



State of Oregon Department of Environmental Quality

Additional Written Comments

Greenhouse Gas Emissions Program 2021

Rulemaking: Advisory Committee Meeting 7

This document is a compilation of additional written comments received related to the seventh and final meeting of the advisory committee for the Greenhouse Gas Emissions Program 2021 Rulemaking to develop a new Climate Protection Program.

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From: Diane Hodiak <dhodiak@350deschutes.org>
Sent: Friday, July 23, 2021 2:24 PM
To: CapandReduce * DEQ; FELDON Leah * DEQ; MCCONNAHA Colin * DEQ; GHGCR2021 * DEQ; CALDERA Stephanie * DEQ
Subject: Re: Comments to EQC on the DEQ CPP : Cap and Reduce Program

July 22, 2021

By: Diane Hodiak, Executive Director, 350 Deschutes, dhodiak@350deschutes.org, 206-498-5887

Representing approximately 1800 stakeholders in Central Oregon

To: CapandReduce@deq.state.or.us,
feldon.leah@deq.state.or.us,
mconnaha.colin@deq.state.or.us,
GHGCR2021@deq.state.or.us, caldera.stephanie@deq.state.or.us

Thank you for the opportunity to comment.

This is difficult to say, especially in public. I and others have supported DEQ in so many ways. However, their work on the Climate Protection Plan falls significantly short. I join many others who believe that the DEQ-proposed climate protection program is anything but climate protection. How can anything that calls itself a climate plan exempt the biggest industry polluters from the cap and offer so many exemptions and perverse incentives to select carbon intense fuels? The end result of this is to encourage pollution above the cap. DEQ is right to be concerned about the pollution from the BAER approach. That is exactly what we expect.

The DEQ plan seems to be largely guided by industry. Sadly, instead of leading, Oregon will lag in climate protection. DEQ's CPP offers little protection to Oregonians and even worse, is likely to contribute to increased negative health consequences for vulnerable communities.

The CCI program lacks integrity because it does not specify the best practices that should guide CCI selection. The end result could be sham programs that are not permanent, additional, or verifiable. 20% involvement from polluters is allowed: a high number considering the California Cap only allows 8%, primarily because the best solution is direct emission reductions, not offsets.

In sum, I am disappointed I cannot support this plan, embarrassed for Oregon's leaders that truly want climate protection, and deeply disturbed that in the midst of a climate emergency that is burning up our state, we have a plan that disregards science, and likely will not meet the reduction goals. What they will support is business as usual, or even worse, increased pollution above the cap. We don't have time for exploratory or "test" initiatives. Truly, we can and must do better.

I hope the EQC will ask DEQ to create a program guided by and in compliance with the governors EO 20-04:

1. To require verification of how their proposed CPP will meet scientific goals.
2. To justify the inclusion of Natural Gas and RNG at a time when we know that they should not be a part of any climate plan. Both have emissions. Scientists doubt that there is sufficient RNG opportunity that would provide a reasonable cost fuel alternative.
3. Why DEQ is not addressing the cleanup of fugitive emissions from pipelines, storage and transmission of natural gas and RNG?

4. Why they have not created integrity within the CCI program with rules and regulations that are a common recommendation for enforcement? (permanence, enforceable, verifiable, additional, real)
5. Why is carbon sequestration not included under CCI's?
6. How do they justify exempting stationary sources from the cap, with only BAER, which will just encourage pollution above the cap?
7. How do they justify incentivizing the use of carbon intensive fuels such as propane, and biomass?
8. Ask them to justify using a different date for the baseline, without adjusting how to increase the required amount of emission reductions that result from a higher baseline?

Diane Hodiak
Executive Director
She/Her/Hers
206-498-5887 talk or text
dhodiak@350Deschutes.org
Attend the GoCleanEnergy.org Conference



On Fri, Jul 23, 2021 at 12:00 PM Diane Hodiak <dhodiak@350deschutes.org> wrote:

DEQ Comments for Cap and Reduce RAC #6

July 22, 2021

By: Diane Hodiak, Executive Director, 350 Deschutes, dhodiak@350deschutes.org, 206-498-5887

Representing approximately 1800 stakeholders in Central Oregon

To: CapandReduce@deq.state.or.us,
feldon.leah@deq.state.or.us,
mconnaha.colin@deq.state.or.us,
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Diane Hodiak
Executive Director
She/Her/Hers
206-498-5887 talk or text
dhodiak@350Deschutes.org
Attend the GoCleanEnergy.org Conference



From: Allen Hallmark <hallmark3843@gmail.com>
Sent: Friday, July 30, 2021 11:48 PM
To: GHGCR2021 * DEQ
Subject: Community Climate Investment Fund projects

To the DEQ staff:

From: Allen Hallmark, a rural Oregonian

Please include carbon sequestration as an option in the array of Community Climate Investment Fund projects.

Thank you very much,
Allen Hallmark
Medford
458-226-6970

COMMENTS ON PROPOSED DEQ DRAFT CLIMATE PROTECTION PROGRAM

Submitted by

Robert E. Yuhnke

On behalf of Elders Climate Action, Oregon Chapter

I. Summary.

ECA submits these comments in response to the scope, timing and various provisions of the proposed Climate Protection Plan.

Our primary concern is that the Program is wholly inadequate to meet the challenge posed by the Climate Crisis as it rapidly devolves into a Climate Disaster in Oregon. The advisory from the World Meteorological Organization that global mean temperature is expected to reach 1.5° C above the pre-industrial baseline within 5 years along with the rapid increase in annual wildfire destruction in Oregon highlights the need for urgent action to reduce GHG emissions.¹ But the proposed CPP delays most reductions much beyond this window of opportunity for delaying the imminent disaster associated with reaching the 1.5° C danger threshold.

ECA calls upon DEQ to strengthen the CPP to reduce GHG emissions from regulated sources to achieve the 45% reduction by 2030 identified by the Intergovernmental Panel on Climate Change (IPCC) as the absolute minimum that must be done to have any chance of stabilizing the climate before warming crosses critical tipping points that will make a climate catastrophe inevitable. For Oregon that means reducing the 33 million metric tons (m MT) of CO₂e emitted from regulated sources by 15 mMT by 2030.

ECA's comments focus on 1) why urgent action is needed to prevent or at least slow the climate crisis from devolving into a climate disaster that will destroy Oregon's economy and make the State uninhabitable during the expanding wildfire season; and 2) an outline of how 15 mMT can be eliminated from regulated sources within this decade.

Need for Urgent Action Designed to Achieve IPCC to Stabilize Climate and Zero Emissions.

Submitted with these comments is a summary of the scientific evidence showing that the rapidly warming drier climate has put Oregon on the path toward a wildfire-dominated decade that is expected to burn 25% to 40% of our forest resources, create air pollution that will make the air intolerable for sensitive populations during the fire season, incinerate homes, businesses and entire communities, and devastate the State's economy.

DEQ's proposal completely disregards the evidence of the climate threat to Oregon by requiring, at best, 7.5 mMT of reductions by 2030, barely half of the GHG reductions (15 mMT) identified as critical by the IPCC. ECA in its December comments on modeling asked DEQ to acknowledge that the climate science reported by the IPCC requires that anthropogenic GHG emissions be reduced to zero by 2050 to stabilize the climate, and to model at least one zero emission scenario. Without explanation, DEQ has not

¹ See attached Summary of Recent Climate Science for more comprehensive discussion of the emergence of a full blown climate disaster.

acknowledged the goal that must be achieved to stop the warming, has not identified stabilizing the climate as a need, or performed any analysis of how that goal might be achieved in Oregon.

ECA's February comments asked DEQ to define the purpose and need for the CPP, and to define stabilizing the climate as the primary need. To date, the only statement DEQ has provided is the general intention to reduce GHG emissions while promoting equity interests and considering economic impacts on regulated entities. ECA does not believe that these general statements of policy objectives satisfy the statutory requirement that the notice of rulemaking must include "[a] statement of the need for the rule and a statement of how the rule is intended to meet the need; ..." O.R.S. 183.335(2)(b)(C).

In her Executive Order 20-04, the Governor defined the need for your rulemaking as responding to "the urgency and severity" of numerous threats to the health, economic stability and well being of Oregonians described in the Order. To avoid these threats, she ordered each executive agency "to reduce the worst risks of climate change and ocean acidification for future generations, **to the greatest extent possible within existing laws....**" This directive from the Governor should be your statement of need for the CPP rule.

But the proposed rule does not measure up to this need. In response to this looming disaster, we ask DEQ to strengthen the draft CPP before submission to the EQC by advancing the timing for planned reductions, and mandating definite reductions for industrial and transportation sources, including:

- Adding process sources under the Cap: ECA submits a proposal for integrating the BAER analysis for industrial sources into reductions under the cap to ensure that these emissions are reduced at the source or with CCIs.
- Regulation of transportation emissions through Fuel suppliers:
 - ECA reiterates earlier oral and written comments objecting to the failure to achieve equity benefits for near-highway BIPOC communities by failing to require that emission reductions from CCIs be achieved by reducing pollutant exposures in those communities. GHG emission reductions achieved through CCIs during the continued combustion of carbon fuels in on-road vehicles must achieve emission reductions at least equal to the reductions mandated for fuel suppliers required under the cap, and that such reductions be achieved in the neighborhoods exposed to transportation emissions.
 - ECA asks that the emission reductions for fuel suppliers be advanced to the earlier years of the program to achieve greater reductions before 2030.
- Modeling of the CPP shows that GHG emissions from on-road transportation fuels will be reduced only 3.0 mMT by 2030, and continue to allow 6.6 mMT CO₂e in 2050, but no explanation or justification is provided for allowing these emissions. The fuel supplier program should be augmented to increase reductions by 2.0 mMT by 2030, and reduce 2050 emissions from transportation to less than 1 mMT by identifying the California advanced ZEV mandate rule for light duty vehicles now under development by CARB as an additional strategy for reducing emissions.

II. Program Exemptions for Large Sources of GHGs Unlawful.

The need for immediate and significant reductions in GHG emissions is clearly demonstrated by the recent deaths here in Oregon from excessive heat exposure, rapidly expanding wildfire burn zones, and

the finding by the World Meteorological Organization that global mean temperature is rising faster than the IPCC expected only three years ago. DEQ needs to develop a CPP that responds to this evidence, or your work will become a footnote in a history of bureaucratic failures.

Last month the World Meteorological Organization, the Earth's climate tracker, issued a warning that 1.5° C rise above the pre-industrial baseline is only 5 years away;² not 15 years away as the IPCC estimated in their 2018 Report. IPCC calculated that a 45% reduction in GHG emissions by 2030 would avoid breaking through the 1.5 C danger threshold long enough to allow emissions to be reduced to zero by 2050. More recent empirical evidence shows that the atmosphere is warming more rapidly than modeled. This evidence demonstrates that major reductions need to be achieved within the next five years to avoid crossing the 1.5° C threshold, or as soon as possible thereafter to minimize the damage expected with global means greater than 1.5° C above baseline.

Oregon needs faster action and larger reductions by 2030 to do its part to avoid this unfolding disaster. Failure to require more rapid reductions will signal to the world that Oregon does not care enough about our citizens, our forests and our economy to take the actions that demonstrate what all jurisdictions can and must do to protect the planet.

Here in the Northwest last year we saw the most massive increase in wildfire in history. Ten million acres burned across the American West, with 1.2 million acres lost to wildfire here in Oregon along with 4,000 homes incinerated, 10,000 residents displaced and 11 killed by flames with hundreds more dying from the unavoidable plume of suffocating fire smoke that blanketed the region for weeks. Two weeks ago hundreds more died in OR and WA from heat stroke triggered by temperatures over 110 F for three days running. These events are a glimpse of the climate disaster that awaits us as temperatures rise.

The most scary fact is that the fires in OR last summer crossed an ominous tipping point: fires released more CO₂ into the atmosphere from burning trees than was emitted from transportation sources. The burn zone has expanded tenfold in a decade from an average of about 120,000 acres burned annually to 1.2 million last year. At these burn rates, wildfire has become the largest source of GHG emissions in Oregon.

The Oregon Climate Assessment, funded by the legislature and published by a science team at OSU, predicts that the burn zone will double again in this decade to 2.5 million acres annually as temperatures continue to rise, summer precipitation drops, and the trees in traditionally wet temperate forests become desiccated. The smoke pollution from these fires will make the Pacific NW uninhabitable during the fire season for those most vulnerable to pollution: children, elders and those with pre-existing respiratory and cardiovascular conditions.

ECA reiterates its frequently expressed concern that the Cap and Reduce program is not consistent with the climate science developed by the IPCC, and supported by the Oregon Climate Assessment (OSU, Jan 5, 2021) which make clear that until GHG emissions are reduced to zero the climate will continue to heat and continue to cause more severe and more destructive climate-driven consequences, including -

- increasing fire zones, fire duration and fire damage to property, businesses and jobs;
- injury to public health from smoke pollution flagged by OHA as the greatest health threat from air

² Citations to sources for statements in this section can be found in the attached Summary of Climate Science.

pollution in Oregon; -- increased flooding, drought, disruption of agricultural production that compromises the food supply; and -- destruction of wildlife habitat include water temperatures unsuitable for salmonid spawning.

DEQ is not accounting for the damage and injuries that its proposed slow schedule for reducing the cap, exemptions and limitations will have on all of the public and private resources that will be adversely affected. So long as those adverse impacts are not accounted for by DEQ, and no rational basis is offered for the slow schedule, and no other competing values or policy considerations are identified to justify exemptions and deferrals, ECA contends that the large exemptions from reductions to zero are in conflict with the goals of the program as stated by Governor Brown's EO, are not consistent with President Biden's EO declaring that the policy of the United States is to achieve zero emissions by 2050, violate DEQ's statutory obligations to protect the environment and public health, are not justified by any statement defining the need for the Program and how success will be measured as required by the Administrative Procedures Act, and are arbitrary, capricious and not consistent with law.

How CPP Can Be Fixed Before Submission to EQC.

HB 2021 mandates an 80% reduction in power sector emissions by 2030 which should achieve about an 8 mMT reduction from the 2019 GHG Emission Inventory (66mMT), or a 12% reduction in economy-wide emissions. The CPP, as currently proposed, will not require additional reductions to achieve even the IPCC's 45% reduction target for 2030 that was originally set when that reduction was expected to avoid crossing the 1.5°C danger threshold. The CPP modeling establishes that the CPP could achieve 7.5 mMT reduction from regulated sources by 2030 **IF** CCIs achieve the same reductions required under the Cap. Together with HB 2021, the proposed CPP could achieve about 39% (25.5/66) reduction from 2019 GHG emissions emitted from the combustion of fossil fuels if CCIs are required to achieve the reductions required by the proposed Cap

ECA asks that DEQ increase the reductions from regulated sources by another 7.5 mMT by 2030. We believe that this additional reduction can be achieved with the proposals outlined in this comment. ECA asks that DEQ fix the flaws in the CPP by taking the actions outlined below.

III. Administrative Procedures Act.

The Oregon Administrative procedures Act requires that before DEQ issues a notice of proposed adoption, it must include "A statement of the need for the rule and a statement of how the rule is intended to meet the need; ..." O.R.S. 183.335(2)(b)(C). DEQ has not provided such statement.

ECA asks DEQ to adopt various provisions from Governor Brown's E.O. as the key elements of the statement of need required by law. Examples include, at least, the Governor's declarations that there is a need to --

- 1) "reduce GHG emissions in Oregon's transportation sector [to] provide substantial public health co-benefits by reducing air pollutants from the combustion of gasoline and diesel fuel that are harmful to human health."
- 2) "rapid[ly] transition from internal combustion engines to zero emission vehicles ...[to] reduc[e] emissions from the transportation sector and advance[e] the State's GHG emissions reduction goals."

These and similar statements of need provide support for the GHG reduction and equity elements of the Program. The E.O. also recognizes the need to protect Oregon's economy from the costs of climate impacts. The Order identifies "economic vitality" of the state being adversely affected by climate change and ocean acidification, and that more "frequent and severe" wildfires are having adverse economic effects on rural communities. Another element of "need" to include in the statement is the need to protect Oregon's economy from the injury to public health caused by heat waves and fire smoke, damage to property and loss of forest resources caused by wildfire, and the loss of fishery habitat from shrinking snow melt and summer stream flows.

Stating these examples of the need to prevent economic losses will provide a context for showing that the benefits of avoiding these impacts more than justify the costs imposed on sources required to control their emissions. The statement of economic impacts required by the APA focuses on the costs borne by regulated entities. It does not require consideration of the costs of inaction, and the value to the public of the benefits of action. Citing the need to prevent those adverse economic impacts provides the EQC with the factual basis and the rationale for comparing benefits with the costs of regulation to justify a strong program.

The Governor's declaration of the magnitude of GHG emissions reductions needed to respond to the "urgency and severity" of the climate crisis also provides a clear statement of the need for GHG emissions reductions:

WHEREAS, Given the urgency and severity of the risks from climate change and ocean acidification, and the failure of the Legislature to address these immediate harms, the Executive branch has a responsibility to the electorate, and a scientific, economic and moral imperative to **reduce greenhouse gas emissions** and to reduce the worst risks of climate change and ocean acidification for future generations, **to the greatest extent possible within existing laws....**
[Emphasis added]

This statement recognizes that under current law there may be limits to the amount of GHG emission reduction that may be required from a source, but the urgency and severity of the risks to future generations requires that emissions be reduced to the greatest extent allowed by existing law. Present and future generations will not be able to reverse within a lifetime or multiple lifetimes the damage to property and destruction to the natural world and living systems that GHG emissions are causing. This is not a program subject to course correction in a decade or two if the predicted rapid expansion of wildfire this decade in response to excessive heat causes the destruction of forests that took most of the last millennium to achieve their current form and structure. We have one opportunity to get it right. The crisis is rapidly devolving into a disaster now. There will be no do-over.

If DEQ does not see the current state of the climate crisis, as described in the attached summary of the evidence that a climate disaster is upon us, with many hundreds of deaths in the last 12 months from heat waves, fires and fire smoke; with science warning of the rapid expansion of those effects here in Oregon in the immediate future causing major disruption to the lives and well-being of Oregonians; and with a global panel of climate scientists applying six different climate models to assess the future who clearly state that we must achieve zero emissions to stabilize the climate before it becomes a runaway climate disaster driven by exogenous factors beyond human control; then nothing will penetrate your bureaucratic bubble to take the action needed to prevent the looming climate disaster. We are doomed to fry in a Hell of your own making.

The Governor has the vision and foresight 15 months ago to see the threat and called for you to reduce emissions to the greatest extent possible within existing laws. Your failure to follow her directive ignores, rather than responds to, the urgency and severity of the crisis we face.

IV. Actions Needed to Meet the Climate Challenge.

At a minimum, ECA believes that you must take the following actions to increase the effectiveness of the CPP during this decade when human occupation of the Cascadian forests remains possible:

- A. reflect the critical need for major reductions before 2030 by accelerating the time horizon for source sectors to take action by steepening the front end of the emission reductions under the cap to at least achieve the magnitude of reductions called for to meet the IPCC target for 2030, i.e., 15 mMT of the 33 mMT you have identified as subject to regulation.
- B. Include industrial process sources under the cap to create incentives for sources to adopt, or help develop, zero emissions technologies. Until they achieve zero emissions, require process sources to invest in CCIs to help achieve the additional reductions needed to meet the IPCC target.
- C. Accelerate reductions from on-road sources and reduce 2050 allowable emissions for fuel suppliers (to ± 1.0 mMT instead of 6.6 mMT) by committing to adopt the proposed CARB ZEV mandate requiring major reductions in light duty internal combustion vehicle sales beginning in 2026, then phasing in more stringent targets until 100% zero emission vehicle sales is required by 2035.
- D. Require that all CCIs achieve 1 for 1 reductions in GHG emissions, and that reductions be verified.
- E. Protect Environmental Justice communities adversely affected by vehicle emissions by requiring that CCIs obtained by vehicle fuel suppliers achieve comparable reductions in both GHG and co-pollutant emissions, and that co-pollutant emissions be achieved in the neighborhoods directly affected by exposure to vehicle emissions.

A. Revise Cap to Meet IPCC Target by 2030.

As discussed in detail in the Climate Science Summary submitted with this comment, Oregon has run out of time to avoid a Climate Disaster. It is upon us, and unfolding rapidly has we lost hundreds of lives within the last 12 months to heat waves and fire smoke pollution, as wildfire destroys forest resources, homes, businesses and communities, as accelerated snowmelt reduces stream flows in the summer heat making streams no longer suitable for fish spawning and migration, and water supplies unavailable for agriculture. The urgency and severity of the climate risks that the Governor identified in her Order a year ago are occurring now. There is no more time to wait. You must require sources to achieve major reductions in GHG emissions as soon as possible.

As proposed, the current draft begins to require reductions in 2022, and presumably paces those reductions evenly over the next 28 years to achieve an 80% reduction from regulated sources by 2050. Without accounting for exemptions and exclusions that make the program less effective, the best that could be expected by 2030 is that 33 mMT would be reduced by 7.5 mMT to an allowable of 25.5 mMT. Meeting the IPCC's 45% reduction target would require that regulated GHG emissions be reduced 15 mMT to an allowable of 18 mMT in 2030.

ECA believes that this schedule is achievable if the following modifications to the CPP are adopted.

B. Integrating Industrial Process Sources Subject to BAER Into the Cap.

DEQ estimates that industrial process emissions are approximately 1.7 mMT annually. The CPP as currently proposed, assures no reduction in GHG emissions from these sources. These emissions must not be allowed to continue throughout the decade. Reductions from the industrial sources or from CCIs must be required to meet the climate crisis.

As proposed by DEQ, a determination of best available emission reduction (BAER)³ would be offered to industrial process sources as an alternative to achieving reductions required by a declining cap. This approach is objectionable on numerous grounds. First, it provides no incentive for industrial sources to adopt or support development of zero emission technologies. It creates a reverse incentive to argue for the least cost, least effective technology. It imposes the burden on DEQ to establish what might be defined as BAER, rather than imposing on sources the obligation to show that reductions required by the cap are not currently feasible, or invest in innovative developments designed to achieve the reductions required by the cap..

As an example, cement production is the world's largest source of industrial process emissions accounting for roughly 8% of global GHG emissions. Oregon has a cement plant that is a major CO₂ emitter. Currently a new cement plant is under construction in Canada that is designed to implement innovative low GHG emission cement-making technology. The BAER program as currently proposed would require DEQ to demonstrate that this innovation will be available for implementation in Oregon. This may prove to be an impossible burden.

As I discovered when I represented the PA Department of Environmental Resources in litigation against the world's largest steel makers in the 1970s, we learned of advanced technology developed by Japanese steel makers for controlling coke oven emissions. EPA sent an observer to evaluate the emission performance of these innovative developments, but those observations did not provide a basis for determining whether those innovations could easily be applied to coke oven batteries in PA. The technical analysis for specific applications could only be performed by the steel company system engineers. The law gave us a tool to require them to invest in that kind of technology development because we could prosecute them to impose fines for their emissions until the emissions were reduced to the levels required by the SIP.

But the program design you have created gives the agency no such leverage. You impose the burden of proving feasibility on the agency, which is not likely to be a burden you can meet. This is a fundamental flaw in the program that is likely to have the effect of postponing or preventing reductions from industrial process sources beyond this decade and possibly the next.

Adding industrial process sources under the cap has dual benefits: 1) sources will be required to achieve reductions immediately either by investing in process modifications or CCIs; and 2) the cost of CCIs will create an incentive to develop, if necessary, and implement emission reduction technologies. You share pair this incentive with language describing the BAER determination process as requiring the process source to bear the burden of demonstrating that GHG emission reductions are not feasible in order to

³ We assume that BAT will be defined, is not limited to control technology, but will encompass both emission control technology, such as carbon capture and sequestration, and process changes that reduce or eliminate the production of CO₂ or other GHGs.

qualify for the use of CCIs as an alternative compliance mechanism beyond the time horizon demonstrated as necessary to adapt and deploy emission reduction technologies at the source.

Requiring industrial sources to offset their emissions with CCIs by 2025, and continue until they achieve zero emissions, will reduce emissions by

C. Fuel Supplier Emission Reduction Program.

The combustion of motor fuels (gasoline, diesel and ethanol blends) is the largest source of GHG emissions in Oregon, contributing 23 million MT CO₂e (35%) of the 66 m MT CO₂ emitted from fossil fuel use in 2019. Motor fuel emissions represent 70% of the 33 m MT CO₂e that DEQ has proposed to regulate under the Climate Protection Program. The success of the CPP turns on the extent to which motor fuel emissions can be reduced or eliminated.

The control strategy for reducing motor fuel emissions relies on three strategies announced to date: 1) expanding the Clean Fuels Program from 10% to 25% to be undertaken as a separate rulemaking, 2) adoption of the California Advanced Clean Truck rule pursuant to section 177 of the Clean Air Act currently proposed as a separate rulemaking; and 3) the regulation of non-natural gas fuel suppliers as part of the Climate Protection Program.

Modeling performed by ICF estimates that emissions from motor fuels will be reduced by only 3.0 mMT by 2030, and continue to emit 6.6 mMT at the end of the Cap in 2050. Neither the modeling report nor DEQ's presentation of the modeling results provide any explanation how projected emission reductions will likely be achieved during the current decade, or why 6.6 mMT of allowable CO₂ emissions will be allocated to fuel suppliers at the end of the Cap in 2050.

1. Modeling Assumptions and Inputs Not Disclosed.

The modeling results are presumably a product of the impact that program features will have on emissions, but data inputs and modeling assumptions used to perform the modeling have not been provided despite three separate requests for data during the RAC process. Nothing we have seen to date provides sufficient information to understand how the estimates of total reductions in motor fuel combustion expected as a result of the implementation of these strategies were obtained. The requested information included future fuel cost assumptions, fleet number assumptions, changes in VMT, ICE replacement with ZEVs in the fleet, and other factors relevant to estimating fuel combustion. ECA renews these requests. Such data must be provided prior to release of the proposed rule and commencement of any formal proceeding before the EQC.

2. Rationale for Reductions This Decade, or Allowing 6.6 mMT GHG Emissions from Motor Fuels in 2050 Not Explained.

Without the requested data, neither the public nor fuel suppliers can understand why only 3 mMT reduction in emissions from motor fuels is required in this decade, and 6.6 mMT CO₂e will be still be allowed under the cap in 2050. DEQ has provided: a) no rationale for requiring only a 13% reduction by 2030, b) allowing large emissions from the transport sector in 2050, c) no explanation of how the program is designed to achieve planned reductions, d) no analysis of the likely success fuel suppliers will have in achieving planned reductions, or e) their willingness to be cooperative partners in a program

designed to eliminate most of their revenues. The program aimed at fuel suppliers is a Black Hole offering no assurance that even planned reductions will be achieved.

During the July RAC meeting, fuel suppliers raised questions about how diminishing fuel supplies required under the Cap would be allocated, what the likely impact would be on delivery of goods and services, what the impact on fuel price would be, and how the public would be affected and respond to either fuel shortages, higher prices driven by fuel supplies not meeting demand, or both.

These issues were not specifically answered by the economic modeling performed by IFC.

ECA's concern is that the program will not work because public response to fuel shortages and/or higher prices will be swift and violent as demonstrated by the public response to fuel shortages in 1974 during the Arab oil boycott, during the Yellow Vest riots in France after President Macron raised fuel prices as part of a strategy to reduce GHG emissions, and as demonstrated by public response to the 6-day Colonial Pipeline knockout in May. Long before the program is pushed to its limits under the Cap, ECA is concerned that public backlash will kill the program.

Additional measures to reduce the demand for motor fuels must be integrated with the regulation of fuel suppliers to achieve significant reductions in GHG emissions.

3. Any Program to Maximize Emissions Reductions from Combustion of Motor Fuels Cannot be Limited to Fuel Suppliers. Program Must Also Assure Replacement of ICEs With ZEVs.

The modeling results show a large fraction of 2050 allowable GHG emissions (6.6 mMT) allocated to fuel suppliers. This is an inherent recognition that controlling emissions from motor fuels by regulating fuel suppliers cannot succeed in achieving even close to zero emissions because it is not focused on eliminating the demand for petroleum motor fuels. Motor fuel demand can be reduced to near zero if IC vehicles are replaced with ZEVs.

Fuel suppliers will not have the clout with consumers to convince vehicle owners to replace their ic vehicles with ZEVs, especially if automakers do not make sufficient ZEVs available for sale in OR, or if total demand for ZEVs does not achieve expected economies of scale needed to bring ZEV prices into parity with ic vehicle prices. Sales commitments backed up by the marketing clout of automakers will be necessary to achieve the reductions in motor fuel use needed to meet the reductions planned under the Cap.

California is developing a rule designed to achieve this outcome.⁴ As currently designed, the ZEV mandate would require manufacturers to achieve 26% ZEV sales beginning 2026, and 60% by 2030.⁵ Assuming that the current replacement rate for LDVs (98%/20 yrs) continues, roughly one quarter of Oregon LDV's will be replaced during the five model years 2026-2030. The CARB rule would require roughly 42% of the replacement vehicles to be ZEVs. The effect of the rule would be to displace approximately 10% of the LDV motor fuel demand by 2030. Oregon's GHG emissions inventory does not disaggregate transportation emissions by vehicle class, but if the fuel demand by vehicle class is similar to CA, displacing this many ic vehicles should reduce GHG emissions from motor fuels about 2 mMT by 2030.

⁴ CARB workshop (May 6, 2021): [May 2021 Advanced Clean Cars \(ACC\) Workshop Presentation](#).

⁵ *Id.*, slide # 43.

In addition, a ZEV mandate that ends the sale of new ic vehicles by 2035, should displace enough demand for motor fuels to reduce GHG emissions from LDVs by about another 3.25 mMT by 2035, with the potential for eliminating about 90-95% of motor fuel use by 2050. Integrating the CARB ZEV mandate with the fuel supplier program should reduce GHG emissions from motor fuels to less than 1.0 mMT by 2050.

When EPA restores the waiver of pre-emption under the CAA, Oregon will have authority under section 177 to adopt the CARB ZEV mandate rule.

ECA asks that DEQ request an additional model run from ICF that includes an assessment of the impact that the proposed CARB rule would likely have on combustion of, and GHG emissions from, motor fuels. We ask that DEQ

4. How Planned Reductions in Motor Fuel Emissions Will be Achieved by Fuel Suppliers is Not Clear.

The largest GHG emissions reductions in the entire plan are required from fuel suppliers, but how fuel suppliers will achieve those reductions is not described, either in the CPP or in the modeling report. Large reductions are expected from displacing fossil C with C in biofuels, but those reductions will be required by the expanded Clean Fuels Program (CFP). The emission reductions to be achieved by fuel suppliers under the CPP are in addition to the reductions that will be required under the CFP.

The CFP is the current basis for GHG reductions from motor fuels. These reductions are included in the baseline used for modeling reductions. Data available on the CFP website shows that GHG reductions are being achieved primarily by substituting ethanol for petroleum fuels in fuel blends. Even assuming that lifecycle C-emissions from planting, harvesting and fermenting the feedstock, and transporting the ethanol is included in the calculation of CO₂ emissions from the fuel, this source of reductions has serious limitations.

In the analysis performed by Argonne NL using DOE's GREET model the GHG reductions achieved from ethanol cover a wide range from 57% (for corn) to 100% (miscanthus) depending on the feedstock used to produce the ethanol. The differences depend primarily on fertilizer inputs required to grow the feedstock and whether the energy used to produce ethanol at the distillery is derived from the feedstock. I have not discovered what assumptions are used to determine the GHG reductions assumed for calculating the reductions from ethanol displacement of gasoline in motor fuels in OR.

The primary feedstock for ethanol produced as motor fuel in the U.S. is derived from corn. If the reductions are based on lifecycle emissions of ethanol produced from corn the reductions actually achieved will be slightly more than half of those assumed if the lifecycle emissions are not accounted for. Obviously that calculation is very important in determining the amount of reduction credits the fuel suppliers are awarded for gasoline displacement.

The availability of biofuels as a strategy for fuel suppliers to meet reductions required by the Cap are limited by a number of factors. First, fuel blends are limited to 15% ethanol by volume. Modern vehicles are designed to perform with fuels blended to 15% ethanol, which obviously puts a cap on the amount of gasoline displacement that can be achieved with ethanol.

Second, most of the fossil C displaced by ethanol will be required to comply with the CFP. Colin said at the 5th RAC meeting that modeling performed to expand the CFP suggests that the cap may be around 30% GHG reduction, or roughly a 4.3 mMT reduction from the current (2019) transportation inventory of 23 mMT that includes ethanol required under the current CFP. But most of the 30% reduction will be required under the proposed expansion of the CFP to 25%. That leaves a large gap (10 mMT) between what the CFP can be expected to achieve and the 6.6 mMT allowable target set under the cap for fuel suppliers in 2050.

That reduction can be achieved by either reducing fuel supplied to the market, raising fuel price to levels that will suppress demand, or investing in CCIs that displace fuel demand. Nothing in the proposed CPP rule limits the options of fuel suppliers for meeting GHG reductions under the Cap. The obvious option is for fuel suppliers to raise prices to suppress demand because that option will allow suppliers to maintain revenues while reducing product sold.

The consumer response to fuel price is not highly elastic. That means fuel prices will need to be raised by large factors to achieve small reductions in demand. In 2008 when oil reached \$140/bbl, and gasoline was \$4.25/gallon, neither travel demand nor fuel consumption was significantly suppressed. People still needed to get to work, to school or to medical care. Transit ridership peaked, but ridership rose by 9 – 12% in various cities compared to prior years, which represented a modest reduction (1-3%) in VMT.

The reports of the modeling presented by IFC do not include estimates of fuel costs if fuel suppliers were to choose cost as the primary strategy for allocating limited supplies to reduce emissions.

While charging higher fuel prices, suppliers will blame the cost increases on the shortages forced on them by the Cap. These costs will hurt low income families the most since they already pay a larger share of family income for transportation, and will be least able to afford higher fuel costs. The result will be an unsustainable political backlash of the kind described above. The program will never achieve its GHG reduction goals, and will have adverse impacts on both equity and broader economic costs imposed on the traveling public.

DEQ does not cite any studies of any role that the fuel suppliers have played in reducing fuel demand vs reducing fuel supplies. DEQ offers no analysis of strategies they have deployed, or how effective those strategies have been. Fuel suppliers have no incentive to displace fuel demand. It may prove much cheaper to invest in CCIs for credits or pay penalties than to promote EV ownership or transit use.

Fuel supplier investments in EV ownership would be treated as CCIs since they are not reductions in fuel carbon or fuel supplied. As CCIs they are capped at 20% or 25% (depending on the scenario) of the total reduction required under the cap, or 2.0 mMT of the 10 mMT not achieved through the CFP. How the remaining 8.0 mMT can be achieved (after maximum ethanol displacement and 20% CCIs) is not explained anywhere in the modeling.

DEQ must present evidence that explains where/how the fuel suppliers can achieve this magnitude of reduction. This is potentially the biggest gap in the entire program, and why DEQ must supplement the fuel supplier program with a proposal to adopt CARB's ZEV mandate rule now being developed to achieve 100% ZEV sales by 2035.

5. CCIs as Proposed in Draft Rules Will Not Achieve Program Goals.

One aspect of the fuel supplier rule is clear: most of the reductions in the early stages of the program will be achieved by fuel supplier investments in CCIs. But whether those investments will achieve any of the three claimed program goals is highly problematic.

1. CCIs will not achieve the GHG reductions required by the Cap because CCIs are not required to achieve the same magnitude of GHG reduction as required by the Cap.
2. CCIs will not achieve equity goals for near-highway BIPOC and low income communities burdened with the adverse health effects of exposure to tailpipe emissions because CCIs are not required to achieve reductions in tailpipe co-pollutants (NO_x, CO, black carbon particles, toxic organic compounds including benzene/toluene/xylene, formaldehyde, 1,3 butadiene, polycyclic aromatic hydrocarbons) or in the neighborhoods exposed to highway pollution that would be achieved if carbon fuels were not burned in on-road internal combustion engines.
3. CCIs will not likely achieve significant reductions in the economic cost of the program because they will not reduce community health costs, and will not achieve reductions in fuel use by on-road vehicles unless CCIs are invested in replacing internal combustion engines (ICEs) with zero emission vehicles (ZEVs) to reduce fuel use.

ECA supports DEQ's decision not to include sequestration as a CCI. Trees do not take up the benzene, 1,3 butadiene, and acetaldehydes emitted by tailpipes, inhaled by nearby EJ communities and stop the cancers, childhood asthma and cardiovascular disease associated with these exposures.

CONCLUSION.

ECA requests that DEQ acknowledge the magnitude of the Climate Disaster bearing down on Oregon with wildfire ravaging the state, destroying homes and communities, and polluting a vast swath of the U.S. with hazardous smoke plumes. To slow the unfolding of this disaster, the CPP must be revised to reduce GHG emissions by an additional 7.5 mMT by 2030 to achieve at least the 45% target identified by the IPCC as necessary to avoid the disastrous consequences of exceeding 1.5° C above the pre-industrial baseline. We believe those additional reductions are achievable with the strategies outlined above.

We submit these comments on behalf of our grandchildren who rely upon you to preserve a liveable planet for them. Use your authority now, so you may tell your grandchildren: I did everything in my power to stop this devastation.

Respectfully submitted,

Robert E. Yuhnke
Elders Climate Action, Oregon Chapter

July 26, 2021

Oregon Department of Environmental Quality
Climate Protection Program
700 NE Multnomah Street, Suite 600
Portland, OR 97232-4100

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

Re: Rules Advisory Committee Meeting #6 and #7 – Comments

This comment letter is submitted on behalf of EVRAZ Portland. Thank you for the opportunity to participate in the Rules Advisory Committee (RAC) Workshop 6 and 7 to support development of the Oregon Climate Protection Program (CPP) regulations. Our comments relate to broad issues in the program design and the Fiscal Impacts Statement (FIS). We have provided an analysis of the FIS by an independent economist as Attachment 1. We have provided summary comments on the rule language as Attachment 2. We have also provided specific requests for modification of the program below.

Requested Modifications to the Proposed CPP

- 1) Reevaluate and rewrite the language of the rule to provide certainty to business. As currently proposed, the rules are unnecessarily complex and subject to ongoing interpretation. Generally suggested changes are:
 - a. Do not include overlapping requirements with other air quality regulatory programs – focus on greenhouse gas emission reductions and acknowledge that co-benefits are in fact a result of the primary greenhouse gas emission reduction and not a goal in and of themselves. Use co-benefit as defined by the U.S. Office of Budget and Management (OMB) instead of reinventing the wheel for Oregon only . The OMB definition of co-benefit is “a favorable impact of a rule that is typically unrelated or secondary to the statutory purpose of the rulemaking”.
 - b. Use the simplest, most direct method of compliance evaluation. If compliance can be determined by emissions, do not require additional analysis beyond emissions calculation and cost effectiveness analysis. Businesses should not be subject to the whims of the current staff of the DEQ. They should have a clearly designated process that they can understand. For Best Available Emissions Reduction (BAER), we previously commented that the EPA Best Available Control Technology (BACT) process could be followed with clear guidelines for the fact that in many cases BAER

- will be looking at retrofit evaluations and not new facility or process construction and will have to account for the feasibility of retrofit construction and costs.
- c. Allow integration of regulatory requirements between programs. Allow a combined analysis of controls in conjunction with Cleaner Air Oregon (CAO), and other programs such as Regional Haze and allow sources to propose an overall program of measures for the requirements of all programs that provide the best overall solution with a timeline for implementation. Businesses faced with undefined, serial investment requirements, potentially for the same equipment are rightly in opposition to all these rules individually.
 - d. Allow credit for capital intensive projects that have been implemented in the past 10 years at stationary sources. Many stationary sources have ongoing programs to increase process efficiency and decrease fuel use. If a source has implemented a major project that substantively improved fuel efficiency and reduced emissions over the past 10 years, that should be an explicit consideration in the evaluation of additional requirements for reductions. As facilities become more efficient, there is less and less low-hanging fruit to achieve emissions reductions. They should not be penalized for having done the right thing all along.
- 2) Provide a reasonable analysis and data on of the costs of the CPP. If these costs are not currently available as stated in the FIS, then get them and wait to prepare the FIS until DEQ can provide an adequate economic analysis. The current FIS is untenable in the lack of disclosure of probable impacts and the obfuscating of the inadequacy of the economic modeling for the purpose of economic impacts analysis. This rule should not be finalized until the Public Utilities Commission (PUC) process used to establish the costs of natural gas has proceeded far enough to determine the natural gas cost impacts to businesses and consumers, and without some estimate of the expected short term cost escalation expected in the transportation fuels sector. These types of costs have meaningful effects to businesses and Oregon consumers. While long-term costs may settle out, the impacts to consumers, business and the overall economy could be adverse in the short term.
 - 3) Provide cost caps to be used if the costs of liquid fuels, natural gas, and propane exceed boundaries that would be expected to cause adverse economic effects such as business failures, manufacturing production leakage or substantive adverse effects to low-income households.
 - 4) Provide economic protections for Energy Intensive, Trade Exposed (EITE) industries. Specifically – provide protections from the increased costs caused by the CPP of fuels used in production. These industries cannot sustain increased costs for fuels and transportation. Some of these industries such as steel and cement currently do not have alternative technologies that will allow process changes as the basis of greenhouse gas emissions reductions. EITE industries will need an emissions reduction path that is supported by cost abatement and research funding to survive the short-term transition to the long-term decarbonized future. As demonstrated by the structure of the California Cap and Trade program, EITE industries come in all different sizes from large multinational corporations to

small businesses and from large emitting sources (over 25,000 metric tons per year) to small emitting (under 10,000 metric tons per year). As the CPP is currently formulated, EITE protections would need to be imposed requirements at the PUC. We strongly recommend direct economic support be provided through the CPP rulemaking. One option would be to use CCI funds to support EITE needed cost abatement and research funding for these emissions reduction pathways and we specifically request this measure in addition to the evaluation of other measures.

- 5) Provide reasonable accountability requirements to all parties to achieve the needed greenhouse gas emissions reductions. Under proposed modifications to **Division 12 Enforcement Procedure and Civil Penalties**, the current rules provide shockingly divergent paths for program compliance for covered sources and Community Climate Investments.
 - a. For covered sources, DEQ is proposing a disciplinary scheme that is draconian. Given the nascent and untested regulatory scheme DEQ is proposing under the CPP, this is inappropriate. There are several places where the CPP is not realistically connected to the regulatory framework already imposed on business and the market factors affecting compliance. As an example – Local Distribution Companies (LDCs) are required by law to provide natural gas to end users. LDCs do not have regulatory authority to require implementation of conservation measures. As a result, if an LDC is not able to convince (because they lack regulatory authority) a sufficient cadre of building owners to retrofit for efficiency, and they are not able to procure enough renewable natural gas (RNG) or other low-carbon fuels during a certain period, they may be required by law to supply gas in excess of their allotted cap. It is extremely unclear if there is sufficient flexibility in the existing program to allow acquisition of compliance instruments by alternative methods that could potentially offset the distribution of gas in excess of their cap. Under the proposed Division 12 rules, an LDC would be subject to extremely high potential fines if their cap was exceeded, and they would have no realistic pathway to compliance. Under this scenario, DEQ would need to modify the CPP rules to regulate the building sector to allow the goals of the CPP to be achieved instead of imposing exorbitant fines if DEQ's goal is to achieve the emissions reductions of the CPP. Accountability is important. So is a reasonable evaluation process to determine the cause of non-compliance in this new program and allowing accountability to DEQ for structural deficiencies of the rules.
 - b. Alternatively, if a Community Climate Investment (CCI) business does not achieve its required emissions reductions, it may not be eligible for future contracts, but there would be no fines or other fiscal accountability for the lost opportunity of the emissions reductions. And this could represent up to 20 percent of the transportation sector emissions reductions. There needs to be greater accountability for CCIs which could represent a substantive amount of money that should be accountable to the citizens of Oregon for program implementation. There should be substantive penalties for negligence or intentional misuse or

misapplication of funds. This is a realistic concern given that under the California Cap and Trade program there are in fact offset investments that are not meeting goals.¹

- c. It is unlikely that a large business would choose to not meet compliance targets in any sector unless there is a conflicting regulatory requirement as described under 5a above. It is far more likely that large businesses will make prudent business decisions and move operations to another state or curtail business operations in Oregon rather than risk non-compliance. It is far more likely that a small business would have a compliance blip because of a staff change or other internal disruption. The proposed fine structure appears intended to put a smaller business out of business. In the fuels sector, this could cause disruptions to supply.
- d. It would be more prudent for the CPP rulemaking to develop a scaled enforcement program that allows sufficient time for covered sources to adapt to the regulatory scheme, and both accountability and technical support to meet the requirements. Potential options that could be considered in lieu of an unreasonable fine structure are disproportionate payback of emissions for first error or increased frequency of compliance demonstration. There are likely many more reasonable measures that could be considered to forward the goals of the program. Hold the big hammer for big mistakes or intentional noncompliance. And most importantly, allow an offramp if DEQ has failed to rigorously evaluate the feasibility of compliance within the existing regulatory framework of a sector and needs to modify the rules to achieve program goals.

General Concerns Regarding Program Design and Fiscal Impacts Statement (FIS)

It has been difficult to develop reasonable comments on the proposed rule language because there are overarching issues of concern imbedded in the structure of the CPP at this point. We have previously provided extensive comment on these issues of concern in our comment letters. At this point, we believe the overall structure of the program threatens both the economy of Oregon, and the purpose of the CPP. An independent review of the FIS economic analysis is included in Attachment 1. The primary issue is that the FIS for the CPP misrepresents the appropriateness of the economic modeling to evaluate effects to the Oregon macroeconomy. The economic analysis supplied by DEQ in the FIS is so deeply flawed that it is unusable to evaluate macroeconomic effects of the proposed CPP. This substantive issue must be addressed. This is the most extensive rulemaking DEQ has ever proposed in terms of the overall impact on the Oregon economy. Gross miscalculation of the economic effects of the program are clearly unacceptable. This must be fixed. Understandable, reasonable estimates of the economic effects of the program are critical to program design and to program success.

¹ Popkin, Gabriel, , Nature, How much can forests fight climate change? January 15, 2019

General Comments on Draft Rules Division 271

General comments on specific sections of the draft Division 271 rules are included in Attachment 2.

Thank you for the opportunity to comment. We want the CPP to be a success and for Oregon to achieve our share of needed greenhouse gas reductions to affect climate change. It is critical that serious issues with the CPP are fixed prior to finalizing rules and moving forward with the program.

Sincerely,
Moore Noise, LLC

A handwritten signature in black ink that reads "Martha Moore". The signature is written in a cursive, flowing style.

Martha Moore, PE
Principal Engineer/Member

cc: Debbie Deetz Silva/EVRAZ



July 23, 2021

Debbie Deetz Silva
 Environmental Manager
 EVRAZ
 14400 N Rivergate Blvd,
 Portland, OR 97203

Subject: Review of Economic Analysis of Proposed Rulemaking for Greenhouse Gas Program

Dear Ms. Silva:

Thanks very much for the opportunity to review and comment on the draft Greenhouse Gas Emissions (GHG) Program for Oregon and the draft Fiscal Impact Statement (FIS) for the proposed regulation. We have reviewed many of the documents supporting the regulatory process, but our comments are focused on the FIS, the presentations and other documentation surrounding the work by the ICF team on the economic analysis of the program designs, and the other comments submitted by the Rulemaking Advisory Committee including Martha Moore, from Moore Noise, LLC. Our primary comments relate to the following themes:

1. The draft FIS falls very shy of its purpose, suggesting that this regulation is not well defined nor well understood.
2. The draft FIS contains misleading information about what the economic analysis does and does not show.
3. Questions remain unanswered about the economic modeling effort.
4. The co-benefit analysis that is tied to the limited economic analysis – no matter how well done – will not be valid because it depends on the output from the economic analysis.
5. The failure to address potential production and emission leakage is worrisome at best as it threatens to reverse all other achievements of the regulation.
6. Taking these shortcomings together, we do not recommend the draft regulation as it pertains to stationary sources should be supported at this time.

Each is addressed more explicitly below. Unless otherwise stated, all quotations that include type that has a ***bold and italicized font*** represent places where we have added emphasis to the quotation.

1. ***The draft FIS falls very shy of its purpose, suggesting that this regulation is not well defined nor well understood.***

The mandate for an FIS comes from OR 183.335 2(b)(E) that states a fiscal impact statement should identify units of local government and the public that may be economically affected by the rule, and develop,

3316 NW 289th Street
 Ridgefield, WA 98642
 Tel: 360.608.1975
www.greeneconomics.com

an estimate of that economic impact on state agencies, units of local government and the public;
and that

the agency shall utilize available information to project any significant economic effect of that action on businesses....”¹

The FIS for the GHG program repeatedly emphasizes the lack of additional information about the costs of the administration of the program, the impacts of leakage (albeit recognizing the potential for job losses), or the costs of Best Available Emission Reductions (BAER), stating that “DEQ does not have additional information to estimate the potential or economic impacts of....” or, “DEQ does not have additional information to determine the precise costs relating to...” on pages 8, 9, 13, 14, and 15.

If the DEQ does not even have this information, the agency should research these questions more fully, and develop the information. Surely that is the purpose of an FIS – to estimate the economic impacts, and not to merely state that they are unable to do so because they don’t know. If this cannot be accomplished, it is clear that the current draft regulation is not well defined, nor well understood by anyone.

In fact, the draft FIS identifies many potential negative economic effects of the proposed regulation, without quantifying them. For example, there are several places where production leakage is mentioned, and the document merely states that the flexibility of compliance means that the risk of leakage is decreased.² Decreased from what? Less risk of leakage than what? If 80 percent of the stationary sources would experience production leakage, then decreasing this to 70 percent would be cold comfort. The agency needs to develop a robust analysis of the risk of leakage, or at a minimum discuss the range of probabilities regarding leakage and its impacts.

Further, the ‘flexibility’ of compliance is not what is typically considered regulatory flexibility. Regulatory flexibility is when an agency defines a standard, allowing different entities to determine the most appropriate means of achieving that standard. For stationary sources, it appears that the alleged flexibility is simply to meet the BAER standard, which will be defined by the agency. While BAER is the only option for process emissions, and facilities that have natural gas supplied by local distribution companies have no flexibility whatsoever.

2. The draft FIS contains misleading information about what the economic analysis does and does not show.

There are misleading statements about the work that has been done to date. These primarily surround the misrepresentation of the ICF work as an analysis of the state economy. For example, the FIS states,

DEQ contracted with ICF *to analyze the macroeconomic impact of an emissions cap program* in Oregon. Across multiple program design scenarios, ICF concluded a program of this type could significantly reduce GHG emissions *while maintaining the overall health of the economy*. While

¹ ORS 183.335 Notice; content; public comment; temporary rule adoption, amendment or suspension; substantial compliance required, Section 2(b)(E)

² State of Oregon Department of Environmental Quality, 2021. Fiscal Impacts Analysis, Greenhouse Gas Emissions Program 2021 Rulemaking Climate Protection Program, p. 9, July 1. Available at: <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/GHGCR2021ac7FIS.pdf>

changes were small, the study indicated net positive trends for gross state product, income, and jobs.³

Yet, the macroeconomic impacts of the program were not the subject of the ICF study (as far as we know from the materials disclosed to date). Macroeconomic impacts would indeed have had to address the numbers of jobs gained or lost as a result of the program among other factors. According to the PowerPoint presentation titled, Oregon Climate Protection Program: Modeling Study on Program Options,⁴

DEQ contracted with ICF to conduct a study to assess different greenhouse gas emissions reduction **program designs** through specialized emissions and economic modeling to analyze potential effects on:

- Forecasted greenhouse gas emissions
- Equity, air quality, and public health co-benefits
- Economic effects on regulated entities, businesses, consumers, and Oregon's economy

Modeling analysis objectives:

- Analyze options to inform overall program design and **relationships between design elements**
- Provide information on directionality and magnitude of changes when adjusting parameters of discrete program elements

In economics, programs are analyzed '*ceteris paribus*' meaning 'with all other things held equal'. Hence because the purpose was to study all program **designs**, then an analyst might legitimately hold all other things constant – in other words, Oregon's macroeconomy. Because the ICF study was exploring how GHG emissions, equity, and effects on regulated entities would be different with different elements of program design, factors that would not change with different program design elements can be assumed to be constant. Given this mandate, leakage wouldn't matter unless by chance one of the program design alternatives were to cause leakage and the others not. Otherwise, the analyst might well assume that leakage would not be affected one way or another by program designs, and it need not be part of the research question.

But what is typically studied in an economic analysis of regulations, is a comparison of what would happen *with* the regulation compared to *without* the regulation. This was not done with the ICF modeling study. It was done, however, with greater and lesser success in 2019 for a closely related regulatory effort, the Oregon Cap and Trade legislative process. A report completed by Vivid Economics at that time concluded with respect to the metals sector,

On balance, the sector is at risk of carbon leakage if Oregon introduces a carbon price without measures to protect against possible adverse competitiveness impacts. A carbon pricing instrument for this sector should be designed to ensure that innovation and emissions reductions

³ Ibid, page 20

⁴ Oregon Department of Environmental Quality and ICF, 2021. Oregon Climate Protection Program: Modeling Study on Program Options, April 27. Available at: <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/ghgcrModAssumptions.pdf>

incentives remain, while also incorporating measures to protect against the risk of carbon leakage and other competitiveness impacts.⁵

Returning to the statement in the draft FIS that “ICF concluded a program of this type could significantly reduce GHG emissions **while maintaining the overall health of the economy**” is not an appropriate interpretation of the work that was done. What the modeling results showed was that, “All scenarios show very little overall economic change but generally positive for GSP [Gross State Product], income and jobs” and “Results are similar and comparable across the scenarios.”⁶ But keep in mind these results are comparing across policy scenarios, and assume, *ceteris paribus*, that everything else remains the same. Hence if the analyst assumes constant economic conditions in the state (see reference in item #4 below), it is not then fair to pretend that a conclusion of the study is that all economic conditions in the state will remain constant.

3. Questions remain unanswered about the economic modeling effort.

Very little information is provided regarding the economic modeling approach described in point #2 above. After the April 28 RAC meeting, Martha Moore submitted the following question in letter to DEQ,

The economic effects of different program designs on regulated entities, businesses, consumers, and Oregon’s economy is presumably estimated to the “Multi-Sector Scenario Model” referenced in Figure 1 of the ICF Modeling Brief for this project. This model takes energy demand forecasts, electricity generation, and cost information to produce GHG emissions and costs. The outputs here would be helpful to see in a simple table of inputs and outputs.

Despite the reasonable question, no additional information has been provided about this model. Nor has any information been provided about how this model works. It may well be a spreadsheet that aggregates information and inputs from other models, but that is not clear nor has this question been answered. In a FAQ after the April 28 RAC meeting, the DEQ wrote the following, which reiterates the purpose of the model but fails to explain how it works,

The purpose of the multi-sector modeling is **to provide a better view of the potential impacts of a new program across Oregon**, even though not every sector or source of emissions will be assumed to be regulated.⁷

However, no simple table of inputs and outputs (as requested) was apparently possible to provide that “better view of impacts.” The FAQ inadvertently further obscures the purpose of the multi-sector model by describing the outputs of the model slightly differently on the same page. In answering Question #6, about which modeling tools were being used, DEQ writes,

- ICF’s multi-sector model for estimating greenhouse gas emissions, air quality emissions, **and costs**;

⁵ Vivid Economics, 2019. Metals Sector Brief, produced for Oregon Carbon Policy Office, January.

⁶ Oregon Department of Environmental Quality and ICF, 2021. Oregon Climate Protection Program: Modeling Study on Program Options, slide #50 available at: <https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/ghgcr2021modStudyResults.pdf>

⁷ Department of Environmental Quality Climate Protection Program, 2021. Modeling Study on Program Options to Reduce Greenhouse Gas Emissions Frequently Asked Questions, May 18. Available at: <https://www.oregon.gov/deq/ghgp/Documents/GHGCRModelingFAQ.pdf>

and later, when answering Question #7 about what emissions forecasts are expected from the modeling effort, DEQ writes,

ICF’s multi-sector model incorporates the above sector-specific modeling results to provide energy demand and emissions projections.

The model output description discrepancies leads to a questionability of the modeling effort in particular - does the multi-sector model also estimate costs? And if it does, what kind of costs? And why does the FIS repeatedly state that they have no estimates of costs (see point #2, above)?

4. The co-benefit analysis that is tied to the limited economic analysis – no matter how well done – will not be valid because it depends on the output from the economic analysis.

All co-benefits are estimated, presumably, from the multi-sector model. Following the same May 18 FAQ referenced in footnote #7,

The aggregated results from the multi-sectoral model are then used as inputs for economic and public health modeling.⁸

As stated above, we do not know if the multi-sectoral model results include an estimate of cost changes. However, when asked directly the following question submitted by Martha Moore,

As costs change, the quantity demanded for energy and fuels typically will be different. Can you explain how this was handled in the analysis?

The DEQ answered on the same page of the FAQ that,

IMPLAN does not assess certain program impacts, *such as potential changes in fuel prices*.

Therefore, the co-benefit analysis, which explicitly claims to address “Equity, Air Quality, and Public Health”⁹ does not take into consideration potential changes in fuel prices. The static nature of the analysis is further emphasized in a presentation covering the results of the modeling from June, 2021, which asserts that the analysis assumes,

Constant environmental & economic conditions across scenarios (e.g., climate change).¹⁰

This means that while the co-benefits are targeted at addressing equity concerns for five communities of concern, two of which are low-income communities¹¹ no analysis has been done to assess the impact of a fuel price increase on these communities. Such an oversight is nonsensical since the very vulnerability these communities face is financial, and it is well documented that low-income households are more prominently affected by price increases for necessities. For example, a 2017 USDA study showed how energy price increases have a far greater impact on low income, compared to non-low-income households. Results showed that an unexpected gas price rise increased the chances that low-income families experienced a shortage of money for food by 7.3 percent, while non-low-income families

⁸ Department of Environmental Quality Climate Protection Program, 2021. Modeling Study on Program Options to Reduce Greenhouse Gas Emissions Frequently Asked Questions, May 18, p. 3. Available at:

<https://www.oregon.gov/deq/ghgp/Documents/GHGCRModelingFAQ.pdf>

⁹ Oregon Department of Environmental Quality and ICF, 2021. Oregon Climate Protection Program: Modeling Study on Program Options, June 16. Available at:

<https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/ghgcr2021modStudyResults.pdf>

¹⁰ Ibid, slide #55.

¹¹ Ibid slide # 53

experienced a 0.2 percent increase in the chance of experiencing a financial shortage for food budgets.¹² If DEQ seeks any additional information we would be happy to provide a collection of economic literature on this topic.

We do believe that the analysis of co-benefits for air quality and ecosystem health have been conducted in a reasonable manner. Also, we recognize that not every aspect of a proposed rule can be analyzed. However, the most prominent and obvious impacts should be included first. To claim to be assessing the distribution of benefits or damages to different communities and neglect to cover the obvious impact of a fuel price increase on low-income households is completely unreasonable.

5. The failure to address potential production and emission leakage is worrisome at best as it threatens to reverse all other achievements of the regulation.

To reiterate the points made in many of our prior comments, production leakage occurs when the costs of environmental regulations in one location cause businesses located there to relocate to sites where there is no such environmental cost. Regulators are typically careful to avoid this because,

- There is associated job loss when a firm relocates outside of Oregon and job loss differentially affects those populations that are already disproportionately affected by climate change poor air quality and poor health. This runs directly counter to the purpose of the proposed regulation.
- Production leakage often causes emissions leakage, which means that when firms relocate to other areas they,
 - May do so explicitly to avoid the emission reductions proposed in Oregon, thus resulting in no net loss of global emissions, so no impact on climate change for these firms whatsoever, which also runs directly counter to the proposed regulatory purpose.
 - May in fact use different energy and other inputs, thus actually resulting in an increase in global emissions as a result of the regulation. This not only represents a complete failure of the regulation for these entities, but actually produces a result that actually aggravates climate change.

For these reasons, DEQ and the governor’s Carbon Policy Office were willing to address these concerns during the Cap and Trade legislative process. However, for no explained reason the current iteration of the proposed regulation has abandoned the effort to avoid leakage. The recent FAQ states:

With this approach, the study does not assess leakage outside of Oregon or supply chain emissions that occur outside the state to support in-state activities. DEQ continues to work with ICF to understand how some of the modeling results can provide qualitative information to inform leakage discussions.¹³

¹² Tuttle, Charlotte, and Timothy K.M. Beatty, 2017. The Effects of Energy Price Shocks on Household Food Security in Low-Income Households, Economic Research Report No. (ERR-233), July. Available at: <https://www.ers.usda.gov/amber-waves/2017/july/unexpected-hikes-in-energy-prices-increase-the-likelihood-of-food-insecurity/>. For the full report, see <https://www.ers.usda.gov/publications/pub-details/?pubid=84240>

¹³ Department of Environmental Quality Climate Protection Program, 2021. Modeling Study on Program Options to Reduce Greenhouse Gas Emissions Frequently Asked Questions, May 18. Available at: <https://www.oregon.gov/deq/ghgp/Documents/GHGCRModelingFAQ.pdf>

A similar FAQ from February¹⁴ also affirmed that DEQ was working with ICF to understand how the modeling could qualitatively inform the leakage discussions. Has there been any progress on this? Further, it is curious that DEQ seems to be struggling to figure out how to include a qualitative discussion of leakage when the IMPLAN modeling is ideally suited to quantitatively measure the economic impacts of leakage. An analyst simply subtracts the economic activity that is estimated to have been associated with the sector, or firm that has left and then the IMPLAN software helps explain how the exit of one firm or sector will have a (negative, in this case) ‘ripple effect’ throughout the economy of the region.

6. Taking these shortcomings together, we do not recommend the draft regulation as it pertains to stationary sources should be supported at this time.

The proposed regulation related to stationary sources should not at this time be put forward as a final regulation. The proposed rule is not clear, nor well evaluated, and as such will be merely setting the stage for continued legal battles to interpret vague suggestions of ‘flexibility’ and that the department will ‘work with’ covered entities. This is not how regulation works. One of the hallmarks of well-written regulations is that they reduce uncertainty and allow firms to confidently invest in areas where – even if regulations are stringent – they are well defined. This allows firms to make wise investments about where to locate based on a variety of factors knowing that those conditions will be maintained and the business can operate sustainably. Hence clarity is critical, which we find lacking in the current status of this draft rule.

Additional concerns are that it will differentially impact low-income, and disadvantaged communities through increased fuel costs, and nothing has been identified that could mitigate these effects. A higher share of income is spent on necessities such as heating, rent, and transportation for low income populations than high income populations.

For the record, Greene Economics is well aware that this decade and the next are the most critical time for the global transition to a decarbonized economy, as recently outlined by several studies such as the International Energy Agency (IEA) document titled, “[Net Zero 2050, A Roadmap for the Global Energy Sector.](#)” We are passionate and concerned about how this transition can occur. What is not helpful at this juncture is to promulgate regulations that may give the appearance of action but fail to thoughtfully and comprehensively analyze the likely economic consequences and ultimately fail to achieve the emission reductions that are so desperately needed. Sadly, as it is currently defined, the draft Oregon GHG emission program falls into that category, looking more like ‘business as usual’ or worse. We sincerely hope the program may be amended in the near future and restore Oregon to its rightful place leading the nation in smart and effective regulation.

Sincerely,



Gretchen Greene, PhD

ggreene@greeneconomics.com

¹⁴ Department of Environmental Quality, 2021. Modeling Study on Program Options to Reduce Greenhouse Gas Emissions; Frequently Asked Questions, Feb. 4. This draft may no longer be available and so is provided as an attachment.

ATTACHMENT 2

340-271-0010 Purpose and Scope –

The purpose and scope do not outline reasonable expectations for what the CPP can achieve. The CPP can achieve greenhouse gas emissions reductions. It cannot mitigate climate change and improve the welfare of communities disproportionately affected by climate change. This is mathematically impossible for the program to achieve. Climate change fueled by greenhouse gas emissions is a global issue. Oregon emissions are approximately one tenth of one percent of global emissions. Without global actions by many governments climate change will proceed unabated. The CPP can improve air quality in disproportionately affected communities through the reduction of co-pollutants. This benefit will accrue primarily from reduced transportation system emissions. And it is appropriate for Oregon to contribute to the reduction of greenhouse gas emissions and to be a leader in the climate transformation.

Section 0010(3)(d) states that the CCP provides covered entities with compliance options to minimize disproportionate business and consumer impacts associated with meeting the CPP requirements. At this point in the process, this statement is untrue. The proposed rules generally do not provide compliance options at all. DEQ's modeling has determined that trading of compliance instruments is of limited benefit in the program. Community Climate Investments (CCI) are available only to the fuels sector at a price set by DEQ that is inflexible and high. There do not appear to be any compliance options included for natural gas distributors or industry. And there are no price caps on the program at all. There are so few compliance options and cost controls in the program it is reasonable to expect potential price instability and escalation in the fuels sector, at least in the short term, as the regulated sectors adapt to the extensive changes required by the CPP regulations. Further, the price of natural gas distributed by local distribution companies (LDC) is subject to a Public Utility Commission (PUC) process for cost recovery. The PUC process is required by Oregon Administrative Rules for setting the price of natural gas and is just beginning for the potential costs of the CPP, so these costs are currently unknown. Initial estimates submitted in comments by NW Natural indicate substantive cost impacts to both business and consumers can be expected. This could, in fact, disproportionately affect low-income households.

Further, Energy Intensive Trade Exposed (EITE) entities are not even acknowledged in the rulemaking. Greenhouse gas reducing programs in California, Washington, and Colorado all accommodate EITE industries to protect them from unfair trade from countries or states without greenhouse gas control programs. The leakage from this omission in the CPP has not even been analyzed in DEQ's modeling.

DEQ cannot make a reasonably supported assertion that the program as currently proposed will not cause substantive business and consumer impacts.

340-271-0020 Definitions –

There appears to be no reason to define shut down and this definition should be deleted. Cessation of operations is later defined. The definition and use of the concept of cessation of operations is not

necessary and should be tied to the common understanding and language in other sections of DEQ's Administrative Rules for air quality.

340-271-0150 Covered Entity Permit Requirements –

Covered entities are required to have a permit. Language in the certification stating they are requesting a permit should be removed.

The BAER process is overly complex, unpredictable, and unworkable as outlined. This portion of the regulations needs to incorporate a degree of reasonableness for both analysis and compliance requirements. A stringent program is fine. But the program needs to be predictable and the analysis requirements should be commensurate with and tied to the needed emissions reductions. If impacts are correlated to emissions, then analyze emissions. If the cost for the emission reduction measure is used for decision-making, then request costs. A source should not be required to do a full economic analysis and health benefits analysis for every BAER determination. DEQ has not even done such analysis for this full rulemaking. As currently outlined, this program will cost tens or hundreds of thousands of dollars to implement at a complex facility. This level of cost for just the analysis requirements is unreasonable and does not achieve any actual emission reductions. DEQ's estimates of cost included in the FIS for this program are grossly underestimated.

This section should be modified to focus on greenhouse gas emissions reductions and to use co-benefits only as a tie breaker. Co-benefits can be reported as emissions of PM2.5 to be consistent with the models used by DEQ to estimate program benefits.

From: Louise Shawkat <louise40208@gmail.com>
Sent: Friday, July 30, 2021 4:40 PM
To: GHGCR2021 * DEQ
Subject: Community Climate Investment

Please include carbon sequestration as an option in the Climate Investment Fund. I am a rural Oregonian. We need to ACT

louise40208@gmail.com
Louise D Shawkat
502.777.7550
870 Cambridge Street
Ashland, Oregon 97520-1008