

Downstream Today: An Overview of the Refining and Petrochemical Manufacturing Industries

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Thank you Barry for the introduction and for the opportunity to be part of this great event. As Barry noted, I'm new to the American Fuel & Petrochemical Manufacturers, having just joined last May, and this is my first opportunity to address this group.

For those that do not know me, I'd thought you might appreciate a little background. I'm a native Washingtonian and have been practicing environmental and energy law for the last 23 years. Many roles in my career led me to AFPM, including serving as outside counsel to the organization, assisting them primarily on fuels and environmental issues at Crowell and Moring. And, as the assistant deputy and then the deputy general counsel of EPA.

When I was approached early last year about the possibility of leading the group, I jumped at the chance. The opportunity to join AFPM and to represent the fuels and petrochemical industries during this time of change was irresistible and convinced me to hang up my legal hat.

For those not familiar with AFPM or need a little reminding, here's who we are. AFPM is one of the oldest trade associations in DC – originally founded in 1902 – and is the leading voice of the U.S. refining and petrochemical industries, or what is commonly referred to as the downstream sector. Our membership represents 97 percent of the U.S. refining and petrochemical capacity.

This includes 119 refineries and 120 petrochemical facilities. While the largest concentration of our members are in the Gulf Coast, our members can be found all over the country, including in Hawaii and Alaska. Our members contribute \$20 billion annually in federal and state taxes. We also employ, directly and indirectly, more than three million employees.

I like to tell the story of what my youngest daughter – age 10 – said to me when I told her that I was going to join AFPM. I tried to explain to her what fuels and petrochemicals are, how they are formed, and how my work life might change. Before I could finish, she stopped me and simply asked: “Dad, are your members the good guys? That’s all I want to know.” Well, the short answer is that yes, we are the good guys. AFPM members produce the fuels and the products that make our modern way of life possible. We make the gasoline that powers our cars, motorcycles, boats, and lawn care products. We make the jet fuel that allows us to fly from state to state and country to country. And we make the building blocks that make our phones, computers, clothes, medicines, and countless other products that we take for granted in our daily lives. Simply put, AFPM members make the U.S. and the world a better place.

My first eight months on the job have been a lot like everyone else’s in this room: very busy. When I took this job, I was hoping for a little quiet period before the storm. No such luck! Since I started, the range of issues we’ve had to confront as an association and a sector has been broad. We’ve faced plummeting crude prices, increased environmental regulations, such as ozone, Clean Power Plan, and the refinery residual risk rule, and infrastructure changes. We even had to fight off attacks from the Pope and others who wage war against the fossil fuels industry. Any of these issues alone would have been a lot. Having to deal with all of these issues simultaneously was certainly a bit of a challenge.

But here's the good news. Despite all of these issues, I'm proud to say that the current state of the fuels and petrochemical industries is **STRONG**. We had a very good 2015, and the outlook for 2016 is good as well.

Today, refined petroleum products supply about 35 percent of our nation's energy needs, with most of the volume used in the transportation sector. Nearly 92 percent of U.S. transportation is fueled by petroleum. The flexibility and efficiency of our nation's refining facilities allowed the industry to take advantage of growing domestic supplies of crude oil and inexpensive natural gas to produce affordable products for our nation and for global markets, especially the areas of Latin America and Europe. U.S. refining capacity has been expanding in recent years, coinciding with the shale revolution, and now stands at 18.1 million barrels a day, up 9 percent from 2000. Today exports represent the strongest growth areas for many of our companies.

Eight years following the start of the Great Recession, U.S. gasoline demand is on the uptick, growing 2.7 percent in 2015, largely due to the sharp downturn in crude prices. While the Energy Information Administration expects gasoline demand to level out in 2016, U.S. diesel demand should be stronger, countering any gasoline downturn.

Product export markets should also continue to present opportunities for U.S. refiners in the short term. Other economies, especially in developing countries, have been slower to recover than the United States. But, global demand still grew in 2015, led by China, India and Europe, as well as the U.S. Looking at this year, the International Energy Agency still projects world petroleum product demand growth, albeit slower than in 2015. Where global growth was 1.8 million barrels per day in 2015, IEA projects growth at 1.2 million barrels per day in 2016, bringing the daily demand to 95.8 million barrels per day.

As crude prices have fallen, refiners have been able to sustain a favorable financial trend. A look at the crack spreads for gasoline and distillate fuels show general improvements in recent years. An abundance of supplies of U.S. domestic crude and natural gas have helped. Keep in mind that gasoline and diesel together represent about three-quarters of the output of U.S. refiners. Diesel fuel's contribution to the bottom line grew during the last decade and should remain strong. Recently, we see that gasoline has moved to the top spot again, but diesel is holding its own.

Over the last few years, there has been lots of discussion as to whether the U.S. refining industry has sufficient capacity to handle increasing domestic crude production. The answer to this question is yes, particularly in the near term. Since 2012, refiners have invested about \$3.6 billion dollars to process this new domestic resource, with another \$3.2 billion in investments planned during the next couple of years.

I'm happy to say, the petrochemical sector is strong as well. Global demand for petrochemicals has doubled in the last 20 years and the future continues to look bright. The U.S. shale revolution is certainly at the heart of this expansion. Access to a previously untapped abundance of natural gas used to produce petrochemicals has led to a sharp decrease in price. For example, in 2008, natural gas sold for \$12.50/MM BTUs, compared to today at less than \$2.50/MM BTUs.

In a dramatic reversal of fortune, the United States is now one of the most affordable countries for petrochemical production. Today, the U.S. chemical sector is the largest industrial consumer of natural gas. As of November 2015, 256 chemical industry projects have been announced with a cumulative investment of \$158 billion from 2010 to 2023 (over \$11 billion per year on average during that time). We expect these projects to result in several hundred thousand additional

jobs. Over 60 percent of the funding comes from foreign investment because companies see that the United States is the best location for investing in the petrochemical industry. This is a remarkable turnaround for a nation that had been losing manufacturing jobs for more than three decades.

While I am bullish about the health and future of our industry, I am not naïve to the challenges that lie ahead. We face pressure from gasoline demand as a result of current CAFE standards and other regulations. Fuel specifications will continue to change both for environmental and engine performance requirements; and the debate over GHG regulations will likely continue to focus on the role of hydrocarbons in our society. Many of these challenges are inflicted not by the market, but by our own federal government. It's hard to compete in a ferociously competitive, global market when federal agencies, like EPA, continue to add layer after layer of unnecessary cost burdens on U.S. manufacturing.

Since 2000, EPA alone has adopted 17 rules that each on its own has annual compliance costs greater than \$1 billion annually. The Clean Power Plan and Ozone rule together will add another \$100 billion of annual compliance costs! It's difficult for U.S. manufacturing to compete in such an environment. We desperately need commonsense regulatory reform in this country. We hope Congress acts on this soon.

It's also time for Congress to repeal the RFS. After 10 years, it's now clear to everyone, except perhaps the biofuels industry, that the program is dysfunctional and not working. The RFS was originally enacted based on two premises: our country was too dependent on foreign oil, and the biofuels mandate would be good for the environment. With respect to the first, the circumstances have changed. The United States is near historic production levels for oil and gas.

As to the second, the original premise has proven to be wrong. The increasing ethanol mandate is leading to higher levels of ozone and carbon dioxide emissions. Worse yet, the mandate has forced consumers to purchase products they don't want, that can violate engine warranties, and pay higher prices to boot. The Government Accountability Office has stated that the costs of the RFS outweigh the benefits, by as much as \$77 ½ billion.

I would be remiss if I didn't mention the lifting of the crude export ban. AFPM is a free-market organization and thus was not opposed to lifting the export ban. However, I have to point out that contrary to the suggestion of some, lifting the ban has not created a free market. That won't happen in any meaningful way until the RFS is repealed and the Jones Act reformed. The lifting of the ban has placed a greater spotlight on the ill-effects of the Jones Act. Because of the Jones Act, it's now cheaper to export U.S. crude to our foreign refining competitors than it is to ship crude from the Gulf Coast to the East Coast.

For example, transport costs last year were three times higher to use a Jones Act ship to move crude from the Gulf Coast to the Northeast than to move that same crude to Europe on a foreign-flagged vessel. This difference, which is as high as \$4 per barrel, is the equivalent of 7 cents per gallon, and provides a significant cost advantage to foreign refiners who compete directly with our U.S. companies. In essence, the Jones Act serves as a subsidy for foreign refiners. This has to change. Some say that reforming the Jones Act is a pipe dream. But that's what people said about lifting the crude export ban, as well.

In closing, I'd like to point out at least one area where we agree with the President. During last week's State of the Union address, President Obama touted the significant improvements to the economy that have occurred over the last seven years. We agree. There have been lots of

improvement, and we as a nation should be proud. But what he failed to mention is that much of this improvement can be traced back to the energy sector, and particularly the shale revolution that spurred a domestic manufacturing renaissance. Indeed, the innovative efforts of domestic oil and gas producers, refiners and petrochemical manufacturers resurrected our economy, brought millions of high-paying manufacturing jobs back to our country, and reshaped global commerce.

Oil, natural gas and the products manufactured from these treasured resources have made life better for billions around the planet. They have increased our lifespan, enabled mass transportation and manufacturing gains, and are essential to all of life's necessities, including shelter, heat, food, healthcare, medicine and clothing. Yes, we ARE the good guys. I hope our policymakers remember this in the months and years ahead, when anti-fossil fuel policies espoused by some are debated.

Thanks again for the opportunity to speak with you today. If there is any time left, I'd be happy to take a question or two – provided they are easy.