



California Energy Commission
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Air Resources Board
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January 28, 2014

Air and Radiation Docket and Information Center
U.S. Environmental Protection Agency
Mailcode: 2822T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Re: Docket ID No. EPA-HQ-OAR-2013-0479

The California Energy Commission (Energy Commission) and California Air Resources Board (ARB or Board) are pleased to submit joint comments on behalf of the State of California to the U.S. Environmental Protection Agency (EPA) in regards to the **2014 Proposed Rule for the Renewable Fuel Standard Program (RFS)**. The proposed standards are below those required by Section 211(o) of the Clean Air Act (RFS2) or anticipated by EPA's previous years' actions.

EPA proposes to reduce the volumetric requirements for Biomass-based Diesel (D4 RINs) and Advanced Biofuels (D5 RINs) from the original 2007 statutory requirements. The Energy Commission and ARB do not support the proposed reductions in these two categories and are concerned these proposed reductions will adversely impact the economic viability of more than 25 advanced biofuels projects in California that are receiving over \$100 million in state funding.

The proposed rule also jeopardizes the development and expansion plans of numerous California biofuel projects that are projected to reach annual production of nearly 380 million gallons of biomass-based diesel and 180 million gallons of advanced biofuels by 2020.¹ Should this portfolio of advanced, low carbon biofuels projects begin to falter due to the proposed reductions, it could impede the State of California's efforts to reduce the carbon intensity of transportation sector fuels by 2020, as envisioned in the Global Warming Solutions Act and Low Carbon Fuel Standard (LCFS).

The LCFS is a performance-based regulation; it establishes market incentives for the production of lower-carbon fuels, regardless of fuel type or production technology, that are essential to the attainment of the program's carbon intensity reduction goals. In order to maintain sufficient production of these vital fuels, the State of California recommends that EPA revise its proposed standard to reflect the volumes shown in

¹ California Energy Commission. 2013. **2013 Integrated Energy Policy Report**. Publication Number: CEC-100-2013-001-CMF.

Table 1. The overall reductions EPA has proposed to the volumes of D5 RINs and D4 RINs will be detrimental to continued investment in low carbon fuels and in achieving greenhouse gas emissions reductions and transportation fuel diversification.

We recommend EPA increase the 2014 requirement for Biomass-based Diesel (D4) to 1.7 billion gallons per year (gpy) and increase the 2014 requirement for Advanced Biofuels (D5) to 2.75 billion gpy (See Table 1).

Table 1: RFS Volumes and California-Proposed Volumes (billion gallons per year)

	Statutory Volume (CAA)	RFS 2 - 2013 (Final Rule)	RFS 2 - 2014 (Proposed)	State of California Recommended Volumes
Renewable Biofuels (D6)	18.2	16.6	15.2	Support
Advanced Biofuels (D5)	3.75	2.75	2.2	2.75
Biomass Diesel (D4)	≥1.0	1.28	1.28	1.7
Cellulosic Biofuels (D3)	1.75	0.006	0.017	No Recommendation

The State of California does support the 2014 reduction of the Renewable Biofuel (D6) requirement to 15.2 billion gpy. As a matter of State law and policy, the Energy Commission does not provide funding to biorefineries seeking to continue the production of first generation, high carbon intensity corn-based ethanol.

Background and Rationale for State of California Recommendations

The ARB and the Energy Commission are concerned about the potential adverse impact to the financial integrity of California's biofuel industry from this Proposed Rule. The Energy Commission manages a \$100 million dollar annual investment program for alternative fuel production and vehicle technologies (the Alternative and Renewable Fuel and Vehicle Technology Program, or ARFVTP) as part of California's climate and energy independence policies. The Energy Commission has invested \$420 million to date in low carbon, advanced technology fuel and vehicle technologies, including nearly \$130 million for advanced biofuel production and fueling infrastructure, making it one of the largest public investment funds for alternative fuel and vehicle technologies in the United States outside of U.S. Department of Energy funding. These projects have leveraged over \$170 million in additional private investments, and are estimated to help create over 1,600 new jobs. California is one of the nation's vanguard states for the development and adoption of advanced biofuels and vehicle technologies.

As shown in Table 2, the ARFVTP portfolio of 28 biofuel production projects emphasizes very low carbon intensity biofuels that use waste-based and alternative crop feedstocks. The 24 biodiesel/renewable diesel and biomethane production projects feature carbon intensity values ranging from 60 percent to 115 percent below

the current California petroleum baselines. These projects were financed with the expectation of historically strong RIN prices, and will need the support of sustained robust RIN markets to continue attracting private investment for future expansion. Appendix Table A provides more detailed information on 20 of the most prominent biofuel projects.

Table 2: Summary of California-Funded Biofuels Fuel Production and Infrastructure Projects (ARFVTP Funding)

Award Category	Number of Awards	Grant Amount (\$ millions)	Match Amount (\$ millions)	Jobs Created	Gallons Anticipated (million DGE)	Average CI of Fuel (gCO₂e/MJ)
Biomethane Production	12	38.8	56.1	577	3.6	-15 to 20
Biodiesel Production	12	29.0	44.1	380	48.0	12 to 50
Ethanol Production	4	12.4	20.2	261	0.3	40 to 83
Biodiesel Infrastructure	4	3.9	6.5	49	N/A	N/A
E85 Fueling Stations	4	16.4	46.7	335	N/A	80 to 90
TOTAL	36²	100.5³	173.6	1,602	51.9⁴	

Source: California Energy Commission

The Energy Commission's biofuel grantees and stakeholders have stated they believe this proposed ruling would significantly harm the economic viability and future potential of the state's emerging biofuel industry. EPA's proposal to reduce the required levels of biofuels use increases market uncertainty and sends the wrong message to the financial community.

California producers have relied on strong RIN markets and favorable RIN prices to sustain operations in competition with fossil fuels, and more importantly, to attract private funding based on the expectation that EPA would continue to require growth in U.S. biofuels production mandates under RFS2. These projects are critically dependent on favorable federal RIN prices to establish their economic competitiveness in fuel

² Of the 28 biofuel production projects funded to date, about 1/3rd are commercial scale projects and 2/3rds are pilot scale demonstration or feasibility projects. Stable, high value RIN credits are especially important to developers of pilot projects who are working to secure financing for their next phase commercial scale plants.

³ The Energy Commission continues to fund about \$20 million per year in new advanced biofuels projects. ARFVTP has been re-authorized through January 2024, which means continued State of California incentive support through the next 10 years.

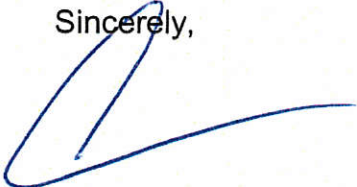
⁴ This 51.9 million gpy figure represents full production at completion of all projects. Current in-state production levels from this portfolio of biofuels projects are lower.


markets, which could experience downward price pressure over the near term due to increasing domestic oil and gas production.

The Energy Commission and ARB strongly support EPA's commitment to the continued growth in renewable fuel production and consumption. To ensure this commitment, we respectfully request that the proposed standards in this Rulemaking be revised to appropriately fit current conditions in the biofuel industry, and to support adequate availability of low carbon fuels. The Energy Commission and ARB recognize the challenges EPA faces implementing RFS2 and would welcome the opportunity to work in partnership with you as you address those challenges.

Thank you for the opportunity to comment. Please contact either of us directly or Bill Kinney at Bill.Kinney@energy.ca.gov or Kirsten King at Kirsten.King@arb.ca.gov of our respective staffs, if you would like more information.

Sincerely,


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Appendix Table A: Detailed Summary of California-Funded Advanced Biofuel Projects through ARFVTP

Diesel Substitutes (11)				
Project	Production (DGE)	Production Phase	Feedstock	Carbon Intensity (gCO₂E/MJ)
Ag Waste Solutions	5,840	Pilot	Dairy Waste	19.6-39.3*
Cal Poly	1,200	Feasibility	Algae	N/A
Biodico	50,000	Pilot	Algae	N/A
East Bay MUD	300,000	Pilot	FOG	11.76*
Buster Biofuels	5,000,000	Commercial	UCO	11.76
Eslinger	5,000,000	Commercial	Multi	11.76*
Crimson Renewables	17,000,000	Commercial	UCO	11.76
Community Fuels	15,000,000	Commercial	Multi	11.7-21.2
SacPort Biofuels	365,000	Pilot	Green Waste	-33*
New Leaf	5,000,000	Commercial	UCO	11.7
Springboard	365,000	Pilot	UCO	11.7
Total Production	48,087,040			*Estimated

Biomethane (7)				
Project	Production (DGE)	Production Phase	Feedstock	Carbon Intensity (gCO₂E/MJ)
BioStar	80,000	Pilot	Dairy and Food Waste	13.45
CR&R	8,633	Commercial	MSW	11.2
Clean World	803,000	Pilot/Commercial	MSW	-13.6*
Harvest Power	578,820	Commercial	MSW	-13.6*
Environ	1,760,000	Pilot	MSW	-13.6*
Blue Line	56,000	Pilot	MSW	36
North State Rendering	324,490	Pilot/Commercial	Rendering Waste	-13.6*
Total Production	3,610,943			*Pending pathway

Gasoline Substitutes (2)				
Project	Production (DGE)	Production Phase	Feedstock	Carbon Intensity (gCO₂E/MJ)
Mendota II	1,000,000	Pilot	Energy Beets	N/A
EdeniQ	52,000	Pilot	Cellulosic Biomass	~20*
Total Production	1,052,000			*Estimate