

CARB FAQ: E15 Evaluation Status

Multimedia Evaluation of E15

Why is CARB conducting this Multimedia Evaluation?

California gasoline is currently blended with up to 10 percent ethanol by volume (E10), the maximum ethanol content allowed by California gasoline regulations. The California Air Resources Board (CARB) has initiated a Multimedia Evaluation (MME) to understand any potential environmental or public health impacts from the use of 15 percent ethanol by volume (E15) in California. California law (Health & Safety Code, §43830.8) generally requires that a Multimedia Evaluation be completed prior to adopting new motor vehicle fuel specifications.

What is the Multimedia Evaluation (MME)?

California Health and Safety Code section 43830.8 defines a “multimedia evaluation” as “the identification of any significant adverse impact on public health or the environment, including air, water, or soil, that may result from the production, use, or disposal of the motor vehicle fuel that may be used to meet the state board’s motor vehicle fuel specifications.” The MME must address:

- Emissions of air pollutants
- Contamination of surface water, ground water, and soil
- Disposal or use of byproducts and waste materials

The MME process is conducted by the Multimedia Working Group (MMWG, explained below) and consists of three tiers, which can take between 2 – 5 years to complete. The three tier MME process was developed by the Universities of California, Davis and Berkeley, for the evaluation of fuel and is adaptable to capture issues unique to each fuel.

- Tier I: Summary Report (~1 year)
 - Determine what is known about the fuel
 - Identify knowledge gaps
 - Outline experimental plan to fill knowledge gaps
- Tier II: Experimental Report (0 – 3 years)
 - Conduct experiments that address knowledge gaps and evaluate key risk assessment elements
 - Evaluate experimental results
- Tier III: Multimedia Risk Assessment Final Report (~ 1 year)
 - Prepare final report
 - Finalize Multimedia Risk Assessment

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- Complete independent scientific peer review

The MMWG consists of staff from CARB and the other expert agencies listed in the [Multimedia Guidance document](#), as well as other agencies with regulatory oversight over fuels, including the Department of Toxic Substance Control, the Office of Environmental Health Hazard Assessment, the State Water Resources Control Board, the Department of Pesticide Regulation, and the Office of the State Fire Marshal. After the three tiers of the MME are completed, and prior to CARB adoption of a potential regulation, the MMWG makes a recommendation to the Environmental Policy Council (EPC, generally consisting of the heads of the MMWG agencies) on whether allowing a particular fuel specification amendment (in this case, authorization of the use of E15) in California would have significant adverse impacts on public health or the environment. In accordance with HSC 43830.8, the EPC shall complete its review of the MME and staff recommendation and determine whether a potential regulation allowing the fuel specification in California would have significant adverse impacts on public health or the environment, CARB may adopt an updated fuel spec regulation following recommendations from the EPC on whether the proposed regulation will cause a significant adverse impact.

Where is E15 in the MME Process?

Starting in 2018, CARB began to collaborate with ethanol stakeholders on a study to examine potential impacts of E15 use in the state. The first draft of the Tier I Summary Report was submitted in 2019, which began the development of the test plan to fill in the data gaps identified in the Tier I Summary Report. The data gaps were focused on potential exhaust and evaporative emissions from the use of E15 in California. Emissions of interest included NO_x, THC, NMHC, CO, CH₄, CO₂, PM, formaldehyde, acetaldehyde, acrolein, benzene, toluene, ethyl benzene, xylenes, and 1,3-butadiene.

The Tier I Summary Report submitted by ethanol stakeholders was finalized and approved in 2020.

Exhaust emissions testing was conducted at the Center for Environmental Research and Technology (CE-CERT) at the University of California, Riverside (UCR) and began in 2021. The study is complete, and the final report can be found on the [CE-CERT Final Report](#) webpage. The CE-CERT final report will be incorporated into the Tier II Experimental Report to be submitted by ethanol stakeholders for review and approval by the MMWG.

What Comes after the Tier II MME Process?

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Following the MME process, the Tier II Experimental Report will be prepared and submitted to the MMWG for review and approval, followed by preparation of the Tier III Multimedia Risk Assessment Final Report and independent scientific peer review.

The MME may take place concurrently with the informal rulemaking process and in the past has taken up to five years. The E15 MME is currently in its third year and staff expects the Tier III development process would likely take at least another full year to complete. After CARB formally releases a potential proposed regulation change, the MMWG will then make a recommendation to the EPC of whether the potential regulatory amendments to allow E15 use in California would have significant impacts on public health or the environment. The MMWG recommendation to the EPC would be based on the totality of evidence gathered or generated during the three tiers of the MME. If the EPC determines there will not be significant impacts on public health or the environment from the use of E15, CARB may then consider adoption of regulatory amendments allowing E15 use in California.