

October 10, 2022

Dear Co-Chairs Lieber and Marsh, fellow members of the REBuilding Task Force, and the SSG modeling team,

As Task Force members with expertise in climate and energy policy, ratepayer advocacy, public health, and environmental justice, we write to thank you for this opportunity to participate in and provide feedback on the SSG modeling process that will help us better understand the relative emissions reduction potential and associated co-benefits of the policies we are considering in the Resilient, Efficient Buildings (REBuilding) Task Force.

First, we'd like to thank the Co-Chairs, LPRO Staff, SSG team, and everyone else who has worked to ensure that our process will be supported by this modeling. We are excited to have this resource, provided by a third party with experience in the state, to help inform our recommendations. We believe it will be incredibly helpful to have a sense of the relative greenhouse gas emissions reduction potentials of various policies as well as an analysis of the co-benefits of these policies.

We provide the following feedback and suggestions in the hope that it is helpful to the SSG team in developing the model parameters and as a response to concerns raised in the last Task Force meeting:

- I. Additional Building Sector Policies Are Critical to Achieving State Climate Goals Equitably and Rapidly
- II. Emphasize Co-Benefits Including: Public Health, Air Quality, Energy Burden, and Climate Resilience
- III. Request Support From DEQ's Materials Management Program for Embodied Carbon Analysis
- IV. Incorporate Inflation Reduction Act Tax Credits and Rebates
- V. Model a Range of Policy Designs

I. Additional Building Sector Policies Are Critical to Achieving State Climate Goals Equitably and Rapidly

While the Climate Protection Program (CPP) helps set the path for Oregon to significantly reduce emissions from some of our top polluting sectors, additional policies, regulations, and incentives are essential to ensure pollution reductions happen at the pace and scale necessary and to enable an equitable transition to a clean energy future. The CPP acts like a cap policy by requiring mandatory limits to cut climate pollution from major sources in the transportation and gas sectors, among others, including oil companies and fossil gas suppliers. Like all other jurisdictions with cap-like policies in place, a suite of complementary policies are necessary to efficiently, affordably and equitably drive emission reductions in specific sectors with the cap's mandatory targets acting as an effective backstop to achieving those greenhouse gas goals.

In addition to the Climate Protection Program's requirements to reach emission reductions targets in the transportation sector, Oregon has adopted complementary policies and programs to more effectively and efficiently drive down emissions including the Clean Fuels Program, Advanced Clean Truck Rules, Zero Emission Vehicle mandates and electric vehicle rebates. Unfortunately, Oregon does not yet have similarly sizable complementary policies in the buildings sector. **There is an urgent need for the legislature to adopt significant policies and programs to ensure an affordable, equitable transition to a decarbonized buildings sector- which would achieve the expressed mission of this taskforce.** By advancing a suite of efficiency and electrification solutions, the legislature can help communities transition to cleaner, healthier living environments and ensure that all Oregonians are able to reap the cost-saving and health benefits of the transition.

The Climate Protection Program doesn't direct regulated companies how to achieve the mandated reduction targets. For instance, NW Natural and other gas utilities have indicated in other settings that they intend to cut their pollution by shifting to substitute fuels like so-called renewable natural gas (RNG, i.e., biogas) and hydrogen. This is highly problematic, as RNG is still primarily methane just like fossil gas, and therefore poses many of the same climate and health risks. Investments in expensive, nascent alternative fuels, like RNG, are risky for Oregon customers and for our climate, and will especially impact renters and low-income households who are already disproportionately burdened by high energy costs. Efficiency and electrification policies that can more affordably, efficiently and equitably achieve much of the GHG targets in the buildings sector should be modeled and considered alternatively to better protect Oregon ratepayers and communities.

As we weigh these policies and consider which will best help us achieve our state's climate goals, we urge fellow Task Force members to consider the health and equity benefits of rapidly reducing emissions in the buildings sector. Acting early may prevent compounding harms that will be experienced first and worst by Black, Indigenous and communities of color across our planet. The sooner we act to curb emissions, the better it will be for all. This is especially true for Black, Indigenous, and other communities of color that are the first and worst harmed by the climate crisis.

For all these reasons, the modeling of policies for purposes of the Resilient, Efficient Buildings Task Force will only be accurate and useful to meeting the Task Force's legislated mission if they're modeled under the CPP cap instead of as if they're on top of and therefore somehow additional to the CPP cap. **We hope that the modelers will take this into account as they model these policies, so that we see how much of the emissions reductions needed from the CPP can be met with the policies under consideration from this Task Force.** Ultimately, these policies are not *additive* to the total gains from the CPP, but they help us get there. We are happy to discuss this further, if helpful.

II. Emphasize Co-Benefits Including: Public Health, Air Quality, Energy Burden, and Climate Resilience

We are glad to hear that SSG is modeling some co-benefits of policies. To be most useful, we hope the modelers will look to the SB 1518 statutory language that directs the REBuilding Task Force process and prioritize co-benefits outlined in this language. See, specifically:

"(3) The task force shall:

- (a) Identify and evaluate policies related to building codes and building decarbonization for new and existing buildings that would enable this state to meet the greenhouse gas emissions reduction goals set forth in ORS 468A.205 while maximizing additional benefits, such as increasing energy efficiency, improving resilience against climate change, improving public health and air quality, reducing the percentage of household income that goes toward energy costs and mitigating displacement and toward mitigating other impacts that result from wildfires, heat waves and other climate change events;*
- (b) Consider, in developing the task force's recommendations, costs, savings and benefits of policies that relate to residential, commercial and industrial buildings, which may include:*
 - (A) Upfront and longer-term economic, environmental, climate and health costs, savings and benefits, along with lifecycle emissions and the social cost of carbon . . ." (emphasis added).*

As an example, we hope that when considering the benefits of widespread heat pump distribution, in addition to energy efficiency savings and emissions reductions, the modelers will look at the public

health, air quality,¹ energy burden,² and climate change resilience benefits of these appliances. There is no shortage of studies outlining the air quality and health risks associated with distributing and burning methane for use in home appliances. It is also critical that when considering the value that heat pumps provide, cooling services during heat waves – which can sometimes be literally life-saving – are considered.³ Finally, it is important that the modelers consider how buildings impact air pollution exposure.⁴ Modeling of air quality co-benefits should include expected changes in outdoor air pollution and accounting for changes in exposure to pollutants of indoor origin, due to, e.g., use of new low-carbon building materials or changes in cooking and heating energy sources.

It would also be helpful, in analyzing costs and considering energy burdens, for SSG to consider whether certain policies result in **avoided upfront or long-term costs** compared to alternatives (e.g., avoided risky investments and potential stranded assets in the gas system). To understand the full picture of how either a “hybrid” or “electrification” scenario could benefit ratepayers and the state, we think it is important to understand the potential avoided costs of a pathway to an expanded gas system reliant on costly alternative fuels. Similarly, we hope that SSG can incorporate the benefits resulting from decreased reliance on fossil fuels in buildings, given current gas price volatility and likely future price fluctuations. The extreme high oil and gas prices afflicting Oregon families and consumers today are not merely a blip, nor do they happen in a vacuum. The economic assessment should therefore reflect the benefits of protecting consumers from future oil and gas price fluctuations. If these avoided costs are co-benefits that SSG is unable to model, we’d hope they’ll be reflected in the narrative of the findings.

III. Request Support From DEQ and Materials Management Program for Embodied Carbon Analysis

As a follow up to a comment made during the last Task Force meeting, and again lifting up the language of the statute, we hope that the SSG team will attempt to model the life-cycle emissions and social cost of carbon benefits of different policies – including embodied carbon to the greatest extent possible. **We suggest the SSG team consult with the Oregon Department of Environmental Quality, specifically the Materials Management Program, on the embodied carbon issue in particular.**

IV. Incorporate Inflation Reduction Act Tax Incentives and Rebates

¹ The use of methane gas in buildings – including renewable natural gas (RNG), which is largely chemically indistinguishable from methane – causes significant public health harms, including increased likelihood of asthma symptoms in children. See Lin, W., et al., “Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children,” *International Journal of Epidemiology* (2013), available at <https://academic.oup.com/ije/article/42/6/1724/737113> (“Our metaanalyses suggest that children living in a home with gas cooking have a 42% increased risk of having current asthma[.]”

² A report by E3 commissioned by the California Energy Commission in 2019 found that electrification of buildings – particularly the use of electric heat pumps for space and water heating – leads to lower energy bills over the long term compared to the use of renewable natural gas. The California Energy Commission also found that the lowest-cost pathway to eliminate direct emissions from commercial and residential buildings is to electrify appliances. According to the analysis, in 2050 an electric heat pump would cost \$34 to \$44 per month to operate, while a gas furnace fueled by RNG would cost five times as much, \$160 to \$263 per month, to operate. See, Dan Aas et al., *The Challenge of Retail Gas in California’s Low-carbon Future: Technology Options, Customer Costs, and Public Health Benefits of Reducing Natural Gas Use, Energy and Environmental Economics, Inc. & University of California, Irvine* (2019), <https://www.energy.ca.gov/sites/default/files/2021-06/CEC-500-2019-055-F.pdf>.

³ See, e.g., https://journals.lww.com/environepidem/Fulltext/2022/02000/Analysis_of_community_deaths_during_the.8.aspx.

⁴ See, e.g., <https://pubs.acs.org/doi/10.1021/acs.est.0c05727>.

As was noted in the last Task Force meeting, we hope the modelers will consider the significant new incentives for electric heat pumps and related clean energy technologies from the Inflation Reduction Act (IRA) that will drive down the upfront costs of certain building decarbonization technologies in Oregon. There was no way to know that Congress would pass such a critical investment bill just over a month ago. But now that it has, it should be captured in the modeling to better understand how Oregon policies paired with new federal incentive programs could drive down clean energy technology costs and deployment.⁵

V. Model a Range of Policy Designs

Finally, it would be extremely helpful if the policies modeled included a range of designs. The current policy survey does not allow for Task Force members to provide this level of input, but we think it is critical to having useful policy results. For example, rather than modeling just the “default” policy design shared in this week’s survey, or modeling just a “more stringent” or “less stringent” policy design, if the model could include both the less stringent *and* more stringent policy designs, that would be ideal. This could help inform how a suite of policies designed to address different building types and sizes could collectively be optimized to reach our state’s climate goals while maximizing co-benefits.

Again, we appreciate your work through this process and the opportunity to provide this feedback. We look forward to continuing this process and collaborating on next steps.

Signed,

Meredith Connolly, Task Force Member – Climate and Energy Policy
Neil Baunsgard, Task Force Member – Climate and Energy Policy
Jairaj Singh, Task Force Member – Environmental Justice
Anjeanette Brown, Task Force Member – Environmental Justice
Bob Jenks, Task Force Member – Public Utility Ratepayer Advocacy
Dr. Elliott Gall, Task Force Member – Public Health

⁵ See ReWiring America’s IRA calculator, available at <https://www.rewiringamerica.org/app/ira-calculator>.