



**WRITTEN STATEMENT OF
AMERICAN FUEL & PETROCHEMICAL MANUFACTURERS
AS SUBMITTED TO THE
SUBCOMMITTEE ON COUNTERTERRORISM AND INTELLIGENCE**

**Committee on Homeland Security
United States House of Representatives**

on

**“The Implications of Refinery Closures for U.S. Homeland Security and Critical
Infrastructure Safety”**

March 19, 2012

I. Introduction

Chairman Meehan, Ranking Member Higgins and Members of the Subcommittee, thank you for giving me the opportunity to testify at today's hearing on the implications of refinery closures for U.S. homeland security and critical infrastructure safety. I'm Charlie Drevna and I serve as president of AFPM, the American Fuel & Petrochemical Manufacturers.

AFPM is a 110-year old trade association that was known as the National Petrochemical & Refiners Association until earlier this year. Our association represents high-tech American manufacturers that use oil and natural gas liquids as raw materials to make virtually the entire U.S. supply of gasoline, diesel, jet fuel, other fuels and home heating oil, as well as the petrochemicals used as building blocks for thousands of vital products in daily life. Most of our members do not have any crude oil and natural gas production operations. While we do not specifically represent the units of companies that explore and develop oil and natural gas reserves, our refining and petrochemical manufacturer members require a steady, secure supply of oil and natural gas, which is vital to our businesses and our nation's economy and national security.

AFPM members make modern life possible and keep America moving and growing as we meet the needs of our nation and local communities, strengthen economic and national security, and support 2 million American jobs. The entire oil and natural gas sector – including the producers of oil and natural gas – supports more than 9 million American jobs and pays more than \$31 billion a year in taxes to the U.S. government, plus additional funds to state and local governments. According to a recent report from the World Economic Forum/HIS CERA, the oil and gas extraction industry added 150,000 jobs in 2011—9 percent of all jobs created in the U.S. that year— many of which were created here in Pennsylvania.

Contrary to what one might read in the headlines, however, the refining industry is a very competitive business and our members compete not only with each other to provide the highest quality fuels at the lowest cost, but also with foreign refiners, who are able to competitively market fuels in some areas of the country. Increased competition and costs – including both market and regulatory costs – coupled with falling demand have created new challenges for American refineries. Unfortunately, the Northeast has experienced the effects of these challenges firsthand, as three Northeast refineries have closed due to a combination of the factors in the last three months alone. For the 2,000 employees and about 750 contractors associated with those facilities, and more than 36,000 jobs supported by the refineries economic activity including restaurants and other small businesses, these closures are a tragedy. AFPM urges Congress and the Administration to ensure an overly burdensome regulatory environment does not worsen the economic situation and lead to further refinery closures, layoffs, and weakened U.S. energy security.

II. Refining Sector Challenges That Are Leading to Closures

High crude oil costs, a struggling economy, foreign competition, new government regulations, and an uncertain regulatory future have created significant challenges for an already competitive refining industry and led to the announced idling and potential closure of several East Coast refineries.

The three East Coast refineries represent more than 713,000 barrels per day (b/d) of domestic refining capacity. In addition, Sunoco announced that it will have to close its 335,000 b/d Philadelphia refinery if it cannot be sold by July. In an Open Letter to the Community published as a newspaper advertisement, Sunoco President and Chief Executive Officer Brian P. MacDonald wrote: “Despite the best efforts of Sunoco’s refinery employees, our Northeast

refinery business has lost nearly \$1 billion in the past three years.” The primary factors contributing to Northeast refining closures include both market conditions and government policies:

- **Crude Costs:** Crude oil feedstock costs are a refiner’s largest expense and not all crude oil is the same. Northeast refineries were built to use light sweet crude oil as their feedstock to manufacture fuels and other refined products. Absent a multi-billion dollar investment in new equipment and procuring the environmental permits authorizing such modifications, these refineries cannot use lower-cost sour crude, making them uncompetitive with refineries using the more affordable crude. There are many factors driving up the price of crude oil, including global unrest, increasing demand, tightening supplies, speculation, and a weakened U.S. dollar. A May 2011 report from the Joint Economic Committee (JEC) found that the weakening of the dollar since 2008, which declined 14 percent, added \$17.04 per barrel to the price of oil (Brent Crude) (Exhibit A).
- **Decreased Demand:** Fuel demand is down in the United States. U.S. gasoline demand peaked at 9.29 million barrels per day in 2007 and is projected to decline 16 percent in the next few years. This decline in demand has created 2.4 million barrels per day of excess capacity in American refineries. Such demand drops are attributable to the recession, higher Corporate Average Fuel Economy (CAFE) Standards and the Renewable Fuel Standard (RFS). The RFS alone has displaced 10 percent of Northeast gasoline supply and nearly 10 percent of the U.S. gasoline supply. Increasing CAFE standards will likely generate an additional 13 percent reduction in demand nationwide, or an amount equivalent to 18 refineries.

- **Regulatory Expenditures:** The U.S. refining sector is facing a blizzard of costly, and in some cases conflicting, regulations that threaten its competitiveness in a global marketplace. Many of these regulations carry little environmental benefit. A Department of Energy report issued in March 2011 concluded that the cumulative burden of federal regulations was a significant factor in the closure of 66 petroleum refineries in the United States in the past 20 years (Exhibit B). The impact of regulations will be discussed in more detail later on in this testimony.

In a recent report, the U.S. Energy Information Administration (EIA) notes that these refinery closures will leave the Northeast and other parts of the East Coast dependent on refined product imports from outside of the region. Some of this lost supply could be replaced by refineries in other regions, since there actually is more than ample supply of finished petroleum products in the U.S. However, EIA notes significant logistical challenges pose sizeable hurdles to getting finished petroleum products to the Northeast. Such a reality could create supply disruptions and require increased imports from Europe and Asia, “notably India.”

Gasoline supply in the midcontinent faces a different set of factors. New oil discoveries on private lands in the Bakken region spanning North Dakota and Montana have provided midcontinent fuel manufacturers with a more affordable (but still expensive) source of crude oil. Lack of port access or infrastructure throughout the region can also *somewhat* mitigate the threat of foreign competition.

Compared to the rest of the nation, consumers in the midcontinent area have actually benefitted from this abundant crude supply, experiencing gasoline prices much lower than the national average in many states (see Exhibit C). However, these costs are still high and the region is also not without its challenges. The rapid expansion in regional crude oil production

has actually created a bottleneck in the region's main crude oil distribution point of Cushing, Oklahoma. This bottleneck has made the actual crude oil slightly less expensive for refiners in this region, but the bottleneck has created a lack of pipeline capacity needed to get the oil out of the distribution center. Given these circumstances, crude oil has had to be sent out of Cushing via rail cars at a cost significantly higher than pipeline shipments. Such costs, as well as time lags in crude shipments, have contributed to area prices being higher than the historical average. TransCanada recently announced plans to build a portion of the Keystone XL pipeline expansion, from Cushing to the Gulf Coast. This will help alleviate some of the bottleneck in Cushing, but will be inadequate in the long term.

The market policy and infrastructure factors impacting the American fuel supply have created a high-cost environment that hampers our nation's economic recovery and threatens our critical refining infrastructure. Unfortunately, government overregulation is making matters even worse. Proposed new regulations and unnecessary tightening of existing standards threaten to raise energy costs for every American consumer, with little or no environmental benefit. They would also have the unintended consequence of strengthening the competitive position of foreign refineries and petrochemical manufacturers, which may lead to additional job losses for America, weaken the U.S. economy, make America more reliant on nations in unstable parts of the world for vital fuels and petrochemicals, and ultimately endanger our national security.

III. Impacts of Regulation on American Competitiveness

AFPM supports sound and sensible environmental and other regulations. Our members are strongly committed to clean air and water, have an outstanding record of compliance with Environmental Protection Agency and other regulations, and have invested hundreds of billions of dollars to dramatically reduce emissions measured by EPA.

As a result of these emissions reductions by our members and by other industries, America's air today is cleaner than it has been in generations. Refiners have cut sulfur levels in gasoline by 90 percent just since 2004. We have also reduced sulfur in diesel fuel by more than 90 percent since 2005 and reduced benzene in conventional gasoline by 45 percent since 2010.

EPA data shows that total emissions of the six principal air pollutants in the United States have dropped by 57 percent since 1980 and ozone levels have decreased by 30 percent. These reductions occurred even as industrial output and the number of vehicles on the road have increased. EPA data indicates there will be continued reductions in the years ahead under regulations already in place.

Despite the substantial progress we have made in environmental stewardship under the Clean Air Act and other laws, we are concerned that EPA and other agencies have, at times, made unreasonable and often conflicting demands on our members without a full cost-benefit analysis. In particular, our members spend a great deal of capital complying with regulations that generate little to no benefit for the environment, capital that could be used to strengthen our nation's refining infrastructure and create new American jobs.

The three recent refinery closures are, unfortunately, just the latest examples of a long term trend. As previously mentioned, a Department of Energy report issued in March 2011 concluded that the cumulative burden of federal regulations was a significant factor in the closure of 66 petroleum refineries in the United States in the past 20 years (Exhibit B).

The manufacturers of fuels are being hit with a regulatory blizzard that poses a significant threat to both refinery operations and our nation. Some of these regulations involve what are called Tier 3 regulations to reduce sulfur in gasoline, greenhouse gas regulations under the Clean Air Act, lengthy permitting delays, requirements under the Renewable Fuel Standard involving

ethanol and other biofuels, and logistical hurdles involved with transporting fuel (such as the Jones Act) to name a few. While each of these regulations poses significant individual costs, many of these requirements conflict with one another, creating compliance issues and increasing fuel costs.

Tier 3 & CAFE

The Obama administration is considering a mandate to lower the amount of sulfur in fuels in order to achieve its greenhouse gas (GHG) tailpipe and CAFE standards, known as Tier 3 gasoline standards. The industry has been successful in reducing sulfur levels in gasoline by 90 percent since the EPA Tier 2 standard was implemented in 2004. While achieving this level of performance came at a high cost – nearly \$10 billion – achieving the next additional small incremental reduction EPA is contemplating could come at a much steeper price tag with little to no environmental benefit. In fact, EPA’s own data indicates air quality will continue improving under the existing Tier 2 standards. Furthermore, achieving the incremental sulfur reduction would require massive new capital investments in equipment that emits more carbon dioxide, which is in direct conflict with EPA’s mission of reducing GHG. As a result of these new costs, independent analysis indicates Tier III sulfur reductions could result in a 9 to 25 cents per gallon increase in the cost of manufacturing gasoline. In addition, these costs could lead to as many as seven additional refinery closures.

Recent EPA testimony indicated the agency is considering scaling back its Tier 3 proposal to focus solely on sulfur reductions. While EPA’s statement is encouraging, the tailored rule would still impose a high-cost, minimal-benefit regulatory requirement on America’s already heavily regulated fuel supply. It could lead to significant domestic fuel supply reductions, higher petroleum product imports, potentially increased consumer costs,

increased refinery emissions, closed U.S. refineries and reduced energy security. As Americans struggle with high gas prices and high unemployment, EPA should not promulgate any new regulations that will exacerbate either situation.

AFPM fully supports market-driven efficiency gains for fuel economy. Consumers want more fuel efficient vehicles, but they also want affordable vehicles. Unfortunately, government imposed CAFE standards are driving up the cost of vehicles and placing new demands on U.S. refiners. In particular, while auto makers are given “offramps” if standards are unachievable, refiners are nonetheless forced to make massive capital investments to produce new fuels for a fleet of vehicles that may never exist. The 2004 requirements for refiners to produce 15 parts per million (ppm) ultra low sulfur diesel (ULSD), for example, was to enable the widespread adoption of nitrogen oxides (NO_x) absorbers on trucks. Ultimately, the vehicle manufacturers determined that those absorbers would not work and instead chose an alternate technology that could function with 50 ppm sulfur fuel. Yet refiners were still required to produce 15ppm ULSD, resulting in much higher costs to achieve identical environmental benefits. .

Government’s involvement in the fuels market always creates unintended consequences, and the impacts are felt by U.S. refiners and consumers alike.

EPA GHG Regulations

Although the Clean Air Act (CAA) was never intended to regulate global emissions of greenhouse gases (GHGs), EPA is nevertheless moving forward in regulating such emissions within the framework of this statute. The agency is proceeding with these regulations even though EPA Administrator Jackson has said several times that they will do nothing to address global concentrations of GHG emissions. In the absence of a comprehensive global approach to GHG emissions, imposing these burdens on the U.S. would unilaterally cripple the ability of

U.S. manufacturers to compete on a world market against other nations – notably India, China and Brazil – with less stringent environmental regulations.

EPA's regulations will encourage companies to export jobs rather than products, and in the case of fuel, force the U.S. to increase its dependence on imports. EIA's report on East Coast refining indicates America's competitiveness is already at risk. The report notes supply shortfalls in the Northeast are more likely to be made up through Indian imports than from other U.S. refiners due to U.S. infrastructure restraints, such as the saturated Colonial Pipeline that supplies the Northeast fuels market with products from the Gulf Coast. Overregulation is a significant factor in this threatening trend. Losing American manufacturing jobs and weakening our vital manufacturing sector will harm the American economy and American workers.

Permitting Delays

The existing permitting process delays important projects for years and significantly increases costs, often times making it uneconomical to pursue new projects. The most recent victim of regulatory delay is the Keystone XL pipeline, which has been studied by federal reviewers for more than three years, and which is being required by President Obama to undergo yet further study.

Getting more U.S. and Canadian oil – along with oil from North Dakota and Montana – delivered to Gulf Coast refineries via Keystone XL would add to the world oil supply and make us less reliant on oil from unstable parts of the world, increasing U.S. energy security and by extension our national security. This would help remove the uncertainty about future supplies that is a factor in the recent rise of oil prices. Unfortunately, the administration has held up approval for the pipeline for more than three years. After President Obama rejected approval of the full Keystone XL pipeline until a new study is completed, Canada is now investigating

construction of a pipeline from oil sands deposits in Alberta to the Pacific to ship its oil to Chinese and other Asian ports. The cost of crude oil is the single largest cost for refineries, and every additional dollar our members spend on an expensive supply limited by government's (in)action is a dollar our members cannot spend upgrading facilities to handle new types of crude or building out other infrastructure. Streamlining permitting processes and increasing domestic production are vital to keeping American refineries running and creating jobs.

General Burden of Continuously Tightening CAA and other Environmental Regulations

The \$128 billion that U.S. refiners have spent since 1990 to comply with federal environmental regulations adds significantly to their costs of manufacturing fuel. Refiners supported, and continue to support, many of these regulations that were clearly beneficial to the environment. However, as environmental standards are tightened, often with de-minimus effects on emissions, the cost to meet those standards increases exponentially, threatening the global competitiveness of American fuel manufacturers. .

Sunoco notes in its Open Letter to the Community regarding its Northeast refinery closures that environmental regulatory costs consumed approximately 15 percent of its operating budget. Similarly, over the last 10 years ConocoPhillips invested 100 percent or more of its profit into its Trainer refinery in the Philadelphia area to meet regulatory requirements before idling the refinery last year. The refinery also lost money in each of the previous three years. Finally, a Hovensa refinery that shut down in the U.S. Virgin Islands was located in a region that was in attainment with the Clean Air Act. EPA was nevertheless requiring the company to spend an additional \$700 million replacing turbines. After losing \$1.3 billion in last three years, the refinery could not afford the additional regulatory compliance costs and decided to instead close its doors.

Finally, there has been a great deal of attention recently on the future of electric vehicles as the “future of transportation.” It was recently reported that the U.S. is pursuing a trade case against China over its practices related to rare earth minerals, a vital component of hybrid car batteries. The same reports note that China controls 97 percent of the world’s supply of rare earth minerals. As Congress and the Administration seek ways to increase our energy security, economic security, and national security, AFPM urges policymakers to weigh the full spectrum of trade-offs. While weaning the U.S. off oil is a good talking point, artificially forcing the market to adopt expensive new technologies that rely on the fair trade practices of China could bring a new set of challenges. In the meantime, the U.S. can instead develop its own abundant supply of energy, which can increase our energy, economic and national security. The U.S. can do so without subsidies or mandates, all our industry needs is the room to do it. As we look to diversify our energy sources, we must not turn our back on petroleum-derived fuels that we will continue to depend upon for decades to come. To do so would simply disadvantage the consumer, harm our national economy and erode our energy security.

IV. Domestic Supply Developments Could Revive Struggling Northeast Refineries

The increased production of domestic unconventional oil and gas, along with the growth of Canadian oil sands shipments to U.S. refiners, creates the potential for a resurgence of petroleum production and refined petroleum products throughout the U.S. The technological advancements in developing these unconventional resources could, as early as 2016, increase North American output by 3 million barrels per day (mmb/d) and decrease waterborne crude imports by 4 million barrels per day (mmb/d). The increases in upstream production creates opportunities for U.S. refiners to improve the security of crude oil supplies, reduce operating costs, and increases their likelihood of being competitive in the global marketplace.

Increased access to competitively priced North American oil from unconventional domestic shale plays in areas such as Utica, as well as Williston Basin, Bakken, and Eagle Ford, could increase access to light sweet crude oils for Northeast refiners, replacing more costly imports from less stable regions. Additionally, the increase in natural gas production is not only providing greater feedstocks for petrochemical facilities, but is helping refineries decrease their operating costs due to less expensive energy costs.

While some hurdles still remain, further development of unconventional shale formations in Ohio could provide northeast refineries with low cost domestic light sweet crude oil. Preliminary estimates by Ohio's Department of Natural Resources (ODNR) suggest that the recoverable reserves within the Utica formation are between 1.3 and 5.5 billion barrels of oil in addition to 3.8 to 15.7 trillion cubic feet of natural gas. Increased interest in Utica shale oil and natural gas formation, along with the proper pipeline infrastructure, could significantly increase access of light sweet crudes for purchase by refiners in the Northeast region of the U.S.

V. Conclusion

The U.S. refining and petrochemical industries are American success stories that are nevertheless facing new challenges. Despite supporting millions of jobs and positively impacting our trade balance, a storm of high crude costs, increased competition, decreased domestic demand and overreaching government regulations have forced several refineries to close.

Still, these challenges are not insurmountable, and with the help of Congress and the Administration, America's oil and gas industry can lead to a resurgence in U.S. manufacturing, increase our energy security, and continue to create jobs here at home. AFPM recommends:

- **Fully develop domestic supplies of energy.** Contrary to the claims of the critics of fossil fuels, America is not energy-poor; rather, we are energy-rich. There is a treasure trove of oil and natural gas under our feet and off our shores – enough to make America the biggest energy producer in the world. Our challenge is not to find this buried treasure or to extract it, but rather to convince the federal government to reverse its current energy policy and allow the development of these resources in a safe and environmentally responsible manner.
- **Reduce the impacts of overregulation.** AFPM recognizes that government has the responsibility to balance the demands of protecting public health while fostering the competitiveness of U.S. business. AFPM supports sound environmental and other regulations that strike the appropriate balance between environmental and economic stewardship. Unfortunately, the size, scope, and cumulative burden of current and impending regulatory activity is creating both significant regulatory uncertainty and a slew of conflicting regulations that will impose significant burdens on domestic fuel manufacturers, which further decreases our national security and makes American refiners less competitive.

A robust domestic fuel industry is vital to U.S. national security. AFPM and its members stand ready to work with Congress in the Administration to grow our domestic energy security, strengthen our national security, and create jobs while protecting our environment to build a better life for Americans today and a better future for the generations that come after us.

Exhibit A

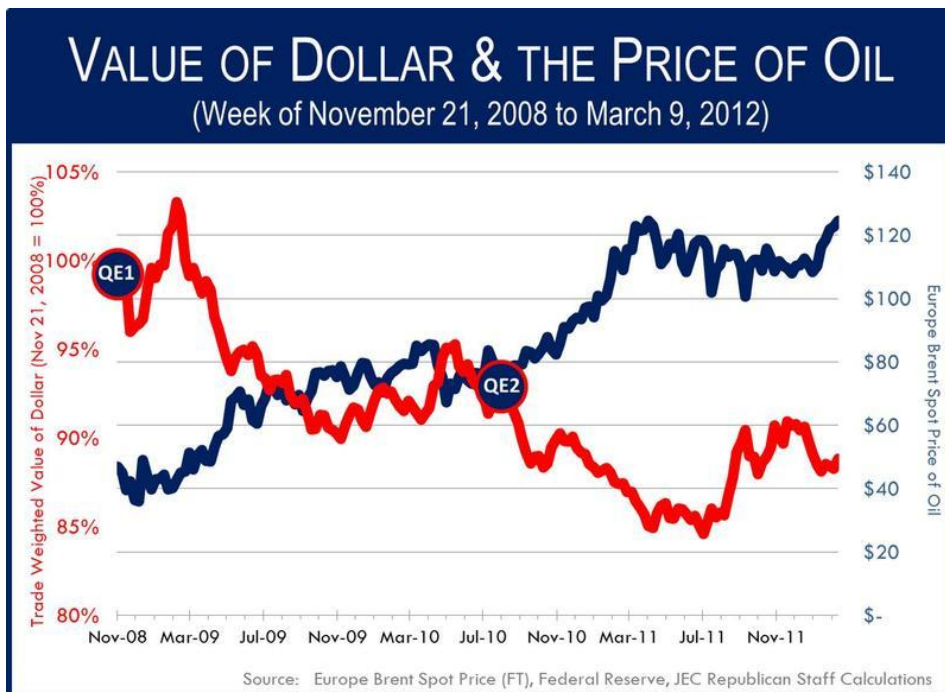
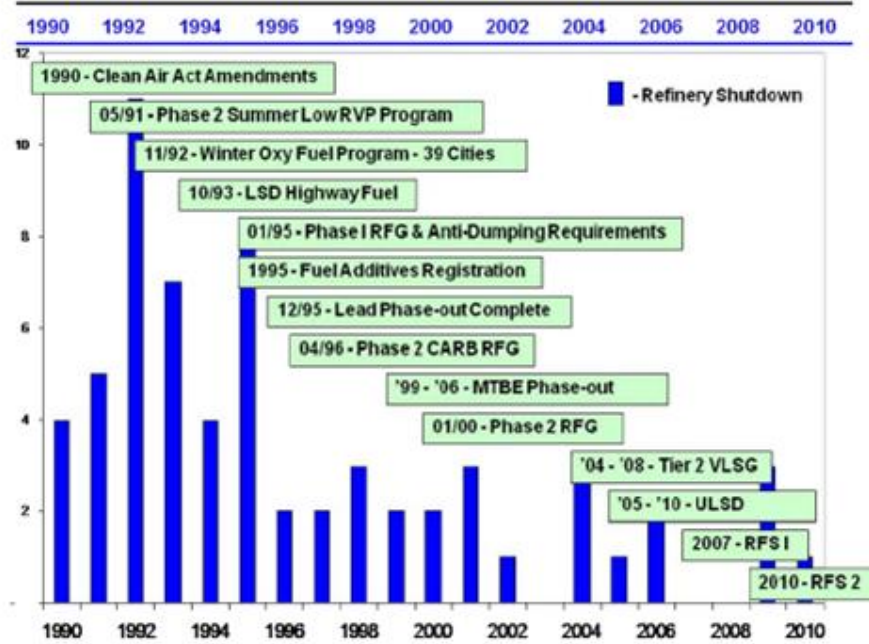


Exhibit B

Figure 9. U.S. Refined Product Environmental Regulations 1990-2010

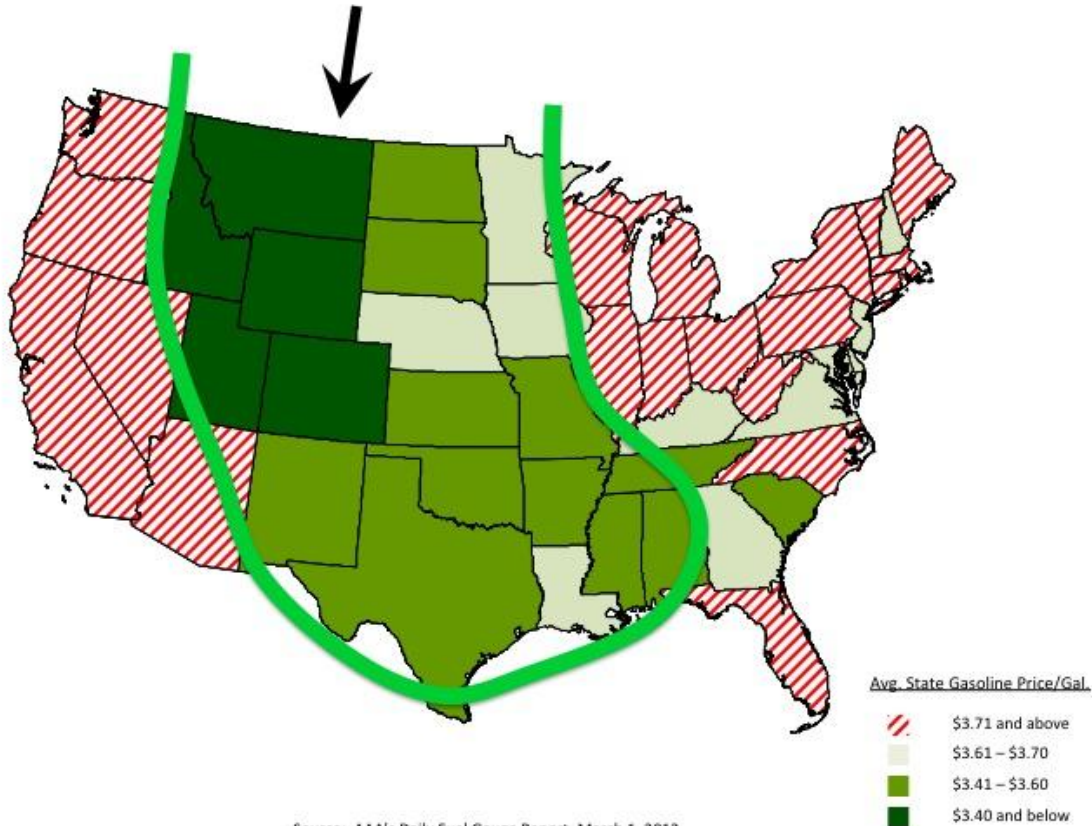


Source: SAIC, 2010, EIA Table 15 - Refineries Permanently Shut Down, 2010.

Source: U.S. Department of Energy, Office of Policy and International Affairs, *Small Refinery Exemption Study – An Investigation Into Disproportionate Economic Hardship*, p. 28-30, found at: <http://www.epa.gov/otaq/fuels/renewablefuels/compliancehelp/small-refinery-exempt-study.pdf>

Exhibit C

U.S. CONSUMERS PAY LOWER GAS PRICES WHERE WE GET DISCOUNTED AMERICAN AND CANADIAN CRUDE OIL



Source: AAA's Daily Fuel Gauge Report, March 1, 2012

- **Rocky Mountain States Are Currently Paying \$0.50 Less Per Gallon of Gasoline than National Average** - National Avg: \$3.74/gal, Wyoming \$3.17/gal (-\$0.56), Colorado: \$3.19/gal (-\$0.55), Montana \$3.28/gal (-\$0.46) ([AAA, 3/1/12](#))
- **Lower Gasoline Prices Due to Access to American and Canadian Crude Oil** -According to a [report](#) by the U.S. Energy Information Administration (EIA), low gas prices in Rocky Mountain states are because of their easy access to cheap crude oil produced in the U.S. Bakken region or imported from Canada (EIA, 2/14/12).
- **North American Oil Boom Is Driving Down Prices v. Rest of World** - North American crude oil sells at a discount compared to world prices. West Texas Intermediate (WTI) is averaging \$18 less per barrel than the international North Sea Brent price. Bakken crude has sold as much as \$28 per barrel less than WTI crude ([EIA, 2/29/12](#)).
- **East Coast States Rely on Higher Priced International Crude Supplies** - Because they lack the pipeline infrastructure to access cheaper U.S. and Canadian crude, East Coast refineries must use more expensive international Brent crude to make gasoline ([IntlBusinessTimes, 3/1/12](#)).
- **Higher East and West Coast State Gas Taxes Do Not Explain Higher Prices** – For example, New York drivers pay \$0.27 per gallon more in state gas taxes than Colorado drivers. Yet, gasoline costs \$0.78 more per gallon in New York than Colorado. That is still a \$0.52/gal. difference.