

**State of California  
Air Resources Board  
Board Item Summary**

**Item # 22-8-1: Public Hearing to Consider Proposed Advanced Clean Cars II Regulations**

**Staff Recommendation:**

This item will describe staff's Proposed Advanced Clean Cars II Regulations, which will amend existing regulations and adopt new regulations as part of the California Air Resources Board's (CARB or the Board) Low Emission Vehicle (LEV) Regulation, the Zero Emission Vehicle (ZEV) Regulation, and associated Test Procedures. This hearing is the first of two on these Proposed Regulations. While the Board will not be voting on the Proposed Regulations at this hearing, staff recommends that the Board adopt a resolution conveying support and directing the staff, among other things, to consider additional amendments, including those as specified, and bring final Proposed Regulations to the Advanced Clean Cars II Regulations to the Board for its consideration in a subsequent hearing in late summer of 2022.

**Discussion:**

Mobile sources are the greatest contributor to emissions of criteria pollutants and greenhouse gases (GHG) in California, accounting for about 80 percent of ozone precursor emissions and approximately 50 percent of statewide GHG emissions, when accounting for transportation fuel production and delivery. Following the completion of the Advanced Clean Cars Midterm Review in 2017, the Board directed staff to develop the Advanced Clean Cars II (ACC II) regulations for post-2025 model years.

Staff's proposal builds upon many decades of CARB regulations seeking to reduce emissions from light-duty passenger cars and trucks. The ACC II proposal aims to further curb criteria, toxic, and GHG emissions in two ways. The proposal would increase the stringency of the LEV program, which includes requirements for internal combustion engine vehicles (ICEVs), and require automobile manufacturers to deliver increasing percentages of ZEVs as a portion of their overall product deliveries between model years 2026 and 2035. The Proposed Regulations to increase the sale of ZEVs would culminate in 100 percent sales of ZEVs and the cleanest-possible plug-in hybrid-electric vehicles (PHEV) by the 2035 model year as directed by Governor Newsom's Executive Order N-79-20. The Proposed Regulations to the LEV regulation would ensure emissions are reduced under real-world operating conditions and prevent the backsliding of emissions from ICEVs as the fleet transitions to ZEVs.

Additionally, the ACC II proposal would make ZEVs more reliable, support the ZEV market, and protect the emission benefits of the ZEV regulation by establishing new minimum technical requirements and ZEV assurance measures. These ZEV assurance measures address warranty, durability, serviceability, streamlined charging, and battery labeling to help ensure

consumers can successfully replace their ICEVs with new or used ZEVs that meet their transportation needs so that emissions are permanently reduced.

The Proposed Regulations were developed in an open public process that included four public (virtual) workshops, one public listening session, several workgroup meetings, and numerous individual meetings with automobile manufacturers, component suppliers, university researchers, non-governmental organizations, environmental justice advocates, trade associations, and the United States Environmental Protection Agency (U.S. EPA). Stakeholders were also invited to provide written comments following the public workshops.

### **Summary and Impacts:**

The emission reductions from the Proposed Regulations are critical to achieving carbon neutrality in California by 2045 and reducing emissions of oxides of nitrogen (NO<sub>x</sub>) from passenger vehicles to attain the latest federal ambient air quality standards for ozone by 2037. When accounting for reduced fuel production, the Proposed Regulations will avoid 69,569 tons of NO<sub>x</sub>, 4,469 tons of fine particulate matter (PM<sub>2.5</sub>), and 383.5 million metric tons (MMT) of carbon dioxide (CO<sub>2</sub>) emissions from 2026 to 2040. Based on these emission benefits, the proposal will lead to approximately 1,272 fewer cardiopulmonary deaths, 208 fewer hospital admissions for cardiovascular illness, 249 fewer hospital admissions for respiratory illness, and 639 fewer emergency room visits for asthma.

The draft Environmental Analysis (EA) concluded that implementing the Proposed Regulations could result in beneficial, long-term impacts to air quality and greenhouse gas emissions; less than significant impacts, or no impacts, to energy demand, land use, mineral resources, population and housing, public services, recreation, and wildfire; and potentially significant adverse impacts to aesthetics, agricultural and forest resources, air quality (due to short-term construction-related emissions), biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise and vibration, transportation, tribal cultural resources, and utilities and service systems. Many of these adverse impacts could be reduced to less-than-significant levels through conditions of approval applied and mitigation measures to project-specific development; however, the authority to apply that mitigation lies with land use agencies or other agencies approving the development projects, not with CARB. Despite these potential adverse impacts, the Proposed Regulations are needed to ensure the significant environmental and economic benefits are realized.

Between 2026 and 2040, the Proposed Regulations are estimated to result in additional cumulative costs to manufacturers of \$30.2 billion, or \$2.0 billion on average per year, but costs to consumers as measured by the total cost of ownership (TCO) will result in overall savings to fleets, businesses, and individuals who purchase these vehicles. Between 2026 and 2040, the statewide TCO is estimated to be a net cost savings of \$81.8 billion, or \$5.9 billion on average per year, meaning the operational savings far outweigh the increased vehicle costs. Much of the TCO savings stem from reduced gasoline consumption, with gas prices conservatively assumed to remain constant around \$4 per gallon, with even greater savings if prices increase. In 2040, the Proposed Regulations are estimated to result in job gains of 24,926, primarily in the services, manufacturing, and construction sectors. However, while jobs continue to grow statewide, the Proposed Regulations would reduce that growth by

about 64,730 jobs, predominantly in the retail and government sectors. The net job impact of the Proposed Regulations in 2040 is estimated to 39,804 jobs foregone.

The net result of the Proposed Regulations is estimated to be a cumulative net benefit to California of \$80.7 billion with a benefit-cost ratio of 1.38, meaning benefits are more than costs between 2026 and 2040.

The primary stakeholder critiques with respect to the ACC II proposal regard the provisions to provide equitable access to clean transportation, initial stringency, the pace for ZEV deliveries, and requirements for ZEV durability.

Environmental advocates note that that staff's proposal for ZEVs differs from the trajectory outlined in the 2020 Mobile Source Strategy and argue that initial requirements should be more stringent to produce greater cumulative climate and air quality benefits. However, the Mobile Source Strategy is a planning exercise and did not consider feasibility or costs of specific regulations.

Additionally, the environmental advocates argue that newly-developed tools in the Proposed Regulations, termed environmental justice values, that give extra credit for deploying ZEVs in underserved communities should instead be mandatory to provide certainty that these communities will have improved access to ZEVs. Mandatory requirements for these environmental justice values would reduce the total number of ZEVs on the road in California in the near-term, and may be impractical for every automaker to generate, whereas an optional program provides appropriate flexibility.

Automakers caution that while technological advances may lower compliance costs, consumers may still not accept new technologies at the rates required by the regulation. They are especially concerned about this in the earlier years of the new requirements, due to personal consumer preference and practical constraints, such as access to charging and high daily driving needs among some owners. In response, staff have maintained averaging, banking, and trading flexibilities, as well as early compliance value mechanisms to smooth out year-to-year fluctuations in the emerging ZEV market.

Automakers also oppose the ZEV durability requirements as proposed. Staff will suggest 15-day changes to address these concerns.