



May 31, 2022

Chair Randolph and Members of the Board
California Air Resources Board
1001 I Street
Sacramento, CA, 95814

Re: Consumer Reports Comments on the Proposed Advanced Clean Cars II Rule

Consumer Reports (CR) thanks the California Air Resources Board (CARB) and staff for the opportunity to comment on the Advanced Clean Cars II proposed rule released on April 12, 2022.

Founded in 1936, CR is an independent, nonprofit and nonpartisan organization that works with consumers to create a fair and just marketplace. Known for its rigorous testing and ratings of products, CR also advocates for laws and corporate practices that are beneficial for consumers. CR is dedicated to amplifying the voices of consumers to promote safety, digital rights, financial fairness, and sustainability. The organization surveys millions of Americans every year, reports extensively on the challenges and opportunities facing today's consumers, and provides ad-free content and tools to 6 million members across the United States.

Attachments

1. California Survey [Report](#)
2. Electric Vehicle Ownership Costs [Report](#)
3. National Fuel Economy [Survey](#)
4. Consumer Reports' Electric Vehicle [Fact Sheet](#)
5. Consumer Reports' Un-SAFE Rule [Study Update](#)

I. Introduction

The proposed Advanced Clean Cars II rules have the opportunity to accelerate marketplace change and bring innovative, cost-saving technology to consumers. These rules should spur a paradigm shift in transportation that will save consumers money, reduce air and climate pollution, and improve public health.

The National Academies of Science, Engineering and Medicine has released a report indicating that, in order to reach a net-zero carbon economy by 2050, at least 50% of new car sales

should be zero-emission by 2030 nationwide.¹ Additionally, the Biden Administration has outlined a target of 50% electric vehicle sales share in 2030, providing complementary investments to help states achieve this goal and investing in the infrastructure necessary to support this transition.² Given California's leadership in the transportation industry and the commitment that the state has displayed in addressing air quality concerns in emissions-burdened communities, now is the time to set sights higher. Delaying action will not only drastically increase the costs associated with transitioning to a zero-carbon economy, but it will also increase costs borne by vulnerable populations, further exacerbating the burdens they face due to the changing environment.³ California should now do their part to convey this immediacy, as the cost of inaction for consumers will far outweigh the costs of action.

Moving forward, the Zero-Emission Vehicle (ZEV) program under ACC II should ensure rapid and sustained ZEV deployment and commercialization to help consumers have access to vehicle choices that reduce costs and enable the state to meet its public health and climate goals. A strong ZEV program will encourage the sale of ZEVs that will produce significant emission reductions and provide consumers with wide-ranging choices from a broad mix of ZEV technologies across all passenger vehicle categories. Such a ZEV program will also provide the certainty private investors need to develop reliable charging and fueling infrastructure, which is among the greatest barriers to adoption for most consumers.⁴

Additionally, EVs have already been proven to provide significant consumer benefits, and a strong ZEV program will help the maximum number of consumers realize the cost-savings of an EV. Our analysis⁵ shows that today's mainstream EVs significantly lower the total cost of ownership for consumers, which in turn allows consumers to spend those savings in the broader economy:

- Owning an EV will save the typical driver \$6,000 to \$10,000 over the life of the vehicle, compared to owning a comparable gas-powered vehicle.
- The average EV driver will spend 60% less to power their vehicle than the owner of a gas-powered vehicle.
- EV owners are spending half as much to repair and maintain their vehicles as owners of gas-powered vehicles; with much of that savings benefiting used car buyers.

¹ National Academies of Science Engineering and Medicine, Accelerating Decarbonization of the U.S. Energy System, 2021

² The White House, FACT Sheet: President Biden Announces Steps to Drive American Leadership Forward on Clean Cars and Trucks, [August 2021](#)

³ Energy Innovation, Cost of Delay, 2021

⁴ Transportation Research Interdisciplinary Perspectives, Understanding and identifying barriers to electric vehicle adoption through thematic analysis, [June 2021](#)

⁵ Consumer Reports, Electric Vehicle Ownership Costs: Today's Electric Vehicles Offer Big Savings for Consumers, Chris Harto, [October 2020](#)

Based on today's average gas and electricity prices, this means that EV owners in California could save \$2,100 a year on fuel and maintenance with an electric car, \$2,600 with an electric SUV, and \$3,200 with an electric pick up.⁶

CR supports a strong Advanced Clean Cars II standard for the sale of new light-duty vehicles. CR is providing detailed comments on the following proposals in the rule:

1. As written, the proposed rule establishes a strong standard to phase out the sale of internal combustion engine (ICE) vehicles, setting a necessary target of 100% ZEV sales by 2035. CR supports this proposal, as well as an aggressive ramp up in stringency leading up to this date. For California to meet its goal of reducing greenhouse gas emissions to 40% below the 1990 level by 2030⁷, the state should lean into strategies that will get us to this goal.
2. For the equity proposal, CARB is proposing a voluntary component to the rule that would allow automakers the ability to reduce their stringency requirements by placing their vehicles into statewide programs that expand access to ZEVs in low-income communities. CR expresses concern that making the equity component to the rule voluntary will not accomplish the goal of increased accessibility, and we are worried that this rule may have unintended consequences, ultimately reducing the number of new ZEVs sold.
3. CR appreciates CARB's focus on consumer protections and assurances, and supports the proposal regarding vehicle durability, batteries, and warranties. These strong rules will give consumers, especially on the secondary market, peace of mind that their investments will maintain reliability throughout their useful life.
4. CR appreciates and supports CARB's inclusion of a "Right to Repair" provision. This is a pillar to ensuring that consumers have the ability to exercise full rights of ownership over the products they purchase.
5. In this proposed rule, CARB identifies Plug-In Hybrid Vehicles (PHEV) as a necessary tool to help consumers overcome the hesitancy associated with purchasing new zero-emission vehicles, while still helping the state reduce emissions necessary to meet its goals. CR agrees with the need to ensure that PHEVs have a role in the energy transition, and urges CARB to consider real-world standards for both PHEV and low-range ZEVs.

II. CR supports CARB's proposed stringency requirements for ZEV sales, leading to 100% ZEV sales for new passenger cars by 2035.

CR supports CARB's 100% ZEVs sales no later than 2035 timeline, and supports an aggressive, yet feasible, ramp up in stringency to achieve this goal. Right now, California has an opportunity to drive an accelerated market transition in the transportation sector that will bring benefits in mitigating the negative effects of climate change on our communities, reducing

⁶ Consumer Reports, New Consumer Reports analysis shows rising gas prices ramp up savings for EV owners, Chris Harto, [March 2022](#)

⁷ [CA Legis. Senate Bill 32 \(De Leon, 2016\)](#)

household transportation costs, and improving air quality in communities throughout the state. In order for CA to achieve statewide emissions reduction goals⁸, we support CARB setting a stringency standard for manufacturers of 68% by 2030, as this will help move the industry to a tipping point where the ZEV market is on a path to becoming self-sustainable.

CR appreciates CARB's efforts to engage with stakeholders on different portions of this rulemaking. CR also appreciates the thoughtful approach that staff has taken in crafting stringency requirements that set an aggressive standard to reduce emissions at scale.

In California, consumers have expressed their interest in rapidly guiding the transition to a zero-emission transportation ecosystem; California still accounts for over forty percent of zero-emission vehicle sales in the country.⁹ Additionally, a CR survey taken of California residents shows that over fifty percent of Californians either "definitely plan to" or "would consider" getting a plug-in EV as their next vehicle, with only six percent of respondents claiming they have "no interest" in ever getting a plug-in EV.¹⁰ As consumer adoption and education continues to grow, these numbers will continue to increase, further establishing the market demand for ZEVs in the state.

The ZEV program under ACC I has been critical in accelerating the market growth of ZEV models and sales, an outcome that would not have occurred with only a fleet-wide GHG or criteria pollutant standard. CARB's "all of the above" approach in capturing emerging zero-emission vehicle technology has allowed the state greater flexibility in meeting deployment goals while also highlighting the importance of prioritizing greater investments in research and development funding to encourage rapid marketplace advancement. CR appreciates the attention that CARB has displayed in encouraging alternative fuel manufacturers to reduce the climate intensity of their fuel production, and we encourage CARB to continue this dialogue, as it is crucial that we continue to consider the upstream emissions associated with the fuel we use in our transportation options.

III. ACC II should include mandatory provisions that focus on equity and ensure that equitable outcomes are delivered in GHG and pollution reductions.

In the proposed rule, CARB establishes a voluntary equity component for manufacturers to participate in that seeks to increase accessibility to ZEVs in underserved communities. CR appreciates the time and effort that CARB has put into establishing this equity component to the ACC II rulemaking, but we worry that the proposed rule falls short of achieving assured and measurable outcomes necessary to increase ZEV deployment in low-income and disadvantaged communities. Considering the original ACC rulemaking did not provide components to further engage with equity communities, CARB members and staff have expressed the need to put a greater focus on achieving rapid emissions reductions and vehicle

⁸ Ibid.

⁹ Veloz, Electric Vehicle Market Report, [April 2022](#)

¹⁰ Consumer Reports, Consumer Attitudes Towards Electric Vehicles and Fuel Efficiency in CA, [March 2020](#)

deployment in these communities, but the proposed rule does not go far enough to truly achieve this result.

Not only do we know that low-income and disadvantaged communities face a disproportionate exposure to vehicle tailpipe emissions,¹¹ but we also know that lower income households spend a greater percentage of their income on transportation costs than their wealthier counterparts, making them more sensitive to fluctuation and uncertainty in the fuel market.¹² For these reasons, there is a great need to encourage policies that will mitigate pollutant exposure and increase accessibility to clean, reliable modes of transportation.

While the ZEV equity programs proposed by CARB have merit, there is no certainty that the provisions will be utilized by automakers, as the proposed rule remains voluntary. In order for CARB to guarantee increased accessibility in underserved communities, ACC II should include a *mandatory* equity component to the rule, requiring that automakers do their share in making ZEVs, both new and used, affordable and attainable for low-income households. Without this assurance, consumers will be forced to trust that automakers will make the decision to ramp up sales and ZEV programs in underserved communities based on economics, with no measures of accountability from CARB in this rule. Additionally, this proposal relies on manufacturer participation, which is purely voluntary, and incented only by decreasing their minimum ZEV sales obligation. Given what we understand about climate change and the disproportionate impacts it will have on low-income and disadvantaged consumers, an emphasis needs to be placed on both increasing accessibility in underserved communities and reducing emissions across the state. To a greater extent, we should ensure that policies intended to increase ZEV deployment in equity communities and increase ZEV stringency are complementary and assured.

Short of a mandatory equity provision, the next best alternative for mitigating both equity and stringency concerns would be to condition the use of other credits, such as those accrued under ACC I, on OEMs fully participating in the equity programs. As a result, OEM participation in the equity credit would be both encouraged through additional credit and disincentives for non-participation. This approach will mitigate possible trade-offs between EV access and air quality and climate benefits.

Additionally, it is important to note that the benefits of reduced GHG emissions in new vehicles also make their way to the used car market, which accounts for over 70 percent of vehicle sales annually,¹³ and an even higher share among mid- to lower-income families. CARB's decision on ZEV sales stringency will also guide the market for low-income and disadvantaged communities, as the market decisions made by the smaller group of individuals who have the means to purchase a new car will establish the options that will be available to the remainder of the

¹¹ American Lung Association, Disparities in the Impact of Air Pollution, [April 2020](#)

¹² Institute for Transportation and Development Policy, High Cost of Transportation in the United States, [May 2019](#)

¹³ Bureau of Transportation Statistics, New and Used Passenger Car and Light Truck Sales and Leases, [April 2022](#)

population on the secondary market. Lower income consumers in the secondary market are trapped by market choices of wealthier drivers, so these standards are key to expanding clean options in the used market. For these reasons, CARB should also ensure that the equity credits solicited through ACC II not only support programs like community carsharing and ridesharing, but also support individual ownership through programs like Clean Cars 4 All.

IV. CR supports CARB's proposal on Consumer protection regarding electric vehicle durability, warranties, and batteries.

CR supports CARB's proposal to provide quality assurance to consumers regarding the durability of their certified range and battery warranty. When a consumer undergoes the process of purchasing a new vehicle for their household, there is an expectation that their vehicle will maintain condition, reliability, and value throughout its useful life. For consumers purchasing a zero-emission vehicle, these concerns can be exacerbated due to the newness of the technology and the lower knowledge of ZEV technology compared to ICE vehicles. It is critical that CARB establishes consumer protections to give customers continued peace of mind that the vehicle they purchase will operate as advertised throughout its lifespan.

These provisions are especially critical for consumers in the secondary vehicle market. As noted above in the equity section, used cars make up about 70% of sales in the automotive market, lower income consumers are especially price sensitive and spend a disproportionate amount of their income on transportation¹⁴. As more EVs enter the secondary market in the coming years, it is imperative that consumers have protections against poorly designed or manufactured batteries that diminish in capacity or fail early. Our most vulnerable populations at the forefront of climate and air quality hazards deserve consumer protections addressing the lifetime of the vehicle, its battery, and its reparability.

Additionally, while we see the costs of producing batteries continue to drop, the battery is still the most expensive part of an electric vehicle.¹⁵ And, by shifting from gasoline to electricity, it is the battery that enables the electric vehicle to eliminate tailpipe pollution and reduce greenhouse gas and other pollutants, especially when combined with California's relatively clean grid.¹⁶ Therefore, reduced capacity or complete failure of the battery pack represent a significant risk to emissions reductions given the potentially high cost of a replacement. Strong corresponding consumer protections regarding durability, battery health and warranties are therefore critical to the emissions and economic success of the ZEV program.

CARB's proposal that new ZEV vehicles maintain 80-percent or more range for 10 years or 150,000 miles is well aligned with industry standards for new ZEVs. Also, staff's proposal that new ZEVs maintain a 70% (and 75% starting in 2031) battery state of health will provide consumers assurances that they will not need to be dependent on recurring battery

¹⁴ Institute for Transportation and Development Policy, High Cost of Transportation in the United States, [May 2019](#)

¹⁵ Bloomberg, Batteries For Electric Cars Speed Toward a Tipping Point, [December 2020](#)

¹⁶ Consumer Reports, How Clean are Electric Vehicles in your State?, [September 2019](#)

replacements, while also maintaining the resale value for the vehicle. Finally, CR supports CARB's proposals on data standardization and battery labeling, as both of these measures will bring greater uniformity to the emerging ZEV market. By allowing consumers to better understand their battery state of health, used vehicle purchasers will know exactly what they are receiving when purchasing a pre-owned ZEV.

V. CR supports CARB's inclusion of a "Right to Repair" provision for zero-emission vehicles.

CR supports CARB's inclusion of ZEVs in existing regulation to require the same access and disclosure of repair information, regardless of vehicle type. CARB should ensure that consumers have the choice to fix their own vehicle equipment, if they can, or to have it fixed by a repair servicer of their choosing, including servicers independent of the manufacturer.

CR has long supported "right to repair," as it is an important component to safeguard and maintain consumers' ability to exercise their full rights of ownership over the products they purchase, including the right to repair them, and the right to resell them, even as technology evolves.

VI. CARB should consider real-world standards for PHEV and low-range ZEVs.

PHEVs can be an important part of cleaning up emissions from the transportation sector while providing consumers with the right vehicle for their needs. There are many highly ranked models on the market right now that are not only affordable, but can help adoption of EVs in the long run.¹⁷ Additionally, we understand that there may be certain market segments that may find options like a low-range ZEV appealing for their lifestyle, but it is important that CARB consider and establish strict parameters surrounding the receipt of credits for these vehicles.

For these limited cases, CARB should ensure that any credit received for a low-range ZEV, with a range above 50 miles but below 150 miles, would qualify only as a PHEV, must meet all ZEV assurance measures, and would not be eligible for proposed equity credits. We fear that including low range ZEVs in the equity credit program may lead to the emergence of sub-par vehicles, and may incentivize automakers to produce products solely for the purpose of compliance, or as a way to achieve their equity requirements.

VII. Conclusion

CR is encouraged to see CARB working towards accelerating marketplace change and leading the transition to a zero-emission ecosystem. We greatly appreciate the time staff has committed to drafting this rule, hearing from stakeholders, and considering the feedback offered. We appreciate the opportunity to provide written comments on CARB's proposed ACC II rule, and welcome continued dialogue throughout the remainder of this rulemaking process.

¹⁷ Consumer Reports Proprietary Rankings and Consumer Data

Thank you for taking these comments into consideration.

Sincerely,

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