



**OREGON
WILD**

Protecting Oregon's wildlands, wildlife, and waters since 1974.

www.oregonwild.org

TO: Oregon Board of Forestry
CC: Oregon Global Warming Commission
FROM: Oregon Wild
DATE: 11/16/2020
RE: Written Testimony, Oregon Wild
 Agenda Item #4: DOJ Memorandum on Statutory Authority relating to Carbon and Climate
 Oregon Board of Forestry – Virtual Public Meeting
 Wednesday, November 4, 2020

This year, the Board of Forestry (the Board) asked the Oregon Department of Justice (DOJ) a series of questions to clarify its authority for rulemaking and policymaking as it relates to carbon and climate. The DOJ's response affirms that the Board does indeed have broad authority to regulate forest carbon under the Forest Practices Act, and that the Board does have the authority to establish climate change and forest carbon goals under ORS 526.016. This clarification now enables the Board to move forward with implementing Governor Brown's Executive Order 20-04. As such, we urge the Board to pursue policies that position the State as a national leader in 21st century climate-smart forest management. Now is a critical time in the effort to slow the most dire impacts of global climate change and the Board must recognize this opportunity to harness the internationally important carbon potential of Oregon's forests.

Oregon's forests offer some of the most carbon-rich ecosystems in the world. Capturing the potential of this massive carbon sink should be at the forefront of the Department of Forestry's (ODF) efforts to combat climate change. The two biggest steps Oregon can take to confront the global threat of climate change will be to protect and grow its forests to sequester more carbon, and reduce its greenhouse gas emissions from logging — its largest source of carbon emissions.¹ Preserving western forests with high and medium carbon-storing abilities would be the equivalent of halting eight years of burning fossil fuels in the same western states,² with the largest 1 percent of trees in mature and older forests comprising 50 percent of the biomass, storing half a forest's carbon.³

This science directly counters the common misconception that young trees sequester more carbon — it is actually mature and old growth forests that offer the most climate value, and any credible forest carbon

¹ Beverly E. Law, Tara W. Hudiburg, Logan T. Berner, Jeffrey J. Kent, Polly C. Buotte, Mark E. Harmon 2018. Land use strategies to mitigate climate change in carbon dense temperate forests. Proceedings of the National Academy of Sciences DOI: 10.1073/pnas.1720064115
<https://web.archive.org/web/20180727130028/http://www.pnas.org/content/pnas/115/14/3663.full.pdf>

² Polly C. Buotte, Beverly E. Law, William J. Ripple, Logan T. Berner 2019. Carbon sequestration and biodiversity co-benefits of preserving forests in the western United States. Ecological Applications DOI: 10.1002/eap.2039.
http://opb-imgserve-production.s3-website-us-west-2.amazonaws.com/original/buotte_eap.2039_accepted_1576697573797.pdf

³ James A. Lutz, Tucker J. Furniss, Daniel J. Johnson, Stuart J. Davies, et. al. 2018. Global importance of large-diameter trees. Global Ecology and Biogeography. DOI: 10.1111/geb.12747
https://www.fs.fed.us/rm/pubs_journals/2018/rmrs_2018_lutz_j001.pdf

strategy must start with growing and retaining older, larger trees. The forests of the Pacific Northwest also offer cultural value to indigenous peoples and outdoor recreation opportunities to nature enthusiasts. Healthy forests help improve climate resilience to impacts like drought and wildfire and they support clean water and habitat for fish and wildlife.

The next steps the Board should take are clear. In the Report on Proposed Actions for Executive Order No. 20-04 that ODF produced in May 2020,⁴ it stated that: *“Following input from the DOJ and revision of the climate change goal, the Board and department plan to implement a systematic review of all statutes and rules as they relate to climate change, greenhouse gas mitigation, climate adaptation, and the impact of the regulations on meeting policy and executive goals.”*

We look forward to an open and transparent revision of the climate change goal (Goal G) that allows for stakeholder engagement, and we urge the Board to expand upon its review of statutes and rules to identify where these policies create barriers to implementation of EO 20-04 and produce recommendations for how these policies can be updated and expanded to best address climate change, greenhouse gas mitigation, and climate adaptation. This is also a matter of utmost urgency, and the Board of Forestry and ODF staff should establish a clear timeline for adoption of policies to implement the Oregon Climate Action Plan. As part of this effort, we ask the Board and ODF to consider the following guiding principles as they pursue implementation of EO 20-04:

1. Use the best available science for all forest management decisions and focus on climate solutions that are durable and within ODF’s control. There are numerous sources of misinformation regarding best practices for climate-smart forestry, as well as efforts to distract agencies from forest conservation strategies to focus instead on dubious carbon claims around wood products.⁵ We ask that the Board and ODF ensure that all studies referenced during the decision making process come from reputable academic and research institutions, be subject to rigorous peer review, and that the funding for referenced studies remain independent of logging interests.
2. Ensure that vulnerable communities and minority populations are given equal access to the decision-making process and ensure that equity and inclusion are considered alongside desirable environmental outcomes in any forest policy.
3. Ensure forest management policies account for lifecycle carbon emissions and promote ecological health in both the near term and long term. For example, some management practices (such as prescribed fires and non-commercial thinning of small-diameter trees in Oregon’s Eastern and Southwestern forests) may result in near-term emissions, but if done correctly could ensure ecological health and better climate resilience in the long-term.

⁴ Oregon Department of Forestry 2020. Report on Proposed Actions for Executive Order No. 20-04. <https://www.oregon.gov/gov/Documents/2020%20ODF%20EO%2020-04%20Implementation%20Report.pdf>

⁵ USDA 2009. Forest Service Global Change Research Strategy, 2009–2019. <https://www.fs.fed.us/climatechange/documents/global-change-strategy.pdf>

4. Ensure that the carbon benefits of any policy recommendation are quantifiable and account for both direct and indirect impacts to the carbon pool, including soil carbon, carbon in dead biomass, carbon in wood products and waste material from logging and processing.
5. Ensure that forest management practices aim to optimize net carbon sequestration, storage, and stocks. While efforts to enhance carbon sequestration and grow Oregon’s forest carbon sinks should be compatible with other ecological values, such as clean water and biodiversity conservation, where conflicts do exist the Board should balance carbon storage with other ecologically desirable outcomes, using the social cost of carbon to weigh the impacts of any potential emissions.

The Science Already Supports Several Near-Term Policy Opportunities

We consider the following practices “low-hanging fruit” as the Board and ODF seek to “*prioritize actions that reduce GHG emissions in a cost-effective manner,*” and “*prioritize actions that will help vulnerable populations and impacted communities adapt to climate change impacts*” as directed in EO 20-04.⁶

Decades of scientific study — including research from world leaders in forest climate science from Oregon State University — clearly demonstrate the need for action. While some climate smart opportunities will be more challenging and time consuming to fully implement, the Board has the authority to act quickly on other fronts even as it continues to facilitate further research.

1. Lengthen logging rotations

The best available science⁷ has made clear that current standard logging rotations (often as short as 35 years) short-circuit the ability of forests to maximize carbon stored.⁸ By allowing trees to grow longer the Board can improve carbon stocks while also increasing fiber yield, timber quality, and financial return.

2. Retain more trees during harvest and promote diversity of species as opposed to monoculture plantations

Greater retention of standing trees after logging will keep more carbon on site, help to make regrowing forests more resilient to natural disturbance, reduce the need for widespread aerial pesticide applications, and provide for more higher-quality habitat for native species.

3. Eliminate logging in biologically significant, carbon-rich mature and old growth forests, and in forests with the highest carbon potential

Mature and old growth forests store immense amounts of carbon. Research has shown that our remaining unlogged native and old growth forests store nearly three times the carbon than

⁶ EO 20-04. https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf

⁷ Beverly E. Law, Tara W. Hudiburg, Logan T. Berner, Jeffrey J. Kent, Polly C. Buotte, Mark E. Harmon 2018. Land use strategies to mitigate climate change in carbon dense temperate forests. Proceedings of the National Academy of Sciences DOI: 10.1073/pnas.1720064115
<https://web.archive.org/web/20180727130028/http://www.pnas.org/content/pnas/115/14/3663.full.pdf>

⁸ Harmon, M.E. 2019. Have product substitution carbon benefits been overestimated? A sensitivity analysis of key assumptions. Environ. Res. Lett. in press <https://doi.org/10.1088/1748-9326/ab1e95>

industrially managed lands. Wherever native stands of large trees exist, they should be protected as climate reserves. Further, the Board and ODF should work to identify areas of the highest carbon storage potential that should also be protected as part of this carbon reserve. These same stands also provide the highest quality habitat for salmon and other at-risk wildlife, helping the Board and ODF achieve two objectives at once.

4. **Seek climate-friendly provisions in the upcoming Habitat Conservation Plan (HCP) process**

Upcoming negotiations based on the passage of SB 1602 in 2020 will focus on modernizing Oregon Forest Practices Act (OFPA) rules in order to benefit aquatic and riparian-dependent species. These negotiations should also optimize potential climate co-benefits outlined in EO 20-04, along with other key environmental concerns including better rules around riparian buffers, steep slope logging, cumulative impacts.

5. **Ensure better incentives for small family forest owners to implement climate-smart forestry on their lands**

The Board and ODF should promote stronger incentives and market development for small family forest owners willing to implement climate-smart forestry on their lands, including better state incentives for the production of FSC certified wood products.⁹

6. **Focus wildfire defense investments on preparing communities as opposed to backcountry logging, and ensure post-fire recovery efforts account for equity concerns**

Logging contributes to further carbon emissions, while doing little to protect homes and communities during wildfire season. More effective ways of preparing communities for more intense, climate-influenced fire seasons include home hardening and retrofitting to be more fire-wise, reducing fuels in the home ignition zone, and limiting new development in high-risk areas.

Regarding Carbon Offsets

As part of EO 20-04, both the Department of Environmental Quality (DEQ) and the Environmental Quality Commission (EQC) have been directed to jointly establish a cap and reduce program for GHG emissions, and the Board and ODF will be expected to provide input on a potential carbon offsets component.

While we believe that a direct incentive program for private landowners may be a better climate solution than an offset program, we recognize that a carbon offsets program within Oregon has the potential to provide financial support for forest protections on private lands. In Oregon, small forest owners have few options when it comes to restoring and protecting older forests on their property, as current tax and financial incentives are geared strongly towards short rotation logging as opposed to protecting valuable carbon stocks. But while a carbon offset program holds promise as a climate solution, there are also several challenges that can undermine its effectiveness. As such, Oregon Wild has several policy priorities we advise the board to take under consideration:

⁹ Ecotrust. Climate-Smart Forestry <https://ecotrust.org/project/climate-smart-forestry/>

- 1) Any future carbon offset program policies must incorporate strong integrity mechanisms that do not enable any toxic air or water pollution elsewhere, with special consideration for communities of color and lower income areas that are already facing higher pollution burdens.
- 2) Forest offset projects must be durable and aim toward long-term storage — that is, they should not only sequester carbon, but also be managed to withstand the stresses of a changing climate in the long-term. Forest projects should be managed for species diversity and climate resilience, with an emphasis on natural forest composition.
- 3) Forest offset projects must be additional — that is, they must incentivize forest practices that are better for the climate than business-as-usual as opposed to rewarding people for current practices. Further, an offset program should incorporate requirements for credit replacement by forest owners for any intentional reversals.
- 4) The carbon benefits of any projects must be quantifiable and verifiable, and therefore ODF must establish a working third-party accountability program with the DEQ and the EQC with the capacity to ensure this. This program must account for industry-based emissions, including emissions from fuel use in industry operations, soil disturbance during harvest operations, and the estimated loss of carbon when a tree is harvested, transported, and processed into wood products. Approved offset transactions must be subject to third-party follow up monitoring to ensure compliance over time, with meaningful penalties should a party violate their commitments.
- 5) An offset program should incorporate meaningful buffer accounts that are large enough to mitigate for natural processes that impact carbon sequestration, like wildfire.
- 6) Any offset program must be comprehensive, covering all carbon emitting sectors of the economy. An effective offset program must avoid leakage of GHG emissions in unregulated sectors.

In addition, the Board and ODF should work closely with small family forest owners to ensure an open and transparent decision-making process. Any future offsets program should focus on privately owned lands, as there are few options for ensuring protections of these forests and they have significant potential in terms of carbon sequestration — data has shown that the carbon stocks on privately owned forests in western Oregon’s Coast Range are only a third of their ecological potential.¹⁰ Publicly owned forests are already, by law, held to higher standards for balancing multiple values and should therefore not be included in offset mechanisms.

¹⁰ Stephen Fain, Brian Kittler, Amira Chowyuk 2018. Managing Moist Forests of the Pacific Northwest United States for Climate Positive Outcomes. Forests. 10.3390/f9100618 <https://www.mdpi.com/1999-4907/9/10/618>

Sent via form submission from [Keep Oregon Cool](#)

Name: Laura Morales-Guzman

Email Address: moraleslaura812@gmail.com

Subject: Sea levels rising

Message: How can we make rising sea levels a priority before it's too late for our children and future grandchildren before they are affected by it. This is a serious matter for anyone living now and in the future. What are your plans and actions that you guys will take to keep our future generations in good hands. The oceans are absorbing more heat, resulting in an increase in sea surface temperatures and rising sea levels. Changes in ocean temperatures and currents brought about by climate change will lead to alterations in climate patterns around the world. What can we do to help and decrease sea levels from rising.

Since the Kyoto Protocol of 1997 where nations first agreed in principle to reduce greenhouse gas emissions, global energy-related CO2 emissions have actually increased 50%! Attempts at reducing global CO2 emissions have, unfortunately and obviously, not been successful. Oregon unfortunately is in the same place in not meeting 2020 emission goals, and estimates show perhaps state ghg emissions will be nearly 100% above where they are in now in just 30 years. These data are just frightening and do not hold for a bright future on the planet. Massive ice sheets have already melted, the permafrost regions have started to melt and emit methane, 2020 was a record year for 30 hurricanes, Oregon has suffered horribly from wind events, continuing drought and fires as has other places in the Western U.S. and on it goes.

Perhaps sensing that time is/has run out on making global emission reductions, in late 2019, the prestigious U.S. National Academy of Sciences announced, “to achieve goals for both climate stability and economic growth, ‘negative emissions technologies’ (NETs) that remove [and] then store carbon dioxide from the air will need to play a significant role in mitigating climate change.” I personally believe this was a warning that because no progress has been made in net ghg emissions, we must now do both, emission reductions and sequester some of what is already in the atmosphere.

Ranching and farming techniques that use regenerative agricultural practices are ‘negative emissions technologies’ (NETs). And now is the time for land owners to respond to this call to adopt these practices and become a part of the solution to help mitigate global warming — and at the same time, reap numerous agronomic benefits from increased soil health on their property. A major advantage of sequestering carbon in soils is that there are already many programs in existence practicing regenerative agriculture or carbon farming procedures that remove carbon dioxide from the atmosphere and storing it in soil as organic matter. I recently chaired an international symposium entitled, “Enabling Regenerative Agriculture: Getting Paid for Improving Soil Health” See: soilsymposium2020.org. Eleven experts from Australia, the three west coast US states plus Ohio, representatives from the carbon marketplace (Nori.com) and local scientists participated. They presented hope that with private, public including federal and state programs assisting and incentivizing farmers this NET technology can immediately (next crop season) go into effect to start the drawdown of atmospheric carbon dioxide. The technology to help mitigate global warming is powerful. If just 20% of Oregon’s arable lands (16 million acres) were to participate in a carbon farming program, the carbon dioxide drawdown would be sufficient to completely negate the 6 Mtons emitted by ALL of Oregon’s agricultural soils.

Legal documents show that carbon sequestration programmed by the latest signup of ranchers in Australia to enroll in carbon farming programs this year was also sufficient to erase more than Oregon's total agriculture emissions of 6Mtons (Louisa Kiely, Carbon Farmers of Australia, presented at the symposium cited above). Highly awarded distinguished professor of Soil Science at Ohio State University, Dr. Rattan Lal told us at the symposium, "It is time to put science into action". He meant we have sufficient information to accomplish carbon sequestration in soils, "so let's get started!"

NETs from regenerative agriculture have already been in place, albeit on small scale, for many years. However, there have been barriers to adopting regenerative soil practices at the large scale. Farmers, especially during these times of economic hardship, are reluctant to adopt what could be perceived as "new" practices that might not work. This was confirmed by a recent (March, 2020) United Nations online survey of nearly two thousand ranchers and farmers, which revealed that the first barrier listed as an impediment to adopting NET practices is lack of knowledge on how to do it, and secondly, insufficient financial incentives to "try something new." Our symposium and others are educating. Now we need the financial incentives to put "science into action."

Oregon's productive working lands are ideally suited for carbon sequestering programs. These practical, scientifically supported approaches to smart farming can contribute to the needs for achieving the goals of Executive Order 20-04 in the arena of carbon sequestration in our natural and working lands. The charge in the EO to Oregon's Departments of Forestry and Agriculture, Watershed Enhancement Board, and the Oregon Global Warming Commission mandate these agencies must step forward to support climate mitigation processes. Regenerative Agriculture has the added benefit that it can be immediately put into action with proper education, support, and a set of effective policies and rules. Notably, this has already been accomplished elsewhere so Oregon does not need to reinvent this wheel by writing policies and new rules. Revised, current rules work!

In order to provide funds that will support regenerative agriculture practices, we urge the Oregon Global Warming Commission to exert its influence upon other agencies to incorporate into a Cap and Reduce program, an Alternative Compliance Instrument that can be used by emitters to offset a limited proportion of their emissions by investing in regenerative agriculture. As Dr. Lal, the highly awarded "soil prophet" stated, "let's get started".

Sincerely yours,

Ray Seidler, Ph.D.

Ashland, Oregon

member Southern Oregon Climate Action Now

MEMORANDUM

TO: Chair Catherine McDonald and Members of the OREGON Global Warming Commission (OGWC)
FROM: Ron Bunch
RE: Comments on the 2020 Biennial Report to the Legislature
Date: November 18, 2020

Introduction

I have been following the development of the 2020 Biennial Report both in my role as member of the Oregon Climate Agriculture Network (OrCAN) Advisory Committee and in my own personal interest. Please note that the following comments are my own and do not reflect the current position of OrCAN.

The following comments pertain to three areas, 1) Regional/Local Solutions to Climate Impacts 2) Recommendation No. 6 - Local Climate Action Plans and 3) Effective Climate Communication Strategies for both Rural and Oregon.

Discussion

Focus on Regional/Local Solutions to Climate Impacts

After the October 30, 2020 OGWC meeting, I commented in writing to legislative member Senator Michael Dembrow that, *"I am concerned how urban and rural Oregon can find common ground to address the challenges of climate change. I think this can happen by emphasizing that the whole state has an interest in mitigating climate impacts on natural and working lands. This is crucial for rural areas because these resources are the foundation of local economies. **How is done is important, and your statement at the OGWC meeting that that climate resiliency investments should be tailored to regional needs and characteristics is on the mark. This is because proposing climate solutions for the entire state can feel overwhelming and not achievable.**"*

Therefore, I recommend that the Biennial Report emphasize that adaptation and mitigation solutions to climate impacts be developed and implemented at the regional/local level. There are certainly statewide considerations, but a regional approach to address identifiable local issues is more likely to gain buy-in, especially in rural counties. This approach is consistent with the Biennial Report's Recommendation No. 6 whereby cities and counties would develop and implement Climate Action Plans.

The Word "Require" Associated with Recommendation No 6

Coming from a land use planning background that includes working in rural areas, I am concerned that the wording of recommendation No. 6 whereby it would be "required" to develop and implement Climate Action Plans. In some parts of the state this will get resistance. Instead it is recommended to investigate using the framework of the existing statewide land use planning program to implement

climate actions. Climate considerations can fit neatly within the land use planning goals and it may be possible to do this through administrative rule-making.

Perhaps a better statement would be, “Engage and support Oregon jurisdictions in amending local plans to incorporate climate mitigation, adaption and resiliency measures

Effective Climate Communication Strategies for both Rural and Oregon

My career experience has also emphasized that messaging must be tailored to the needs of perceptions of differing stakeholders. Its recommended that a communication and engagement function be considered as a Biennial Report recommendation or embedded in the development and implementation of the above Climate Action Plans. The state’s land use program Goal1: Citizen Involvement provides a good template for the latter.

Also, in my correspondence to Senator Dembrow I stated the following regarding this matter:

“I am also concerned about the urban-rural polarization on governance issues. I suggest that the state government consider formulating a long-term communication and engagement strategy with rural stakeholders. There is a precedent. In 2004, Governor Ted Kulongoski signed [EO04-04](#) creating an Office of Rural Policy in 2004. However, [it was disbanded in 2008](#). In view of the socio-political issues and climate challenges facing the state, it is time to consider creating a similar state function.”

Sent via form submission from [Keep Oregon Cool](#)

Name: Rich Rodriguez

Email Address: awizard@aol.com

Subject: Recommendations

Message: The State of Oregon needs to establish a cabinet level office to combat the Climate Crisis - The Department of Climate Action.

I work for a state agency and have seen first hand how ineffective the various arms of the State function with regard to climate. My agency's leadership has taken NO action despite being called out in a recent executive order on climate change.

October 27, 2020

Catherine MacDonald

Global Warming Commission

Subject: Comments on Draft 2020 GWC Report to the Legislature

Thank you for inviting me to submit comments on the subject report. In my opinion, this is the most important report written by any Oregon agency that I have read. As it states on page 1 of the executive summary “to be clear and to the point, Oregon has not made the progress envisioned in the Oregon Global Warming Commission’s (OGWC) Roadmap to 2020 “. The statute that created the OGWC directed the Commission to make recommendations for new policies and actions that should be taken to meet our Greenhouse Gas (GHG) goals. In its’s 2018 Report to the Legislature, the OGWC had 0 recommendations for legislative action.

In this 2020 draft report the OGWC has 31 recommendations for new policies and actions that should be taken by the Legislature to meet our GHG goals. These are my comments on this draft report.

- # 3 set date of June 30, 2021 for establishing agency goals
- # 5 use consultant (faster, less expensive) to provide additional support for OGWC for the following task “conduct research on the potential applicability of policies and programs being advanced in other states and countries and how they could be customized to Oregon”
- # 6 set date of December 30 2021 for local jurisdictions to complete Climate Action Plans
- # 9 develop Cap and Reduce Program by June 30, 2021
- # 12 - # 18 Add wordage to ensure that Hydrogen Fuel Cell electric vehicle refueling is included in these recommendations. Add recommendation requiring that no new internal combustion vehicles can be sold in state after 2035. Add recommendation dealing with replacing aviation fuel with hydrogen or cellulose-based biofuel. Transportation sector recommendations should be complete by December 30, 2021.

- #23 Add recommendation that Oregon should enact a carbon sequestration tax credit in line with U.S. Code 45Q which would minimize the cost of converting the state's natural gas fueled electrical stations to zero-carbon dioxide energy sources. Tax credit in place by Dec 30, 2021.
- # 24 Add wordage to ensure that renewable energy powered microgrids be located to enhance the resiliency of areas likely to be impacted by a Cascadia event.

Sent via form submission from [Keep Oregon Cool](#)

Name: Richard Turnock

Email Address: richardturnock@comcast.net

Subject: Biennial Report

Message: Preliminary 2019 sector-based emissions data exceeds the State's 2020 emissions reduction goal erasing all of the gains Oregon had made since 2010. Economic collapse of 2008-2010 resulted in reduced GHG emissions. Economic growth through 2019 erased all of the emission reductions.

Reducing GHG emissions to meet the Paris Agreement of 2.0 degrees C, will require the equivalent of global economic collapse and then economic recovery without increasing emissions.

Dear Oregon Global Warming Commissioners,

I am writing to express my concern over ODF's initial report on the climate Executive Order (20-04). The report does not include any concrete steps that ODF will take to help avoid the worst climate impacts. Industrial forestry in Oregon, which ODF is obligated to regulate, has been the largest contributor to greenhouse gas emissions of any sector in the state. I ask that the Oregon Global Warming Commission work with ODF to produce concrete climate solutions to store more carbon in Oregon's forests.

The Executive Order is clear that ODF is charged with identifying ways to contribute to Greenhouse Gas emissions (GHG) reduction goals. The initial report instead relies mostly on symbolic actions that will have no meaningful effect on reducing emissions or reforming forestry practices. Please recommend concrete, science-based changes that will help increase carbon storage such as reducing clearcutting, lengthening the rotation time between harvest activities to allow trees to store more carbon, reducing road building, and promoting an incentive system for private forest owners to store more carbon in their forests.

Moreover, the initial ODF report lacks any timeline for a transparent process for public engagement. That stands in stark contrast to many of the other state agencies that are holding an open process for the public to engage ahead of their final reports in 2021. Please allow Oregonians a chance to engage in the creation of your proposal and share their input with the Commission and with ODF.

We need ODF to step up and help become part of the climate solution and not just contribute to the climate crisis. ODF has an important role in helping remedy climate change. I look forward to working with the agency on this effort.

I ask that the Commission take a leadership role in encouraging our state agencies to do the right thing for Oregon's climate. In the case of ODF, this means going back to the drawing board, consulting peer-reviewed science and producing concrete steps for a.) avoiding greenhouse gas emissions from industrial forestry, b.) storing more carbon on the landscape, and c) engaging the public, independent scientists, and stakeholders in the process.

Sincerely,
Ms. Melba Dlugonski
6735 SE 78th Ave Portland, OR 97206-7116 melbajade@hotmail.com

Sent via form submission from [Keep Oregon Cool](#)

Name: Richard Turnock

Email Address: richardturnock@comcast.net

Subject: Biennial Report

Message: Dear OGWC,

Whether you read UN reports or listen to consultants on climate change, one common theme stands out: Cities!

Cities integrate transportation, business, industry, buildings, consumers, electricity, demand and supply of goods and services, and all the key parts of our economic system.

The Final OGWC Biennial Report must include a focus on the role of Oregon Cities.

ODOT wants to expand freeways in Cities at a time when there is less traffic and a disruption in transportation will happen by 2023 with autonomous vehicles in RoboTaxi networks.

Air pollution in cities comes from people burning wood in homes combined with stagnant weather conditions in the fall and winter.

Current infrastructure of roads, buildings and dwellings expanded over time based on ownership of cars and trucks. However, as we transition to autonomous vehicles over the next five years, space will be freed up at surface parking, parking garages and underground parking, driveways and home garages.

The transition to a new transportation system will happen faster than you think.

Is this a two year plan to maintain the status quo or a ten plan to save civilization?

Sources: Tony Seba, Tesla

Richard Turnock
8373 SW Chevy Pl
Beaverton OR 97008
503-319-4686

Sent via form submission from [Keep Oregon Cool](#)

Name: Richard Turnock

Email Address: richardturnock@comcast.net

Subject: Biennial Report

Message: Dear OGWC,

In your Final Biennial Report, please consider feedback loops that interconnect our economic system.

For example, your emphasis on energy efficiency delays installation of renewable energy, delays converting to electric transportation and delays electrifying industry and buildings. Energy efficiency reduces energy demand and lowers costs for consumers, and incrementally lowers GHG emissions. However energy efficiency does not eliminate the sources of GHG emissions and does not accelerate the transition to Clean Energy.

To experience many other feedback loops, schedule a workshop with Climate Interactive using their interactive climate simulation (EN-ROADS). Or go online and see for yourself:

<https://en-roads.climateinteractive.org/scenario.html?v=2.7.29>

Richard Turnock
8373 SW Chevy Pl
Beaverton OR 97008
503-319-4686

I am a retired engineer that has taken a very strong interest in Global Warming, and I attended today's Global Warming Commission Meeting.

from Edward Averill to host (privately): 1:22 PM

I want to note some issues.

1. I fully support Melanie Plaut's testimony on Methane/Natural Gas/RNG.
2. I do not support the factory farms that are a huge generator of RNG, as they create pollution in the air and into the ground, and therefore into the aquifers. Such factory farms have pollution issues all across the country, even up to killing neighbors when breezes send the methane to their yards in such concentration it is suffocating. (Search for this in Iowa.)

Melanie used 4 to 20% as the amount of Natural Gas could possibly be replaced with RNG without going to great lengths. It requires the same kind of biomass that when composted becomes a valuable soil additive to produce the methane. Stealing it from where it grew depletes the carbon from that land.

When we are within 10 to 15 years of climate tipping points, using a 100 year GWP for methane is foolishly optimistic. the 20-year GWP is about 76.

I know NW Natural Gas brags about their leakage rates, but I think it's worth some money to have measurements taken along pipelines, in storage areas, and in areas of retail distribution.

35 cities in California have joined the pattern of setting timeframes for decommissioning Natural Gas distribution. **Reforestation can affect local climate.** It holds water in the local soil and needles/leaves. Since we are wanting to **avoid desertification**, we should be interested in **increased forestation**. But,

3. **Warning:** We are told that expected climate warming, the growth / planting zone compatibility will change so much that many trees and other plants will not do well where they have, historically. So, that is another reason for looking for **diversity of plants being planted for the 20 and 40 year futures.**
4. Another issue is that progress has **some opportunities**. **Power Purchase Agreements** cause major investments to be made by providers from outside of Oregon, and they deliver finished, ready-to-use generation. Hooking it up to the local network is possibly the biggest issue.. **Permitting for the big transmission lines can be a very long process.** The opportunity to get **massive offshore wind sources could allow us to go very clean, surprisingly soon**, but only if the planning for the grid is started, soon.
5. On **accelerating decarbonization of transportation**, there are states who already determining **cutoff dates for switching from ICE vehicles to EV**. This can be a **no new ICE registrations after**

some date. It can be a **no use of ICE vehicles after some date.** Consider a non new registrations of ICE after 2025. Consider no further use of ICE after 2032ish.

6. I want to push **ground source heat pumps** again. They are too good to pass up.

Please look at

<https://dandelionenergy.com/>

This company does ground source **heat pump retrofits in New York State.** Look at their brags on **replacing fossil fuel heating with electric, and paying for it all through the electric bill. The new electric bill will be less than the sum of their old heating bill plus the old electric bill, even though the new bill includes a loan payoff for the heat pump.**

We should cause that to be available in Oregon.

The **efficiency of ground sourced vs. air sourced is about 2x** and therefore could decrease the grid load of electric heating a lot.

7. If any of the big investment funds such as PERS or college funds are currently invested in fossil fuel, that should be moved to green energy.
8. Another comment. So far as I understand moving to green energy should always have a payoff time on the order of 5 to 15 years. That means that if a person can afford their current situation, they can move to a better situation, if only they have the way to finance it over it's payoff time. If that becomes readily available, individuals would be enabled to make good investments for their current situaion in a largely painless way. That's why designing a system that can offer the financing is important.
9. Please get the Mark Z Jacobson book just published on getting to 100% green with wind, water, solar and storage. It is available in PDF, and you could make it available to the commissioners on a Google Drive.e's a well-known expert that teaches at Stanford
10. A European strategy for overbuilding grid energy for stability, IS to generate hydrogen with extra available energy. This is becoming a standard part of their green planning, now.

Thanks for listening,

Ed Averill

Sent via form submission from [Keep Oregon Cool](#)

Name: Angela Jensen

Email Address: angela@umpquawatersheds.org

Subject: Note on Current Meetings

Message: It has come to our attention at Umpqua Watersheds that the meeting you are holding today does not include an agenda item concerning our forests and forestry management.

We cannot emphasize enough that, with respect to Governor Brown's Executive Order 20-04, changes in our perception and practices of our forests is paramount- both for climate change mitigation and adaptation. We are somewhat surprised that this is not receiving more attention from OGWC and that this commission seems to refrain from pushing greater responsibility on ODF.

ODF has their next meeting on November 4th and many of their agenda items include topics related to carbon accounting, flux, and carbon mitigating management scenarios. Your own EO 20-04 Goal Setting is listed as agenda item #8. Thus, it looks like OGWC is missing an opportunity during today's meeting by not discussing forestry issues at all.

That being said, and in consideration of ODF's upcoming meeting and OGWC's goals, we would like to implore the following considerations as these are vital to fulfilling the mandates of the executive order:

- * Longer harvest rotations
- * Greater water protection/ buffer zones
- * Increased tree retention and the protection of ecological valuable stands, including late successional forests.

Please understand that we have already reached out to Peter Daugherty and are also reaching out to ODF Board of Forestry. We implore that you do your part as well by assisting this administrative agency in establishing the correct policies.

Thank you for your time and consideration.

Angela Jensen
Conservation/ Legal Director
Umpqua Watersheds