

State of California Air Resources Board

Board Item Summary

Item # 24-6-2: Public Hearing to Consider Proposed Low Carbon Fuel Standard Amendments

Staff Recommendation:

Staff will present to the California Air Resources Board (CARB or Board) proposed amendments to the Low Carbon Fuel Standard (LCFS) regulation. The LCFS program supports California's zero-emission vehicle regulations and accelerates private investment to produce cleaner fuels like electricity, hydrogen, and biofuels that are needed to displace fossil fuels and reduce transportation sector emissions. Since the beginning of the program, California has tripled the quantity of low-carbon fuels used in transportation, and the program is poised to deliver more benefits in the coming decades. The proposed amendments will reduce greenhouse gas emissions (GHG) from transportation fuels by reducing the carbon intensity of those fuels by at least 30% in 2030 and 90% in 2045 as compared to the 2010 baseline. Additionally, the proposed amendments will reduce criteria pollutants such as oxides of nitrogen (NO_x) and fine particulate matter (PM_{2.5}) from the transportation sector in California. Staff recommend that the Board approve the proposed amendments.

Discussion:

The LCFS program was adopted in 2009 as an early action measure in support of Assembly Bill (AB) 32 (Núñez and Pavley, Chapter 488, Statutes of 2006). The LCFS regulations were subsequently updated in 2018 to strengthen the program's requirements through 2030 in support of Senate Bill (SB) 32 (Pavley, Chapter 249, Statutes of 2016), which codifies a statewide greenhouse gas (GHG) emissions reduction target of at least 40% below 1990 levels by 2030. In 2022, Governor Newsom signed several climate bills to cut pollution, protect Californians from big polluters, and accelerate the state's transition to clean energy, including AB 1279 (Muratsuchi, Chapter 337, Statutes of 2022) which requires an 85% reduction in anthropogenic GHG emissions below 1990 levels by 2045. In December 2022, the Board approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update), which lays out a path to achieve these targets and achieve carbon neutrality by 2045. The 2022 Scoping Plan Update signals the need for an aggressive reduction of fossil fuel use, building on and accelerating greenhouse gas reduction programs that have

been in place for a decade and a half, including the LCFS program. This means rapidly moving to zero-emission transportation; transitioning the cars, buses, trains, and trucks that now constitute California's single largest source of planet-warming pollution to zero-emission technology. Achieving GHG emissions of 85% below 1990 levels by 2045 will require significant investment and use of lower carbon opportunities while zero-emission technologies gain market penetration in response to regulations adopted by the Board and achieve interim climate goals. Conventional internal combustion engine vehicles from legacy fleets will remain on the road for some time, even after new vehicle sales have transitioned to zero-emission vehicle (ZEV) technology. Therefore, it is necessary to ensure there are reliable and adequate low-carbon fuel supplies available for both zero-emission vehicles and existing internal combustion engines to displace fossil fuels. The LCFS currently provides the regulatory environment that supports private investment in expanding low-carbon energy for the transportation sector, but California still needs additional deployment of low carbon fuels to meet our climate and air quality goals and support implementation of ZEV technology regulations.

CARB staff developed LCFS regulatory changes to build on the existing momentum and to update the LCFS program to further support California's climate goals. Staff engaged with the public on potential changes to the LCFS program for over two years, including ten public workshops and two LCFS community listening sessions, participation in Environmental Justice Advisory Committee (EJAC) meetings, an informational update to the Board, and numerous meetings with individual stakeholders to discuss concepts to update the LCFS.

Summary and Impacts:

The proposed amendments to the LCFS regulation are intended to increase the deployment of low carbon fuels and further reduce greenhouse gas emissions from transportation by increasing the stringency of the annual required carbon intensity reductions, achieving a 30% reduction by 2030 and a 90% reduction by 2045. The proposed amendments are designed to send clear, long-term market signals to support investment in low-carbon fuel production and technologies that are needed to achieve deep emissions reductions in the transportation sector while supporting the broader portfolio of zero-emission vehicle regulations and climate statutes. The proposed amendments also align crediting opportunities with the fuel and technology pathways identified in the 2022 Scoping Plan Update and streamline several aspects of program implementation. Notably, the proposed amendments would provide significant support for investment in zero emission vehicle refueling infrastructure, as well as continued revenue for transit solutions and zero-emission vehicle support for over-burdened communities. The proposed amendments both signal a limited future for all combustion fuels and incentives

for zero emission fuels and infrastructure to leverage federal incentives and grow those sectors.

The proposed amendments will result in substantial greenhouse gas and criteria emissions reductions. Staff estimate that cumulatively, from 2025 to 2046, the proposed amendments will reduce statewide emissions from mobile sources by approximately 553 million metric tons of GHGs, 9,107 tons of particulate matter (PM2.5), 34,495 tons of oxides of nitrogen (NOx), relative to the legal baseline. Based on these emission benefits, the proposed regulation will result in health benefits of approximately \$11.9 billion from 2025-2045. Substantial benefits will be seen near frontline communities often located adjacent to major freight corridors, ports, and distribution centers in the state. These estimates underestimate the total benefits of the proposed amendments as they exclude changes in tailpipe emissions where those are already fully captured by the analyses for the ZEV regulations recently adopted by the Board.