Oregon Global Warming Commission-

Public Comments December 16th, 2022

Sent via form submission from *Keep Oregon Cool*

Name: Jennah Maier

Email Address: jennahmaier@outlook.com

Subject: Questions on the Natural and Working Lands Proposal and SB 1534A

Message: Hello,

Thank you in advance for your time. I live in Eugene, I'm a Master's student, and I am currently writing a research paper and doing advocacy work in support of Oregon's SB 1534A. It looks like most or all of the provisions in this bill are the direct result of work done by this Commission and your Natural and Working Lands Proposal. I'm hoping someone who was involved in that Proposal work could help me out with a few questions to fill in the gaps in my research, if anyone has any availability to talk with me this week. I'm happy to talk over email or phone, whichever is more convenient. My number is 616-745-5313.

I'd love some insight into any or all of the following questions:

- Are there noteworthy deviations between the Proposal and SB 1534A, or are there specific improvements to the Bill that the Commission would recommend?
- If SB 1534A is passed, are there specific next steps planned?
- Were the Proposal or Bill written with other state's examples of sequestration efforts in mind? If so, which plans or legislation were particularly influential?
- Are there pieces of the Proposal or Bill that are no longer relevant because of the federal Inflation Reduction Act of 2022's carbon capture provisions?
- Do you have any information to share on why the direction of the Proposal and Bill is to further invest in more inventory and baseline studies, rather than going straight to on the ground sequestration work such as incentives or requirements for land owners?

Thanks so much!
Jennah Maier

From: ODOE ITService * ODOE <ODOE.ITSERVICE@energy.oregon.gov>
Sent: Monday, November 21, 2022 1:08 AM
To: Oregon GWC * ODOE <Oregon.GWC@energy.oregon.gov>
Cc: ROSS Linda * ODOE <Linda.ROSS@energy.oregon.gov>; BAKER Zachariah * ODOE <Zachariah.Baker@energy.oregon.gov>
Subject: New TIGHGER submission -

Business Contact
Scott Matthews

Email
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Click here to access record

Feedback on draft list of actions

General Comment on Roadmap

Hi, I have been a lifelong Oregonian and I would love to see Oregon become a national leader in clean, nuclear energy. Nuclear has received heavy scrutiny in the late 70s and 80s, but this scrutiny has lead to substantial advancement in safety. Nuclear is now the SAFEST form of energy out of all energy sectors. One of the biggest concerns people have is what to do with the nuclear waste. And there is a simple answer: Bore Holes. Due to recent advances in bore hole technology due to the fracking industry, you can drill down a mile deep, and then have a horizontal section that goes multiple miles to deposit the waste. And all this can be done on site! No transportation needed. Please consider nuclear energy as it is quite simply the best option to a cleaner Oregon and cleaner future. Thank you!

Comments on Draft Recommendations for the Roadmap to 2035

Chair Cathy Macdonald and members of the Oregon Global Warming Commission,

Thank you for the opportunity to provide comment on the Oregon Global Warming Commission's Transformative Integrated Greenhouse Gas Emissions Reductions (TIGHGER) project and its upcoming RoadMap to 2035 Report. The Metro Climate Action Team (MCAT) is a Portland metro areas group of climate activists focused on supporting and strengthening climate legislation in Oregon.

We commend the Commission for undertaking the TIGHGER analysis and we believe that the Roadmap should be a watershed report, providing both an overview of the TIGHGER analyses, and recommending strategies and actions that should be pursued to further reduce Oregon's GHG emissions. The consensus of MCAT Clen Buildings and Methane Team members regarding the framing recommendation are provided below.

1. Support continued implementation of climate programs and regulations adopted and under development.

It's critical that the report state that analysis of the current set of Programs and Regulations Adopted and Under Development (PRAUD) measures indicates that the state will be on track to meet the EO 20-04 sector-based GHG emission reduction goal for 2035, but only if the necessary implementation and compliance work is performed and these PRAUD programs stay in place and operate as planned with adequate staffing and resources to be successful over the long run.

Given that the Roadmap is forward looking document, the existing state programs that were not able to be included in the current analysis, but that that will play a role in reducing emissions, as identified in ODOE's 2022 Biennial Energy Report, should be included in the Roadmap report.

2. Adopt updated state greenhouse gas reduction goals.

The current legislative goal for GHG emission reduction goals in Oregon was established in 2007, has a 2020 goal that was widely missed, and has a 2050 goal of at least 75 percent below 1990 levels. Executive Order 20-04 added a new 2035 goal of at least 45 percent reduction below 1990 levels and an updated the 2050 goal of at least an 80 percent reduction below 1990 levels. The climate crisis continues to strengthen as wildfires, floods, droughts, killer storms and other warming-related incidents grow in severity and frequency. The Secretary General of the United Nations, along with the best available science, is telling us we need to go further and faster to reduce GHG emissions. Significantly, the current TIGHGER analysis shows that accelerating achievement of the 2035 goal by 2030, is not only technically possible to achieve with a suite of additional state climate policies and programs, but that the stronger target also shows substantial economic and health benefits, and not just by 2030 but also significant net benefit through 2050. Based on the TIGHGER analysis results, we recommend that the Commission propose that the legislature adopt the following new GHG reduction goals of at least 50% reduction by 2030, and net zero by 2050.

3. Recommend a set of actions for legislative or executive branch action (e.g., authorization and funding) that helps the State meet the accelerated greenhouse gas reduction goal.

We believe that a goal of the Roadmap document should be to highlight what additional measures would be most cost-effective and have the least risk associated with meeting accelerated greenhouse gas reduction goals. Specifically, the suite of additional state climate policies and programs that are

common to both the “Electrification” and “Hybrid” policy scenarios represent an initial least-regrets set of measures to recommend to the legislature.

4. Fund future studies to continue to guide climate action over time.

Every modelling framework can use better data, and we fully support the Commission recommending that the TIGHGER analysis be funded and updated each biennium. However, the TIGHGER project has developed a policy simulation tool for Oregon that is based upon state-level data that in some cases is disaggregated to the county level. The limitations of a policy simulation model need to be better explained relative to optimization models, and the benefits and limitations of the county-level data need much more clarity with some examples of county-level results. MCAT also supports increased community engagement, especially where county level data and results can help inform local decision making

5. Strengthen governance and accountability for Oregon climate action.

We agree that its long-passed time for the support staffing to the Commission be increased from its current level of 0.3 FTE, which has not changed since 2007. This is justified by both the increased level of climate-related activities under EO 20-04 and the accelerating impacts of climate change to Oregon.

Its also required if the Commission is to fulfill its role in creating a comprehensive climate action plan, including the contributions from both the energy sector-based actions and the natural and working lands study.

Given that under EO 20-04 a number of state agencies are doing climate work but are not on the statutory list of ex-officio non-voting members of the OGWC, the Commission should recommend that the Legislature update the statutory list of OGWC ex-officio non-voting members to include all or some of these agencies. The Commission should also recommend that the Legislature include a requirement for agencies tasked under EO 20-04 provide reports on their climate work and progress to the Commission to help the Commission carry out its mandate.

Public participation in climate-related policy decisions is challenging and made even more difficult by the fact that efforts are distributed through many different state agencies. A lot of climate-related agency actions could benefit from being tracked all in one place to inform decisionmakers and the public. We support a recommendation that the Commission to create a state climate action dashboard as part of its statutory tracking and education responsibilities.

Recognizing that EO 20-04 was the result of a legislative process that was derailed by two walk-outs, we support recommending that the Legislature put these directives into statute, and include the directives to agencies to prioritize climate actions that help vulnerable populations and impacted communities and consult with the Environmental Justice Task Force (now the Environmental Justice Council) on climate policies.

6. Position the state to take full advantage of federal investments in climate action.

The Commission is not alone in recognizing that federal funds from the Infrastructure Investment and Jobs Act and the Inflation Reduction Act can help to significantly reduce the costs involved in meeting the state’s GHG emissions reduction goals. The Commission should use its position to help encourage and support cooperation between state agencies, the legislature, the private sector and civil society to coordinate program applications and the state position itself to maximize the use of these funds in Oregon – with a priority to disadvantaged and climate-impacted communities.

Sincerely,

Dr. Pat DeLaquil on behalf of the Clean Building and Methane group of the Metro Climate Action Team

Feedback on draft list of actions

General Comment on Roadmap

December 2, 2022 Comments on Criteria and Weighting Chair MacDonald and Members of the Commission: I'm writing to comment on the draft criteria for weighting actions to be recommended in the Roadmap to 2035. My comment is about the Risk and Uncertainty criteria. I would ask you to consider giving considerably more weight to actions that can have a greater effect in the near term. We all know, because CO2 stays in the environment for decades, that an action that reduces greenhouse gases today is worth a lot more than an action that reduces greenhouse gases in the distant future. Yet, Risk and Uncertainty receives only 11 points of 100, and timing is just 20% of that criterion. I suggest that you reduce all other criteria by 1 point and add the additional points to Risk and Uncertainty, and then that you change the weighting within that criterion to reflect the greater weighting for actions that affect the atmosphere in the near term. Thank you for the opportunity to comment. Linda Craig

November 29, 2022

To the Oregon Global Warming Commission and Chair Macdonald

From Arlene Sherrett, Climate Advocate

I appreciate the opportunity to give public testimony before the Commission. The Commission has a track record of significant leadership in recommending legislation on climate change and their work is respected throughout Oregon. Currently the Commission has before it a straw proposal for the next reports scheduled to the state legislature, both the Roadmap to 2035 and theCommission's 2022 Biennial Report. I am responding to the opportunity to provide comments on the draft proposal.

I support the Commission's approach in creating the 2022 Roadmap to 2035. The PRAUD analysis showing that Oregon could meet its 2035 target with existing policies was brilliant and I am enthusiastic about the idea of driving even greater emissions reductions sooner than the 2035 target. As the IPCC has warned, greater progress on emissions reduction is needed.

However, I don't feel as enthusiastic about the latest analysis of electrification versus hybrid scenarios. Thus under **Item 3a. Recommend a set of actions for legislative or executive branch action (e.g., authorization and significant funding) that helps the State meet the accelerated greenhouse gas reduction goal**, I think the Commission should shift its focus away from the electrification/hybrid scenario analysis and center the exercise on finding individual actions that could reduce emissions. *The Commission could consider recommending: (ii) mix of common and unique actions from each scenario.*

The electrification and hybrid scenarios are represented by graphs that seem to show, on the surface, that RNG and hydrogen would be as effective in reducing emissions as electrification. This result is unconvincing. Many studies have shown greater cost savings and, of course, greater emissions reduction can be achieved by electrification. A closer look at the way the scenarios were set up and which actions went into which scenario, does raise doubt that the logic behind the scenarios is will result in an accurate picture. For instance, 100% heat pump deployment in new and existing buildings should be in the electrification scenario and not in common actions, whereas hydrogen should have been in the common actions, not in the hybrid scenario; hydrogen deployment is not connected to either scenario. Not to mention the hybrid scenario is based on technology that is not ready for commercialization now and may not be ready by 2030. The hybrid option, therefore, has no chance of meeting the 2030 target.

If the purpose of the exercise is to find a way to drive enhanced emissions, there are several other emissions reduction strategies that could be extracted from the foundational work done in the TIGHGER analysis. One action I would stress as worth looking at is 100% deployment of heat pumps in new and

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If the purpose of the exercise is to find a way to drive enhanced emissions, there are several other emissions reduction strategies that could be extracted from the foundational work done in the TIGHGER analysis. One action I would stress as worth looking at is 100% deployment of heat pumps in new and

existing building stock. The energy saved by heat pumps, and correspondingly emissions, is tremendous if one estimates a savings of 50-60% on energy bills (A heat pump produces 3 kWh of heat for every kWh of electricity. An electric baseboard produces 1 kWh of heat for every kWh of electricity[1].)

The idea also dovetails well with the cooperative energy efficiency program prescribed for ETO and utilities by HB 3141, using Public Purpose Charge funds. The PPC budget alone will not be enough to reach all the low income individuals or families who apply. From an environmental justice perspective, plans must be made, in the spirit of leaving no one behind, to reach every low income household. Dedicating public funds to the effort might broaden the opportunity to serve more low income Oregonians and at the same time reducing emissions. Private funds should also be sought. In addition, there is a financing option called on-bill financing or Inclusive Utility Investment[2] that could be adopted voluntary by utilities or mandated legislatively or perhaps by the PUC. This option catches lower income households who don't qualify to get their heat pump at no charge but may not have good enough credit to finance an energy upgrade.

The co-benefits analysis will undoubtedly provide insight into what policy actions might best contribute to further emissions reductions. It would also be helpful to have access to mathematical detail on individual proposed actions if there were no proprietary constraints but in the absence of that information the marginal abatement costs might be a starting point.

My second suggestion also ties in with emissions reduction. **Item 3b. Should the Commission consider carrying forward relevant recommendations from our 2020 Biennial Report to the Legislature?** I would like to comment on recommendations **29 Pass legislation to eliminate coal from the electricity supply before 2022** and **23 Establish a framework for measuring embodied carbon for both whole building and specific building materials**.)

Recommendation 29 on elimination of coal would provide substantial emissions reduction and health benefits. Eliminating coal has been strongly supported by modeling studies done for Oregon and the Pacific Northwest in recent years. Oregon utilities have already started decommissioning coal plants but coal generated electricity from out of state is still being imported and may continue through 2036[3] if not longer, depending on the will to retire some of the newer coal plants before their useful lifetimes end.

One study that underscores coal's critical role in emissions reduction is *Oregon Clean Energy Pathways,* co-authored by Clean Energy Transition Institute, Evolved Energy Resources, GridLab and Renewable Northwest. The study concludes that "Emissions reductions from switching away from coal are the primary means of meeting near-term Oregon emissions targets[4]" and "Eliminating coal power from Oregon's electricity supply is the most impactful and cost-effective near term path to achieving

significant emissions reductions. By achieving emissions reductions through coal retirement, Oregon avoids investing in expensive clean fuels strategies and can take advantage of the expected drop in renewable energy costs after 2040[5]."

Elimination of coal is a key takeaway from a 2017 study as well, the *Pacific Northwest Low Carbon Scenario Analysis*, produced by Energy and Environmental Economics *(*E3): "The most cost-effective opportunity for reducing carbon in the Northwest is to displace existing coal generation with a combination of energy efficiency, renewables and natural gas. Currently, coal resources account for roughly 80% of the Northwest's electricity-sector greenhouse gas emissions[6]."

I think that further elimination of coal in the energy mix in Oregon would definitely go a long way toward the additional emissions reductions needed to meet the Roadmap goal by 2030.

My final suggestion concerns recommendation 23: **Establish a framework for measuring embodied carbon for both whole building and specific building materials**. I want to draw the Commission's attention to some interesting work being done by RMI[7], Skanska Construction[8] and also by the Structural Engineering Institute[9]. All three of these organizations promote using less embodied carbon in the design and construction of new buildings. Based on the premise that because cement and other building materials have historically been cheap, these materials have been overused in building design. Judicious design and materials choices could drive embodied carbon emissions savings of up to 46%[10]. Associated with this work, the Embodied Carbon in Construction Calculator (EC3) tool[11] is a free tool that allows construction professionals to design buildings using less cement and other materials with high embodied emissions. This might be an interesting avenue to pursue for either education or public/private cooperation.

I respectfully submit these comments to the Commission in the hope that they may be helpful.
Arlene Sherrett

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