Maria Pica Karp
Vice President and General Manager, Government Affairs

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U.S. Environmental Protection Agency (EPA)
Office of Air and Radiation
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Re: Docket ID No. EPA-HQ-OAR-2016-0041 "Renewables Enhancement and Growth Support Rule"

Chevron U.S.A., Inc. ("Chevron") appreciates the opportunity to review and comment on the referenced Notice of Proposed Rulemaking (NPRM). Chevron is a major refiner and marketer of petroleum products in the U.S. This proposed rule directly affects Chevron's compliance requirements under the Renewable Fuel Standard (RFS), which in turn impacts our transportation fuel business and customers. Chevron is a member of both the American Petroleum Institute (API) and the American Fuel and Petrochemical Manufacturers (AFPM). We support and incorporate by reference the comments submitted jointly by API and AFPM in response to this proposed rulemaking.

Chevron believes the RFS is fundamentally flawed and should be repealed or significantly reformed. Nonetheless, Chevron is generally supportive of the EPA's proposed changes in the NPRM and is providing comments on the following sections of the proposed rule: (1) biointermediates; (2) standards for ethanol flex fuel (EFF); (3) carbon capture and sequestration (CCS) implementation under the RFS program, and (4) generating RINs for renewable electricity.

Biointermediates

Chevron supports EPA's advancement of the proposed biointermediate provisions and believes the provision represents a potential avenue to utilize existing facilities and infrastructure within the context of the RFS program. The two-party biointermediate structure allows for more feedstock and product flexibility which may allow additional compliance pathways to emerge. However, the biointermediates provision needs to be flexible enough to enable commercially viable solutions.

EPA's use of the existing RFS framework where the renewable fuel producer generates the RIN, not the biointermediate producer, is important to minimize potential double counting of RINS while increasing the integrity of those RINs in the process. Chevron agrees with the EPA that RIN integrity is of the utmost importance and supports EPA's proposed requirements on attest engagements for biointermediate producers, the requirement for both the biointermediate producers and the renewable

Chevron Government Affairs
600 13th Street, NW Suite 600, Washington, DC 20005
Tel 202 408 5800 Fax 202 408 5845
mpica@chevron.com

fuel producer to have a Quality Assurance Plan (QAP) in place to generate a Q-RIN, and the QAP requirements during the interim implementation period. However, the proposed two-party limitation unnecessarily constrains the viability of the process. Potential future pathways, in particular those that involve renewable natural gas or involve intermediate processing steps at more than one pretreatment/stabilization/upgrading/aggregation facility, may not qualify under the two-party restriction. EPA could achieve the same level of rigor in tracking biointermediates while removing the proposed restriction on the number of parties allowed to make a biointermediate.

In order to determine the renewable content of co-processed fuels, the 2010 RFS2 final rule[1] provided two methods, mass balance and C-14 testing. The NPRM limits the allowable testing to only ASTM D6866 Carbon-14 (C-14) testing. Chevron believes that the mass-balance methodology is an equally, if not more appropriate, quantification approach, particularly at lower biogenic concentrations. A study by the National Renewable Energy Laboratory (NREL) came to similar conclusion, stating that "mass balance procedures are accurate, reliable and appropriate to determine renewable gasoline and diesel yields attributable to the addition of bio-oil… in FCC co-processing operations, particularly for bio-oil addition under 10%."[2] Furthermore, NREL found that C-14 is not an accurate or reliable method to determine yields attributable to the addition of <10 wt. % of bio-oil.[3]

EPA should not deviate from the 2010 rule and further limit the methodologies available to determine the renewable content of co-processed fuels. Allowing only C-14 testing may prove to have the unintended consequence of inhibiting investment and production of low-carbon fuels. In order to avoid this consequence, EPA should include the mass balance approach, limited to units affected by the co-processing operation, as an acceptable methodology to determine renewable fuel yields. To address potential concerns regarding data quality, EPA could evaluate additional requirements such as additional QAP validation or provisional periods where increased analysis is required. At a minimum, EPA should provide an option to petition for use of a mass-balanced yield approach where C-14 is not appropriate.

Standards for EFF

Chevron is supportive of EPA's desire to apply clear quality standards to all fuels used in Flex Fuel Vehicles (FFV). Ensuring that fuel specifications and requirements are implemented in an equitable manner is important to maintain a level playing field amongst fuel providers.

The general structure of the NPRM's three options to demonstrate compliance with the EFF standards (full-refiners, bulk blender-refiner, and blender pump-refiners) sets forth a logical structure that accounts for various players in the marketplace. Chevron is supportive of the NPRM's proposed limits under

[1] 75 FR 14670

[2] National Renewable Energy laboratory, Analysis for co-processing fast pyrolysis oil with VGO in FCC units for second generation fuel production, accessed 2/12/17 at https://www.arb.ca.gov/fuels/lcfs/lcfs_meetings/12132016nrel.pdf.

[3] Ibid

each of these options for sulfur, benzene, and elemental contamination as they are equivalent to those of gasoline. For Reid vapor pressure (RVP), EPA should maintain the currently proposed variable requirements for EFF full-refiners and EFF bulk blender-refiners as they represent standards that are equitable and most protective of air quality. Furthermore, Chevron opposes a change to a uniform 9.0 psi RVP standard for these two categories. Chevron is concerned that the NPRM fails to establish a RVP standard for this category. Chevron believes it is inappropriate to rely on the certified "parent blends" to meet the environmental requirements of the RVP standard because (1) there is a risk of higher evaporative emissions from vehicles fueled with EFF blended at the pump (in particular if E0 is used as a "parent blend") and (2) it creates an uneven playing field where the fuel pump blender has less stringent regulatory requirements compared to upstream fuel providers. EPA should propose a RVP standard for EFF blender pump-refiners that is equally as stringent compared to the standard for full-refiners and bulk blender-refiners.

The NPRM outlines the addition of natural gasoline as an approved blendstock for making EFF. Chevron believes that the proposed natural gasoline certification requirements and specifications for sulfur, benzene, and CHONS[4] are appropriate and critical to ensuring that FFVs that run on EFF made with natural gasoline have the same emissions performance as conventional gasoline vehicles. Chevron believes the best way to accurately illustrate compliance with these standards is through testing on a "certification tank" of EFF. EPA's proposed alternative compliance demonstration using the RVP compliance tool is inappropriate, as the tool is based on a narrow set of test fuels. To maintain the integrity of the certified natural gasoline blendstock, EPA should continue to require compliance demonstration through representative testing methodologies and continue to require bulk blender-refiners and blender pump-refiners to only use certified natural gasoline. In addition, Chevron supports the proposed EFF Quality Survey Program as a means to maintain program integrity through independent audits of those entities that are not subject to the robust provisions of the full-refiner category.

Chevron is a leader in fuel detergent development and is concerned with the proposed elimination of the current deposit control requirement for the gasoline portion of E51-83 and the deferral to set a deposit control requirements for E16-50. A lack of deposit control additive requirements for gasolines (E0-E15) but not for E16+ in FFVs is arbitrary as the extra amount of ethanol in E16 isn't going to mitigate the need for deposit control additives. Based on our experience, deposits are even an issue with E85. EPA should maintain the existing deposit control requirements for E51-E83 and incorporate requirements for E16-E50.

Chevron has significant safety concerns with the potential for denatured fuel ethanol (DFE) to be used as a blend component for EFF. As the NPRM points out, the headspace in DFE storage tanks is flammable at nearly all ambient temperatures. Blender pumps use fuel drawn from underground storage tanks to blend EFF within the dispenser. OSHA requires motor fuel dispensers to be listed by a nationally recognized testing laboratory for use with Category 1 or 2 flammable liquids. However,

[4] CHONS – carbon, hydrogen, oxygen, nitrogen, and sulfur

fueling equipment manufacturers do not currently offer fuel dispensers listed as compatible with ethanol blends above E85. For these reasons, the EPA should continue to not allow DFE to be used as a parent blend at blender pumps.

Lastly, Chevron does not support the proposed deferral of an RVO assigned to entities that blend natural gasoline to make EFF. As the NPRM outlines, natural gasoline is a non-renewable blendstock that is used as a transportation fuel. Therefore, it should incur the same RVO obligation as blendstocks for oxygenate blending (BOBs). EPA should amend the proposal to provide an equitable treatment of non-renewable fuels, regardless of their relative quantiles.

CCS Implementation under the RFS Program

As outlined in the NPRM, EPA has received a petition regarding an alternative crediting method relating to displacement of naturally occurring CO2 extracted from domes. Chevron believes the conceptual approach outlined in the petition is technically correct and would greatly simplify monitoring and reporting. Additionally, Chevron supports the proposal to allow both Class II (EOR) and VI disposal wells to qualify on a case-by-case basis to meet the GHG RIN thresholds using existing requirements in 40 CFR Part 98. The creation of a new standard is not desirable.

RIN Generation for Renewable Electricity

The generation of RINs for renewable electricity used as transportation fuel is complex and hard to quantify due to the multiple steps and large group of stakeholders involved. No matter what provision, or combination of provisions, is utilized, RIN validity and the ability to show real and additional GHG reductions will be a constant challenge.

All parties participating in the RFS must be held to the same set of standards with respect to reporting, recordkeeping, validation, etc. Allowing a simple estimation procedure (e.g., 80% of EV charging occurs at home) for some fuels and rigorous reporting and recordkeeping for others (e.g., liquid fuels) establishes an uneven playing field among fuel providers. Data should be verifiable and meet a standard of additionality (e.g., the renewable electricity should represent new sources for the purpose of generating RINs by fueling electric vehicles not just shuffled from existing sources). Any method that does not utilize verifiable data runs the risk of double-counting RINs.

The proposed RIN generating structures that involve the vehicle owner or the utility will be unable to effectively verify renewable electricity usage and will create fragmentation in data as a result to the high number of registered parties. EPA should not consider these alternatives.

The remaining alternatives presented in the NPRM (public charging stations and vehicle manufacturers) contain acceptable components, but challenges remain. The public charging station alternative is likely to generate relatively few RINs. To limit complexity and number of registered parties, the charging station network should be the RIN generator, not the fleet or site owner, as there is a

smaller number and their data are easily aggregated. The vehicle manufacturer alternative represents some practicality. However, unverifiable models or averages (like the flawed approach used in California's Low Carbon Fuel Standard) should not be considered. It is essential that renewable electricity sources contracted by the vehicle manufacturer are verifiable and additional. A hybrid of both of these alternatives could represent an initial path forward if vehicle manufacturers can eliminate public charging station events from their data use to eliminate double counting.

Conclusion

EPA's proposed rule outlines several potential provisions that can provide clarity and potential new pathways for renewable fuel production. We see multiple opportunities to improve the effectiveness of this rule by ensuring the biointermediate provisions are flexible enough to enable commercially viable solutions, that there is equitable treatment amongst obligated parties, and that RIN generation from renewable electricity represents real quantifiable and additional GHG reductions.

Chevron has ongoing concerns with the RFS. Despite the tremendous efforts by EPA, our industry, and many others, the program is fundamentally unworkable and should be repealed or significantly reformed.

Thank you for providing this opportunity for Chevron to comment on the NPRM. If you have any questions regarding our comments, please contact Bob Anderson (bob.anderson@chevron.com; 925-842-5317) or Dave Sander (davesander@chevron.com; 202-408-5853).

Sincerely,