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March 4, 2022

Edie Chang
Deputy Executive Officer
California Air Resources Board
1001 I Street
Sacramento, CA 95814
Via electronic mail

RE: Comments on January 31, 2022, CARB Draft State Strategy for the State Implementation Plan

Dear Ms. Chang:

Thank you for the opportunity to comment on agency's draft strategy for the State Implementation Plan (SIP) to meet the federal ozone standard of 70 parts per billion (ppb). Growth Energy is the world's largest association of biofuel producers, representing 89 U.S. plants that each year produce more than 8 billion gallons of renewable fuel; 92 businesses associated with the production process; and tens of thousands of biofuel supporters around the country. Together, we are working to bring better and more affordable choices at the fuel pump to consumers, improve air quality, and protect the environment for future generations. We remain committed to helping our country diversify our energy portfolio in order to grow more green energy jobs, decarbonize our nation's energy mix, sustain family farms, and drive down the costs of transportation fuels for consumers.

We sincerely appreciate the California Air Resources Board's (CARB) attention and hard work to improve air quality and to reshape California's fuel mix to make it more sustainable. This objective is a central driver for our industry, and we look forward to continuing our work with California on our common goals as you move ahead.

In order for California to meet the 70-ppb ozone standard and improve air quality, California must have rapid and deep emissions reductions from mobile sources. Clean, renewable fuels like bioethanol can play a key role in achieving California's air quality goals. Specifically, higher bioethanol blends that help to displace petroleum products in California's vehicle fleet can deliver critical air pollution, climate change, and public health benefits.

Consideration of Higher Bioethanol Blends as part of the Draft State Strategy

California is already one of the largest consumers of bioethanol and is a national leader in the use of E85 in flex-fuel vehicles (FFV). However, it remains just one of 2 states that does not allow the sale of E15. Already approved for more than 96 percent of the current national vehicle fleet, higher bioethanol blends like E15 help to reduce carbon monoxide (CO), particulates (PM2.5), nitrogen oxide (NOx), volatile organic compounds (VOCs), and greenhouse gases.[1] As such, it is important that the state move forward to approve E15 to further displace fossil fuels. Specifically, CARB should proceed as expeditiously as possible to update California fuel specifications to allow for the sale of E15 and evaluate all strategies that can maximize the air quality benefits of higher bioethanol blends in the state.

Simply allowing for the sale of E15 blends would achieve immediate air pollution and climate benefits and is consistent with CARB's "multi-pollutant planning effort that identifies the pathways forward to achieve the State's many air quality, climate, and community risk reduction goals."[2] The emission benefits of displacing fossil fuels with clean-burning bioethanol are significant. Bioethanol blends deliver critically needed air quality and public health benefits and help the state to meet federally required air quality standards. In addition, a shift from E10 to E15 in California would cut 1.8 million metric tons of GHG emissions from the state's transportation sector – the equivalent of removing 411,000 cars off the road each year.[3]

Higher bioethanol blends also deliver cost savings to consumers. While Californians already benefit from the use of E85 in FFVs, motorists in other states already enjoy savings of up to 10 cents per gallon with E15. These cost benefits are important for all Californians, particularly those in low-income and disadvantaged communities seeking clean transportation fuel options.

In addition to updating the fuel specification to allow for E15 in California, we urge CARB to examine all strategies that can further maximize the air quality benefits of using higher bioethanol blends in FFVs such as expanded use of E85 and the potential of midlevel blends such as E30.

Higher bioethanol blends provide immediate air quality and public health benefits in California

A recent analysis from leading national experts demonstrates air quality and public health benefits from higher bioethanol blends, particularly in disadvantaged communities. The study is the first large-scale analysis of data from light-duty vehicle emissions that examines real-world impacts of bioethanol-blended fuels on regulated air pollutant emissions, including PM, NOx, CO, and total hydrocarbons (THC).

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[1] Analysis of Ethanol Compatible Fleet for Calendar Year 2022, Air Improvement Resources, Inc. November 16, 2021, Analysis-of-Ethanol-Compatible-Fleet-for-Calendar-Year-2022-16Nov21.pdf (growthenergy.org).
[2] California Air Resources Board, Draft 2022 State Strategy for State implementation Plan, July 21, 2021.
[3] GHG Benefits of 15% Ethanol Use in the United States. Air Improvement Resource, Inc. November 30, 2020, National E15 Analysis Final (airimprovement.com).

Specifically, the analysis demonstrates bioethanol-associated reductions in emissions of primary PM, NOx, CO, and THC.[4] Key findings of the study include:

- PM emissions decreased with increasing bioethanol content under cold-start conditions. Primary PM emissions decreased by 15-19% on average for each 10% increase in bioethanol content under cold-start conditions. Cold start PM emissions have consistently been shown to account for a substantial portion of all direct tailpipe PM emissions from motor vehicles.
- NOx, CO, and THC emissions were significantly lower for higher bioethanol fuels for PFI engines under cold-start conditions. THCs include VOCs, meaning that all three of these ozone precursors decreased with higher bioethanol blends.
- Lower PM emissions result in lower ambient PM concentrations and exposures, which, in turn, are causally associated with lower risks of total mortality and cardiovascular effects.
- Higher blends of bioethanol fuels may be particularly beneficial for disadvantaged communities with high traffic density and congestion and are thus exposed to disproportionately higher concentrations of PM emitted from motor vehicle tailpipes. Vehicle trips within these communities tend to be short in duration and distance, with approximately 50% of all trips in dense urban communities under three miles long. As a result, a large proportion of these vehicle trips occur under cold start conditions when PM emissions are highest.

Clearly, higher bioethanol blends, including E15, have numerous benefits and can play a key role in California's efforts to meet critical air quality standards. As such, we encourage CARB to maximize the benefits of higher bioethanol blends as part of its Draft SIP Strategy.

Thank you for the opportunity to comment and in advance for your consideration.

Sincerely,

Chris Bliley
Senior Vice President of Regulatory Affairs
Growth Energy

[4] Tufts University Department of Civil and Environmental Engineering, Air Quality and Public Health Comments to RFS, February 3, 2022. Exhibit 4: Growth-Energy-RVO-Comment_Exhibits.pdf (growthenergy.org).