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SOCAN Testimony on HB4009.

Chair McLain and members of the House Committee on Transportation:

I write as cofacilitator of Southern Oregon Climate Action Now (SOCAN). is the oldest grassroots climate organization in the Rogue Valley and represents some 2,000 Southern Oregonians who are concerned about the climate crisis and seek federal, state and local action to address it. We are rural and coastal Southern Oregonians who live on the frontlines of the warming, reducing snowpack, heatwaves, drought, rising sea level and the increasing wildfire risk that these trends conspire to impose on us. Because of our concern, we pay close attention to efforts nationally, statewide, and locally that impact our collective efforts to address the climate crisis. As our logo above indicates, the focus of SOCAN is to promote action through science while encouraging that this be undertaken through a social justice lens.

I write today in connection with HB4009 om which we take a neutral position since we prefer HB4126, but suggest this should be amended similarly to the suggestions we made for HB4126.

First, however, I'd like to note that we (SOCAN) acknowledge the funding plight faced by the JCT and ODOT in relation to transportation and, especially highway maintenance. We recognize that the financial crunch is driven by a combination of (i) the static state gasoline tax, (ii) the inflationary trend in road maintenance and construction costs, (iii) the increasing efficiency of the internal combustion engine vehicle resulting in less gasoline being purchased, and (iv) the succeeding encouragement to Oregonians to go hybrid or fully electric with their vehicle purchases and thus cease buying gasoline. Inevitably, the combined result of these trends is, and will continue to be, a substantial shortfall in funding for statewide transportation needs.

Where is the Climate Crisis?

As Le Page (2025) reported: "Current policies of governments around the world are likely to result in Earth warming by anywhere between 1.9°C and 3.7°C by 2100, with potentially more to come in the 22nd century." This is entirely consistent with the projections identified by the United States Geological Survey for Oregon (USGS 2026), as depicted in Figure 1, which reveals

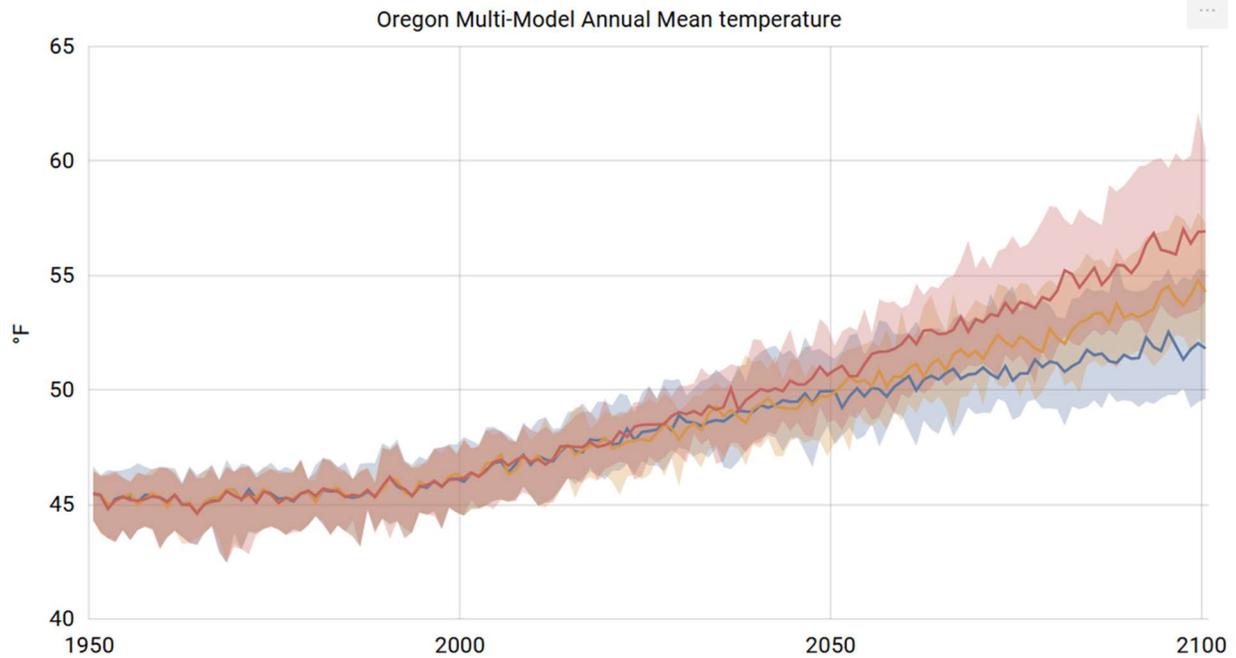


Figure 1 Oregon projected temperature change to 2100 from the 1981-2010 average. (USGS 2026)

an anticipated warming of some 10 degrees Fahrenheit by 2100 compared to the 1981-2010 average (USGS 2026). In this graph, the red line represents the mean projection for the Shared Socioeconomic Pathway (SSP) 585 that was initially identified as the ‘worst case scenario’ (Hausfather 2018) but has come to be described often as the ‘business as usual scenario’ (e.g., Hausfather 2019) because it’s the trajectory we seem to be following. As a measure of the progress we are making towards ecosystem devastation, NOAA (2026) reported that globally 2025 was the third warmest year on record. The other trajectories depicted in Figure 1 indicate possible trajectories that we could follow if we committed to reducing or eliminating completely the behaviors that contribute to greenhouse gas emissions such as the accelerating use of fossil fuels and the conversion of land to managed uses serving humans. While a substantial improvement over SSP 585, neither SSP 370 (orange) nor SSP 245 (blue) promise an ideal trajectory through the century.

Since my background is in biology, with a focus on ecology and conservation biology, I relate Oregon and global future temperatures to the main factors influencing the distribution of global natural ecosystems (known as biomes). How these biomes are distributed across the planet in relation to average annual temperature and precipitation is depicted in Figure 2 (modified from Whittaker 1975). As can be seen, a shift in temperature of just a few degrees Centigrade can be enough to adjust temperatures out of the range that supports current ecosystems where they now are and eliminate many biomes from their current locations across the globe. While range shifts are possible for flora and fauna when climatic changes are slow, as they have been through geologic time, the rate at which human-imposed temperature shifts are occurring is faster than the range shift potential of global biomes. The result of global

temperature projections as depicted in Figure 1 will likely be that the ongoing viability of most, if not all of, both Oregon's and Earth's biomes will be severely compromised, along with the biodiversity of the flora and fauna that they comprise. Climate change, along with our

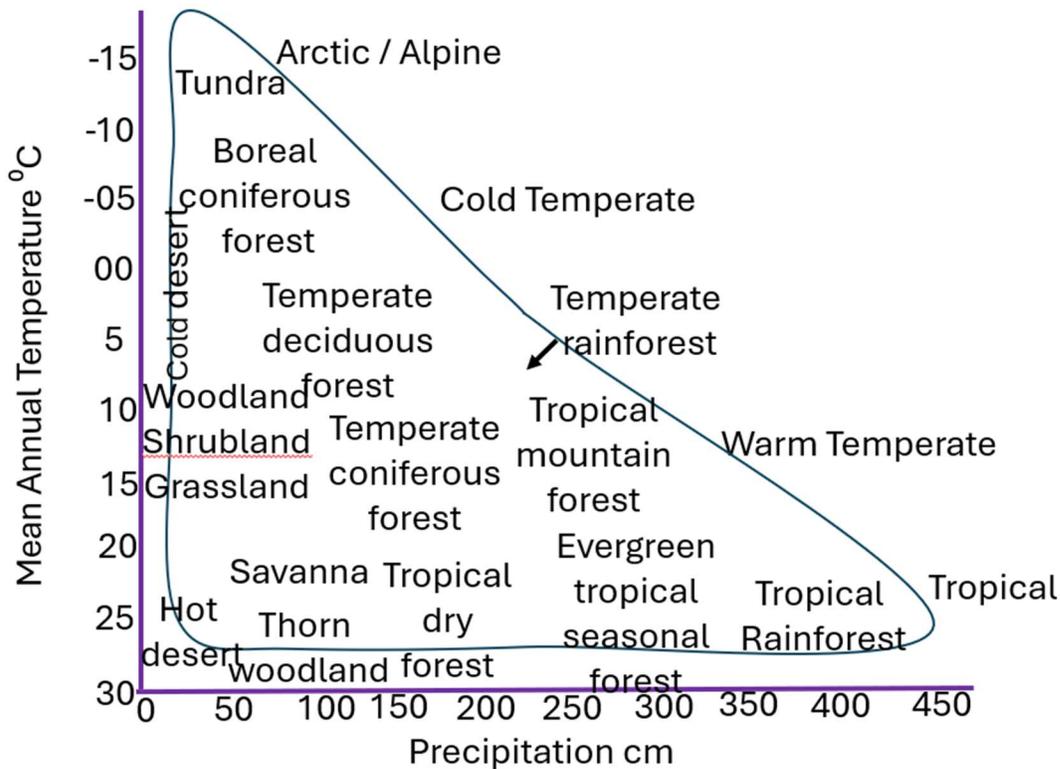


Figure 2 Distributions of natural ecosystem (biomes) in relation to average annual temperature and precipitation. (Modified from Whittaker 1975)

unsustainable use of land, water and energy are the major contributing factors to our causing the current sixth extinction (WWF undated). Since our agriculture, forestry and fisheries are dependent also on these two variables, the 'business as usual' projections pose a serious threat to these critical human endeavors and the survival of humanity. From a global, national or state perspective, we are confronted with a climate catastrophe to which it will be impossible to adapt. We are in a clear 'all-hands-on-deck' moment where we must both collectively and individually (in our personal, professional and legislative lives) do whatever we can to avert the current global trajectory. If we are to achieve the adjustment in climate trend that is needed, we cannot, in anything we do, ignore the climate crisis.

We note that transportation is listed consistently by DEQ as the leading contributor statewide to our emissions of regulated greenhouse gases (DEQ undated). Thus, I submit, it is incumbent upon the legislature to include in any transportation proposal provisions that address both the ongoing emissions of greenhouse gases from this sector and the pollution that transportation imposes, especially on low-income Oregonians.

We were extremely disappointed, as will be future generations of Oregonians, that the funding proposals in 2025 failed to recognize the need to incorporate into transportation planning consideration for how proposals contribute or fail to contribute to the statewide goal of reducing greenhouse gas emissions. Frankly, simply ignoring the climate crisis is irresponsible.

We understand fully that Oregon's contribution to national greenhouse gas emissions is small, and our contribution to the global problem is even smaller. However, if we, in Oregon, are to urge other jurisdictions (state and national) to take what steps they can to reduce emissions, we must do what we can ourselves. This means that the impact of proposed programs on the climate crisis should be at the center of consideration for all legislative proposals including this transportation package.

One route that can be included is to promote electrification of our transportation system. As the U.S. Department of Energy (USDOE undated) states: "All forms of electric vehicles (EVs) can help improve fuel economy, lower fuel costs, and reduce emissions. Using electricity as a power source for transportation improves public health and the environment, and provides safety benefits, and contributes to a resilient transportation system." Meanwhile the Western Resource Advocates (WRA undated) argue:

"Transportation electrification involves transitioning personal cars, commercial fleets of cars and trucks, and public transit like buses and trains from fossil-fueled vehicles to ones powered by electricity. Transportation electrification will fundamentally reshape our transportation and power systems by reducing demand for gasoline and increasing the demand for electricity. The transition to [electric vehicles](#) provides substantial economic, environmental, and public health benefits, and the faster the transition occurs, the faster those benefits are realized by our communities. When those vehicles are powered by clean electricity, they can help us make substantial progress in curbing carbon pollution to address climate change."

In contrast to the last caveat stated above, it is critical to understand, as Kirk (2023) pointed out: "Even an EV charged on West Virginia's coal-dominated grid will still reduce carbon dioxide pollution by around 30%." As long ago as 2018, the World Economic Forum echoed these sentiments (WEF 2018).

The reason that electrifying our transportation system is beneficial can be illustrated with reference to full life cycle emission assessments of different vehicles. The International Energy Agency (IEA 2024), for example, reported that: "A typical medium car with a petrol (gasoline) engine and driven 42 km per day will be responsible for life-cycle emissions of 54.1 t of CO₂-eq over a 15-year lifetime" Meanwhile, a Plug-in Hybrid "would produce **36.9 t**, or **32% less** over its lifetime." Finally, a "battery EV with a 300 km range would produce **25.0 t**, **54% less** over its lifetime than a conventional internal-combustion vehicle and **32% less** than an equivalent plug-in hybrid EV. Despite higher manufacturing emissions associated with producing its battery, the

battery EV's cumulative emissions are lower than those of its internal-combustion equivalent after 2 years.” The point is that despite the campaign of misinformation and disinformation waged by those promoting continued fossil fuel use and continued climate destruction, time and again full life cycle analyses indicate electrification is beneficial (e.g., Olguz 2023). A review of then contemporary literature on this comparison was presented by Verma et al. (2022) corroborating the above conclusions.

We acknowledge that there exist supply chain problems with EVs, notably in terms of the minerals needed in the batteries (e.g., Tyrrell 2022). The first response is to note that there are better ways to mine lithium (e.g., Spiller and Kannan 2024) and it is possible to close the loop and recycle (Aannir et al. 2023). Meanwhile, there are also alternatives to the lithium battery (Lee 2024), notably sodium-ion batteries (Wankhede 2025). While the internal combustion engine will always use fossil fuel and emit greenhouse gases, the electric vehicle technology is advancing rapidly and making electric vehicles ever more advantageous from a climate perspective, and, as clean energy technology advances, also from an economic perspective.

In response to the increase in the number of hybrid and electric vehicles on the roads, we (SOCAN) also acknowledge that there will likely be a need to impose on those of us traveling our highways with hybrid, plug-in hybrid electric vehicles (PHEVs), and electric vehicles a Vehicle Miles Traveled (vmt) charge. However, rather than establishing a flat rate for vmt, we suggest that this should be scaled on an inversely proportional basis to the miles per gallon equivalent (e.g., Gluckman 2026) of the vehicle. This means the charge would be lower for a more efficient vehicle. Such a system would encourage the purchase of more versus less efficient vehicles, an important consideration if and when all vehicles are included in the vmt policy as we also recommend. It would also serve as an inducement to Oregonians to consider purchasing hybrid or battery-powered electrical vehicles. We encourage consideration to be given to abandoning the gasoline tax as a source of Transportation revenue, and converting, presumably gradually, to a system based entirely on VMT with the previously identified outlined inducement to buy more versus less efficient vehicles.

Consistent with our desire to see transportation proposals encourage the electrification of our transportation sector, we would like also to suggest that a portion of funds generated should be allocated to incentivizing EV purchase and the installation of EV charging stations. We would also like to encourage that this, or a subsequent proposal, incorporate components of the bill promoting the purchase of new zero-emission school buses as indicated in HB2945 (OLIS 2025).

While the current proposal certainly moves us forward in terms of highway maintenance funding, we would like to see greater emphasis on those aspects of transportation that are consistent with the Department of Land Conservation and Development’s Climate Friendly and Equitable Communities (DLCD undated).

It is critical that legislators confronting our transportation problems are not deceived by the anti-science claims coming from the Heritage Foundation and their Project 2025 (e.g., Dans & Groves 2023; Richels et al. 2023; Waldman 2024; Colman 2024).

In closing, I reiterate that we (SOCAN) recognize the importance of developing a satisfactory funding scheme for transportation in our state. As stated above, we acknowledge the need for imposing fees for road use by EVs but urge that these fees do not serve to disincentivize EV purchase. We recommend a system whereby all drivers are charged a fee for vehicle miles traveled (vmt) in the state. While continuing the tax on gasoline and diesel serves to disincentivize the Internal Combustion Engine (ICE), which is a good outcome, it is probably unreasonable to charge ICE drivers double for their use of Oregon roads, so this tax should probably be phased out as the vmt charge is phased in.

Finally, I note that there has emerged a substantial 'no new taxes' call from folks who seem not to understand that there is a critical problem regarding funding our state highways that must be addressed legislatively or our transportation system will suffer. It is not helpful to cry 'no new taxes' unless one simultaneously proposes a rational solution to the highway funding problem. Presumably those resisting transportation funding proposals and demanding no new taxes without offering a funding solution will also commit to not using our state highways either for their own travel, or in the transportation of items they consume.

In summary, while we accept the principle of imposing on Hybrid, PHEV, and EV owners, a vehicle miles traveled charge, we take a neutral position on HB4009 while recommending the charge not be a flat rate but be computed as inversely proportional to the miles per gallon equivalent of the vehicle because this would incentivize Hybrid, PHEV and EV ownership vehicle ownership. We also suggest that such a fee be charged to all vehicle owners as a means of discouraging Internal Combustion Engine purchase.

Respectfully Submitted

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

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Sources Cited

Aannir M, Hakkou R, Levard C , Taha Y, Ghennioui A, Rose J, Saadoun I. 2023 Towards a closed loop recycling process of end-of-life lithium-ion batteries: Recovery of critical metals and electrochemical performance evaluation of a regenerated LiCoO₂

<https://www.sciencedirect.com/science/article/abs/pii/S0378775323007176>

Colman Z. 2024 Heritage Foundation chief dismisses record temperatures, defends Project 2025. E&E News By Politico <https://www.eenews.net/articles/heritage-foundation-chief-dismisses-record-temperatures-defends-project-2025/>

Dans P. and Groves S. 2023. Mandate for Leadership: The Conservative Promise: Project 2025. The Heritage Foundation.

https://static.heritage.org/project2025/2025_MandateForLeadership_FULL.pdf

DEQ undated Oregon Greenhouse Gas Sector-Based Inventory Data Oregon Department of Environmental Quality <https://www.oregon.gov/deq/ghgp/pages/ghg-inventory.aspx>

DLCD undated Climate-Friendly and Equitable Communities. Oregon Department of Land Conservation and Development. <https://www.oregon.gov/lcd/cl/pages/cfec.aspx>

Gluckman D. 2026 What Is MPGe? Car and Driver

<https://www.caranddriver.com/features/a70248105/mpge-fuel-economy-explained/>

Hausfather Z. 2018 Explainer: How ‘Shared Socioeconomic Pathways’ explore future climate change Carbon Brief <https://www.carbonbrief.org/explainer-how-shared-socioeconomic-pathways-explore-future-climate-change/>

Hausfather Z. 2019 Explainer: The high-emissions ‘RCP8.5’ global warming scenario. Carbon Brief <https://www.carbonbrief.org/explainer-the-high-emissions-rcp8-5-global-warming-scenario/>

IEA 2024 EV Life Cycle Assessment Calculator International Energy Agency

<https://www.iea.org/data-and-statistics/data-tools/ev-life-cycle-assessment-calculator>

Kirk K. 2023 Electric vehicles reduce carbon pollution in all U.S. states. Yale Climate Connections <https://yaleclimateconnections.org/2023/09/electric-vehicles-reduce-carbon-pollution-in-all-u-s-states/>

Lee C. 2024 We rely heavily on lithium batteries – but there's a growing array of alternatives. <https://www.bbc.com/future/article/20240319-the-most-sustainable-alternatives-to-lithium-batteries>

Le Page M. 2025 The world is on track for between 1.9 and 3.7°C of warming by 2100. New Scientist 24 January 2025. <https://www.newscientist.com/article/2465472-the-world-is-on-track-for-between-1-9-and-3-7c-of-warming-by-2100/>

NOAA 2026 Assessing the Global Temperature and Precipitation Analysis in 2025. National Oceanic and Atmospheric Administration. <https://www.ncei.noaa.gov/news/global-climate-202513#:~:text=2025%20ranked%20as%20the%20third,F%2F0.02%C2%BC>).

Olguz S. 2023 Life Cycle Emissions: EVs vs. Combustion Engine Vehicles Visual Capitalist https://www.visualcapitalist.com/life-cycle-emissions-evs-vs-combustion-engine-vehicles/#google_vignette

OLIS 2025 2025 Regular Session HB 2945. Oregon Legislative Information System. <https://olis.oregonlegislature.gov/liz/2025R1/Measures/Overview/HB2945>

Richels R, Jacoby H, Santer B, Yohe G. 2023 Don't let the Heritage Foundation's denialism 'Mandate' drive our climate agenda. The Hill <https://thehill.com/opinion/energy-environment/4336135-dont-let-the-heritage-foundations-denialism-mandate-drive-our-climate-agenda/>

Spiller B & Kannan S. 2024 There's a Better Way to Mine for Electric Vehicle Batteries. Resources <https://www.resources.org/common-resources/theres-a-better-way-to-mine-for-electric-vehicle-batteries/>

Tyrrell J. 2022 We can't mine our way out of this: the EV battery conundrum. T_HQ <https://techhq.com/2022/07/addressing-ev-battery-supply-chain-constraints/>

USDOE undated Electric Vehicle Benefits and Considerations. U.S. Department of Energy Alternative Fuels Data Center. <https://afdc.energy.gov/fuels/electricity-benefits>

USGS 2026 USGS National Climate Change Viewer. United States Geological Survey. https://apps.usgs.gov/nccv/loca2/nccv2_loca2_counties.html

Verma S, Dwivedi G, Verma P. 2022 Life cycle assessment of electric vehicles in comparison to combustion engine vehicles: A review. Science Direct; Materials today: Proceedings <https://www.sciencedirect.com/science/article/abs/pii/S221478532100763X>

Waldman P. 2024 Climate Denial the Heritage Foundation Way. Heatmap <https://heatmap.news/politics/project-2025-climate-week#>

Wankhede C. 2025 7 alternatives to lithium-ion batteries: What's the future of energy storage? Ford <https://www.androidauthority.com/lithium-ion-battery-alternatives-3356834/>

WEF 2018 The electrification of transport could transform our future – if we are prepared for it. World Economic Forum. <https://www.weforum.org/stories/2018/08/we-must-get-it-right-with-electric-vehicles-for-the-sake-of-our-planet/>

WRA undated What is Transportation Electrification? Western Resource Advocates <https://westernresourceadvocates.org/we-advance-clean-energy-and-reduce-climate-pollution/transportation-electrification/>

WWF undated What is the sixth mass extinction and what can we do about it? World Wildlife Fund. <https://www.worldwildlife.org/stories/what-is-the-sixth-mass-extinction-and-what-can-we-do-about-it>

Whittaker R. 1975 Communities and Ecosystems [2nd edition]. Macmillan Publishing Co (New York). <https://www.scribd.com/document/757317714/Communities-and-Ecosystems-Robert-H-Whittaker-Z-Library>