Monroe Energy

November 13, 2018

The Honorable Andrew R. Wheeler
Acting Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Re: **Petition for RFS Waiver Under 42 U.S.C. § 7545(o)(7)(A)(i)**

Dear Acting Administrator Wheeler:

On behalf of Monroe Energy, LLC, I hereby request that you exercise your waiver authority under 42 U.S.C. § 7545(o)(7)(A)(i) to reduce the 2018 and 2019 renewable fuel volume mandates because implementation of the Renewable Fuel Standard ("RFS") program is causing severe harm to the economy of the Commonwealth of Pennsylvania and to the Petroleum Administration for Defense District ("PADD") Region 1, in which Monroe operates. Monroe supports the separate waiver petition filed by the Commonwealth of Pennsylvania on November 2, 2017, and resubmitted on November 2, 2018.

The RFS program is currently—and will continue—severely harming the economy of Pennsylvania and PADD 1. As demonstrated by a new study that examines the economic effects of the RFS program on PADD 1 refiners, "EPA's proposed 2019 RFS requirements have the potential to make a number of East Coast refineries unprofitable," which "will increase the probability that one or more of these refineries may be unable to continue production."[1] The study further finds that "significant job losses" stemming from refinery closures "would constitute a substantial negative economic impact on the local and regional economy."[2] This study provides substantial evidence that the RFS program is currently inflicting severe economic harm on the PADD 1 region and that EPA's proposed 2019 standards would exacerbate that harm.

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[1] Craig Pirrong, *Analysis of the RFS Program and the 2019 Proposed Standards* 2 (Aug. 17, 2018) ("Pirrong Study") (attached as Exhibit A).

[2] *Id.* at 2, 18.

Many refineries struggle with slim margins, and the RFS program's RIN requirements, as well as the manner in which the RIN market operates, inflict serious economic harm on those businesses. In some years, Monroe must spend more on RINs than the amount it paid in 2012 to purchase its refinery and more than its annual costs for labor and capital investments. Last year, Monroe's RIN expenses exceeded every category of expenses other than the crude oil it purchased to refine into fuel. Monroe is not alone in struggling under the weight of its RIN obligations. Earlier this year, Philadelphia Energy Solutions filed for Chapter 11 bankruptcy due to the devastating financial impact of its RIN obligations. And in recent years, several Pennsylvania refineries have closed—Marcus Hook in 2012, and Sunoco Eagle Point before that—and several others have come close to closing.

Even when RIN prices are low, the unpredictability of those prices still makes it extremely challenging for refiners to plan for future RIN compliance obligations. The combination of annual changes in RIN obligations and highly volatile RIN prices makes it extraordinarily difficult for refiners to engage in mid-term economic planning and budgeting—let alone to attract capital to undertake long-term major investments that create new, high-quality jobs.

Furthermore, the dire economic consequences of the RFS program are not limited to Mid-Atlantic refiners. Each refining job has a large multiplier effect on the regional and national economy. Specifically, each refinery job supports an estimated 18.3 jobs in southeastern Pennsylvania, 22 jobs state-wide, and 61 jobs nationwide.[3] EPA should use its severe-economic-harm waiver authority to reduce RFS volume requirements to prevent further refinery shutdowns and job losses in Pennsylvania and throughout the entire Mid-Atlantic region.

For the reasons explained above, EPA has ample justification for exercising its waiver authority. Moreover, as Monroe explained in a recent comment letter submitted to EPA,[4] the standard that EPA should use in deciding whether to exercise its severe-economic-harm waiver authority should not be a "generally high degree of confidence" that severe economic harm would result from the RFS volume requirements, as EPA has indicated in the past. Instead, EPA should exercise its judgment based on the available evidence, without any heightened standard tilting the scale in either direction. For a waiver to be appropriate, moreover, EPA should not require a demonstration that the RFS program would be the sole cause of the

[3] Center for Workforce Information & Analysis, *Reemployment Assessment and Economic Impact of ConocoPhillips and Sunoco Closings*, Appendix C at 1 (Jan. 9, 2012).

[4] Monroe Comments, *Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020; Proposed Rule*, 83 Fed. Reg. 32,024 (July 10, 2018), EPA-HQ-OAR-2018-0167 (attached as Exhibit B).

moreover, EPA should not require a demonstration that the RFS program would be the sole cause of the economic harm. In the real world, severe macroeconomic harm seldom arises as a result of a single factor. EPA should adhere to the plain statutory language and to economic reality by inquiring whether the RFS program's volume requirements would be a significant factor in causing severe economic harm in combination with other economic factors. Finally, in determining whether the RFS volume requirements would cause severe economic harm, EPA should focus exclusively on the economic consequences of the RFS program for the State and/or region at issue—in this case, Pennsylvania and PADD 1—without regard to any benefits the program may provide outside of that State or region.

Thank you for your consideration of this request. Please feel free to contact me if you have any questions.

Sincerely,

Christopher Ruggiero
Vice President, General Counsel & Secretary
MONROE ENERGY, LLC
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EXHIBIT A

Analysis of the RFS Program and the 2019 Proposed Standards

Craig Pirrong[1]

August 17, 2018

[1] Dr. Craig Pirrong is a Professor of Finance and Director of the Global Energy Management Institute at the Bauer College of Business at the University of Houston.

I. Executive Summary

The Environmental Protection Agency's ("EPA") Renewable Fuel Standard ("RFS") program is intended to promote the use of "renewable" fuels, generated from biological sources, in place of fuels created from crude oil and other fossil sources. For the current year, 2018, the RFS program effectively requires that gasoline be blended with 10.67% percent renewable fuel. Under the EPA's proposed standards for 2019, this percentage would go up to 10.88%.[2]

Until 2013, gasoline blenders were able to meet the RFS requirements by blending petroleum-based gasoline with corn-based ethanol. Ethanol can be blended up to slightly less than 10 percent into gasoline with no detrimental effects on car engines, and some benefits to performance. However, at higher levels, ethanol causes corrosion in some car engines—to the point where car manufacturers may not guarantee the warranty on a car that uses fuel blended with higher levels of ethanol.

Because of this barrier, referred to as the "blend wall," refiners have been forced to find other ways to meet the EPA's renewable fuel requirements. The RFS program allows refiners to purchase renewable fuel credits from other biofuel sources to cover shortfalls in the renewable fuel content of gasoline. Biodiesel has been the market of choice for refiners trying to meet the standard. However, meeting the standard by subsidizing biodiesel production is expensive, and has the effect of raising prices to consumers and reducing the profitability of producers.

The cost of meeting the RFS mandate has fallen particularly heavily on East Coast refiners. These refiners have faced substantial economic headwinds in recent years, ranging

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[2] *See* Exhibit 1.

from weaker than expected gasoline demand to lowered margins due to increased reliance on imported sources of crude oil. The additional cost of meeting the RFS mandate has further reduced the profitability of these refineries.

The EPA's proposed 2019 RFS requirements have the potential to make a number of East Coast refineries unprofitable. This will increase the probability that one or more of these refineries may be unable to continue production.

While refineries represent a fairly small portion of jobs on the East Coast, they are important employers in their home counties. A refinery shutdown in one of these counties could result in a substantial number of employees who would be out of work.

If the EPA were to revise the 2019 proposal to be at 2012 standards, this would reduce the financial strain on East Coast refiners and avoid the potential for job losses from a refinery shutdown.

II. Background: The Renewable Fuel Standard

A. Overview of the RFS Program

The RFS requires the use of renewable fuel to replace or reduce fossil fuel-based transportation fuel, heating oil and jet fuel.[3] In essence, the program is meant to serve as a subsidy for qualified renewable fuels. First created in 2005 and subsequently expanded in 2007 under the Energy Independence and Security Act, the program is implemented by the EPA in

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[3] "Overview for Renewable Fuel Standard", EPA, *available at* https://www.epa.gov/renewable-fuel-standard-program/overview-renewable-fuel-standard ("EPA's Overview for Renewable Fuel Standard").

collaboration with the Departments of Energy ("DOE") and Agriculture ("USDA").[4] The program defines annual volume standards across four categories: biomass-based diesel ("BBD"), cellulosic biofuel ("CB"), advanced biofuel, and total renewable fuel. Each year, the EPA sets a corresponding percentage standard based on the estimated energy demand of the prior year. Gasoline and diesel refiners and importers ("Obligated Parties") must meet renewable volume obligations ("RVOs") which are based on the percentage standards defined by the EPA and volume of gas and diesel that the Obligated Parties have produced or imported in the calendar year.[5]

B. Renewable Fuel Annual Standards

When the RFS program was expanded in 2007, initial statutory targets were established for the different types of biofuels that extended to the year 2022 to reach a target of 36 billion gallons. The required standards are structured in a hierarchy based on the greenhouse gas ("GHG") reduction amounts associated with the fuel. Fuels with higher GHG reduction amounts can be applied to multiple standards, whereas fuels with lower GHG reduction amounts qualify for fewer standards. The most restrictive standards are for both cellulosic biofuel ("D3") and biomass-based diesel ("D4"), where only those specific fuels qualify to meet the corresponding standards.[6] Next, there is a standard for advanced biofuels, which can be met by D3, D4, or

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[4] The main changes enacted in 2007 included increasing the long term renewable fuel goal to 36 billion gallons, extending annual volume requirements to 2022, clarifying the definitions for qualified renewable fuels, and providing for specific waiver authorities. *See* EPA's Overview for Renewable Fuel Standard.

[5] EPA's Overview for Renewable Fuel Standard.

[6] EPA's Overview for Renewable Fuel Standard.

advanced D5 fuels.[7] Finally, there is a total renewable fuel standard, which can be met by any qualified fuel and is generally met first with conventional corn-based ethanol ("D6").[8]

The EPA has the ability to waive the RFS requirement in any given year, in part or in whole, if it determines there is inadequate domestic supply, or if the requirements cause severe economic harm.[9] The agency is mandated to finalize annual percentage standards for each year by November 30th of the preceding year; the biomass-based diesel volume standards must be finalized 14 months prior to the compliance year.[10] In recent years, the EPA has set annual standards below the statutory targets due to the EPA's projections of the inability of the industry to produce statutory target quantities of biofuels and the market's inability to absorb those target quantities.

C. Proposed Standards for 2019

On November 30, 2017, the EPA finalized the biomass-based diesel volume requirement for 2019, which remained unchanged from the prior year at 2.1 billion gallons.[11] On June 26, 2018, the EPA proposed 2019 volume requirements for cellulosic biofuel, advanced biofuel, and

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[7] EPA's Overview for Renewable Fuel Standard; "Approved Pathways for Renewable Fuel", EPA, *available at* https://www.epa.gov/renewable-fuel-standard-program/approved-pathways-renewable-fuel.

[8] EPA's Overview for Renewable Fuel Standard.

[9] EPA's Overview for Renewable Fuel Standard.

[10] "Renewable Fuel Annual Standards," EPA, *available at* https://www.epa.gov/renewable-fuel-standard-program/renewable-fuel-annual-standards.

[11] "EPA Finalizes RFS Volumes for 2018 and Biomass Based Diesel Volumes for 2019", EPA, *available at* https://www.epa.gov/newsreleases/epa-finalizes-rfs-volumes-2018-and-biomass-based-diesel-volumes-2019.

total renewable fuel.[12] The 2018 and proposed 2019 standards are summarized in Exhibit 1. The proposed renewable fuel mandated levels increase the overall requirement by over 3%, and the advanced biofuel mandate increases by over 13%. The largest change is for cellulosic biofuels, which increases by 32.3%, although this category is still the smallest, with only 381 million gallons required.

D. RINs

The RFS program requires Obligated Parties to demonstrate compliance with their RVOs by submitting Renewable Identification Numbers ("RINs") to the EPA.[13] RINs are created as the biofuel is created, and each category of biofuel has a separate RIN category. For example, for each gallon of ethanol produced, one corresponding D6 RIN is created.[14] Subsequently, when each gallon of biofuel is sold, it comes with an attached RIN.[15] Once the biofuel is blended, the RIN becomes detached, and it can be either submitted to the EPA to fulfill a RVO or sold separately on the secondary market. Refiners with blending facilities accumulate RINs as they blend the refined oil with biofuel to create the finished product. Importantly, refiners without sufficient blending facilities ("merchant refiners") are still obligated to provide RINs to the EPA each year, and must buy most or all of their RINs in the secondary market. RINs can be

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[12] "Proposed Volume Standards for 2019, and the Biomass-Based Diesel Volume for 2020", EPA, *available at* https://www.epa.gov/renewable-fuel-standard-program/proposed-volume-standards-2019-and-biomass-based-diesel-volume-2020.

[13] EPA's Overview for Renewable Fuel Standard.

[14] The RIN system is calibrated to ethanol, meaning one RIN is equivalent to one gallon of ethanol. Biodiesel fuel has a higher energy content, and therefore a single biodiesel gallon generates 1.5 RINs. *See* Brent D. Yacobucci, "Analysis of Renewable Identification Numbers (RINs) in the Renewable Fuel Standard (RFS)", Congressional Research Service, July 22, 2013, *available at* https://fas.org/sgp/crs/misc/R42824.pdf ("CRS RINs"), p. 3.

[15] CRS RINs, p. 3.

used either in the year they are created, or they can be banked and used the following year, but only 20% of the RVO can be met by prior year RINs.[16]

The EPA has set up an in-house EPA Moderated Transaction System ("EMTS") through which all RIN transactions much be cleared. Although most RINs are bought and sold through private contracts, these private contracts must be registered with EMTS.[17] The EPA views the EMTS solely as a "screening" system, and all due diligence remains the duty of the obligated parties.[18] Further, the EPA reports total RINs registered by month, but does not report trades and RIN price data collected through EMTS.[19]

RIN prices are highly volatile. For example, after August of 2009, D6 RIN prices stayed in a narrow band under 10 cents. However in early 2013, prices jumped significantly, surpassing one dollar in March of that year.[20] Other RIN types have had similarly large price movements. In general, the RIN prices of the different fuel types reflect the hierarchy of the standards. In other words, cellulosic, which has the greatest GHG reduction effect, and the lowest volume requirements, is the highest priced RIN.[21] Ethanol RINs, which can only be used for the general requirement, have the lowest prices.[22] Exhibit 2 shows historical prices for three of the RIN

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[16] "[U]nlike other commodities, RINs generally may only be used in the year they are generated or for one additional year, although suppliers may only meet up to 20% of their current-year obligation with the previous year's RINs." *See* CRS RINs, pp. 5–6.

[17] CRS RINs, p. 4.

[18] CRS RINs, pp. 4, 11.

[19] CRS RINs, p. 9.

[20] *See* Exhibit 2.

[21] *See* OPIS data on historic RIN price; CRS RINs, p. 15.

[22] *See* Exhibit 2.

types (cellulosic D3 RINs are not included due to volatility and limited data). The price of RINs is crucially important for merchant refiners, who must buy most or all RINs in the secondary market to comply with EPA rules.

E. The Binding Blend Wall Results in Volatile and High Prices for RINs Refiners Need to Purchase

The EPA regulates motor vehicle fuels and fuel additives in accordance with the Clean Air Act, which includes regulating the proportion of ethanol blended with motor gasoline, and which vehicles are permitted to use the different fuel blends. The majority of vehicles in the United States use E10 fuel, which includes up to 10% ethanol by volume. Most gas stations do not sell fuels with higher ethanol blends, such as E15 (10.5% - 15% ethanol content).[23] As a result, the demand for ethanol is constrained by the 10% blend level of ethanol that the total volume of E10 fuel can absorb. This constraint is referred to as the "blend wall." The significance of the blend wall is that as the EPA requirements surpass the volume of ethanol that can be used to blend with E10 fuel, additional types of biofuel RINs are needed to meet the general mandate.

Exhibit 3 shows the volume of blended ethanol as a proportion of supplied gasoline (before any ethanol is added). Ethanol usage increased significantly beginning around 2002, until around 2012 when it nearly reached the 10% mark, where it has hovered ever since.

Importantly, the conventional portion of the renewable fuel standard volume requirement exceeds the supplied ethanol volume. In other words, the mandate exceeded the production of

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[23] "Almost all U.S. gasoline is blended with 10% ethanol," EIA, May 4, 2016, *available at* https://www.eia.gov/todayinenergy/detail.php?id=26092.

ethanol. Exhibit 4 shows the gap between the supplied ethanol and the conventional portion of the renewable fuel requirement which contributes to the high RIN prices. When the gap increased substantially in 2013, around the same time the 10% blend wall was hit, RIN prices increased substantially.[24] The gap in 2016 was over four hundred million gallons. In 2017, the conventional portion of the standard increased by half a billion gallons (from 14.5 to 15),[25] but supplied ethanol was essentially unchanged from the prior year, and therefore the gap approached one billion gallons. As RIN prices increase or become more volatile, the prices refiners must pay for RINs in the secondary market increase or become more volatile.

III. Refineries in the East Coast Region Have Faced Significant Economic Headwinds

The refining industry on the United States East Coast, called PADD 1 by the EIA,[26] has faced significant economic headwinds both before and after the implementation of the RFS mandates. When RIN prices spiked in 2013 due to increased RFS requirements,[27] the refining industry on the East Coast PADD 1 was earning historically large refining margins due to the simultaneous timing of the shale oil boom in the United States that provided cheap feedstock.

The temporary benefit from the US's shale oil boom delayed the full impact on refiners of the RFS mandates. In recent years, the temporary benefit from the shale oil boom has largely

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[24] *See also* Exhibit 2 and Exhibit 3.

[25] "Final Renewable Fuel Standards for 2017, and the Biomass-Based Diesel Volume for 2018", EPA, *available at* https://www.epa.gov/renewable-fuel-standard-program/final-renewable-fuel-standards-2017-and-biomass-based-diesel-volume.

[26] *See* Glossary for Petroleum Administration for Defense District (PADD), *available at* https://www.eia.gov/tools/glossary/index.php?id=petroleum%20administration%20for%20defense%20district.

[27] *See* Exhibit 2.

dissipated and the PADD 1 refining industry is facing pressures due to weaker than expected demand for gasoline and high stocks of gasoline, in addition to compliance pressures from the RFS program.

A. Decline in the Number of Refiners in PADD 1

The economic obstacles facing PADD 1 refineries are evidenced by the substantial decline in the number of refineries over the past 18 years. Exhibit 5 shows this decline: in 2000, sixteen refineries operated in the region; by 2018, this number had dropped to only 8. Between 2009 and 2018 alone, seven refiners accounting for 641,300 barrels per day of operable capacity closed, as shown in Exhibit 6. Two of the refiners, the Axeon refinery in Savannah, GA, and the Western Refining facility in Yorktown, VA, were the only refining facilities in their respective states. Currently, just 8 refiners operate in the East Coast region, with capacity equal to 1,223,500 barrels per day. Exhibit 7 lists these 8 refiners and their operable capacity, which ranges from 22,300 barrels at Ergon's Newell, WV plant to 335,000 at Philadelphia Energy Solutions in south Philadelphia. [28]

Accompanying this reduction in the number of refiners has been a reduction in the amount of refined crude oil products produced. Exhibit 8 shows that in 2005, East Coast refineries produced over 600 million barrels of refined products per year in 2005; by 2017, this number was down to just over 250 million barrels.

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[28] Exhibit 5 only includes operating refineries and excludes idle (but operable) refineries, while Exhibits 6 and 7 include operable refineries. There were three idle refineries in 2010, for example. *See* "East Coast (PADD 1) Number of Idle Refineries as of January 1", EIA, June 25, 2018, *available at* https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=8_NA_8OI_R10_C&f=A.

B. Decrease in Employment at Refineries in PADD 1

As the number of refineries in PADD 1 has decreased, employment in the refinery industry has also decreased. Employment in refineries encompasses a number of occupations, some of which involve skills that are specific to the industry and others of which involve skills that can be used in a number of industries. The orange and blue lines in Exhibit 9 estimate the level of employment associated with the refining industry in PADD 1 using the industry category Petroleum and Coal Products Manufacturing Industry.[29] Although this industry definition includes non-refinery coal employment, I reduced the potential number of non-refinery jobs by collecting data only from counties that had active refineries during the time period. After an increase between 2005 and 2008, employment in this job category fell rapidly during the recession. Since 2012-2013, employment in this category has remained fairly stable.

C. Weak Demand for Gasoline Heavily Impacts PADD 1

Exhibit 10 shows that PADD 1 refineries are highly dependent on gasoline production. Weaker than expected demand for gasoline has led to historically high gasoline stocks. Exhibit 11 shows how stocks have increased since 2000 and peaked in 2016. While stocks can experience fairly large quarterly shifts, the overall trend has been upward since 2013. The combination of high stocks and weaker than expected demand has put downward pressure on prices, which in turn places refiners under greater financial pressure.

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[29] The associated 4-digit NAICS code is 3241.

D. Diminishing Effects of the Shale Boom that Provided Low Cost Crude Oil

In the early years of this decade, the shale boom in the western United States (e.g., North Dakota, Bakken shale formation) provided a new supply of crude oil to PADD 1. This increased supply of low cost crude was partly a result of increased domestic production of light crude, and partly a result of transportation bottlenecks that made PADD 1 a more attractive destination for Bakken crude. Between 2010 and 2016, U.S. domestic crudes were considerably cheaper than international crudes, and PADD 1 refiners had similar acquisition costs of these domestic crudes, relative to the Gulf Coast refiners (Exhibit 12).[30] However, resolution of the supply bottlenecks and a lift on the U.S. crude export ban led to a decline in the price differential between domestic and international crude and subsequently a decline in rail shipments from the Midwestern United States to PADD 1. Exhibit 13 shows this decline and the accompanying increase in crude oil imports to PADD 1 refineries. In other words, for a time East Coast refineries were able to cheaply source the feedstock, crude oil, from domestic sources, but as the U.S. domestic price moved closer to international prices, the price of crude oil for East Coast refineries increased.

The effects of the shale boom can also be seen by examining crack spreads (a proxy for gross margins that measures the difference between the price of a barrel of refined product and the price of a barrel of crude) for PADDs 1–3. Exhibit 14 shows the crack spreads from 2004 to 2018. PADD 1's crack spread is consistently lower than those of the other two PADDs, but its disadvantage narrowed during the period when it received the most benefit from the shale boom.

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[30] "Widening Brent-WTI price spreads unlikely to change East Coast crude oil supply," EIA, November 1 2017, *available at* https://www.eia.gov/todayinenergy/detail.php?id=33572.

This Exhibit also shows that the largest beneficiary of the shale boom was PADD 2, which benefited from proximity and from the transportation bottlenecks.

Exhibit 15 shows the difference in crack spreads relative to PADD 1. This shows that PADD 1 is almost always at a disadvantage, but its disadvantage relative to PADD 3 was substantially reduced in the years where it received large rail shipments of Bakken crude. Exhibits 16 and 17 show the average annual crack spreads and the average annual differences. These exhibits demonstrate more clearly PADD 1's disadvantage relative to the other two. PADD 1 not only has the lowest crack spreads, but since the refineries in PADD 1 tend to be older and less efficient than PADD 2, margin differences tend to understate the relative disadvantage of PADD 1 refiners.

E. Crack Spreads Are Lower for East Coast Refiners Relative to the Midwest and Gulf Coast Refiners and RFS Requirements Lower Crack Spreads Even Further

As already explained, the crack spreads for refiners in PADD 1 are almost always lower than the spreads in the other two PADDs. The shale boom decreased the differences in spreads between PADDs 1 and 3, temporarily improving the financial prospects of PADD 1 refiners.

Exhibit 2 shows the RIN prices over time. These prices are incorporated into Exhibits 18 and 19, which show the monthly and annual crack spreads after removing the cost of RFS compliance. When RIN prices increased substantially in 2013, the RIN adjusted crack spread visibly diverged from non-adjusted crack spreads. After accounting for RFS compliance, current PADD 1 spreads appear to be close to 2009 and 2010 levels, when the United States was in a deep recession and many PADD 1 refiners went out of business.

IV. Supply and Demand Model Estimation: The 2019 RFS Requirements Impose Substantial Costs on PADD 1 Refiners and Consumers

Through my estimation of a supply and demand model, I analyze two scenarios: (1) a fractional compliance standard that does not cause a binding blend wall, and (2) the proposed 2019 standard.[31] I focus on PADD 1, though similar results hold for PADDs 2 and 3. The first scenario is equivalent to the standard for 2012, when the D6 RIN price was close to zero and the blend wall was not binding. The model used to predict prices and quantities in the two scenarios is described in further detail in Section VII.

In the short run, moving from a zero RIN price (RFS requirements that are below the blend wall) to the proposed 2019 standard would cause a roughly 1 percent reduction in the quantity of refined product produced.

Most of the effect of the proposed 2019 standard will be accounted for in the price of refined products (gasoline, diesel, and middle distillates). Moving from a zero RIN price (non-binding blend wall) fractional standard to the proposed 2019 standard reduces the prices received by refiners in PADD 1 by 1.7 percent, or about $1.27 per barrel. This price reduction is material because it reduces top line revenue but not production cost. Thus, at current prices, a 1.7 percent ($1.27) decline in the wholesale price of refined petroleum products represents a 12.3 percent decline in PADD 1 refinery margins (Exhibit 20).[32] These changes reduce refiner economic

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[31] In the analysis, the models are calibrated to match fuel production, consumption and prices, and RIN prices, as of January 2018.

[32] 1.7% is the reduction in the top line price of refined product. The 12.3% reduction in the crack spread is the reduction in the differential between the barrel of crude and refined product after reducing the price of the refined product by 1.7%.

profits in PADD 1 by approximately $1.6 billion. Exhibit 21 shows these profit losses for all three PADDs. Although they appear similar across PADDs, PADD 1 production is much lower. Exhibit 22 shows that in per-barrel terms, the loss is much higher for PADD 1. Based on an estimate of Monroe's market share in PADD 1 of 15.5%[33], I calculate lost economic profits (not accounting) to Monroe are estimated at $248 million (Exhibit 23).

It is important to note that consumers will also pay considerably higher retail prices due to the 2019 standards. The price paid by consumers for a gallon of gas will increase by 3.6 percent.

V. The Proposed 2019 RFS Requirements Heighten the Risk of Shutdown at Several East Coast Refiners

As I discussed previously, refineries on the East Coast face a number of difficult circumstances that affect their profitability, and the economic vulnerability of these refiners cannot be blamed solely on the RFS requirements. However, my analysis shows that the 2019 RFS proposed requirements are likely to substantially exacerbate the financial difficulties of these refiners, potentially pushing profitable refiners into unprofitability.

A. Monroe Energy Would Be Consistently Unprofitable Under the 2019 Requirements

Exhibit 24 shows a comparison of Monroe Energy's actual operating income and per-barrel profit to my estimates of Monroe's operating income and per-barrel profit if the 2019 proposed RFS standards were implemented. Monroe was intermittently profitable between 2012

[33] *See* Exhibit 7.

and 2017: it had positive operating income in 2014, 2015, and 2017 and negative income in 2012, 2013, and 2016. My model estimates that the implementation of the proposed 2019 standards would subtract about 12.3% from gross revenue, while leaving costs unchanged. This estimate would potentially result in a reduction in profits that would have made Monroe unprofitable in all years between 2012 and 2017. For example, while Monroe made a profit of about $1.03 per barrel in 2017, under the requirements in the proposed 2019 standards, it would have taken a loss of $4.78 per barrel. In 2014, when Monroe had a gain of $0.92 per barrel under that year's standards, it would have taken a loss of $7.32 per barrel under the proposed 2019 standards.

B. United Refining Company Would Move from Mostly Profitable to Unprofitable Under the 2019 RFS Requirements

Exhibit 25 shows that United Refining Company would have moved from an overall positive operating income to a generally negative operating income if the proposed 2019 standards had been in place between 2008 and 2016. For example, in 2014 and 2015 United Refining had positive margins of $5.47 and $5.30 per barrel. However, if the proposed 2019 standards had been in effect, United Refining would have taken losses of $2.35 per barrel in 2014 and $1.17 per barrel in 2015. Even in 2012, when United Refining had a very good year, the proposed standards would have taken it from a profit of $14.54 per barrel to only $2.69 per barrel.

C. PBF Energy Would Move from Consistently Profitable to Consistently Unprofitable Under the 2019 RFS Requirements

Exhibit 26 shows that, similarly to United Refining, PBF Energy would have had consistently negative operating income under the proposed 2019 standards, despite having consistently positive operating income under existing standards between 2012 and 2017. For example, in 2017 PBF made a profit of $1.54 per barrel; this would have been a loss of $4.12 per barrel had the proposed 2019 standards been in effect.

D. Philadelphia Energy Solutions Cited RFS Requirements in its Bankruptcy Filing

The actual experience of Philadelphia Energy Solutions (PES), the largest refiner in the mid-Atlantic region, demonstrates the financial fragility of the PADD 1 refiners. On January 21, 2018, PES filed for Chapter 11 bankruptcy, claiming an inability to comply with the Renewable Fuel Standard requirements. PES had previously announced layoffs in October 2016 of approximately 100 people.[34]

On March 12, 2018, PES proposed a settlement regarding its outstanding RFS obligation. PES agreed to retire 138 million of its 210 million RINs, for a total value of about $75 million, to meet its 2016 and 2017 obligations, and an additional 64.6 million RINs to be applied to its 2018 obligation. The settlement would forgive approximately 70% of PES's renewable fuel obligation.[35]

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[34] Reuters, "Exclusive: Philadelphia Energy Solutions to file for bankruptcy – memo," January 21, 2018, *available at* https://www.reuters.com/article/us-philadelphiaenergysolutions-bankruptc/exclusive-philadelphia-energy-solutions-to-file-for-bankruptcy-memo-idUSKBN1FA18P; Reuters, "Philadelphia Energy Solutions laying off nonunion workers: sources," October 10, 2016, *available at* https://www.reuters.com/article/us-usa-refineries-pes-idUSKCN12A1VM. The number of layoffs comes from https://www.businessinsider.com/r-four-years-after-rescue-us-refinery-reels-as-investors-profit-2016-11, which states that 25% of the nonunion labor force was laid off, and https://www.reuters.com/article/us-usa-refineries-pes-idUSKCN12A1VM, which lists the number of nonunion employees in 2014.

[35] Consent Decree and Environmental Settlement Agreement, *In re: PES Holdings, LLC, et al., Debtors*, dated March 12, 2018.

VI. A Refinery Shutdown Would Put a Substantial Number of Jobs at Risk

Refineries employ a wide range of people across a number of job categories. Exhibit 27 shows the percent of refinery employment in different geographic areas. While this shows that refineries do not account for a large share of employment within the entire PADD, it also shows that they are very important locally. In 2018, refineries accounted for about 0.1% of the jobs in New Jersey, Delaware, Pennsylvania, and West Virginia, but a full 3.69% of the jobs in McKean County, PA, located in the northwestern part of the state. Refinery shutdowns, such as the one that hit York County, VA have the potential to be highly disruptive locally.[36]

In 2012, the Pennsylvania Center for Workforce Information and Analysis conducted a reemployment and economic impact study for potential closings of the ConocoPhillips and Sunoco facilities in Delaware County, PA.[37] This study used an estimate that 18.3 jobs would be lost in Southeast Pennsylvania for each refinery layoff in the region, and 22 jobs would be lost across Pennsylvania as a whole. These lost jobs are either indirect ("in related industries" such as suppliers to or customers of the refinery industry) or induced (in industries impacted by reduced spending).[38] A job loss multiplier of 18.3 implies that for every 100 lost refinery jobs in Pennsylvania 1,830 total jobs would be lost (or 1,730 additional jobs), while a multiplier of 22 implies that for every 100 lost refinery jobs, 2,200 total jobs would be lost. If a large refinery

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[36] The latest quarter with employment data prior to the refinery closing in York County, VA was Q2 2009, with a percent of refinery employment of 1.2%. *See* U.S. Census Bureau, Quarterly Workforce Indicators data, *available at* https://qwiexplorer.ces.census.gov.

[37] Reemployment Assessment and Economic Impact of ConocoPhillips and Sunoco Closings, Center for Workforce Information & Analysis, January 9, 2012 ("CWIA 2012").

[38] CWIA 2012, Appendix C. The report also includes a national multiplier of 61. However, the national multiplier may have ignored the possibility that refiners in the Midwest and Gulf Coast would increase production in response to the East Coast refinery closure.

with approximately 800 jobs were shut down and only half of the employees were reemployed, the Pennsylvania Center's 18.3 multiplier would suggest that over 7,300 jobs might be lost in the region and over $539 million would be lost in labor income and 8,800 jobs might be lost in the state (Exhibit 28). If these significant job losses were to be realized, it would constitute a substantial negative economic impact on the local and regional economy.

VII. Technical Description of the Analysis

This section provides technical details of the analysis used above. Basic economics can be used to understand and quantify the impact of the RFS on refiners and consumers of motor fuels. Specifically, positive RIN prices effectively serve as a tax on the consumption and production of conventional fuels, and with some modifications a standard economic framework—tax incidence analysis—can be used to trace out the effects of the RFS.

A. The Effect of the RFS on Gasoline Supply and Demand

A standard supply-demand diagram illustrates the effects of the Renewable Fuel Standard. In Exhibit 29, the upward sloping line is the supply of refined petroleum products, with the quantity of production on the horizontal axis and the price on the vertical axis. The downward sloping line is the demand curve. In the absence of a binding blend wall for gasoline, the price P^* and quantity Q^* of fuel is determined by the intersection of the supply and demand curves.

The RFS compliance mandate falls on refiners. When the blend wall binds, refiners must purchase excess RINs, raising the RIN price above zero. The supply curve (which represents the marginal cost of supply) shifts up by the price of the RIN, P^{RIN}.[39] The intersection of the RIN-inclusive supply curve and the demand curve shifts to P^R and Q^R. Note that the quantity of consumption and production declines. Further, P^R is the price that consumers pay, but producers receive only P^R- P^{RIN} because they must pay for the RINs required to achieve compliance. This point is given by the point on the net-of-RIN supply curve corresponding to Q^R.

Thus, a positive RIN price increases the price that consumers pay for fuel, reduces the price that refiners receive, and reduces the quantity of conventional fuel consumed. These price and quantity changes result in transfers from consumers and refiners to the sellers (and producers) of RINs, biofuel producers, who effectively collect the RIN tax.

B. Determining the Price of a RIN

Normally in an analysis of tax effects on price and quantity, the tax would be a fixed amount (e.g., as in the case of state and federal gasoline taxes) or a percentage of the price. In the case of the RFS, the "tax" is not a fixed amount or a fixed percentage. Instead, the RIN price depends on the demand and supply for RINs. The demand for RINs is determined by the gasoline market and by the amount of biofuel required by the RFS. The supply of RINs is determined by the production of biofuel and by the physical constraint of the ethanol "blend wall."

First consider the demand for RINs. Gasoline blenders buy refined motor gasoline from refiners and ethanol from ethanol producers. Blenders then sell the RINs associated with the

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[39] The price and quantity effects do not depend on where the compliance burden falls. If consumers must acquire RINs, the demand curve falls by P^{RIN} and the prices paid by consumers and received by refiners, and the equilibrium quantity, are the same as when the compliance burden falls on refiners. Here P^{RIN} is the price per gallon of RINs multiplied by the fractional compliance standard.

ethanol back to refiners, who return the RINs to the EPA. Exhibit 30 shows the outcome with two different RIN prices, P^{RIN} and P^{RIN*}. Note that with the higher RIN price, the quantity of fuel consumed declines. The total quantity of RINs demanded is equal to the product of the fractional compliance amount and the quantity of fuel consumed. Thus, for a given fractional compliance standard, with a higher RIN price, fewer RINS are demanded. This is illustrated as a movement along the D_{RIN} curve in Exhibit 31. As the compliance standard increases, the demand for RINs shifts outward because at any given quantity of fuel, more RINs are required from refiners. This is seen in the shift from D_{RIN} to $D_{RIN'}$ in Exhibit 31.

Now consider the supply of RINs. RINs are supplied when biofuels are produced, with the amount of RINs per gallon depending on the type of biofuel. In the gasoline market, as long as the RFS requirements can be met by adding ethanol to gasoline, the cost (and therefore the price) of producing a RIN is effectively 0, aside from any administrative costs that vary by the number of RINs. The reason is that blenders purchase the RIN along with the ethanol. If the blenders were to sell the acquired RINs to refiners at a price greater than 0, refiners' costs would increase and they would have to increase their prices by the amount of the RIN price to compensate.

The cost of a RIN changes once the RFS requirements reach the physical constraint of the "blend wall." The amount of ethanol that can be consumed in conventional automobile engines is limited by technical constraints to approximately 10 percent—an amount of renewable fuel that is lower than what the RFS currently requires. The additional RINs necessary to meet the requirement must come from the production of other types of biofuel. The structure of the RFS program allows RINs from other types of biofuel—either advanced biofuel or biodiesel—to be used in place of RINs generated from ethanol. In the RFS program's terminology, D4 and D5 RINs (from biodiesel and advanced biofuel) can be used to cover the D6 RIN obligation. Thus, an RFS fractional compliance standard that is sufficiently strict to cause the blend wall to bind creates a demand for D4 and D5 RINs, which in turn creates a demand for biodiesel.[40]

Exhibit 31 illustrates the supply and demand for RINS. The demand curve for RINs is derived from the market for blended gasoline shown in Exhibit 30. The quantity of RINs demanded for a given RIN price depends on the equilibrium quantity of gasoline, taking into account the supply shift from the cost of the RIN. The supply curve of RINs is determined by the difference between the marginal cost of producing biodiesel and the price of diesel fuel: biodiesel is more expensive to produce than conventional diesel, but sells at the conventional diesel price, so biodiesel will be produced only if the value of the RIN generated from the production of biodiesel covers this higher cost. The market-clearing D4/D5 RIN price is given by the intersection of the supply and demand curves. Further, when the blend wall is binding, and both D6 and D4/D5 RINs can be used to achieve D6 compliance, the prices of these RINs are (approximately) the same.

Recall that changing the fractional compliance amount shifts the demand curve for RINs. Thus, changing this amount affects the price of RINs—and the magnitude of the RIN tax—in a similar way as an increase in the RIN price, as illustrated in Exhibit 32. In this exhibit, an increase in the fractional compliance amount shifts the blended gas supply curve upward,

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[40] For a deeper analysis of this mechanism, see Scott Irwin and Darrell Good, "Is Speculation Driving Up the Price of RINS?" *farmdoc daily* (3): 77, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, April 24, 2013. *Farmdoc daily* contains numerous other articles describing this mechanism.

shifting out the demand curve for RINs, which given the upward-sloping supply curve, drives up the price of RINs. This, in turn, increases the RIN tax, which reduces the price refiners receive for conventional fuels, and increases the price that consumers pay for them.

To summarize, positive RIN prices serve as a tax on the consumption and production of conventional fuels, and the larger the fractional compliance quantity is, the larger the size of the tax. Thus, increasing the fractional compliance amount increases the prices consumers pay for fuel, and reduces the prices refiners receive.

C. Predicting the RIN Price Under Different Scenarios

Putting the above theoretical analysis into a practical model required determining the following: (1) the supply curve for refined products; (2) the supply curve for biodiesel; (3) the demand curve for gasoline. I estimate the first two using publicly available data, and use estimates from the academic literature on gasoline demand for the third.

Retail gasoline sold at the pump is a blend of petroleum-derived motor gasoline and ethanol, which are blended in fixed proportions. Because of the blend wall discussed previously, a gallon of retail gas is currently 90% motor gasoline and 10% ethanol (a blend referred to as E10). The EPA Renewable Fuel Standard implicitly sets the renewable fuel requirement higher, and the current proposal for 2019 is 10.88%. This higher requirement, because it cannot be met by blending ethanol at 10.88%, is met through the purchase of RINs generated through the production of other biofuels. One can therefore treat the price of retail gas as 0.9 times the price of refined gas plus 0.1 times the price of ethanol plus the cost of the RINs necessary to meet EPA requirements.

The cost of producing a gallon of gasoline is somewhat difficult to quantify because of the nature of the production process. Refined products such as motor gasoline, diesel, aviation fuel, and kerosene are produced from a single barrel of crude oil through fractional distillation, and producing gasoline alone could only be done by throwing away the other components.[41] Since motor gasoline is only produced in combination with other refined products, gasoline supply is best thought of in terms of the supply of refined products generally.

To estimate the cost of manufacturing a gallon of refined products from crude oil, I assume that the marginal cost of production is a translog function of the quantity produced. This means that for every percent increase in quantity produced, cost will increase by some fraction of a percent. This is a common functional form for estimating production costs. More specifically, I regress the natural log of marginal production cost of a gallon of refined product on the natural log of quantity of refined product and the natural log of the price of a barrel of crude.

In a competitive market, price is equal to the marginal cost of production, so I use price as a proxy for marginal cost. To assign a single price to the full range of refined products created from a barrel of crude oil, I weight the price of the product by the portion of the output it accounts for, e.g. if motor gas accounts for 42% of the output, the wholesale price of motor gas gets a weight of 42% in the price of finished product. It was not possible to match all refined products with their equivalent prices, particularly for products that make up smaller fractions of the total refined product. I therefore used only the 5 refined products that made up the largest

[41] "Oil: Crude and Petroleum Products Explained, Refining Crude Oil," EIA, *available at* https://www.eia.gov/energyexplained/index.php?page=oil_refining#tab2.

shares of the total. These refined products accounted for between about 80 and 95 percent of the total refined product volume.

An important complication in the estimation of supply curves is that changes in price and quantity can be due to movement along the supply curve (in which case the price and quantity pairs trace out the supply curve) or due to shifts in the supply curve. A shift in the supply curve could be a result of a number of factors, such as changes in the availability of imported gas.[42] A standard approach is to use instrumental variables estimation to identify the supply curve, where the instrumental variables are demand shifters.[43] The demand shifters used were the unemployment rate, average temperature, air miles traveled, and freight carloads shipped.

Data for the estimation come from several sources. Data on number of barrels processed and prices and quantities of finished products are from the Energy Information Agency ("EIA"). I use the Producer Price Index to rescale all prices to 2018 dollars. The EIA also supplies information on the percent utilization of refining capacity, which can be used to infer total refining capacity in barrels of crude. Unemployment rates are from the Bureau of Labor Statistics. Data on average temperatures are from NOAA. Time series on air miles traveled and freight carloads shipped are available from the St. Louis Federal Reserve Bank.

Observations in the data are defined by month at the level of the PADD. PADD 1 encompasses the East Coast states, including West Virginia and all of New England. PADD 2 encompasses the Midwestern states, including Kentucky and Tennessee. PADD 3 consists of the

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[42] Weinhagen, J. 2003. "Consumer gasoline prices: An empirical investigation." *Monthly Labor Review* July 2003: 3–10.

[43] Peter Kennedy, *A Guide to Econometrics*, Fifth Edition, MIT Press, 1998, pp. 182–186.

Gulf Coast states, excluding Florida, plus Arkansas and New Mexico. PADDs 4 and 5, which are not included in the analysis presented here, consist of the Rocky Mountain states and the West Coast. I disregard PADDs 4 and 5 because most inter-PADD shipments occur between PADDs 1, 2, and 3.[44]

I use these data to estimate the translog cost function, with the natural log of refined product price as the dependent variable. The estimated coefficient on log quantity was 0.75 and the coefficient on log input price was 0.89; both were significant at 1 percent. This means that a one percent change in output is associated with a 0.75 percent change in marginal production cost, and that a one percent change in the price refiners pay for crude increases cost by 0.89 percent.

The cost curve for biodiesel is important because biodiesel is used to meet the RIN requirement for gasoline. If biodiesel is cheap to produce, it will be cheap to meet the RFS requirement for blended gasoline. If biodiesel is expensive, meeting the requirement will also be expensive.

Biodiesel can be made from a number of different feedstocks, but soy oil is by far the most common, accounting for about half of the feedstock used in 2017. Corn and canola oil accounted for an additional 26%.[45] Other important inputs to biodiesel include methanol and natural gas.

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[44] "PADD regions enable regional analysis of petroleum product supply and movements," Feb. 7, 2012, *available at* https://www.eia.gov/todayinenergy/detail.php?id=4890.

[45] EIA, "Monthly Biodiesel Production Report With data for April 2018," Independent Statistics & Analysis, June 2018, available at https://www.eia.gov/biofuels/biodiesel/production/biodiesel.pdf, accessed on July 19, 2018.

I estimate cost curves for biodiesel taking a similar approach to the cost curves for refined products. As with refined products, I use an exponential cost function and employ air miles traveled and freight carloads shipped as demand shifters. I used data from 2012 and later, since biodiesel production was very low prior to that point. The regression determines the relationship between output price and quantity, controlling for the input prices of soy oil, methanol, and natural gas. Data on biodiesel prices are from the U.S. Alternative Fuel Data Center. Data on prices for the other inputs are from the EIA, with the exception of methanol prices, which are from the Methanex corporation. PADD-level detail is not available for all variables, so observations are at the monthly level for the entire United States. The coefficient on log quantity produced was 0.006, and the coefficient on soy oil price was 0.19, and the coefficient on soy oil price was 1.1. Both were statistically significant at the 1 percent level.

Finally, the model requires estimates of the elasticity of demand for gasoline. The demand for gasoline has been a popular topic in economics, so I select estimates of gasoline demand from the literature, rather than create an additional estimate here.

Most studies have found that gasoline demand is highly price-inelastic, i.e., consumers do not adjust their behavior very much in response to price. Recent estimates of the price elasticity of retail gasoline are in the range of -0.04 to -0.25, which means that a 10 percent increase in the price of gas would reduce consumption by between 0.4 and 2 percent.[46] One set of estimates

[46] *See* Hughes, JE; Knittel, CR, Sperling, D. (2008). "Evidence of a Shift in the Short-Run Price Elasticity of Gasoline Demand." *The Energy Journal* 29 (1): 113–134. Park, Sung Y.; Zhou, Guochang (2010). "An estimation of U.S. gasoline demand: A smooth time-varying cointegration approach," *Energy Economics 32*, 110–120.

puts the elasticity higher, at -0.25 to -0.30, which would mean that a 10 percent increase in the price of gas results in a 3 percent reduction in the amount of gas consumed.[47]

The above elasticity estimates differ substantially from each other, but all indicate that consumers are relatively unresponsive to price. When the elasticity of demand is close to zero, an increase in production costs can be passed through to consumers in the form of higher prices, leaving producers' profits relatively unaffected. One study of the RFS program, using RIN price and wholesale fuel price spreads for the years 2013-2015, shows that RIN prices are rapidly incorporated into the wholesale price of gas.[48] However, a later study shows that pass-through rates were lower for domestic products in 2015 and 2016.[49] This second study suggests that refiners are at risk for additional costs from the RFS program. Note that, based on the analysis in Section V, even with a high RIN price pass-through rate, refiners' profits can be adversely affected in a way that may affect their survival.

A final point worth noting is that biodiesel may have some important limitations. It has been linked with clogged fuel filters due to impurities like bacteria and sterol glucosides.[50] It also is more difficult to store than petroleum diesel, since biodiesel can degrade over time.[51]

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[47] Levin, Laurence; Lewis, Matthew; Wolak, Frank (2017). "High Frequency Evidence on the Demand for Gasoline," *American Economic Journal: Economic Policy Vol. 6, No. 3,* 314–347.

[48] Knittel, CR; Meiselman, BS; Stock, JH. 2017. "The Pass-Through of RIN Prices to Wholesale and Retail Fuels under the Renewable Fuel Standard." *Journal of the Association of Environmental and Resource Economists* 4 (4): 1081–1119.

[49] "Re-examining the Pass-through of RIN Prices to the Prices of Obligated Fuels", Charles River Associates, October, 2016, pp. 8–9.

[50] Intertek, "Biodiesel Fuel Filter Blocking Problems," *available at* http://www.intertek.com/biofuels/biodiesel/fuel-filter-blocking-problems/, accessed on July 19, 2018.

[51] Biofuel.org.UK, "Biofuel Chemistry: What are Biofuels and How are They Made?" *available at* http://biofuel.org.uk/how-are-biofuels-produced.html, accessed on July 19, 2018.

Although not addressed here, these problems may limit the degree to which biodiesel can be added to the fuel supply.

Based on the above estimates, and the model calibrated using those estimates, I calculate consumer and refiner deadweight loss and transfers to biodiesel producers, as well as deadweight loss from biodiesel production. Under the 2019 RFS requirements, a total of $13 billion would be transferred from consumers to biofuel manufacturers, of which $8.6 billion is through gasoline. Refiners would lose about $4.7 billion in transfers to biodiesel producers, with the amount split roughly equally across PADDs. However, it is important to note that these are absolute amounts, not per barrel or percentages of production. As Exhibit 22 showed, in terms of the cost per barrel produced, the burden falls much more heavily on PADD 1 refiners. The deadweight loss is fairly limited, since the quantity of refined product produced does not change much. Deadweight loss to consumers comes to $109 million under the 2019 proposed standards, most of which (as with the transfers) occurs in the gasoline market. Refiner deadweight loss is $42.5 million. Biodiesel producers receive a benefit of $1.8 billion in transfers from consumers and refiners. The remainder of the transfer from consumers and refiners goes to ethanol producers in the form of higher RIN prices. Finally, the deadweight loss from the biodiesel market is $472 million, which comes from production of an inefficiently large amount of biodiesel.

VIII. Conclusion

Economically, the RFS acts as a tax on the production and consumption of motor fuels. Like all taxes, the RIN tax increases the prices consumers pay for these products, and reduces the prices refiners receive. The crucial distinction between the RIN tax and conventional taxes is that it is not in a fixed amount, but has a size that depends on the RFS mandates adopted by the EPA: when the EPA increases the mandated consumption of biofuels, it imposes a larger tax, and hence larger impacts on producers and consumers.

Using standard economic analysis, and extensive data on the production and refining of motor fuels and biofuels, I quantify the impact of moving from a mandate where the price of RINs are zero, to the mandate proposed by the EPA for 2019. This impact is large, on both consumers and producers.

The impact will fall particularly heavily on refiners on the East Coast of the United States. I estimate that refining margins (the gross profit per barrel) will fall by 12.5 percent in this region as a result of the 2019 EPA proposal as compared to a mandate level at which the price of RINs is zero. This decline in gross margin is large enough to make many refineries on the East Coast unprofitable, and thereby is large enough to cause some refineries to shut down, with a consequent loss of jobs.

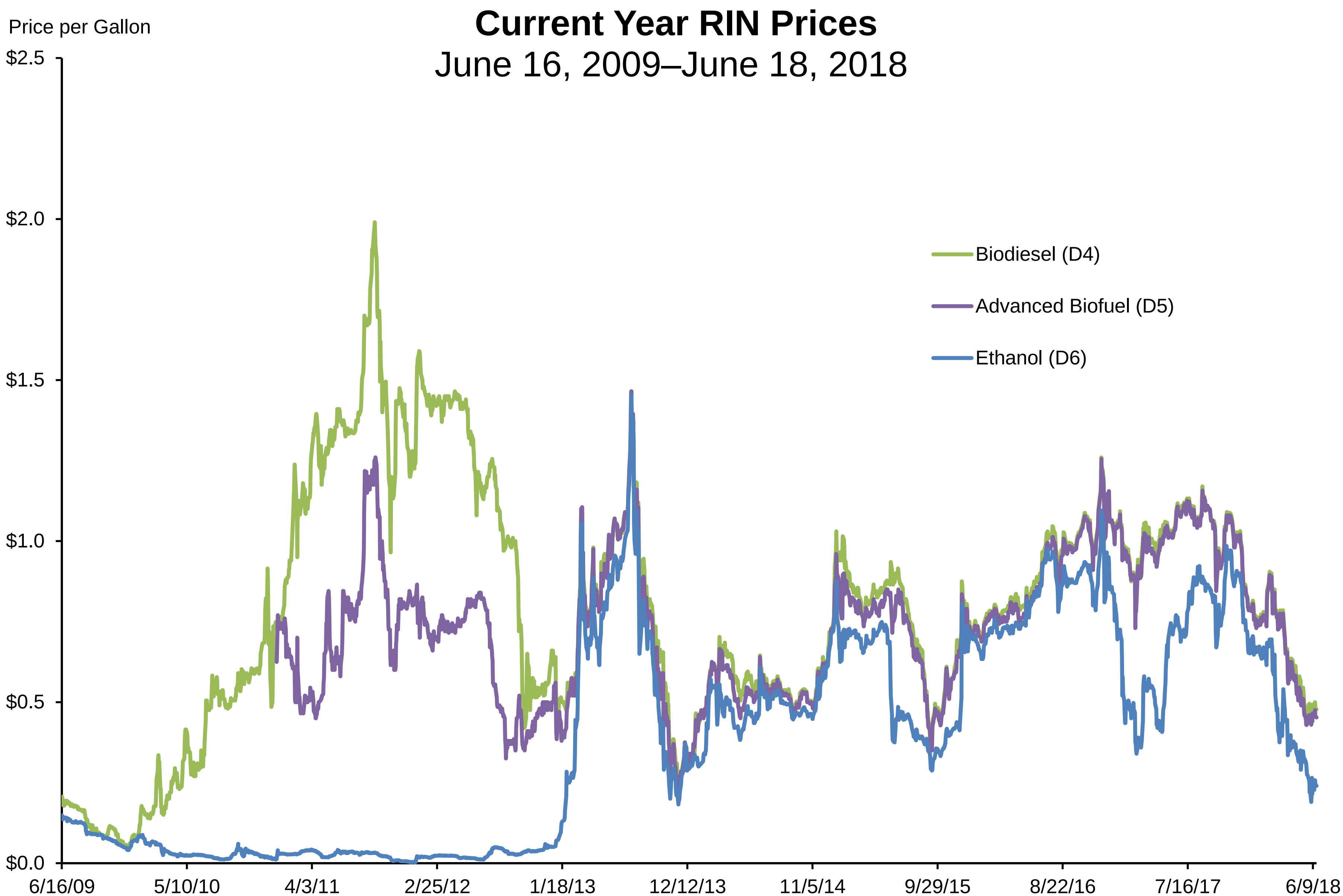
Exhibit 1

Renewable Fuel Standard Mandates

	Volume Required (in Billion Gallons)				Percent Required			
	Cellulosic Biofuel	**Biomass-Based Diesel**	**Advanced Biofuel**	**Renewable Fuel**	**Cellulosic Biofuel**	**Biomass-Based Diesel**	**Advanced Biofuel**	**Renewable Fuel**
2018 Mandates	0.288	2.10	4.29	19.29	0.159%	1.74%	2.37%	10.67%
2019 Proposal	0.381	2.10	4.88	19.88	0.209%	1.72%	2.67%	10.88%
Percent Change	32.3%	0.0%	13.8%	3.1%	31.4%	-1.1%	12.7%	2.0%

Source: EPA

Exhibit 2



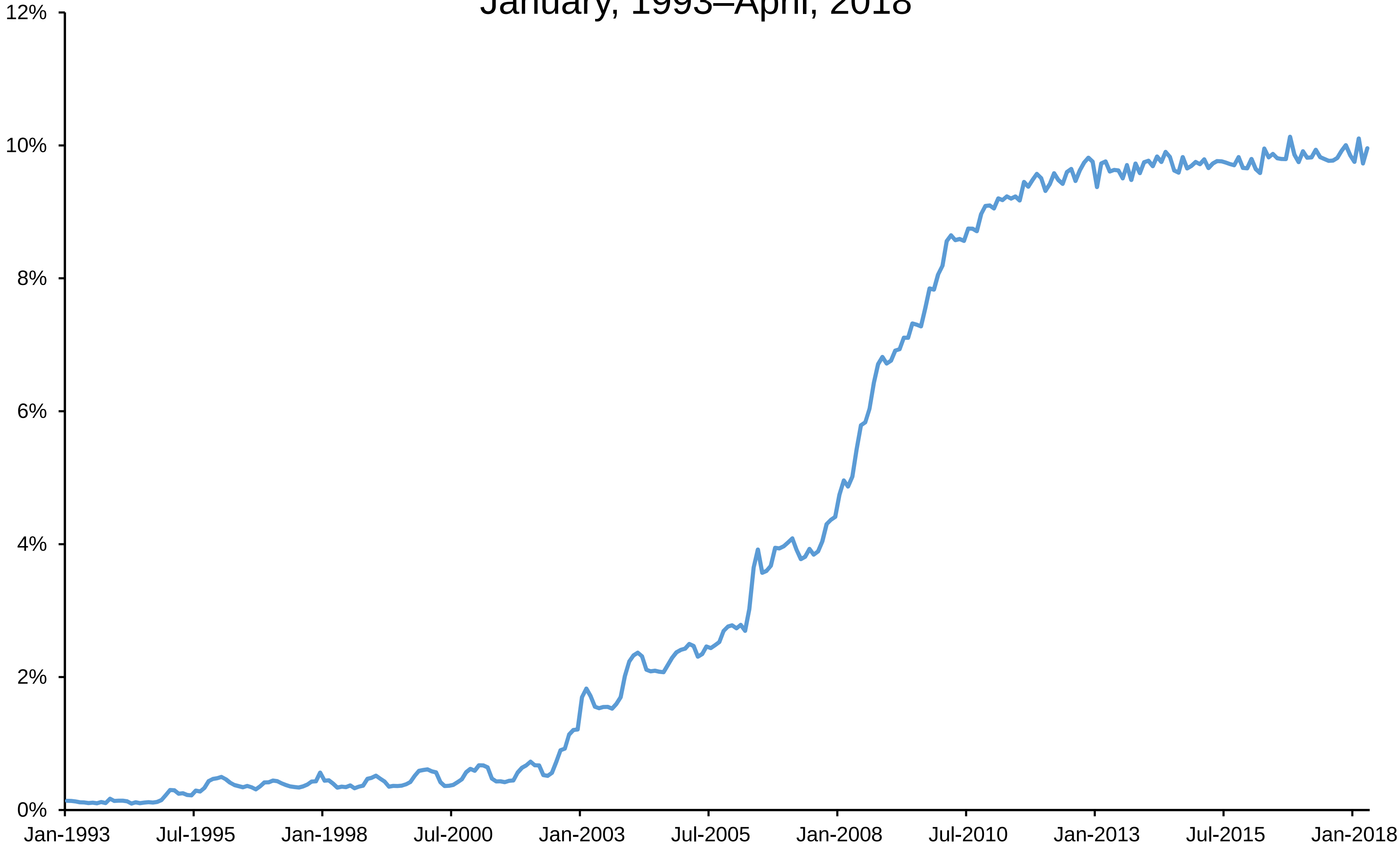
Source: OPIS

Note: Daily average prices are shown on the graph.

Exhibit 3

U.S. Refinery and Blender Net Ethanol Input as a Percentage of Supplied Finished Motor Gasoline

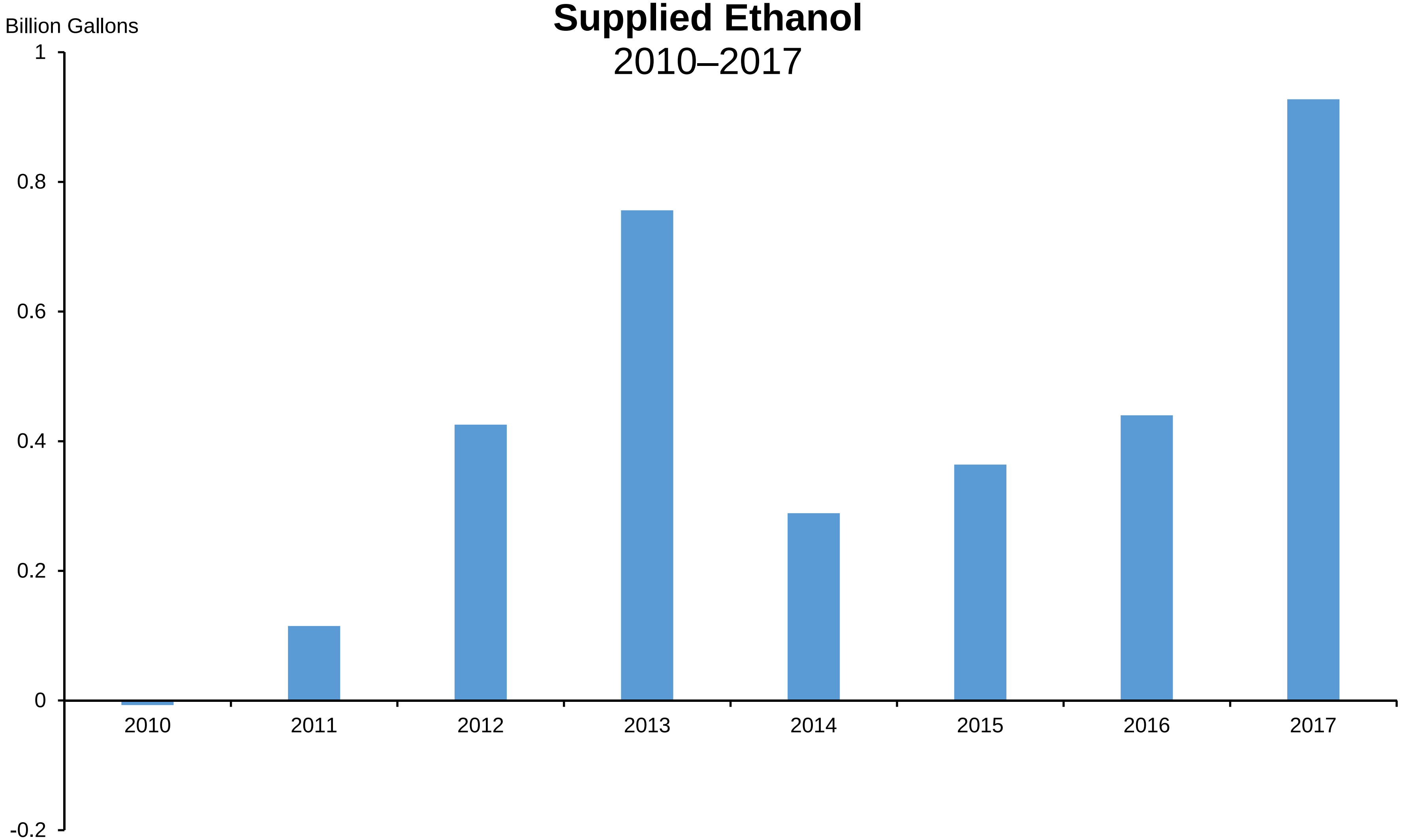
January, 1993–April, 2018



Source: EIA

Exhibit 4

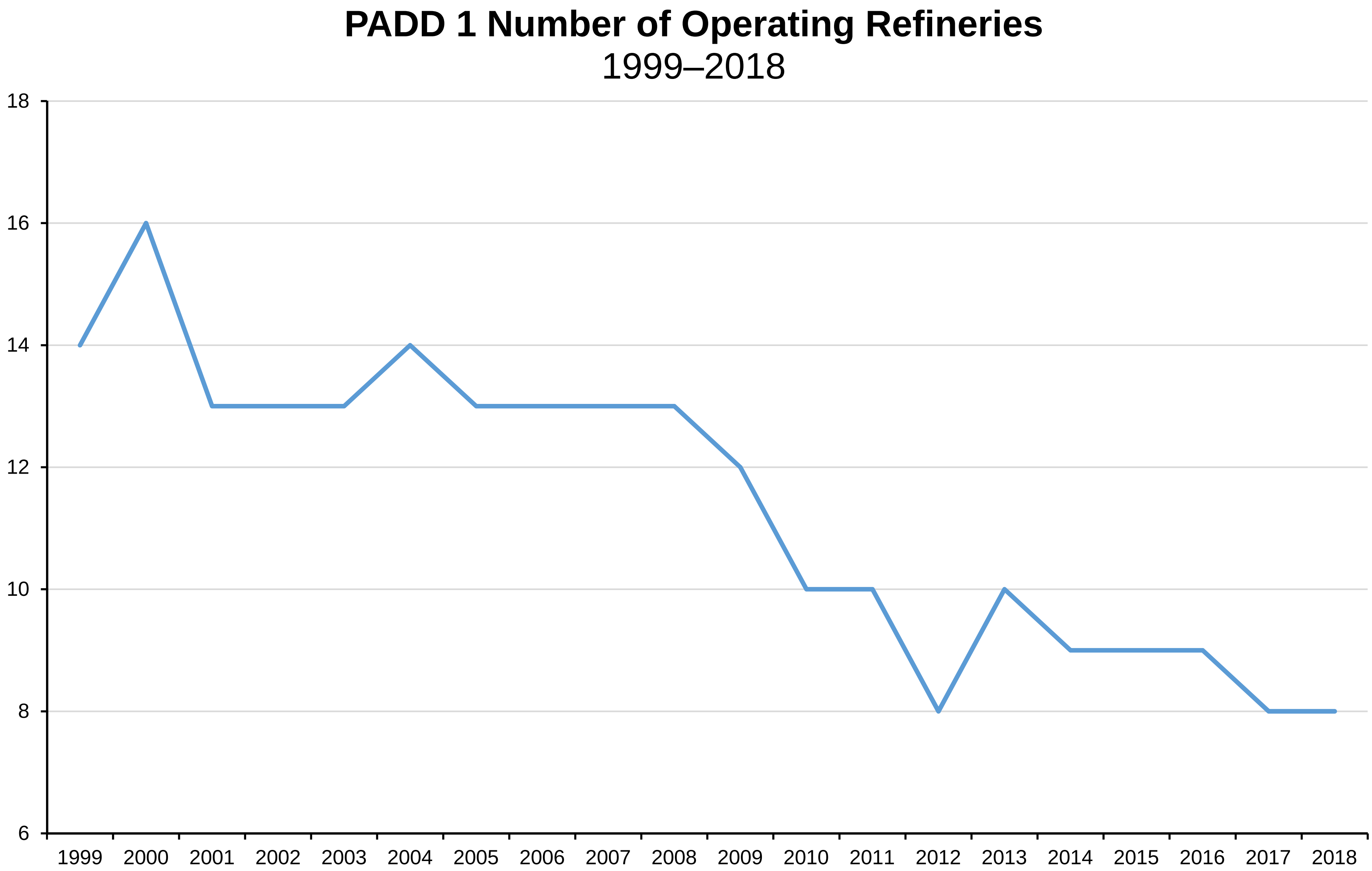
Gap Between Conventional Renewable Fuel Standard and Supplied Ethanol
2010–2017



Source: EIA; EPA

Note:
[1] Conventional renewable fuel standard is calculated by subtracting advanced biofuel volume mandates from renewable fuel mandates.
[2] The gap is calculated by subtracting U.S. refinery and blender net input of fuel ethanol from conventional renewable fuel standards.

Exhibit 5



Source: EIA

Note:
Only included operating refineries and excluded idle (but operable) refineries. There were three idle refineries in 2010, for example. *See* "East Coast (PADD 1) Number of Idle Refineries as of January 1", EIA, June 25, 2018, *available at* https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=8_NA_8OI_R10_C&f=A.

Exhibit 6

Refinery Closures in PADD 1
2010–2017

Company Name[1]	State	Site	Year of Closure[2]	Total Operable Capacity[3] (Barrels per Calendar Day)
Sunoco Inc	New Jersey	Westville	2010	145,000
Western Refining Yorktown Inc	Virginia	Yorktown	2011	66,300
Sunoco Inc	Pennsylvania	Marcus Hook	2011	178,000
Chevron USA Inc	New Jersey	Perth Amboy	2012	80,000
Hess Corporation	New Jersey	Port Reading	2013	70,000
Axeon Specialty Products LLC	Georgia	Savannah	2014	28,000
Axeon Specialty Products LLC	New Jersey	Paulsboro	2017	74,000
Total Capacity Closed				641,300

Source: EIA

Note:
[1] Included all operable refineries, including idle (but operable) refineries. There were three idle refineries in 2010, for example. *See* "East Coast (PADD 1) Number of Idle Refineries as of January 1", EIA, June 25, 2018, *available at* https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=8_NA_8OI_R10_C&f=A.
[2] Considered the year in which a facility was shut down to be the year of closure.
[3] Recorded total operable capacity as of the year of closure. Total operable capacity refers to atmospheric crude distillation capacity. Used cat cracking fresh feed downstream charge capacity for the current year for Hess Corporation, because total operable capacity is not available.

Exhibit 7

PADD1 Refineries

January 1, 2018

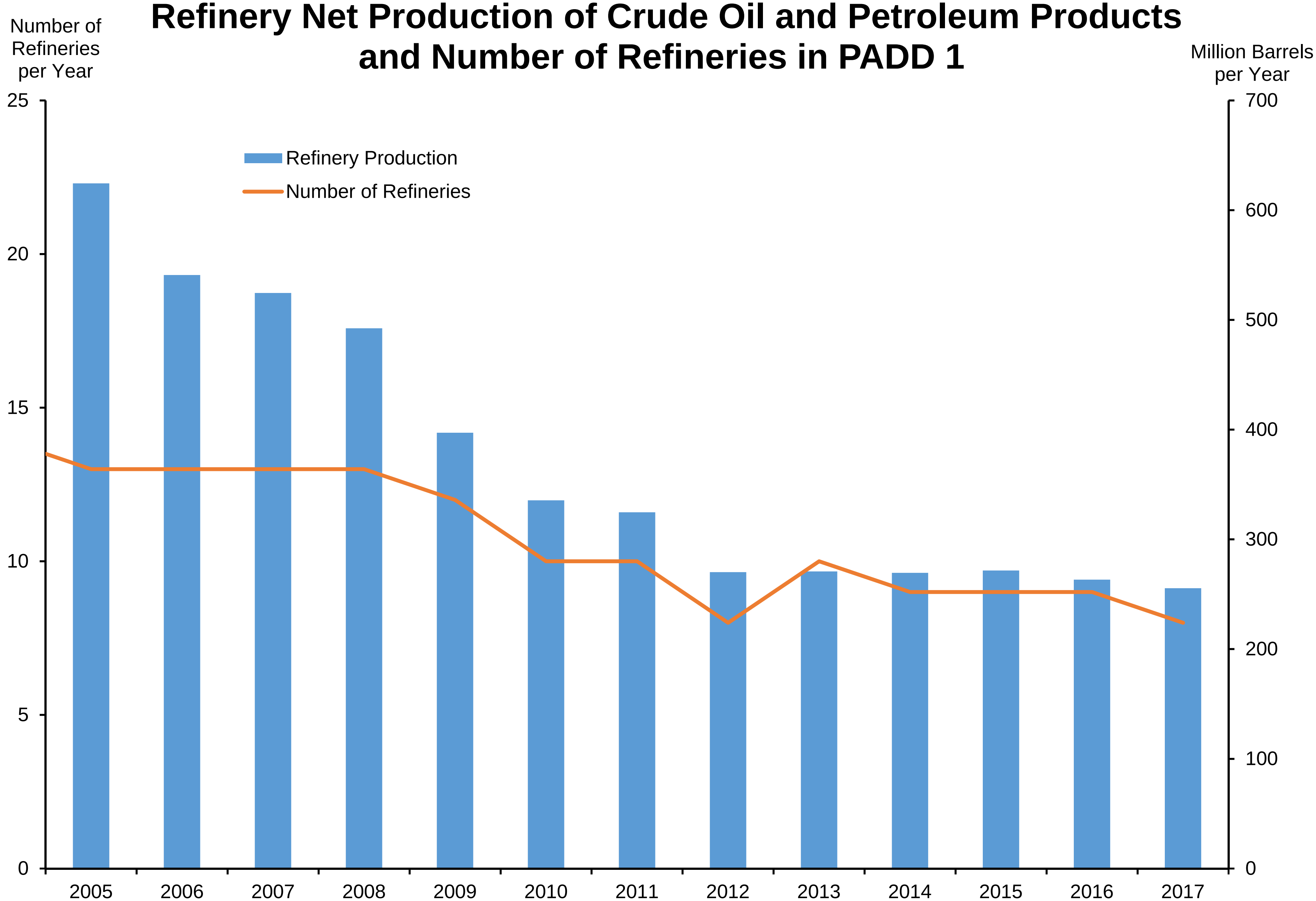
	Company	Corporation	State	Site	Total Operable Capacity[1] (Barrels per Calendar Day)	Percent of Total
1	American Refining Group Inc	American Refining Group Inc	Pennsylvania	Bradford	11,000	0.9%
2	Delaware City Refining Co LLC	PBF Energy Co LLC	Delaware	Delaware City	182,200	14.9%
3	Ergon West Virginia Inc	Ergon Inc	West Virginia	Newell	22,300	1.8%
4	Monroe Energy LLC	Delta Air Lines Inc	Pennsylvania	Trainer	190,000	15.5%
5	Paulsboro Refining Co LLC	PBF Energy Co LLC	New Jersey	Paulsboro	160,000	13.1%
6	Philadelphia Energy Solutions	Carlyle Group	Pennsylvania	Philadelphia	335,000	27.4%
7	Phillips 66 Company	Phillips 66 Company	New Jersey	Linden	258,000	21.1%
8	United Refining Co	Red Apple Group Inc	Pennsylvania	Warren	65,000	5.3%
	Total				**1,223,500**	**100.0%**

Source: EIA

Note:
[1] Total operable capacity refers to atmospheric crude distillation capacity.

Exhibit 8

Refinery Net Production of Crude Oil and Petroleum Products and Number of Refineries in PADD 1

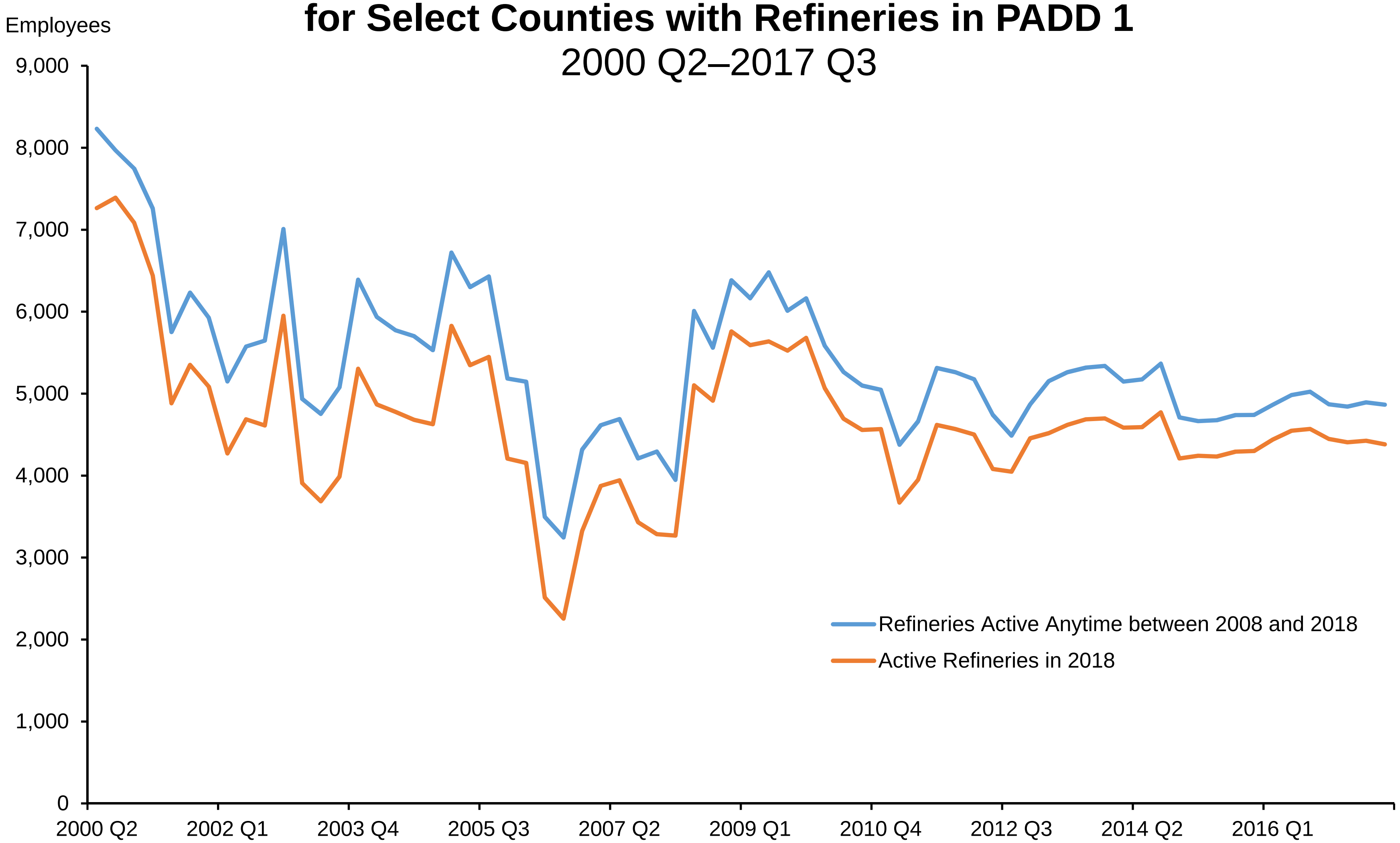


Source: EIA

Exhibit 9

Employments in Petroleum and Coal Products Manufacturing for Select Counties with Refineries in PADD 1

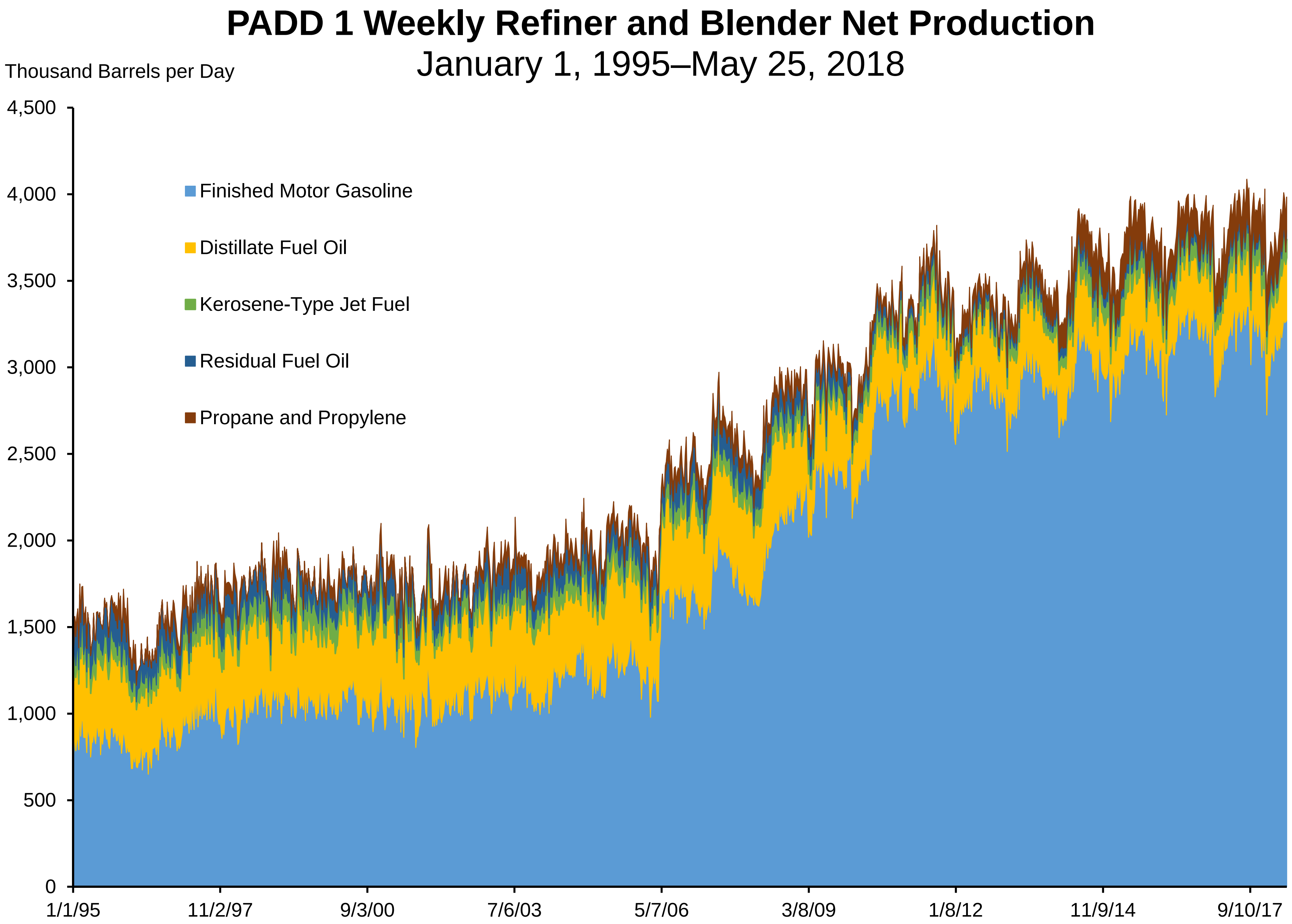
2000 Q2–2017 Q3



Source: U.S. Census Bureau; EIA

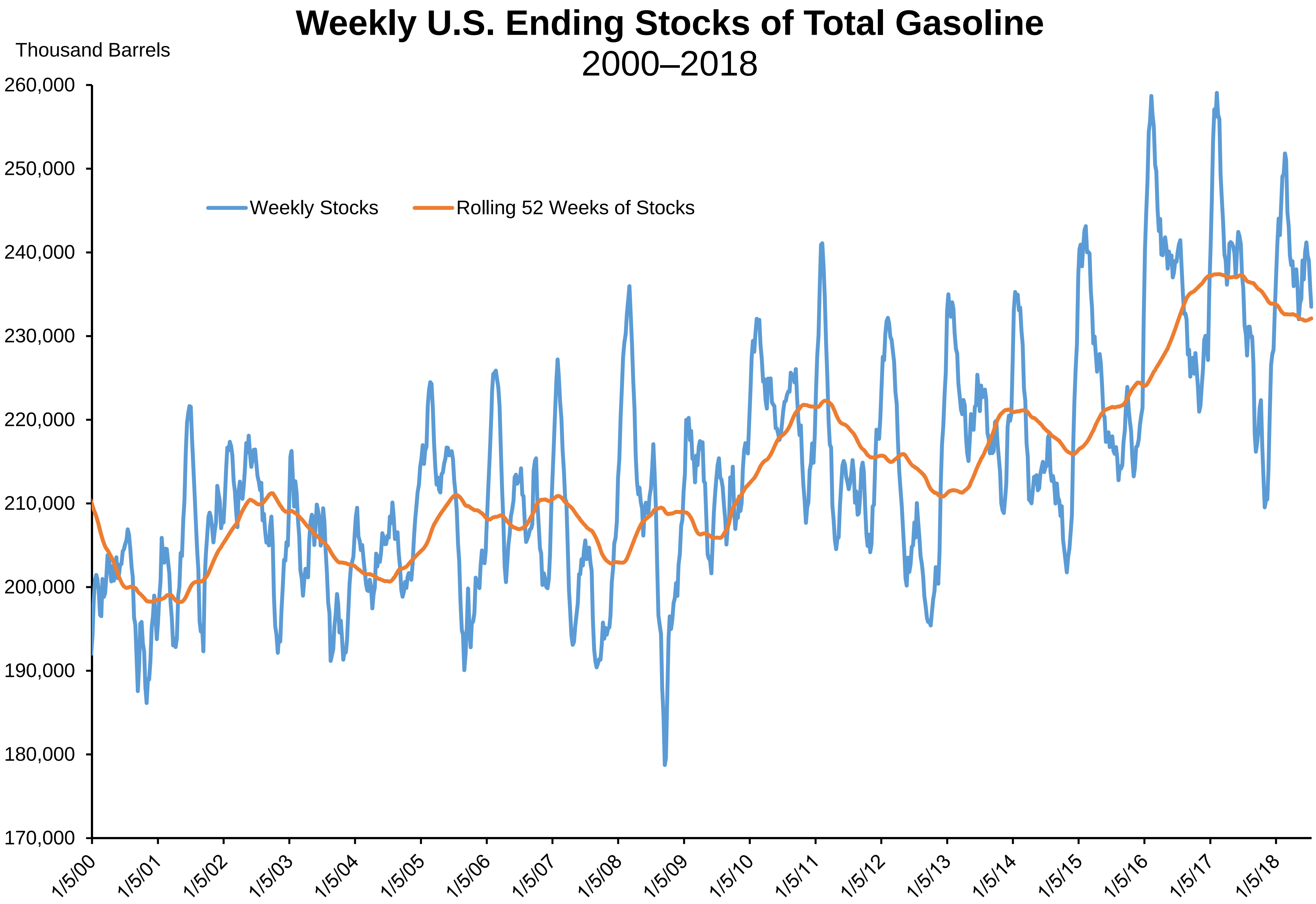
Note: Employments in the following counties are included for refineries active anytime between 2008 and 2018: York County, VA; New Castle County, DE; Hancock County, WV; Chatham County, GA; Gloucester County, NJ; Union County, NJ; Middlesex County, NJ; Warren County, PA; Delaware County, PA; Philadelphia County, PA; and McKean County, PA. Employments in York County, VA, Chatham County, GA, and Middlesex County, NJ are excluded from the currently active refineries series. Refinery employment is defined as jobs under NAICS code 3241. Some employment data points are fuzzed values.

Exhibit 10



Source: EIA

Exhibit 11



Source: EIA

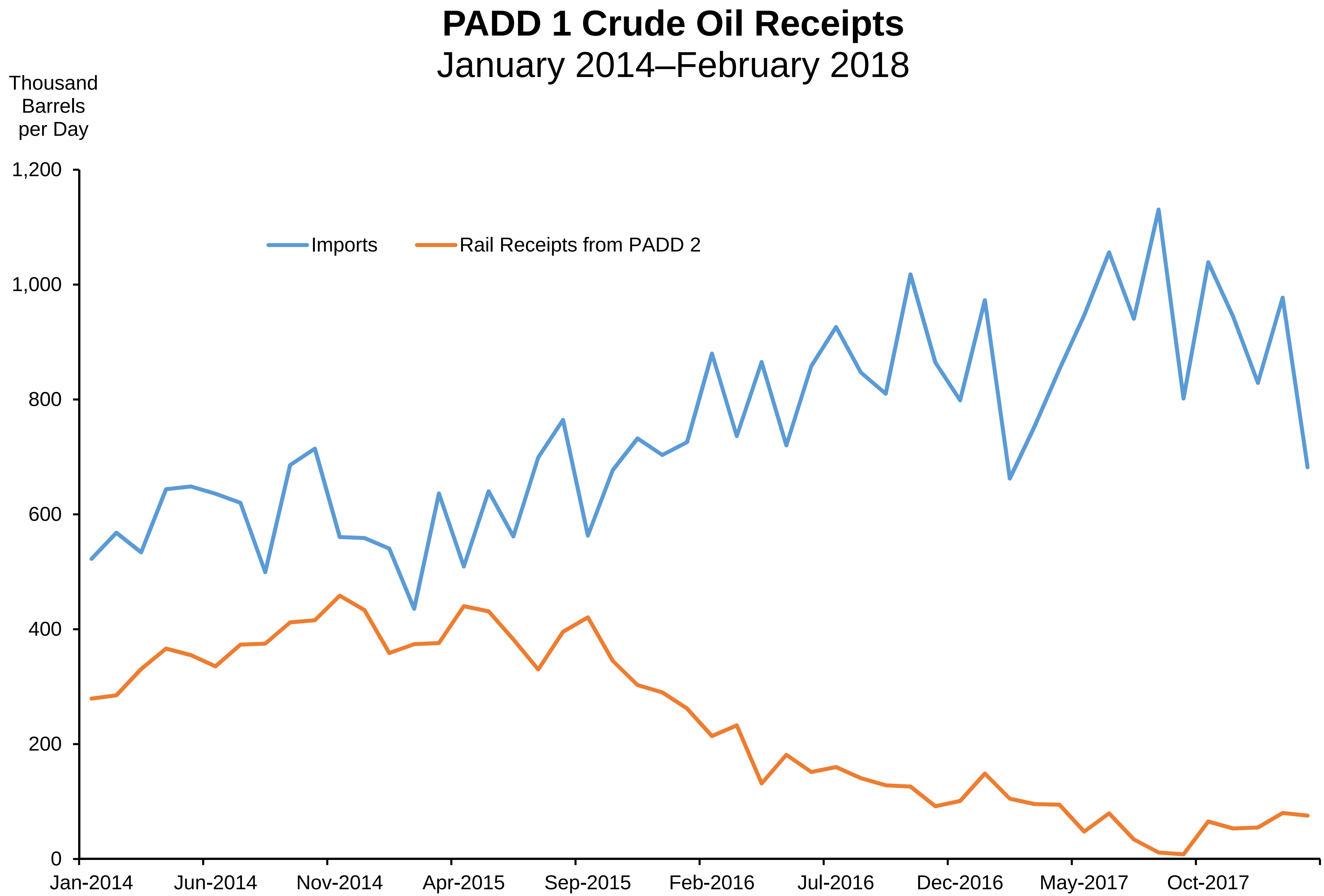
Exhibit 12

Monthly Brent-West Texas Intermediate Crude Oil Spot Price Spread

(Jan 2010 – Sep 2017)

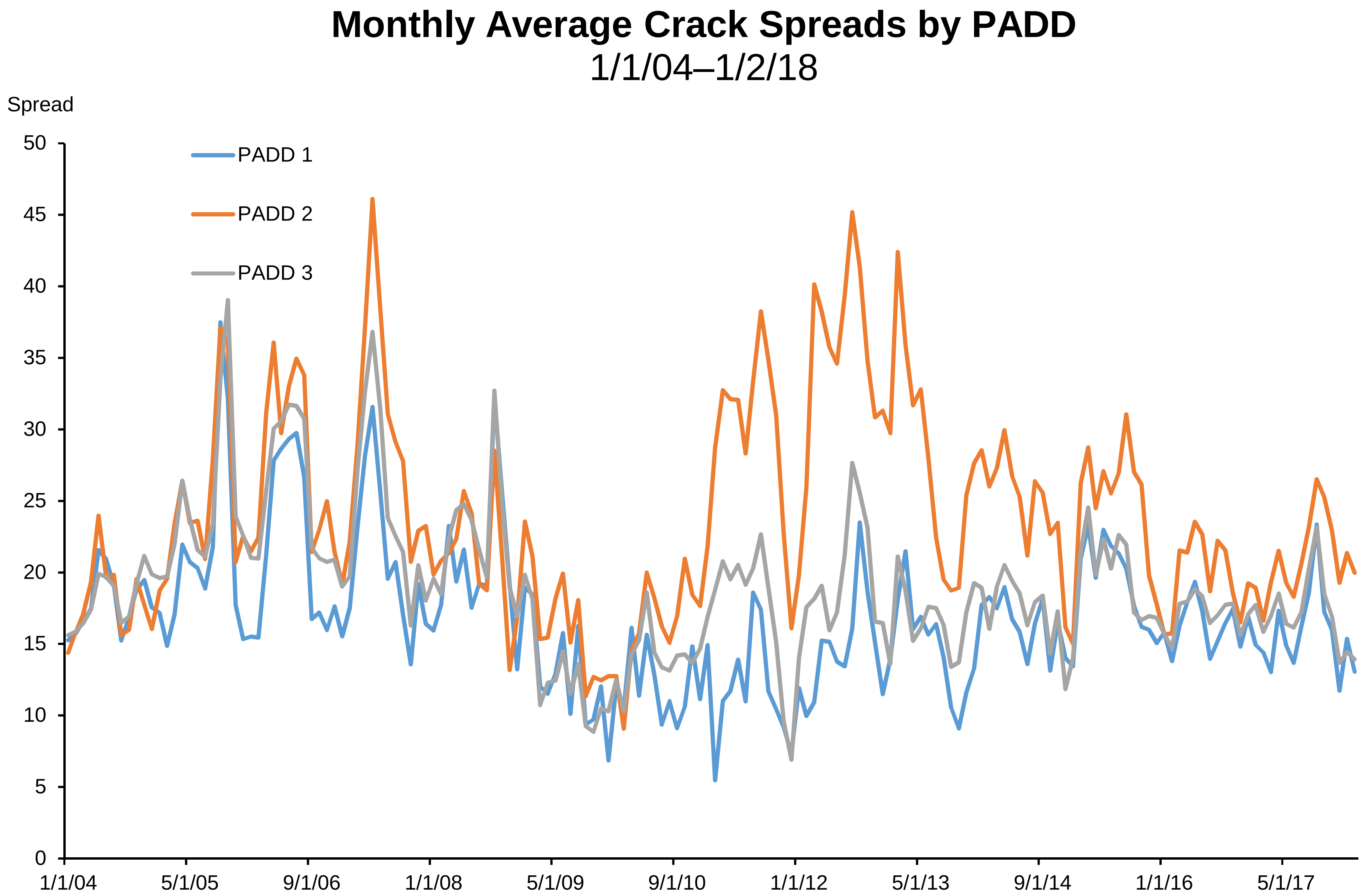
Source: EIA

Exhibit 13



Source: EIA

Exhibit 14



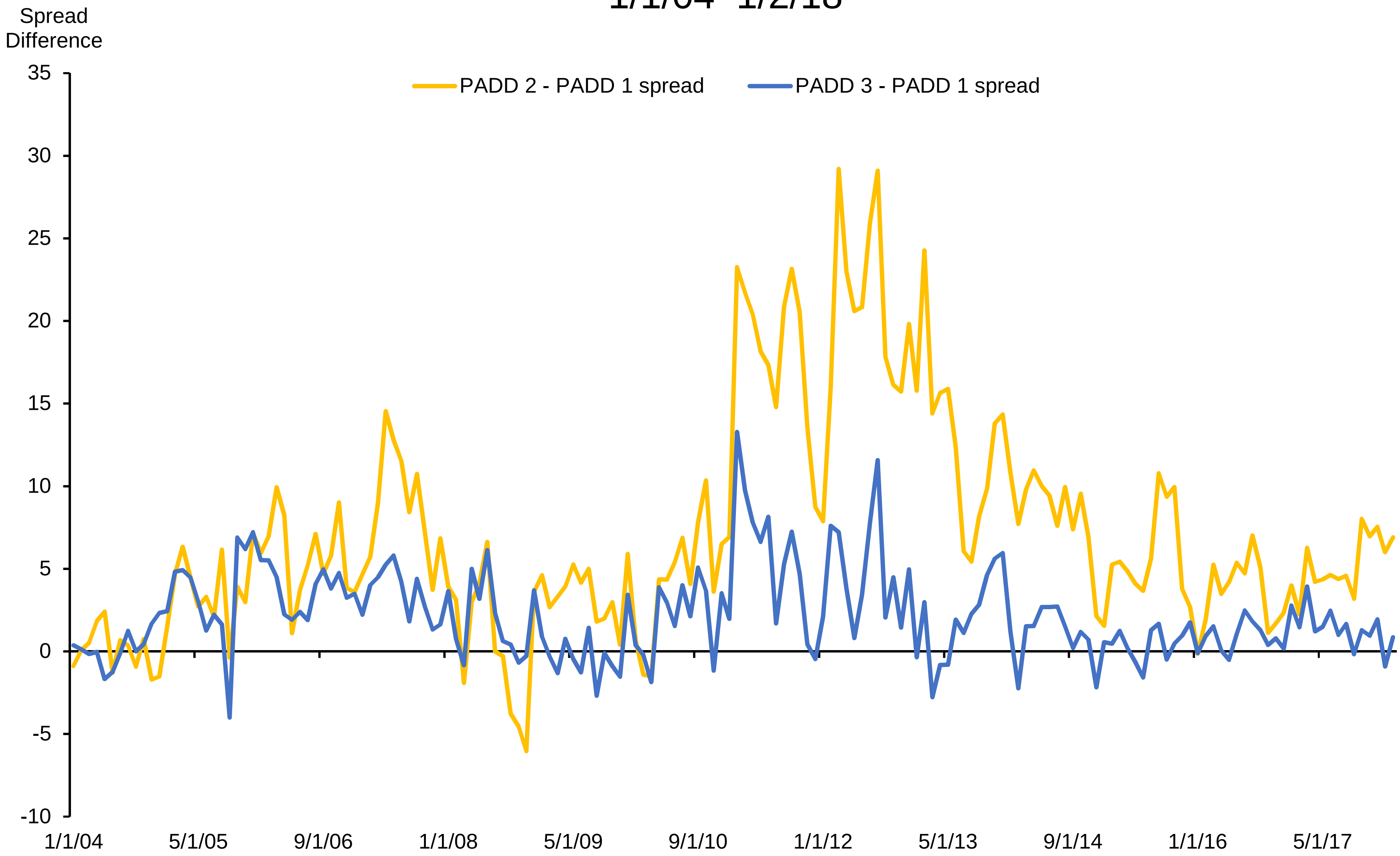
Source: EIA; FRED

Note: Crack spreads are calculated by taking the difference between the average price of refined products weighted by output and the input price for crude (composite), adjusted for inflation using the producer price index.

Exhibit 15

Monthly Difference Between PADD 1 Spreads and PADDs 2 and 3 Spreads

1/1/04–1/2/18

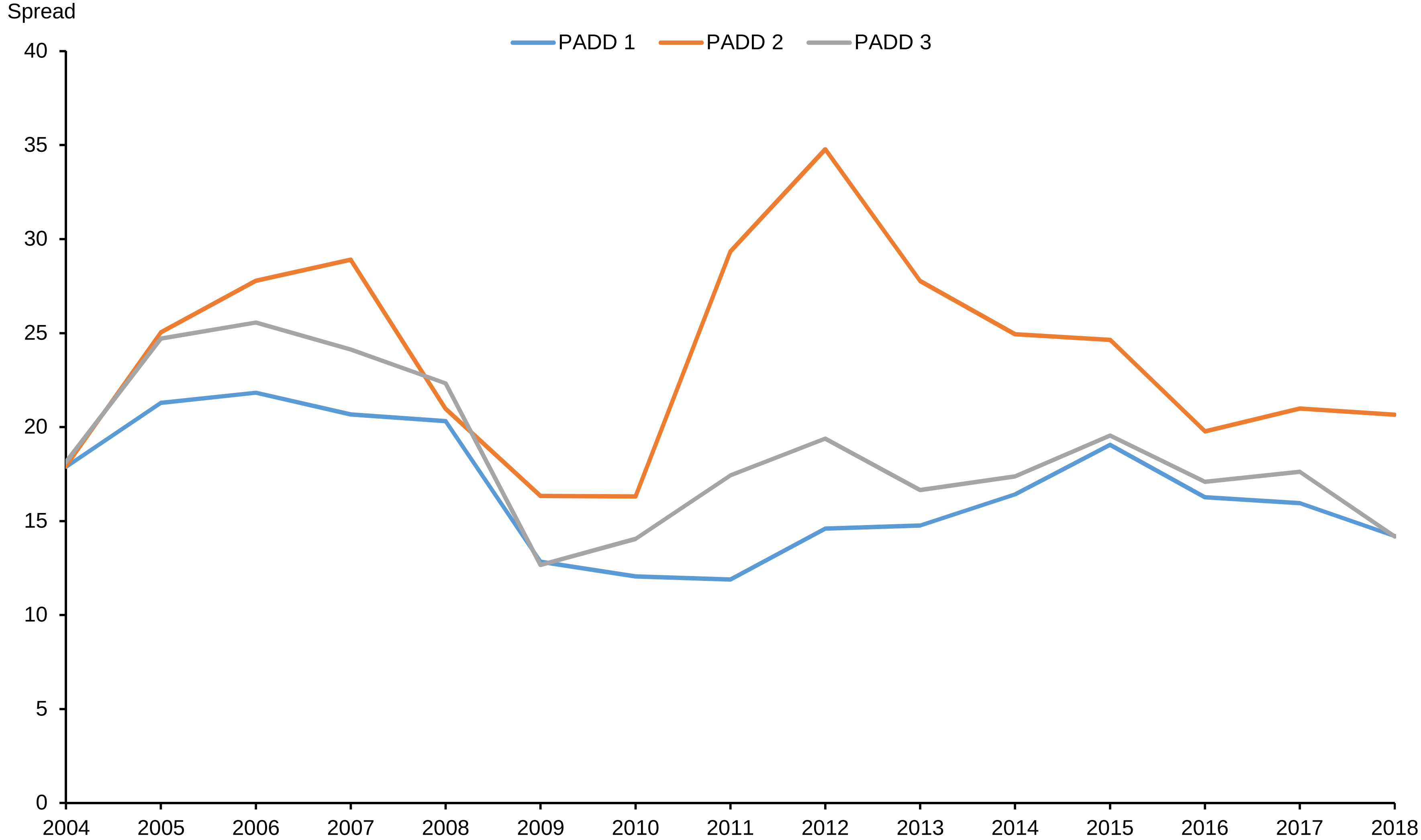


Source: EIA; FRED

Note: Crack spreads are calculated by taking the difference between the average price of refined products weighted by output and the input price for crude (composite), adjusted for inflation using the producer price index.

Exhibit 16

Annual Average Crack Spreads by PADD
2004–2018



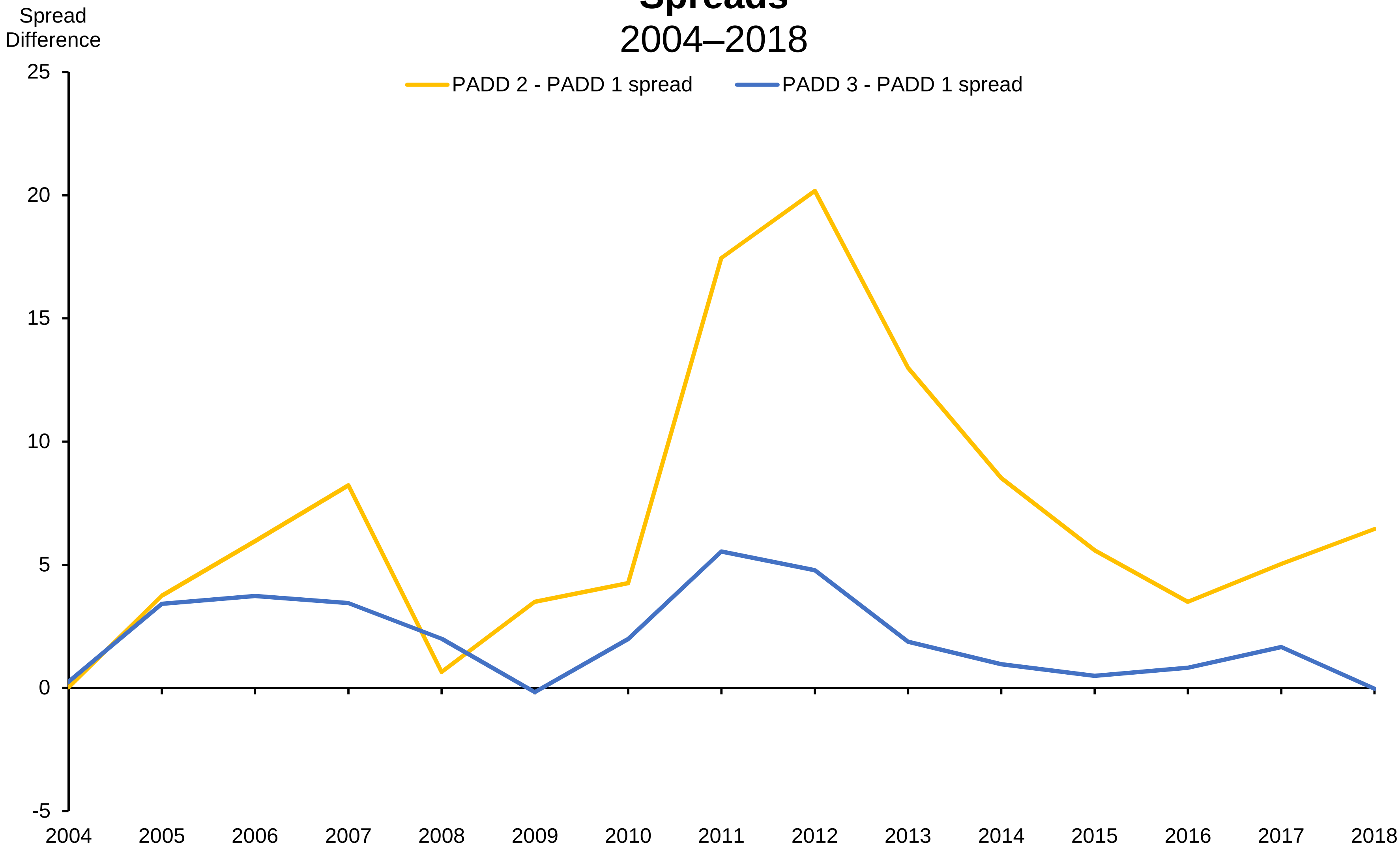
Source: EIA; FRED

Note: Crack spreads are calculated by taking the difference between the average price of refined products weighted by output and the input price for crude (composite), adjusted for inflation using the producer price index.

Exhibit 17

Annual Average Difference Between PADD 1 Spreads and PADDs 2 and 3 Spreads

2004–2018

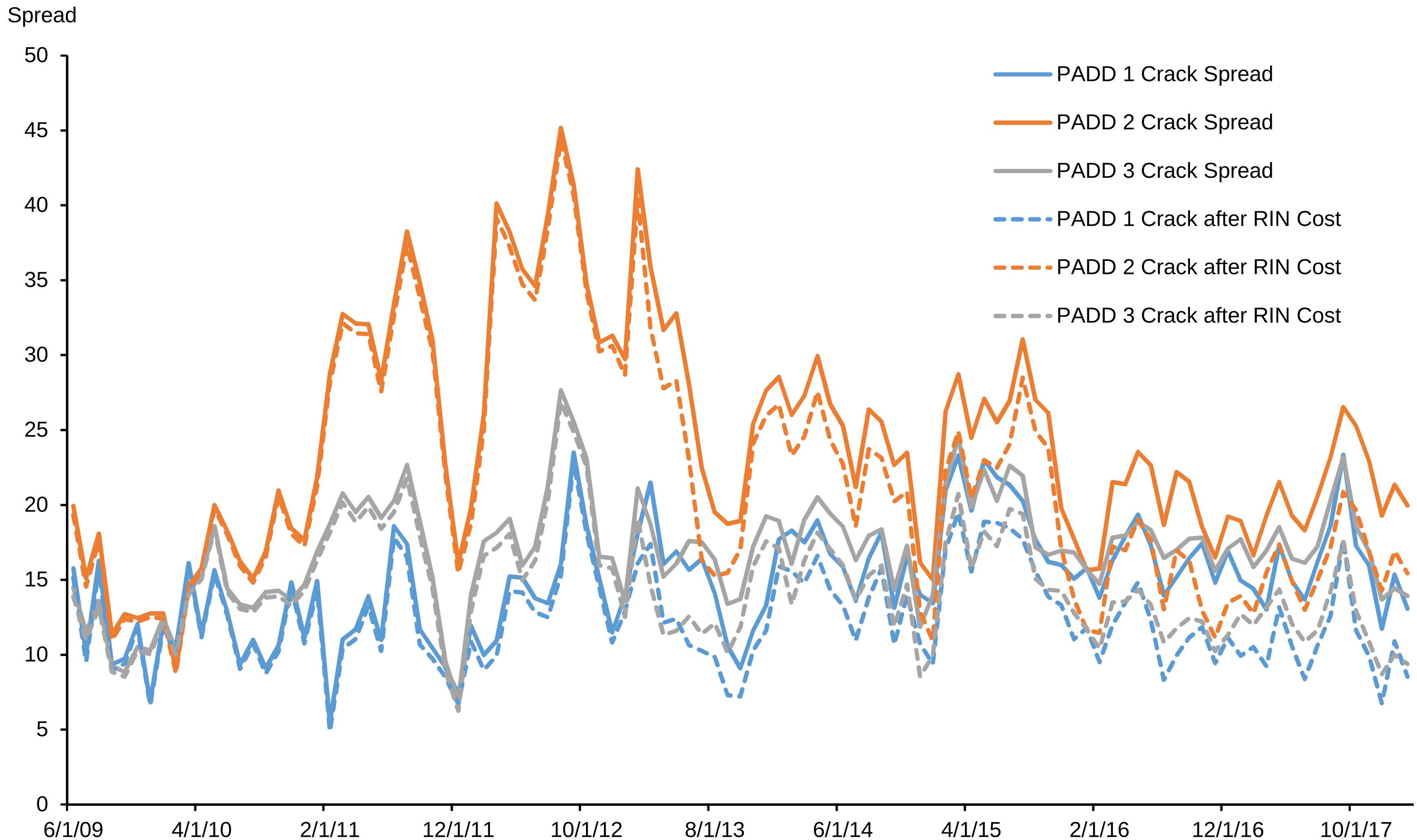


Source: EIA; FRED

Note: Crack spreads are calculated by taking the difference between the average price of refined products weighted by output and the input price for crude (composite), adjusted for inflation using the producer price index.

Exhibit 18

Monthly Average Crack Spreads by PADD and RIN Cost
June 2009–February 2018

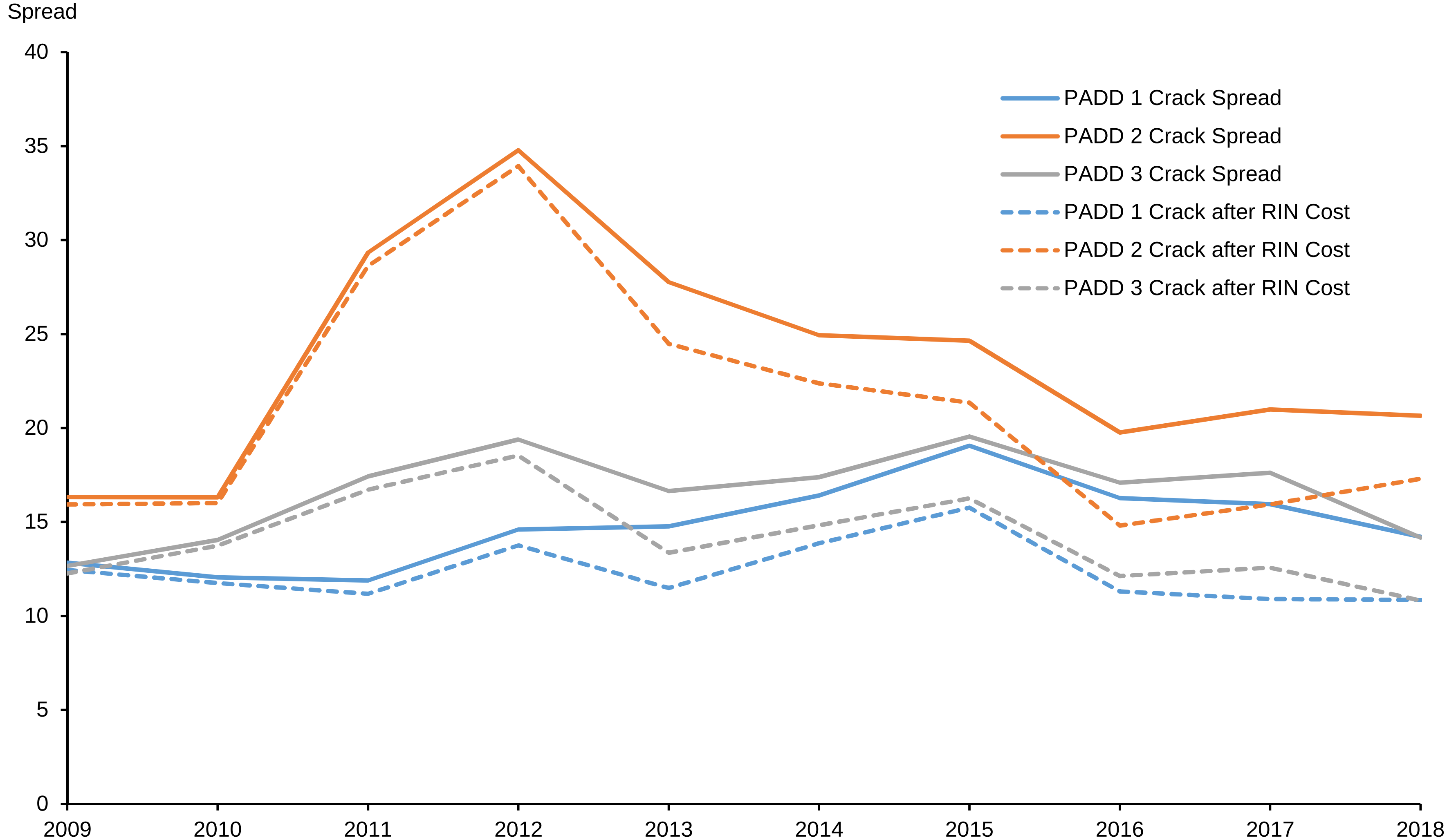


Source: EIA; FRED; OPIS; EPA

Note: Crack spreads are calculated by taking the difference between the average price of refined products weighted by output and the input price for crude (composite), adjusted for inflation using the producer price index. RIN cost per barrel is aggregated at the monthly level using daily RIN price, assuming that renewable fuel standards are met.

Exhibit 19

Annual Average Crack Spreads by PADD and RIN Cost
2009–2018



Source: EIA; FRED; OPIS; EPA

Note: Crack spreads are calculated by taking the difference between the average price of refined products weighted by output and the input price for crude (composite), adjusted for inflation using the producer price index. RIN cost per barrel is aggregated at the monthly level using daily RIN price, assuming that renewable fuel standards are met. RIN data are available starting in June 2009 through February 2018.

Exhibit 20

Changes in Crack Spreads Under Different Scenarios

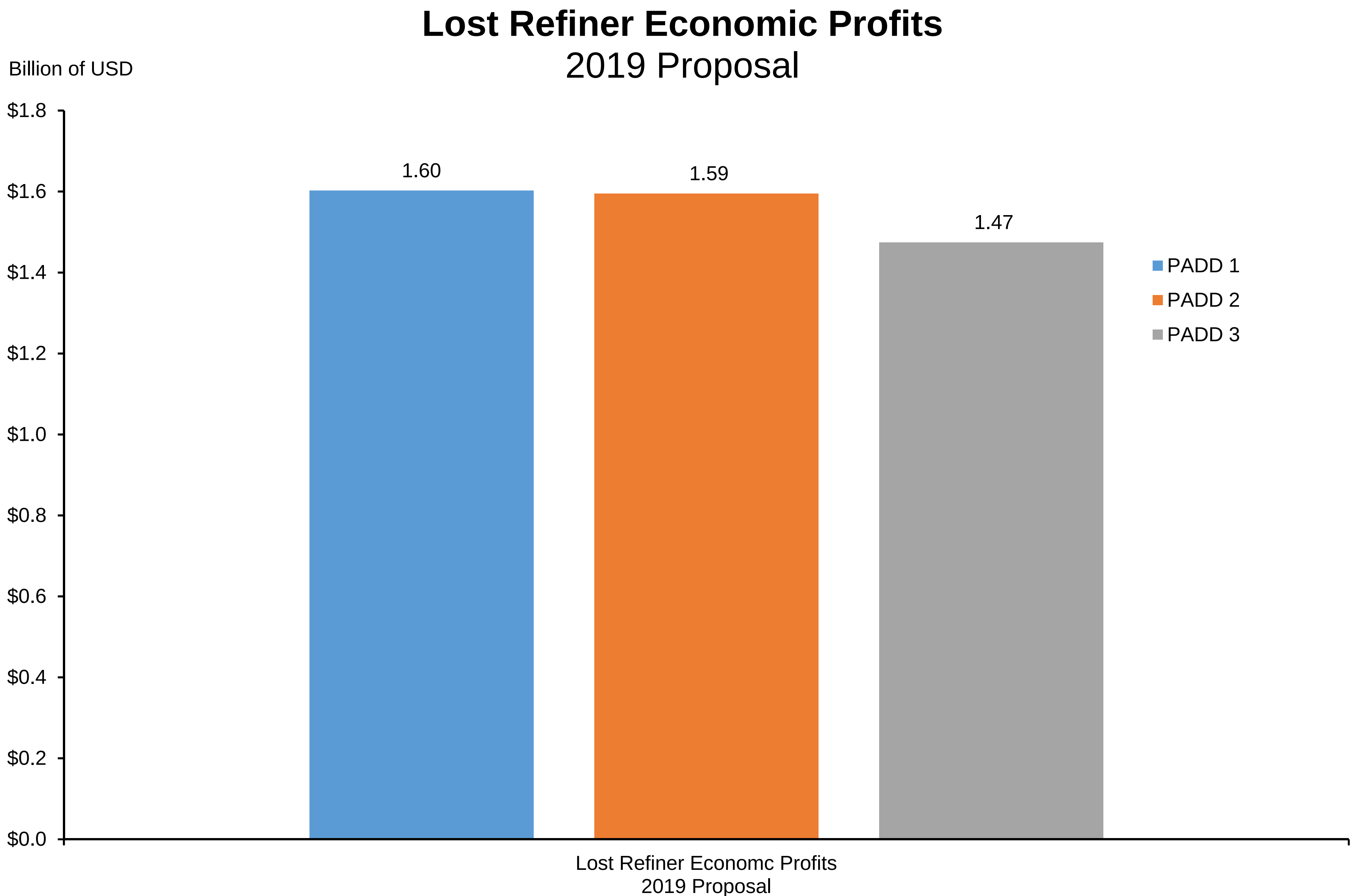
Relative to Zero RIN Price

	2019 Proposal
Crack Spread Difference (RIN Price Is Removed) per Barrel	
PADD 1	-$1.27
PADD 2	-$1.13
PADD 3	-$0.68
Percent Reduction in Crack Spread[1]	
PADD 1	-12.3%
PADD 2	-5.9%
PADD 3	-4.4%

Source: EIA; OPIS

Note:
[1] Percent reduction in Crack Spread was calculated by dividing Crack Spread Difference per Barrel by the difference between RIN price and crude price.

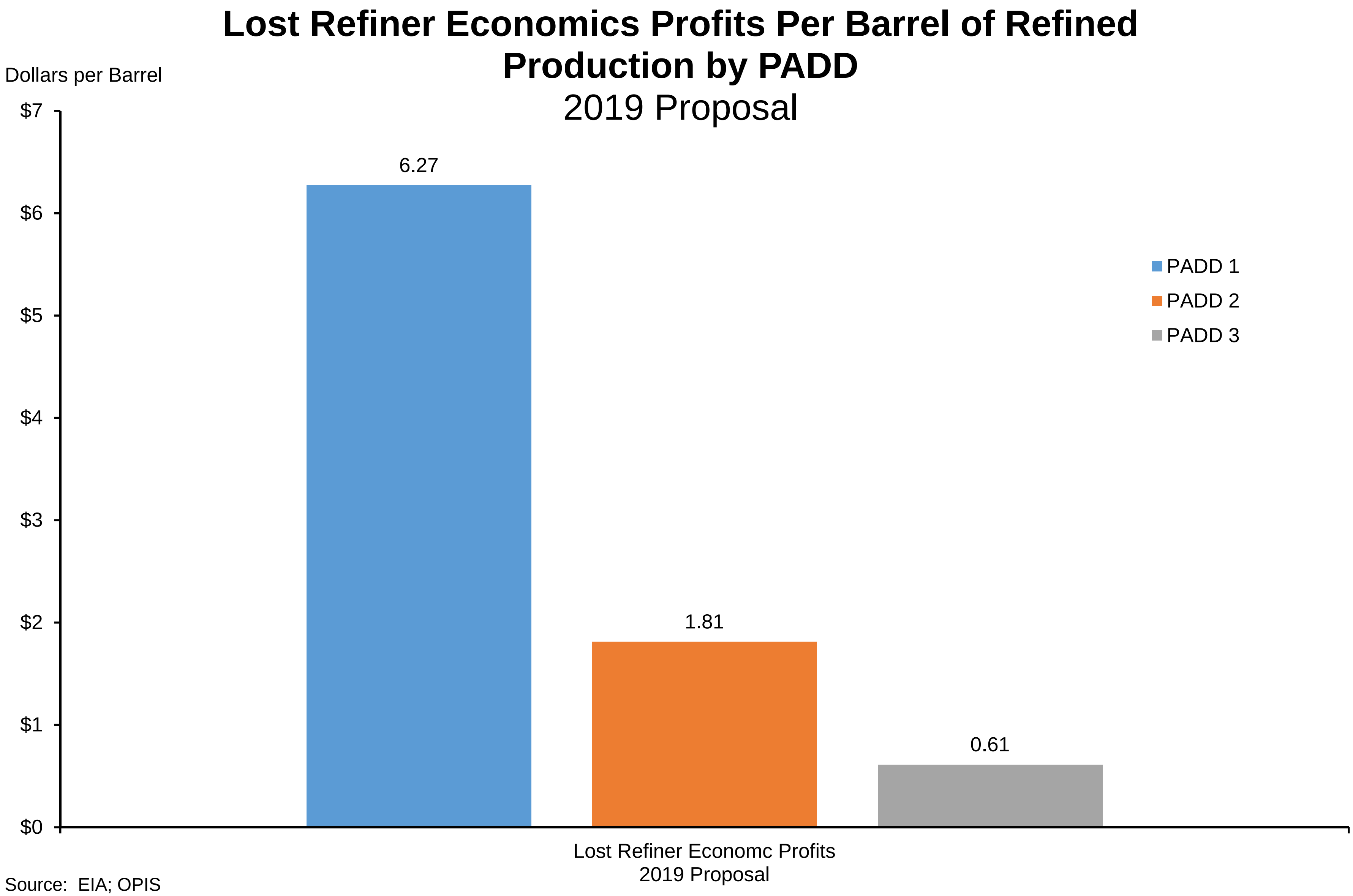
Exhibit 21



Source: EIA; OPIS

Note:
Economic profits differ from accounting profits in that they include opportunity costs and do not include sunk fixed costs of production.

Exhibit 22



Source: EIA; OPIS

Note:
Economic profits differ from accounting profits in that they include opportunity costs and do not include sunk fixed costs of production. Calculated using total lost refiner economic profits under the 2019 Proposal scenario divided by 2017 refinery net production of crude oil and petroleum products for each PADD, respectively.

Exhibit 23

Summary of Annual Economic Impact to Monroe

Scenario	Total PADD 1 Lost Profits (in millions) Relative to Non-Binding Blend Wall	Monroe's Market Share[1]	Lost Profits to Monroe (in millions)
2019 Proposal	$1,602	15.5%	$248

Source: EIA; OPIS

Note:
[1] Estimated based on 2018 Operable Capacity data from the EIA.

Exhibit 24

Monroe Energy LLC: Trainer, PA Refinery[1]
Operating Financials[2]
2012–2017

		Actual Results							Adjusted Results[7]				
Year	Total Operable Capacity[3] [A]	Average Assets (millions)[4] [B]	Operating Revenue (millions)	Costs (millions)[5]	Operating Income After Taxes (millions)[6] [C]	Profit (Loss) by Barrel [C] / [A]	Return on Assets [C] / [B]	Crack Spread (Gross Revenue) Reduction	Operating Revenue (millions)	Costs (millions)[5]	Operating Income After Taxes (millions)[6] [C]	Profit (Loss) by Barrel [C] / [A]	Return on Assets [C] / [B]
2012[8]	-	$1,164	$1,347	($1,410)	($41)	-	-4%	0.877	$1,181	($1,410)	($149)	-	-13%
2013	67,525,000	$1,168	$7,003	($7,119)	($75)	($1.12)	-6%	0.877	$6,142	($7,119)	($635)	($9.41)	-54%
2014	67,525,000	$1,141	$6,959	($6,863)	$62	$0.92	5%	0.877	$6,103	($6,863)	($494)	($7.32)	-43%
2015	67,525,000	$1,229	$4,741	($4,451)	$189	$2.79	15%	0.877	$4,158	($4,451)	($191)	($2.82)	-16%
2016	69,350,000	$1,340	$3,843	($3,968)	($81)	($1.17)	-6%	0.877	$3,370	($3,968)	($388)	($5.60)	-29%
2017	69,350,000	$1,729	$5,039	($4,929)	$72	$1.03	4%	0.877	$4,419	($4,929)	($331)	($4.78)	-19%

Source: EIA; SEC Form 10-Ks; Reuters

Note:
[1] Monroe Energy LLC was acquired by Delta Air Lines in 2012. Financial information is not available for Monroe Energy prior to 2012.
[2] Dollars are shown in millions, except for Profit (Loss) by Barrel, which is shown in dollars.
[3] Total operable capacity refers to atmospheric crude distillation capacity, shown in barrels per year. Data are as of January 1 of the relevant year.
[4] Average assets are calculated by taking the average of the current year total assets and the total assets from the previous year.
[5] Costs are calculated by taking the difference between operating revenue and operating income.
[6] A 35% tax rate is assumed.
[7] Adjusted results are calculated with the assumption that operating revenues are reduced by the crack spread reduction. Costs are held constant from actual results.
[8] The Trainer, PA refinery shut down in September 2011 and did not reopen until September 2012.

Exhibit 25

United Refining Company
Operating Financials[1]
2008–2016

		Actual Results						Crack Spread	Adjusted Results[6]				
Year	Total Operable Capacity[2] [A]	Average Assets (millions)[3] [B]	Operating Revenue (millions)	Costs (millions)[4]	Operating Income After Taxes (millions)[5] [C]	Profit (Loss) by Barrel [C] / [A]	Return on Assets [C] / [B]	Crack Spread (Gross Revenue) Reduction	Operating Revenue (millions)	Costs (millions)[4]	Operating Income After Taxes (millions)[5] [C]	Profit (Loss) by Barrel [C] / [A]	Return on Assets [C] / [B]
2008	23,725,000	$498	$1,658	($1,710)	($33.40)	($2.17)	-2%	0.877	$1,454	($1,710)	($165.99)	($7.00)	-33%
2009	23,725,000	$472	$1,174	($1,116)	$37.61	$2.44	3%	0.877	$1,029	($1,116)	($56.22)	($2.37)	-12%
2010	23,725,000	$505	$1,295	($1,378)	($53.66)	($3.48)	-4%	0.877	$1,136	($1,378)	($157.23)	($6.63)	-31%
2011	23,725,000	$497	$1,543	($1,510)	$21.22	$1.38	1%	0.877	$1,353	($1,510)	($102.15)	($4.31)	-21%
2012	23,725,000	$531	$2,005	($1,660)	$224.17	$14.54	11%	0.877	$1,758	($1,660)	$63.88	$2.69	12%
2013	23,725,000	$586	$1,960	($1,639)	$208.71	$13.53	11%	0.877	$1,719	($1,639)	$52.03	$2.19	9%
2014	23,725,000	$649	$1,751	($1,621)	$84.29	$5.47	5%	0.877	$1,535	($1,621)	($55.68)	($2.35)	-9%
2015	23,725,000	$696	$1,369	($1,244)	$81.69	$5.30	6%	0.877	$1,201	($1,244)	($27.79)	($1.17)	-4%
2016	23,725,000	$698	$967	($946)	$13.84	$0.90	1%	0.877	$848	($946)	($63.47)	($2.68)	-9%

Source: EIA; SEC Form 10-Ks

Note:
[1] Results are shown for the Wholesale segment of United Refining Company, which includes sales of finished products produced at United Refining Company's refineries in Pennsylvania and New York. United Refining Company's fiscal year ends on August 31.
[2] Total operable capacity refers to atmospheric crude distillation capacity, shown in barrels per year. Data are as of January 1 of the relevant year.
[3] Average assets are calculated by taking the average of the current year total assets and the total assets from the previous year.
[4] Costs are calculated by taking the difference between operating revenue and operating income.
[5] A 35% tax rate is assumed.
[6] Adjusted results are calculated with the assumption that operating revenues are reduced by the crack spread reduction. Costs are held constant from actual results.

Exhibit 26

PBF Energy Inc.: All Refineries[1]
Operating Financials[2]
2012–2017

		Actual Results						Crack Spread (Gross Revenue) Reduction	Adjusted Results[7]				
Year	Total Operable Capacity[3] [A]	Average Assets (millions)[4] [B]	Operating Revenue (millions)	Costs (millions)[5]	Operating Income After Taxes (millions)[6] [C]	Profit (Loss) by Barrel [C] / [A]	Return on Assets [C] / [B]		Operating Revenue (millions)	Costs (millions)[5]	Operating Income After Taxes (millions)[6] [C]	Profit (Loss) by Barrel [C] / [A]	Return on Assets [C] / [B]
2012	183,303,000	$3,937	$20,139	($19,218)	$598	$3.26	15%	0.877	$17,662	($19,218)	($1,012)	($5.52)	-26%
2013	183,303,000	$4,334	$19,151	($18,823)	$213	$1.16	5%	0.877	$16,796	($18,823)	($1,318)	($7.19)	-30%
2014	183,303,000	$4,789	$19,828	($19,680)	$96	$0.52	2%	0.877	$17,389	($19,680)	($1,489)	($8.12)	-31%
2015	183,303,000	$5,635	$13,124	($12,764)	$234	$1.28	4%	0.877	$11,510	($12,764)	($815)	($4.45)	-14%
2016	253,565,500	$6,864	$15,920	($15,422)	$324	$1.28	5%	0.877	$13,962	($15,422)	($949)	($3.74)	-14%
2017	307,731,500	$7,870	$21,787	($21,056)	$475	$1.54	6%	0.877	$19,107	($21,056)	($1,267)	($4.12)	-16%

Source: EIA; SEC Form 10-Ks; Reuters

Note:
[1] PBF Energy owns and operates five domestic oil refineries and related assets, which they acquired in 2010, 2011, 2015, and 2016. These refineries are: Paulsboro Refining Company LLC, Delaware City Refining Company LLC , Chalmette Refining, L.L.C., PBF Western Region LLC, Torrance Refining Company. PBF Energy does not provide operating financials at a refinery level, so data are presented for their entire refinery sector. PBF Energy had an IPO in December 2012. Operating Financials are not available for their refining segment prior to 2012.
[2] Dollars are shown in millions, except for Profit (Loss) by Barrel, which is shown in dollars.
[3] Total operable capacity refers to atmospheric crude distillation capacity, shown in barrels per year. Data are as of January 1 of the relevant year.
[4] Average assets are calculated by taking the average of the current year total assets and the total assets from the previous year. PBF Energy restated its reported total assets for 2014 in their 2015 10-K. The restated figure is used for calculations.
[5] Costs are calculated by taking the difference between operating revenue and operating income. PBF Energy restated its reported operating income for 2013 and 2014 in their 2015 10-K. The restated figures are used for calculations.
[6] A 35% tax rate is assumed.
[7] Adjusted results are calculated with the assumption that operating revenues are reduced by the crack spread reduction. Costs are held constant from actual results.

Percent of Refinery Employment by Area[1]

	Percent As of 2017 Third Quarter
Mid-Atlantic PADD 1 States with Active Refineries[2]	0.10%
States in PADD 1[3]	0.04%
Gloucester County, NJ[4]	0.70%
Warren County, PA[4]	2.50%
McKean County, PA[4]	3.69%

Source: U.S. Census Bureau; EIA

Note:
[1] Refinery employment is defined as jobs under NAICS code 3241. Some employment data points are fuzzed values.
[2] The states in PADD 1 with active refineries as of January, 2018 are Delaware, New Jersey, Pennsylvania, and West Virginia.
[3] The states in PADD 1 are Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Florida, Georgia, North Carolina, South Carolina, Virginia, and West Virginia.
[4] The county has one or more active refineries as of January, 2018.

Exhibit 28

Direct, Indirect, and Induced Impact on Employment Assuming Closure of Large Refinery

	Based on ConocoPhillips and Sunoco Report in 2012[1]	State Level[2]
Assume 800 total employees and half of them are reemployed		
Multiplier [A]	18.31	22.00
Direct, Indirect, and Induced Job Losses[3] [B] = [A] * 400	7,324	8,800
Average Labor Income Loss[4] [C]	$73,601	–
Labor Income Loss from Direct, Indirect, and Induced Job Losses [D] = [B] * [C]	$539,051,836	–

Source: "Reemployment Assessment and Economic Impact of ConocoPhillips and Sunoco Closings" ("ConocoPhillips and Sunoco Report"), Center for Workforce Information & Analysis, January 9, 2012, at pp. 54–56; EIA.

Note:
[1] The multiplier is calculated using Total Employment divided by Direct Employment from p. 55 of the ConocoPhillips and Sunoco Report, *i.e.* -1,831 / -100. Total Employment includes direct, indirect, and induced impact employment figures.
[2] The state level multiplier is from p. 54 of the ConocoPhillips and Sunoco Report. The ConocoPhillips and Sunoco report did not include labor income losses at the state level. Scaling up from the regional level is not possible because state job losses include a different mix of industries from the regional job losses.
[3] Multiplied current total employees by mutipliers to calculate direct, indirect, and induced job losses in each scenario.
[4] Calculated using Total Labor Income based on the direct, indirect, and induced impact divided by Total Employment based on the direct, indirect, and induced impact from the ConocoPhillips and Sunoco Report.

Exhibit 29

Supply and Demand Diagram

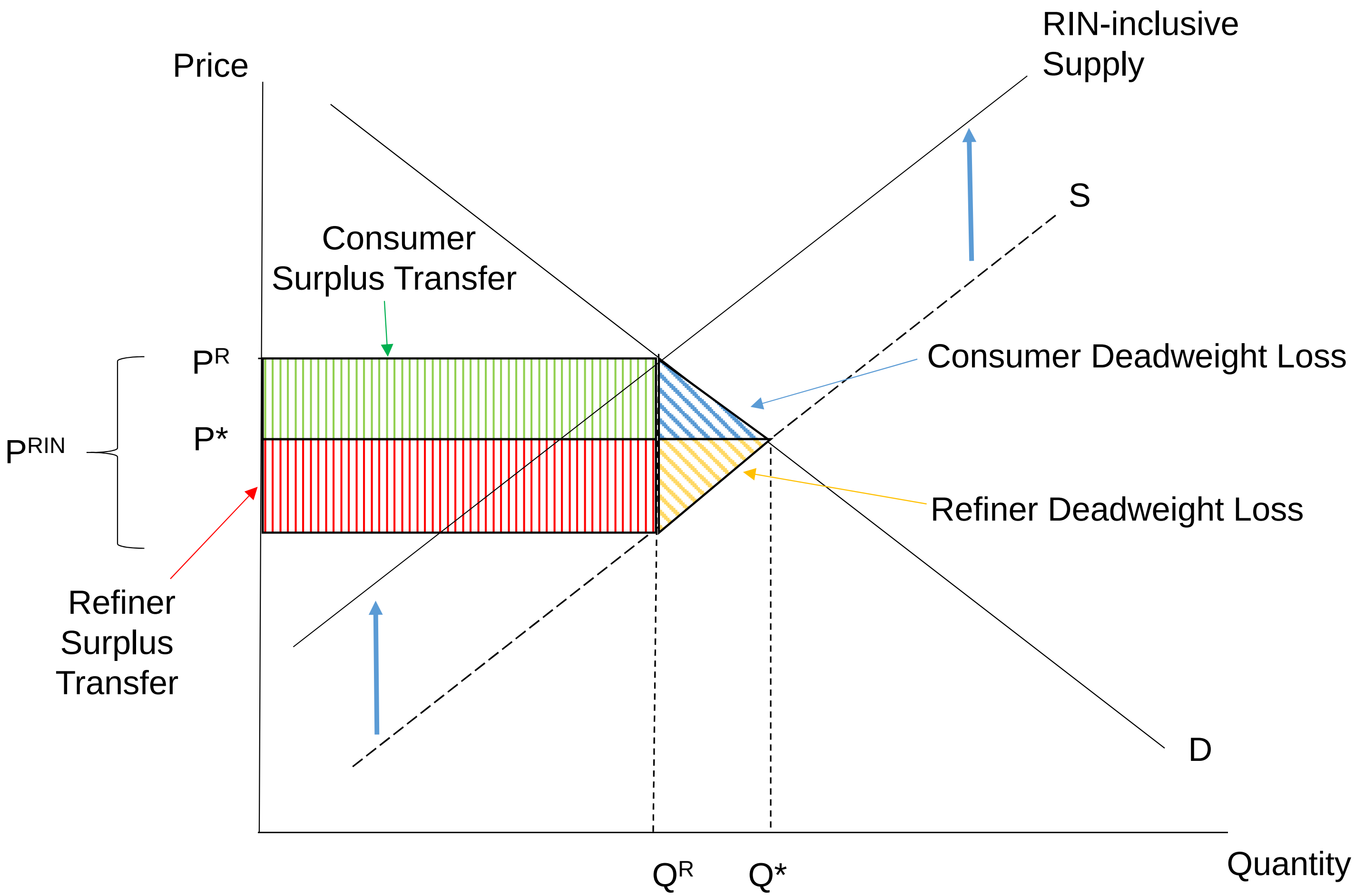
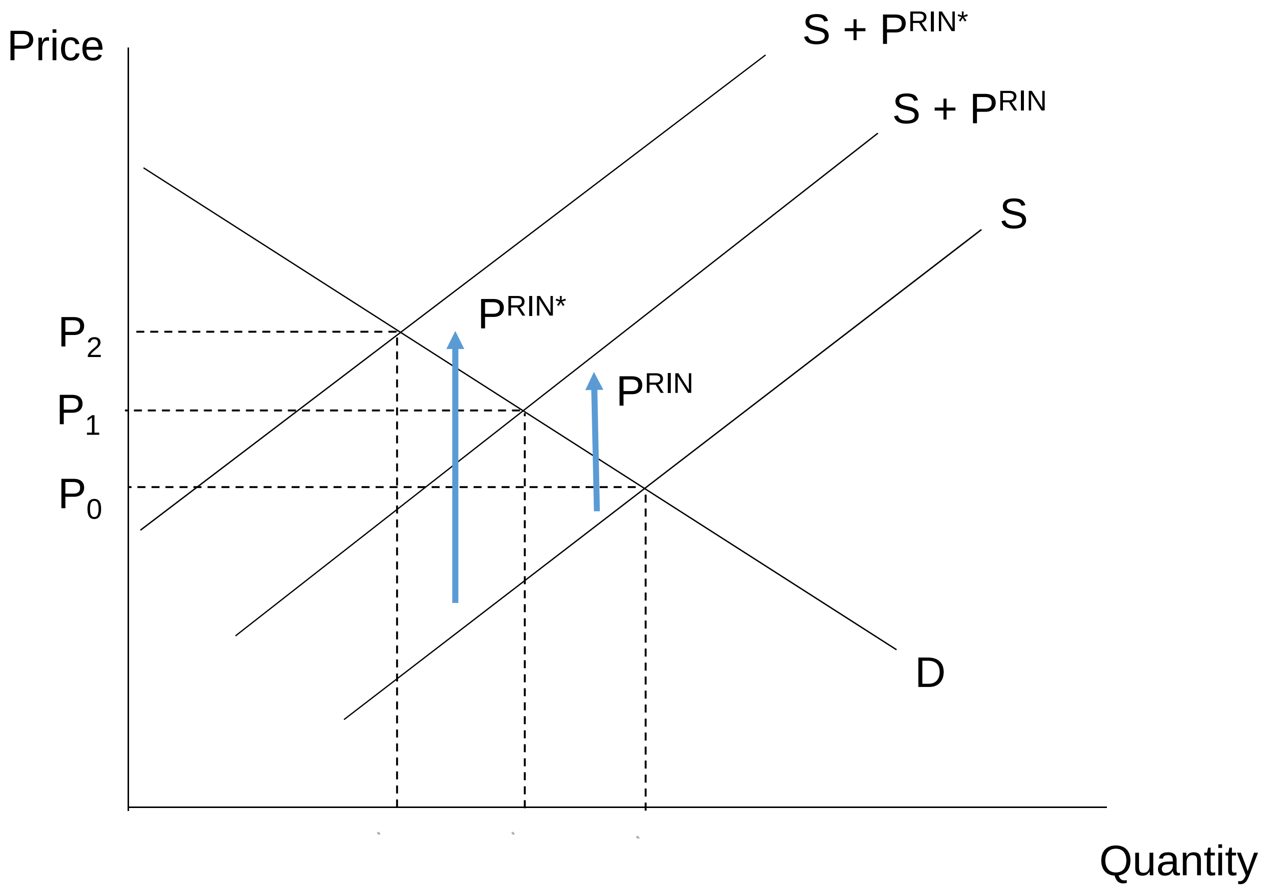
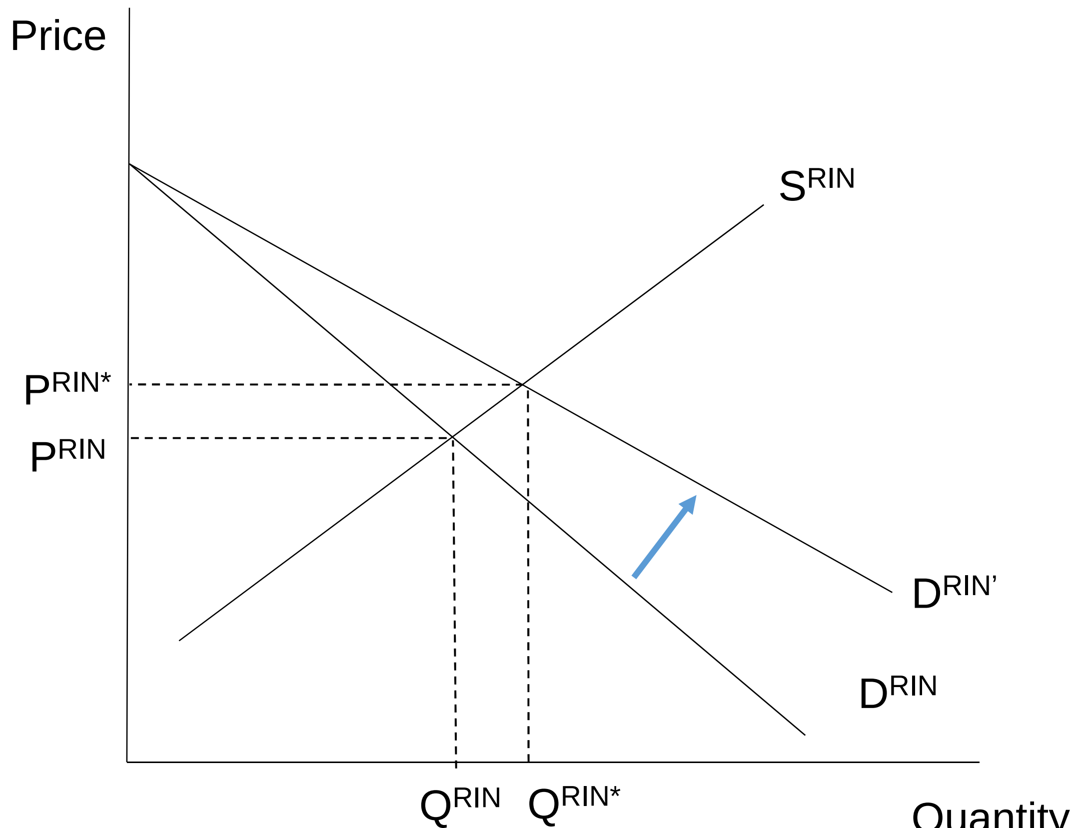


Exhibit 30

Gas Supply and Demand with Different RIN Prices



RIN Supply and Demand



Gas Supply and Demand with Different RIN Obligations

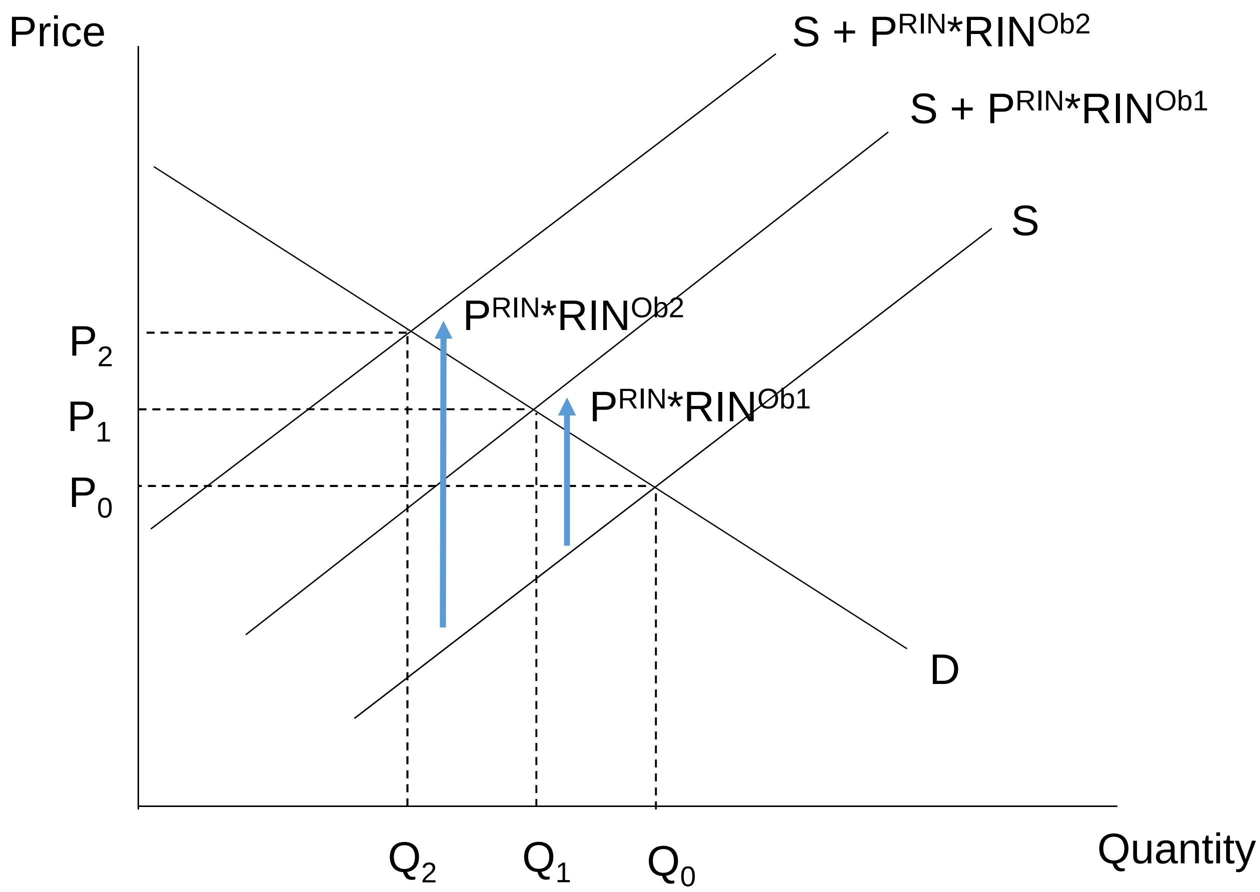


EXHIBIT B

Monroe Energy

August 17, 2018

Hon. Andrew R. Wheeler
Acting Administrator
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460
a-and-r-docket@epa.gov

Via Electronic Submission on Regulations.gov

RE: Comments on Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020; Proposed Rule, 83 Fed. Reg. 32,024 (July 10, 2018), EPA-HQ-OAR-2018-0167

Monroe Energy, LLC ("Monroe") respectfully submits these comments on EPA's Notice of Proposed Rulemaking ("NPRM") with respect to the Renewable Fuel Standard ("RFS") program for 2019. Monroe owns a refinery in southeastern Pennsylvania and is an obligated party under the RFS program.

EXECUTIVE SUMMARY

Monroe urges EPA to exercise its general waiver authority, which allows EPA to waive the RFS program's renewable fuel requirements "in whole or in part" if the EPA Administrator makes either of two determinations: (i) "that implementation of the requirement would severely harm the economy" of a "State, a region, or the United States"; or (ii) "that there is an inadequate domestic supply."[1] Monroe believes that both of these standards have been satisfied for the 2019 RFS program.

First, EPA should invoke its severe-economic-harm waiver authority to reduce RFS volume requirements. Contrary to prior statements by EPA, the standard that EPA should use in deciding whether to exercise its severe-economic-harm waiver authority should not be a "generally high degree of confidence" that severe economic harm would result from the RFS volume requirements; instead, EPA should exercise its judgment based on the available evidence, without any heightened standard tilting the scale in either direction. Moreover, for a waiver to be appropriate, EPA should not require a demonstration that the RFS program would be the *sole* cause of the economic harm but should grant a waiver where the RFS volume requirements would be a significant factor in causing severe economic harm in combination with other economic factors. Nor should EPA consider any countervailing economic benefits of the RFS program in its economic-harm determination.

The severe-economic-harm standard is met here. When renewable fuel is produced, EPA issues a renewable identification number ("RIN") that obligated parties turn in to EPA to show compliance with the RFS requirements. Many refineries struggle with slim margins, and these RIN requirements, as well as the manner in which the RIN market operates, are currently inflicting serious economic harm on those businesses. In some years, Monroe must spend more on RINs than the amount it paid in 2012 to purchase its refinery and more than its annual costs for labor and capital investments. Last year, Monroe's RIN expenses exceeded every other category of expenses other than the crude oil it purchases to refine into fuel. Monroe is not alone in struggling under the weight of its RIN obligations. Earlier this year, Philadelphia Energy Solutions ("PES")

[1] 42 U.S.C. § 7545(o)(7)(A).

filed for Chapter 11 bankruptcy due to the devastating financial impact of its RIN obligations. And in recent years, several Pennsylvania refineries have closed—Marcus Hook in 2012, and Sunoco Eagle Point before that—and several others have come close to closing.

As demonstrated by a new study that examines the economic effects of the RFS program on PADD 1 refiners—information that was not previously available to EPA—"EPA's proposed 2019 RFS requirements have the potential to make a number of East Coast refineries unprofitable," which "will increase the probability that one or more of these refineries may be unable to continue production."[2] Furthermore, the dire economic consequences of the RFS program are not limited to Mid-Atlantic refiners. Each refining job has a large multiplier effect on the regional and national economy. Specifically, each refinery job supports an estimated 18.3 jobs in southeastern Pennsylvania, 22 jobs state-wide, and 61 jobs nationwide.[3] EPA should use its severe-economic-harm waiver authority to reduce RFS volume requirements to prevent further refinery shutdowns and job losses in Pennsylvania and throughout the entire Mid-Atlantic region.

Second, Monroe urges EPA to invoke its general waiver authority due to "inadequate domestic supply." EPA should interpret that phrase to exclude foreign imported fuel and should conclude that domestic supply is inadequate to attain the otherwise-applicable volumes of advanced biofuel and total renewable fuel. The NPRM itself confirms that the cellulosic waiver alone is not sufficient to reduce volume requirements for advanced biofuel and total renewable fuel to levels reasonably attainable based on domestic supply. EPA has projected that 2.65 billion

[2] Craig Pirrong, *Analysis of the RFS Program and the 2019 Proposed Standards* 2 (Aug. 17, 2018) ("Pirrong Study") (attached as Exhibit A).

[3] Center for Workforce Information & Analysis, *Reemployment Assessment and Economic Impact of ConocoPhillips and Sunoco Closings*, Appendix C at 1 (Jan. 9, 2012) (attached as Exhibit B).

gallons of advanced biodiesel and renewable diesel are reasonably attainable in 2019.[4] That projection, however, depends upon hundreds of millions of gallons of imported advanced biodiesel and renewable diesel. Setting mandates that effectively require the importation of massive quantities of foreign fuel—while imposing onerous compliance costs on U.S. refineries—does nothing to advance Congress's objective in establishing the RFS program, which was to move the Nation toward energy independence. Moreover, the shortfall in advanced biodiesel and renewable diesel relative to EPA's projections is likely to be exacerbated by the recent tariffs imposed on renewable fuel imported from Argentina and Indonesia. Thus, even if EPA concludes that "domestic supply" encompasses imported fuel, a waiver would still be required to account for the unavailability of Argentine and Indonesian imports.

EPA should also take additional steps to improve the functioning of the RIN market. As currently structured, the RIN market is highly susceptible to speculation and manipulation, resulting in nearly $1 billion in fraudulent costs.[5] To address these shortcomings, EPA should adopt RIN trading reforms and encourage the Commodity Futures Trading Commission ("CFTC") to work with EPA to regulate RIN transactions by non-obligated parties and non-blenders. The purchase and sale of RINs by these entities—such as banks, speculators, and other middlemen who are not obligated parties—fall within the definition of "swaps" regulated by the CFTC, and increased CFTC scrutiny of transactions involving these parties would reduce market volatility, manipulation, and fraud. EPA should also adopt a collar or cap on the price of a RIN based on 2012 average RIN prices—the last year in which RIN prices were unaffected by speculation. A

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[4] *Renewable Fuel Standard Program: Standards for 2019 and Biomass-Based Diesel Volume for 2020*, 83 Fed. Reg. 32,024, 32,040 (July 10, 2018) ("NPRM").

[5] Doug Parker, E&W Strategies, *White Paper Addressing Fraud in the Renewable Fuels Market and Regulatory Approaches to Reducing this Risk in the Future* 2 (Sept. 4, 2016), EPA-HQ-OAR-2016-0544-0063 ("I believe the cost of these fraud schemes to victims and consumers, including taxpayers and obligated parties, is approaching $1 billion.") (attached as Exhibit C).

price collar or cap would provide predictability to obligated parties and would substantially reduce the incentives and opportunity for market manipulation and fraud.

In addition, EPA should change its treatment of RINs separated from renewable fuel that is exported. Currently, such RINs are retired when the renewable fuel is exported. Instead, those RINs should be available for RFS compliance. That approach is consistent with the statutory goal of furthering American energy independence because it would incentivize further investments in domestic biofuel production facilities.

Finally, Monroe supports EPA's decision to exercise its cellulosic waiver authority to the maximum permissible extent. In particular, EPA is correct not to require the backfilling of missing cellulosic biofuel volumes with non-cellulosic fuels, not to rely on carryover RINs to reduce the size of the cellulosic waiver, and not to adjust RFS standards in light of small-refinery hardship exemptions.

TABLE OF CONTENTS

EXHIBITS

COMMENTS

I. EPA SHOULD EXERCISE ITS GENERAL WAIVER AUTHORITY.

In the NPRM, EPA has proposed to use its cellulosic waiver authority to reduce the statutory renewable fuel volume requirements.[6] Monroe supports EPA's decision to exercise its cellulosic waiver authority to reduce the statutory volumes. By itself, however, the cellulosic waiver is not sufficient to align volume requirements with amounts that can reasonably be obtained without inflicting severe economic harm on those regions in which refiners are concentrated—including Petroleum Administration for Defense District ("PADD") Region 1 where Monroe's refinery is located—and without requiring the importation of hundreds of millions of gallons of foreign advanced biodiesel and renewable diesel.

Congress afforded EPA the authority to adjust statutory volume requirements to prevent these serious economic consequences and this dangerous reliance on imported fuel. Specifically, EPA possesses the authority to waive the RFS program's renewable fuel requirements "in whole or in part" if the EPA Administrator makes either of two determinations: (i) "that implementation of the requirement would severely harm the economy" of a "State, a region, or the United States"; or (ii) "that there is an inadequate domestic supply."[7] EPA acknowledged this authority in the NPRM and "solicit[ed] comment on whether further reductions under the general waiver authority could be justified."[8] EPA would be justified in exercising its general waiver authority on either or both of these grounds.

[6] 83 Fed. Reg. at 32,026.

[7] 42 U.S.C. § 7545(o)(7)(A).

[8] 83 Fed. Reg. at 32,029, 32,048.

A. EPA Should Exercise Its General Waiver Authority For Severe Economic Harm.

EPA can reduce the statutory volume requirements for renewable fuel upon determining that "implementation of the requirement would severely harm the economy . . . of a State, a region, or the United States."[9] Monroe and other obligated merchant refiners in the Northeast are experiencing severe economic harm as a result of the RFS volume requirements.[10] The onerous compliance obligations that the RFS program imposes on Monroe and other refiners make it extremely challenging for refiners to operate profitably, imperiling the livelihoods of their employees and creating damaging economic ripple effects throughout the entire Northeast region.[11] As demonstrated in a recent comprehensive study by economics expert Dr. Craig Pirrong, any further increases in the RFS mandates could inflict devastating financial effects on the PADD 1 region and beyond.[12]

To prevent further refiner bankruptcies and closures—and the far-reaching economic harm that these developments would impose on the broader economy of the PADD 1 region—EPA should exercise its authority to grant a severe-economic-harm waiver that reduces the advanced biofuel volume to 3.88 billion gallons and the total renewable fuel volume to 17.88 billion gallons.

1. A waiver is appropriate whenever, in EPA's judgment, the evidence indicates that the volume requirements would cause severe economic harm.

In the past, EPA has indicated that, before exercising its severe-economic-harm waiver authority, the agency must have "a generally high degree of confidence that severe harm would

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[9] 42 U.S.C. § 7545(o)(7)(A)(i).

[10] *See infra* Part I.A.4.

[11] *Id.*

[12] *See generally* Pirrong Study.

occur from implementation of the RFS."[13] The evidence of severe economic harm to the PADD 1 region discussed below more than meets that threshold. But EPA should not evaluate whether to grant a severe-economic-harm waiver using a "generally high degree of confidence" standard because that standard is inconsistent with the Energy Independence and Security Act of 2007 ("EISA") that established the RFS program. EPA should instead grant a severe-economic-harm waiver whenever, in EPA's judgment, the evidence indicates that the RFS volume requirements would severely harm the economy. This standard would better conform to the statute and the cases that have interpreted it.

EPA is not bound by its prior interpretation of EISA's severe-economic-harm waiver provision. As EPA has acknowledged, it "is not precluded from altering the interpretation of the term 'severe economic harm' that it articulated in prior waiver decisions."[14] EPA should take this opportunity to alter its prior interpretation because the statutory language and context, as well as relevant precedent, all indicate that a waiver is available whenever EPA, in its judgment, determines based on the available evidence that the RFS volume requirements would cause severe economic harm.

The general-waiver provision of EISA requires only "a determination by [EPA], after public notice and opportunity for comment, that implementation of the requirement would severely harm the economy . . . of a State, a region, or the United States."[15] Thus, nothing in the plain language of the statute requires EPA to have a heightened "degree of confidence" about the

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[13] *See Notice of Decision Regarding the State of Texas Request for a Waiver of a Portion of the Renewable Fuel Standard*, 73 Fed. Reg. 47,168, 47,171-72 (Aug. 13, 2008) (denial of petition for waiver); *accord Notice of Decision Regarding Requests for a Waiver of the Renewable Fuel Standard*, 77 Fed. Reg. 70,752, 70,754 (Nov. 27, 2012) (same).

[14] EPA, *Renewable Fuel Standard Program - Standards for 2018 and Biomass-Based Diesel Volume for 2019: Response to Comments* 22, EPA-420-R-17-007 (Dec. 2017).

[15] 42 U.S.C. § 7545(o)(7)(A).

economic impact of the RFS volume requirements. Rather, by its terms, the statute requires nothing more than an evaluation of the evidence and exercise of judgment in the same manner as EPA and other federal agencies make a range of other consequential decisions.

Moreover, EPA's "generally high degree of confidence" standard conflicts with the D.C. Circuit's ruling in *American Petroleum Institute v. EPA* ("*API*") that EPA's cellulosic waiver authority[16] requires EPA to "take neutral aim at accuracy" in its projection of cellulosic biofuel production, without a thumb on either side of the scale.[17] The D.C. Circuit disapproved "EPA's decision to adopt a methodology in which the risk of overestimation is set deliberately to outweigh the risk of underestimation"—an approach that EPA believed would advance the objectives of the RFS program.[18] The D.C. Circuit instead interpreted EISA "plainly to call for a prediction of what will *actually* happen."[19]

EPA's "generally high degree of confidence" standard is incompatible with the "neutral aim at accuracy" required by the D.C. Circuit because it creates an unacceptable risk that EPA will put a thumb on the scale against a finding of severe economic harm and thereby underestimate the risk that the RFS volume requirements will in fact cause severe harm to the economy. In the absence of an explicit statutory mandate, agency determinations should not depend on the agency's specific level of "confidence." By requiring a "generally high degree of confidence" that the RFS requirements would cause severe economic harm, EPA is adding a second, extra-statutory requirement that must be satisfied before it can exercise its general waiver authority. EPA's determination should instead turn on the available evidence and the exercise of the agency's

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16 *Id*. § 7545(o)(7)(D)(i).

17 706 F.3d 474, 476 (D.C. Cir. 2013); *see also id.* at 479 (in light of "the general structure of the RFS program," "the most natural reading of the provision is to call for a projection that aims at accuracy").

18 *Id*. at 479.

19 *Id*.

judgment. Thus, whenever EPA determines, in its judgment, that the evidence supports a finding that the statutory requirements would severely harm the economy of a State, a region, or the United States, it may exercise its general waiver authority (and should have a sound reason if it declines to do so). This standard comports with the D.C. Circuit's instructions in *API* because it is not weighted in favor of underestimation or overestimation.

In addition, *API* rejected EPA's reliance on the same vague notions of statutory purpose that EPA has used to justify its "generally high degree of confidence" standard. In its 2008 denial of a waiver for severe economic harm, EPA stated that it "believe[d]" that this standard "would appropriately implement Congress' intent for yearly growth in the use of renewable fuels."[20] Similarly, in *API*, EPA defended its potentially overestimated projection of cellulosic biofuel production on the ground that it "help[ed] drive the production of volumes that will be made available" and served "the objective of promoting growth in the industry."[21] The D.C. Circuit, however, rejected that policy-based reasoning, concluding that "a tilt . . . toward 'promoting growth' . . . has no basis in the relevant text of the Act."[22] The same is true here. EPA should evaluate the risk of severe economic harm from the RFS volume requirements by aiming for accuracy without a "tilt" in either direction.

The D.C. Circuit's 2013 decision in *API* postdates EPA's 2008 and 2012 severe-economic-harm waiver denials and thus represents a change in circumstances that would amply justify EPA's reconsideration and rejection of its prior interpretation of EISA's severe-economic-harm waiver provision.[23] EPA should bring its interpretation of the severe-economic-harm waiver authority in

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[20] 73 Fed. Reg. at 47,171-72.

[21] *API*, 706 F.3d at 478 (emphasis omitted).

[22] *Id.* at 479.

[23] *See FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009).

line with *API* by making its determination based on the record evidence without any heightened standard.

In the past, EPA has sought to justify its "generally high degree of confidence" standard by reference to the Ninth Circuit's decision in *Davis v. EPA* upholding EPA's high burden of proof for waivers under former Section 211(k)(2)(B) of the Clean Air Act,[24] but EPA's reliance on *Davis* is misplaced. That section allowed a waiver of an oxygen-content requirement when "compliance with such requirement would prevent or interfere with the attainment by the area of a national primary ambient air quality standard."[25] EPA required an applicant seeking such a waiver to "clearly demonstrate" the effects of a waiver.[26] The Ninth Circuit's decision upholding that standard was largely premised on the extensive legislative history "indicating that Congress wanted the EPA closely to scrutinize waiver requests" related to those statutory oxygen-content requirements.[27] There is no equivalent legislative history regarding severe-economic-harm waivers under EISA.[28] And, even if there were some legislative history suggesting that Congress intended EPA to construe the severe-economic-harm waiver provision narrowly, "vague notions of a statute's 'basic purpose' are . . . inadequate to overcome the words of its text regarding the specific issue under consideration."[29]

Moreover, the Ninth Circuit did not conclude that the oxygen-content-waiver provision was unambiguous and compelled EPA's reading of that provision. Rather, it simply concluded

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[24] 348 F.3d 772, 779-80 (9th Cir. 2003).

[25] 42 U.S.C. § 7545(k)(2)(B) (2003).

[26] *Davis*, 348 F.3d at 779.

[27] *Id*. at 780.

[28] *See* 73 Fed. Reg. at 47,171-72 (referring to "intent" of Congress generally but citing no legislative history).

[29] *Mertens v. Hewitt Assocs*., 508 U.S. 248, 261 (1993) (emphasis omitted).

that EPA's interpretation was reasonable and therefore entitled to *Chevron* deference.[30] Thus, the Ninth Circuit's decision in *Davis* presents no obstacle to EPA's adopting a less stringent standard for assessing severe economic harm in the RFS context.

In fact, there are settings outside of the Clean Air Act where EPA does not require an elevated standard of proof to be satisfied before it exercises its waiver authority. For example, under the Toxic Substances Control Act, EPA may exempt toxic chemical manufacturers from certain requirements if the Administrator determines that the exemption "will not present an unreasonable risk of injury to health or the environment."[31] EPA has interpreted this statute to "require[ ] balancing of the harm to health or the environment that a chemical substance may cause and the magnitude and severity of that harm, against the social and economic effects on society of EPA action to reduce that harm."[32] In undertaking this assessment, EPA "will examine the *reasonably ascertainable* economic and social consequences" of its decision.[33] EPA should follow the same approach here.

Similarly, although the process is not transparent, EPA does not appear to apply the "generally high degree of confidence" standard in issuing waivers to small refineries "for the reason of disproportionate economic hardship."[34] None of the judicial opinions reviewing EPA's decisions under that provision indicates that EPA applied a standard comparable to a "generally

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[30] *See Davis*, 348 F.3d at 779-80 ("EPA's interpretation was a permissible one" and "prevails whether or not there is another interpretation consistent—even more consistent—with the statute") (citing *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837, 844 (1984)).

[31] 15 U.S.C. § 2604(h)(4).

[32] 40 C.F.R. § 725.67(c)(1).

[33] *Id*. (emphasis added).

[34] 42 U.S.C. § 7545(o)(9)(B)(i).

high degree of confidence."[35] There is no reason for EPA to utilize different standards when applying these two analogous waiver provisions that are part of the same statutory framework.

For all of these reasons, EPA should not apply a heightened standard when making its severe-economic-harm waiver determination, but should instead make its determination by exercising its judgment based on the available evidence.[36]

2. The RFS program need not be the sole cause of severe economic harm to warrant a waiver.

EPA has interpreted the severe-economic-harm waiver provision of EISA to mean that the agency cannot exercise its waiver authority unless it is shown that the RFS program would be the *sole* cause of severe harm to the economy.[37] But in the real world, severe macroeconomic harm seldom arises as a result of a single factor. In the context of an economy on the scale of a State or entire region of the United States, economic outcomes are almost always determined by multiple factors. It would be absurd to interpret the RFS's statutory framework to limit the availability of a severe-economic-harm waiver to the far-fetched setting in which a single factor—the RFS program's volume requirements—would be solely responsible for the creation of severe economic harm. That interpretation would nullify EPA's severe-economic-harm waiver authority, in violation of settled principles of statutory interpretation.[38] The statutory text should instead be

[35] *See Ergon-W. Va., Inc. v. EPA*, --- F.3d --- , No. 17-1839, 2018 WL 3483282, at *5 (4th Cir. July 20, 2018) (vacating denial of exemption); *Sinclair Wyo. Ref. Co. v. EPA*, 887 F.3d 986 (10th Cir. 2017) (vacating denial of exemption); *Lion Oil Co. v. EPA*, 792 F.3d 978 (8th Cir. 2015) (denying petition for review of exemption); *Hermes Consol., LLC v. EPA*, 787 F.3d 568 (D.C. Cir. 2015) (vacating denial of exemption).

[36] Under the plain text of EISA, EPA may exercise its general waiver authority whenever it determines that "implementation of [EISA's statutory] requirements" under 42 U.S.C. § 7545(o)(2) would cause severe economic harm to a State, a region, or the United States. Thus, if requiring 13 billion gallons of advanced biofuel—the statutory volume requirement for 2019—would result in severe economic harm, then EPA may waive that requirement "in whole or in part" for that reason alone. *Id.* § 7545(o)(7)(A).

[37] 73 Fed. Reg. at 47,170-71.

[38] *See Ratzlaf v. United States*, 510 U.S. 135, 140-41 (1994) (holding that statutes should not be interpreted in a way that causes a provision to have "no consequence").

read to grant EPA the discretion to use its general waiver authority whenever the RFS program's volume requirements would be a significant factor in causing severe economic harm, even if those volume requirements operate in combination with other economic factors existing at the time to bring about that harm.

In reaching its contrary interpretation, EPA pointed to the fact that Congress did not use the word "contribute" to refer to the connection between the RFS program and "severe economic harm."[39] EPA contrasted the absence of the word "contribute" in EISA's severe-economic-harm waiver provision with the "numerous examples" in other parts of the Clean Air Act "where Congress authorized EPA action based on the contribution made by a factor or activity, and worded the statute to clearly indicate this intention."[40] EPA inferred from Congress's word choice that Congress intended to limit the agency's severe-economic-harm waiver authority to circumstances where the RFS program would be the sole cause of the economic harm.

But the uses of the word "contribute" in the other Clean Air Act contexts invoked by EPA are inapt because they *overwhelmingly* refer to an activity "contributing" to *pollution*.[41] In the pollution context, regulators, courts, and regulated parties are often able to determine whether a particular activity is the sole cause of pollution or merely one of several "contributing" factors.[42]

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[39] 73 Fed. Reg. at 47,171.

[40] *Id.*

[41] *See, e.g.*, 42 U.S.C. § 7403(c)(3)(A) ("emissions . . . that contribute to urban air pollution"); *id.* § 7410(a)(D)(i)(I) ("any source . . . which will . . . contribute significantly to nonattainment in . . . ambient air quality standard"); *id.* § 7412(m)(1)(C) ("contribution of atmospheric pollutants to total pollution loadings"); *id.* § 7412(m)(1)(D) ("contribution of such deposition to violations of water quality standards"); *id.* § 7412(m)(3) ("discharges that contribute to such emissions"); *id.* § 7474(e) ("emitting facility . . . will cause or contribute to a cumulative change in air quality"); *id.* § 7492(c)(1)(A) ("transport of air pollutants . . . significantly contributes to visibility impairment"); *id.* § 7503(a)(1)(B) ("major stationary source will not cause or contribute to emissions levels"); *id.* § 7511a(g)(4)(A) ("products the use of which contributes to ozone formation"); *id.* § 7512a(c)(1) ("stationary sources contribute significantly to carbon monoxide levels").

[42] *See, e.g.*, 33 U.S.C. § 1321(f)(2) (oil discharger may escape liability if it can show that the "discharge was caused solely by" some other party, act, or event); 42 U.S.C. § 9607(b) (releasing regulated party from liability under the

In the economic context, however, the distinction between a "significant contribution" to severe economic harm and the "cause" of that harm has little real-world significance because there is almost never a *sole* cause of any economic condition.[43] Indeed, EPA seems to have recognized as much. In the Administrator's recent letters responding to waiver petitions submitted by several States, the Administrator asked the States to identify "the extent to which harm may be attributable to RFS requirements, particularly when there may be *multiple causes contributing to economic difficulties* of a refinery."[44]

Accordingly, EPA should not draw any inferences based on the absence of the word "contribute" in Section 211(o)(7)(A) because there is no meaningful distinction between a significant contribution and causation in the economic setting. Relying on such a flawed inference would be just as atextual as "EPA's equation of 'hardship' and 'viability'" in the context of small-refinery exemptions under Section 211(o)(9)(B), which, the Tenth Circuit held, "improperly transforms Congress's statutory text into something far beyond what Congress plausibly intended."[45] Instead, EPA should adhere to the plain language of EISA and economic reality by inquiring whether the RFS program's volume requirements would be a significant factor in causing

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Comprehensive Environmental Response, Compensation, and Liability Act if it can show that the "release of a hazardous substance and the damages resulting therefrom were caused solely by" some other party, act, or event); *see also New York v. EPA*, 852 F.2d 574, 580 (D.C. Cir. 1988) (upholding EPA's determination that out-of-state sources contributed less than 20% of sulfate in the air in a Pennsylvania national ambient air quality standard subject area and therefore did not "significantly contribute" to the violation); *Air Pollution Control Dist. of Jefferson Cty. v. EPA*, 739 F.2d 1071, 1093 (6th Cir. 1984) (upholding EPA's determination that air pollution emissions from a power station contributed about 3% of the pollutants in an area that violated national ambient air quality standards and therefore did not "significantly contribute" to that violation).

[43] *See, e.g.*, John Lindauer, *Macroeconomics* 534 (4th ed. 2012) ("[I]t is often difficult to identify the precise cause of a[n economic] problem because multiple causes can be occurring at the same time."); Peter J. Moniel, *Macroeconomics in Emerging Markets* 685 (2d ed. 2011) ("There is no single cause of currency crises.").

[44] Letter from E. Scott Pruitt, Administrator of EPA, to Tom Wolf, Governor of Pennsylvania (Jan. 31, 2018) (emphasis added).

[45] *Sinclair*, 887 F.3d at 997.

severe economic harm in combination with other economic factors. At a minimum, EPA has discretion under EISA to apply that causation standard because the statute does not mandate a "sole cause" approach.[46]

3. Countervailing economic benefits from the RFS program cannot offset severe economic harm for purposes of the waiver determination.

In determining whether the RFS volume requirements would cause severe economic harm, the statutory text requires that EPA consider only economic harm to the region at issue and that it disregard any economic benefits that the RFS program might generate in that region or in other areas of the United States.

The plain language of EISA makes clear that economic benefits are irrelevant to the severe-economic-harm analysis. The statutory term "harm" encompasses injury, but not offsetting benefit.[47] Moreover, in other contexts, Congress has enacted statutes that have given EPA *express* authority to consider benefits in addition to harm. For example, in *Michigan v. EPA*, the Supreme Court concluded that when Congress instructs EPA to issue a regulation if, in the language of the statute, it "finds such regulation is appropriate and necessary," EPA must consider both costs and benefits.[48] And in *Entergy Corp. v. Riverkeeper, Inc.*, the Court deferred to EPA's determination that a statutory requirement that the agency establish standards to ensure that cooling-water intake structures at power plants reflect the "best technology available" mandated an analysis of both costs and benefits.[49] In contrast, here, Congress unambiguously instructed EPA to consider only "severe[ ] harm" without even hinting at a consideration of benefits. Thus, the statutory language

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[46] *See Chevron*, 467 U.S. at 845 (holding that agencies' statutory interpretations are upheld so long as they are "reasonable").

[47] *See, e.g.*, *Harm*, *Black's Law Dictionary* (10th ed. online 2014) ("Injury, loss, damage; material or tangible detriment").

[48] 135 S. Ct. 2699, 2706 (2015).

[49] 556 U.S. 208, 217-18 (2009).

in EISA, unlike the statutes at issue in *Michigan v. EPA* and *Entergy Corp*., expressly focuses exclusively on economic harm to the exclusion of benefits.

Furthermore, although the statutory term "may waive" seems to confer discretion, the statutory context indicates that this discretion is very narrow. As the Supreme Court has stated, although "[t]he word 'may,' when used in a statute, usually implies some degree of discretion," this presumption "can be defeated by indications of legislative intent to the contrary or by obvious inferences from the structure and purpose of the statute."[50] For example, it is relevant in construing EISA's severe-economic-harm waiver provision that, when a government program would cause severe economic harm, the government should act to avert that effect, rather than to protect parties who may derive benefits from the market distortions the program creates. That is, the government should "first, do no harm"; the interests of those being "severely harmed" by the government should not take a back seat to the interests of incidental beneficiaries.

Here, the combination of Congress's use of "may waive" and specific criteria for granting a waiver creates at least some ambiguity about whether EPA has discretion to deny a waiver if the statutory criteria are satisfied, including, for example, where EPA determines that the RFS program creates countervailing benefits elsewhere in the economy. Given this ambiguity, the canon of constitutional avoidance requires rejecting an interpretation of the severe-economic-harm waiver provision that would violate the non-delegation doctrine by giving the Administrator unbridled discretion over use of his waiver authority. If the Administrator were able to deny a waiver despite severe economic harm caused by the RFS volume requirements, that would mean

[50] *Cortez Byrd Chips, Inc. v. Bill Harbert Constr. Co.*, 529 U.S. 193, 198-99 (2000).

that Congress has not supplied the requisite "intelligible principle to which the person or body authorized to [act] is directed to conform."[51]

4. The RFS program is currently inflicting severe economic harm on the PADD 1 region.

Whether EPA applies its "generally high degree of confidence" standard or, as Monroe suggests, exercises its judgment based on the available evidence, it is clear that the RFS program is currently inflicting severe economic harm on the PADD 1 region and that this economic harm would become even more serious if EPA adopted its proposed 2019 standards. The compliance obligations imposed by the RFS program make it extremely difficult for refineries in the PADD 1 region to operate profitably. And the closure of even a single refinery, and the resulting job losses, would have widespread economic consequences for the entire Northeast. A severe-economic-harm waiver is therefore urgently needed.

This economic harm is documented in a comprehensive new study by Dr. Craig Pirrong, a leading economics expert, of the effects of the RFS program on PADD 1 refineries. "Using standard economic analysis, and extensive data on the production and refining of motor fuels and biofuels," Dr. Pirrong "quantif[ied] the impact of moving from a mandate where the price of RINs are zero, to the mandate proposed by the EPA for 2019," and found that the "impact is large, on

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[51] *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 472 (2001) (alteration in original). The Supreme Court's recent grant of certiorari in *Gundy v. United States*, 138 S. Ct. 1260 (2018), suggests that the Court may be poised to reinforce the significance of the intelligible-principle requirement. *Gundy*, which will be argued on October 2, 2018, presents the question whether the statute authorizing the Attorney General to decide whether to apply the provisions of the federal Sex Offender Registration and Notification Act, 34 U.S.C. § 20901 *et seq.*, to offenses that occurred before that Act was passed violates the nondelegation doctrine. The grant of review is particularly significant in *Gundy* because, as the United States' brief in opposition noted, all eleven federal circuits that had ruled on that nondelegation claim had rejected it, and the Court had previously denied review on that question on fifteen separate occasions. Br. in Opp. at 21-22, *Gundy v. United States*, No. 17-6086 (Dec. 18, 2017). Given the Court's apparent interest in the nondelegation question, EPA should ensure that it does not adopt an interpretation of EISA's severe-economic-harm waiver provision that would contravene that doctrine.

both consumers and producers."[52] Specifically, "[t]he impact will fall particularly heavily on refiners on the East Coast of the United States," as their refining margins "will fall by 12.5 percent," a "decline in gross margin" that "is large enough to make many refineries on the East Coast unprofitable, and thereby is large enough to cause some refineries to shut down, with a consequent loss of jobs."[53]

The study begins by summarizing the history of multiple refinery closings in PADD 1 over the last decade, which underscores the serious "economic obstacles facing PADD 1 refineries."[54] Since 2009, seven refineries in PADD 1 have shut down, eliminating 641,300 barrels per day of capacity from the region.[55] As a result, only eight refineries currently remain in the PADD 1 region, with PADD 1 refinery production decreasing by more than 50% since 2005.[56] And "[a]s the number of refineries in PADD 1 has decreased, employment in the refinery industry has also decreased."[57]

One reason for these closures is the narrow profit margin with which PADD 1 refiners must grapple.[58] Monroe, for example, currently struggles to turn a profit and has been able to do so in only three of the past six years.[59] In an industry with often very slim margins, the cost to refiners of complying with the RFS program is potentially devastating. In some years, Monroe must spend more on RINs than the amount it paid to purchase its refinery, and more than on any other category

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[52] Pirrong Study at 29.

[53] *Id.*

[54] *Id.* at 9.

[55] *Id*.

[56] *Id*.

[57] *Id.* at 10.

[58] *Id.* at 10-13.

[59] *Id.* at 14-15.

of expenses—including labor and capital investments—except the purchase of crude oil. Indeed, when Monroe purchased its refinery in 2012, a D6 RIN cost less than five cents and RFS compliance costs were manageable. But last year, some RINs peaked at more than $1.20.[60] RIN compliance obligations make it difficult for Monroe just to break even, much less invest the necessary capital for sustaining and expanding operations.

Moreover, it is nearly impossible for refiners to plan for future RIN compliance obligations because the price of a RIN can fluctuate wildly. In one seven-month period during 2013, for example, the price ranged from $0.07-$1.43 per D6 RIN.[61] And last year the price of a D6 RIN peaked at well over a dollar.[62] The combination of annual changes in RIN obligations and highly volatile RIN prices makes it extraordinarily challenging for refiners to engage in mid-term economic planning and budgeting—let alone to attract capital to undertake long-term major investments that create new, high-quality jobs.

The full financial impact of the RFS program has only begun to be felt in PADD 1 in the last few years. Before 2016, PADD 1 refineries were shielded in part from the full impact of the RFS program by the shale boom, which created an "increased supply of low cost crude" in PADD 1.[63] PADD 1 was "a more attractive destination" for shale crude than other parts of the country, "partly [as] a result of transportation bottlenecks" that meant that shale crude could most easily be transported into PADD 1.[64] But "resolution of the supply bottlenecks and a lift on the U.S. crude

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[60] 83 Fed. Reg. at 32,053, Fig. VI.B.2-1.

[61] Gretchen Morgensen & Robert Gebeloff, *Wall St. Exploits Ethanol Credits, and Prices Spike*, N.Y. Times (Sept. 14, 2013), https://www.nytimes.com/2013/09/15/business/wall-st-exploits-ethanol-credits-and-prices-spike.html.

[62] 83 Fed. Reg. at 32,053, Fig. VI.B.2-1.

[63] Pirrong Study at 11.

[64] *Id.*

export ban" in recent years has "led to a decline in the price differential between domestic and international crude and subsequently a decline in rail shipments from the Midwestern United States to PADD 1."[65] As a result, the relative benefits of the shale boom to PADD 1 have diminished.[66] Furthermore, beginning in 2016, stocks of gasoline rose to historic levels, and "[t]he combination of high stocks and weaker than expected demand has put downward pressure on prices, which in turn places refiners under greater financial pressure."[67] Now, the adverse economic pressures that result from the RFS program are being borne in full by PADD 1 refineries. In fact, the RFS program has a particularly dire effect on PADD 1 because refiners in that region are generally less profitable than refiners in the other two regions in the east, PADD 2 (Midwest) and PADD 3 (Gulf Coast).[68] Current margins for PADD 1 refiners "appear to be close to 2009 and 2010 levels, when the United States was in a deep recession and many PADD 1 refiners went out of business."[69]

These RFS-induced economic pressures recently drove PES—the largest PADD 1 refiner, producing 335,000 barrels per day (approximately 27% of PADD 1's capacity)—into Chapter 11 bankruptcy.[70] PES had been created in 2012 when a combination of $25 million in state grants and intervention by Pennsylvania's governor and the White House helped entice the Carlyle Group and Sunoco to rescue the South Philadelphia Refinery from financial distress.[71] As of late 2012, there was "wide speculation and good reason to hope that the region [could] become a leading

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[65] *Id*.

[66] *Id.* at 11-12.

[67] *Id.* at 10.

[68] *Id.* at 11-12.

[69] *Id.* at 13.

[70] *See id.* at 16-17 & Ex. 7.

[71] Patrick Kerkstra, Temple University Center for Regional Politics, *Taking Care of Our Own: How Democrats, Republicans, Business, and Labor Saved Thousands of Jobs and Our Refineries* 27-32 (Dec. 2012), http://www.cla.temple.edu/corp/files/2012/12/Refinery-story-011113.pdf.

energy hub" and could "reassert its old role as one of the leading energy centers on the East Coast."[72] But RIN prices spiked in 2013, and between 2012 and 2017 PES spent $832 million on RINs, which created an "unpredictable, escalating and unintended compliance burden" that amounted to "twice [its] annual payroll, nearly one and one-half times [its] annual average capital expenditures, four times [its] interest expense, and now represents [its] single largest expense after crude oil."[73] As PES explained in its Disclosure Statement in bankruptcy court, the RFS program was "the primary driver behind [PES's] decision to seek relief under the Bankruptcy Code."[74]

PES's bankruptcy "demonstrates the financial fragility of the PADD 1 refiners,"[75] as well as the serious harm that the RFS program causes to PADD 1 refineries, the men and women who work there, and the economy and energy security of both the PADD 1 region and the United States as a whole. Indeed, after PES filed for bankruptcy, EPA entered into a settlement agreement with PES, agreeing that PES "has limited ability to comply with its" RFS obligations and relieving PES of approximately 70% of its renewable fuel obligation—thus highlighting the untenable situation PES was in due to the RFS requirements and to which PES may return in the future absent policy changes by EPA.[76] The bankruptcy court approved the settlement, finding that there was "just cause for the relief granted."[77] And EPA recently made a joint request with PES that, in light of "the unforeseen circumstance of the delay of [PES's] emergence from bankruptcy," the court should extend the settlement agreement's deadlines.[78] EPA's settlement with PES reflects the

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72 *Id.* at 38.

73 *In re PES Holdings, LLC*, No. 18-bk-10122, Dkt. 10, at 1 (Bankr. D. Del. Jan. 22, 2018).

74 *Id.*

75 Pirrong Study at 16.

76 *PES Holdings, LLC*, No. 18-bk-10122, Dkt. 244-1, at 5 (Mar. 12, 2018); *see also* Pirrong Study at 16-17.

77 *PES Holdings, LLC*, No. 18-bk-10122, Dkt. 376, at 2 (Apr. 5, 2018).

78 *PES Holdings, LLC*, No. 18-bk-10122, Dkt. 510, at 2-3 (July 25, 2018).

agency's recognition that the RIN program is not economically sustainable, at least in the case of the largest PADD 1 refinery.

When refineries struggle or close, the rest of the economy suffers because the direct and indirect impacts of layoffs from refineries are "substantial."[79] A study commissioned by the Commonwealth of Pennsylvania estimated that for every refinery layoff, 18.3 jobs will be lost in southeastern Pennsylvania, 22 jobs will be lost across the State, and 61 jobs will be lost across the Nation.[80] Accordingly, if a refinery with 800 employees closes and only half of those employees are able to find employment elsewhere, the refinery's closure will result in more than 7,300 direct, indirect, and induced job losses in the southeastern Pennsylvania region alone, an average labor income loss of $73,000, and a total labor income loss from direct, indirect, and induced job losses in southeastern Pennsylvania of more than $539 million.[81]

These employment multipliers for refinery jobs are much higher than for other industries; iron and steel foundries, for example, have a multiplier of only 6.5 jobs for Pennsylvania and 12 jobs for the Nation.[82] Monroe now supports almost 500 direct refining jobs, which translates into 9,000 indirect and induced jobs in southeastern Pennsylvania and 30,000 nationwide indirect and induced jobs.[83] As the governor of Pennsylvania has explained to EPA, in addition to Monroe's nearly 500 employees, PES employs 1,600 people, and together "these direct jobs support over

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[79] Center for Workforce Information & Analysis, *Reemployment Assessment and Economic Impact of Conoco Phillips and Sunoco Closings*, Appendix C at 1 (Jan. 9, 2012) (attached as Exhibit B).

[80] *Id.*

[81] Pirrong Study at 17-18 & Ex. 28.

[82] Center for Workforce Information & Analysis, *supra*, Appendix C

[83] *Id.*

35,000 indirect jobs in Southeastern Pennsylvania."[84] The Commonwealth's study also details that a thousand lost refinery jobs would cost state and local governments $280 million in tax revenue.[85]

Thus, if Monroe or another PADD 1 refiner were to close, the effects would be immediate, dramatic, and widespread. As the Pirrong Study concludes, "[i]f these significant job losses were to be realized, it would constitute a substantial negative economic impact on the local and regional economy."[86] Each of these job losses is the loss of essential income not merely to a single person, but in many cases to an entire family. The effect in each instance is one of the most serious challenges an adult breadwinner can face—in a word, "severe" economic loss for that person, for those who depend on him or her for support, and—often—for others around them. When households throughout a locale or region are beset by these economic challenges, the harm to that area is itself severe.

Indeed, the effects of a refinery closure in PADD 1 would reverberate across the region and throughout the Nation. A recent report analyzing the economic effects if PES were to close estimated that half of PES's 1,100 workers would have "difficult" re-employment prospects, and another 21% would have "fair to difficult" re-employment prospects.[87] And "any negative actions that could result in a discontinuation of refinery operations could have a significantly negative local economic impact."[88] For every 100 PES employees who are out of work for one year, the

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[84] Letter from Tom Wolf, Governor of Pennsylvania, to Scott Pruitt, Administrator, Environmental Protection Agency, at 2 (Nov. 2, 2017).

[85] Center for Workforce Information & Analysis, *supra*, Appendix C.

[86] Pirrong Study at 18.

[87] David E. Dismukes & Gregory B. Upton, Jr., Acadian Consulting Group, *Economic Impact and Re-Employment Assessment of PES Philadelphia Refining Complex* 13 (Aug. 31, 2017) (attached as Exhibit D).

[88] *Id.* at 4.

Philadelphia area would lose 585 jobs, almost $60 million in labor income, more than $627 million in output, and $12 million in state and local taxes.[89] The Commonwealth of Pennsylvania would lose 1,333 jobs, $128 million in labor income, $797 million in output, and $21 million in state and local taxes.[90] The Central Atlantic region, in turn, would lose 1,483 jobs, $140 million in labor income, $826 million in output, and $23 million in state and local taxes.[91] And the U.S. economy, in the aggregate, would lose 2,669 jobs, $227 million in labor income, $1 billion in economic output, and $45 million in state and local taxes.[92] "In the long-term," moreover, "the sum of these negative economic consequences would be even greater."[93] As the study concluded, "[a] plant closure" on the level of PES would "induce serious economic harm [in] the region."[94] Nor are these concerns merely theoretical. In 2016, PES was forced to lay off approximately 100 workers due to ever-increasing RIN prices.[95] If the RFS program were to lead a refinery like PES to lay off yet more workers, the serious consequences would be felt throughout the entire PADD 1 region and beyond.

In addition, compensating for the loss of refining capacity in the Philadelphia region—which has recently accounted for half of the East Coast's refining capacity[96]—would be logistically difficult and would increase the cost of gasoline and diesel fuel to residents of the

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[89] *Id*. at 20.

[90] *Id.*

[91] *Id.*

[92] *Id.*

[93] *Id.* at 26.

[94] *Id.* at 27.

[95] Pirrong Study at 16.

[96] *See* U.S. Energy Info. Admin., *Potential Impacts of Reductions in Refinery Activity on Northeast Petroleum Product Markets* (May 11, 2012), https://www.eia.gov/analysis/petroleum/nerefining/update/pdf/neprodmkts.pdf.

Northeast. For example, moving fuel from alternative sources along the Gulf Coast would "require overcoming both pipeline and vessel constraints" because the pipeline delivering fuel from the Gulf Coast "is at or near capacity,"[97] and chartering Jones Act vessels is very expensive. Furthermore, the shipping infrastructure for receiving that fuel in Northeast ports—which have traditionally received unrefined crude oil—would "require considerable modification before [it] can be used to receive products."[98] Together, these challenges raise the prospect of substantial job losses, "higher gas prices," and potentially "serious spikes in some areas."[99]

Thus, the closure of even a single refinery in PADD 1 would produce cascading effects that, under any measure, would qualify as severe economic harm. As demonstrated by the recent PES bankruptcy and by the numerous PADD 1 refineries that have shuttered in the past decade, there is a material risk that a PADD 1 refinery will close in the near future. Monroe's recent profitability challenges will only be exacerbated if EPA moves forward with its proposed 2019 RFS standards. As the Pirrong Study explains, "the 2019 RFS proposed requirements are likely to substantially exacerbate the financial difficulties of [PADD 1] refiners, potentially pushing profitable refiners into unprofitability."[100] Indeed, if the proposed 2019 standards had been applied between 2012 and 2018, Monroe would have lost hundreds of millions of dollars almost every year and never would have come close to being profitable.[101] And even PADD 1 refineries that are consistently profitable would have lost hundreds of millions—if not billions—of dollars every

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97 *Id.* at 4.

98 *Id.* at 5.

99 Kerkstra, *supra*, at 28.

100 Pirrong Study at 14.

101 *Id*. at 14-15.

year since 2012 if the 2019 proposed standards had been in place in those years.[102] Plainly, these outcomes (and their cascading effects) are not what Congress intended when it adopted the RFS requirements—and the severe-economic-harm waiver authority is the tool EPA was given to avert them.

The serious economic harm currently being inflicted by the RFS program is confirmed by the fact that EPA in recent years has found the need to provide a far larger number of hardship exemptions than ever before. The EPA Administrator is authorized to temporarily exempt small refineries from their renewable fuel volume obligations under the RFS program for "disproportionate economic hardship."[103] For the 2016 compliance year, EPA granted 19 out of the 20 petitions it received, and for compliance year 2017, EPA has already granted 29 of the 33 petitions, with the four others still pending.[104] In addition, in recent years, courts of appeals have repeatedly vacated EPA's denials of hardship exemptions.[105] These exemptions are concrete evidence of the economic damage that the RFS program is currently causing and will continue to cause in the absence of a severe-economic-harm waiver.[106] Rather than continuing to resort to a

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[102] *Id.* at 14-15 & Exs. 24-26. The fact that some refiners in a region may be profitable in a given year does not preclude EPA from exercising its general waiver authority. Indeed, Congress has indicated that even if a small refinery is profitable, it may still be eligible for a small-refinery hardship waiver. As a Senate report recently explained, "the RFS program may impose a disproportionate economic hardship on a small refinery even if the refinery makes enough profit to cover the cost of complying with the program"; "[s]mall refinery profitability," the report continued, "does not justify a disproportionate regulatory burden where Congress has explicitly given EPA authority . . . to reduce or eliminate this burden." S. Rep. No. 115–132, at 94 (July 20, 2017). The same principle should also apply to larger refiners. Congress has given EPA the authority to reduce the regulatory burden imposed by the RFS program when the statutory volume requirements would result in severe economic harm to a State or region. The fact that in some years some refiners are able to turn a profit does not mean that the RFS program is not inflicting severe economic harm within the meaning of EISA.

[103] 42 U.S.C. § 7545(o)(9)(B).

[104] Letter from William L. Wehrum, Assistant Administrator, Environmental Protection Agency, to Senator Charles E. Grassley (July 12, 2018), *available at* https://www.eenews.net/assets/2018/07/13/document_daily_01.pdf.

[105] *Ergon*, 2018 WL 3483282; *Sinclair*, 887 F.3d 986; *Hermes*, 787 F.3d 568.

[106] It would be erroneous for EPA to rely on these small-refinery waivers as evidence that a severe-economic-harm waiver is unnecessary. These hardship exemptions underscore the serious economic harm that the RFS program

patchwork of facility-specific exemptions, however, EPA should mitigate the economic harm caused by the RFS program on a comprehensive, even-handed basis using the general waiver authority provided by Congress. The small-refinery exemptions and bankruptcy-induced settlements are *ad hoc* solutions to an industry-wide problem that should be anticipated and addressed in a holistic, fair, and uniform manner at the time the annual RFS standards are set.

Numerous States have sought waivers due to the severe economic harm directly attributable to the RFS program. Tom Wolf, the governor of Pennsylvania, asked EPA to exercise its waiver authority "in order to provide relief to refiners in Pennsylvania and elsewhere that are struggling to remain operational given the current and proposed volume requirements."[107] The "request is based upon the high cost of compliance associated with the RFS and the impact these costs have on the continued viability of the oil-refining sector in the Northeast, as well as on the local and regional economies."[108] Governor Wolf noted that the 2018 volume requirements would severely harm "the Commonwealth of Pennsylvania, the entire East Coast region, and the national economy by levying significant and unreasonable costs on merchant petroleum refiners, causing harm to their employees and the states and regions in which they operate. A waiver is imperative to protect not only refining jobs, but also the domestic refining capacity in the U.S."[109]

John Carney, governor of Delaware, has also recently requested that EPA exercise its waiver authority because "[t]he sharp and significant increases in costs to the refinery industry" from the RFS program "will directly lead to devastating job losses in Delaware and throughout the

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is inflicting on those refiners, such as Monroe, that are ineligible for the exemption due to their size, and therefore provide compelling evidence of the need for EPA to exercise its general waiver authority.

107 Letter from Tom Wolf, Governor of Pennsylvania, to Scott Pruitt, Administrator, Environmental Protection Agency, at 2 (Nov. 2, 2017).

108 *Id.*

109 *Id.*

region" and a waiver is necessary to "preserve the steady refinery jobs in Delaware."[110] The governors of Texas and New Mexico have likewise sought waiver relief due to the severe economic harm that the RFS program is inflicting on their States' economies as a result of volatile, unpredictable, and frequently spiking RIN prices.[111]

PADD 1 refiners are already in a tenuous economic position as a direct result of the RFS program. Increasing refiners' RFS compliance costs through adoption of EPA's proposed 2019 volume requirements may make it impossible for at least some of those refiners to realize a profit and remain in operation. A further reduction in East Coast refining capacity, and the attendant losses of direct and indirect employment, would exacerbate the severe economic harm that the RFS program is already causing to Pennsylvania and the entire PADD 1 region. EPA should put an end to these pernicious economic effects by exercising its general waiver authority for severe economic harm.

The Pirrong Study examined the difference in economic impact between EPA's proposed 2019 standards and RFS requirements that are below the blend wall,[112] as Monroe urges EPA to adopt. Monroe believes that EPA should set the RFS requirements so that the implied ethanol inclusion rate is 9.7%, just under the blendwall. As the Pirrong Study calculates, the difference between Monroe's proposed 2019 standards and EPA's proposed standards would "represent[ ] a 12.3 percent decline in PADD 1 refinery margins," a difference of $1.6 billion in lost refiner profits, and a difference of $248 million in lost profits for Monroe alone.[113] Monroe urges EPA

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110 Letter from John Carney, Governor of Delaware, to Scott Pruitt, Administrator, Environmental Protection Agency, at 1 (Jan 30, 2018).

111 *See* Letter from Greg Abbott, Governor of Texas, to Scott Pruitt, Administrator, Environmental Protection Agency (Dec. 1, 2017); Letter from Susana Martinez, Governor of New Mexico, to Scott Pruitt, Administrator, Environmental Protection Agency (Nov. 22, 2017).

112 Pirrong Study at 13-14.

113 *Id*.

to exercise its general waiver authority to avert the severe economic harm that would result from imposing these additional burdens on refiners.

B. EPA Should Exercise Its General Waiver Authority For Inadequate Domestic Supply.

EPA also has the authority to reduce statutory volume requirements where there is an "inadequate domestic supply" of renewable fuel.[114] EPA should exercise that authority for the 2019 RFS volume requirements because, as EPA's own data demonstrate, there is an insufficient domestic supply of advanced biofuel to meet either the statutory mandate or EPA's proposed volume requirements.[115]

The NPRM proposes a total volume requirement for advanced biofuel of 4.88 billion gallons for 2019.[116] EPA premised that total on its expectation that 2.8 billion gallons of advanced biodiesel and renewable diesel (equaling 4.34 billion ethanol-equivalent gallons) will be available in 2019.[117] But EPA further recognized that only 2.65 billion gallons of advanced biodiesel and renewable diesel are "reasonably attainable" in 2019.[118] According to EPA, any higher volume requirement "has a greater potential to increase the incentive for switching advanced biofuel feedstocks from existing uses to biofuel production," and has the potential to cause "market disruptions and/or higher costs."[119] Moreover, a large portion of the estimated 2.65 billion gallons of "reasonably attainable" volume is made up of imported fuel; according to EPA's own numbers, in 2017, there were only 2.33 billion gallons of advanced biodiesel and renewable diesel available

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[114] *See* 42 U.S.C. § 7545(o)(7)(A)(ii).

[115] *See* 83 Fed. Reg. at 32,043, Tbl. IV.B.2-1.

[116] *Id.* at 32,025, Tbl. I-1.

[117] *See id.* at 32,042, Tbl. IV.B.3-1.

[118] *Id.* at 32,040.

[119] *Id.* at 32,039-40.

in the United States, and of that amount, 655 million gallons were imported, leaving only 1.67 billion gallons of domestically produced advanced biodiesel and renewable diesel.[120] The numbers were similar in 2016, when there were only 1.73 billion gallons of domestically produced advanced biodiesel and renewable diesel.[121]

These figures make clear that the NPRM's proposed advanced biofuel requirement is not attainable without substantial amounts of foreign imported fuel and, even then, will cause unwarranted "market disruption." And EPA's conclusion that 2.8 billion gallons are "attainable" is little more than *ipse dixit*, as it "require[s] finding alternative sources for biodiesel imports" from unknown locations, and is further premised on there being a "diversion of advanced feedstocks and/or advanced biodiesel and renewable diesel from existing uses," in order to help make up for lost volumes.[122] Accordingly, there is "inadequate domestic supply" to meet the NPRM's proposed volume requirement for advanced biofuel. EPA should reduce that volume requirement to a level that can be attained without foreign imports and without disrupting the market for advanced biodiesel and renewable diesel.

In last year's final rule, EPA expressly declined to "resolve at this time the interpretive issue regarding whether the term 'domestic supply' should include consideration of imports."[123] EPA should use this year's rulemaking as an opportunity to answer that question and confirm that "domestic supply" excludes imported fuels.

[120] *Id.* at 32,043, Tbl. IV.B.2-1.

[121] *Id.*

[122] *Id.* at 32,047.

[123] *Renewable Fuel Standard Program: Standards for 2018 and Biomass-Based Diesel Volume for 2019*, 82 Fed. Reg. 58,486, 58,517 (Dec. 12, 2017).

Any other interpretation would strip the statutory term "domestic" of all meaning. Congress did not direct EPA to focus on the adequacy of the *total* supply of renewable fuel, but instead on the adequacy of *domestic* supply. The term "domestic" means "[p]roduced in or indigenous to a particular country"[124]—*i.e.*, produced in the United States. If "domestic supply" included foreign imports, it would leave the term "domestic" with no force because the statute would direct EPA to consider the worldwide supply of fuel available to meet RFS volume requirements, which is the same inquiry that would be required if the word "domestic" were omitted altogether from the statute. "[O]ne of the most basic interpretive canons," however, is that a "statute should be construed so that effect is given to all its provisions, so that no part will be inoperative or superfluous, void or insignificant."[125] Construing "domestic" to encompass foreign imports cannot be reconciled with that settled canon of construction.

Other provisions of EISA underscore that "domestic supply" excludes foreign imports. For example, the criteria that EPA "shall" consider when determining the volume requirements for biomass-based diesel (beginning in 2013) and all other renewable fuel (beginning in 2023) include "the impact of renewable fuels on the energy security of the United States," "the infrastructure of the United States," "job creation," and "rural economic development"[126]—all of which are exclusively domestic concerns.

Excluding imports from the "domestic supply" of renewable fuel would also further the objectives of EISA. Congress enacted the RFS program to "'move the United States toward greater energy independence and security.'"[127] To that end, Congress sought to reduce the United States'

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[124] *Domestic*, *American Heritage Dictionary of the English Language* 533 (5th ed. 2011).

[125] *Corley v. United States*, 556 U.S. 303, 314 (2009).

[126] 42 U.S.C. § 7545(o)(2)(B)(ii).

[127] *Monroe Energy, LLC v. EPA*, 750 F.3d 909, 911 (D.C. Cir. 2014) (quoting Energy Independence and Security Act of 2007, Pub. L. No. 110–140, 121 Stat. 1492, 1492 (2007)).

dependence on imported petroleum by fostering a market for biofuels grown in the United States. As Congress stated in EISA, the production of transportation fuels from renewable energy would help "reduce the dependence of the United States on energy imported from volatile regions of the world that are politically unstable, stabilize the cost and availability of energy, and safeguard the economy and security of the United States."[128]

But one of the principal effects of EPA's annual RFS mandates has been to increase the United States' dependence on foreign imports of renewable fuel. Since the RFS program took effect, imports of advanced biodiesel and renewable diesel have constituted an ever-increasing share of the total volume of those fuels consumed domestically, and for the last two years have made up almost 30% of the total.[129] Indeed, because EPA looks to data from previous years to estimate renewable fuel supplies in coming years and to set volume requirements, this past reliance on imported fuel locks in dependence upon foreign-produced biofuel in the future. Construing "domestic supply" to encompass foreign imports would therefore continue to increase U.S. refiners' reliance on imported biofuel and further impair the RFS program's objectives of energy security and independence.

Moreover, the supply of imported biofuel is subject to geopolitical and economic uncertainties that make it a particularly inappropriate factor to take into account when predicting the "domestic supply" of biofuel for the upcoming year because it exposes obligated parties to the risk that the foreign biofuel may not ultimately be available. This is a real possibility in 2019 because, as EPA recognizes, "in December 2017 the U.S. International Trade Commission adopted tariffs on biodiesel imported from Argentina and Indonesia," and "no biodiesel was imported from

[128] Pub. L. No. 110–140, § 806(a)(4), 121 Stat. 1492, 1722 (2007).

[129] *See* 83 Fed. Reg. at 32043-44, Tbl. IV.B.2–1.

Argentina or Indonesia from September 2017—February 2018, after a preliminary decision to impose tariffs on biodiesel imported from these countries was announced in August 2017."[130] Biodiesel imports from these two countries accounted for over 550 million gallons in 2016 and 290 million gallons in 2017.[131] And "[t]he volume of imported biodiesel in 2017 sourced from countries not impacted by the tariffs" was "significantly less than the volume supplied by Argentina and Indonesia," with only 100 to 150 million gallons of biodiesel "imported from countries unaffected by the recent tariffs."[132] Congress would not have intended to subject obligated parties to the risk that trade disputes, wars, or other unpredictable international conditions would limit the availability of imported biofuel. To eliminate that risk—and the inherent unfairness of subjecting obligated parties to the uncertainties of the international fuel trade—foreign imports must be excluded from "domestic supply."

Exercising EPA's general waiver authority based on the inadequate supply of domestically produced renewable fuel would also be consistent with the D.C. Circuit's recent decision in *Americans for Clean Energy v. EPA* concerning the agency's use of the inadequate-domestic-supply waiver in the 2014-2016 rule.[133] The D.C. Circuit rejected EPA's interpretation of the word "supply" in the phrase "inadequate domestic supply" as permitting consideration of "demand-side factors" that "affect[ed] the availability of renewable fuel to market actors downstream from refiners, importers, and blenders, such as fuel retailers or consumers."[134] The court made clear that the term "supply" refers only to "the supply of renewable fuel available to

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130 *Id*. at 32,046.

131 *Id.*

132 *Id.* at 32,047.

133 864 F.3d 691, 710 (D.C. Cir. 2017).

134 *Id.* at 709-10.

refiners, blenders, and importers to meet the statutory volume requirements" and "does not authorize EPA to consider demand-side factors affecting the demand for renewable fuel."[135]

That conclusion is relevant here because statutory words should be interpreted "in their context and with a view to their place in the overall statutory scheme."[136] Accordingly, just as the D.C. Circuit interpreted the term "supply" not to apply to "downstream" market participants "such as fuel retailers or consumers,"[137] EPA should interpret the adjacent statutory term "domestic" to refer only to renewable fuel domestically produced, not to the "upstream" supply of foreign-produced fuels.

To be sure, the D.C. Circuit assumed that the phrase "inadequate domestic supply" would apply to "importers" and noted that, in determining whether to find "inadequate domestic supply," EPA "*may*" consider factors such as "the amount of renewable fuel available for import from foreign producers."[138] But the meaning of the word "domestic" was not before the D.C. Circuit in *Americans for Clean Energy*, where the parties' dispute about the inadequate-domestic-supply waiver focused solely on the term "supply." The court's off-hand comment regarding foreign-produced supply—which was included as one of a long list of factors that EPA "may" consider when determining the available "supply"[139]—was therefore dicta because courts are "bound" only by "those portions of the opinion necessary to th[e] result."[140] In any event, a court's interpretation of an ambiguous statute does not prevent an agency from adopting a different reasonable

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[135] *Id.* at 710.

[136] *Davis v. Mich. Dep't of Treasury*, 489 U.S. 803, 809 (1989).

[137] *Americans for Clean Energy*, 864 F.3d at 709-10.

[138] *Id.* at 709 (emphasis added).

[139] *Id.*

[140] *Seminole Tribe of Fla. v. Florida*, 517 U.S. 44, 67 (1996).

interpretation of that statute,[141] and nothing in *Americans for Clean Energy* suggests that the term "domestic" *must* be read to encompass foreign imports.

Congress did not enact the RFS program to mandate increased dependence on foreign biofuel—particularly at the expense of U.S. refineries, which, as discussed above, are struggling to survive in the face of onerous RFS compliance costs. Accordingly, EPA should invoke its general waiver authority to reduce the advanced biofuel requirement by at least 655 million gallons, which is the quantity of advanced biodiesel and renewable diesel that was imported in 2017, because that imported fuel is not part of the "domestic supply" and, without it, there is inadequate "domestic supply" to meet EPA's proposed volume requirements for 2019. Moreover, even if EPA concludes that foreign imports can be included within the "domestic supply," EPA should reduce the proposed volume requirements for 2019 by 550 million gallons, which is the volume imported from Argentina and Indonesia in 2016, the last full year before the imposition of tariffs that have effectively shut off access to biofuel produced in those two countries. Under either approach, EPA should further reduce the advanced biofuel volume by an additional 150 million gallons to reflect the difference between the 2.8 billion gallons of advanced biodiesel and renewable diesel on which its 2019 proposal is premised and the 2.65 billion gallons of advanced biodiesel and renewable diesel that EPA concluded were "reasonably attainable."[142]

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[141] *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 982 (2005).

[142] To be clear, Monroe agrees with EPA that "imported volumes qualify to be used for compliance with the [RFS] standards." EPA, *Renewable Fuel Standard Program - Standards for 2018 and Biomass-Based Diesel Volume for 2019: Response to Comments* 7, EPA-420-R-17-007 (Dec. 2017). Monroe is *not* arguing that imported biofuel should not be eligible for the RFS program. Monroe's position is that EPA should not set RFS volume requirements based on the expectation of a certain volume of foreign biofuel imports.

II. EPA SHOULD REFORM THE RIN MARKET.

EPA has invited comments regarding potential reforms to the RIN market, explaining that if EPA chooses to initiate a rulemaking on that topic, the agency "would be informed by comments received in response to" the current notice.[143] Monroe urges EPA to initiate a rulemaking on RIN market reforms. Currently, the RIN market is essentially unregulated and is uniquely subject to manipulation, leading to highly volatile prices. In order to improve the operation of the RIN market and eliminate speculation, EPA should limit the purchase of RINs to obligated parties and adopt additional RIN market reforms to increase the liquidity of RINs in the market and prevent the hoarding of RINs. EPA should also work with the CFTC to regulate the RIN market and should institute a RIN price cap. Finally, EPA should allow obligated parties to use RINs associated with exported renewable fuel for RFS compliance.

EPA also solicited comments on "potential changes to the RIN trading system" during last year's comment period, stating that it takes "seriously" the "concerns th[at] current provisions related to RIN trading render the RFS program vulnerable to market manipulation."[144] In last year's Final Rule, however, EPA concluded that it was "not in a position to make significant changes to the RIN system at this time."[145] The agency has now invited comments on RIN market reform for a second time. Two rounds of comments on this topic are more than enough to provide EPA with the information it needs to promulgate meaningful RIN market reforms.

A. The RIN Trading Market Needs Reform.

EPA designed RINs to serve as both a compliance tool and a tradable credit in the EPA-created RIN market. As a result of inadequate monitoring and safeguards, the RIN market has

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[143] 83 Fed. Reg. at 32,027.

[144] 82 Fed. Reg. 34,206, 34,211 (July 21, 2017).

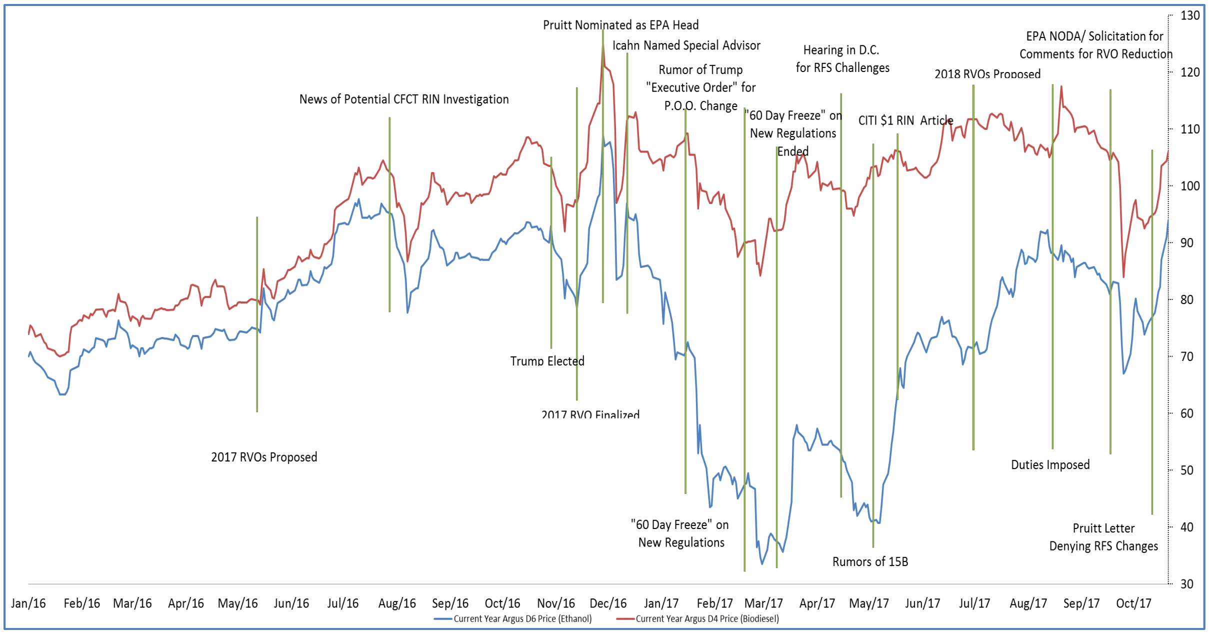
[145] 82 Fed. Reg. at 58,525.

grown into an unregulated $6-$15 billion market (depending on the price of RINs) in which RINs are being hoarded, bought, and sold for profit. Volume is thin, price signals are opaque, and the market is subject to manipulation. On numerous occasions, Monroe has received phantom offers that suddenly vanished and reappeared at higher prices when Monroe attempted to buy at the purported asking price.

RIN prices are also highly volatile, particularly in response to perceived or anticipated regulatory action by EPA. Although the RIN market lacks transparency and EPA has refused to disclose information concerning who holds RINs at any given moment, Monroe believes—and EPA has the information to confirm—that large quantities of RINs are held by banks and other financial intermediaries that are not obligated parties. These entities have no compliance-based reason to buy or sell RINs; instead, their interest is in speculating on changes in RIN prices. That activity further obscures price signals and aggravates volatility.

The structural flaws in EPA's RIN program and inadequate regulatory oversight have led to unpredictable, extreme volatility in the RIN market. The chart below exemplifies how actions or statements can affect the RIN market, making it susceptible to market manipulation and speculation that have resulted in nearly $1 billion in fraudulent costs.[146] For example, the news of a potential CFTC RIN investigation in August 2016 caused RIN prices to fall. This price drop can only be attributed to financial institutions' sales of RINs, as there was no statutory change in volume obligations.

[146] Doug Parker, E&W Strategies, *White Paper Addressing Fraud in the Renewable Fuels Market and Regulatory Approaches to Reducing this Risk in the Future* 2 (Sept. 4, 2016), EPA-HQ-OAR-2016-0544-0063 ("I believe the cost of these fraud schemes to victims and consumers, including taxpayers and obligated parties, is approaching $1 billion.") (attached as Exhibit C).



The opacity and structural weakness of the RIN market have created an avenue for criminal conduct. An investigative study completed in September 2016 by a former Director of EPA's Criminal Investigation Division found approximately $271 million in documented fraud loss as well as $71 million in seizures of illicit profits by federal authorities resulting from RFS fraud cases (as of the date of the study).[147]

Yet merchant refiners and other obligated parties have no choice but to participate in this market because they need to acquire and submit RINs to EPA to demonstrate compliance with the RFS. Refiners like Monroe that have limited capacity to blend renewable fuel are dependent upon the RIN market to establish compliance. For Monroe, the 2016 cost of compliance was more than $200 million, greater than the cost of purchasing its refinery. Similar to other merchant refiners, Monroe's cost of acquiring RINs in some years is greater than its annual labor costs and is exceeded only by the cost of acquiring crude oil. The market desperately needs to be reformed.

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[147] *Id.* at 7.

Monroe has participated in multiple RFS reform discussions with EPA, the Department of Agriculture, and industry representing renewable fuel producers and farmers to improve the RIN market. Monroe urges EPA to adopt the following rules to regulate the RIN market, many of which were derived from prior negotiations with government and industry:

- data related to the RIN market, such as public posting of RIN prices, must be made publicly available;
- non-obligated parties must sell RINs 30 days after a RIN is generated, in order to prevent the hoarding of RINs;
- only obligated parties may purchase RINs;
- a RIN may not be transferred more than two times before it is turned in for compliance;
- manipulation of the RIN market (including activities such as spoofing, setting artificial price floors, reporting false transaction data, and round trip trades) is forbidden;
- in a given compliance year, any obligated party and any RIN-generating party that has RIN inventory greater than 120% of its prior year's obligation must sell to an obligated party whose RIN inventory is less than 120% of its prior year's obligation, but EPA may issue a waiver of this requirement for asset purchases or other one-time transactions that would affect the party's obligation;
- unobligated parties must sell RINs to an obligated party within 30 days of RIN acquisition.

If EPA adopted these reforms, it would begin to eliminate the vulnerabilities of the current RIN market and to establish a well-functioning market.

B. EPA Should Encourage The CFTC To Actively Monitor The RIN Market.

Monroe was pleased to see EPA enter into a Memorandum of Understanding ("MOU") with the CFTC in March 2016.[148] In the MOU, EPA and the CFTC announced that they can share information, pursuant to 40 C.F.R. § 2.209(c)(1), and conduct joint or separate investigations into

[148] *Memorandum of Understanding Between the Environmental Protection Agency and the Commodity Futures Trading Commission on the Sharing of Information Available to EPA Related to the Functioning of Renewable Fuel Standard and Related Markets*, at 2 (Mar. 16, 2016), https://www.epa.gov/sites/production/files/2016-03/documents/epa-cftc-mou-2016-03-16.pdf.

potential fraud, market abuse, deceptive practices, commodity market manipulation, or other violations relating to the generation of, and trading in, the RIN market.[149]

EPA should encourage the CFTC to oversee RIN market transactions to prevent market manipulation by middlemen who are not obligated parties and do not intend to use the RIN to comply with RFS requirements. Transactions involving these parties fall squarely within the definition of "swaps" subject to CFTC jurisdiction because the non-obligated party is not intending to consume the RIN to comply with the RFS, as required for physical settlement.[150] The CFTC has the jurisdiction and the expertise to help EPA regulate the RIN market. EPA should actively encourage that partnership.

Monroe also urges EPA to act on the prior CFTC recommendations regarding EPA's oversight of the RIN market and implement regulatory changes to allow EPA to collect the data needed to monitor RIN trading in a manner equivalent to other regulated markets. In addition, EPA should seek advice from the Treasury Department on how best to regulate the market and increase its coordination with Treasury and the CFTC to ensure that EPA has the tools to police RIN market manipulation.

C. EPA Should Institute A RIN Price Cap.

EPA should also impose a cap on RIN prices. A price cap would reduce volatility in the market, discourage speculation, and promote the objectives of the RIN system.

As noted above, the dysfunction in the RIN market stems in part from the fact that RIN prices are highly responsive to speculation regarding EPA regulatory actions—specifically, how

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[149] *Id.*

[150] *See Further Definition of "Swap," "Security-Based Swap," and "Security-Based Swap Agreement"; Mixed Swaps; Security-Based Swap Agreement Recordkeeping*, 77 Fed. Reg. 48,208, 48,233-34 (Aug. 13, 2012) (explaining that trades in environmental commodities constitute "swaps" and are eligible for the forward exclusion only if ownership is transferred "so that the buyer can consume the commodity in order to comply with the terms of mandatory . . . environmental programs").

much renewable fuel EPA will require to be blended in an annual rulemaking—and disconnected from economic fundamentals concerning the relative cost of producing renewable fuel. The result is significant price volatility and enormous risks for obligated parties dependent on the secondary RIN market. These parties cannot hedge away the volatility in RIN prices, which means that these risks impose real costs on obligated parties. As a result of these large and highly unpredictable regulatory compliance costs, refiners are hindered in evaluating whether to make capital investments that will be recovered over many years. It is extremely challenging for Monroe and other refiners to make capital investments when they need to preserve cash on hand to mitigate the risk of an unanticipated, significant increase in RIN prices.

One solution to this problem—which not only would reduce price volatility but would also significantly reduce the incentives for speculation by non-obligated parties and the ability of such parties to engage in market manipulation—is for EPA to cap or place a collar on the price of RINs. Monroe proposes that the price of a RIN be capped at the average price in 2012, which was 2.8 cents per D6 RIN; 61.7 cents per D5 RIN; $1.097 per D4 RIN; and 77 cents per D3 RIN.[151] That cap is appropriate because 2012 was the last year in which RIN prices reflected the economic fundamentals of blending renewable fuel in place of petroleum. Beginning in 2013, RIN prices were strongly influenced by speculation concerning the degree to which EPA would set volume requirements in excess of the E10 blendwall, thereby drawing down on the RIN bank and introducing the prospect of RIN scarcity.

From the beginning of the RFS program, EPA has recognized the importance of a neutral compliance mechanism that applies to all obligated parties equally. For example, when EPA first set a 20% rollover RIN limit in its 2007 regulation, EPA declared that the limit would "apply

[151] Source: Argus.

equally to all obligated parties," thus "provid[ing] the certainty all parties desire in implementing the program."[152] Instituting a price cap or collar would promote the purpose of the RIN system by enabling it to serve as an efficient and neutral compliance mechanism that would allow obligated parties to comply on an equal footing regardless of whether they blend renewable fuel.[153]

D. EPA Should Allow RINs From Exported Renewable Fuel To Be Used For Compliance By Obligated Parties.

Under current regulations, an exporter of renewable fuel must retire RINs associated with that exported renewable fuel and cannot use those export RINs to demonstrate compliance with its RFS obligations.[154] This system penalizes domestically produced, exported renewable fuel in comparison to foreign-produced, imported renewable fuel. EPA should instead allow these RINs to be used for compliance by obligated parties.

As a recent presentation by Charles River Associates explained, EPA should allow RINs for exported volumes of ethanol to be used for compliance purposes because "[p]roviding RIN value" for ethanol would "improve[ ] the price position of US-produced ethanol in global markets."[155] Because of the restrictions of the blend wall, there is a limit on the amount of ethanol that can be used domestically. But if EPA allowed RINs for exported volumes to be used for compliance, the "increased exports would result in a net increase in ethanol demand."[156] If EPA instituted this regulation, "[b]y 2020, the RIN value for exporters could increase exports by 1.2

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152 *Regulation of Fuels and Fuel Additives: Renewable Fuel Standard Program*, 72 Fed. Reg. 23,900, 23,934 (May 1, 2007).

153 42 U.S.C. § 7545(o)(5); 72 Fed. Reg. at 23,904, 23,908.

154 40 C.F.R. §§ 80.1427(c), 80.1430.

155 Charles River Associates, *Unobligated RINs for Renewable Fuel Exports: Impact on Ethanol Volumes* 2 (Oct. 16, 2017), *available at* http://www.fuelingusjobs.com/library/public/1-CRA_EthanolVolumes_ExportProposal_10_17_2017.pdf (attached as Exhibit E).

156 *Id.*

billion gallons."[157] Allowing RINs for exported biofuel to be used for compliance purposes would thus increase ethanol demand while also easing the burden caused by the blendwall.

EPA has the statutory authority to adopt this change. To be sure, EISA expressly authorizes EPA to provide for credits for "the generation of an appropriate amount of credits by any person that refines, blends, or imports gasoline" that contains renewable fuel.[158] But the statute does not limit EPA to providing credits only to these parties. There is no reason EPA could not allow an appropriate amount of credits to be used for compliance by an entity that exports renewable fuel as well.

Making this change would enhance RIN market liquidity and provide financial incentives for biofuel producers to invest in expanded production facilities, thus furthering the goal of energy independence. The proposed change would also advance EISA's environmental goal of reducing greenhouse gas emissions. By promoting the production of additional renewable fuel for export, the program would reduce greenhouse gas emissions abroad through the substitution of renewable fuel for petroleum—reductions that Americans would benefit from no less than if they had occurred within our geographic boundaries.

III. MONROE SUPPORTS EPA'S PROPOSAL TO APPLY THE CELLULOSIC WAIVER TO THE MAXIMUM EXTENT.

Although Monroe urges EPA to exercise its general waiver authority to implement further reductions to the RFS volume requirements for 2019, it supports EPA's proposal to exercise its cellulosic waiver authority to the maximum extent, without requiring the backfilling of missing

[157] *Id.* at 6.

[158] 42 U.S.C. § 7545(o)(5).

cellulosic biofuels with non-cellulosic fuels, relying on carryover RINs to minimize the extent of the waiver, or adjusting RFS standards in light of small-refinery hardship exemptions.

First, EPA is correct not to mandate the backfilling of missing volumes of cellulosic biofuel by requiring increased usage of other fuels.[159] Congress recognized that cellulosic technology might not develop as quickly as it anticipated. Accordingly, Congress gave EPA the cellulosic waiver authority so that EPA could reduce the total and advanced renewable fuel requirements by the amount that cellulosic volumes fall short of the statutory requirement,[160] rather than mandating backfilling that would compensate for the shortfall in cellulosic biofuel through increased volumes of other types of renewable fuel. As the D.C. Circuit recently affirmed, EPA enjoys "broad discretion" in exercising its cellulosic waiver authority to reduce the total renewable fuel and advanced biofuel statutory requirements.[161] The "text places only one limitation on EPA's cellulosic waiver authority: Any reduction EPA makes to the advanced biofuel or total renewable fuel volume requirements may not exceed the amount of EPA's reduction to the cellulosic biofuel volume requirement. Beyond that, the provision does not prescribe any factors that EPA must consider in making its decision to lower the advanced biofuel or total renewable fuel volume requirements."[162] Accordingly, EPA has "discretion to consider a range of factors in determining whether to exercise its cellulosic waiver authority."[163] EPA's decision to exercise that authority to the maximum permissible extent, without requiring backfilling, is therefore consistent both with the plain language of EISA and with the case law construing the relevant statutory provision.

159 83 Fed. Reg. at 32,038.

160 *See* 42 U.S.C. § 7545(o)(7)(D)(i).

161 *Americans for Clean Energy*, 864 F.3d at 733.

162 *Id.* (citation omitted).

163 *Id.* at 734.

Second, Monroe also fully agrees with EPA's decision not to rely on carryover RINs to avoid or minimize the need to reduce the 2019 statutory volume requirements. EPA is correct that "a bank of carryover RINs is extremely important in providing obligated parties compliance flexibility in the face of substantial uncertainties in the transportation fuel marketplace."[164] Carryover RINs are one of the few mitigants for what is otherwise a highly distorted RIN market. Carryover RINs help provide some stability for costs because, as EPA recognizes, they offer a measure of "liquid[ity]" to the market "when sufficient carryover RINs are held in reserve."[165] If carryover RIN reserves were drawn down and then a shock to the system caused an unexpected shortfall in the renewable fuel supply, obligated parties could be left entirely unable to meet their compliance obligations. And, as EPA noted, such a circumstance "could lead to the need for a new waiver."[166] These possibilities confirm the importance of maintaining the current bank of carryover RINs. Moreover, over the last year, the number of advanced biofuel carryover RINs has decreased from 810 million to 640 million,[167] so there is no reason to fear spiraling quantities of carryover RINs. The current volume constitutes only 14% of the advanced renewable fuel volume requirement proposed in the NPRM, well below the 20% maximum allowed by EPA's regulations.[168]

The D.C. Circuit has upheld EPA's treatment of carryover RINs in prior rulemakings, reasoning that "the statute is better read not to require EPA to consider carryover RINs" when

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[164] 83 Fed. Reg. at 32,029.

[165] *Id.*

[166] *Id.*

[167] *Id.* at 32,030.

[168] 40 C.F.R. § 80.1427(a)(5).

determining whether to exercise its waiver authority.[169] "[N]othing in the text of" EISA "indicates that the 'supply' of renewable fuel available in a year must include any available 'carryover' credits from the prior year."[170] The D.C. Circuit therefore concluded that "EPA need not consider carryover RINs as a supply source of renewable fuel for purposes of determining the supply of renewable fuel available in a given year."[171]

Finally, Monroe supports EPA's decision not to adjust the RFS standards for 2019 in light of volumes exempted under Section 211(o)(9), which authorizes EPA to exempt small refineries from the RFS program on the basis of disproportionate economic hardship.[172] As EPA has explained, "at this time no exemptions have been approved for 2019," so any adjustment would be on the basis of an estimate and subject to revision.[173] More fundamentally, hardship exemptions are often evidence of economic harm that is resulting from the RFS program itself. The fact that the program is imposing economic hardship on small refineries is reason to grant relief across the board, not to impose even more onerous obligations on other refineries. EPA is thus correct to "maintain[ ] its approach that any exemptions for 2019 that are granted after the final rule is released will not be reflected in the percentage standards that apply to all gasoline and diesel produced or imported in 2019."[174]

Accordingly, while Monroe believes that EPA should also exercise its general waiver authority based on severe economic harm and inadequate domestic supply, Monroe supports EPA's decision to exercise its cellulosic waiver authority to the maximum permissible extent.

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169 *Americans for Clean Energy*, 864 F.3d at 714.

170 *Id.*

171 *Id.* at 716.

172 83 Fed. Reg. at 32,056-57 (citing 42 U.S.C. § 7545(o)(9)).

173 *Id*. at 32,057.

174 *Id.*

CONCLUSION

Monroe appreciates the opportunity to submit comments on the proposed 2019 Rule.

Dated: August 17, 2018

Respectfully submitted,

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