February 25, 2019

Senator Lee Beyer
Representative Caddy McKeown
Co-Chairs, Joint Committee on Transportation
Oregon State Legislature
900 Court St. NE
Salem, Oregon 97301

Dear Co-Chairs Beyer and McKeown and Members of the Committee:

Forth is pleased to offer this testimony concerning transportation electrification in Oregon, and the implications of House Bill 2020.

About Forth

Forth is a trade association and advocate for electric and smart mobility, with over 160 members from across the transportation electrification ecosystem. Our members include most major car companies and charging equipment providers, as well as utilities, local governments, consulting firms, and many other organizations.

Originally founded as Drive Oregon in 2011 with seed funding from Business Oregon, Forth advances electric, smart, and shared mobility in the Pacific Northwest and beyond through innovation, advocacy, engagement, and demonstration projects. More information, including a full membership list, is available at forthmobility.org.

Overview: Why Does it Matter? Where Do We Stand?

Oregon has historically been a leader in promoting clean transportation, but needs to move much faster and more aggressively to meet our climate goals and remain a leader in the field. Our success or failure will be on full display in June 2020 when the world's largest transportation electrification conference comes to Portland.

Transportation electrification is critical to meeting our climate goals. Transportation is responsible for about 40% of Oregon's greenhouse gas emissions, and electrifying our transportation system is going to be critical to meet the carbon goals of HB 2020.

In 2018, Governor Brown signed an Executive Order stating that Oregon is working towards putting 50,000 electric cars on the road by 2020. This goal is an important interim step, however, meeting the goal will still only represent less than 5% of new car sales. The Oregon Global Warming Commission, Portland General Electric's work on deep decarbonization, and virtually every other study commissioned on the subject concludes that we need to have 100% of all new vehicles sold be electric by 2035 or 2040 in order to meet Oregon's carbon emissions reduction goals. We are not on course to meet that target.

Climate is not the only reason to care about electrifying transportation. Transportation is the second-highest expense for most households, second only to housing, and electric vehicles and other new mobility services can dramatically reduce those costs. Using cheap clean Northwest electricity to fuel a car is roughly equivalent to buying gasoline for $1 per gallon. Owning and operating EVs can allow people to keep more of their own money in their pockets and become more self-sufficient.

Oregon stands to lose millions of dollars in economic development if we do not maintain our leadership electrifying the state's transportation sector. Oregon is already home to Daimler Trucks and Moovel (the mobility subsidiary of Daimler) as well as many other businesses in this space, from Jaguar Land Rover's only US office to startups like Arcimoto in Eugene. These companies have created hundreds of jobs in Oregon and pumped millions of dollars into Oregon's economy. We regularly work with Business Oregon and other partners to host visits from other mobility companies. In 2020, Forth will host the world's largest EV Symposium here, which will bring thousands of global industry leaders to Portland. Oregon's leadership on transportation electrification—or lack thereof—will be on full display to the world in 2020.

Oregon's Electric Vehicle Rebate

Oregon's new electric vehicle rebate is a critical step forward that needs to be quickly and effectively implemented.

Electric cars are much cheaper to operate—their electric "fuel" costs the equivalent of about $1 per gallon in Oregon, and they require almost no maintenance. However, they are still more expensive up front, and that sticker price is what most consumers focus on. That's why the point-of-purchase rebate that the Legislature created in 2017 is so important. Thanks to your leadership, any Oregonian who buys an electric car can receive up to $2,500 "cash on the hood." Income-qualifying buyers can get an additional $2,500 Charge Ahead rebate that they can stack for $5,000 off a new electric car or apply to a used electric car.

Data from a variety of states—from Georgia to Massachusetts—show a very clear link between a rebate and an uptick in EV sales (and a decline in transportation sector carbon emissions). The statistics are clear—rebates accelerate transportation electrification. We are very grateful to the Legislature for including a rebate in the 2017 transportation package.

Major automakers are now offering dozens of electric car models for sale in Oregon, including models that appeal to consumers across the state. These include plug-in hybrids that easily switch from electricity to gasoline and affordable SUVs like the Mitsubishi Outlander. We expect to see plug-in hybrid pickup trucks for sale within the next couple of years.

The Oregon Legislature needs to protect rebate program funding and resist any attempts to weaken or undermine the program before it even has a chance to get underway. In future years, HB 2020 could provide important revenue to maintain and expand rebates.

Consumer Engagement

Less than half of drivers even know that electric cars are an option. Oregon will need to make stronger investments in consumer outreach to promote the state rebate and the benefits of electric vehicles.

Even in California, the nation's leading electric vehicle market, over half of drivers can't name a single electric car model. That statistic has not improved significantly over the last six years. Over the coming years, we hope that HB 2020 funds can be used to support additional outreach work about Oregon's rebate, and about the benefits of electric vehicles in general. This work is especially important in reaching lower income consumers and rural consumers to ensure they realize that EVs are a viable option for even long-distance commute and that an EV can be an affordable used car option.

Charging Infrastructure

Oregon needs to do more to address "charging anxiety" by strategically investing just over $10 million in additional charging infrastructure during the current session. It is especially critical that this Legislature find at least $5 million to sustain and upgrade the West Coast Electric Highway.

Most Oregonians have no idea how or where to charge electric cars, which creates an additional source of uncertainty and anxiety about buying one. In a PSU survey of over 4,000 EV drivers, lack of public charging infrastructure was one of the top three complaints for EV owners, with 29% of respondents identifying it as their number one issue . People who live in apartment buildings, or without dedicated garage space, have particular challenges. Finally, the state should also be prepared to support the arrival of hydrogen fuel cell electric vehicles in coming years by encouraging that fueling infrastructure.

These investments are urgent. Eventually, there will be enough electric cars on the road to make charging more profitable and reduce the need for public investment. However, to get to that point, Oregon needs to make strategic investments in the next 2-3 years while this market

is still getting off the ground. The good news is that these key charging needs can be met with a modest, but targeted, investment of approximately $10 million.

Strengthen the West Coast Electric Highway and Other key Fast Charging Locations. Oregon made an important early investment by securing federal grant funds to build out the "West Coast Electric Highway" of fast chargers along I-5 and the Oregon coast: fully electrified transportation corridors with stations every 25 to 50 miles that are essential for travel between communities and long-distance road trips. These fast chargers, which can provide about 50-75 miles of range in 20-30 minutes, have made it possible for electric vehicle owners to travel the length of our state in electric vehicles and have filled in gaps charging infrastructure that private investment would not. They are especially important for rural Oregonians. However, the West Coast Electric Highway is now inadequate to serve growing EV loads, is not compatible with newer American and European electric vehicles like the Chevy Bolt, and is now at risk of going "dark" when the current contract expires mid-2019, stranding thousands of Oregon's electric vehicle owners and causing Oregon's charging infrastructure to take a significant step backwards. The West Coast Electric Highway is not some permanent network of charging infrastructure that can simply be "turned off" and then turned back on in a year or two when more funding is available. The operating contract actually requires Webasto, the operator of the West Coast Electric Highway, to completely tear out all existing charging stations and wiring once the contract expires—a huge step backwards for public charging infrastructure in our state.

Support charging in apartment buildings. Many Oregonians—especially those of low and moderate income—reside in apartments and often do not have dedicated parking spaces where they can charge electric vehicles. The state should partner with businesses and community organizations to provide matching funds to support the cost of charging stations for apartment housing and to provide outreach and technical assistance. This effort should complement the Charge Ahead rebate program in order to ensure electric vehicle ownership is a more viable option for all Oregonians regardless of income.

Encourage employers to provide charging. The United States Department of Energy (USDOE) found that employees are six times more likely to purchase an electric vehicle if they can charge at work, and workplace charging also provides a promising solution for people who cannot charge at home for various reasons. Here again, Oregon should work with community-based organizations and businesses to provide matching funds, outreach, and technical assistance to employers, with a focus on small businesses.

Provide charging at public buildings to set a positive example. Despite being the first state to sign on to the USDOE workplace charging challenge, as well as a stated desire to 'lead by example,' the State of Oregon has very few facilities that provide charging for employees. METRO pledged to expand EV charging in its climate strategy, but has not made any progress in doing so. The City of Portland's efforts to expand its EV fleet have also been slowed by difficulties finding a funding source for charging infrastructure. Other government agencies face similar barriers. For this reason, the state should provide funding for publicly available charging

at government facilities, prioritizing workplaces with large numbers of employees; large numbers of public visitors; high visibility in the community; service to, or a location within, traditionally underserved communities; and government agencies that have significant numbers of electric vehicles in their fleets.

Encourage access to hydrogen fueling infrastructure for Fuel Cell Electric Vehicles. Hydrogen fuel cells are a promising technology, both for light duty vehicles and for heavy duty applications. Companies such as Honda, Toyota, and others are actively involved in bringing these vehicles to market, and they are already available in California. Oregon should encourage the development of hydrogen fueling infrastructure with matching funds.

The charging investments outlined above are not expensive. In fact, they could all be paid for by the approximately $10.9 million that Oregon has available for charging infrastructure through the Volkswagen Appendix D settlement funds. We believe Governor Brown is right to call for these funds – a total of just fifteen percent of the Volkswagen funds – to be spent on EV charging infrastructure. Forth has already provided more detailed comments to state agencies through that process. Over 40 states have committed to using at least some of these funds for charging, and we believe Oregon should do so as well. If the Legislature chooses not to use Volkswagen Appendix D funds in this way, it should find alternative sources of funding that can legally be used for this purpose in the coming biennium. To be clear: HB 2020 funds will not be available soon enough to pay for these investments, especially the West Coast Electric Highway. HB 2020 could, however, provide an important source of revenue for charging infrastructure in the long run..

Heavy Duty Electrification

Oregon can reap even more benefits by extending its push for electric transportation to include heavy duty vehicles.

Electrification is rapidly becoming cost-competitive in heavier duty vehicles, not just cars. This trend is especially dramatic when it comes to transit buses. Many transit districts across the US have concluded that electric buses are not only cleaner, but cheaper to operate over their lifetimes, and have pledged to transition to 100% electric fleets. From Seattle to LA and across the country, this trend is catching on fast. The city of Shenzhen in China has already replaced all of its dirty diesel buses with electric buses. Eugene and Wilsonville are currently ahead of Portland in this race, but we are hopeful that TriMet will move quickly to catch up.

There's more to come. Electric school buses are becoming increasingly cost competitive, holding out hope that our kids will no longer be exposed to toxic exhaust on their way to and from school. Daimler trucks has recently begun sales of electric commercial trucks including the eCascadia and the eM2, and companies like Tesla have announced ambitious plans for

electrifying long-haul transit. Other industrial equipment, from yard tractors and forklifts to utility bucket trucks and garbage trucks, are also electrifying rapidly. As Oregon moves to reduce carbon from the transportation sector, it will need to adopt additional measures to incentivize electrification of freight and heavy-duty vehicles.

Conclusion

Oregon has historically been a leader in promoting clean transportation, but will need to move much faster and more aggressively to meet our goals and retain our leadership. HB 2020 could provide a valuable source of funding for these efforts.

We encourage the Legislature to build upon the important step of creating an electric vehicle rebate program by continuing to make focused and strategic investments and policy decisions to put the state on track to fully electrifying its transportation system.

Thank you for the opportunity to testify, and to work with you on these important issues.

Sincerely,

Jeff Allen
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