

**Post-Hearing Questions for the Record  
Submitted to Ms. Janet McCabe  
From Chairman James Lankford**

***"Re-examining EPA's Management of the Renewable Fuel Standard Program"*  
June 18, 2015**

**United States Senate, Subcommittee on Regulatory Affairs and Federal Management  
Committee on Homeland Security and Governmental Affairs**

1. EPA's proposed rule acknowledges that the year-long 2014 delay to finalize standards for a year that was nearly over was not an appropriate way to set standards. It reflects,

We concluded that the approach in the November 2013 proposal, projecting volume growth into the-then future, was not an appropriate way to set standards in late 2014, for a year that was largely over. (p. 33104)

Q: Why is this November's finalization of 2015 numbers treated differently in the proposal?

*Answer:*

The language cited refers to a decision, taken at the end of 2014, not to finalize standards that had been proposed nearly a year earlier, in November 2013. For the current NPRM, EPA in June proposed volumes for the year based on our best estimate of what is possible to achieve in 2015.

Q: Shouldn't the 2015 figures also be based on actual production as well since they will be finalized in November?

*Answer:*

EPA recognizes that where we stand in the calendar year must be considered as we determine what volumes to propose and finalize. For 2015, for example, we took estimated actual production as of the time of the proposal into account when proposing the standards, and we will consider current information in developing the final rule.

2. In 2014, approximately 75 million gallons of E85 were purchased by U.S. consumers. On page 33128 of the newly proposed rule, EPA projects 600 million gallons of E85 consumption for 2016.

Q: What methodology did EPA utilize in the latest rule proposal for calculating such a dramatic growth of E85 consumption between 2014 and 2016?

Q: Given the actual consumption of E85 to date, isn't it problematic for EPA to project a dramatic uptick in consumption of E85 beginning just 6 months from now?

Q: Has EPA conducted any studies into the average cost for individual gas stations to install the necessary infrastructure to provide E85 to customers?

Q: If E85 consumption in 2015 finishes at or near the 2014 level, what actions is EPA considering to see increase E85 numbers in 2016?

*Answer:*

As described in the NPRM, the proposed standards can be met in a variety of ways, using a variety of different fuel types in different volumes. To illustrate the possible outcomes, we evaluated a number of scenarios with varying levels of E85, imported sugarcane ethanol, advanced biodiesel and other non-ethanol advanced biofuels, and imported conventional biodiesel. The increased use of E85 to 600 million gallons is just one of the illustrative scenarios. In the same table, on page 33127 of the proposed rule, we show examples where the standards are met with only 100 or 200 million gallons of E85 being used. The time and costs associated with developing E85 infrastructure are two of the issues that the market will have to overcome if it is to choose to meet the proposed volumes through the increased use of E85. Depending on a retail station's current configuration and the breadth of changes it wishes to make to market E85, existing studies suggest that the cost could range from just a few thousand dollars to well over \$100,000 per station.

3. On May 14, 2015, Dallas Burkholder from the EPA's Office of Transportation and Air Quality released a memo titled, "A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effects." In it he writes that EPA understands that higher "...D6 RIN prices, as seen in 2013, [are] expected to result in a significant decrease in the price of E85..."<sup>4</sup> During your testimony on June 18, 2015, you testified:

... The relationship between RIN prices and what we set in the volumes market is very, very complex and it's affected by many, many things – not just the volumes we set... It is not simple; it is complex. We pay attention to RIN prices, but we don't formally factor them into our decision-making because it is so complex.  
(01:35:10 et seq.)

Q: In the context of the six-fold proposed volume increase in E85 for 2016, is increased RIN price the largest factor in meeting that target?

Q: Without driving up RIN prices, does EPA have another basis for expecting the market to meet the proposed 2016 E85 volume target?

Q: If so, can you please provide that basis?

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<sup>4</sup> Dallas Burkholder, *A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effects*, May 14, 2015, p.2

*Answer:*

When renewable fuels cost more than the petroleum fuels they replace, the RFS requirements cause higher RIN prices that offset the higher cost of the renewable fuels and subsidize their use in the marketplace. Whether these higher RIN prices will result in increases in the use of E85, the use of ethanol in other concentrations, or the use of non-ethanol renewable fuels is a question that will be sorted out in the marketplace. We have proposed renewable fuel standards that can be met a variety of ways with a range of different fuel types. The market, not EPA, will determine what volumes of which fuels will ultimately be used to meet the standards. The increased use of E85 to 600 million gallons is just one of the various scenarios we described in the proposal to illustrate the options available to the marketplace.

4. The proposed 2014-2016 volume standards are scheduled to be finalized in November of 2015.

Q: What indicators will EPA use between now and November 30th to assess whether these changes are on-track before they finalize the 2016 standards?

Q: Does EPA plan to lower the volumes in the final rule if these indicators are not on track?

*Answer:*

Decisions regarding the final rule will be based on all the information that is available to us at the time we finalize the standards, including information provided to us through public comments. We will also continue to consult with our federal partners, including the Departments of Agriculture and Energy (including EIA), to ensure we have the most up-to-date information available.

**Post-Hearing Questions for the Record  
Submitted to Ms. Janet McCabe  
From Senator Michael B. Enzi**

**“Re-examining EPA’s Management of the Renewable Fuel Standard Program.”  
June 18, 2015**

**United States Senate, Subcommittee on Regulatory Affairs and Federal Management  
Committee on Homeland Security and Governmental Affairs**

1. The Energy Policy Act of 2005 authorizes the Environmental Protection Agency (EPA) to grant a temporary exemption of Renewable Fuel Standard (RFS) requirements to a small refinery if compliance with RFS requirements would impose a “disproportionate economic hardship” on the refinery. In 2011, the Department of Energy completed a Small Refinery Exemption Study to examine RFS impacts on this class of U.S. petroleum refineries, but circumstances have changed significantly since the 2011 Study was completed. The price of the most commonly used renewable fuel credits (RINs) for RFS compliance has skyrocketed from about 5 cents/RIN in 2011 to more than 70 cents/RIN in 2015. This cost is much higher than Congress or EPA anticipated when the RFS program was established. Since many small refineries are limited in the RINs they can generate through biofuel blending, they are forced to accept the costly and punitive compliance pathway of purchasing RINs.
  - a.) Has the Agency examined how the purchasing of RINs effects small refineries since 2011?

*Answer:*

Under the statute, small refineries who believe that they would experience a disproportionate economic hardship from compliance with their RFS obligations may submit a petition to the EPA and request an extension of their temporary statutory exemption from RFS obligations. In the context of responding to small refinery petitions, EPA evaluates on a case-by-case basis all economic issues raised by small refinery petitioners, including any harm purported to be caused by the need to purchase RINs.

- b.) How about in areas of high consumer demand for diesel fuel where typical biodiesel blending yields less RINs than required for compliance? Or supply areas where biodiesel is not offered at terminals?

The Agency evaluates petitions for small refinery relief on a case-by-case basis, and petitions may include such locally-relevant considerations as consumer demand for diesel fuel or supply of biodiesel at terminals.

- c.) Will the new RFS released by your agency disproportionately impact small refiners? Do you expect to approve additional requirement waivers for small refinery petitioners?

*Answer:*

As explained in response to Question 1.a., small refineries who believe that they would experience a disproportionate economic hardship from compliance with their RFS obligations may submit a petition to the EPA and request an exemption from their RFS obligations. This is the process that the EPA follows. The decision to grant a petition based on the basis of disproportionate economic hardship is made in consultation with DOE on a case-by-case basis based on the specific information provided by petitioners.

**QFRs from 6/18/15 Senate Homeland Security and Government Affairs Committee  
Regulatory Affairs and Federal Management Subcommittee**

**Post-Hearing Questions for the Record  
Submitted to Ms. Janet McCabe  
From Senator Ben Sasse**

***“Re-examining EPA’s Management of the Renewable Fuel Standard Program”  
June 18, 2015***

- 1) Ms. McCabe, during the hearing you mentioned that EPA did not estimate the impact that proposed RVO standards would have on transportation fuel prices due to the complicated formula involved in the calculations. You did, however, mention that EPA did consult other models and studies to make these determinations. Could you provide me with a list of the models and studies that EPA used to consult how the proposed RVO standards would impact transportation fuel prices?

*Answer:*

Recent analysis and debate regarding the RFS program and transportation fuel prices has focused on how RIN prices (rather than the RVOs themselves, per se) might affect fuel prices. EPA has conducted a preliminary assessment of the impact that RIN prices have on transportation fuel prices.<sup>1</sup> However, we did not directly rely on that assessment in the setting of the standards. Rather, we included that paper in the discussion in the rule preamble, and placed that paper in the docket for the proposal, as it represents our most recent analysis of the relationship between RVOs and fuel prices.

We have reviewed a number of other studies that have looked at the relationship between RIN prices and transportation fuel prices.<sup>2</sup> We reference these, but did not directly rely on these in setting the specific numeric standards. Our approach to establishing the proposed standards is described in detail in the NPRM. We note that subsequent to publishing the proposal, other studies have come out exploring the impact of the price of RINs on transportation fuel prices.<sup>3</sup>

- 2) Ms. McCabe, during the hearing you mentioned that EPA did not conduct a study on how the proposed RVO standards would affect international trade. You did, however, mention that EPA consulted models and studies relating to these issues. Could you provide me with a list of the models and studies that EPA used to consult how the proposed RVO standards would affect international trade and biofuel trade flows between the U.S. and Brazil?

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<sup>1</sup> Dallas Burkholder, *A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effects*, May 14, 2015

<sup>2</sup> See, for example, “Analysis of Whether Higher Prices of Renewable Fuel Standard RINs Affected Gasoline Prices in 2013.” Informa Economics. January 2014; and Irwin, Scott, and Darrel Good. “High Gasoline and Ethanol RIN Prices: Is There a Connection?” *FarmDoc Daily*. Department of Agriculture and Consumer Economics, University of Illinois Urbana-Champaign, 27 Mar. 2013

<sup>3</sup> Knittel, Christopher R., Meiselman, Ben S., and Stock, James H., *The Pass-Through of RIN Prices to Wholesale and Retail Fuels under the Renewable Fuel Standard*, July 2015. <http://www.nber.org/papers/w21343>

*Answer:*

For the NPRM, EPA reviewed current and historical pricing and trade information regarding sugarcane ethanol from Brazil and domestically produced corn ethanol. We used data from the Brazilian Sugarcane Industry Association (UNICA), the U.S. International Trade Commission, the U.S. Energy Information Administration (EIA), the Oil Price Information Service (OPIS), the U.S. Department of Agriculture (USDA) World Agricultural Supply and Demand Estimates Report (WASDE), the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri, and two studies from the Center for Agricultural and Rural Development (CARD) at Iowa State University—Babcock and Zhou (2013), and Babcock, Moreira, and Peng (2013). In the proposal, EPA provided cost estimates of sugarcane ethanol and corn ethanol to illustrate the relative costs of these two biofuels, which provides insights into the potential for biofuel trade between the U.S. and Brazil.

We note that the biofuels market is inherently international: biofuels, like commodity crops, trade extensively between and among nations. EPA is aware of such trade dynamics and we monitor data related to the flow of international trade in biofuels, as described above. Multiple different factors affect the quantities of such flows, including the prices for corn ethanol, sugarcane ethanol and biodiesel, crop prices, the prices of gasoline and oil in both countries, RIN prices, various state and local biofuel policies, and national level biofuel policies, such as Brazil's requirement that a certain percentage of transportation fuel be made up of ethanol.

- 3) Ms. McCabe, during the hearing I mentioned that the Nebraska state government provided me with a breakdown of the number of registered vehicles by fuel source including automobiles that are capable of using Flex Fuel and E-10 in the state of Nebraska.

You mentioned that EPA had numbers on the breakdown of the numbers of vehicles in the U.S. vehicle fleet that can support the different fuel sources. Could you provide me with EPA's numbers that break down the U.S. vehicle fleet and the amount of vehicles that can support the different categories of fuel? Could you please provide me with EPA's numbers on how many vehicles in the U.S. fleet are capable of supporting fuel above E10? How many vehicles are capable of supporting fuel above E15? How many vehicles are Flex Fuel Vehicles?

*Answer:*

In the proposal, the number of vehicles in the fleet that are considered Flex Fuel Vehicles, which can use higher level ethanol blends (up to E85, a blend of up to 85% ethanol by volume), are derived from the Energy Information Administration's (EIA) Annual Energy Outlook. For 2016, EIA projects that there will be about 16 million flex fuel vehicles (FFVs) in the fleet. These flex-fuel vehicles can use E10, E15 as well as E85. Conventional (non-FFV) vehicles that are legally permitted to use E15 are those manufactured in 2001 or later. Based on EPA vehicle population estimates by model year that allow us to project the numbers of 2001 and newer

model year vehicles in the fleet, we estimate that there are currently approximately 169 million 2001 and newer light-duty vehicles in the fleet (out of a total over 210 million).

- 4) Ms. McCabe, in the EPA's proposed rule, the agency made a determination that, "the required volumes of advanced biofuel and total renewable fuel should be reduced from the statutory targets based on a consideration of the market to supply such fuels through domestic production or import and the ability of available renewable fuels to be used as transportation fuel, heating oil, or jet fuel." Furthermore the agency cited that the potential use of renewable fuels depends in part on the "infrastructure available for distributing, blending, and dispensing renewable fuels, as well as the vehicles in the fleet capable of consuming various renewable fuels."

As the agency made this determination what metrics did you use to calculate what constituted the necessary vehicle and fuel infrastructure that would be required for the potential use of renewable fuels and thereby necessitated a reduction in overall RVO standards?

*Answer:*

Section II of the preamble to the proposed rule discusses our rationale for proposing to waive the required volumes from statutory levels, and for the proposed levels themselves. The same section discusses infrastructure limitations. For example, in Section II.A.5 we discuss the inability of the market to reach the statutory volumes, and review data on current consumption of biofuels versus what would need to happen to hit statutory targets. Section II.B.3 also discusses infrastructure limitations, including the consumption capacity of FFVs of higher-level ethanol blends and the small overall number of refueling stations offering such blends. For example, there are approximately 3,000 refueling facilities that sell E85, out of approximately 150,000 total retail facilities in the U.S. Further, there are only about 100 facilities that currently offer E15. The discussion in those two sections and elsewhere in the NPRM collectively represent EPA's evaluation of the infrastructure limitations that, in our view, provided support for the proposed use of the statute's waiver authorities.

- 5) Ms. McCabe, during the hearing you mentioned how important it was to get E-15 fuel going in the marketplace. I've met with biofuel producers and gasoline retailers in Nebraska and I am told that one of the biggest impediments to getting E-15 to market is not having a Reid Vapor Pressure waiver for E-15 or blends above E-10 during the summer driving season. To respond to this problem, I have co-sponsored S. 1239, which was introduced by Senators Donnelly, Grassley, and Fischer. This legislation extends the Reid Vapor Pressure waiver for fuel above E-10.

This legislation will allow E-15 to compete with other fuels in the marketplace and help provide relief to biofuel producers and gasoline retailers. I am hopeful that this legislation will be considered, but I do not understand why the EPA has not used their authority to fix this issue despite their praise for E-15 in the marketplace. Could you please explain EPA's rationale for not extending this waiver?

*Answer:*

The Clean Air Act provides for a 1 psi (pound per square inch) Reid Vapor Pressure (RVP) waiver for E10, and provides that EPA can issue waivers to fuels or fuel additives if certain conditions are met. The statute precludes EPA from granting a waiver to a fuel or fuel additive if it would cause vehicles and engines to exceed their emission standards in-use. Since 10 psi RVP E15 would cause a significant number of vehicles to exceed their evaporative emission standards in-use, the Agency does not have the authority to provide such a waiver (see 75 FR 68112-68120, November 4, 2010). Based on data available at the time of the partial E15 waiver, the Agency was only able to legally grant the partial waiver for E15 up to 9 psi RVP, and that is what we did (see 75 FR 68094, November 4, 2010 and 76 FR 4662, January 26, 2011). However, it is important to highlight that in roughly 40% of gasoline nationwide during the summer months (areas where Reformulated Gasoline is required or where state programs do not allow for the RVP increase in their area to protect air quality and public health), and in all gasoline nationwide during the winter months, the lack of a 1-psi waiver for E15 does not constrain its sale.