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To California Air Resources Board Staff

Submitted Electronically via On-Line Public Comment Form

California LCFS 2023 Rulemaking – Lookup Values

Dear CARB Staff,

Phillips 66 Company (Phillips 66) appreciates the opportunity to comment on the proposed CARB Lookup Table Pathways Technical Support Documentation.

Phillips 66 produces and supplies petroleum fuels and renewable fuels. Phillips 66 is expanding the production of renewable fuels at its Rodeo facility near San Francisco. Phillips 66 also operates a petroleum refinery in Los Angles and several fuel terminals in the state, and markets products under the 76® brand. Phillips 66 is a member of the Western Petroleum States Association (WSPA).

In the proposed lookup table pathways technical support documentation, CARB is proposing significantly higher N_2O tailpipe emissions for ULSD, which would contribute to an incremental CI score of about 3 gCO2e/MJ for the ULSD (petroleum diesel), compared to the current LCFS regulation. See table B.4 below from the documentation posted on the CARB website.

LCFS Life Cycle Analysis Models and Documentation | California Air Resources Board

We request supporting analysis and the rationale for justifying such an increase to the N_2O emissions for ULSD tailpipe emissions.

Furthermore, will the new N_2O emission factor for ULSD also be applied to biodiesel and renewable diesel fuel pathways, or is CARB planning to establish a different N_2O emission factor for biodiesel and renewable diesel?

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Table B.4. Comparison of CIs and Refining Details for ULSD Production between CA-GREET3.0 and CA-GREET4.0

ULSD		CA-GREET3.0	CA-GREET4.0	Difference
Electricity source		3-CAMX Mix		
1) Crude Recovery				
Source (feedstock production)		OPGEE default		
CI, gCO_2e/MJ		**11.78**	**12.61**	**0.82**
2) Crude Refining to ULSD				
Source (fuel production)		CA Crude		
Efficiency		85.87%	85.87%	
Share of other energy inputs (excluding crude)	Residual oil	20.8%	20.8%	
	Diesel fuel	0.0%	0.00%	
	Gasoline	0.0%	0.00%	
	Natural gas	71.7%	71.7%	
	LPG	0.0%	0.0%	
	Electricity	3.7%	3.7%	
	Hydrogen	3.6%	3.6%	
	Butane	0.2%	0.2%	
Feed loss		0.0%	0.0%	
CI, gCO_2e/MJ		**13.57**	**13.59**	**-0.02**[6]
3) ULSD Transport				
80% pipeline to blending terminal, miles		50	50	
20% on-site blending and distributed by HDD truck, miles		0	0	
Distributed by HDD Truck, miles		50	50	
CI, gCO_2e/MJ		**0.24**	**0.23**	**-0.01**
4) Tailpipe Emissions		74.86	78.44	**3.58**
Methane (CH_4), g/MJ		0.03	0.007	
N_2O, g/MJ		0.724	3.55	
CO_2, g/MJ		74.1	74.95	
Total CI, gCO_2e/MJ		100.45	104.48	**4.03**

Thank you for your response. Sincerely,

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