

**Alternative Jet Fuel**  
**Producer Comment:**  
**LCFS Table 3**

**Air Resources Board**  
**Governing Board Meeting, April 24, 2018**

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*Presented by:*  
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# Summary

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- ✓ Represent AJF Producer Group
- ✓ AltAir Fuels, Fulcrum Bioenergy, Neste, RedRock Biofuels, Velocys
- ✓ Two Year Engagement with ARB on this Proposal
- ✓ Exemplary Process, Regulatory Structure, and Specific Details of the Rule
- ✓ Major Breakthrough



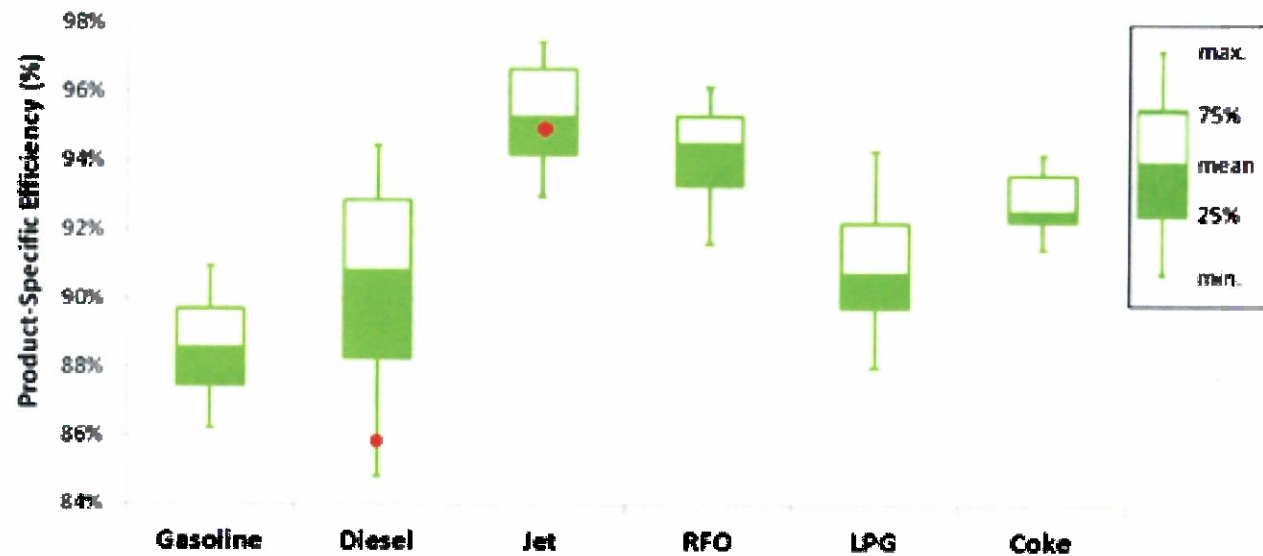
# But

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- ✓ Table 3= AJF Benchmark 11% Below Diesel
  - ✓ Results in 11% Less Credit Generation
  - ✓ Appears to be Driven by Renewable Diesel Protection
  - ✓ Not the Correct Technical Determination
  - ✓ Not the Optimal Policy Outcome
  - ✓ Need Crediting Parity



# Technical (Argonne GREET Table)

Figure 7. Average product shares (by energy) from major processing units in 43 refineries.



## Refining Efficiency

- Jet Assumed Efficient
- Diesel Assumed Inefficient
- Inefficiency= More Credits



# Policy Options (Opt-in Fuel)

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- Use Table 2- Diesel Curve
  - Crediting Parity for fuels produced with same feedstocks and at same facilities
- Use Fixed Benchmark Not Curve
  - No CI Regulation of Jet Fuel
  - All GHG Reduction is Additional
- Use Hybrid= Fixed Benchmark then Curve
  - No More Credits than RD
  - Preemption
  - Phase In Period



# What's the Policy Problem? On-Road Fuel Always Wins.

Prompt Calif. Cap-at-the-Rack Prices (cts/gal)

Product	Price	Wk Avg	30-Day Avg
Summer CARB RFG-R	11.83	11.848	11.881
Summer CARB RFG-M	11.80	11.818	11.852
Summer CARB RFG-P	11.79	11.808	11.842
Winter CARB RFG-R	11.80	11.818	11.858
Winter CARB RFG-M	11.80	11.818	11.858
Winter CARB RFG-P	11.82	11.834	11.871
<b>CARB No.2</b>	15.03	15.052	<b>15.099</b>
B5 Biodiesel	14.28	14.302	14.347
Propane	8.25	8.262	8.288
LNG (cts/DGE)	10.75	10.762	10.796

OPIS California Low Carbon Fuel Standard

Product	Low	High	Mean	Change
Carbon Credit (\$/MT)	140.000	145.000	142.5000	1.0000
CI Pts Ethanol (\$/CI)	0.01141	0.01182	0.011615	0.000080
CI Pts Biodiesel (\$/CI)	0.01766	0.01829	0.017975	0.000125
<b>Carbon CPG Diesel (cts/gal)</b>	6.72	6.96	<b>6.840</b>	0.050
Carbon CPG Dsl 95% (cts/gal)	6.38	6.61	6.495	0.045
Carbon CPG Gasoline (cts/gal)	10.43	10.80	10.615	0.075
Carbon CPG Gas 90% (cts/gal)	9.38	9.72	9.550	0.070

OPIS U.S. RIN Values (cts/RIN)

Product	Year	Low	High	Mean	Change
Corn Ethanol	2017	41.50	44.50	43.000	1.500
Corn Ethanol	2018	43.00	46.00	44.500	0.500
Biodiesel	2017	56.50	60.50	58.500	-1.500
<b>Biodiesel</b>	2018	64.00	68.00	<b>66.000</b>	<b>-1.750</b>
Cellulosic	2017	255.00	261.00	258.000	0.000
Cellulosic	2018	247.00	253.00	250.000	0.000
Adv. Biofuel	2017	55.50	59.50	57.500	-1.500
Adv. Biofuel	2018	63.00	67.00	65.000	-1.750

## RD Policy Bonuses (\$/gallon)

Cap at the Rack	.15
LCFS Cost	.07
RIN Value	<u>.06</u>
<b>TOTAL</b>	<b>.28</b>



# Questions

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