strategies in these sectors. There are opportunities for interventions to reduce GHG emissions in the non-energy residential, commercial, and agricultural sectors of the economy, for instance through improved wastewater management, refrigerant handling, and conservation tillage.

- **Recommendation:** Alternative compliance mechanisms such as CCIs should encourage innovation from regulated sectors and incentivize a broad range of approaches. Funds from a CCI program should be invested in direct emissions reductions so that there is a clear linkage between inputs (funding) and outputs (GHG reductions) under a single regulator.

For further detail on this analysis and resulting recommendations, please read on in the following memo below.

¹ American Gas Foundation (2021). "Building a Resilient Energy Future: How the Gas System Contributes to US Energy System Resilience" Available at: <https://gasfoundation.org/2021/01/13/building-a-resilient-energy-future/>

² It is important to understand that DEQ's charter does not allow it to regulate electric utilities.

1. Introduction

Governor Brown's Executive Order 20-04 directs the Oregon Department of Environmental Quality (DEQ) to cap and reduce emissions from transportation fuels, from other liquid and gaseous fuels, and from large stationary sources of greenhouse gas (GHG) emissions.³ In response to EO 20-04, the DEQ has engaged stakeholders and the public in the development of a cap-and-reduce program. The DEQ has stated three goals of the cap-and-reduce program: to achieve significant GHG reductions, to contain costs, and to promote equity.⁴ This memo describes the methodology and results of Guidehouse's independent modeling (under contract to Avista and Cascade) to understand the economywide energy and emissions impacts of the proposed program. This analysis focuses on the first of the program's three goals: the GHG emissions reductions mandated by EO 20-04.

DEQ's Modeling Efforts to Date

The DEQ convened a rulemaking advisory committee (RAC) to provide diverse perspectives on policy proposals including fiscal, environmental justice, public health, and economic impacts. At the RAC's second meeting on February 17, 2021, DEQ's contractor presented the Reference Case results, projecting emissions from different sectors through 2050 in the absence of a cap-and-reduce program. DEQ's contractor presented initial greenhouse gas (GHG) emissions results from three policy scenarios at the third RAC meeting (March 18, 2021) and presented revised emissions results at the fourth RAC meeting (April 22, 2021). DEQ's policy scenario presentations showed emissions from entities that would be regulated under the cap-and-reduce program; but DEQ's results do not show how the program's activities could affect emissions from sectors outside of the program, such as the electric sector. DEQ has also stated that their modeling does not consider emerging GHG reduction technologies such as carbon capture and sequestration or hydrogen technologies.

RAC Stakeholder Questions

Among other RAC stakeholders, Avista and Cascade have raised questions about the transparency of DEQ's modeling analysis and the DEQ's focus on electrification in its modeled policy scenarios. Specifically, stakeholders have noted that:

- On April 8, the Northwest Gas Association requested that DEQ share its analytical assumptions, which are critical to providing meaningful and substantive input into RAC discussions, and the DEQ did not respond to this request until May 20, 2021.
- The electrification of building heat and transportation end uses would increase emissions from electric generation unless the power sector greatly reduces its emissions intensity.
- The DEQ's policy scenario results (as presented to the RAC) do not account for emissions that would be transferred to the electric sector due to electrification.
- The DEQ appears to consider electrification as the default approach that a CCI program would use to reduce GHG emissions.

³ Office of the Governor of the State of Oregon (2020). "Executive Order No. 20-04." Available at: https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf

⁴ Oregon Department of Environmental Quality (2021). "Oregon Climate Protection Program: Rulemaking Advisory Committee Meeting 1." p.25. Available at: <https://www.oregon.gov/deg/Regulations/rulemaking/RuleDocuments/ghgcr2021rac1slides.pdf>

Avista and Cascade have stated that they believe an overemphasis on electrification as the primary decarbonization solution will result in leakage⁵ or displaced emissions from the natural gas and other fuels sectors to the electric generation sector. As a result, electrification-focused policies risk falling short of delivering economywide emissions reductions in the ways presented by DEQ's modeling results.

To date, DEQ has not presented scenario results regarding the amount of emissions leakage from regulated entities to the electric sector. This memo provides a thorough view of economywide emissions to understand the program's potential impact on emissions from regulated entities and emissions from sectors outside of the program's scope.

Independent Statewide Emissions Modeling

Avista and Cascade contracted with Guidehouse to develop a transparent model that examines the economywide energy use and emissions impacts of five potential outcomes for Oregon:

- A Reference Case forecast of emissions in the absence of a cap-and-reduce program
- The three policy scenarios developed and presented by DEQ
- A fourth policy scenario that allows deployment of hydrogen technologies in the form of hydrogen-enriched natural gas (HENG) and supply of industrial green hydrogen

This modeling effort intends to understand how the adoption of different GHG reduction technologies could affect economywide emissions in Oregon. Taking an economywide perspective of emissions enables consideration of the emissions impacts to sectors such as power generation, which are outside the scope of the proposed program. The analysis presented here does not examine health or economic impacts of program policies, the banking or trading of compliance instruments, or the purchase of alternative compliance instruments such as CCI credits. These points are important considerations that policy makers should consider in addition to the emissions analysis presented here.

2. Methodology

Guidehouse created an independent model to forecast the energy use and emissions associated with the Reference Case and policy scenarios, using technology assumptions presented by the DEQ and its contractor. These assumptions include Oregon-specific, Oregon-adjacent, and Federal policies that impact the future energy mix, energy landscape, and emission sources, including utility programs.⁶ Guidehouse's economywide energy and emissions model forecasts changes in energy consumption through 2050 across all sectors of the economy, by fuel type and by end use. The model accounts for energy used upstream to generate electricity and energy used downstream by customers. Figure 3 provides a schematic of Guidehouse's energy and emissions model.

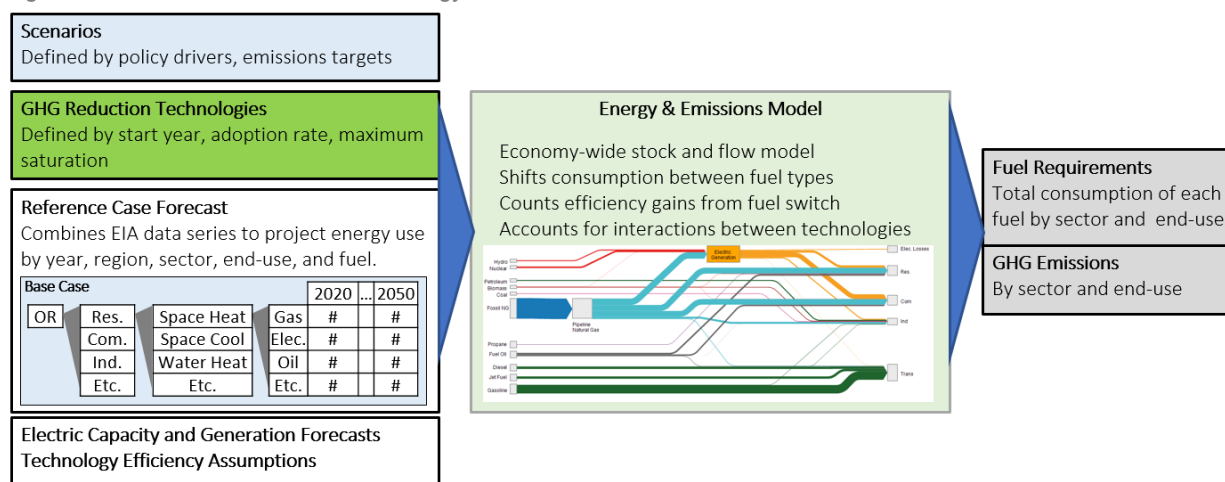
⁵ The DEQ has defined leakage as the shifting of emissions or business to outside of Oregon or outside the scope of the program's regulation.

<https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/ghgcr2021KeyTerms.pdf>

⁶ The DEQ's assumptions regarding adoption of GHG emissions technologies are provided in a presentation titled, "Modeling Study: Assumptions and Background," available at:

<https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/ghgcrModAssumptions.pdf>

Figure 3. Schematic of Guidehouse Energy and Emissions Model



Reference Case Methodology

Guidehouse used publicly available data to develop a Guidehouse Reference Case forecast, which assumes that policies in place on January 2021 remain in force and no new policies are implemented to reduce GHG emissions. The Reference Case begins with 2018 energy consumption data by sector and by fuel, reported by the US Energy Information Administration’s (EIA’s) State Energy Data System (SEDS).

Guidehouse referenced the EIA’s *Annual Energy Outlook (AEO) 2021* forecasts for the Pacific region to project energy consumption by sector and by fuel type through 2050. For the residential and commercial sectors, Guidehouse estimated the amount of energy consumed for different end uses (e.g., space heating, water heating) based on end use consumption estimates in EIA’s Residential Energy Consumption Survey (RECS) and EIA’s Commercial Building Energy Consumption Survey (CBECS).

For the power generation sector, Guidehouse estimated the electric generation mix using the High Renewable WECC Future forecast described in Portland General Electric’s *Integrated Resource Plan (IRP)*.⁷ The High Renewable WECC Future forecast approximates a world with high penetration of renewables at levels exceeding current renewable portfolio standards (RPS) and some amount of gas-fired generation to maintain system reliability and meet peaking needs.

Policy Scenario Methodology

Guidehouse modeled the emissions outcomes of the three policy scenarios presented by DEQ and one additional policy scenario focused on low carbon gas deployment. Each scenario is defined by a GHG emissions reduction target and an array of GHG reduction interventions that are deployed to reduce GHG emissions. Guidehouse’s model introduces these emissions reduction technologies as deviations from the Guidehouse Reference Case. The model calculates the collective energy and emissions impacts of each scenario’s technology bundle.

⁷ Portland General Electric. *Integrated Resource Plan 2019*. p.77. Available at: <https://portlandgeneral.com/about/who-we-are/resource-planning/>

On May 20, 2021, the DEQ provided details about its model in response to a public records request made by the Northwest Gas Association on April 8. The modeling assumptions shared by DEQ prior to May 20 did not include precise figures describing the adoption of different GHG reduction technologies.⁸ Guidehouse examined the data files provided by DEQ on May 20th and developed policy scenario assumptions to replicate the policy scenarios used in the DEQ contractor’s model as best as possible.⁹ Table 2 summarizes these assumptions.

Appendices to this memo include a list of referenced data sources and further modeling details.

Table 2. Policy Scenario Assumptions

	Scenario 1	Scenario 2	Scenario 3	Scenario 4 (developed by Avista & Cascade)
Policy Scenario Definition				
GHG Cap	80% by 2050	80% by 2050	90% by 2050	80% by 2050
Trading allowance	Allows trading	Limited trading	Allows trading	Allows trading
CCI use allowed	Up to 25%	Up to 5%	Up to 25%	Up to 25%
Includes hydrogen tech?	No	No	No	Yes
GHG Reduction Technologies				
Building Heat Electrification	Moderate (38% of load)	High (61% of load)	High (61% of load)	Low (17% of load)
Building Hot Water Electrification	Moderate (39% of load)	High (52% of load)	High (52% of load)	Low (26% of load)
Efficiency Improvements over Reference Case	10% load reduction	10% load reduction	10% load reduction	10% load reduction
Cooking Electrification	60% of gas load	90% of gas load	90% of gas load	60% of gas load
Transport Electrification Beyond SB1044	52% of remaining LDVs	76% of remaining LDVs	76% of remaining LDVs	76% of remaining LDVs
RNG Supply	54 bcf/year, equivalent to 75% of statewide RNG potential			
	54% of gas supply	95% of gas supply	95% of gas supply	84% of gas supply
Hydrogen-enriched Natural Gas (HENG)	None	None	None	5% of gas supply by energy
Industrial Process Electrification	15% of gas load	63% of gas load	63% of gas load	15% of gas load
Industrial Local Green Hydrogen	None	None	None	75% of gas energy

⁸ Oregon DEQ. “Modeling Study: Assumptions and Background.” Available at:

<https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/ghgcrModAssumptions.pdf>

⁹ The assumptions in Table 2 may be refined upon further examination and clarification of the data files provided by DEQ on May 20, 2021.

3. Modeling Results

This section details the results of Guidehouse’s modeling of a Reference Case and four policy scenarios.

Reference Case Modeling Results

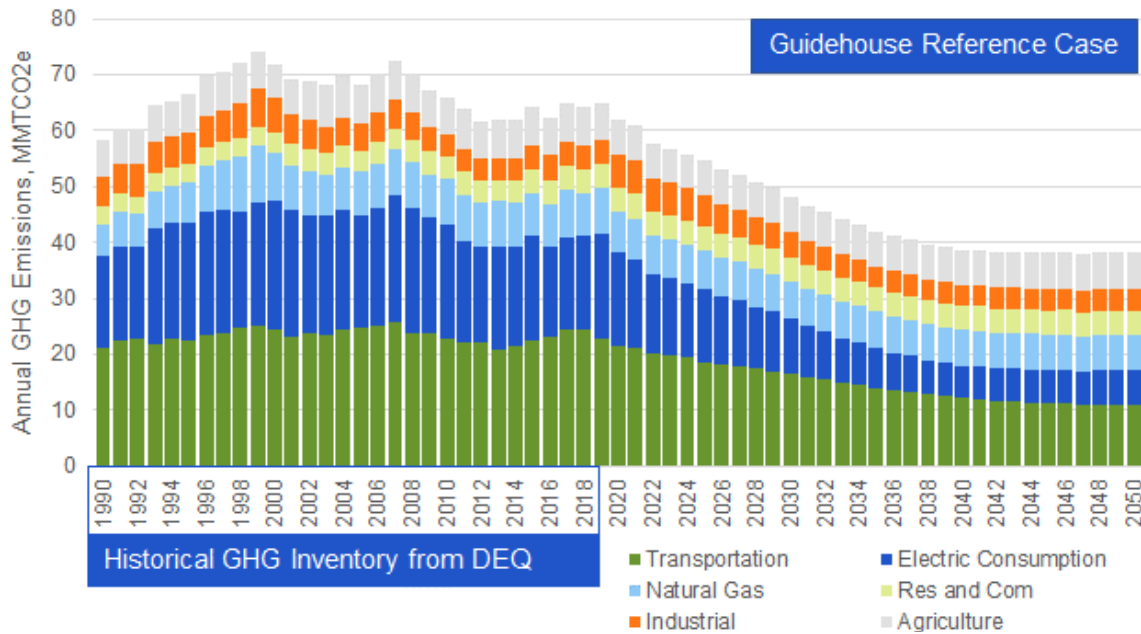
Guidehouse modeled a Reference Case that forecasts future emissions based on regulations in force as of March 2021, including regulations with future compliance dates. The Guidehouse team aligned historical emissions estimates prior to 2019 with emissions estimates published by the DEQ.¹⁰ Figure 4 presents emissions forecasts through 2050 for the Guidehouse and DEQ Reference Cases. The following trends are evident:

- Transport emissions decrease due to requirements of the Oregon Clean Fuels Program, increased stringency of federal CAFE standards, and Senate Bill (SB) 1044 requirements for zero emissions vehicle adoption.
- Natural gas emissions decrease due to RNG adoption requirements in SB 98 and utility-driven improvements to energy efficiency (referenced from IRP plans).
- Industrial emissions decrease due to US AIM Act requirements for reduced emissions of hydrofluorocarbons (HFCs).
- Electric sector emissions decrease due to increased generation from renewable sources and utility-driven improvements to energy efficiency (referenced from IRP plans). Electric sector emissions increase in later years due to vehicle electrification.
- Emissions from residential, commercial, and agriculture sectors remain stable.

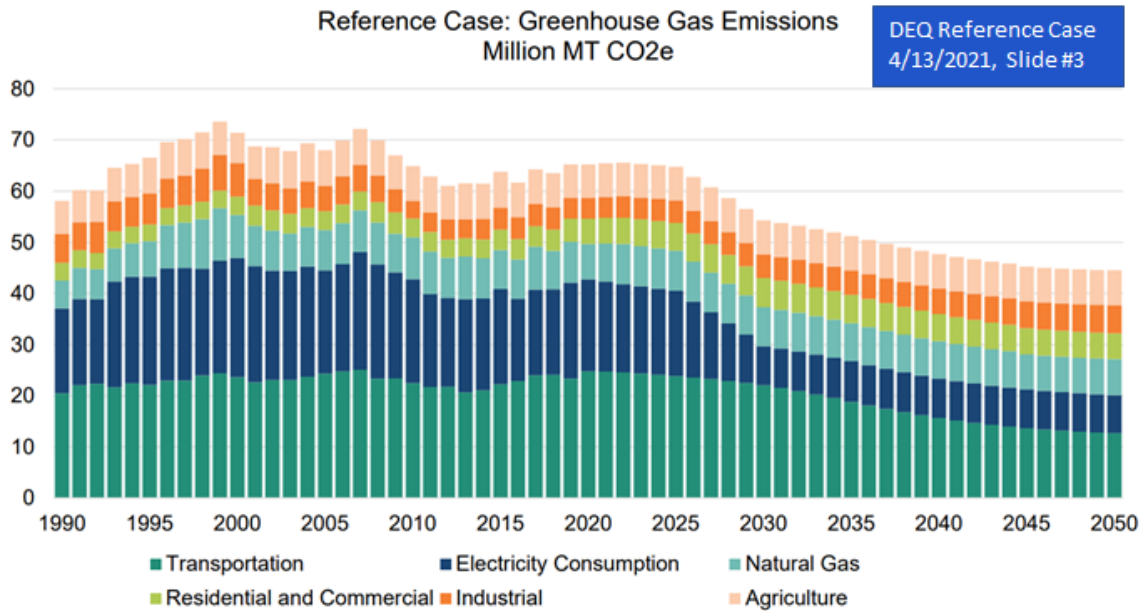
These trends and the proportional decrease in emissions over time are similar to the DEQ Reference Case results presented at the third RAC meeting, which Figure 4 replicates. This comparison illustrates that the fundamental assumptions of Guidehouse’s model are aligned with DEQ’s model.

¹⁰ Oregon Dept. of Environmental Quality (DEQ). “Oregon Greenhouse Gas Sector-Based Inventory Data.” Available at: <https://www.oregon.gov/deq/aq/programs/Pages/GHG-Inventory.aspx>

Figure 4. Guidehouse and DEQ Forecasts of Reference Case Greenhouse Gas Emissions,¹¹ MMTCO_{2e}



Source: Guidehouse analysis



Source: Oregon Department of Environmental Quality

¹¹ Consumption of electricity and natural gas from all sectors are included in the “Electric Consumption” and “Natural Gas” categories. The “Industrial” category represents process emissions. The “Residential and Commercial” category represents emissions from delivered fuels, landfills, wastewater, and other non-energy sources.

Policy Scenario Modeling Results

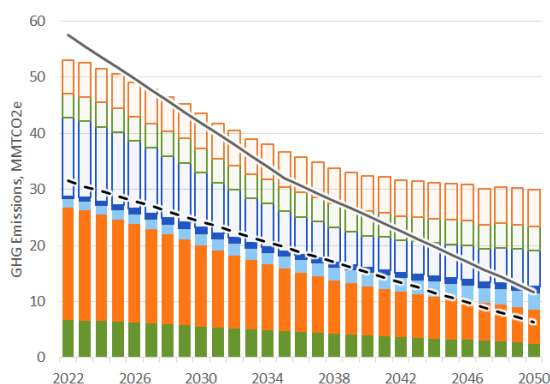
Guidehouse modeled the emissions outcomes of four policy scenarios (Figure 5). In Figure 5, solid bars represent GHG emissions affected by the cap-and-reduce program. The program will directly regulate gas utilities (green bars), non-natural gas fuel suppliers (orange), and industrial emitters (light blue). Although the program will not regulate the electric sector, the electrification measures implemented to meet the program's requirements will increase electricity consumption and lead to an incremental increase in electric sector emissions (dark blue bars).

The hollow bars in Figure 5 represent GHG emissions that will not be affected by the cap-and-reduce program. These include non-energy emissions from the residential and commercial sectors (hollow green, i.e., wastewater, landfills, refrigerants), from agricultural activity (hollow orange), and from electric generation unaffected by the program (hollow blue). The dashed lines represent the GHG limits for activities covered by the cap-and-reduce program; the solid lines represent statewide GHG emissions limits prescribed by EO 20-04.

Figure 5. GHG Emissions Forecasts for Four Policy Scenarios

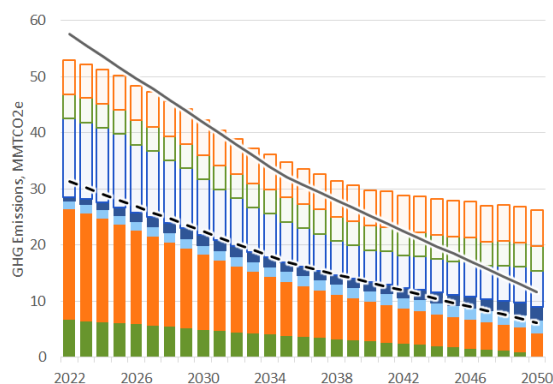
Policy Scenario 1

(80% cap, 25% CCI, moderate electrification)



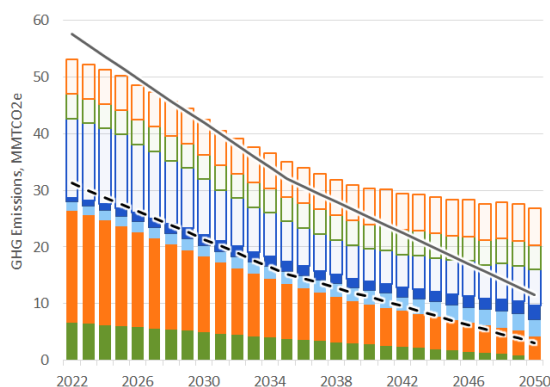
Policy Scenario 2

(80% cap, 5% CCI, high electrification)



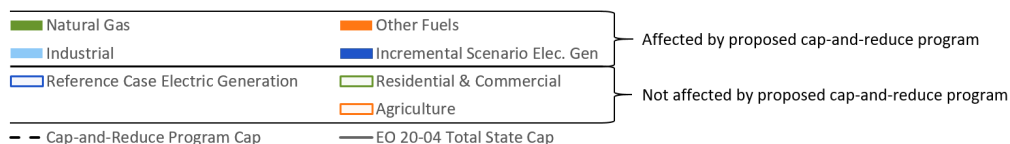
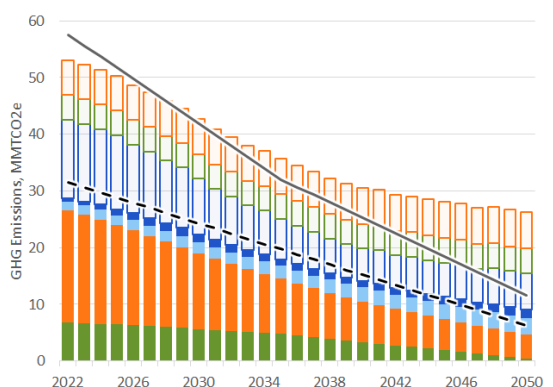
Policy Scenario 3

(90% cap, 25% CCI, high electrification)



Policy Scenario 4

(80% cap, low electrification, hydrogen technologies)



Note: Guidehouse’s modeling assumes that Oregon’s electric generation mix evolves as shown in Figure 6. Regardless of cap-and-reduce program activities, Oregon’s average electric emissions factor is projected to decrease due to the retirement of coal generating facilities and the installation of new renewable capacity, from 0.54 lbs CO₂/kWh in 2022 to 0.21 lbs CO₂/kWh for 2040-2050. Source: Guidehouse analysis

Although none of the policy scenarios achieve the statewide emissions targets (solid line) established by EO 20-04, there are differences between the scenarios; stakeholders need to understand the potential outcomes and the relationships that drive them. Several findings are evident from the policy scenario results in Figure 5:

- In all four scenarios, the 2050 actual GHG emissions from regulated sectors exceed the program’s GHG emissions cap. Depending on the program design, regulated entities may be allowed to use flexibility mechanisms such as emissions banking and alternative compliance instruments to meet the cap. In scenarios 2 and 4, 2050 emissions are only

slightly above the emissions cap, and flexibility mechanisms may yield net emissions below the cap. However, the 2050 emissions in scenarios 1 and 3 are far above the program cap, and flexibility mechanisms may not be sufficient to meet the cap.

- The electrification activities modeled in policy scenarios 2 and 3 will reduce GHG emissions from gas utilities to almost zero. However, as the solid blue bars in Figure 5 illustrate, these emissions are not fully eliminated from the economy. Instead, the electrification activities effectively displace emissions from the gas sector to the electric sector, which is outside the scope of the cap-and-reduce program.
- Policy scenario 3 has a high emissions target of 90% reduction by 2050 and, as the DEQ noted in presentations at the third and fourth RAC meetings, it is unlikely that the GHG reduction technologies being considered can achieve a 90% target.
- In policy scenario 4, GHG emissions from gas utilities are reduced to almost zero using a combination of electrification and low carbon fuels such as renewable natural gas (RNG) and hydrogen. Scenario 4 represents an additional compliance pathway that allows utilities to eliminate GHG emissions with minimal impact to electric generation emissions.

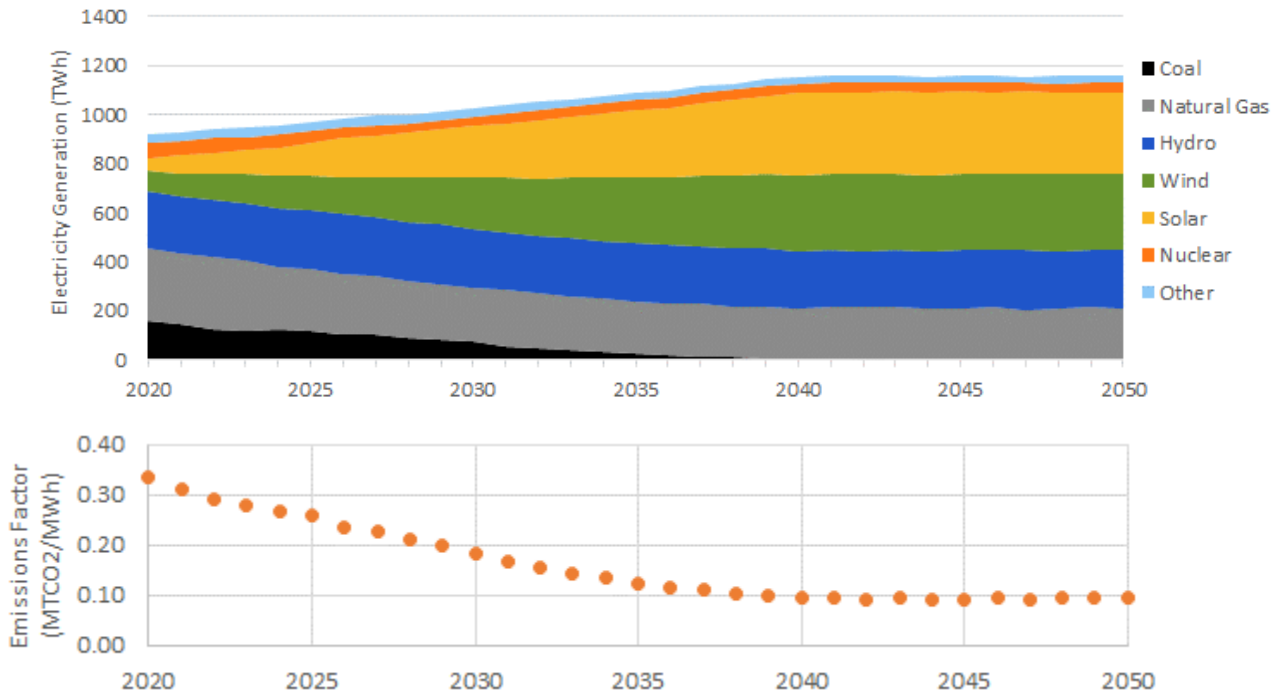
While the non-energy emissions (agriculture, wastewater) remain relatively stable in this analysis, new policies may be developed to reduce these emissions in the future. However, even if all non-energy emissions were eliminated, policy scenario 1 would not meet the statewide goals set by EO 20-04.

Electric Sector Emissions

The emissions forecasts depicted in Figure 5 are highly sensitive to assumptions regarding the electric sector generation mix in future years. For this analysis, Guidehouse took an optimistic view of how the power sector will decarbonize, using the High Renewable WECC Future forecast described in Portland General Electric's IRP and illustrated in Figure 6.¹² The High Renewable WECC Future forecast assumes a high penetration of renewables at levels exceeding current RPS and some amount of gas-fired generation to maintain system reliability and meet peaking needs. In this forecast, increased generation from renewable sources leads the electric generation emissions factor (in tons of carbon per MWh) to drop by over 60% by 2050.

¹² Portland General Electric. *Integrated Resource Plan 2019*. p.77. Available at: <https://portlandgeneral.com/about/who-we-are/resource-planning/>

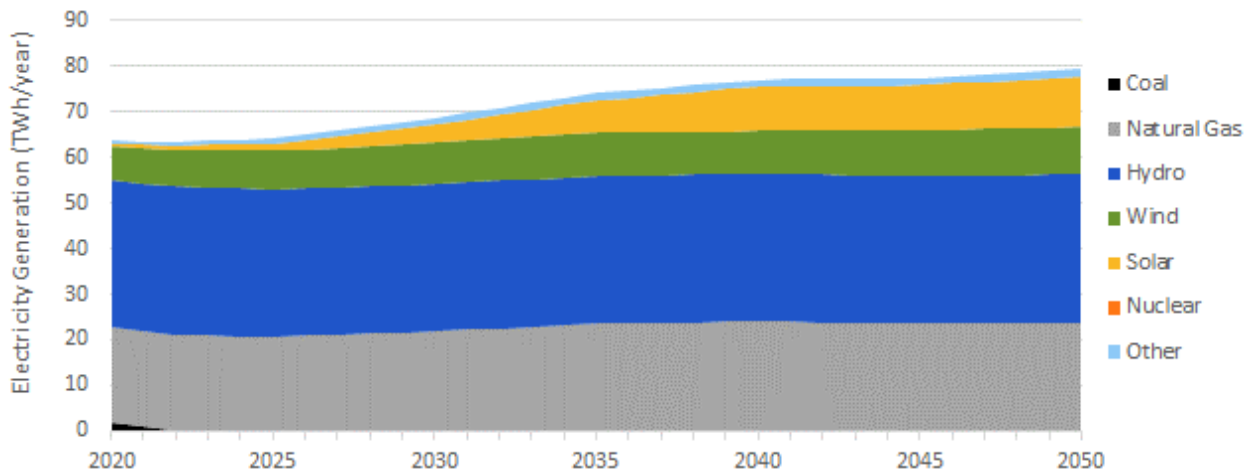
Figure 6. Electric Generation Mix and Emissions Factor Forecast, WECC High Renewables Case



Source: Electric Generation from Portland General Electric IRP 2019. Emissions Factor from Guidehouse analysis.

Compared to the WECC High Renewables case, the generation forecast used in the DEQ’s modeling (Figure 7) shows greater reliance on fossil fuel generation in later forecast years.¹³ If Guidehouse conducted this analysis using the DEQ’s electric generation forecast, then the analysis would show an even greater amount of emissions displaced to the electric sector.

Figure 7. Electric Generation Mix Forecast, DEQ Reference Case

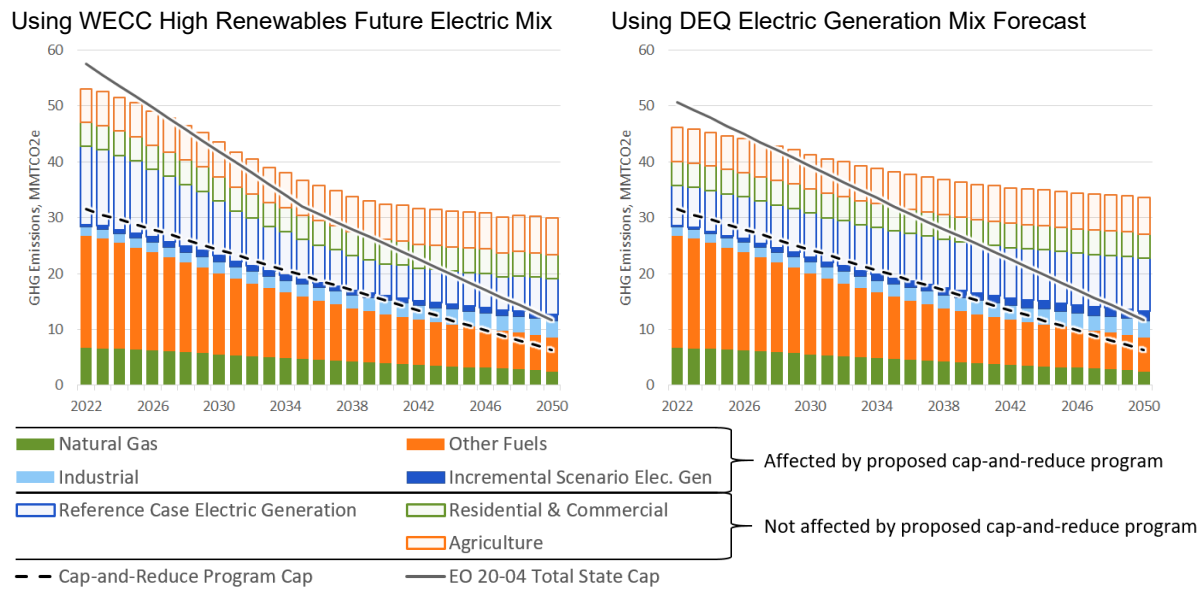


Source: DEQ

¹³ Oregon Department of Environmental Quality. Filename “DEQ-ICF-GHGanalysis-2021.04.22.xlsx” sheet name “Power Sector Detail Projections.”

Figure 8 compares the results of policy scenario 1 as it was modeled (with the WECC High Renewables forecast) to an alternative outcome using the DEQ Reference Case forecast.

Figure 8. GHG Emissions Results of Policy Scenario 1 Using Two Generation Mix Forecasts



Source: Guidehouse analysis

This comparison of results using different electric generation forecasts indicates the following:

- Compared to the DEQ’s forecast, the Guidehouse model assumes a higher penetration of zero emissions renewable generation.
- If fuel-fired electric generation continues to provide 30% of Oregon’s electric power (as in the DEQ Reference Case), then electrification activities will lead to even greater emissions leakage from the cap-and-reduce program to the electric sector.

Guidehouse notes that Oregon is currently considering legislation to increase its clean energy standards to further decarbonize the electric power sector. If adopted, Oregon’s House Bill 3180 would increase the state’s RPS to 90% by 2035, and 100% by 2050. Implementation of the requirements in HB 3180 would result in lower emissions leakage from the cap-and-reduce program in later years of the forecast period.

4. Conclusions and Recommendations

The fourth policy scenario that Guidehouse modeled emphasized the delivery of low carbon gas through deployment of hydrogen technology, and it resulted in the greatest reduction in economywide GHG emissions. Guidehouse has previously analyzed and reported how the gas system contributes to US energy system resilience.¹⁴ In a decarbonized future, gas networks would continue to support the reliability and resiliency of Oregon’s broader energy system by transporting and distributing low carbon gas and hydrogen.

¹⁴ American Gas Foundation (2021). “Building a Resilient Energy Future: How the Gas System Contributes to US Energy System Resilience” Available at: <https://gasfoundation.org/2021/01/13/building-a-resilient-energy-future/>

- **Recommendation:** The DEQ should develop and present to the RAC a scenario in which emerging low carbon fuel technologies are used to deliver GHG emissions reduction with minimal impacts to the electric sector. DEQ's analysis of policy alternatives should consider the reliability and resilience benefits of maintaining diverse energy delivery systems, including the gas network.

In contrast to DEQ's presentation of policy scenario results, Guidehouse found that scenarios with high levels of electrification do not eliminate GHG emissions from Oregon's economy unless Oregon's power sector fully decarbonizes the electricity supplied to its customers. The DEQ's policy scenarios do not meet the intended goal of reducing overall GHG emissions to the levels mandated by EO 20-04. Rather, the DEQ's scenarios effectively shift GHG emissions from one group (within their purview) to another group (outside of DEQ's purview) resulting in net reductions system-wide which do not meet the mandates by EO 20-04.¹⁵

- **Recommendation:** To adequately inform the RAC's decision-making, the scenario results presented by DEQ should describe the economywide emissions impacts of the proposed cap-and-reduce program.

Meeting the statewide goals of EO 20-04 will require emissions reduction from sectors outside the proposed scope of the cap-and-reduce program. The proposed Community Climate Investment (CCI) program provides an avenue for investment in GHG reductions strategies in these sectors. There are opportunities for interventions to reduce GHG emissions in the non-energy residential, commercial, and agricultural sectors of the economy, for instance through improved wastewater management, refrigerant handling, and conservation tillage.

- **Recommendation:** Alternative compliance mechanisms such as CCIs should encourage innovation from regulated sectors and incentivize a broad range of approaches. Funds from a CCI program should be invested in direct emissions reductions so that there is a clear linkage between inputs (funding) and outputs (GHG reductions) under a single regulator (DEQ).

Guidehouse recognizes that this statewide emissions analysis may raise additional questions and recommendations beyond those outlined above. We welcome the opportunity to discuss and refine this analysis with the DEQ and RAC members.

¹⁵ It is important to understand that DEQ's charter does not allow it to regulate nor consider electric utilities and therefore they are prohibited/inhibited by their charter to produce a system-wide/holistic approach to GHG reductions.

Appendix A: Data Sources Used

Table 3 lists the main data sources referenced in Guidehouse’s modeling of the Reference Case and policy scenarios. The table contains hyperlinks to the source data and describes how data from each source was used. Table 3 also notes which data sources were also referenced in the DEQ’s modeling, based on information provided by DEQ.

Table 3. Referenced Data Sources

Source Consulted	Nature of Use	Sector	Used by DEQ?
Oregon Greenhouse Gas Sector-Based Inventory	To obtain OR’s historic emissions by sector (1990-2018)	All	Yes
EIA State Energy Data System (SEDS)	To obtain baseline energy use in OR by fuel type and sector	All	Yes
EIA Annual Energy Outlook (AEO)	To obtain % change in fuel use each year from SEDS baseline for Reference Case to 2050 – used Northwest Power Pool	All	Yes
NREL Electrification Futures Study	To inform the level of end use electrification assumed to occur by 2050	All	Yes
Integrated Resource Plans for Avista, Cascade, NW Natural, PacifiCorp, Portland General Electric, and Puget Sound Energy	Compared load forecasts to EIA AEO forecasts; gathered projected savings from energy efficiency measures	All	Yes
EIA Residential Energy Consumption Survey (RECS)	To calculate % energy consumption by fuel type and end use in the Pacific Region	Residential	Not stated
EIA Commercial Buildings Energy Consumption Survey (CBECS)	To calculate % energy consumption by fuel type and end use in the Pacific Region	Commercial	Not stated
Argonne National Laboratory’s VISION 2020 Model	To inform growth projections of state vehicle registrations	Transportation	Yes
EIA State Electricity Profiles	To obtain OR’s generation mix, present day, in-line with Electricity Mix in Oregon	Electricity	Not stated directly
EPA SIT Agriculture Module	To affirm historical emissions numbers from DEQ GHG inventory	Agriculture	Yes
EPA SIT Projections Tool	Default settings used to obtain projection data for Reference Case to 2050	Agriculture	Yes

Source Consulted	Nature of Use	Sector	Used by DEQ?
McKinsey & Company (2018) “Decarbonization of industrial sectors: the next frontier”	Informed the portion of industrial energy consumption that may be replaced by hydrogen fuel	Industrial	Yes
ICF (2019), “Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment”	Provides statewide potential RNG production capacity	Natural Gas	Yes

Appendix B: Sector- and Technology-Specific Methodology

This appendix describes the methodology and assumptions for individual sectors and technologies in the energy and emissions model.

Residential and Commercial Electrification

In 2018, 40% of homes in Oregon used fossil fuels as their primary heating source, well below the US average of 57%.¹⁶ Technologies available today can be used to fully electrify the heating and hot water needs of Oregon's buildings. However, the electrification of end uses served by fuels will shift consumption and GHG emissions to the electric sector and will require substantial expenditures by consumers to purchase and install electric heating equipment. Guidehouse tested whether a more selective approach to building electrification can meet the cap-and-reduce program's targets with a lesser degree of electrification.

Guidehouse focused on three technologies to electrify buildings' heating needs:

- **Electric air-source heat pumps (ASHPs)** provide space heating and space cooling by using electricity to move heat from the outdoor space to the indoor space and vice versa. Recent advances in cold climate ASHP technology make it possible to use heat pumps for space heating when outdoor ambient temperatures are as low as -13°F.¹⁷ With these systems, most buildings in Oregon could feasibly electrify their heating needs, albeit with high installation costs.
- **Heat pump water heaters (HPWHs)** use electricity to transfer heat from ambient air to a stored water tank and are an energy efficient alternative to electric resistance water heaters and fuel-fired water heaters. The adoption of HPWHs has been limited by a variety of factors, including cost, product availability, and installation constraints. Guidehouse projects that the market for HPWHs will overcome these barriers and that many Oregon buildings will use HPWH technology for water heating by 2050.
- **Electric cooking equipment** is capable of displacing conventional fuel-fired cooking equipment. In the Pacific West region (including Oregon), about 23% natural gas consumed by commercial buildings is used for cooking purposes.¹⁸

Fuel-fired appliances and electric appliances have inherently different energy efficiency ratings. When modeling electrification interventions, Guidehouse accounted for the changes in energy efficiency. Guidehouse also assumed that equipment energy efficiency improves over time, due to replacement of older less efficient appliances and to improvements in appliance technology. Table 4 presents Guidehouse's assumptions regarding the efficiency of different end uses and energy sources at the start and end years of the modeling period. These values reflect the

¹⁶ US Energy Information Administration (2021). "State Profile and Energy Estimates: Oregon." Available at: <https://www.eia.gov/state/data.php?sid=OR#ConsumptionExpenditures>

¹⁷ A sample of heat pump products capable of continuous operation at -13°F include Daikin's Aurora, Mitsubishi's Hyper-Heat, Fujitsu's Halcyon, and Lennox's MLA product lines.

<https://daikincomfort.com/go/aurora/>

<https://www.mitsubishicomfort.com/benefits/hyper-heating>

<https://www.fujitsugeneral.com/us/residential/technology/xlth-low-temp-heating.html>

<https://www.lennox.com/products/heating-cooling/mini-split-systems/mla>

¹⁸ EIA (2012). Commercial Buildings Energy Consumption Survey. Table E7. Natural gas consumption and conditional energy intensities by end use. Available at:

<https://www.eia.gov/consumption/commercial/data/2012/c&e/pdf/e7.pdf>

assumption that non-condensing gas-fired equipment will gradually be replaced by high-efficiency condensing gas equipment and that electric resistance heating will gradually be replaced by electric heat pumps.

Table 4. Energy Efficiency Assumptions by Sector, End Use, and Energy Source

Sector and End Use	Energy Source	2020	2050
Residential Space Heat	Electric	128%	260%
	Natural Gas	82%	88%
Residential Water Heat	Electric	150%	330%
	Natural Gas	58%	73%
Commercial Space Heat	Electric	161%	360%
	Natural Gas	83%	88%
Commercial Water Heat	Electric	150%	332%
	Natural Gas	59%	75%

Source: Guidehouse analysis

Energy Efficiency Measures

Energy efficiency can reduce energy-related carbon emissions by decreasing the amount of energy consumption needed to accomplish a given task (e.g., heat a home, transport cargo, etc.). Our analysis assumes that some amount of energy efficiency will be deployed in the Reference Case, as utilities continue their rebate programs, building codes improve over time, and federal automobile efficiency standards become more stringent. The Reference Case for this analysis is based on the EIA’s *Annual Energy Outlook 2021*, and the EIA provides estimates of energy intensity by sector and end use in 2020 and 2050.¹⁹ Guidehouse’s analysis uses EIA’s proportional change in energy intensity as a proxy for energy efficiency improvement in the Reference Case.

The measures included in the Guidehouse model assume that efficiency measures implemented in the policy scenario cases could achieve greater efficiency reductions than those included in the Reference Case. Guidehouse referenced projected reductions in energy loads from the IRPs published by electric and gas utilities operating in Oregon. Each utility’s IRP stated that energy efficiency would impact overall load growth over the IRP period, though the magnitude of energy efficiency reductions was different for each utility.

The DEQ stated its assumption for energy efficiency by stating, “[the] achieved technical potential energy efficiency [is] based on Oregon Energy Trust methods and results as presented in utility IRPs.”²⁰ Guidehouse believes that this approach will overestimate the emissions savings from energy efficiency measures, since the technical potential counts all available efficiency measures regardless of cost. Guidehouse instead recommends using of the “achievable” emissions reduction from utility IRP filings.

¹⁹ EIA (2021). *Annual Energy Outlook 2021 with projections to 2050: Chart library*. pp. 9, 33, 42-43, 48. Available at: <https://www.eia.gov/outlooks/aeo/pdf/00%20AEO2021%20Chart%20Library.pdf>

²⁰ Oregon DEQ. “Oregon Climate Protection Program: Modeling Study on Program Options.” p.24. Available at: <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/ghqcrModAssumptions.pdf>

Transportation Sector Modeling

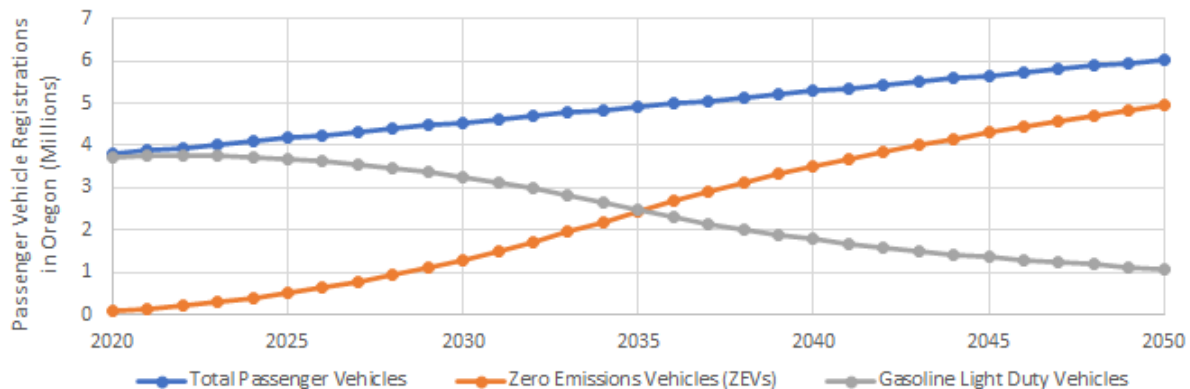
The Guidehouse Reference Case for transportation sector emissions is based on Oregon's current transportation sector energy use from EIA SEDS and on the EIA's *Annual Energy Outlook* projections of transportation sector growth in the Pacific region. Guidehouse adapted the EIA's outlook to account for local laws and regulations including Oregon's SB 1044 and Oregon's Clean Fuels Program.

Vehicle Electrification

Oregon's SB 1044 sets targets for zero emissions vehicle (ZEV) adoption in the state.²¹ Per SB 1044, Oregon must target the registration of 250,000 ZEVs by 2025, and ZEVs should account for 25% of total vehicle registrations in Oregon by 2030. To model the expected impacts of SB 1044 on the transportation sector's energy consumption, Guidehouse assumed the targets in SB 1044 are met.

Guidehouse forecast the growth in total state passenger vehicle registrations based on trends observed in Oregon's historical vehicle registrations²² and nationwide forecasts included in Argonne National Laboratory's VISION model.²³ Guidehouse used a stock turnover calculation to estimate how the shares of ZEV and gasoline-powered passenger vehicles changes over time through 2050. Based on these forecasts, the energy and emissions model includes a fuel switching calculation to estimate the amount of energy use that shifts from gasoline to electricity, accounting for the difference in energy efficiency of gasoline- and electric-powered vehicle types.

Figure 9. Forecast of Oregon Passenger Vehicle Registrations by Fuel Type in Guidehouse Reference Case



Source: Guidehouse analysis

²¹ Oregon State Legislature (2019). "SB 1044 Enrolled." Available at:

<https://olis.oregonlegislature.gov/liz/2019R1/Downloads/MeasureDocument/SB1044/Enrolled>

²² Oregon Department of Transportation (2020). "Oregon DMV Vehicle Registration Statistics." Available at:

https://www.oregon.gov/odot/DMV/Pages/News/vehicle_stats.aspx

²³ Argonne National Lab (2020). "VISION Model." Available at: <https://www.anl.gov/es/vision-model>

Clean Fuels Program

Oregon's Clean Fuels Program requires reduction in the carbon intensity of gasoline and diesel beginning in 2015.²⁴ Guidehouse modeled the effects of this program as adjustments to the emissions factors for gasoline and diesel fuels over time, using emissions factors provided by the DEQ, as Table 5 lists.

Table 5. Oregon Clean Fuel Standards for Gasoline and Diesel Fuels

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 and beyond
Percent Reduction from 2015 Baseline (%)	0.25	0.50	1.00	1.50	2.50	3.50	5.00	6.50	8.00	10.00
Gasoline Emissions Factor (gCO ₂ e/MJ)	98.37	98.13	97.66	96.59	95.61	94.63	93.15	91.68	90.21	88.25
Diesel Emissions Factor (gCO ₂ e/MJ)	99.39	99.14	98.61	97.26	96.27	95.29	93.81	92.32	90.84	88.87

Source: Oregon DEQ

Transportation Sector Efficiency

Guidehouse also assumed that transportation sector efficiency may be improved so that transportation energy loads decrease relative to the Guidehouse Reference Case. The catchall assumption for transportation efficiency includes measures such as improvements to urban planning, traffic management, and public transit, though the analysis did not model these opportunities individually.

Renewable Natural Gas

RNG is a gaseous fuel with lower carbon intensity and similar operational and performance characteristics to natural gas, and RNG can reduce GHG emissions in applications that use natural gas and other fossil fuels. RNG reduces systemwide GHG emissions by avoiding the release of methane into the atmosphere from the natural breakdown of organic materials. Combusted natural gas has a much lower carbon intensity than pure methane when released to the atmosphere; eliminating methane emissions provides the majority of avoided GHG emissions. The specific carbon intensity of RNG is a complex calculation that depends on feedstock, production technology, and location, among other factors.

RNG or biomethane can be produced through several production technologies, including landfill gas collection, anaerobic digestion, and thermal gasification systems. Common RNG feedstocks include landfill gases, livestock waste, food waste, agricultural residues, and woody biomass. RNG facilities can use the produced gas onsite for electricity generation, boiler heating, and transportation refueling, or facilities can inject the RNG into the natural gas grid for use by gas utility customers. When distributed to these end use customers, RNG can reduce the GHG emissions of gas appliances in buildings, gas-fired combined heat and power systems at

²⁴ Oregon Department of Environmental Quality. "Oregon Clean Fuels Program Overview." Available at: <https://www.oregon.gov/deq/ghgp/cfp/Pages/CFP-Overview.aspx>

industrial sites, or through compressed natural gas vehicle fleets. RNG is a valuable low carbon resource for applications that are difficult or expensive to electrify.

Table 6 highlights the RNG production potentials for each feedstock assumed for Oregon, along with the applicable emissions rates. In recent years, RNG development has increased in support of federal and state decarbonization goals in the transportation and gas utility sectors. Oregon has an estimated in-state RNG production technical potential of roughly 27.7 trillion Btu per year from available landfill, animal manure, wastewater treatment, and food waste resources through anaerobic digestion technologies. In future years, thermal gasification production technologies could increase in-state RNG technical potential by about 44.8 trillion Btu per year using available agricultural residues, forest residue, municipal solid waste resources, and energy crops. In 2018, Oregon consumed 271 trillion Btu of natural gas.²⁵ Our analysis assumes that the state’s total natural gas consumption will decline over time due to efficiency improvements and electrification measures, while the state’s total RNG potential will remain stable.

As the final column of Table 6 illustrates, the emissions factor of RNG can vary depending on the source of the gas, since some sources capture greenhouse gases that would otherwise be vented to the atmosphere. Guidehouse adopted the assumption used in DEQ’s modeling that RNG is a zero emissions fuel source.

Table 6. Estimated RNG Production Potential and Emissions Rates for Oregon

Process	Feedstock	Potential (Trillion Btu/Year)				Emissions Rate (lbs CO ₂ e per MMBtu)**
		Low	High	Average High-Technical	Technical	
Anaerobic Digestion	Landfill gas	6.24	10.19	12.80	15.41	21.0
	Animal manure	1.96	3.93	5.23	6.54	-124.0
	Water resource recovery facilities	0.29	0.41	0.72	1.03	16.6
	Food waste	0.14	0.25	2.47	4.70	-9.9
Thermal Gasification	Agricultural waste	1.06	2.65	7.34	12.03	12.3
	Forestry and forest product residue	2.16	4.32	7.70	11.08	10.4
	Energy crops	0.00	0.00	0.00	0.00	9.7
	Municipal solid waste	1.16	8.66	15.18	21.70	6.4
Total		13.02	30.41	51.45	72.48	

** Emissions rates are based on relevant Low Carbon Fuel Standard projects; data available at:

<https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities>

Source: Low, High, and Technical potentials from ICF (2019), “Renewable Sources of Natural Gas: Supply and Emissions Reduction Assessment.” The ICF report claims that the provided potentials are conservative, so Guidehouse calculated an average of the High and Technical cases from ICF (2019).

²⁵ US Energy Information Administration. State Energy Data System, Table C1. Available at:

https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/sum_btu_1.html&sid=OR

Hydrogen-Enriched Natural Gas (HENG)

In sectors currently using natural gas and other fossil fuels, hydrogen offers another low carbon gas solution to reduce GHG emissions. Hydrogen can be produced through electrolysis using dedicated renewable generation or curtailed renewable generation systems (power-to-gas or green hydrogen) and through natural gas reformation with carbon capture (blue hydrogen). It can be blended into existing natural gas pipelines using HENG. If implemented with low concentrations, this strategy appears to be viable without increasing risks in end use devices (such as household appliances and heating equipment), overall public safety, or the durability and integrity of the existing natural gas pipeline network. Guidehouse research and interviews with heating technology experts indicate that hydrogen may be blended with natural gas at a maximum concentration of 15% hydrogen by volume, which could displace about 5% of natural gas supplied in HENG pipelines.^{26,27} HENG technology is unlikely to be available beyond the pilot scale until 2030.

The Guidehouse energy and emissions model assumes in policy scenario 4 that utilities begin blending hydrogen in the gas supply in 2035 and that hydrogen has displaced 5% of natural gas deliveries by 2050. Blending hydrogen into delivered gas has the effect of reducing the emissions factor of delivered gas by about 5%.

Industrial Sector Process Emissions

The Guidehouse model estimates two values for industrial sector GHG emissions: (1) the total GHG emissions from all industrial activity in Oregon, and (2) the total GHG emissions from industrial activity that would be regulated by the cap-and-reduce program.

In the Reference Case forecast, total industrial GHG emissions from all industrial activity is referenced from forecasts provided by the US Environmental Protection Agency's State Inventory Tool (SIT).²⁸ The SIT model reports CO₂, N₂O, and other emissions based on historical industry activity and forecasts of industrial growth through 2050. The SIT tool was last updated prior to passage of the US AIM Act, which requires an 85% reduction in hydrofluorocarbon (HFC) emissions by 2035. To reflect the impact of the AIM Act, the Guidehouse model assumes a linear reduction in HFC emissions beginning with 0% HFC reduction in 2021 and ramping to 85% HFC reduction in 2035.

In the policy scenario forecasts, consideration of industrial GHG emissions is limited to facilities that would be regulated under a cap-and-reduce program. During RAC meetings, the DEQ has stated that the cap-and-reduce program's regulations of industrial emissions will likely be limited to stationary sources producing over 25,000 MTCO₂e of process-related GHG emissions per year. The DEQ reports GHG emissions from facilities holding air quality permits,²⁹ but these reports do not separate process emissions from emissions due to combustion of natural gas and delivered fuels. Thus, from the data publicly available, Guidehouse was unable to validate the DEQ's estimates of industrial process emissions from facilities that would be regulated by

²⁶ GRTgaz et al. (2019). "Technical and economic conditions for injecting hydrogen into natural gas networks." Available at: <http://www.grtgaz.com/fileadmin/plaquettes/en/2019/Technical-economic-conditions-for-injecting-hydrogen-into-natural-gas-networks-report2019.pdf>

²⁷ Melaina, Antonio and Penev (2013). "Blending Hydrogen into Natural Gas Pipeline Networks: A Review of Key Issues." Available at: <https://www.nrel.gov/docs/fy13osti/51995.pdf>

²⁸ Available at: <https://www.epa.gov/statelocalenergy/state-inventory-and-projection-tool>

²⁹ See: <https://www.oregon.gov/deq/aq/programs/Pages/GHG-Emissions.aspx>

the program. Because of this limitation, Guidehouse used values for regulated industrial process emissions as reported in DEQ's presentation of initial results from DEQ's modeling study.³⁰

Industrial Local Green Hydrogen

Green hydrogen is a term used to describe hydrogen that is separated from water and converted to a viable fuel source through a renewables-powered electrolysis process. Recent studies that have demonstrated the feasibility of using green hydrogen in the steel industry³¹ and the cement-making process.³² Separate from the HENG strategy described previously, hydrogen may be delivered to customers through dedicated distribution systems designed for 100% hydrogen gas, known as hydrogen clusters or districts. For policy scenario 4, Guidehouse's energy and emissions model calculates the impacts associated with switching a portion of the industrial sector's energy consumption from pipeline gas sources to locally produced hydrogen. Assumptions regarding the amount of industrial energy consumption that may be replaced by hydrogen were informed by a third-party analysis of industrial sector decarbonization.³³

³⁰ Available at: <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/ghgrRefPolResults.pdf>

³¹ See, for instance, Hybrit Steel in Sweden, at: <http://www.hybritdevelopment.com/> ; Voestalpine Hydrogen Production Facility in Austria, at: <https://www.voestalpine.com/group/en/media/press-releases/2019-11-11-h2future-worlds-largest-green-hydrogen-pilot-facility-successfully-commences-operation/> ;

Thyssenkrupp Steel Europe's partnership for green hydrogen production, at: <https://www.thyssenkrupp.com/en/newsroom/press-releases/pressdetailpage/green-hydrogen-for-steel-production--rwe-and-thyssenkrupp-plan-partnership-82841> ;

³² Doyle, Amanda (2019). "Producing cement using electrolysis". Available at:

<https://www.thechemicalengineer.com/news/producing-cement-using-electrolysis/>

³³ McKinsey & Company (2018). "Decarbonization of industrial sectors: the next frontier" Available at:

<https://www.mckinsey.com/~media/mckinsey/business%20functions/sustainability/our%20insights/how%20industry%20can%20move%20toward%20a%20low%20carbon%20future/decarbonization-of-industrial-sectors-the-next-frontier.pdf>

Dear DEQ:

My name is D.J. Builta, and I represent Ed Staub & Sons Petroleum. We are a member of the Oregon Fuels Association and appreciate DEQ including our representative on the Climate Protection Program (CPP) Rules Advisory Committee (RAC).

For purposes of background, our business employs approximately 400 employees in cities throughout Oregon. Our employees are mostly truck drivers, retail gas station employees, and fuel bulk plant employees serving the needs of customers throughout Oregon in the small towns in which they live, and we do not have staff for extended government compliance needs. In short, we are a small family-owned business and are not large oil companies.

Our business cares deeply for people and the environment. We make moving people and goods possible in our community. People in our communities are able to get to and from work, the store, and school with the help of the products we sell.

Those products continue to get cleaner and transportation technology advancements are making us all more efficient. We have made significant investments to help Oregon achieve its GHG reduction goals. Through the Clean Fuels Program, our industry has helped remove over a million metric tons of GHG emissions. Our small, family-owned businesses are not the enemy and we are not a barrier to the state achieving its GHG goals – we are a conduit.

We support a 500,000 MtCO₂e threshold. That threshold ensures that we are able to continue to make investments in the CFP without unnecessary costs of a new program. These new complex regulations would be very expensive on our business. We simply cannot absorb the costs like the few other large businesses that you are considering regulating. This would be a fair threshold that would distinguish large importers from small. Anything lower would create unfair markets based on existing, long-term contracts.

Lastly, it is important that any policy scenario include an emergency exception in the event a small business exceeds a threshold due to an unforeseeable event. We all watched what happened in the South when a single pipeline was unable to deliver fuel. That sort of disruption could create new challenges in the fuels sector and will certainly impact reported emissions – especially for those that would need to find new fuel, in new locations to serve their communities. Similarly, with emerging natural disasters, it is important that we have the flexibility to deliver fuel to these emergencies without the fear of this regulation.

Thank you for considering our comments.

Sincerely,
D.J. Builta
Ed Staub & Sons Petroleum

From: Gary Richardson <iramosrich@gmail.com>
Sent: Tuesday, May 18, 2021 3:01 PM
To: GHGCR2021 * DEQ
Subject: Gas emission rules

As someone who will be building a house in Oregon this coming year, I hope the state arrives at a working compromise between the need to reduce emissions to protect the health of residents and the need for businesses to operate efficiently and profitably in order to create and maintain the jobs our communities need.

Thank you.

Ivonne Richardson

IETA Comments to DEQ on Draft OCPP Rules

Recommendations to Enhance Trading Potential in OCPP

The [International Emissions Trading Association](#) (IETA) welcomes this opportunity to submit feedback to the Department of Environmental Quality (DEQ) on the development of the Oregon Climate Protection Program (OCPP). As the leading international business voice on climate markets and finance, IETA's non-profit organization represents over 150 companies, including many facing climate risks and opportunities across the United States. IETA's market expertise is regularly called upon to inform market-based policies that deliver greenhouse gas (GHG) reductions and removals, address economic competitiveness concerns and balance economic efficiencies with social equity and co-benefits. Our membership includes leading organizations from across the carbon trading lifecycle, including aggregators, brokers, investors, covered entities, and carbon offset registries. These organizations have unparalleled expertise in ensuring that carbon markets operate efficiently and effectively.

IETA has long advocated for and strongly supported Oregon's efforts to implement a market-based approach to reducing GHG emissions, including earlier iterations of cap-and-invest initiatives in the legislature. However, IETA is concerned that, as envisioned, the OCPP puts far too many restrictions on trading. IETA fears these restrictions will result in sparse allowance trades and subsequently lead to unnecessarily high costs for covered entities. In fact, the proposed restrictions are so severe that IETA questions whether the OCPP should be characterized as a market-based approach. Abandoning a fully market-based approach not only bodes poorly for the internal functioning of the OCPP, but also threatens the prospects of linking the OCPP with other carbon markets including California and Washington State. To course correct, IETA offers three priority recommendations for improvement, detailed below.

IETA Recommendations to Enhance OCPP Trading and Program Participation

First, IETA urges further consideration of broadening allowance trading within Oregon. The proposed OCPP restricts trading to only the fuels sector, despite the program covering multiple sectors. IETA urges further consideration of not imposing limits on the free trading of allowances across market participants. Supporting the liquidity of emissions allowances will encourage investment in the least costly emission reduction opportunities across Oregon's diverse economy, resulting in achieving the state's emission reduction targets at least cost to Oregon's businesses and consumers. Failure to allow non-compliance entities to participate in the new market would mark a stark departure from how carbon markets are implemented in California (as well as that planned for Washington State, starting in 2023), thereby effectively closing the door to future linkages with these jurisdictions, even before the Oregon market finds its legs.

Second, IETA recommends increasing the number of covered entities covered by the OCPP while acknowledging that Oregon, like all jurisdictions, faces local political constraints. This could generally be accomplished by covering new sectors, although IETA is aware that this may be difficult from a regulatory perspective. Another approach would be to lower emissions thresholds for existing sectors—for example, the OCPP as proposed only mandates nine (9) entities in the fuels sector. IETA recommends lowering the

emission threshold for the fuels sector from 200,000 MTCO₂e to 5,000 MTCO₂e, thereby increasing the number of covered entities by an estimated six times. This expansion would increase trading and participation, thereby driving additional private sector investment in emission reductions. It would also enhance liquidity and inoculate against risk of market manipulation by a few powerful compliance entities.

Third, IETA recommends allowing third-party entities, such as brokers and investors, to participate in allowance trading. These entities often play the vital role of market maker, identifying potential cost savings and executing market transactions for companies that do not have the resources to build out internal carbon management and trading teams. The liquidity that results from these third parties ensures an efficient market. IETA recommends allowing third parties to buy, hold, and sell allowances to ensure that the market operates smoothly. In this way, all Oregonians will have the opportunity to participate in the market to reduce GHG emissions and contribute to achieving the state's climate goals.

Conclusion

As always, IETA supports Oregon's efforts to craft a market-based approach to support meeting state climate targets. Our membership stands ready to assist in the design and implementation of such an approach under the auspices of the OCPP. If there are any comments or questions, please contact IETA Strategic Advisor, Clayton Munnings, at munnings@ieta.org.

IETA Comments to DEQ on Draft OCPP Rules

Recommendations to Enhance Trading Potential in OCPP

The [International Emissions Trading Association](#) (IETA) welcomes this opportunity to submit feedback to the Department of Environmental Quality (DEQ) on the development of the Oregon Climate Protection Program (OCPP). As the leading international business voice on climate markets and finance, IETA's non-profit organization represents over 150 companies, including many facing climate risks and opportunities across the United States. IETA's market expertise is regularly called upon to inform market-based policies that deliver greenhouse gas (GHG) reductions and removals, address economic competitiveness concerns and balance economic efficiencies with social equity and co-benefits. Our membership includes leading organizations from across the carbon trading lifecycle, including aggregators, brokers, investors, covered entities, and carbon offset registries. These organizations have unparalleled expertise in ensuring that carbon markets operate efficiently and effectively.

IETA has long advocated for and strongly supported Oregon's efforts to implement a market-based approach to reducing GHG emissions, including earlier iterations of cap-and-invest initiatives in the legislature. However, IETA is concerned that, as envisioned, the OCPP puts far too many restrictions on trading. IETA fears these restrictions will result in sparse allowance trades and subsequently lead to unnecessarily high costs for covered entities. In fact, the proposed restrictions are so severe that IETA questions whether the OCPP should be characterized as a market-based approach. Abandoning a fully market-based approach not only bodes poorly for the internal functioning of the OCPP, but also threatens the prospects of linking the OCPP with other carbon markets including California and Washington State. To course correct, IETA offers three priority recommendations for improvement, detailed below.

IETA Recommendations to Enhance OCPP Trading and Program Participation

First, IETA urges further consideration of broadening allowance trading within Oregon. The proposed OCPP restricts trading to only the fuels sector, despite the program covering multiple sectors. IETA urges further consideration of not imposing limits on the free trading of allowances across market participants. Supporting the liquidity of emissions allowances will encourage investment in the least costly emission reduction opportunities across Oregon's diverse economy, resulting in achieving the state's emission reduction targets at least cost to Oregon's businesses and consumers. Failure to allow non-compliance entities to participate in the new market would mark a stark departure from how carbon markets are implemented in California (as well as that planned for Washington State, starting in 2023), thereby effectively closing the door to future linkages with these jurisdictions, even before the Oregon market finds its legs.

Second, IETA recommends increasing the number of covered entities covered by the OCPP while acknowledging that Oregon, like all jurisdictions, faces local political constraints. This could generally be accomplished by covering new sectors, although IETA is aware that this may be difficult from a regulatory perspective. Another approach would be to lower emissions thresholds for existing sectors—for example, the OCPP as proposed only mandates nine (9) entities in the fuels sector. IETA recommends lowering the

emission threshold for the fuels sector from 200,000 MTCO₂e to 5,000 MTCO₂e, thereby increasing the number of covered entities by an estimated six times. This expansion would increase trading and participation, thereby driving additional private sector investment in emission reductions. It would also enhance liquidity and inoculate against risk of market manipulation by a few powerful compliance entities.

Third, IETA recommends allowing third-party entities, such as brokers and investors, to participate in allowance trading. These entities often play the vital role of market maker, identifying potential cost savings and executing market transactions for companies that do not have the resources to build out internal carbon management and trading teams. The liquidity that results from these third parties ensures an efficient market. IETA recommends allowing third parties to buy, hold, and sell allowances to ensure that the market operates smoothly. In this way, all Oregonians will have the opportunity to participate in the market to reduce GHG emissions and contribute to achieving the state's climate goals.

Conclusion

As always, IETA supports Oregon's efforts to craft a market-based approach to support meeting state climate targets. Our membership stands ready to assist in the design and implementation of such an approach under the auspices of the OCPP. If there are any comments or questions, please contact IETA Strategic Advisor, Clayton Munnings, at munnings@ieta.org.

From: Peter Brandom <Peter.Brandom@hillsboro-oregon.gov>
Sent: Friday, May 28, 2021 1:23 PM
Subject: Comments on Behalf of League of Oregon Cities following GHG RAC #6

Good Afternoon,
Please consider the following on behalf of the League of Oregon Cities.

Question

- For stationary sources regulated under the program based on BAT but not obligated to meet the given cap, to what reduction obligations, if any, will those entities be held, and how will that be tracked and enforced?

Comments

- Request that non-natural gas fuel suppliers be regulate at 25,000 MTC02e or less, rather than the stated 200,000. Alternatively, consider regime whereby threshold for non-natural gas fuel suppliers is adjustable, based on meeting cap trajectory. Perhaps it is revisited on a regular schedule, or annually and adjusted as needed to ensure that cap is met
- RAC needs to understand the details for how stationary sources will be held accountable for obligations if they are not obligated to meet the established cap
- In response to some RAC members comments on the stated purpose to “support reduction of emissions of other air contaminants;” strongly support this purpose as part of EO 20-14 and the objectives is seeks to achieve
- Please include in rules reader’s guide the explanation for each exemption
- The level of the cap start should be set so that the opportunity to achieve the mid- and long-term goals of the EO is feasible
- In charts that show statewide emissions, please include all-sector chart that shows the effected sectors in the program, so we can see the magnitude of emissions to be regulated as compared to total state emissions
- Please clarify, no later than RAC #6, what DEQ proposes consequences of nonattainment to be

Respectfully,

Peter Brandom (he/him/his) |Senior Project Manager
City of Hillsboro, Oregon
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June 7, 2021

To: The Department of Environmental Quality (DEQ) Climate Protection Program (CPP)
GHGCR2021@deq.state.or.us

Re: Comments for Rulemaking Advisory Committee Meeting 5

Thank you for the ongoing opportunity to provide comments to the Department of Environmental Quality (DEQ) Climate Protection Program for Rulemaking Advisory Committee meeting 5. We acknowledge that you have a difficult task to implement a meaningful program under a number of constraints. We have done a high-level review of the [draft rules](#) version 1 and a preliminary review of the [modeling data](#). We have also included some observations based on our extended participation.

It is not explicitly covered in the draft rules how thresholds will be modified in subsequent years. One possibility is that they decrease so as to be the same proportion as the cap reductions. Another option that should decrease incentives for entities to try to get under a fixed threshold is to specify a percentage of the total emissions to be covered. The fixed threshold could be used initially with the percentage used in subsequent years.

The draft rules propose a threshold of 200,000 MTCO₂e for non-natural gas fuel suppliers. We are concerned that this threshold is too high and would leave a significant amount of the emissions unregulated. We request that DEQ adopt a threshold of 25,000 MTCO₂e, in-line with the thresholds that have been adopted by California and Washington State.

We were encouraged to see that you have opted to cover combined combustion and process emissions from stationary sources. However, we recognize that you have decided stationary sources will not be subject to a cap but rely only on best available emissions reductions technology. We do not believe this approach will provide the necessary reductions, which is especially important because of the effect of their co-pollutants on vulnerable communities. The Program should cover all emissions under the cap from a stationary source and then require the best available practices for the process emissions.

We are concerned about Compliance Instruments (CI) being usable indefinitely. The main goal of the Program should be that the covered entities have reduced emissions to the target value by 2050. Making early reductions greater than required will allow them to bank CIs until they exceed their cap and then use the banked CIs to avoid having to reduce emissions. The modeling data show that in fact the highest use of banked CIs is in 2050 and the final emissions are above their cap.

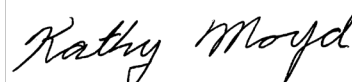
Although it is not yet in the draft rules, we understand from previous meetings that the intent is to annually distribute CIs based on the percent of emissions for that entity out of the total emissions for the sector. We believe this gives the wrong incentives for maximum reductions. The example given on slide 41 of the [presentation materials](#) shows this: with two fuel suppliers, Supplier B gets more CIs the second year than it got the first year because Supplier A reduced its emissions by a higher percentage. We do not have a recommendation for a better approach but want to point this out.



Rebecca Gladstone
LWVOR President



Claudia Keith
LWVOR Climate Emergency Portfolio



Kathy Moyd

From: CapandReduce * DEQ
Sent: Tuesday, May 25, 2021 4:32 PM
To: GHGCR2021 * DEQ
Subject: FW: It's not climate protection if the largest polluters are excused

From: MYRNA JUDD <campaigns@good.do>
Sent: Tuesday, May 25, 2021 11:31:59 PM (UTC+00:00)
Subject: It's not climate protection if the largest polluters are excused

Dear Governor Brown,
(cc: Director Whitman)

I'm a proud Oregonian and celebrated the signing of the Oregon Climate Action Plan (EO 20-04) last year as potentially the biggest climate action Oregon has ever taken.

I'm writing today out of a deep concern you are letting some of the state's largest polluters entirely free rein to continue spewing climate pollution, before the Climate Protection Program (frm. cap & reduce) even begins a rule-writing process. There is no role for fossil fuel "natural" gas in a climate-safe future. Fossil gas-burning power plants in Oregon must be fully regulated by the Climate Protection Program, along with every other large polluter in the state.

Fossil gas power plants are the largest stationary sources of climate pollution in Oregon. One out of every 10 tons of climate pollution in Oregon comes from gas-burning power plants. We just finished the important work of closing the last coal-burning power plant here. Ignoring the next generation of polluting power plants in a "climate protection program" is unthinkable!

A second major area of concern for this program, as initial rulemaking gets underway, is the matter of near-term targets for reducing pollution. Oregon must not depend on decades-old science for setting the targets of the Climate Protection Program. So far, DEQ has refused to commit to strong targets for climate pollution reductions, especially an interim target.

We must cut climate pollution in half by 2030 according to the best available science. Our current state targets do not meet that threshold, and thus the Climate Protection Program, focused on the biggest sources of pollution, should be more ambitious than even the overarching state targets.

You are our protector from large polluters. You clearly value science and have a vision for a prosperous, clean energy economy for Oregon, as exemplified by the Oregon Climate Action Plan. This gross exemption cannot be allowed or the ambitions of your executive order will not become reality.

Please instruct the Department of Environmental Quality to include gas-burning power plants and all THE damaging programs that they seem to comfortably overlook, OR AVOID!

I encourage you to listen to the land, Gov. Brown, LISTEN TO THE LAND. THE EARTH IS BECOMING VOCAL IN IT'S NEED FOR HELP AND HEALING. PLEASE LISTEN TO THE LAND !!!

Yours sincerely,

MYRNA JUDD
Umpqua, Oregon, 97486, United States



Submitted to: GHGCR2021@deq.state.or.us

June 4, 2021

TO: Oregon Department of Environmental Quality
FROM: Northwest Pulp & Paper Association
RE: Rulemaking Advisory Committee Meeting 5, Oregon Climate Protection Program

Thank you for the opportunity for the Northwest Pulp & Paper Association (NWPPA) to provide comment on Oregon Department of Environmental Quality's (DEQ) Oregon Climate Protection Program Rulemaking Advisory Committee (RAC) Meeting 5, held May 25, 2021. As a member of the RAC, Kathryn VanNatta Director of Regulatory Affairs for NWPPA, submits the following written comments.

Background

NWPPA is a 65-year-old regional trade association representing 10-member companies and 14 pulp and paper mills and various forest product manufacturing facilities in Oregon, Washington and Idaho. Our members hold various permits issued by DEQ including permits for Title V Air Operating Program and the Air Contaminant Discharge Program, and also report Greenhouse Gas (GHG) emissions under DEQ's GHG Reporting and Third Party Verification Program.

NWPPA members are at the forefront of Oregon air quality improvement efforts. Our members have embraced technically advanced and scientifically sound controls on air emissions over the past 20 plus years. We are proud of our dedication to efficient and environmentally sound processes and reduction of GHG emissions over time. We are committed to the hard work, expense and discipline it takes to be contribute to our communities.

NWPPA staff are long-standing-stakeholder participants in numerous DEQ advisory committees including groups on: establishing regulatory programs, administrative rules (RACs), agency program improvement efforts and agency fee increases.

Overarching comments

Oregon's pulp and paper sector has been recognized as an essential business by state and federal governments. Without fail, our Oregon mills' essential workers have been making vital paper products we all use every day to help fight against COVID-19. Our essential paper products are used by Oregon consumers as well as being distributed within the Western US and abroad.

NWPPA's comments on the May RAC meeting held should be construed as preliminary in nature, given the enormous complexity of the proposal the many assumptions with very limited details, and the short comment turn-around time. NWPPA will provide additional comments on this rulemaking as we continue our analysis over the coming months.

While many details are unclear, pulp and paper manufacturing will face increased costs from Scope 1 (on-site combustion and process emissions and use of best available emission reduction requirements), Scope 2 (cost of energy) and Scope 3 (transportation fuels required to get our vital products to consumers). We ask the Department to keep this triple-threat cost profile in mind as you design Oregon's program.

Shared goals

NWPPA member mills have been longtime leaders in minimizing GHG emissions by maximizing the use of carbon-neutral biomass as the sector's primary (57%) fuel source and the use of highly efficient combined heat and power (CHP) systems for onsite energy generation of steam and electricity. Since 2010, the Oregon pulp and paper sector has reduced emissions from anthropogenic sources by 62,000 mt CO₂e. That's the same as removing over 13,400 passenger vehicles from the road for one year.

Oregon's pulp and paper mills make their products with predominantly zero-carbon emitting hydropower and other renewables for purchased electricity, carbon neutral biomass, and natural gas—resulting in one of the most environmentally responsible manufacturing methods in the world. As a result, in 2019 Oregon's pulp and paper sector emitted only about 1% of the state's anthropogenic GHG emissions.

Lack of EITE facility treatment

In a total reversal in agency approach, in the April RAC meeting DEQ Director Whitman and various staff stated for the first time – that there would be no consideration of/treatment for leakage of Oregon EITE jobs and EITE GHG emissions to other states and countries.

NWPPA is shocked and extremely perplexed by DEQ's abrupt EITE policy reversal halfway through the RAC process. As noted below, DEQ has made various statements in Executive Order 20-04 scoping documents and previous RAC briefs regarding program goals to maintain Oregon EITE jobs and prevent leakage of GHG emissions.

NWPPA absolutely opposes the agency's lack of any EITE consideration and treatment. NWPPA believes that dismissing EITE policy considerations will cause leakage of jobs and GHG emissions.

Pulp and paper manufacturing is one of the most energy intensive and trade exposed sectors in the country. The Governor's 2018 study, titled *Oregon Sectoral Competitiveness under Carbon Pricing, Final Report December 2018*, prepared for the Oregon Carbon Policy Office study by Vivid Economics,¹ categorizes Oregon's pulp and paper sector as an EITE sector. Therefore, a primary DEQ consideration for elements of the future program must be the fact that Oregon's pulp and paper sector is vulnerable to regulatory programs that increase production costs relative to producers in other jurisdictions because these costs typically cannot be passed on to consumers. Carbon regulation increases the cost of energy (a major cost component of pulp and paper production) and therefore has the potential to cause production to "leak" to other jurisdictions. As discussed in more detail below, such leakage to locations that likely have higher GHG emissions intensities would in fact increase the greenhouse gas emissions for an equivalent amount of pulp and paper or wood products produced, which works against the clear intent of Executive Order 20-04 to reduce carbon emissions.

Leakage

In Governor Brown's 2018 *Oregon Climate Agenda: A Strong, Innovative, Inclusive Economy While Achieving State Climate Emissions Goals*, it recognizes the need for protection of trade exposed industries at page 18.²

A well-designed cap-and-trade program will take preventative measures to protect manufacturers in certain trade-exposed industries from competition in markets where climate emissions are not currently regulated. Once identified, sectors such as cement, pulp-and-paper, and steel could receive some free allowances to level the playing field with their competitors.

Some utilities could also receive allowances to maintain competitive and affordable rates for customers. The distribution of allowances from within the state's allowance budget does not change the cap and the level of emissions reduction required economy-wide; it simply eases compliance while maintaining economic incentives to innovate and find ways to lower emissions. [Emphasis added.]

In DEQ's June 2020 *Program Options to Cap and Reduce Greenhouse Gas Emission Final Report* submitted to Governor Brown, the Report discusses DEQ's work to develop the program and recognizes trade exposure on page 4. The concept and risk of leakage along with solutions for leakage is addressed on page 20.³

¹ <https://www.vivideconomics.com/wp-content/uploads/2019/08/Oregon-Industrial-Sector-Competitiveness-Under-Carbon-Pricing-1.pdf> Downloaded March 25, 2021.

² <https://www.oregon.gov/gov/Documents/Governor%20Kate%20Brown%20Climate%20Agenda.pdf> Downloaded April 29, 2021

³ <https://www.oregon.gov/deq/ghgp/Documents/ghgCapRedf.pdf>. Downloaded April 29, 2021.

Furthermore, if the EQC were to regulate the emissions from electric generation in Oregon, there is a risk that energy suppliers (particularly those with obligations to supply power at least cost) would shift their resource utilization out of state. This form of leakage is a major policy issue in program design, particularly in the electricity sector. As a result, other programmatic approaches may be needed to effectively address greenhouse gas emissions associated with the electricity sector.

Program design elements regarding coverage and thresholds may vary across the program in response to leakage concerns, as well as differing considerations for the potentially regulated entities, trade-exposed industries, and covered sectors.

Another example of DEQ's own policy work to address cost containment and avoid leakage is found in DEQ's *Greenhouse Gas Emissions Program 2021 Rulemaking: Background Brief*⁴ states there could also be costs for consumers and businesses. NWPPA believes there will be significant cost increases for consumers and businesses and that the program should be designed to ensure Oregon business may thrive. Regarding leakage, the Brief also states at page 4,

DEQ also seeks to minimize leakage, which is the shifting of greenhouse gas emissions outside of Oregon or outside the scope of the program's regulation. This may result in emissions in areas or sectors where there are no emissions regulations or there are less strict emissions regulations. [Emphasis added.]

Leakage of a small percentage of Oregon's pulp and paper sector's production related emissions to nearly any other part of the world has the potential to increase the GHG emissions, both in areas with and without GHG emission regulations. Another key factor to consider is that Oregon has one of the lowest state-based GHG emission factors associated with purchased electricity of any major pulp and paper producing state in the US. Production shifts outside of the state would increase purchased electricity GHG emissions as well as increase transportation related GHG emissions by shifting production from local mills to facilities outside of the state or country. Production shifts outside Oregon would also bring the devastating effects of the loss of family-wage essential worker jobs in rural areas within the state.

The pulp and paper industry is an energy intense industry and is sensitive to carbon policy programs that increase the cost of energy which can cause production to shift to other jurisdictions without the added carbon costs. Due to the sector's extensive utilization of

⁴ [Climate Protection Program, Greenhouse Gas Emissions Program 2021 Rulemaking: Background Brief, dated Dec. 18, 2020.](#) Downloaded April 29, 2021.

biomass for energy needs (the industry derives approximately two-thirds of its fenceline energy needs from biomass), the pulp and paper industry has a larger energy intensive footprint than GHG intensive footprint. As when federal cap and trade was being considered in the American Clean Energy and Security Act of 2009 (Waxman-Markey cap and trade legislation), it is important that EITE eligibility criteria be defined on a basis of energy intensity or GHG intensity.

Lack of key details on Climate and other air programs do not allow facility-level analysis

There is still a lack of DEQ rule “framework” documents and information – as advertised in the DEQ Rulemaking Work Plan – for the April 22 RAC meeting. Consequently, it is nearly impossible to analyze the Climate Protection Program’s effects without key details. For large Oregon EITE manufacturers the regulatory landscape on air regulatory issues is even more complex.

NWPPA thanks Director Whitman for his statement in RAC #4 that various agency air programs regulate facilities from different regulatory perspectives including the Climate Protection Program, Cleaner Air Oregon and the Regional Haze review. For Oregon EITE manufacturers, the April announcement of recognition of the interactions of these two additional regulatory programs and the Climate Protection Program increases regulatory burden on sources regarding timing, program alignment, cost considerations and cross-media effects of pollution control technology.

NWPPA seeks clarification for how each program affects each other program’s goals and regulatory requirements so EITE manufacturers may effectively plan their compliance pathway. Many years of air regulatory program timing are being proposed for change within a short amount of time and no ability to forecast or plan into year 2022 or 2023 . Without details on how and when EITE’s will be regulated, EITE facilities face increased leakage risks.

Therefore, NWPPA seeks clarification on the following:

- What specific Oregon law, administrative rule or other Executive Authority policy statement is DEQ basing its “no EITE consideration” statement on April 22, 2021 – when DEQ has made statements that electrical generation, landfill gas emissions, utility transport gas and process emissions are excluded from under the proposed “cap” and will not be subject to any price signals. Why then do similar facilities within certain sector’s face increased natural gas prices from local distribution utilities?
- How does DEQ consider the three perhaps four exclusions with no EITE consideration or treatment to be a level playing field and the policy not become an Oregon Executive branch policy choice to pick winners and losers?

- NWPPA believes regulating natural gas emissions at the at the local distribution utility level will result in increased risk of job and GHG emission leakage – so we are curious and ask why does DEQ believe that no job and GHG emission leakage will occur?
- Will there be an economic analysis by the Oregon Public Utility Commission of the overall cost impact of the proposal?
- What are the program’s cost containment mechanisms and when/how will they be triggered?
- It appears that there will be a volumetric charge on natural gas delivered by local natural gas distribution companies. Will EITE’s see a cost estimate/projected cost curve from the DEQ or the Public Utility Commission estimating cost increases for all natural gas customer classes?

Necessity of Alternative Compliance Mechanisms

NWPPA still believes that mitigating the risk of leakage for Oregon’s EITE pulp and paper sector should be a major program design consideration. NWPPA’s preferred way to protect our essential pulp and paper manufacturing base and our highly-trained essential workers is to exclude Oregon mills and our energy supply from the program. However, if the rule moves forward including the pulp and paper mills and our forest products supply chain in the program, there must be multiple compliance pathways *thoughtfully and carefully built into the core of the program*.

Thank you for the opportunity to provide written comment on DEQ’s Oregon Climate Protection Program Rulemaking Advisory Committee (RAC) Meeting 5, held May 25, 2021.

June 4, 2021

VIA ELECTRONIC MAIL

Department of Environmental Quality
Office of Greenhouse Gas Programs
700 NE Multnomah Street, Suite 600
Portland, Oregon 97232

RE: NW Natural Comments- DEQ Climate Protection Program Rulemaking Session #5

Northwest Natural (“NW Natural” or “we”) appreciated the opportunity to participate in the May 25th, 2021 Rules Advisory Committee (“RAC”) meeting to implement Governor Brown’s Executive Order 20-04. The May 25th meeting addressed DEQ’s recently released partial draft of the Climate Protection Program (the “Partial Draft”). NW Natural respectfully submits the comments below, as well as a redline of the proposed regulatory text, in response to the May 25th discussion.

NW Natural has long supported the development of programs that effectively and equitably address the existential crisis of climate change, including the recently proposed Cap and Invest legislation, HB 2020 and SB 1530. We also are working vigorously to decarbonize our pipeline by 2050. NW Natural remains deeply concerned about the compliance instrument design, equity implications of the program, the transparency of the modeling process, and the potential for the process to result in a program that redistributes carbon emissions, instead of reducing them, while ignoring the implementation of all available decarbonization strategies. By designing a program that is wholistic, inclusive, and prioritizes equity, DEQ can better ensure that the Climate Protection Program aligns with the statutory goal of enacting air quality controls “consistent with the overall public welfare of the state.” See Or. Rev. Stat. Ann. § 468A.010(1)(a).

To ensure the promulgation of an effective and equitable rule, NW Natural strongly believes that the Climate Protection Program must complement and accelerate the work that already is underway to deploy carbon reduction strategies and that impacted communities are meaningfully engaged by DEQ in the design of the Climate Protection Program.

Our comments on the content discussed in the 5th RAC meeting are listed below by topic area:

CCI Program Discussion

Authority and CCI Program Administration

We understand and agree with DEQ’s position that they do not have the authority to raise revenue beyond what it costs to administer air permitting as part of this program. See Or. Rev. Stat. Ann. § 468.065(2). However, based on RAC discussions to date, it is possible the CCI program could generate

and spend hundreds of millions of dollars per year. In light of this possibility, we would like to better understand DEQ's views on the following:

- What is the basis for DEQ's authority to establish and direct a third party to collect and disburse funds?
- Are the remaining parts of the rules going to establish more details about the goals, governance, and other issues related to this third party?
- How is the proposed third party charged with the administering CCI-generated funds different from an Oregon Energy Trust (ETO)-type organization? The proposed third party seems similar to the ETO, but the ETO is established in statute and has clear governance provisions.

Clarity About Non-GHG Pollutants in the Climate Protection Program

We agree that there are often non-GHG air contaminants that are co-pollutants with GHGs. However, the draft rule language regarding the CCI program does provide sufficient detail as to whether non-GHG emission reductions are required and, if so, what the measurement, verification, and accounting of these non-GHG emission reductions should be. Moreover, the overarching goals for the Climate Protection Program are equity, cost containment and GHG reduction. It is unclear how addressing non-GHG air contaminants helps to achieve any of these goals without doing so to the detriment of the others. DEQ needs to adopt very clear metrics for each of the three goals – equity, cost-reduction and GHG reduction and ensure there is a process in place to verify that these metrics have been met. It is critical that any CCI work around non-GHG air contaminants does not compromise the reduction of GHG emissions.

If reductions of non-GHG pollutants are a purpose of this program, we believe that they should be measured and verified in addition to an explicit accounting of GHG reductions from the CCI program. GHG reduction should not be confused or compromised in any way by focusing on non-GHG air contaminants. We believe that the rules should establish the rigor that is required to account for the reduction in GHGs (which should be prioritized) as well as non-GHG pollutants. It is also important to fully understand how this application of non-GHG regulation works in concert with other programs currently in place today.

Finally, DEQ needs to demonstrate why existing programs tasked with reducing non-GHG air contaminants like Cleaner Air Oregon are insufficient and why that existing regulatory regime is not the best place to address any current regulatory gaps in non-GHG air contaminants. Whether non-GHG air contaminants are ultimately included in the Climate Protection Program, DEQ needs to demonstrate how the various programs align and intersect to ensure there are not contradictory, duplicative, vague or misaligned obligations that covered entities are required to meet.

Each Regulated Sector Should Have A Separate CCI Program

To best align the reduction of emissions from the source of those emissions, the transportation sector and the natural gas utility sector should have separate CCI programs that keep separate carbon and economic accounting books. Customers of each sector, who will bear the financial burden of this program, should not be forced to cross subsidize other sectors. This would not only make the program

easier to administer, but also ensure greater accountability, and ensure that the objectives of cost-reduction, GHG emission reduction and equity can be achieved within the particular covered sector.

The CCI fund of each sector should reflect project that reduce emissions emitted from that sector and should not inflict additional financial burdens on the customers paying into these funds. This also ensures that those paying for compliance also receive the benefits of GHG reduction, cost-containment and equity. For example, a project that leads to substantial reduction in particulate matter might not be appropriate for funds from natural gas utility customers, given that emissions of particulate matter from natural gas combustion are far lower than combustion of most transportation fuels.

Point of Regulation

As we have said on numerous occasions, the party that uses or sells the fuel that is responsible for the resultant GHGs should have the compliance obligation. These entities are most in control of the ways in which that sold fuel can result in less emissions via energy efficiency and renewable supply. This means that natural gas utilities should not have the compliance obligation for the gas sold to Oregon companies that is not sold by the utility. Utilities that merely transport of the fuel do not have the influence to reduce the consumption of these users. There are a very small number of natural gas sellers in the state of Oregon, and therefore, the argument that including them under the cap as regulated entities is unduly burdensome lacks merit. This is consistent with Oregon laws like the electric Renewable Portfolio Standard.

Compliance Period and Weather Impacts

While a three-year compliance period is more appropriate for this program than a single year, it is still unsatisfactory for the volatility faced by the natural gas utilities. The issue is the unpredictability in usage/ emissions in a given year due to weather – where years that are warmer than normal see less usage and years that are colder than normal see more usage. Three years is not a long enough of a period to address this issue, and in reality, just puts all the necessary inflexibility resulting from the compliance obligation on the third year. Any difference from the first two years and any difference in the third year must be rectified or ‘trued up’ within the third year.

A more appropriate way to solve this issue is to leverage work that is already done at the Oregon Public Utility Commission and define emissions obligations using weather normalization, so the differences from year to year are adjusted in future years. This approach would not change a compliance obligation for the utility over the long-term, but would prevent weather-based differences from creating unnecessary swings in CCI purchases and the price of emissions allowances in the secondary market.

Compliance Reporting Logistics

NW Natural realizes that this program will depend heavily on the emissions reporting submitted by the Company to DEQ. To ensure complete accounting for current and future means of reducing carbon emissions it is clear that updates will be necessary to the current reporting program. Additionally, the program should be able to account for and changes and updates to the inventory in subsequent years if errors are discovered in the previously reported data.

Draft Rules Suggestions

In addition to the above comments, NW Natural is also submitting a redline of the partial draft rules to highlight its particular concerns with the Partial Rule.

340-271-0010

Purpose and Scope

(3) The purposes of the Climate Protection Program are to reduce greenhouse gas emissions from sources in Oregon, achieve co-benefits from reduced emissions of other air contaminants, and enhance public welfare for Oregon communities. To support these purposes, this division:

- (a) Requires that covered entities reduce greenhouse gas emissions;
- (b) Supports reduction of emissions of other air contaminants that are not greenhouse gases;
- (c) Provides covered entities with compliance options to minimize disproportionate business and consumer economic impacts associated with meeting the Climate Protection Program requirements; and
- (d) Allows covered fuel suppliers to comply with the Climate Protection Program requirements in part through community climate investment funds and greenhouse gas reduction credits that:

(A) ~~Reduce greenhouse gas emissions~~ Represent a verifiable greenhouse gas emissions reduction and could also;

~~(B) Support reduction of emissions of other air contaminants; and~~

(B) Support investments that result in a verifiable and quantifiable reduction ~~to reduce~~ in air contaminants emissions in communities disproportionately impacted by air contamination and/or helps communities disproportionately impacted by the effects of climate change become more resilient to the impacts of and climate change; and

(C) Provide covered entities lower cost emissions reduction options to reduce business and consumer impacts.

340-271-0020

Definitions

(4) "Community climate investment credit" or "CCI credit" or "credit" means an instrument issued by DEQ that represents a verifiable one metric ton reduction in CO2e to track a covered fuel supplier's payment of community climate investment funds, and which may be used in lieu of a compliance instrument, as further provided and limited in this division.

340-271-0110

Covered Entity and Covered Emissions Applicability

(a) The person is a ~~local distribution~~ company that either produces natural gas, compressed natural gas, or liquefied natural gas in Oregon, or that ~~imports, sells, or distributes~~ natural gas, compressed natural gas, or liquefied natural gas to end users in the state.

(b) Except as provided in paragraph

(B) Covered emissions do not include:

(i) Emissions that are from the combustion of biomass-derived fuels including biomethane, **including sources outside of Oregon that are attributed to use in Oregon through a tracking mechanism such as M-RETS;**

(ii) **Emissions from manufactured fuels whose upstream emissions have already been accounted for, including hydrogen and synthetic methane.**

(iii) Emissions that are fugitive emissions; and

(iv) Emissions from natural gas delivered to an air contamination source that has an applicable code of 221112 in the 2017 North American Industry Classification System.

(v) **Emissions retired on behalf of local distribution company's customers from voluntary emissions reduction programs offered by a local distribution company**

(vi) **Emissions retired on behalf of other state or federal programs, including the Oregon Clean Fuels Program and the EPA Renewable Fuel Standard (RFS).**

Process Challenges

NW Natural continues to have issues with the format and transparency of this rulemaking process. Both the formal agenda and majority of conversation during the meeting was focused on information that was not provided in the draft rules provided by DEQ. It is difficult to prepare and have a productive discussion of items, such as how to establish the baseline for the cap, without opportunity for all RAC members and the public to have materials prior to the meeting.

The Jam board tool continues to be an oversimplified exercise and not an effective way to capture feedback on a piece of policy with such significant financial and environmental impacts. It is extremely important that this process has high integrity, complete discussion, and a high level of transparency. This brainstorming tool does not provide a meaningful record or full engagement on the key details and design of this program. Comments condensed down into a few words without context should not be relied upon for policymaking decisions that impact all Oregonians.

Cost Cap

It is deeply concerning that there has been no meaningful discussion of including a cost cap in the rule. Proceeding without a cost cap would be both extremely dangerous and without precedent. Both the Renewable Portfolio Standard (RPS) and the newest version of HB 2021, or 'One-Hundred-Percent Clean' include cost caps. Moreover, DEQ is designing the Climate Protection Program very differently than either the RPS or One-Hundred-Percent Clean, both of which were designed in the Legislature, which naturally allowed the necessary changes to existing law to ensure the programs work correctly and to minimize unintended and expensive consequences. Contrast that with the current development of the Climate Protection Program by rule, which by very definition limits the tools DEQ has at their disposal to ensure the program is designed and implemented correctly. Not including a cost cap is borderline reckless for a program that directly or indirectly covers large swaths of Oregon's economy. A cost cap ensures that there is a brake mechanism in case an unintended consequence that causes compliance costs to skyrocket. For instance, the CCI program is a completely new and untested program. The new and uncertain nature of the program is likely to lead to dramatic swings in the price of a CCI, which in turn could have the unintended consequence of causing compliance costs to spike without a remedy to stop the spike or fix the problem that led to the spike. Not having a cost containment mechanism could have a profoundly negative impact on Oregon's economy overall, and those sectors in particular that are either directly or indirectly covered by the Climate Protection Program.

Incomplete Rules

We understand that this is a large undertaking and staff has had to segment certain topics in the interest of time. As we have shared in previous comments, it is inefficient and potentially detrimental to the rulemaking process to arbitrarily separate fundamentally interrelated topics and discuss them separate meetings.

We are particularly concerned about our ability to provide constructive feedback on the partial draft rule and topics discussed in RAC meeting #5. The point of regulation and definition of CCIs is critical components of the program, but we cannot analyze the implications of DEQ's proposal without the context of the entirety of the program. NW Natural would like to provide productive feedback on the draft rules, but we feel that comprehensive comments need to wait until the full draft rules are issued.

NW Natural was actively listening during the last meeting, and our lack of a comment during RAC meeting #5 does not mean we see the issues discussed in this meeting as settled. We are prepared to provide more feedback once the entire draft rule language has been presented.

Thank you for your consideration of our comments. We look forward to continuing to partner with DEQ throughout the rulemaking process to design an effective and equitable rule that benefits all Oregonians.

Sincerely,

/s/ Nels Johnson Nels Johnson

Enclosures

June 4, 2021

Colin McConnaha
Manager, Office of GHG Programs
Oregon Department of Environmental Quality
GHGCR2021@deq.state.or.us

Comments on Oregon Climate Protection Program: Rulemaking Advisory Committee Meeting 5

Dear Colin,

Thanks to you and your colleagues for another well-organized RAC meeting on this important program. The Metro Climate Action Team (MCAT) is a community of experienced volunteers working to steward significant greenhouse gas reduction legislation into law in Oregon, and several of our members attended the meeting.

We believe the threshold for fuel suppliers is much too high, and although we generally agree with the industry perspective that most companies will not try to subvert the program, there are too many historical examples where a few bad actors find a way game the system, and a high threshold opens the door to potential gaming. Both Washington and California use a threshold of 25,000 metric tons for fuel suppliers, and we see no reason why Oregon cannot be consistent with these adjoining jurisdictions and use the same threshold. This level of threshold would cover 38 entities, according to DEQ, and from an administrative perspective, this seems eminently doable to us.

We continue to have significant concerns about the proposal to use a site-specific “best available emission reduction technology” approach for regulating stationary sources. We see this approach as being inconsistent with EO 20-04, which directs DEQ and the EQC to cap and reduce GHG emissions from large stationary sources in a manner consistent with the science-backed goal of reducing Oregon’s GHG emissions at least 45% below 1990 levels by 2035 and at least 80% below 1990 levels by 2050. Given the urgency and severity of the climate crisis, there is no justifiable reason to exclude industrial GHG emissions from regulation under the CPP cap.

There is important evidence from California that since 2012, manufacturing industries under that state’s Cap and Trade program:

1. Are more efficient – cutting emissions while expanding output;
2. Show increased employment relative to comparable uncapped facilities located in other states, and
3. Have steadily grown output with no break in the trend relative to uncapped facilities in other states.

DEQ needs to do a better job of clarifying the Base Cap, which is going to be the 2022 starting point for the program, whereas the question of the Baseline, which is a historical reference point, is only relevant to the calculation of any interim and final targets for the program.

Regarding the Base Cap, we strongly support using reported data over assumptions, and believe that an average of 2018 to 2020 data is a reasonable Base Cap, but the Allowance level for the first year of the program (2022) should be one annual increment below the Base Cap.

Regarding the Baseline, we note that emissions for 2010, which is used for modeling purposes and is based on data reported to DEQ, is only 0.4 million MtCO₂e above the 1990 estimated Baseline, so targets based on either of these baselines will not be too different.

We understand some of the rationale for excluding methane emissions from the Climate Protection Plan, but firmly believe that this source of GHG emissions must not be ignored by DEQ. We recommend that DEQ open a rulemaking process to regulate methane emissions, using a life-cycle GHG intensity metric, to include upstream leaks and the carbon intensity of RNG.

Finally, regarding Community Climate Investments, we strongly recommend that DEQ examine the approach used by Washington state in which any use of offset mechanisms are below the CAP.

Sincerely,

Metro Climate Action Team Steering Committee:

Brett Baylor, Rick Brown, Pat DeLaquil Dan Frye, Debbie Garman, Mark McLeod, KB Mercer, Michael Mitton, Rich Peppers, Rand Schenck, and Jane Stackhouse

Oregon Department of Environmental Quality

June 7, 2021

Office of Greenhouse Gas Programs
700 NE Multnomah Street, Suite 600
Portland, OR 97232

Submitted via email to GHGCR2021@deq.state.or.us

RE: Climate Protection Program Initial Draft Rules and other Rulemaking Advisory Committee Topics

Climate Protection Team:

Oregon Business for Climate applauds DEQ's long effort to welcome and encourage input toward shaping the Climate Protection Program (CPP). We have been pleased to be closely involved since the initial workshops, and to participate actively in every RAC meeting. While most of our feedback has been in those sessions, with the draft initial rules published and raising significant concerns, and with too little time to convey our full feedback during the last RAC, we feel it is necessary to provide this written feedback.

Context:

Oregon Business for Climate is a league of nearly 100 businesses across the state, representing nearly 30,000 employees in a range of industries from manufacturing to agriculture to transportation to healthcare. We believe climate leadership is critical to the health of Oregon's industries and communities, and will help our state re-emerge as a leader thriving in the growing clean economy. To that end, **our mission is to advance urgent, ambitious, equitable climate policies and programs designed to help spur innovation and economic opportunity while effectively and responsibly reducing emissions.**

We seek solutions. We provide this input at a critical time when this very important program is beginning to solidify – and in fact is at risk of being codified in a form that is very limited in its effectiveness, does little to nothing to spur innovation or opportunity, and delivers much less benefit for impacted communities than it could. The CPP has the potential to be one of the 3 or 4 most significant Oregon efforts of this decade to address climate change (along with the potential for an expanded Clean Fuels Program, and this month's potential 100% Clean Energy legislation). Or, depending on your work and EQC decisions, it could become a narrow, heavily exempted, largely ineffective effort.

In the following, we endeavor to crisply point out areas where the rules appear to be headed in the wrong direction, offer potential solutions, and provide input on likely upcoming decisions in hopes of

averting further concerns with the program. We know you are receiving lots of input, so we're aiming to be as concise as possible; please take no offense from our not burying this input in lots of extra words.

Our feedback and suggestions

We have organized this input into 7 topics:

1. Goals of the program
2. Stationary sources
3. Fuel suppliers
4. Exemptions
5. Community Climate Investments
6. Overall program targets
7. Other critical fixes

1. Goals of the program

a) Missing: Innovation, opportunity, and economic development

The triangle of goals often used in describing this program references reducing emissions, addressing equity (minimize impacts; maximize benefits), and costs (minimize impacts on companies and customers). This 'costs' concept fails to consider the BENEFITS that could flow from this program. A well-designed program has the potential to spur innovation in technologies, services, and business models – many of which could be exported to other states and regions, and could create economic development and good-paying, equitable jobs throughout Oregon's economy. The program chose not to incorporate this as a goal, and it shows. (We say 'chose not to' because the suggestion was indeed referenced in one of DEQ's early RAC recaps, but not acted upon. Also, the modeling exercise attempts to quantify some economic upsides, yet the program does not recognize these as a goal.) The program's third goal should have been 'Economics,' not 'Costs,' to recognize there are economic pluses and minuses to be optimized in program design. As it stands now, the program misses several opportunities to create opportunities, some of which we mention below.

b) Strengthen equity in the draft rules statement of goals

The purpose statement in item 3 on page 1 of the initial draft rules does not mention the critical objective of minimizing impacts and maximizing benefits for disproportionately impacted communities. While this concern is mentioned earlier, it also needs to be clearly stated in the purpose, and strongly emphasized.

c) KEEP supporting reduction of co-emissions

Some RAC members shared concern about the language including 'supporting the reduction of co-pollutants' in the purpose. This is an essential benefit of the program, has huge health and other implications (especially for disproportionately impacted communities), and needs to be maintained.

2. Stationary sources

a) BAERA is NOT SUFFICIENT, NOT PRACTICABLE and NOT MOTIVATING

We applaud the agency's efforts to find creative and balanced solutions to this monumental challenge. However, for several reasons, the segregation of major stationary source into an alternate system based on Best Available Emissions Reduction Approaches (BAERA) is not a solution.

- The BAERA-only approach is **nearly unenforceable and thus at very high risk of being weak and ineffective**, amounting to a near exemption for all of these large emitters. The definition of **what is 'best' and what is 'available' can be challenged endlessly** – wasting time, costing focus and resources (of both the agency and the emitters), creating uncertainty (and lack of alignment and investment), and ultimately allowing more emissions. Similar 'Best Available Technology' regimes may have worked on emitters creating pure commodities, like coal power plants where the only valued output is kWh, and the markets and technologies are directly comparable across the country and globally. But this program seeks to cover more complicated emitters. Consider the semi-conductor examples (a large number of the relevant entities in Oregon). Just one of many arguments emitters can make will be that these products serve different markets (from leading edge (high margin) microprocessors for PCs and servers and phones, to commodity (lower margin) embedded controllers for cars and machines). Each producer can argue that what is 'available' for a higher margin product is not 'available' (or economically viable or applicable) for their lower margin or older technologies. Even in cement production the arguments will persist – questioning whether 'available' means a technology that exists in one lab anywhere in the world, or an approach that is demonstrated, at scale (a concept not well-defined), and in some number (a threshold to be debated) of plants in the U.S. This argument is not to assert that any emitter is seeking to be a 'bad actor;' just that, for *some*, all legal tools will be exhausted to delay and avoid the costs of reducing emissions. In short, seeing these shortcomings, BAERA is not a practicable or sufficient tool as the main driver of emissions reductions for these major stationary sources.
- Compounding these weaknesses of a BAERA-only model, its central purpose of providing an alternative (less demanding) emissions reductions path for emitters means that it will very likely enable **more local emissions and co-emissions – bringing a direct impact on nearby disproportionately impacted communities**. If BAERA was actually an attempt to address local emissions, it requires much closer scrutiny.
- Of particular concern for our organization, working to maximize the opportunities and economic development benefits of addressing climate change, is that a **BAERA is inherently an anti-innovation and anti-leadership concept**. The notion is that our emitters should look elsewhere for what others are doing to reduce emissions – and stop there, rather than investing, innovating, and leading our way out of the climate crisis – and creating opportunities for Oregon in the process.

Bringing a broader lens to this issue, we note that several of Oregon’s large stationary sources are facilities of global corporations. These firms know they need to address climate change and meet requirements already, or soon to be, in place internationally and elsewhere in the U.S., in plants with identical and similar challenges. There is **no reason Oregon can’t be a venue for investments in emissions-reduction innovations that will serve these companies in their other sites around the country and around the world.**

b) Stationary sources must be under the cap; BAERA could be a complement

The problems with a BAERA method make it clear that stationary sources need to be under the program’s overall emissions cap. Applying the cap to stationary sources also strengthens the CCI (and other offsets) program(s), and compliance instrument trading programs, by bringing in many more participants and dollars. (This presumes requirements are in place to ensure entities qualify to participate in trading and CCIs, and that their participation does not enable the local emissions impacts mentioned above.)

While BAERA is insufficient, there is potential that BAERA could be helpful as an approach *in parallel with the cap*. Under the cap, the drive for innovation remains, and the local emissions are still reduced. If BAERA is used as a complement rather than the main emissions reduction driver, the stakes are lower, bringing the potential that the definition of BAERA wouldn’t be endlessly contested (as outlined above). This opens some possible solutions, where adopting the best available emissions reductions approaches could help these stationary sources.

- Stationary sources demonstrating use of BAERA could qualify for use of CCIs or other offsets.
- Stationary sources demonstrating use of BAERA could be allowed significantly longer compliance periods, giving them time to innovate and implement new approaches beyond the best otherwise available, provided that they meet the total cumulative emissions reductions defined by the cap over these longer compliance periods.

c) CCIs could enable a financing tool for emissions reductions

It is clear that the emissions reductions required by the overall program goal will be difficult for some stationary sources to meet. At the same time, the overall climate imperative is equally clear. To further help address this challenge, the CCI concept can be extended to create a lending (or investment) pool for stationary sources, or other emitters, to experiment, innovate and implement new emissions reduction methods. CCI funds could also accelerate new technologies and products created by other Oregon companies serving these covered entities. The same third parties (which should be not-for-profit entities) that are collecting and disbursing CCIs could also provide these loans (and investments) – within a well-defined, DEQ-approved program. Smaller loans could support R&D and experimentation. Larger loans could enable implementation – where these larger loans could be required to be accompanied by a significant private sector loan on the same terms (ensuring due diligence). The program would need to define how investments that directly benefit disproportionately impacted communities would

take priority over these loans. Moreover, recipients of larger loans could be required to adopt community benefits agreements or other labor standards to ensure equity benefits flow from these financial engagements.

d) Invite other solutions from industry

The emissions reductions required by the latest science are daunting, but again, Oregon must fully participate in our share of those reductions – and we stand to benefit by leading. We, the broader business community, collectively failed to sufficiently support a carefully crafted and balanced cap and invest policy in the legislature that would have enabled both flexibility and investment while meeting this challenge. Now we must meet the same challenge with the tools at hand.

DEQ has offered an array of flexibility mechanisms to help stationary sources meet the reductions required by the cap. Financing tools and longer compliance periods, mentioned above, could also help. We suggest the agency seek other solutions for RAC discussion from representatives of the stationary sources, and others, stipulating that those proposals must meet the cap, create benefits for disproportionately impacted communities, and drive economic opportunity in Oregon.

3. Fuel suppliers

a) Set a threshold covering the vast majority of market participants

As a key parameter toward achieving the program’s goals, the proposed coverage threshold of 200,000 MTCO_{2e} fails on several fronts.

- This threshold leaves **an important percentage of emissions not covered**. In a program striving to achieve the large required reductions and already weakened by many other exemptions, there is no room for this exemption by choice or convenience.
- Proposers suggested that this high threshold means there will be little change in the covered entities – yet there have been changes in the last decade in the list of would-be covered parties even at this high threshold level. Again, this is an argument for **cost savings or convenience that lacks credibility and deserves little weight** given the importance of the challenge.
- This **high threshold invites gaming** by market participants (at the state border, or in the structure of companies). Gaming has been shown in other programs. This is not to suggest any particular participant will be a bad actor, but a well-designed program that is fair for the good actors would not invite such manipulation. (A blanket prohibition on ‘unconscionable’ actions, even if a definition were somehow added to the draft rules, is not a robust solution.) Some have offered that the industry’s long-term contracts would prevent such gaming. Of course, this argument doesn’t stand up to even cursory consideration. Any contract can be changed by the parties if both see benefit – and if one sees enough benefit, they can bring benefit to the other party.

- The high proposed threshold is also **unfair to the large entities** that would be covered, **inviting leakage in the market** toward the many providers that would not be covered.
- Finally, the proposed **high fixed threshold is not practical**. Over time, as emissions reductions are achieved, the threshold would need to be revised – requiring a thorough process, advanced notice, and more jockeying by market participants around a new threshold.

b) **Align with neighboring programs**

The simplest and cleanest approach would be to cover all fuel suppliers, with no threshold. If DEQ is unable to design a very streamlined approach for the smallest suppliers, then we acknowledging that a zero threshold may bring administrative costs (for the agency and small participants) with little environmental benefit.

The next reasonable threshold is 25,000 MTCO₂e, aligning with both WA and CA. At this level, DEQ still will need to design sideboards and monitor the market to avoid gaming, but the pressure for gaming and leakage will be much lower.

c) **Establish a fixed minimum percentage of coverage**

If the agency is committed to a non-zero threshold, then setting a percentage of coverage would help address several of the concerns identified above. For example, if the 25,000 MTCO₂e threshold is applied at the start of the program, the rules could also give the agency the ability to set a new threshold every X years (perhaps aligned with compliance periods) to ensure that some percentage of coverage is maintained (regardless of any leakage, market changes, etc.). Such a coverage commitment, such as ‘95% of CO₂e emissions from non-natural gas fuels,’ could be translated every X years into a new threshold number (to the nearest thousand MT) for MTCO₂e – without DEQ needing to go through a significant process.

4. **Exemptions**

Unfortunately, some could characterize the current direction of the program as a series of exemptions leading to a very narrow scope, rather than a strong program designed to maximize its emissions reduction effectiveness while balancing other core goals. Below are some opportunities for improvement.

a) **Control fugitive emissions**

The fact that fugitive emissions are difficult to measure and control does not represent a sufficient reason to exempt them, and their very high global warming potential, from the program. Nor does the fact that some of our gas utilities assert that they have very clean distribution systems. Sniffer technologies for detecting leaks and other problems are a mature capability, and are expanding with the use of drones and other systems. There are several approaches for managing these emissions even if DEQ doesn’t believe it could effectively survey systems itself. Some are mentioned below.

- Most obviously, the emissions from **compressor stations** should be covered by the program.

- Gas utilities could be required to present **annual system-wide leak-check findings**, report any leaks found, and repair any leaks immediately – essentially prohibiting leakage.
- A more complete approach would be to simply **apply a well-to-burner lifecycle emissions adder** (based on national third-party studies) to all natural gas used. A utility would be responsible for that full lifecycle CO2e impact unless they can certify, again with third-party verification, that their full lifecycle emissions are lower, and that lower number would be used. If it were determined that out-of-state stages cannot be included in this clear responsibility, then the truncated ‘lifecycle’ would begin where systems cross the state line.
- Considering the complexity of the issue, DEQ might instead commit to a new **fugitive emissions rulemaking process** to fully scope and define a management protocol, consistent with and encompassed by the Climate Protection Program goals and rules.

b) **Fix the definition of gases**

Again recognizing that methane has a much higher global warming potential than the CO2 resulting from burning the gas, the definition in the draft initial rules based on the CO2e that would result from ‘**complete combustion or oxidation**’ is **completely insufficient**. Regardless of how upstream fugitive emissions are handled, this definition essentially means that any waste or leakage at the point of use, or known system breakage, is not covered. The utility or its major customers must be responsible for any known leaks, and utilities and/or major users should certify reporting and volume estimations of any such incidents (cut lines, equipment failures, etc.).

c) **Clarify language to exempt only utility-scale electric generation**

The initial draft rules intend to exempt emissions from gas-fired utility-scale electricity generation. RAC members were assured that this language does not exempt gas used for on-site electricity generation. The draft language needs clarification on this matter, ensuring the exemption only applies to gas-fired utility-scale electric generating units owned by investor-owned utilities with service territories in Oregon.

5. **Community Climate Investments**

a) **Prioritize impacted communities**

Oregon Business for Climate supports the Community Climate Investments concept broadly sketched by DEQ’s climate team. The approach has the potential to drive benefits into disproportionately impacted and at-risk communities throughout the state. With good governance, the basic framework of independent third parties aggregating and managing these investments will enable flexibility while ensuring alignment with program goals and prioritization of these communities.

b) **Enable other investments that also yield climate, equity, and economic benefits**

While prioritizing investments in disproportionately impacted communities, there is the potential for **investments in other locations that also drive benefits to the target populations, advance innovation, and provide emissions reductions.**

In the draft initial rules, on pages 1 & 2 (under 340-271-0010, item 3, d (A, B, and C)), the rules imply CCIs can ONLY be activities that create benefits in disproportionately impacted communities (since A, B, and C all appear to be requirements). It is not clear that this was intended, but if so, this could rule out many forest-related, ag-related, or innovation-related investments – each of which could be designed (required) to drive benefits for people who are or could be disproportionately impacted. The draft rules appear to be a locational requirement, where the CCIs should instead be framed as required to drive benefits for the target populations.

Currently, with the overly narrow definition of CCIs, coupled with the BAERA removing any impetus for development of new technologies and methods (as already discussed), the draft rules further risk establishing an ANTI INNOVATION program.

c) Ensure 1-for-1 carbon reductions and appropriate limitations

The biggest concern with the current CCI approach is that it does not currently **ensure 1-for-1 achievement of GHG emission reductions**. This is essential to ensure the environmental integrity of the program. It also challenges the equity integrity of the program (since we know GHG emissions and co-emissions also have disproportionate impact on at-risk communities).

Furthermore, for this reason, the proposal to allow up to 25% of emissions to be addressed through CCIs is disconcerting. CCIs were presented as analogous to ‘offsets’ – where emissions reductions are strongly certified (with additionality, measurability, monitoring, etc.), and in quantities matching the emissions they are offsetting. This is challenging, as demonstrated around the country, which is one reason no other program has allowed offsets to address more than 8% of excess emissions. This is a challenge for further RAC discussion.

Tabulation of **CCIs must also not enable double-counting**. For example, if a CCI project accelerates transportation electrification and can be demonstrated to have a certain carbon benefit by replacing use of fossil fuels, the agency must ensure that same reduction in use of fuels is not creating the appearance of compliance by fuel suppliers. CCIs that drive reductions within the regulated sectors present these difficult challenges, and the agency must address them to achieve effectiveness and integrity in the program.

The use of CCIs also opens the risk of allowing local emissions and co-emissions that have impacts on nearby communities – frequently the very communities facing a history of environmental injustices. For this reason, as with the other suggested CCI qualifications discussed above, **any entity accessing CCIs (or other offsets or flexibility tools) to address excess GHG emissions must qualify by not presenting such pollution risks (or achieving at least proportionally declining risks) to nearby populations**.

The 1-for-1 GHG reduction requirement may be difficult to achieve for each CCI project. To enable more climate-beneficial projects to balance those that are less impactful, the third parties that are aggregating CCI funds and investing in these projects could be allowed to **meet**

the **1-for-1 requirement on a PORTFOLIO basis**, achieving that level, in aggregate, across their projects.

d) Ensure zero emitter influence

Regulated entities may have preferences as to what projects their CCI dollars end up funding. But these **payments that essentially allow excess polluting are not grant funds**, and must not be considered as such in any way. The third parties that aggregate CCI funds from emitters must be wholly independent from the emitters, including not having emitters on their boards, and with the ability to deploy funds as they see fit. Further, emitters should not be permitted to participate in publicity around projects that their dollars may have helped fund – unless they also provide additional funding beyond what was required by their emissions. Only such excess funds may be considered a contribution to any CCI project.

e) Extend third parties managing CCI funds: Add a climate impact reduction lending and investment capability

As discussed in item (c) in the above section on stationary sources, the CCI concept could be extended to create a lending (or investment) pool for stationary sources, or other emitters, to experiment, innovate and implement new emissions reduction methods. Please see the above section for a discussion of this potential solution.

6. Overall program targets

To confirm some of our feedback in the recent RAC meeting and off-line discussions, the use of more recent data for sectoral breakdowns of emissions is understandable, but cannot be a basis for lowering the program's overall target. That is, if the 2010 or 2017-2019 data is used for the starting point of the emissions reduction path, the **2035 goal and the 2050 goal still need to match at least what would be targeted (in absolute total emissions across the categories DEQ is able to regulate) on a 1990 basis in the Governor's executive order**. Moreover, as the Governor's office has recently acknowledged, an 80% reduction by 1990 is only part of what is required by science. Net emissions need to be zero by 2050, with substantial reductions immediately (by 2030). With this clear imperative, we encourage DEQ to cap emissions according to the more aggressive emissions reduction scenario of at least a 90% reduction by 2050, and including a strong interim requirement.

From a business perspective, we recognize the need to use the most recent data, such as the average 2017-2019 numbers, as the starting point for emissions reductions, provided the cap follows a steep reduction path as discussed above.

Finally, when DEQ presents the scope of the program, **integrity requires that DEQ clearly present the program's results relative to the total emissions categories over which DEQ has authority and the potential to regulate**, NOT only showing (or calculating reductions among) the smaller portion of emissions the agency has chosen not to exempt. To put it another way, DEQ's program goals and emissions reductions need to be measured across all non-gas fuels (regardless of coverage thresholds), all stationary sources (regardless of thresholds), and all other potentially regulated emissions (whether they are difficult or presently impractical to regulate or not).

7. Other critical fixes

a) Set limits on banking

The draft initial rules enable perpetual banking. This allows emitters to have higher actual emissions than the program's target as of 2050, and depending on the rules governing termination of the program, could allow those higher emissions to continue in perpetuity. That is NOT consistent with the goals of the program. We recommend a **required phase out of banked emissions (and use of CCIs and other offsets) in the latter years of the program such that actual emissions as of 2050 match what is required by the program goals.**

b) Prevent windfall transfers of compliance instruments

Previous discussions and leanings have presented little with regard to controls on banking and CCIs to prevent windfalls or other profiteering by covered entities. Again, this is not to assert any bad actors among the parties, but to expect that a well-designed program would anticipate potential risks and not invite any such action. As just one example, covered entities should not be permitted to sell unused instruments provided for free by DEQ for a given year or period if the company winds down or significantly reduces operations within that period.

c) Establish a role for non-profit market makers

The draft rules only allow compliance instrument transactions between covered entities, and the agency's initial leanings envision a simple online resource for would-be buyers and sellers to post interest and offers. We recommend that the agency envision a **more robust program and trading system that provides dynamic information, liquidity, deal aggregation, and low transactions costs.** These elements are necessary to make trading a true flexibility mechanism as discussed. To enable such a system, we suggest the agency make provisions in the rules to allow for one (or a limited number) of non-profit market makers – with appropriate transparency, cost recovery, and regulations to authorize (and periodically re-authorize) the entity or entities.

d) Require priced transactions and transparency

Furthering the goals mentioned above, and to add transparency and prevent market manipulation, we recommend not allowing any non-priced transactions of compliance instruments. The 'estimated values' as mentioned in the draft rules are not sufficient to achieve these goals.

We applaud the agency's tremendous efforts to quickly define a program with sufficient depth to enable this level of specific input, and we look forward to continued participation in the process. Thank you!

Sincerely,

Tim Miller
Director, Oregon Business for Climate

June 4, 2021

RE: Climate Protection Program - RAC Meeting #5 and Initial Draft Rules

DEQ's Office of Greenhouse Gas Programs,

Thank you for the opportunity to submit comments following the Department of Environmental Quality (DEQ)'s fifth Climate Protection Program (CPP) Rulemaking Advisory Committee meeting. We submit for your consideration feedback on DEQ's initial draft rules, as well as comments on other aspects of program design discussed at the meeting, including approaches for determining the base emissions cap and compliance instrument distribution.

The program design choices that DEQ makes in the coming weeks could be decisive in determining whether the "Climate Protection Program" lives up to its name. This will depend in large part on whether DEQ a) sets the cap and emission reduction targets that are consistent with the best available science; b) holds industrial polluters accountable for their emissions by including them under the cap; and c) ensures equity and environmental integrity in its proposed alternative compliance "Community Climate Investment" program. The baseline and trajectory of the cap matter immensely for the overall environmental integrity of the program and actually moving these regulated sectors toward decarbonizing and meeting our state's necessary climate goals. While we do not address each of these issues at length here, we would encourage you to refer to our organizations' previously submitted comments on these topics as well.¹

Thank you in advance for your consideration.

I. Purpose and Scope (340-271-0010)

We appreciate that the draft rules cite improved public welfare as a purpose and a benefit of the Climate Protection Program. However, given the extensive data demonstrating the benefits of climate action (including recent reporting by the Oregon Health Authority²), we would urge DEQ to be more specific in describing the public health and economic benefits--including avoided costs--of emissions reductions over the life of the program. Further, while we are pleased to see that the purpose of the program includes language supporting the reduction of co-pollutants, we would urge you to expand the goals of the program to include alleviating burdens and prioritizing benefits for environmental justice and impacted communities more broadly. Relatedly, we hope that the next iteration of draft language will include a proposed definition of "disproportionately impacted communities." Further, we would urge you to revise the language³ citing the need to "minimize disproportionate business and consumer economic impacts." As currently written, this language assumes solely costs and burdens on businesses, failing to account for

¹ <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/GHGCR2021ac4Comments.pdf>
and <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/ghgcr2021ac3comments.pdf>.

² <https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/CLIMATECHANGE/Documents/2020/Climate%20and%20Health%20in%20Oregon%202020%20-%20Full%20Report.pdf>.

³ 340-272-0010, Purpose and Scope; (3)(c)

the economic benefits and job opportunities, as well as the avoided costs, associated with reducing emissions. In addition, DEQ must define “disproportionate impacts” when used in this context.

II. Definitions (340-271-0020)

As referenced above, there are several important terms currently missing from DEQ’s proposed definitions. Notably, “communities disproportionately impacted” and “disproportionate business and consumer economic impacts.”

As discussed in greater detail in previous comments submitted on behalf of our organizations, it is critical that DEQ provide assurances of environmental integrity with respect to alternative compliance. We therefore urge DEQ to revise the definition of “community climate investments” to specify that CCI funds will account for a 1:1 reduction of emissions for each alternative compliance instrument, and that these alternative compliance instruments will not allow pollution to occur above the cap or persist unabated in communities.

Further, in its description of trading practices,⁴ DEQ notes that trading of compliance instruments is prohibited for the use of any “unconscionable tactic.” If this is intended to put safeguards around the use of trading, it is critical the DEQ define what activity falls under the category of “unconscionable” in connection with the transfer of compliance instruments.

Lastly, with respect to the definition of “compliance obligation,” we are concerned to see that this definition only applies to covered fuel suppliers. As discussed at length in previous written and verbal comments, our organizations believe that stationary sources’ process emissions must be included under the cap in order to ensure mandatory declining emissions limits on the industrial sector. While we discuss the issue further below, for the purposes of 340-271-0020, we would encourage DEQ to revise this definition to include stationary source emissions.

III. Covered Entities and Emissions Applicability (340-271-0110)

Natural gas utilities:

We strongly support DEQ’s proposal to regulate all natural gas utilities without setting a threshold. There are currently no mandatory greenhouse gas reduction targets set on this sector in Oregon, and it is past time to start reigning in emissions from this growing source of climate pollution in our state.

Non-natural gas fuel suppliers: As our organizations have expressed previously through written and verbal comments, our bottom line is that DEQ needs to set thresholds to encompass the emissions necessary for the cap and reduce program to serve as a guarantee that the state can achieve its greenhouse gas emissions reduction targets. This means that the threshold for regulation and distribution of compliance instruments must be set to hold non-natural gas fuel suppliers (e.g. oil companies) responsible for their pollution – no exemptions. With that in mind, we strongly support DEQ’s proposal to require that all persons that are related entities aggregate their emissions together to determine applicability.

⁴ See 340-271-0600 (2)(b).

However, we are extremely concerned that DEQ is proposing a threshold of 200,000 MTCO₂e for non-natural gas fuel suppliers. In suggesting such a high threshold for regulation for these entities, DEQ is proposing to give a free pass to roughly 80 oil companies and other fuel suppliers. Instead, we strongly urge DEQ to adopt a threshold of 25,000 MT for regulating this sector. A threshold of 25,000 MT would bring Oregon in-line with neighboring jurisdictions on the West Coast, as both California and Washington (among other jurisdictions) have adopted this threshold for non-natural gas fuel suppliers.

This threshold would help ensure that oil companies and other fuel suppliers are held responsible for their pollution, and would help avoid the potential gaming of the system that would be more likely to occur at higher thresholds to skirt regulation. It could also help address the concern around market volatility, as entities falling in and out would likely not be as big an issue.

Lastly, while we understand that DEQ has certain statutory limitations on the types of emissions it has authority to regulate (e.g. biofuels), and that other emissions sources are covered through different rules (a.g. landfills), it is not clear that these limitations apply to all of the proposed exemptions within DEQ's initial draft rules. For instance, DEQ has explained that the proposed exemption for fugitive emissions is due to these types of emissions being difficult to quantify. Given the large number of proposed exemptions for both fuel suppliers and stationary sources, we would strongly urge DEQ to detail for the public the explicit reasoning behind each proposed exemption, and to quantify the emissions being left on the table in not covering these emissions under the program.

Stationary Sources: Given that there are currently no greenhouse gas regulations on major industrial emitters in Oregon, it is critical that DEQ's program be designed to hold these sources accountable for their significant climate pollution by ensuring regulation of both fuel combustion and process emissions from stationary sources under the Climate Protection Program. DEQ's proposal to set a threshold of 25,000 MTCO₂e for coverage of stationary sources' process and combustion emissions is important to make sure major emitters are regulated.

Holding industrial sources accountable matters in protecting both community health and the climate. Ensuring emissions reductions from these sources is also important to maximizing economic benefits under the program. Exempting those sources from the cap would not only weaken the climate potential of the program but will also hurt incentives for technological innovation and advancement, especially if DEQ does not plan to update the best available technology determination on a frequent basis. What we have seen in other jurisdictions where industry is brought under the cap (or a similar dynamic with carbon pricing regimes) is innovative responses that help incentivize changes from the status quo and a bigger focus on decarbonization solutions (not just efficiency) that go further, faster. It is not clear that a "best available emission reduction" (BAER) approach alone would have this similar effect.

While a BAER approach can be an excellent complementary tool to reduce emissions onsite, we are concerned that--absent the cap itself and strong sideboards to ensure effective implementation--this approach lacks regulatory teeth. Specifically, we are concerned that regulating industrial emissions with a site-specific BAER approach only for process emissions--rather than requiring industrial emissions under the cap--could effectively exempt sources from mandatory declining emissions limits. Rather, incentivizing industry to take a holistic approach to decarbonizing would instead bring all the emissions

reduction tools and solutions to bear in a more direct way. As we have learned from other states and countries' experiences, a declining cap on industry is what paves the way for upgrades like electrification and super efficient boilers, and for innovations to manufacture in cleaner, less carbon intensive ways. In order to ensure effectiveness of applying a best available technology approach, these emissions must also be covered under the cap.

In addition, the value of a BAER depends on how it is designed and enforced. The baer should be rigorous and updated regularly. A baer should be assessed every 3-5 years to stay abreast of innovation. Working backward from how to ensure GHG reductions are factored into major decisions by the regulated entity (boiler upgrades, other major asset acquisitions, technology changes or renovations, changes in ownership, etc.) will help ensure emissions reductions are maximized and will mitigate the risk of stranded assets.

We believe DEQ should require the use of a qualified third party auditor for each entity, creating a pollution reduction evaluation that covers both greenhouse gases and pollutants that impact local health. A third party auditor can also help ensure that entities prioritize on-site reductions, and identify and consider local air pollution impacts and expected health benefits when determining what technologies are "available."

At a bare minimum, BAER should take into account, and incentivize reductions of, emissions that aren't otherwise regulated by the cap at a different point of regulation. This would include direct pipeline delivery of natural gas, direct combustion of coal, tires or other emissions from the industrial source that are not necessarily categorized traditionally as "process" emissions but that produce greenhouse gases. In other words, BAER should not enable a loophole for industrial emissions that are not otherwise regulated by CPP elsewhere.

Finally, we would be remiss if we did not raise once again that the program would be strongest if it included all major stationary sources of emissions, including fossil fuel power plants. Even if the legislature passes 100% clean electricity regulation this legislative session, it will not cover exported emissions from in-state gas plants. That is something we hope DEQ is open to revisiting in the future to ensure we maximize coverage of on-site emissions from major sources within Oregon.

We urge DEQ to maximize community, economic, and climate benefits by covering stationary sources emissions under the cap, and then requiring best available emissions practices to maximize onsite emissions reductions.

IV. Cessation of Covered Entity Applicability

We support DEQ's draft rule language that proposes that a natural gas fuel supplier is no longer covered under the program if its covered emissions are 0 MTCO_{2e} for six consecutive calendar years. While using the threshold for the baseline for coverage makes sense in the case of a zero MT threshold, the same is not true for substantially higher thresholds. Specifically, we are concerned with DEQ's proposal that an oil company or other non-natural gas fuel supplier is no longer covered under the program once its emissions are less than 200,000 MTCO_{2e} for six consecutive calendar years. If the Climate Protection Program is

doing its job, emissions from the transportation sector should be steadily declining each year from the outset of the program. If the goal of the program is to cap and *reduce* emissions, then the threshold for inclusion in the program should decline with the cap, to continue to incentivize further reductions.

V. Demonstration of Compliance (340-271-0510)

Under DEQ's draft rules, entities may demonstrate compliance for each MTCO_{2e} of covered emissions by submitting either one compliance instrument or one community climate investment credit (CCI credit). Just as a compliance instrument is defined to authorize the emission of one MTCO_{2e}, each CCI credit must similarly be defined to ensure a 1:1 reduction of emissions. CCIs must be designed to ensure that pollution does not occur above the cap or persist unabated in communities. In other words, CCIs should not be designed to blow the cap, i.e. the overall emissions budget for these sectors. Instead, it should be an alternative compliance pathway under the cap. Further, we continue to strongly urge DEQ to ensure that the program: requires onsite emissions reductions first; incorporates air quality impacts and considerations like transitioning off combustion of fossil fuels; and requires that investments happen in and directly benefit Oregon communities, prioritizing investments in frontline/impacted communities.

Banking/Trading

Finally, in focusing on flexibility mechanisms, DEQ seems to assume that cost-effective options are not currently available for industry to comply, when in fact there are substantial cost-effective opportunities for industry to reduce emissions now, that can in many cases save industry money.

Our groups have consistently maintained that, in considering trading as a compliance mechanism for the program, DEQ must ensure the value inherent in trading is used to advance, and not frustrate, just and equitable climate mitigation priorities, ensure reductions occur at the pace and scale necessary to meet the state's mandatory climate targets and best available science over time, and protect against windfall profits for regulated entities and market manipulation.

We are concerned that DEQ is proposing to allow essentially unfettered trading and banking of compliance instruments. Banking of allowances can delay emissions reductions if entities are over-allocated allowances and are able to put off decarbonization efforts. This has been the case in similar programs globally, particularly the European Union, and we should not repeat similar design flaws here. As currently drafted, these rules could in theory result in an entity banking its compliance instruments until the end of the program without having effectively reduced its emissions.

Moreover, if DEQ believes that providing compliance flexibility is essential, we would urge the agency to instead consider using its authority to create a reserve (as it is proposing to do for new market entrants) for price containment and market liquidity (so they might not CCI from above the cap), etc. Further, we urge DEQ to establish strict holding limits and use a third party to help track allowances, to ensure that an entity is not exceeding its holding limit of allowances.

In addition to the above feedback on the proposed draft rules, we also offer the following comments on other aspects of program design discussed at the meeting, including approaches for determining the base emissions cap and compliance instrument distribution:

VI. Determining the Base Emissions Cap and Trajectory

The baseline and trajectory of the cap matter immensely for the overall environmental integrity of the program and actually moving these regulated sectors toward decarbonizing and meeting our state's necessary climate goals.

The initial cap should be set at a level that will require emissions reductions from day one. Functionally, this would mean setting the cap below the estimated emissions for the covered entities for a determined baseline year. We have lost several years of emission reductions with delayed action on emission reductions, and there is no reason to lock in another year of status quo in Oregon.

We understand DEQ's desire to use a baseline year that has reported data for constructing the initial cap. If DEQ chooses to go with a baseline other than 1990 (like 2010), we would strongly urge DEQ to provide data on the difference in baseline emissions to demonstrate how the program will achieve at least the science-backed goals of the executive order. If DEQ chooses a baseline with higher emissions than 1990, it should adjust the downward trajectory of the cap decline factor to achieve similar emission reductions with the additional emissions baked in.

The emission reduction targets and resulting cap trajectory are essential to this program actually moving the needle on GHG emission reductions in these sectors. Without bold, strong targets and an ambitious cap trajectory ratcheting down annually, this program will not achieve its key goals. A minimum of 45% GHG reduction below 1990 levels by 2035 is the most important emission target and accompanying trajectory to ensure we reduce GHG emissions and maximize the benefits of replacing climate pollution with clean energy solutions. By 2050, DEQ's program should be setting a target of 90% to get us closer to Washington and California aiming for zero carbon. The target should at least be achieving 80% reduction by 2050 to be consistent with the Executive Order. The targets presented in Scenario 3 of DEQ's modeling are most consistent with what science requires and keeps Oregon most aligned with neighboring states who are putting their regulated sectors on a trajectory to zero carbon over the next 3 decades.

The regulated entities have largely been preparing for climate regulation that reigns in their emissions for years, and should be able to comply with GHG reduction targets in line with science. Consistently, we have seen in other states and countries with similar programs that setting clear and ambitious GHG reduction targets is achievable. Regulated entities, businesses and industries adapt and plan, and finally factor climate into business decisions going forward. In California, we have seen their economic growth become decoupled from emissions intensity, and we can expect similar success here once we move past the status quo. The current emission levels of our biggest sources are causing deadly, harmful and expensive climate impacts in Oregon, and particularly for frontline communities. We cannot lock in delayed action by setting a less ambitious target or cap trajectory, or deferring any longer when the transition to clean energy alternatives starts for these sectors.

VII. Compliance Instrument Distribution

We appreciate the opportunity to provide input on how to structure compliance instrument distribution. As our organizations have weighed in throughout the rulemaking process, we have strong concerns with direct distribution to polluters essentially, free allowances -- and would again urge that DEQ not go that route. If that is how DEQ chooses to proceed, we urge that there at least be safeguards in place. As outlined in our previous comments, these safeguards could include:

- The initial allocation of compliance instruments should be substantially less than the baseline emissions calculation for the entity so entities do not receive 100% free allowances and would have to reduce emissions from day one. And, the compliance instruments allocation should decline substantially every year thereafter.
- Ideally, DEQ would also put conditions on the distribution of compliance instruments – e.g. covered entities would need to have an emissions reduction plan in place to receive direct distribution and/or demonstrate emissions reductions to receive compliance instruments.

Thank you for your consideration, and we look forward to continuing to work with you to ensure a healthy future and a stable climate for all Oregonians through the establishment of a strong and just Climate Protection Program.

Nora Apter, *Climate Program Director*
Oregon Environmental Council

Meredith Connolly, *Oregon Director*
Climate Solutions

June 4, 2021

Richard Whitman
Director, Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232

Re: Oregon Climate Protection Program

Director Whitman,

Thank you for the opportunity to respond to the slide deck presented by the Oregon Department of Environmental Quality (“DEQ”) at the fifth RAC meeting of the Oregon Climate Protection Program (“CPP”). As a reference, the Oregon Farm Bureau Federation (“OFB”) is the state’s largest general agriculture association representing nearly 7,000 families engaged in production agriculture.

While we appreciate the release of portions of the draft CPP rules, the May 25th meeting materials left stakeholders with many questions about key components of this rulemaking: the regulation of stationary sources, framework for community climate investments (“CCIs”), and distribution of compliance instruments. OFB supports broad trading and banking flexibility as an avenue to control costs. However, the agency’s proposed alternative compliance option, CCIs, will not contain costs for consumers, and will instead drive up the cost of compliance with the CPP. We recommend that DEQ offer regulated entities a variety of alternative compliance instruments, including those available in the global marketplace and those available through voluntary agricultural practices. CCIs should not be the sole pathway to alternative compliance with the CPP. DEQ should also prioritize an analysis of consumer cost impacts to inform the development of CCIs and cost containment mechanisms prior to the release of draft final rules for public comment.

OFB encourages the DEQ to adopt a threshold for the regulation of fuels of no less than 200,000 metric tons of carbon, as proposed in the draft rules. This threshold would capture the overwhelming majority of emissions while limiting the regulatory burden of the program on small businesses and the cost impacts to their customers, including farm and ranch families. We also support the exemption of bio-mass derived fuels in draft Rule 0110.

OFB opposes the agency’s expansive purpose and scope language in draft Rule 0010. The agency should ensure the scope of the CPP aligns with Governor Brown’s Executive Order 20-04, which applies specifically to the reduction of greenhouse gases, not co-pollutants. As currently drafted, the proposed expanded scope—to co-benefits and public welfare—is likely to

lead to unnecessary conflict and confusion with existing programs. DEQ should clarify that the purpose of the CPP is to reduce global greenhouse gases, as directed by the Governor.

As shared in previous comments, OFB remains concerned that consumer cost impacts are not adequately addressed in the draft rules. For farm and ranch families, the costs of compliance with the CPP could be significant, given that agricultural production is both fuel and energy intensive. We respectfully urge the agency to prioritize cost controls in any future version of the draft rules so that rural Oregon families don't bear a disproportionate cost burden under this new regulatory program.

Sincerely,

A handwritten signature in black ink, appearing to be 'JD', with a long horizontal stroke extending to the right.

Jenny Dresler
Lobbyist
Oregon Farm Bureau

June 1, 2021

Colin McConnaha
Nicole Singh
Office of Greenhouse Gas Programs
Oregon Department of Environmental Quality
Sent Via Email: Colin.McConnaha@state.or.us; Nicole.Singh@state.or.us

RE: Oregon Fuels Association RAC #5 Comment Letter

Dear Colin and Nicole:

Thank you for an opportunity to provide comment following the Climate Protection Program rules advisory committee meeting. The Oregon Fuels Association (OFA) is the voice of Oregon's small, locally-owned fuel stations, fuel distributors and heating oil providers. It is important to understand that OFA members are not national or multinational businesses or major oil companies that navigate complex climate regulations daily. In fact, today our members are making difficult decisions on how to comply with Oregon's existing regulatory structures designed to reduce GHG emissions, all of which have a direct expense on these small businesses. Adding yet another new, complex regulation will unnecessarily add significant expense on these local businesses – an expense that can be avoided without hurting the state's GHG reduction goals. Without more justification, as explained below, our members cannot and should not be expected to manage a complex regulatory program competing with large businesses in the fuel sector – especially since it will not deter the state from meeting its GHG reduction goals.

OFA members have demonstrated that they are at the forefront of environmental stewardship. For example, OFA members have made significant investments in infrastructure to enable fuel blending that lowers the carbon intensity of fuels, thereby lowering the state's GHG emissions. The same Clean Fuels Program (CFP) carbon intensity targets are expected to more than double pursuant to the Governor's EO 20-04. In short, investments by our members have helped eliminate millions of tons of greenhouse gas emissions since the Clean Fuels Program (CFP) was implemented in 2015.

To reiterate our previous comments that are relevant context for comments to RAC meeting number 5:

- *Lowering the threshold for fuel under the program will have little to no climate impact.* Nearly, 100% of transportation fuels is currently regulated under the CFP and nearly 90% of transportation fuel will be regulated under a 300,000 MtCO₂e threshold for Cap-and-Reduce, allowing Oregon to meet its GHG reduction goals. The state can still meet its stated goals outlined in EO 20-04.
- *Gaming the system in the fuel market is impractical.* Oregon fuel distributors purchase fuel from major oil companies under long-term contracts. OFA members have little to no ability to change the detailed terms of that relationship with their supplier and are simply price takers in the fuel marketplace. For example, a branded fuel station *must* pick up their fuel at a specific location as specified in the contract by the oil company. It cannot then choose to pick up different fuel, at a different location without breaching its contract.

Moreover, due to the significant compliance costs with the Clean Fuels Programs (CFP), many distributors have decided to purchase obligated fuel in-state (fuel already compliant with the standard). This means that any changes in business practices for many distributors would also mean significant new CFP requirements. Meaning, becoming a fuel importer in order to avoid cap-and-reduce direct regulation would subject a company to new regulations under Oregon's CFP program. Again, these changes for OFA member businesses are substantial and thereby mitigate the threat of gaming the program.

- *Cap-and -Trade programs in the States of Washington and California regulate oil refiners, not local distributors.* Those states have recognized that the cost of compliance is far more expensive for a local fuel distributor than for a multinational company. The regulations and burdens on small and medium sized businesses should be recognized and mitigated by the DEQ in the CPP.

The following are direct comments to the proposed rules, and to some extent, answers to questions raised during RAC #5 meeting.

Threshold: *OFA supports a regulatory threshold of 300,000 MtCO₂e* for the transportation fuels sector. Lowering the threshold for fuel under the program will have little to no climate impact. This threshold is appropriate because it will balance DEQ's needs to reduce GHG emissions while not unfairly burdening small transportation businesses. Lowering the threshold to 200,000 MtCO₂e could impact a number of small businesses that directly compete with a neighboring state for business. While we appreciate the recognition that a very low threshold does not make sense for the program, we would encourage DEQ to again consider raising the threshold back to 300,000 MtCO₂e.

Threshold Determination: At the outset of the program, DEQ should use a 6-year average to determine whether a transportation fuel business should be in the program or out of the program. A 6-years is the same amount of time DEQ is considering for an entity to be in the program, at a minimum. A 3-year average is too short and may not accurately reflect the long-term contracts that are common in this industry. With contracts ranging from 10-15 years, it would be more appropriate to use a longer period to determine whether a small or medium sized business should shoulder the disproportionate share of the regulatory costs compared to others in the program.

Moreover, a short averaging time could put small border regional businesses at a severe economic disadvantage. Similar to the reason to avoid regulating natural gas power plants, a low threshold (even at 200,000 MtCO_{2e}) could push fuel sales into a neighboring state. That leakage would not only hurt these Oregon employers, but would push fuel purchases in a state that neither follows the Clean Fuels Program nor a cap-and-reduce program. This will actually increase GHG and co-pollutants in those low-income areas.

Reserves: We agree that using reserves to cover new fuel entrance is a smart approach. This will lessen the impact of new entrance on existing regulated entities. The amount of reserves a new entrant may receive should be under a newly established, individual cap and cap decline for, at a minimum, a three-year period when entering the program. This will provide these small and medium sized businesses an appropriate regulatory pathway as opposed to a potential regulatory cliff that would be created in the event that the fuel distributing entity was pulled into the program in later years and would all of a sudden be required to purchase thousands of CCI on top of internally absorbing the cost of complying with new regulations. There should not be any limits to the use and distribution of these compliance instruments.

Covered Entity Trigger: We believe a 3-year average is the most appropriate way to calculate emissions for the purpose of determining when a non-covered entity exceeds the established threshold and thereby becomes a covered/regulated entity. DEQ is proposing that one year of exceeding the threshold means an entity will be regulated by the program for six years. We disagree that one year is enough to determine whether a distributor or retailer is likely to exceed the threshold for future years. Complying with this program will require hiring new, trained personnel and resetting relationships with their retail customers. This is an unbalanced and unfair approach because it benefits DEQ at the expense of Oregon's small and medium sized business.

Emergency Exception: Under any scenario, including thresholds and thresholding activation mechanisms, DEQ must include a provision that exempts year(s) where there is an unanticipated disruption in fuel distribution and demand. As a timely example, several states recently experienced a significant issue when a pipeline was unable to deliver fuel as expected. If something in Oregon causes a major disruption in fuel distribution – whether an issue related to a pipeline or storage – the program should not use those years in any calculation. In addition, with the growing number of natural disasters, fuel demand could spike causing distributors to import more fuel than anticipated to respond to emergencies. Again, those events should not be used in a calculation to determine whether an entity is covered or uncovered by the program.

Thank you for considering our comments.

Sincerely,

Mike Freese
Oregon Fuels Association

MEMORANDUM

To: Richard Whitman, Director, Oregon Department of Environmental Quality
Sent via email: GHGCR2021@deq.state.or.us

From: Oregon Manufacturers and Commerce
Shaun Jillions, sjillions@oregonmanufacturers.org

Date: June 6, 2021

Re: Feedback on Oregon Climate Protection Program: Rulemaking Advisory Committee Meeting 5

Thank you for the opportunity to provide feedback on the topics presented by the Oregon Department of Environmental Quality (“DEQ”) at the fifth meeting of the Oregon Climate Protection Program: Rulemaking Advisory Committee (“RAC”). As a reference, Oregon Manufacturers and Commerce (“OMC”) is an association dedicated to promoting, protecting, and advancing Oregon manufacturers and their allied partners.

We provide the below comments in response to the questions posed by DEQ at the fifth RAC meeting.¹

Any considerations or suggestion for purpose and scope (Rule 0010)?

DEQ should narrow the scope of the CPP to align with Governor Brown’s executive order 20-04, which applies explicitly to the reduction of greenhouse gases. The executive order directs DEQ and the EQC to “*cap and reduce greenhouse gas emissions from large stationary sources of greenhouse gases..., from transportation fuels..., and from all other liquid and gaseous fuels.*” However, the agency’s Rule 0010 expands the scope of the program beyond Governor Brown’s executive order, to achieve co-benefits from reduced emissions of other air contaminants and enhance public welfare for Oregon communities. This expanded scope is likely to lead to unnecessary conflict and confusion with existing air contaminant programs and is not contemplated in the Governor’s executive order.

What are your thoughts on DEQ’s leanings relating to covered entity thresholds (Rule 0110)?

a. No threshold for covered emissions natural gas utilities; all are covered

¹ OMC’s comments reflect the preliminary stage of DEQ’s work on the topics considered during the fifth RAC meeting. OMC reserves the opportunity to develop or change its perspective on aspects of these topics as DEQ’s proposals evolve.

OMC is concerned that DEQ's proposal for upstream regulation at the natural gas utility will result in the leakage of emissions to other jurisdictions. The costs of compliance with the CPP will ultimately be borne by ratepayers, and energy intensive facilities whose energy consumption is regulated upstream have no compliance pathway under the agency's recommendation, other than to pay a higher price for the consumption of natural gas or possible curtailment. Without a flexible pathway to address anticipated compliance costs under the CPP, this regulatory approach will ultimately result in leakage and the closure of Oregon-based energy intensive, trade exposed (EITE) facilities.

b. 200,000 MTCO₂e of covered emissions for non-natural gas fuel suppliers

OMC supports a threshold for non-natural gas fuel suppliers of no less than 300,000 MTCO₂e, which would capture the overwhelming majority of emissions while limiting the regulatory burden of the program on smaller businesses and the cost impacts to their customers. We also urge DEQ to create program off-ramps in the event the agency's aggressive cap trajectory cannot be met with existing technologies.

c. 25,000 MTCO₂e of covered emissions for stationary sources

As discussed in question (a) above, OMC remains concerned that EITE entities with emissions resulting from the combustion of natural gas have no efficient or cost-effective compliance pathway under the proposed CPP rules. While the rules provide a compliance pathway to stationary sources with process emissions that exceed 25,000 MTCO₂e and stationary sources that are directly connected to the natural gas pipeline, energy intensive facilities receive no such consideration under the CPP. DEQ must provide a flexible pathway to compliance to all EITE entities.

What data is best suited to determine the base cap? How many years of data should be used to determine the base cap?

Of the three options for base cap presented to the RAC—1990, 2010, and 2017-2019—OMC recommends that DEQ adopt a base cap of 2017 to 2019, averaged over no less than three years. Facilities have adopted pollution control technology in recent years that require the installation of natural gas-fired control systems in response to state environmental programs; the tradeoff is the increased combustion of natural gas. DEQ should establish a base cap based on the most recent data set in order to accurately reflect recently adopted pollution control equipment by regulated entities. Also, determining the base cap based on a three-year average makes sense as it can help level out irregularities that may result from unusual weather patterns or market instability. Additionally, DEQ should avoid establishing a base cap based on data from 2020 and 2021, given the impact of the global pandemic on the state's economy and local manufacturers.

What other considerations might there be for determining the base cap?

OMC supports DEQ's assumptions for determining the base cap. Emissions that are regulated through a different policy approach, such as a best available emissions reduction assessment, should not be included in the base cap. This will ensure that emissions are not double counted under the CPP.

What are your thoughts on the draft rules for demonstration of compliance and use of a three-year compliance period?

OMC has consistently advocated for consideration of a compliance period for the CPP of no less than five years to allow for the identification and adoption of emerging technologies (if they even exist). We also encourage DEQ to consider a longer compliance period at the outset of the program.

What are your thoughts on the draft rules for trading compliance instruments, including the process for reporting trades to DEQ? What are your thoughts on the draft rules for banking compliance instruments?

OMC supports broad flexibility for trading and banking compliance instruments as a means to control costs in the CPP. However, OMC is concerned that under DEQ's Trading Rules (0600, 0610 and 0690), confidential business information could be made public record through the filing of trading forms. As such, we encourage DEQ to ensure that proprietary information is protected under the CPP.

OMC supports DEQ's proposed Banking Rule (0340), which allows covered entities to bank compliance instruments indefinitely or until they demonstrate compliance, are transferred to another covered entity, or the covered entity meets the criteria for cessation from the CPP.

Thank you for the opportunity to provide the agency with feedback during the public comment period. OMC looks forward to future engagement with the DEQ.



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May 30, 2021

Nicole Singh, Senior Climate Policy Advisor
Colin McConnaha, Manager, Office of Greenhouse Gas Programs
Department of Environmental Quality
700 NE Multnomah St.
Portland, OR 97232
Submitted to: GHGCR2021@deq.state.or.us;

Dear Ms. Singh, Mr. McConnaha, Mr. Mirzakhilili, Chair George

Thank you for the opportunity for the Sierra Club to comment on the agency's Climate Protection Program (CPP) rulemaking. The Oregon Chapter of the Sierra Club is Oregon's largest long-standing grassroots environmental organization, representing nearly 75,000 members and supporters in Oregon who work to protect our state's environment and public health. The Sierra Club supports a strong and rigorous Climate Protection Program to cap and reduce greenhouse gas (GHG) emissions. Our comments today focus largely on the regulation of the electricity generating sector under the proposed CPP and the design of the Community Climate Investment (CCI) alternative compliance option.

Regulating the Electricity Sector Under the Program

DEQ's objective and the overarching purpose of the Climate Protection Program is to place a firm and declining limit on greenhouse gas pollution across major emitting sectors of Oregon's economy while promoting equity and justice. We are concerned, as are many other stakeholder groups, about DEQ's proposal to exempt the electricity generating sector from the Climate Protection Program. Especially concerning is your proposal to exempt electricity produced in Oregon from fracked fossil gas. This proposed exemption appears to violate the very purpose of the program as well as the governor's Executive Order 20-04, and DEQ's explanation for why this exemption is needed and allowable has been murky and inadequate. We urge the Environmental Quality Commission to question DEQ staff more thoroughly about this serious point of disagreement within the rule-making Advisory Committee, and require DEQ to more clearly and concretely explain the rationale behind the agency's position. Our opinion is that the electricity generating sector should be included in the CPP to achieve the needed GHG reduction for Oregon and fulfill the mandate set by the governor.

While we do hope the Legislature acts to further reduce carbon from Oregon’s electricity sector, there is no guarantee any legislation will be successful. The CPP can be an effective mechanism for dealing with Oregon’s electricity sector emissions. We suggest DEQ and the EQC revisit this question after the end of the 2021 legislative session and assess what gaps remain in reducing electricity generation emissions that the CPP should fill.

Community Climate Investment (CCI)

We support the use of a CCI concept as part of Oregon’s GHG Reduction Program. However, the CCI program must be designed carefully and correctly to deliver real, verifiable emission reductions that directly benefit the health of environmental justice and frontline communities in Oregon. The CCI program should deliver multi-pollutant benefits directly to frontline, environmental justice (EJ) and impacted communities; and we trust DEQ will include those EJ community interests and voices in the design and ongoing oversight of such a program. The CCI option should be available only when adequate direct emission reduction is not technically feasible at a regulated facility.

We believe DEQ should develop a set of draft overarching principles right now for governing the CCI, and solicit public comment on those principles along with the draft rule language, and present both to the Environmental Quality Commission (EQC). Further refinement of CCI program principles and governing criteria can and will continue post rule-making as DEQ convenes workgroups to flesh out the details of the program. But we believe some initial governing principles are important to vet and present to the EQC as part of the final rule.

The following are some design principles we believe are key for a successful Oregon CCI program:

1. DEQ should use every opportunity within the CCI option to maximize public health benefits for the people of Oregon, especially our most vulnerable citizens in Oregon’s environmental justice and impacted communities. This in part would mean limiting CCI projects to in-state (Oregon) projects, and not allowing out-of-state projects that provide indirect, less reliable, less verifiable, less valuable benefits to Oregon communities.
2. CCI projects must produce at minimum the same amount of GHG emission reduction that would have been required of the regulated entity using this compliance option. To ensure environmental integrity, every CCI project must meet the same criteria as any legitimate emissions offset (consistent with emission reduction credit principles in Division 268). Each project must produce emission reductions that are quantifiable and verifiable (i.e. conducted by or certified by an independent 3rd party). They must be enforceable, permanent, surplus (i.e., in addition to what otherwise would occur without the CCP), and contemporaneous (i.e., the actual emission reduction must occur within a reasonable timeframe from when the credit is granted).
3. Critical to the CCI program will be how projects are prioritized and selected for funding. Beyond simply defining what types of projects may be “allowable”, it is essential that DEQ develop an overarching set of values, principles, and criteria that will govern how CCI projects are prioritized and selected for funding. Public input and transparency are essential components of a successful CCI effort. The CCI’s key principles and operating guidance should be developed through

workshops with interested committee members and representatives of impacted communities across a demographically, economically, and geographically diverse range of stakeholders. DEQ's CCI guiding principles should:

- Center the opinions and needs of frontline EJ and impacted communities.
 - Give the highest priority to projects that provide multi-pollutant emission reductions (GHG + particulate + air toxics) that directly benefit vulnerable urban and rural neighborhoods, especially those located in proximity to regulated facilities or sources of high risk air pollution.
 - If forestry projects are considered, include only projects that are consistent with the best current science, occur within the state, and meet all environmental integrity criteria (i.e. are quantifiable, verifiable, permanent, enforceable, contemporaneous, and surplus). In addition, any such projects must provide meaningful multi-pollutant public health benefits to front-line EJ communities.
4. We disagree that the goal of the CCI program should be to provide reductions at “minimal cost”. The purpose of the CCI program should be to provide a voluntary alternative compliance option that may be less expensive or more technically feasible relative to on-site reductions, but the purpose is not to provide the “cheapest possible” option. Giving priority to the “cheapest” or “minimal” cost options risks allowing out-of-state or global emission reduction “credits” that are less verifiable, less enforceable, and much less valuable to the people of Oregon. To help safeguard against the abuse of this program, DEQ should also use a realistic price for valuing carbon reduction, such as EPA’s social cost of carbon.

Again we urge the Environmental Quality Commission to question DEQ staff more thoroughly about the reasons for exempting the electricity generation sector from the CPP. We encourage the EQC to review any legal analysis from the Department of Justice about DEQ’s authority to regulate this sector. The EQC should reexamine adding electricity generation to the CPP based on outcomes of the 2021 legislative session. DEQ should also develop a set of overarching principles for governing the CCI, solicit public comment on those principles along with the draft rule language, and present both to the Environmental Quality Commission (EQC).

Thank you for your consideration.



David Collier
Conservation Committee Member
Oregon Sierra Club

cc: Sam Baraso, Vice-Chair, Oregon Environmental Quality Commission,
Stephanie Caldera. stephanie.caldera@deq.state.or.us

From: Jana Jarvis <Jana@ortrucking.org>
Sent: Friday, June 4, 2021 3:53:19 PM
To: SINGH Nicole * DEQ <nicole.singh@deq.state.or.us>

Following DEQ's carbon rulemaking RAC #5, the following are questions and comments from the Oregon Trucking Associations relative to the materials provided at that meeting.

1. To date, we have not seen any clear analysis of the cost to transportation fuels as a result of this program. For Oregon-based carriers, the additional cost for fuel can create a competitive disadvantage and the ambiguity of the data presented only highlights this concern.
 - a. What will the initial cost increase be to a gallon of diesel as this program is implemented?
 - b. Will there be off-ramps to the program as a cost-control measure to keep Oregon's trucking industry viable?
2. The program relies on expansion of Oregon's Clean Fuels program from 10% to 25%. Blending biofuel at higher rates creates additional maintenance requirements for today's heavy truck and impacts the engine performance negatively. Renewable diesel, on the other hand, performs well and is a more preferred option. Unfortunately, the bulk of renewable diesel is currently supplied to California with only limited supplies of product available to Portland-based trucking companies.
 - a. What will the State of Oregon do to make renewable diesel more available to Oregon trucking companies?
 - b. Since renewable diesel is significantly more expensive than petroleum-based diesel, will Oregon be able to provide the necessary financial incentive to keep product cost in line with conventional diesel?
 - c. Will Oregon provide incentives to locate facilities in Oregon to produce renewable diesel?
3. OTA advocates to regulate this program at the primary level of import into the state, best assured by regulating at the 300,000 level. However, discussions around entities that exceed the established level being required to participate in accessing compliance instruments for six years, rather than the one year they exceeded the limit, seems excessive. Averaging these limits, rather than selecting one year of anomaly, would serve to more fairly reflect the goal of the program.
 - a. Will DEQ create an exception process in the event that normal fuel distribution channels are impacted through natural disaster or economic disruption?
 - b. With the limited number of fuel importers into the state of Oregon, who does DEQ foresee as new entrants into the fuel distribution market that would be subject to these compliance instruments?
4. With the limited number of fuel importers into the state of Oregon, who does DEQ foresee as new entrants into the fuel distribution market that would be subject to these compliance instruments? Success for carbon reduction in the coming years is dependent on a reduction of compliance instruments in the future. Technology innovations are limited in the heavy truck market and while electric and alternative fuel technology is currently being developed, adoption of this new technology will be dependent on factors such as range and fueling infrastructure. As a result, diesel will likely be the fuel of choice for years to come for the industry that literally moves Oregon's economy.
 - a. Will this program simply result in fuel rationing?
 - b. Will Oregon be prepared to account for limited product availability as a result of limited fuel supplies?

Thank you in advance for your answers to these questions.

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June 8, 2021

Nicole Singh, Senior Climate Policy Advisor
Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232

RE: PPGA Comments - Cap and Reduce Rule Advisory Committee Meeting, May 25, 2021

Dear Ms. Singh:

Thank you for the opportunity to provide feedback on the Oregon Department of Environmental Quality's (DEQ) fifth Rules Advisory Committee (RAC) meeting of May 25, 2021.

The Pacific Propane Gas Association (PPGA) is the state trade association representing Oregon's propane industry. Our membership includes small multi-generational family businesses and large corporations engaged in the retail marketing of propane gas to Oregonians. PPGA members provide propane to the residential, commercial, agricultural, transportation and industrial markets throughout Oregon. Currently, users of propane have found value in propane's environmental benefits, versatility, and affordability.

PPGA offers the following comments regarding key topics discussed at the fifth RAC meeting and outlined in the draft rules proposed by DEQ.

Determining Base Emissions Cap

The PPGA believes when determining the base emissions cap, it is important for the DEQ to use actual data and not make estimations using a baseline that does not have data support. We believe the base cap should reflect a more recent, multi-year, emissions average. Oregon has seen economic and population growth in the last ten years and the fact remains that these things result in more energy consumption. Establishing a base cap that does not reflect this will likely lead to more difficult compliance for covered entities, could result in larger market disruptions and lead to higher consumer costs.

Point of Regulation/Covered Fuel Supplier

In previous comments, the PPGA had suggested a 300,000 MtCO₂e threshold for covered fuel suppliers. The PPGA is generally supportive of DEQ's leaning to a 200,000 MtCO₂e threshold. This threshold will capture a vast majority of emissions while eliminating regulatory burden on our smaller members. As we have shared before, PPGA members are small businesses often with 5-10 employees. Having a complex regulatory reporting scheme would be a major challenge to many of our small business members. We appreciate DEQ's recognition of this issue and work to avoid that burden on small businesses.

Having a higher threshold will also help mitigate year-to-year variability as a covered fuel supplier. If the level were set at 25,000 MtCO_{2e}, for example, many propane companies would fall in and out of being a covered entity likely depending on the winter weather. Again, this would create regulatory burdens for our members who would not know if they were a covered entity on a year-to-year basis.

Exempted Emissions

The PPGA strongly supports the draft rules provision to exempt emissions that are from the combustion of biomass-derived fuels including renewable propane. Renewable propane is a key part of our industry's effort to decarbonize our fuel. Having a regulatory incentive to bring more renewable propane into the market is critical for further adoption. Already in Oregon, because of the Oregon Clean Fuels Program we estimate much of the propane used in the transportation sector is renewable.

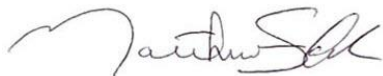
Renewable propane is currently generated primarily as a co-product of renewable diesel, renewable propane can scale with the increased scaling of that fuel. About 900 million gallons of renewable diesel were consumed in the United States in 2019, based on estimates using U.S. Environmental Protection Agency data. Unfortunately, only a fraction of the renewable propane from renewable diesel production is being captured for delivery to the market as most of it is currently being consumed at the plant. Having the Climate Protection Program exempt emissions from renewable fuels will provide further incentives to bring these fuels to market.

Multi-Year Compliance Period

The PPGA remains concerned about DEQ's leaning towards a 3-year compliance period. We support DEQ's desire to smooth annual variability and provide certainty but have concerns that 3-years will achieve those goals. The PPGA continues to believe a 5-year compliance period will better address these concerns. For example, in the propane industry, in the last five years, we saw annual consumption of between 66.6 million gallons and 97.8 million gallons. This is a large variation over a short period of time. It is best to offer a compliance period that adequately accounts for such variation.

Thank you for allowing us to share our feedback. We look forward to continuing to work on this important rule making process.

Sincerely,



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June 4, 2021

Steven D. Smith
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Ms. Nicole Singh
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Submitted Electronically to: GHGCR2021@deq.state.or.us

Re: Comments on Oregon Climate Protection Program - RAC Meeting #5

Dear Ms. Singh,

Phillips 66 appreciates the opportunity to comment on the materials and discussion from the fifth Oregon Climate Protection Program RAC meeting on May 25, 2021. We appreciate the opportunity to be a RAC member and are hearing important viewpoints from other stakeholders.

Program Scope

Phillips 66 is increasingly concerned that the scope of the cap program continues to shrink and is now projected to cover only about 45% of Oregon emissions. By comparison, California's Cap-and-Trade program covers over 80% of California emissions. What started as a broad economy-wide program in Oregon seems to now be potentially reduced, if we understand correctly, to covering approximately 12 fuel suppliers. ODEQ rationale for not including other sectors under the cap is either: 1) legal constraints, 2) more effective mechanisms exist for other sectors, or 3) administrative burden.

The reduced number of obligated sources under the cap would potentially reduce credit liquidity and program transparency.

The exclusion of sectors from the program should not result in additional reduction obligation for those covered under the cap.

Recommendation: OEQ should return to including more sectors under the cap, either at program start or in future amendments. If ODEQ maintains the reduced program, features such as banking, trading, multi-year compliance periods, fair and reasonable base cap and reduction rate, and a robust Community Climate Investment (CCI) program become even more critical.

Threshold for Non-Natural Gas Fuel Suppliers

Phillips 66 does not support the proposed obligation threshold of 200,000 metric tonnes CO₂e per year (tpy) for non-natural gas fuel suppliers. California's program threshold of 25,000 tpy is working. If the proposed threshold excludes 10% (per ODEQ estimate) of the approximately 20 million tpy of transportation emissions, this equates to excluding approximately 2 million tpy from the cap. This proposed exemption seems unwarranted given the State's aggressive carbon reduction goals.

Recommendation: Adopt a threshold of 25,000 or zero tpy.

Covered vs. non-Covered Fuels

As we move further into rulemaking, it will be important to add regulatory clarity on the specific fuels and fuel uses that are covered vs. not covered under the cap. Slide 21 in the May 25 presentation adds some clarity, but further detail will be important.

Base Cap Determination

ODEQ is correct to look to the 2017-2019 period in selecting the base cap. Emissions in 2020 and early 2021 are likely not representative due to reduced economic activity.

Recommendation: The base cap should be equal to the single highest emission year in 2017-2019 unless economic forecasts suggest that actual 2022 emissions could be higher.

Initial Reductions

It is unusual for a major compliance program requiring emission reductions to be effective almost immediately (2022) following adoption. This appears to be the case for the Climate Protection Program. The program's initial emission reductions (cap slope) should allow obligated parties adequate time to develop compliance plans which may include capital planning, funding, and construction of new low-carbon facilities.

Recommendation: The RAC should debate the pros and cons of a program start in 2022 vs. later year. If ODEQ maintains 2022 as year one, the cap for 2022 should be equal to the baseline cap. Reductions for the first compliance period should be modest.

New Entrants and Compliance Instrument Reserve

The rationale for a Compliance Instrument Reserve for new entrants is not clear. In the case of non-natural gas fuel suppliers, the appearance of a new entrant does not necessarily mean there is new and additional statewide fuel sales and emissions. Instead, it may just mean a shifting of fuel suppliers with new entrants gaining sales and other companies reducing sales. Demand may be overall unchanged. The proposed “proportional” distribution system could be designed to accommodate this. Diverting compliance instruments to create a stockpile for potential future new entrants reduces critical allocation to existing sources.

Recommendation: Revisit rationale for Compliance Instrument Reserve. If ODEQ maintains the Reserve, it should be minimal.

Community Climate Investments (CCIs)

Phillips 66 provided significant input on the CCI feature in prior comments. With compliance required as early as 2022, it is critical that ODEQ define this feature as soon as possible including the allowable use percentage and price for CCIs. Without clarity, CCIs cannot be part of compliance planning.

Recommendation: ODEQ should clarify the CCI feature soon and allow CCIs for projects that strengthen natural and working lands.

Thank you for this opportunity to submit comments. You can reach me at 832-765-1779 or steven.d.smith@p66.com.

Best Regards,

Steven D. Smith



June 4, 2021

Oregon Department of Environmental Quality
Office of Greenhouse Gas Programs
700 NE Multnomah St., Suite 600
Portland, OR 97232

Sent Via Email To: ghgr2021@state.or.us

RE: Climate Protection Program 2021 – RAC Meeting #5

Dear members of the Environmental Quality Commission, Director Whitman, DEQ staff, and members of the Rulemaking Advisory Committee,

As always, we appreciate the opportunity to provide comments on DEQ's draft Climate Protection Program. However, as detailed below, we are disappointed that DEQ has continued to shrink the scope of the Climate Protection Program. We believe that the rules as drafted undermine Oregon's ability to meet emissions reductions goals and its commitment to equity.

Significantly, the 100% Clean Energy bill which DEQ is relying on to address emissions from the electric sector (HB 2021) won't compensate for DEQ's exemption of all fracked gas power plants from the Climate Protection Program. By entirely exempting fossil fuel electric power generators from the Climate Protection Program, DEQ is creating a huge loophole that can easily be exploited by energy intensive industries, as we have seen happen in other states.

Combined with DEQ's exemption of fugitive emissions and emissions from interstate pipelines and other facilities owned by pipeline companies, DEQ's exemption of fracked gas power plants will create sacrifice zones, most notably in Hermiston, Oregon, a rural community that is largely low-income and Latinx.

In addition, we do not have confidence that DEQ’s process for engaging Tribal Nations has been structured in a way that ensures that these important stakeholders have a sufficient voice in shaping the Climate Protection Program.

I. THE DRAFT RULES ARE AT ODDS WITH DEQ’S MANDATE TO INCORPORATE EQUITY.

Throughout this rulemaking, DEQ has pledged to give at least as much weight to equity as it gives to controlling costs for businesses in deciding how to reduce greenhouse gas emissions. But the draft rules do not reflect that commitment to equity.

A. DEQ Is Creating a Foreseeable Sacrifice Zone in Hermiston.

First, the draft rules reflect that DEQ has chosen to create a sacrifice zone in Hermiston, Oregon in rural Umatilla County. Residents of Hermiston—who are disproportionately low-income, and 35% of whom are Latinx—are exposed to harmful pollution from several significant sources of greenhouse gas emissions, including nearby highways, fracked gas power plants, and fugitive emissions from pipelines and compressor stations. By exempting fracked gas power plants, pipeline emissions, and fugitive emissions in Oregon, DEQ has effectively decided that Hermiston will not enjoy any of the benefits of reductions in co-pollutants that could result from a more equitable and effective greenhouse gas emissions reduction program.

DEQ’s rulemaking needs to reflect an understanding that the choices regarding which emissions to exempt from this program could have an even more significant impact on equity than DEQ’s policy choices for how to regulate the increasingly small universe of covered emissions. DEQ should reverse course on exclusions that threaten environmental justice communities in Oregon, and not leave the people of Hermiston behind.

B. The Purpose and Scope Section Needs to Describe Which Communities Disproportionately Bear the Burdens of Pollution and Climate Change.

Second, the language in 340-271-0010(2)(c) that “[c]ertain communities” within Oregon are disproportionately affected by air contamination and climate change erases the important point that the communities overburdened by pollution and most vulnerable to the effects of climate change are disproportionately Black, Indigenous, and communities of color, and low-income and rural communities. DEQ should look to the Oregon Environmental Task Force’s definition of environmental justice communities and ensure that is reflected in the purpose of these rules.

C. DEQ Must Ensure Its Engagement with Tribes Allows Tribal Nations to Meaningfully Influence the Rulemaking.

Third, we want to again amplify Tribal representatives' concerns about DEQ's engagement process. At present, we do not have confidence that DEQ's process for engaging with Tribes is sufficient to allow Tribes to meaningfully influence the direction of this rulemaking. DEQ's consultation with Tribes must happen in a timely fashion that allows Tribes sufficient information and opportunity to ensure the Climate Protection Program works for their Nations.

II. THE DRAFT RULES DO NOT REFLECT A PROGRAM THAT IS WELL POSITIONED TO MAKE SIGNIFICANT HEADWAY IN MEETING OREGON'S GHG EMISSION REDUCTION GOALS.

A. DEQ Is Creating Significant Loopholes for Fracked Gas Power Plants That Are Not Covered by the 100% Clean Energy Bill, If Passed.

We remain concerned that Oregon will not be able to meet its emissions reduction goals if fracked gas power plants are exempted from the Climate Protection Program. We disagree with DEQ that the proposed 100% Clean Energy bill (HB 2021), if it were to become law, will suffice on its own to reduce harmful emissions from power plants in Oregon that burn fossil fuels. There is a large gap between the coverage of the proposed Climate Protection Program and the coverage of HB 2021 within which a significant number of present and future fracked gas plants may operate.

HB 2021 as written covers only Investor-Owned Utilities (IOUs) that sell retail electricity to Oregon consumers served through the distribution system of an electric utility. It does not apply to companies that distribute electricity outside of the utilities or that export electricity outside of Oregon.¹

The rise in cryptocurrency mining offers one example of how industry in Oregon can manipulate the loophole that would be created by DEQ's exemption of the electric sector and HB 2021's limited scope. As recently reported by the Wall Street Journal, cryptocurrency mining operations, which are extremely energy intensive, have begun buying and restarting idled power

¹ See B-Engrossed House Bill 2021, <https://olis.oregonlegislature.gov/liz/2021R1/Downloads/MeasureDocument/HB2021/B-Engrossed> (definitions in Section 1, which cross-reference definitions in ORS 757.600); ORS 757.600 (defining "retail electricity consumer" as "the end user of electricity for specific purposes such as heating, lighting or operating equipment, and includes all end users of electricity served through the distribution system of an electric utility . . .").

plants around the country to power their mining operations.² For example, as highlighted in a recent lawsuit, a power plant in New York that previously generated power for the state's power grid was bought by a cryptocurrency company which intended to use 100% of the 300,000 megawatt hours per year generated by the power plant for its associated bitcoin mining "data center" facility, without any contribution to the local electricity grid.³

A fracked gas power plant that supplies energy directly to a cryptocurrency mining operation in Oregon would not be covered by HB 2021 if it did not supply energy into the retail market. Oregon is already experiencing an influx of bitcoin miners flocking for the low energy prices, and cryptocurrency remains unregulated in the state.⁴ The loophole created by DEQ's exemption of fracked gas power plants from the Climate Protection Program and HB 2021's inapplicability to power plants that do not distribute power through the grid may incentivize cryptocurrency miners and fracked gas power plants to develop similar partnerships in Oregon, which would result in significant unregulated greenhouse gas emissions.

Other energy intensive industries, like data centers could also easily take advantage of this loophole by entering into power purchase agreements to directly purchase wholesale electricity, becoming a private power plant's sole client. In this way again, a local fracked gas plant can escape the coverage of HB 2021 by selling directly to a data center without putting power into Oregon's retail market.

HB 2021 would also not apply to power plants in Oregon that emit greenhouse gases in Oregon but export electricity outside of Oregon and do not serve any end users in Oregon.

If HB 2021 passes, the fracked gas power plants that are currently operating in Oregon will not simply vanish into thin air. The infrastructure will remain and will become a likely attractant to these private companies looking to generate their own power. By exempting merchant fracked gas power plants from the Climate Protection Program, DEQ risks cancelling out any emissions reductions that may be achieved under HB 2021.

In order to ensure that *all* high-emitting fracked gas power plants in Oregon are required to reduce their GHG emissions, DEQ should not shirk its duty by assuming that the entire electric sector will be addressed by the proposed clean energy bill. DEQ's own data reflects that

² Brian Spegele and Caitlin Ostroff, *Bitcoin Miners Are Giving New Life to Old Fossil-Fuel Power Plants*, Wall Street Journal, May 21, 2021 <https://www.wsj.com/articles/bitcoin-miners-are-giving-new-life-to-old-fossil-fuel-power-plants-11621594803> (attached to this letter).

³ Verified Petition, *Sierra Club et al. v. Town of Torrey et al.*, 2020-5198 (Yates Cnty. NY), <https://iapps.courts.state.ny.us/nyscef/ViewDocument?docIndex=aab30IoQb8PkdQgdBNu9Bg==>.

⁴ Katie Shepherd, *Bitcoin Miners Are Flocking to Oregon for Cheap Electricity. Should We Give Them a Boost?* Willamette Week, Feb.21, 2018, <https://www.wweek.com/news/business/2018/02/21/bitcoin-miners-are-flocking-to-oregon-for-cheap-electricity-should-we-give-them-a-boost/>.

use of fracked gas outside of the retail electricity market, use for residential and commercial buildings, use for transportation, and industrial and agricultural uses, accounts for 12% of Oregon’s GHG emissions.⁵ In order to be effective, Oregon must require reductions in emissions of all GHG emissions from combustion of fracked gas. The Climate Protection Program is well situated to do that by regulating fracked gas power plants in Oregon that emit greenhouse gases in Oregon whether or not they deliver electricity into Oregon’s grid.

We implore DEQ to eliminate its exemption for the entire electric sector from the definition of covered emissions in Section 6 and to remove the dangerous incentives DEQ is creating for power plants in Oregon to begin supplying energy directly to large corporations or to export power outside of Oregon. DEQ must develop an approach in the Climate Protection Program to close the loophole for merchant gas plants, and bitcoin and data mining. At a minimum, DEQ should explain to the RAC why it believes its exemption of the entire electric sector would not have these potentially disastrous consequences.

B. DEQ Should Not Ignore Harmful Emissions from RNG, Biofuels, and Biomass.

Section 4 (which applies to non-natural gas fuel suppliers) and Section 5 (which applies to natural gas fuel suppliers) of the draft rules should not wholly exempt greenhouse gas emissions from the combustion of RNG, biofuels, and biomass. These sources of energy still contribute to climate change and harm communities, and DEQ’s rulemaking should not ignore those costs.

C. DEQ Should Regulate Fugitive Emissions.

Furthermore, DEQ should not exclude in-state fugitive emissions from the definition of covered emissions.

As explained above in our comments about DEQ’s creation of a sacrifice zone in Hermiston, excluding fugitive emissions undermines both equity and the ultimate goal of reducing greenhouse gas emissions. The administrative convenience of the entities subject to regulation is not worth this significant cost.

D. The Threshold for Covered Fuel Suppliers Is Too High.

⁵ Oregon DEQ, Greenhouse Gas Emissions from 1990-2019, <https://www.oregon.gov/deq/FilterDocs/GHGdata.xlsx> (showing that in 2019, “natural gas use” was responsible for 7.6 million metric tons CO₂e out of a total of 64.5 million metric tons CO₂e, the equivalent of 12% of the total emissions)

In light of DEQ’s decision to narrow the cap and trade program to apply only to fuel suppliers, it is particularly important that DEQ capture as many emissions as possible under the cap. The draft rules’ threshold of 200,000 MTCO₂e is too high, and threatens to undermine Oregon’s ability to achieve its emissions reduction goals.

DEQ should explore whether it could better ensure Oregon effectively reduces greenhouse gas emissions by starting with a threshold of 200,000 MTCO₂e but decreasing the threshold over time, as the cap decreases, or by using the same threshold that DEQ intends to use for stationary sources: 25,000 MTCO₂e.

Ultimately, DEQ must incorporate sideboards to ensure that whatever threshold it uses will continue to capture the vast majority of greenhouse gas emissions from fuel suppliers. We are concerned that fuel suppliers could escape regulation under this program by restructuring and breaking up their operations into smaller entities with total emissions just below the threshold. The draft rules do not seem to safeguard against this possibility.

E. Excluding Emissions from Entities that Own Interstate Pipelines Could Create a Massive Loophole that Allows Massive Sources of GHG Emissions to go Unregulated in Oregon.

With respect to the draft rules on the regulation of stationary sources (section 6), the exclusion of all “emissions from an air contamination source that is owned or operated by an interstate pipeline” could allow facilities like the proposed Jordan Cove LNG to fall entirely outside of the Climate Protection Program.

As DEQ is aware, the proposed Jordan Cove LNG Project would create approximately 36.8 million metric tons of CO₂e, more than 15 times the emissions that were generated from the Boardman coal plant.⁶ Because both the pipeline and the liquefaction and export terminal would be owned by Pembina Pipeline Corporation, it appears that under DEQ’s proposed language, neither fugitive emissions from the pipeline nor the significant stationary source emissions from the Jordan Cove liquefaction process and compressor stations would be covered by the Climate Protection Program.

This is a massive loophole that DEQ needs to close. DEQ should remove the exemption for pipeline-owned emissions in Oregon. At a minimum, the Climate Protection Program should include emissions from all pipeline compressor stations and other stationary sources owned or operated by an interstate pipeline company that are required to obtain an Air Contaminant Discharge or Title V permit from DEQ.

⁶ See generally *Jordan Cove LNG and Pacific Connector Pipeline Greenhouse Gas Emissions Briefing*, Oil Change Int’l, Jan. 2018 http://priceofoil.org/content/uploads/2018/01/JCEP_GHG_Final-Screen.pdf.

We have heard DEQ suggest it lacks the authority to regulate emissions from corporations that own interstate pipelines, but have not heard DEQ articulate which federal or state law it specifically believes it is preempted by. Without this information it is impossible for stakeholders to fully understand DEQ's position—leaving us struggling to understand why the agency would want to exempt these significant sources of greenhouse gas emissions from the program.

F. The Proposed Compliance Period Is Too Long.

The proposed 3-year compliance period and September 30 deadline for demonstrating compliance would mean that entities subject to the Climate Protection Program would not have to demonstrate compliance until September 30, 2025, and again on September 30, 2028.

Although DEQ has not yet shared any information about its anticipated enforcement timeline (or even what enforcement would look like), we assume that enforcement would presumably not happen until 2026 and 2029.

This slow schedule for demonstrating compliance and beginning enforcement actions does not give Oregon enough time to undertake meaningful enforcement and recalibration of the rules necessary to make sure that we are on track to meet our 2030 goals. The climate emergency requires much faster action than this.

G. The Initial Cap Should Be Based on Oregon's Goal of Reducing Emissions By At Least 80% from 1990 Levels By 2050.

Executive Order 20-04 sets a clear goal: Oregon must reduce all of its greenhouse gas emissions by 80%—or more—from 1990 levels by 2050. Regardless of whether DEQ intends to use 2010 data to allocate compliance instruments for fuel suppliers and to set individual regulations for stationary sources, its initial reduction goals must be based first and foremost on what is necessary to accomplish that goal.

DEQ's vast exemptions from the Climate Protection Program have already restricted the extent to which the Program will be able to contribute to this goal, and have created foreseeable loopholes that will allow major sources of greenhouse gases in Oregon to go unregulated.

H. The Rules for Stationary Sources Must Contain Concrete Emissions Reduction Goals.

While we understand that additional rules regarding how stationary sources will be regulated under the Climate Protection Program are forthcoming, we urge DEQ to ensure that those rules

are grounded in concrete goals for reducing emissions from stationary sources and are based on a study of the impacts of direct regulation on environmental justice communities. DEQ must create sideboards to ensure that direct regulation of stationary sources delivers both significant actual reductions in GHG emissions and equity.

We understand that DEQ intends to directly regulate stationary sources primarily based on available control technologies. To clarify our previous suggestion, we do not support a program that would allow stationary sources to use the “alternative compliance mechanisms” that DEQ has created in the cap and trade program (banking, trading, and offsets) because allowing polluters to exceed the carbon cap harms communities already overburdened by pollution and those most at-risk for the effects of climate change. We do, however, support a program that would require stationary sources in high-polluting industries to help fund the Community Climate Investments in environmental justice communities, *not* as an alternative to reducing emissions, but in addition to whatever emissions reductions can be achieved through the best available control strategies.

III. DEQ SHOULD MODEL THE FULL IMPACT OF ITS POLICY DECISIONS INCLUDING ON FRONTLINE COMMUNITIES AND SHARE THAT MODELING WITH THE RAC.

Despite retaining ICF to model the impact of some of the policy choices DEQ is making in its rulemaking, DEQ has not, to our knowledge, studied the impact of some of its significant exemptions—including the exemption of fracked gas power plants, fugitive emissions, and emissions from pipeline operations—on Oregon’s ability to meet its GHG emission reductions goals, nor studied which specific communities in Oregon will reap the co-benefits of this program or analyzed the equity implications of DEQ’s decisions.

Moreover, even where ICF has performed modeling for DEQ, DEQ has not shared enough information about ICF’s analysis with the RAC to allow us to fully understand the modeling and assumptions. DEQ should open its books and show its math. RAC members cannot meaningfully evaluate DEQ’s proposals without having access to information at a granular level about exactly how DEQ’s proposed program will—or will not—reduce greenhouse gas emissions. Powerpoint presentations with high-level summaries of the modeling are insufficient.

DEQ must model its exemptions, and not just the effect of the program on the entities and emissions DEQ has chosen to cover.

DEQ must also model the impact of its proposed rules on environmental justice communities using census data and environmental justice mapping. It is unfair to ask RAC members to do all

the work of analyzing how DEQ's proposed rules will affect equity without supplying the RAC with the information, tools, and resources necessary to do this work.

We urge DEQ to be more transparent in sharing its full analysis of the policy options for the Climate Protection Program.

IV. CONCLUSION

DEQ's emphasis throughout the RAC process has largely been on cost containment and flexibility for entities subject to the program, and the draft rules unfortunately reflect that emphasis. We urge DEQ to correct course by re-centering equity and emissions reductions as it further develops its draft rules.

Sincerely,

Allie Rosenbluth, Campaigns Director, Rogue Climate, RAC member

Oriana Magnera, Energy, Climate, and Transportation Manager, Verde, RAC Member

Dan Serres, Conservation Director, and Erin Saylor, Staff Attorney, Columbia Riverkeeper, a member of the Power Past Fracked Gas Coalition

Molly Tack-Hooper, Senior Attorneys, Earthjustice



LMI Environmental, LLC

June 3, 2021

VIA EMAIL

Colin McConnaha
Manager, Office of Greenhouse Gas Programs
Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232

Re: Comments on DEQ's Cap and Reduce Rule Advisory Committee May 25, 2021 Meeting

Dear Mr. McConnaha,

Thank you for the opportunity to comment on DEQ materials presented at the May 25, 2021 Cap and Reduce Rule Advisory Committee (RAC) meeting. I am glad to see that we were able to review a portion of the draft rules, and look forward to seeing the full set of the draft soon.

Based on the materials presented and meeting discussion, I offer the following comments:

1. Determining the Base Cap:

DEQ's presentation was very enlightening on this issue. It is true that DEQ didn't begin collecting greenhouse gas (GHG) data until 2010, but even then, facilities struggled to learn how to calculate emissions accurately and it would be a surprise if all facilities even recognized the need to report in those early years. Accordingly, the early reported data may not be as accurate as one would hope.

In addition, many facilities have been subject to environmental programs that require the installation of natural gas-fired control systems or have converted from other fuels to natural gas. For a variety of reasons, including the realization and acceptance of where the state's emissions are currently, it is important to use the most recent data presented by DEQ. Using the 2017-2019 average appears to be the most logical approach of those presented as it also helps level out anomalies that may result due to unusual weather patterns or other irregularities that can occur in a single year.

2. Specific comments on the draft rules:

- a. 340-271-0010: Paragraph (3) appears to list several purposes for the rule. In addition to greenhouse gas emission reductions, the rule also hopes to achieve reduction of emissions of other air contaminants. Although we discussed this during the meeting, it

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is important to reiterate that although reduction of other air contaminants may sometimes coincidentally occur when reducing greenhouse gases, this is certainly not always the case. In fact, there are many instances in which reducing greenhouse gases (GHG) will actually increase other air contaminants, a couple of instances which quickly come to mind include:

- i. Pollution control equipment that is used to thermally oxidize various air pollutants such as VOCs, volatile HAPs, etc. Equipment such as this has been required by the State of Oregon and the EPA for many years and is quite prevalent.
- ii. The State of Oregon and EPA's preference for requiring facilities to install natural gas combustion equipment rather than other fuels (including biomass). Obtaining an air quality permit is typically much more difficult for fuels other than natural gas. Natural gas is also often considered to be Best Available Control Technology for combustion sources and has been required in many applications.
- iii. In addition to the above scenarios, the simultaneous reduction of GHG and co-pollutants may often be incompatible with Oregon's other air quality rules such as Regional Haze and Cleaner Air Oregon. Both of which may require the installation of natural gas combustion in order to comply with those rules.

DEQ should consider removing (3)(b) from the rule in an effort to avoid conflicting priorities. At the very least, DEQ should qualify the statement by making it clear that GHG emission reduction is the main goal of the rule, and the reduction of co-pollutants are a possible secondary benefit but may not always be the case. In either case, the reduction of co-pollutants should not be a significant driver of the program.

(3)(d) "Allows" covered fuel suppliers to satisfy a portion of their compliance obligation through community climate investment funds. I would like here to reiterate my earlier comments regarding the need to open-up the alternative compliance options by also allowing covered entities to satisfy their compliance obligations with more traditional offset projects within and outside of the state. DEQ should also consider encouraging fuel suppliers to incorporate hydrogen enriched natural gas as a means of demonstrating compliance with the upcoming reductions.

- b. 340-271-0110: We are supportive of DEQ's position to exclude emissions from the combustion of biomass from the list of covered emissions. To date, we have few tools with which to combat GHG emissions. As a renewable, carbon neutral fuel, biomass is a very important tool toward that goal.

Paragraph (b)(B)(viii) appears to refer to sources that are connected to an interstate pipeline. The statement might be a bit clearer stated as:

"Emissions from an air contamination source that receives fuel from a source that is owned or operated by an interstate pipeline."

- c. 340-271-0430: We support DEQ's approach to allow holding compliance instruments as it encourages early investment and GHG emission reductions. Doing otherwise, would be a punitive approach that would encourage covered entities to maintain high emissions for as long as possible.
- d. 340-271-0500: DEQ's position of establishing three-year compliance periods is commendable. I would like to reiterate my earlier comments that encourage DEQ to establish five-year compliance periods which would allow facilities to plan, budget, engineer and implement GHG emission reduction projects. The project permitting timeframe alone can use up nearly half of the time allowed by a three-year compliance period.
- e. 340-271-0590: DEQ's position regarding the document retention period of seven years is a bit excessive. Other environmental programs require documents be kept for two to five years. Seven is far from the norm and can create a heavy administrative burden for covered entities.
- f. 340-271-0600: We support DEQ's position regarding the trading of compliance instruments. Allowing covered entities to work together to both reach the goal of this program while maintaining needed flexibility to meet customer needs will be critical.

Again, thank you for the opportunity to provide these comments. I look forward to continuing working with you.

Sincerely,



Ellen Porter



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June 4, 2021

Oregon Department of Environmental Quality
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Via Email: GHGCR2021@deq.state.or.us

RE: Climate Protection Program Development

Shell Energy North America (US), L.P. (“Shell Energy”) markets and trades natural gas, power and environmental products and provides risk management support to its wholesale and retail customers throughout North America. Shell Energy’s goal is to provide more energy to meet growing demand while providing cleaner energy to reduce carbon emissions. The transition to low-carbon solutions can be achieved by meaningful carbon pricing mechanisms and the Oregon Climate Protection Program (“OCPP”), currently under development by the Oregon Department of Environmental Quality (“DEQ”), is represents a good first step. With modification, the OCPP can become a more effective foundational program that can expand over time to participate in and contribute to programs that exist and are emerging throughout the Western U.S.

First, linkage with Washington and the Western Climate Initiative (“WCI”) Cap and Trade programs should be a cornerstone of the OCPP. The WCI program is established and has proven to be successful in reducing emissions. In order to achieve linkage, it is necessary for the OCPP to adopt similar design elements with respect to the cap, reserves, and offset protocols. Linked regional and state allowance trading programs throughout North America would result in lower overall costs due to the ability to reduce emissions across a wider geographic region. Linkage to other states and provinces that include new sources would ensure a consistent carbon price in the linked jurisdictions, thereby eliminating the potential for emissions leakage. This would ensure a level playing field for similarly situated resources and avoid market distortions. DEQ should review the language that would support linkage with other programs and consider what modifications can be applied based on the sectors it plans to regulate under the OCPP.

Second, the current proposal limited to fuel suppliers, natural gas utilities and stationary sources allocates allowances and strictly limits trading which is contrary to market-based principles that provide liquidity and options for covered entities attempting to comply with the program. The OCPP should be amended to allow allowance trading across all covered entities. Limiting trading to the fuels sector is discriminatory and directly disadvantages entities in other covered sectors. Additionally, allowing brokers, investors and other third parties to trade allowances can provide market efficiencies and lower costs through access to counterparties that can offer established best practices and credit.

Third, the DEQ must consider offsets as a means for obligated entities to comply with the OCPP. The use of offset credits encourages voluntary GHG emission reduction programs, promotes innovation,

June 4, 2021

Page 2

and can help reduce GHG emissions in all sectors of the economy, not just those industries or sectors covered by a carbon pricing system. For activities and sectors that are already covered in existing provincial and state offset programs, OCPP can recognize the offsets as eligible and rely on the criteria established in these existing programs. Eligible offsets would represent real, verifiable and permanent carbon reductions sourced from any jurisdiction that enforces the same quality requirements that prevail for similar investments made in Oregon.

Fourth, the compliance threshold for non-natural gas fuel suppliers should be reduced to 25,000 MTCO_{2e}/year. Lowering the threshold ensures the OCPP is consistent with the WCI and Washington programs that both recognized this level creates an incentive to reduce overall emissions from the sector; the main goal of the OCPP. Lowering the threshold will also increase the number of market participants, creating a level playing field and protecting against market manipulation that can occur when there are few market participants.

Finally, Shell Energy would like to be included in the DEQ Rulemaking Advisory Committee as the OCPP advances. The experiences and expertise of entities that have participated in global markets can provide an informed perspective to the committee as it moves forward with OCPP implementation. Thank you for this opportunity to comment. Shell Energy looks forward to continued involvement and working with DEQ to develop the rules. Should you have any questions or wish to discuss any of these comments in greater detail, please don't hesitate to contact me.

Sincerely,



Marcie A. Milner
Vice President, Regulatory Affairs
Shell Energy North America (US), L.P.

Southern Oregon Climate Action Now

SOCAN

Confronting Climate Change

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May 30th 2021

SOCAN Comments on RAC 5

DEQ Rulemaking Advisory Committee Members

GHGCR2021@deq.state.or.us

Colleagues:

Once again, I write on behalf of Southern Oregon Climate Action Now, an organization of some 1500 rural southern Oregonians concerned about global warming and its climate chaos consequences to express concerns about the developing Climate Protection Program. Our mission is to promote awareness about the science of global warming and its climate change consequences and motivate individual and collective action to address the problem.

In addition to the following comments from the RAC 5 materials, meeting, and discussion, I append an updated copy of the submission I made to the EQC in association with the May report to that body by DEQ on the developing program.

I start by noting that I remain impressed by the open and transparent process that DEQ has adopted in developing its program. This process is assuredly one that we would like to have seen emulated by other agencies, many of which seem to have adopted secrecy and an unreasonable 'trust us' approach.

Following some brief introductory remarks, I will address my concerns in the sequence that topics were introduced during the session, ending with some overall perspectives.

The Climate Protection Program Goal

I note that the Executive Order states its purpose clearly as directing and ordering state agencies (as identified) to contribute to a reduction in greenhouse gas emissions to at least 45% below 1990 emissions levels by 2035 and at least 80% below 1990 emissions levels by 2050. The identified agencies are charged to "exercise any and all authority and discretion vested in them by law to help facilitate Oregon's achievement of the GHG emissions reductions goals set forth in Paragraph 2 of this Executive Order."

Furthermore, the EO specifically charges that EQC and DEQ shall take actions necessary to:
“Cap and reduce greenhouse gas emissions from stationary sources,
“Cap and reduce greenhouse gas emissions from transportation fuels...; and
“Cap and reduce GHG emissions from all other liquid and gaseous fuels...”

I draw attention specifically to the language of the Executive Order to underline the fact that the Executive Order does not simply charge the agencies to ‘do their best,’ but to use “any and all authority and discretion vested in them by law.” I also note again that the EO specifically directs DEQ to “Cap and reduce greenhouse gas emissions from stationary sources.” I will return to the charge regarding Stationary Sources later.

The point I would like to underline is that the EO is not a suggestion but a clear and unequivocal direction. Unless it has been rescinded or modified by a later Executive Order, the agencies presumably should feel obligated to carry out the charge it contains. It has been disappointing, however, to see and hear DEQ repeatedly backing off the charge in the Executive Order. This is particularly so since it was that charge that in March 2020 generated significant excitement among those of us who have been working on this issue for many years.

I continue with comments on the proposed rules.

Initial Draft Program Rules

(p 4) Fuel suppliers included in the program are responsible for above 200,000 MMT emissions annually.

During the presentation, we learned that this exempts some 10% of fuel supplier emissions.

I appreciate that the rule states: “All persons that are related entities must aggregate their emissions together to determine applicability.” However, it is not entirely clear that this will negate efforts of fuel suppliers above the threshold to engage in shape-shifting such that they lower their emissions below that threshold. It should also be noted that imposing a fixed value on this sector will result in covered entities that reduce emissions below the threshold achieving exemption. This will inevitably result in the percentage of covered emissions falling as the percentage of exempted fuel supplier emissions rises to the extent that, ultimately, all emissions of greenhouse gases will be exempt. If the reduction in emissions were caused by a dramatic electrification of the transportation sector and overall reduction in fossil fuel use, this would be an acceptable outcome. However, if this results from fuel suppliers ‘gaming the system’ with little overall reduction in fossil fuel use, the program has failed. It would seem preferable, if the 200,000 MT threshold (which we learned during the presentation, would cover 90% of emissions) is to be imposed at the inception of the program, then this percentage should decline on the same trajectory as the overall cap so as to maintain an inducement for fuel suppliers to reduce emissions.

While we heard a representative of the fossil fuel industry argue during RAC5 that companies engage in contracts that would preclude their ability to ‘game the system,’ previously we heard from a rep from the same industry argue that gaming the system would occur. Given the huge exemption that 200,000 MT allows, we recommend reducing the threshold to a much lower value. There seems no reason that

25,000MT should not be the value since, according to the RAC 3 slide set, this would capture 99% of emissions and negate the problem identified below.

Given that the threshold of 200,000 MT would cover 90% of emissions, and 10% are exempt, we can calculate that, of the 24.1 MMT of 2019 emissions, 2.41 MT would be annually exempt. Adding this to the 10.8 MMT of emissions from the fossil gas Electricity Generation Units (EGUs) that are exempt (discussed below), we find 13.2 MMT of 2019 emissions excluded from the program. This is well above the 11.6 MMT target that 80% below 1990 levels implies for 2050. To achieve the EO goal for 2050, the program either must reduce overall emissions substantially more, or encourage reduction in the electricity sector emissions.

(4) (b) (A) Covered emissions include emissions of anthropogenic greenhouse gases in metric tons of CO₂e that would result from the complete combustion or oxidation of the annual quantity of propane and liquid fuels.

4 (b) (B) Specifically excludes fugitive emissions (leakage)

(5) (b) (B) (ii) Excludes Fugitive emissions

(6) (b) (B) (v) Excludes Fugitive emissions

On several occasions, we have been informed that DEQ only intends to address emissions from the combustion of fossil fuels. This exempts all leakage and eliminates full life cycle analysis. It is noteworthy that the California Aliso Canyon (Porter Ranch) leak resulted in some 100,000 tonnes of fossil gas emissions (<https://ww2.arb.ca.gov/our-work/programs/aliso-canyon-natural-gas-leak>; <https://sundial.csun.edu/163530/news/porter-ranch-residents-suffer-negative-health-effects-following-aliso-canyon-gas-leak/>, https://ww2.arb.ca.gov/sites/default/files/2020-07/aliso_canyon_methane_emissions-arb_final.pdf).

The decision to focus only on combustion emissions and ignore fugitive emissions means Oregon would be learning nothing from California's mistake (<https://www.ecosystemmarketplace.com/articles/porter-ranch-debacle-shines-light-on-role-of-fugitive-emissions/>). Apparently, in developing its greenhouse gas emissions policy, Washington undertakes full life cycle assessment and did not omit fugitive emissions. According to the Washington State 'Rule to Assess Greenhouse Gas Emissions:'

"The life cycle analysis evaluates the 20-year and 100-year global warming potentials for all GHG associated with the subject facility. The life cycle analysis component will rely upon a framework established by the International Organization for Standardization (ISO). A typical GHG life cycle analysis includes an accounting of the upstream and downstream emissions associated with the project, including transportation, leakage, and market and indirect emissions implicated by the project. The ISO standards proposed by Ecology will set requirements for collecting, calculating, and validating data, and will guide the selection impact categories and category indicators. The life cycle analysis will also include a review of market and geographic leakage effects, as Governor Inslee's directive specifically requested Ecology include these components in the new rule." <https://www.natlawreview.com/article/washington-department-ecology-preparing-new-rule-to-assess-greenhouse-gas-emissions>

There is currently little active extraction of fossil fuel in Oregon, though there has been recurring interest in coalbed methane extraction in Coos Bay (<https://oregoncoastalliance.org/coalbed-methane-rears-its-head-again-in-coos-county/>) and, according to the Energy Information Agency (EIA <https://www.eia.gov/state/analysis.php?sid=OR#71>), the Mist Field in NW Oregon (Columbia County) (<https://core.ac.uk/download/pdf/10197469.pdf>) produced fossil gas in the 1980s. However, though unlikely, this does not preclude the possibility of future such endeavors in the state. Furthermore, all fossil fuel used in the state has to be transported or piped into the state. This inevitably results in leakage. The message is that exempting fugitive emissions from consideration may have unforeseen consequences in terms of vast emissions being overlooked. It would seem appropriate for Oregon at least to learn from California and emulate Washington State in imposing full life cycle assessment. If this is not done, fuel suppliers should be required to undertake assessment of their system for leaks, report any leaks detected, and undertake and demonstrate their immediate repair.

5 (b) (A) Covered emissions include emissions of anthropogenic greenhouse gases in metric tons of CO₂e that would result from the complete combustion or oxidation of the annual quantity of natural gas imported, sold, or distributed for use in this state.

The general error of focusing only on combustion emissions from fossil fuel use rather than full life cycle emissions was discussed above. This is particularly egregious in the case of fossil (natural) gas because it allows fossil gas companies, which market a product that is potentially as bad as coal when fugitive emissions are assessed, to continue evading responsibility for their contributions to the problem. It is well-known that fossil gas is some 90% methane, that methane is 86 times worse than carbon dioxide as a global warming agent on a 20-year basis, and that substantial methane leaks during hydraulic fracturing, processing, and transmitting this fossil fuel. A more extensive discussion of this issue can be found at [Fossil Gas: A Bridge to Nowhere](#). Fossil gas corporations know this but consistently obfuscate by using carefully worded statements that claim something like ‘fossil gas is a clean-burning fossil fuel.’ These corporations understand that most customers and potential customers will accept this claim and its implications at face value and will not know to question the fugitive emissions of methane, so the companies continue successfully to market and encourage increased use of their fossil fuel. This occurs at the expense of our climate and our future. It is regrettable that by exempting the fugitive emissions of fossil gas, DEQ is enabling this deception to continue.

(5) (b) (B) (i) Excludes emissions from biofuels, biomethane (biogas)

(6) (b) (B) (i) Excludes combustion of biomass-derived fuels including, for example and without limitation, biomethane and woody biomass

Oregon has a serious problem when it comes to legislative understanding of what constitutes a genuinely renewable (non-emitting) energy source, and what fails that test. The result is that questionable fuels have been awarded a status they don’t deserve.

There may be some limited situations in which biofuels (biomass) is a reasonable fuel source, but the blanket exemption for all biofuels is inappropriate. For example, it could be argued that using sawmill waste or forest management slash that would otherwise be burned anyway (though this is a questionable way of dealing with the product as opposed to returning the nutrients to the soil) in small scale generation facilities is reasonable. The catch, however, is the temptation to promote tree harvest for the purpose of electricity generation where forest health and ongoing sequestration are

compromised while sequestered carbon is released. If we are to be serious about reducing greenhouse gas emissions, what we need with biofuels is lifecycle assessment of emissions for each project and approval only of those that exhibit GHG emissions benefits. Regrettably, according to Oregon statute many kinds of biomass are defined as Renewable Energy Sources without reference to the life cycle assessment of emissions (<https://www.oregonlaws.org/ors/469A.025> and <https://www.oregonlaws.org/ors/321.267>).

Unfortunately, Oregon [SB 98](#) passed and was signed into law in 2019. It claimed that “The development of renewable natural gas resources should be encouraged to support a smooth transition to a low carbon energy economy in Oregon.” This bill also encouraged fossil gas utilities to increase their biogas proportion to accomplish the following: “In each of the calendar years 2045 through 2050, 30 percent may be renewable natural gas.”

The legislature approved this bill despite the fact that the [Oregon Department of Energy](#) in 2018 identified the capacity for biogas in Oregon as follows: “The gross potential for RNG production when using anaerobic digestion technology is around 10 billion cubic feet of methane per year. This is about 4.5 percent of Oregon’s total yearly natural gas use. Once technical obstacles are overcome, thermal gasification technology could produce up to another 40 billion cubic feet per year, or about 17.5 percent of annual natural gas use.” This totals 22%. From previous DEQ presentations of the modeling assumptions, we learned that the substantial reduction in emissions from the fossil gas utilities is expected to result from a transition to between 50% and 75% RNG in the gas pipelines. If ODOE is to be believed, this is simply impossible. Furthermore, other analyses of the potential for RNG to replace fossil gas identify the capacity as less than 10% (<https://www.greenbiz.com/article/7-things-know-about-renewable-natural-gas> and <https://www.nrdc.org/sites/default/files/pipe-dream-climate-solution-bio-synthetic-gas-ib.pdf>). Apparently, fossil gas companies have persuaded the legislature and DEQ that they can achieve the impossible. While there is merit in capturing methane from landfills, Confined Animal Feedlot Operations, and sewage treatment plants that would otherwise escape into the atmosphere, evidently the capacity is very small. Thus, rather than insert this into general gas pipelines, this product would be better conserved for those special uses for which electrification is not now possible. For a more complete discussion of the flaws in RNG, visit [What’s Up with RNG](#).

(5) (b) (B) (iii) Excludes fossil gas for electricity generation

(6) (b) (B) (ix) Excludes electrical generation facilities

It remains unclear why DEQ has seemed insistent on excluding the entire electricity sector from the Climate Protection Program but this seems to be because agency personnel judge they cannot regulate out-of-state generation and if they regulate in-state generation, the utilities will simply flip a switch and import their electricity from elsewhere. However, no evidence to support this contention has been offered. According to DEQ 2019 emissions data from permitted entities, the greenhouse gas emissions from state fossil gas Electricity Generation Units (EGUs) amounted to 10.8 million metric tons (MMT). While this may drop between now and 2050, the very rational encouragement towards electrification that is widespread through the program will likely increase the need for electricity, a trend that could increase GHG emissions from this sector.

While there certainly exists, at the time of this writing, a credible legislative proposal (HB2021) designed to reduce GHG emissions from the electricity sector, there remains no guarantee that this will become

law. Indeed, evidence from recent years indicates that the legislature is unable to approve proposals that offer meaningful programs to reduce greenhouse gas emissions. Thus, DEQ should develop a program that stands alone and does not assume that substantial emissions reductions will be achieved through this legislative effort. This means that the electricity sector should be included in the Climate Protection Program. If not, and HB2021 fails, DEQ has a responsibility to ensure that the electricity sector reduces emissions according to the declining cap. On the other hand, if HB2021 is successful, this component of the program could be dropped.

(6) Stationary sources responsible for $\geq 25,000$ MTCO_{2e} annually

See below: 'Stationary Sources and Best Available Emissions Reduction Technology.'

(6) (b) (A) Covered emissions include emissions of anthropogenic greenhouse gases in metric tons of CO_{2e} from emissions that are from processes and emissions that are from combustion of liquid, solid, or gaseous fuels, including combustion for both energy production and processes.

It is certainly appropriate for DEQ to cover emissions from industrial processes. However, the flaws in focusing on combustion emissions from fuels previously discussed are equally applicable here.

(6) (b) (B) (ii) Excludes Biogenic emissions from municipal solid waste (e.g., tires)

(6) (b) (B) (vi) Excludes Municipal Solid Waste Landfills

A justification for excluding emissions from municipal solid waste (combustion?) has not been offered. Excluding tires seems especially incongruous. Given the high potential for municipal solid waste to produce toxic pollutants that would affect neighboring communities suggests that including solid waste within the program would have huge benefits.

(6) (b) (B) (vii) Excludes Industrial Waste Landfills

Ditto above.

(6) (b) (B) (viii) Excludes emissions from a contamination source owner who operates a pipeline."

This is convoluted but seems to exempt not just the pipeline but any other activity undertaken by the owner of that pipeline. If the goal is to exclude the pipeline, this is overkill since fugitive emissions are already excluded. Surely this needs to be reworked to state that it excludes only the pipeline but no other activities the owner might undertake.

Base Emissions Cap

The key element here is to ensure that the cap should cause covered entities to embark immediately on a downward trajectory that leads towards emissions that are 'at least 80% below 1990 levels by 2050' which equals 82.4242% below 2010 levels.

Covered Entities and Compliance Instrument Distribution

I have no comment here to add to the concerns expressed above.

Compliance Period, Trading, Banking

A compliance period of three years seems reasonable, with the expectation that covered entities should report emissions (reductions) annually.

Requiring both sides of a compliance instrument trade to communicate and barter independently will potentially provide a window for some entrepreneurs to set themselves up as the intermediary to profit from these negotiations. It might be better to engage and certify a third-party entity and establish a protocol for undertaking these transactions. It is, however, important that they be transparent and public.

There seems to be no limit on banking. This is potentially unfortunate since it would allow an entity to undertake massive initial emissions reductions when the effort is easy, and bank certificates in order to evade later emissions reductions. What remains unclear is what happens after 2050.

Next Steps:

Community Climate Investments

I judge Community Climate Investments to be a critical component of the program, particularly to promote carbon sequestration projects. However, this program will need a set of rigorous rules to prevent abuse, assure projects achieve either emissions reductions or carbon sequestration, and to minimize negative impacts on communities impacted by co-pollutants.

It should also be clear that investment projects achieve a 1 to 1 impact so emissions benefits claimed by a polluting investor are actually reflected in the greenhouse gas reductions they purport to represent.

Stationary Sources and Best Available Emissions Reduction Technology

The proposal to award stationary sources the Best Available Emissions Reduction route seems like a total cop-out. The Governor's Executive Order specifically stated that the charge to EQC and DEQ is to: "Cap and reduce greenhouse gas emissions from stationary sources." The BAER is a complete rejection of that charge. Clearly DEQ has the authority to impose such a requirement on stationary sources. It appears that DEQ - again - is simply caving in to pressure from the affected industries, the very industries that are the reason Oregon is not on the trajectory established by HB 3543 in 2007. If DEQ is serious about following the directive stated in EO 20-04, and actually achieving sufficient emissions reductions to reach the goal stated therein, this component of the proposal will be abandoned. This proposal defeats the basic principle of emissions reductions programs of establishing free market programs, since it imposes on DEQ - or some third-party entity - the responsibility for deciding for an industry what its BAER technology is. It also removes the incentive to innovate since industries will simply claim there is no BAER greater than what they are already doing, so they have achieved the demands of the program.

The result will almost inevitably not only be continued greenhouse gas emissions, but also continued co-pollutant emissions.

If DEQ is serious about achieving meaningful GHG emission reductions, it will keep all industries in the cap and reduce program.

It is perfectly reasonable to expect industries to adopt BAER technology, but this should be undertaken within the Cap and Reduce Program. For example, it would be reasonable to require that before an industry can engage in the Community Climate Investment program it has adopted, or has demonstrably firm commitments to adopt, BAER technology.

Equity / Social Justice

Overall, I note that the program as developed so far seems to cater extensively to the concerns of regulated industries but pay little or no attention to the critical issues of equity and social justice defined in the Executive Order as being essential components of the program. The triangle of goals we have frequently seen indicates that cost effectiveness and equity are at least equally important to one another, even if they are behind emissions reductions in priority. While this has often been stated, the developing program denies that assertion. In fact, the program seems to have elevated cost to the top priority, exceeding the greenhouse gas emissions reductions in importance.

Closing Comments:

As I review the graphs from the models, I note that the emissions reductions that DEQ is targeting seem to relate only to the covered emissions. The graphs presented during RAC 4 from the modeling start at around 30 MMT rather than the 58 or 66 MMT that are reported for 1990 and 2010 emissions leaving some 30 MMT unaccounted and untouched. It appears that DEQ is really only trying to reduce covered emissions rather than total emissions. If this is the case, to the 2050 end-points of those projected outcomes, we need to add some 30 MMT of non-covered emissions that, presumably, will either remain unchanged or will increase. If this is the case, the 2050 emission level will be some 40 MMT. This means that far from achieving the 80% reduction stated in the EO, the Climate Protection Program will have only achieved some 30% emissions reductions.

If the current trends in program development continue and are not revisited and adjusted appropriately, many of us will find it difficult to support the Climate Protection Program that emerges.

Respectfully submitted



Alan R.P. Journet Ph.D.
Co-Facilitator
Southern Oregon Climate Action Now

Comments submitted to the Environmental Quality Commission updated (in italics) to reflect RAC 5 discussions.

Southern Oregon Climate Action Now

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Confronting Climate Change

<https://socan.eco>

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Chair Kathy George

Members of the Oregon Environmental Quality Commission

Chair George and members of the Commission:

I write as co-founder and co-facilitator of Southern Oregon Climate Action Now, an organization of some 1500 rural southern Oregonians who are concerned about global warming and the climate crisis it is causing. Since our inauguration in 2012, we have been engaged with the statewide climate coalition and state legislators in efforts to establish a statewide greenhouse gas emissions reduction program. In this effort, we have been frustrated by industries and legislators who have consistently fought against and thwarted reasonable and well-developed legislative proposals that would establish such a program.

We were, therefore, delighted when Governor Brown signed Executive Order 20-04 fourteen months ago unequivocally charging state agencies to use their authority to achieve emissions reductions by 2050 of at least 80% below the 1990 emissions level. This translates into a 2050 goal of 11.6 Million Metric Tons of CO₂e GHG emissions annually.

As DEQ began its effort last summer, we were excited by the energy, enthusiasm and transparency staff seemed to bring to meeting the charge. This was especially so given the COVID crisis under which we all were operating; DEQ is to be complimented on developing a procedure that allowed input and offered COVID security.

Frankly, however, this excitement has been challenged month after month since the Rulemaking Advisory Committee was initiated in January as DEQ has seemingly back-tracked from its initial commitment to meeting the charge.

I have been engaged since the beginning of this effort, attending all DEQ public workshops, town halls and information sessions plus all RAC meetings. My concerns are as follows:

- 1) **The Rulemaking Advisory Committee:** In structuring the Rulemaking Advisory Committee DEQ weighted it conspicuously in favor of industry and against the conservation, environmental, and climate concerned, equity / social justice and labor communities, and incorporated no climate science expertise. Though the RAC is diverse, its membership is not balanced. The result is that DEQ is receiving an abundance of advice from those seeking to minimize the impact of any climate program on their business operations with a commensurate paucity of RAC comments from the environmental/climate concerned, social justice and labor arenas. Meanwhile, statements that are contradicted by science almost always go unchallenged. The result has been an unbalanced number of comments from the emitting industries and a dearth of comments from the other communities. In terms of comments, fortunately this has been balanced to an extent by participation from the climate and social justice communities who have attended RAC meetings as members of the public and offered public comment both orally during the meetings and in written form submitted after the meetings. Regrettably, however, in developing its program DEQ has seemingly paid almost no attention to the comments from either the climate or social justice communities but has acceded substantially to comments from industry as representatives attempt to weaken the program. DEQ, thus, seems to be developing a program that caters more to efforts by polluting industries to undermine the program or evade their emissions reduction responsibilities, rather than efforts that recognize the urgency of addressing the climate crisis.

- 2) **Exempting Electricity Sector:** DEQ has adopted a commitment to exempting the electricity sector completely, thus exempting fossil gas utilities. DEQ seemed to argue that it needed to exempt the electricity sector completely from the program because of limited authority to regulate out-of-state generation and the possibility that in-state utilities could easily evade the program by switching from Oregon generation to out-of-state generation. However, they offered no evidence to support the contention that this leakage would occur. Yet, by exempting electricity, DEQ would exempt several gas-powered generation facilities. According to DEQ data on emissions from 2019, these gas-fired power plants accounted for some 10.8 million metric tons amounting to over 50% of the greenhouse gas emissions from emitted facilities in Oregon and some 17% of Oregon's total in-boundary emissions. As the program encourages a statewide effort to electrify the energy economy, the need for this energy will increase, presumably resulting in an increase in the need for power plants. There seems little reason that utilities would avoid fossil gas plants if the sector is not included in the program - thus increasing methane emissions as the fossil gas is extracted, processed, and transmitted to Oregon.

- 3) **Relying on passage of HB2021:** Frequently during RAC meetings, DEQ leadership has referred to the clean electricity bill as a vehicle for addressing the problem of reducing emissions from that sector. While this legislation appears promising, agencies working on the EO should be mindful of the fact that excellent climate legislation has been thwarted in the legislature for several years in a row. There seems little reason to anticipate that the 2021 legislature will be any more receptive than past legislatures. This means that DEQ needs to assume HB2021 will not pass and develop a plan that addresses all sectors of the economy.
- 4) **Fuel Supplier Threshold:** We heard from comments offered by a fossil fuel industry spokesperson during a RAC meeting that whatever the threshold for inclusion / exemption is, the industry will 'game the system' to assure they are in the exempt category. In addition, from DEQ reporting, we learned that a 300,000 MT threshold for inclusion in the program, as DEQ seems to favor, would result in 14% of the fossil fuel emissions from fuel suppliers being exempt. This amounts to some 3.4 MMT. If we add this to the emissions resulting from the electricity exemption discussed above, on the basis of 2019 emissions data, the program has reached 14.2 MMT and has broken through the target designated in the Governor's Executive Order of 11.6 MMT by 2050. These two arguments lead to the conclusion that the fossil fuel threshold should be a number at or close to zero to include all fossil fuel suppliers who emit more than a trivial amount of greenhouse gases. *During RAC5 discussion of the proposed draft rules, we learned that the threshold for inclusion of fuel suppliers has been lowered to 200,000 MT, a total that would exempt 10% of fuel supplier emissions - or 2.4 MMT of the 2019 emissions. This means that, based on 2019 data, the draft proposal would still break the 2050 target of 11.6 MMT with 13.2 MMT of emissions.*
- 5) **Promoting RNG:** Given that methane has a Global Warming Potential 86 times that of carbon dioxide on a 20-year basis, there is a strong case to justify trapping methane emissions from landfills and cattle operations so it does not add to the atmospheric concentration of this greenhouse gas. Using this gas to fuel those industrial operations that cannot (easily) electrify thus seems justified. However, the evidence is clear that there is simply insufficient capacity in the state or nation to supply an adequate amount of RNG to replace conventional fossil gas to the extent that fossil gas corporations claim. The Oregon Department of Energy 2018 report stated the capacity for RNG in Oregon was only 22% of the usage in that period. Rather, the evidence suggests fossil gas companies are promoting RNG simply as a tactic to encourage a continued need for gas infrastructure (pipelines and end-uses) that will justify an ongoing need for fossil gas when reality strikes and insufficient RNG is obvious. All the evidence tells us that fossil gas must be eliminated from the energy economy. Furthermore, we must recognize that if RNG has a role to play, it is a very limited role serving those industries where electrification is not currently possible. The notion of blending the limited supplies of

RNG into the regular gas pipelines, as the gas companies propose, constitutes a gross misuse of this limited resource.

- 6) **Best Available Technology (BAT):** The premise of the cap and reduce approach to decreasing emissions is that emitters will be encouraged to reduce emissions by the reducing number of compliance instruments (allowances) they are allocated each year and the penalty imposed for exceeding their allocated total. This is identified as a free market approach since the agencies are not dictating to polluters how they shall reduce emissions; that decision is made by the polluter. This point was reiterated during the DEQ presentation to the EQC. However, by suggesting that some industries will be exempt from the cap and reduce program but required to adopt Best Available Technology approach to reducing emissions, DEQ is proposing to breach the free-market principle and establish itself (or some third party) as the judge of what constitutes a cost-effective BAT for each industry. The consequence will inevitably be a litany of court cases as industries seek to identify the least costly option, doing nothing, or doing whatever they are currently doing as their BAT. Additionally, since BAT installation is likely a time-consuming and expensive activity, there will inevitably be a cycle established such that industries are allowed several years of continued emissions before another BAT review is imposed. During this cycle, there will be no incentive to reduce emissions and the responsibility for emissions reductions will fall excessively on other industries or sectors. Finally, it is worth noting that EO 20-04 specifically directs DEQ to cap and reduce emissions from stationary sources; the EO is not based on: 'do the best you can.'
- 7) **Changing the baseline to 2010:** The Governor's Executive Order clearly identifies the interim and 2050 goal in terms of 1990 emissions. While 1990 may not offer the best data for modeling future outcomes, this is the date specified in the charge to DEQ. If there is justification for switching models to a 2010 baseline, then the percent reduction needed to achieve the EO goal of 11.6 MMT by 2050 should be adjusted accordingly. This means the percent reduction from 2010 should be 82.4242%.
- 8) **Flawed models:** During the discussion of model scenarios, a number of flaws were evident compromising their credibility and any conclusions they might seem to offer.
 - a. It was evident from the graphic summaries of model trajectories that the starting point was neither the 58 MMT of emissions reported for 1990 nor the 66 MMT reported for 2010 but a value between 30 and 35 MMT. Presumably the models did not include the emissions that DEQ proposes to exempt from the Climate Protection Plan. However, the Executive Order did not identify a target comprising only those emissions to be included in a reduction program; the EO refers to an 'at least 80%' reduction plan for all emissions in 1990. If we add the exempt emissions back into the 2050 total and assume they have held steady

over the intervening 30 years, rather than approaching 11.6 MMT of emissions, Oregon would be at somewhere around 40 MMT, hardly the 80% below 1990 levels that the EO demands. *Rather, the Climate Protection Program would achieve only about a 30% reduction in emissions.*

- b. It seemed evident both from the slides and the presentations that the models assessed only emissions resulting from the combustion of fossil fuels and excluded full life cycle emissions. This means that emissions of methane from fossil gas extraction, processing and transmission are not included. This arbitrarily excludes a substantial proportion of the emissions from that fuel. Promoting some fossil gas by exempting the electricity sector thus results in 'leakage' of emissions out-of-state.
- c. Despite the fact that the ODOE 2018 assessment concluded that the maximum capacity for RNG in Oregon amounts to some 22% of 2017 fossil gas usage, the models assumed that RNG could replace between 50 and 75% of fossil gas use. Since apparently only combustion emissions were assessed, the emissions resulting from the production of the RNG were also presumably ignored and not accounted in the modeled scenario projections.
- d. Despite the claim that all model scenarios achieved the target reductions, it was evident from the graphs that this was only true for one of the model scenarios.

As a result of the flaws in the modeling, it is impossible to draw from them any meaningful inferences.

While we appreciate the efforts being undertaken by DEQ to reduce greenhouse gas emissions, we urge the agency to develop a program that acknowledges the urgency of the climate crisis rather than a program that seems to bend over backwards to cater to resistant polluting industries. On several occasions we have heard the claim that the DEQ goal is to achieve "significant emissions reductions" or words to that effect. While this represents a positive step, it is absolutely not what the Executive Order signed by Governor Brown in March 2020 states.

Respectfully submitted



Alan Journet Ph.D.
Co-facilitator
Southern Oregon Climate Action Now

cc Richard Whitman, Director DEQ
Colin McConnaha, Manager, DEQ Office of Greenhouse Gas Programs

June 4th, 2021

Comments on DEQ Climate Protection Program Rulemaking

Submitted by: Ryan Haugo, Director of Conservation Science

To the Department of Environmental Quality and Members of the Climate Protection Program RAC:

Once again, thank you for the ongoing opportunity to provide comments to the Climate Protection Program Rulemaking Advisory Committee. As we have previously expressed, climate change is one of the defining challenges of our time. We appreciate the work the Department of Environmental Quality and the Greenhouse Gas Emissions Program Rulemaking Advisory Committee and the opportunity to review the first version of the draft rules for the Climate Protection Program. Reiterating and building upon our March 25, 2021 and April 30, 2021 letters, would we like to share these updated comments.

- 1) **Oregon Requires a Rigorous Program:** It is critical that the Climate Protection Program sets an ambitious cap and emissions reductions timeline that ensures the necessary GHG reductions to meet the goals identified in Governor Brown's Executive Order 20-04 of 45% below 1990 levels by 2035 and at least 80% below 1990 levels by 2050 and that promotes just transitions in Oregon's frontline communities. If a baseline year other than 1990 is chosen for the Program, DEQ must provide certainty that the Program will at minimum meet the goals set in Executive Order 20-04.
- 2) **Covered Entities and Thresholds.** The Climate Protection Program draft rules version 1 proposes a threshold of 200,000 MTCO_{2e} for non-natural gas fuel suppliers. We are concerned that this threshold is too high and would undermine the integrity of the emissions cap and of the Program overall. We strongly advocate that DEQ adopts a much lower threshold of 25,000 MTCO_{2e}, in-line with the thresholds that have been adopted in California and Washington State.
- 3) **Exemptions:** As part of ensuring a rigorous GHG reductions program, we are concerned about the number exemptions from the cap within the first version of the draft rules. At a minimum, we request from DEQ additional explanation of the rationale behind each of the exemptions and quantification of the total impact of these exemptions on Oregon's GHG emissions.
- 4) **Stationary Source Emissions:** Echoing our previous comments, while encouraged that the draft rules propose covering both combustion and process emissions from stationary sources, we are concerned about the sole reliance on case by case determinations of best available emissions reductions technology. Instead, we advocate that the Program maximize community, economic, and climate benefits by covering stationary sources' process emissions under the cap, and then requiring best available emissions practices to maximize onsite emissions reductions.
- 5) **Community Climate Investments:** Finally, as we have expressed in our previous comments, TNC strongly supports Community Climate Investments (CCI's) in frontline communities to support just transitions while helping Oregon meet a rigorous GHG cap. Again, we also support the ability for communities to identify CCI projects focused on natural climate solutions on natural and working lands that that provide both climate mitigation and community resilience benefits. We also acknowledge the importance of ensuring that CCI's maintain integrity in terms of both equitable outcomes for frontline communities and environmental impacts.

Again, thank you for the opportunity to provide comments. We look forward to continuing discussions with the Committee as you refine this important work to develop a strong and comprehensive Climate Protection Program.

May 10, 2021

Oregon Department of Environmental Quality
Office of Greenhouse Gas Programs
700 NE Multnomah St., Suite 600
Portland, OR 97232

Re: WSPA Comments on ODEQ Cap-and-Reduce RAC Meeting #4

Western States Petroleum Association (WSPA) is a trade association that proudly represents companies that explore for, produce, refine, transport and market petroleum, petroleum products, natural gas, and other energy supplies in Oregon and four other western states.

The way the world produces and consumes energy is evolving. And the members of WSPA are on the cutting edge of those changes, investing in and developing the affordable, reliable, and ever cleaner energy sources and technologies of the future. We believe that, working together, we can rise to the challenge of a changing climate. As such, we appreciate the opportunity to comment ODEQ's fourth RAC meeting on the proposed cap-and-reduce program.

Threshold and Allocation for Non-Natural Gas Fuel Suppliers

We appreciate ODEQ's attention to the issue of threshold and allocation for transportation fuel suppliers. As noted in our March letter, we support a low threshold and could support a zero threshold. Any threshold over 25,000 TCO_{2e} per year could invite fuel shuffling and result in potential negative environmental impacts. (Please see our previous comments.)

Regarding allocation, we agree with ODEQ that volumes of fuel sales by company can change annually such that an allocation based solely on historical operations could complicate program administration and could demand significant trading between obligated parties. As discussed in the recent RAC meeting, we encourage ODEQ to consider a two-step allocation methodology. Initial allocation for a compliance year or period could be based on recent history volumes (e.g. single recent year or 3-4 year rolling average), with a later "true-up" or final adjustment to allocation based on actual activity (fuel volumes). It is critical that activity levels are based on fuel volumes supplied to Oregon that includes all renewable fuels as opposed to emissions under the program. By doing this it ensures that a company is not penalized for meeting compliance under Cap-and-Reduce with renewable fuels.

This methodology could function equally for both small and large fuel suppliers. Flexibility would need to be provided to compliance entities to purchase and/or retire allowances after the “true-up” to meet compliance. This methodology is similar to California’s Cap-and-Trade program for industrial sectors.

Proposed Exemption for Process Emissions

Where jurisdictions propose carbon programs (e.g. Cap-and-Trade, carbon tax), WSPA generally recommends that the programs be economy-wide and include all sectors where emissions can be adequately measured and quantified. Properly designed, economy-wide programs with this structure will then operate where the most cost-effective reductions occur first. This functions to optimize program emission reductions and provides cost containment for Oregon businesses and Oregon consumers. Sector exclusions can reduce program liquidity and trading, can result in different price signals to different industries, and can lead to overall higher program costs.

For these reasons, WSPA does not support the proposed exclusion of imported electricity from the program and encourages ODEQ to seek authority to include imported electricity in the future if ODEQ does not currently have authority over those sources. Similarly, we do not support the proposed exclusion of approximately 1.8 MMTCO₂e from industrial process and other sources. We are concerned that ODEQ’s conceptual plan to instead apply best technology requirements on these sources will deliver a less-than-proportional share of GHG reductions to achieve the state’s aggressive goals. If true, this could put additional pressure on other obligated sources such as natural gas and transportation fuels to “make up” any shortfall in emission reductions. To highlight our concern, we point to “Scenario 3” from ODEQs modeling where ODEQ applied a 90% cap decline rate, instead of the expected 80% cap decline rate, to emission under the Cap-and-Reduce program after exempting industrial process emissions and small fuel suppliers.

Community Climate Investments (CCIs)

WSPA directionally supports the CCI feature subject to further details. CCIs could add value to the program in at least these ways:

- Fund projects to reduce emissions in disadvantaged communities
- Support local economies
- Strengthen Oregon’s natural and working lands
- Provide alternative compliance options for sectors where emission reductions are very high-cost and/or take time to develop
- Protect Oregon consumers from market volatility.

The CCI program should be structured and balanced to address each of these goals. We offer the following perspectives:

- **CCI Supply/Demand:** For the CCI feature to be successful, there must be reasonable supply/demand for the emission credits. The price must be able to support the necessary funding for real community greenhouse gas emission reduction projects. This is the supply component. On the other hand, cost cannot be too high or obligated parties may not use the CCI feature. This is the demand component. It would be unfortunate if the CCI option was underfunded, underutilized, or not used at all.
- **CCI Price:** It is premature to decide that the price of CCIs should be established at the Social Cost of Carbon (SCC). The April RAC presentation showed a potential CCI price of \$75/TCO₂e in 2020\$. This is far higher than most other alternative compliance options in other Cap-and-Trade style programs. For example, the February 2021 joint California/Quebec auction price for allowances was \$17.80/TCO₂e and offset credits are currently available at similar price. The SCC was a consideration in the design of the California Cap-and-Trade program price containment features but was used to inform how that program's auction price ceiling was established, not its alternative compliance mechanisms. The RAC should have expanded discussion on the basis for the CCI feature and the implications of a potentially severely underutilized CCI feature.
- **CCI Supply:** We strongly recommend the natural and working lands projects be included as part of the suite of options available to supply the CCI. These could include projects to enhance forest carbon sequestration, grassland improvement, soil improvement and agricultural options. These projects could provide significant supply of CCIs to the program. We are concerned that there will be inadequate supply of CCIs without the inclusion of such projects (an area which Governor Brown's Executive Order NO 20-04 specifically identified). This consideration should include some use of offset project protocols already established by national offset registries.
- **Cost Containment:** The CCI feature should deliver community reductions AND provide program cost containment. This feature can and should be a tool to control compliance costs for obligated parties, which should result in corresponding cost control for Oregon consumers of natural gas, transportation fuels and consumer products.

Program Modeling

We appreciate you sharing the ICF modeling assumptions and results in the April 22 and April 28 meetings. We have the following comments and questions:

- Clean Fuels Program (CFP) Assumption: We note that ODEQ and ICF assume in the three modeled scenarios that the Clean Fuels Program is extended to require a 25% CI reduction by 2035. As the rule has not been adopted, it should not be included in all modeled scenarios. We encourage ODEQ and/or ICF to transparently discuss this in the next RAC meeting. RAC members should understand the interplay between CFP program costs and Cap-and-Reduce program costs, including impacts of overlapping emission reductions and specific drivers for each.
- CCI Use: If we understand the modeling properly, modelers assumed in all 3 scenarios use of a maximum allowable volume of CCIs (5% or 25%) in all years. We also understand that this was in large part due to banking of CCIs, implying that the use of CCIs in a given compliance period is not limited. Instead, the percentage limit applied in the model would appear to apply on the purchase of CCIs. We also understand that the price for the CCIs was assumed to be the stated Social Cost of Carbon in all cases. Are both assumptions correct? If we heard correctly, ICF in the modeling workshop stated that the model used maximum volumes of CCIs in even the early years to bank credits for future years. This dynamic is important for RAC members to understand. It is positive that the model suggests that the CCI option may be used to fund projects in disadvantaged communities. That said, this suggests that compliance costs will be at or near the CCI price throughout the life of the program. We recommend that ODEQ discuss this finding in coming RAC meetings and provide compliance cost information alongside the modeling results.
- Energy Cost Transparency: Other stakeholders in the modeling workshop recommended that ODEQ and ICF present certain model outcomes in more detail (e.g. tables). Expanding upon our request in the above section, we also recommend and request that ODEQ share the forecasted costs for the modeled years for consumer energy including costs for residential electricity, natural gas, gasoline and diesel fuel.

Thank you again for the opportunity to comment. If you have any questions, please feel free to contact me at troberts@wspa.org. As always, we welcome the opportunity to meet with you to further discuss these ideas and welcome an open dialogue with you.

Sincerely,



Tiffany Roberts

VICE PRESIDENT, REGULATORY AFFAIRS



Dear DEQ:

My name is Gabriel Zirkle and I represent WSCO Petroleum. We are a member of the Oregon Fuels Association and appreciate DEQ including our representative on the Climate Protection Program (CPP) Rules Advisory Committee (RAC).

For purposes of background, our business employs some 450 Oregonians from Portland to Ashland, East to Pendelton, and West to Coos Bay. Our employees consist of 16 corporate staff, 22 transportation drivers hauling fuel, and 400 managers and CSR in retail stores and gas stations and we do not have staff for extended government compliance needs. In short, we are a small family-owned business and are not large oil companies.

Our business cares deeply for people and the environment. We make moving people and goods possible in our community. People in our communities are able to get to and from work, the store, and school with the help of the products we sell.

Those products continue to get cleaner and transportation technology advancements are making us all more efficient. We have made significant investments to help Oregon achieve its GHG reduction goals. Through the Clean Fuels Program, our industry has helped remove over a million metric tons of GHG emissions. Our small, family-owned business is not the enemy, and we are not a barrier to the state achieving its GHG goals – we are a conduit.

We support a 300,000 MtCO₂e threshold. That threshold ensures that we are able to continue to make investments in the CFP without unnecessary costs of a new program. These new complex regulations would be very expensive on our business. We simply cannot absorb the costs like the few other large businesses that you are considering regulating. This would be a fair threshold that would distinguish large importers from small. Anything lower would create unfair markets based on existing, long-term contracts.

Lastly, it is important that any policy scenario include an emergency exception in the event a small business exceeds a threshold due to an unforeseeable event. We all watched what happened in the South when a single pipeline was unable to deliver fuel. That sort of disruption could create new challenges in the fuels sector and will certainly impact reported emissions – especially for those that would need to find new fuel, in new locations to serve their communities. Similarly, with emerging natural disasters, it is important that we have the flexibility to deliver fuel to these emergencies without the fear of this regulation.

Thank you for considering our comments.

Sincerely,

GABRIEL ZIRKLE

From: Casey Kulla <kullac@co.yamhill.or.us>
Sent: Tuesday, May 25, 2021 10:58 AM
To: SINGH Nicole * DEQ <nicole.singh@deq.state.or.us>
Subject: First round comments, today's RAC

My view is that the GHG draft rules should lower the threshold for both stationary sources and the non-natural gas fuel suppliers (the 25K and 200K). It is my view that these need to be much lower, so that all parties are covered, as this is a matter of fairness, in my view.

I would ask you to reconsider the choice to not include a cap for stationary sources, as I don't think the "best available emissions reduction" approach sufficiently addresses the goal: "requires that covered entities reduce carbon emissions."