National Highway Traffic Safety Administration
1200 New Jersey Avenue SE
Washington, DC 20590

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Comments of Consumer Reports on NHTSA's notices of proposed rulemaking on Electric-Powered Vehicles: Electric Powertrain Integrity (Docket No. NHTSA-2024-0012) and Fuel System Integrity of Hydrogen Vehicles; Compressed Hydrogen Storage System Integrity (Docket No. NHTSA-2024-0006)

Submitted via: www.regulations.gov

I. Introduction

Consumer Reports (CR) welcomes the opportunity to comment on the National Highway Traffic Safety Administration's (NHTSA) proposals to issue new vehicle safety rules for battery electric vehicles (BEVs) and hydrogen fuel-cell vehicles (HFCVs). These rules are important to ensuring vehicle safety for consumers and first responders, while aligning rules with existing global standards for vehicle safety. Additionally, the HFCV proposal seeks to establish strong rules for safety relating to the storage and use of hydrogen as fuel in vehicles, the first of their kind in the United States.

Founded in 1936, CR is an independent, nonprofit, and nonpartisan organization that works to create a fair and just marketplace for consumers. Known for its rigorous testing and rating of products and vehicles, 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, sustainability, and fairness in the marketplace. 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. In the area of transportation, CR is working to ensure affordable, clean, and safe mobility choices for all consumers.

II. Electric-powered vehicle rules

With the emergence of mainstream BEV technology on the market, it is critical that rules be enacted to ensure consumers, first responders, and others are protected from, and aware of, the risks associated with potential electrolyte spillage and electrical shock during normal vehicle operations and in post-crash situations. As vehicle technology evolves and manufacturers identify new practices to improve battery efficiency, it is important that regulators remain apprised of industry developments and align existing vehicle safety standards with emerging technologies. Harmonizing these regulations with existing Global Technical Regulations (GTR) helps NHTSA establish a sensible baseline in the United States while minimizing the need to expend significant resources on this rulemaking.

A necessary component of the present proposal is the standardization of emergency protocols to be shared with first responders in the event of a vehicle emergency related to the combustion of an BEV battery. Safety risks associated with BEVs in post-crash situations can vary from electric shock to uncontrolled increases in temperature and pressure. While these instances may be limited, first responders must know how to respond to BEV-related emergencies with the appropriate resources as shared by manufacturers. By enacting standards, NHTSA can ensure that first responders have

the ability to prepare appropriately for real-world emergency situations, while mitigating potential risks to the general public.

NHTSA's proposal includes a requirement for audio and visual warnings to be present to drivers in the case of a thermal event in the propulsion battery, or rechargeable electric energy storage system (REESS), during active driving. This critical requirement would ensure that drivers and passengers are aware of potentially catastrophic conditions and have the ability to evacuate the vehicle in case of an emergency. By warning passengers of the thermal event, potential risk can be mitigated by ceasing operations of the vehicle and reducing the likelihood of occupant exposure to combustion. CR generally supports this proposal and urges NHTSA to identify opportunities to revisit and reassess these requirements as vehicle technology evolves. For example, we recognize that there are many different battery cell form factors and pack configurations that may require different approaches to the test procedure – and there could be even more different implementations in the future, including vehicle manufacturers potentially installing cells/modules directly into the vehicle.

Performance requirements and associated testing procedures of vehicle controls represent another important component of the proposal. These vehicle controls include overcharge protection, over-discharge protection, overcurrent protection, over-temperature protection, external short-circuit protection, and low-temperature protection. These protections are important not only to ensure the safety of vehicle occupants and the general public, but they are also critical to ensure the longevity of the REESS. CR supports the proposed requirements for manufacturer-supplied documentation, and urges NHTSA to work with manufacturers to assess the distinction between required REESS protections in this proposal and existing onboard dashboard controls, such as low state of charge warnings, in order to ensure that all warnings are sufficiently prominent and properly convey the severity of the potential emergency. More generally, NHTSA also should conduct significant engagement with industry partners, safety experts, and to better educate consumers on the safety measures necessary to protect themselves.

CR is also in strong support of the proposal to ensure first and second responders have access to vehicle-specific information about existing REESS. The proposed rules establish a requirement for vehicle manufacturers to submit standardized emergency response information to a NHTSA depository – hosted on NHTSA's website – which would provide first and second responders with the appropriate information necessary to assist in emergencies under various conditions and circumstances.

The NHTSA proposal's information provisions could be enhanced by including specific hazard warning label requirements aimed at consumers and maintenance technicians. Requirements such as these for permanent labeling would be a sensible, low-cost way to further educate the public about the primary safety hazards associated with the REESS, and help ensure that consumers and others without first responder-type training do not respond to an emergency situation with actions that would increase the risk of them getting injured or killed by electrocution.

CR supports NHTSA's proposal to update and replace the existing Federal Motor Vehicle Safety Standard (FMVSS) No. 305 with the proposed FMVSS No. 305a, expanding the applicability of the rule to vehicles with a gross vehicle weight rating greater than 10,000 pounds and adding the additional requirements not originally included in FMVSS No. 305.

III. Hydrogen fuel cell vehicle rules

HFCVs continue to garner interest among manufacturers, consumers, and commercial transportation entities as a clean vehicle alternative to internal combustion engines. While to date their sales have been somewhat limited, manufacturers continue to make strides in HFCV technology. CR supports NHTSA's proposal to establish the creation of FMVSS No. 307 and FMVSS No. 308, which would establish safety standards for both the integrity of the fuel system in HFCVs and the compressed hydrogen storage system itself.

IV. Conclusion

CR thanks NHTSA for proposing these important standards and urges their swift approval. These rules can help increase consumer confidence in the safety of their vehicles and ensure that the first responders have the appropriate information necessary to combat emergency events for EVs and HFCVs.

Respectfully Submitted,

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