

Recommendations on accelerating transportation electrification under a Clean Fuel Standard

To: Interested parties

From: Union of Concerned Scientists and EV Noire

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I. Background

Transportation provides a vital service, connecting people to opportunities and to one another, but it is also a major source of pollution that harms people and communities through climate change, tailpipe pollution from cars and trucks, and along the supply chains that produce transportation fuels such as gas, diesel, biofuels, natural gas, and electricity. Addressing this harm and building a cleaner more equitable transportation system requires a suite of policies focused on everything from neighborhoods, highways and transit systems to vehicles and ultimately the fuels that power the system. In each area transformational policies are required to meet the needs of all communities and address the full range of climate and other pollution and health impacts. Ultimately a core element of this transformation is phasing out petroleum-based fuels and replacing them with renewable sources of energy.

Unfortunately existing fuels policies are not up to the task. The Renewable Fuel Standard (RFS), last amended in 2007, reflects an outdated understanding of the problems associated with transportation fuels and an inadequate set of solutions. The RFS is deficient in three major ways: 1) it focuses on increasing the use of biofuels rather than reducing pollution from the use of petroleum, 2) it ignores the central role of transportation electrification as an alternative to combustion fuels, and 3) it excludes wind and solar energy from its definition of renewable fuel.

Transportation fuel stakeholders – including automakers, utilities, and biofuel producers – are increasingly focusing on an alternative policy framework to address these deficiencies, based on performance standards for transportation fuels in California, Oregon and Washington. Minnesota, New Mexico, and New York are also considering legislation to enact their own Clean Fuel Standards. These Clean Fuel Standards set a declining standard for the average carbon intensity (CI) of transportation fuel used in the state, based on a scientific assessment of the climate pollution from each fuel, measured over its full lifecycle, including extraction, refining, distribution and use in a vehicle. A system of credits and deficits requires sellers of more polluting fuels like gasoline and diesel to provide financial support for producers of the cleanest fuels, such as renewable electricity. See [UCS's fact sheet on Clean Fuel Standards](#) for more details.

Clean Fuel Standards can provide substantial financial support for electric vehicles (EVs). For example, the California Low Carbon Fuel Standard provided more than half a billion dollars worth of support for EVs in 2020, funding point of sale EV rebates, helping transit agencies switch to electric buses and funding equity focused utility programs supporting a pre-owned EV rebate program and support for multi-unit dwelling EV chargers. However, the structure and rules for the EV support within Clean Fuel Standards differs in different jurisdictions and has been evolving over time. The Union of Concerned Scientists and EV Noire have conducted an assessment of lessons learned and developed a set of best practices and recommendations for future state or federal Clean Fuel Standard policies.

Clean Fuel Standards work in concert with other policies and programs to support transportation electrification and should be designed and implemented to reinforce broader policy goals. Viewed in isolation, a Clean Fuel Standard is technology neutral, and does not require specific outcomes or direct a fixed share of support for electrification. In practice, however, a clean fuel standard provides a durable source of financial support for transportation electrification that enables other policies to move more quickly. For example, transit agencies operating electric buses in California generate credits through the California LCFS worth more than \$10,000 per bus per year. This support enabled California to enact a Innovative Clean Transit regulation that requires all public transit agencies to gradually transition to a 100 percent zero-emission bus fleet. The LCFS alone does not ensure this outcome, but the support the LCFS provides helps ensure that transit agencies have the resources they need to make the transition to zero emissions fleets.

Equitable electrification requires thoughtful coordinated policies. Transportation electrification requires resources, but depending on how these resources are used, they can reinforce or amplify existing inequities or advance transportation equity. To ensure electrification benefits all communities requires policies that address consumer engagement, community engagement, workforce economic development, public health and clean infrastructure deployment. Clean fuel standards are providing resources to help address these needs, but they are only one piece of a larger policy landscape that must be approached in a coordinated and holistic manner. See [EVHybridNoire's E-Mobility public policy toolkit](#) for best practices in this area.

Clean Fuels Standard are complex and require deliberate public engagement. Because of the broad reach and basis in lifecycle analysis, Clean Fuel Standards can be confusing and opaque to understand and engage around. However, the fuel supply chain touches everyone, and crafting equitable fuel policies requires meaningful public participation. To make this work, policy makers need to seek input grounded in the real problems that affect people and their communities. Policy should be tailored to address these real needs and include ongoing oversight to adapt to changing circumstances.

II. Lessons learned from California and Oregon Clean Fuel Policies

Address barriers to public engagement. Clean Fuel Standards are very wonky and confusing policies, which take a lot of time to understand and influence. This presents a barrier to meaningful public participation in program design and oversight. However, once CFS credit revenue is available to fund transportation electrification projects, interest in direct engagement increases on the question of how to appropriately direct that support. To the extent that CFS policies can build upon well understood and broadly supported existing channels of support for community investments, this may increase support and understanding of the policy without needing to create whole new policy mechanisms.

Define mechanisms to support transportation electrification that allow for equity, effective oversight and adaptation over time. Clean Fuel Standards can generate substantial support for transportation electrification, but policy design and oversight is required to ensure that this support is used in an equitable and effective manner. Existing state policies have relied principally on electric distribution utilities to participate in the program on behalf of EV drivers in their service territories and use associated funds to support transportation electrification subject to rules from relevant regulators. However, automakers and third-party non-profits have also played a role in state programs, and a federal program might take a different approach. State programs have recently revised policies to ensure a portion of the funds benefit disadvantaged communities and are subject to appropriate oversight. An appropriate federal policy design will be essential to ensure that support for transportation electrification is equitably distributed, subject to appropriate oversight and meets Justice 40 commitments.

Develop safeguards to address concerns about specific fuel pathways. Many stakeholders in environmental and environmental justice groups have concerns about impacts of specific fuel pathways that go beyond the lifecycle CO₂ emissions. These concerns include toxic air pollution from oil extraction and refining, water pollution from leaks in pipelines, food price impacts from excessive utilization of food-based feedstocks for biofuel production, or air and water pollution from large dairies and swine collecting manure for biomethane production. Understanding the concerns directly from affected communities and developing solutions that address their needs will be essential to developing a truly equitable fuel policy.