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Testimony–Penn Security Fuels Initiative
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Thank you Chairman White, Chairman Musto and members of the committee. I am grateful to be here today to discuss this important topic. My name is Rolf Hanson. I am the Executive Director of Associated Petroleum Industries of Pennsylvania. By way of background, we are a division of the American Petroleum Institute which is the only national trade association that represents all aspects of America's oil and natural gas industry. Our 400 corporate members, from the largest major oil company to the smallest of independents, come from all segments of the industry.

The use of ethanol to reduce our dependence on foreign oil is nothing new. The nation has considered it during our nation's Project Independence in 1974, which was the year after the first Arab oil embargo, after the second energy crisis in 1979, and after the Clean Air Act of 1990.

The International Energy Agency forecasts that world-wide energy demand will increase by 50 percent between now and 2030. With this huge global appetite for energy, "energy security", not "energy independence" should be our nations framework going forward.

Our nation imports roughly 60 percent of our oil in order to meet consumer demand.

This nation must do everything it can to access a diversity of resources here and around the world. The term "Energy Independence" would be at odds with this objective. We

hear the talk of weaning ourselves of Persian Gulf oil, but the fact is the amount of Persian Gulf oil has been substantially unchanged for years. The real supply security depends on international trade. The Persian Gulf provides an important supply, but note that they are only ONE source, representing less than 20 percent of total U.S. imports.

The Penn Security Fuels Initiative has been portrayed to reduce our dependence on foreign oil (particularly from the Middle East) and the high price of crude oil.

Government should not over-promise on the potential of renewables to reduce petroleum demand. Overestimates create unrealistic expectations, poor policy and wasted resources. Government policies should strive to encourage sustainable and competitive second generation biofuel technologies.

In 2005, Congress created a national program to increase biofuel usage, particularly ethanol and biodiesel, in motor fuels in the United States. This federal program, enacted as part of the Energy Policy Act of 2005 (EPACT), requires all refiners, blenders, distributors, and importers to ensure that biofuels represent a specified percentage of their total output. **The program Congress created provides companies with considerable flexibility.** For example:

- Congress expressly prohibited EPA from imposing any per-gallon mandate. 42 U.S.C. § 7545(o)(2)(A)(iii).
- Congress expressly prohibited EPA from restricting the geographic areas in which renewable fuels could be used. *Id.*
- Congress directed EPA to establish a credit trading program to allow individual companies to choose whether to satisfy the biofuel requirements by blending renewable fuels themselves or by purchasing credits from another company that has exceeded its requirements. 42 U.S.C. § 7545(o)(5).

Congress imposed biofuel requirements in stages, beginning with 4 billion gallons in 2006 and increasing to 7.5 billion gallons in 2012. 42 U.S.C. § 7545(o)(2)(B)(i). **This provision is currently in conference committee in congress where the number has been increased to over 30 billion gallons by 2020.** Our industry has invested heavily to meet and exceed the federal requirement for ethanol-blended gasoline. In 2006, we used 25 percent more than required -- and, according to Energy Information Administration estimates, will exceed the 2007 requirement as well.

- Congress did not require any particular alternative fuel to be used to meet a mandate. **A narrow definition that focuses on a particular feedstock or process technology may inappropriately favor one industry over another, discourage innovation and lead to inefficient use of available resources. A broad definition encourages investment from multiple industries in the development of cost-effective technologies and alternative sources of feedstock that have the best chance of long term success in meeting societal goals.**
- Congress did not require an alternative fuel to be made from particular feedstocks or restrict the use of any feedstock or processing scheme.
- Congress did not exclude foreign supply of renewable products.

Thus, the federal program permits individual companies to determine the most efficient way to comply with renewable fuel requirement. **State biofuel mandates interfere with the flexibility of the federal program.**

Based on the clear intent and jurisdiction of the federal government and on the need to avoid numerous contradictory state laws that disrupt supply, states should avoid the temptation to impose add-on state-specific requirements for biofuels. They should rely upon the federal government to adopt program elements, timing, and levels best suited for a national renewable program.

- Congress also required in EPACT05 that EPA and the Department of Energy (DOE) complete a study on “Fuel System Harmonization” and provide recommendations to Congress by June 1, 2008. This will provide guidance to Congress as to whether further steps should be taken regarding boutique fuels. EPA plans to consider state biofuel mandates in this study.

- The report to Congress shall contain recommendations for legislative and administrative actions that may be taken to improve air quality, reduce costs to consumers and producers, and increase supply liquidity.
- The study shall also assess:
 - The effect of boutique fuels on the achievement of national, regional and local air quality standards and related environmental and health protection standards and goals;
 - The feasibility of developing national and regional motor vehicle fuel slates for the 48 contiguous states; and
 - The feasibility of providing incentives and the need for the development of national standards to promote cleaner burning motor vehicle fuels.
- In preparing the study, DOE and EPA shall consult with Governors, Automobile manufacturers, State and local air pollution regulators, Public health officials, Motor fuel producers and distributors, and the public.

If any renewable fuel legislation is to move forward we would highly encourage the State to adopt the federal definition of renewable fuel. State legislative initiatives that promote bio-based alternatives to petroleum fuel – particularly those involving mandatory usage requirements – undermine the flexibility that Congress intended in enacting the Energy Policy Act of 2005 (EPACT 2005) and should be avoided.

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In contemplating ethanol and biodiesel there are a couple of practical considerations that must be seriously looked at and planned for.

Biodiesel is not shipped on petroleum pipelines. This is primarily due to the fact that biodiesel manufacturing is done at relatively small plants and that the production is very fragmented. The plants are all located far away from pipelines. As a result, biodiesel is shipped by barge, truck, or rail.

Ethanol cannot be shipped on pipelines as it is an alcohol and picks up water very easily. In fact, even if ethanol is already blended with gasoline, if it comes in contact with water,

it will actually drop out of the gasoline and mix with the water instead. This contaminates the entire ethanol and gasoline mixture. This is called phase separation. As a result, ethanol must be also shipped barge, truck, or rail instead of on the pipelines (the pipelines have traces of water, small amounts but enough to impact ethanol) to the pipeline terminal and then the ethanol is blended with the gasoline just as it is being loaded into the tanker truck for delivery to a convenience store.

The heart and soul of the challenges in handling ethanol & biodiesel is that they simply are not and cannot be shipped on the very efficient petroleum pipeline system that runs throughout PA.

As a result of ethanol's inability to be shipped on pipelines because of its affinity to mix with water, means that it must be blended at the very last minute at our pipeline terminal as it's being loaded onto tanker trucks.

1. Install additional & multiple truck off-loading lanes at terminal facilities to handle the large quantity of trucks necessary to bring in and off-load the ethanol & biodiesel that would be required under the legislation.
2. Install new segregated pumps and piping from those truck off-loading positions to segregated tankage.
3. Install new segregated pumps and piping from that dedicated tankage at each facility to each of the truck loading lanes for blending into the tanker trucks.
4. At each and every loading arm for each product on every truck loading lane at each of the pipeline terminals, we need to install automated blenders to blend the gasoline and ethanol. **This doesn't exist today.** The installation of these blenders comprises quite a bit of work and will take time to install. There will be hundreds if not thousands of product loading arms that will need this very sophisticated equipment.
5. Some might say that splash blending versus the automated blending of these products would enable to add blending capability more quickly at a pipeline terminal. However, splash blending is not an option. Splash blending is accomplished by pulling the truck up to a quickly configured tank and loading apparatus where the 10% ethanol or biodiesel would be loaded onto the truck first, by itself. The truck then pulls under the loading racks with multiple loading positions to load the remaining 90 % of gasoline or biodiesel. Most of PA's terminals have 8 loading lanes for trucks. If splash blending were utilized, all trucks would have to go through that one loading spot for ethanol and biodiesel and that becomes the constriction. In other word it takes the loading speed of an 8 lane terminal and makes it as fast as a one lane terminal. Trucks would be lined up down the street for miles at each of our terminals across the state if this were the case. This is not an exaggeration. There is simply way too much volume to be loaded that way.

Splash blending biodiesel is also not the best way to do it. Biodiesel, especially in winter, needs to blend evenly with the regular diesel fuel as it's loaded into the truck or it won't mix well. Automated blending at the loading rack as it's being loaded and blended into the truck is the best way to do this. Depending on the temperature of biodiesel and the temperature of the regular diesel fuel, it may not mix well if at all.

6. Moving 10% of PA's volume of gasoline by rail and truck would be a completely new phenomenon. Currently, 100% of PA's petroleum is moved via the efficient pipeline system throughout PA. The logistical challenges involved in moving 10% of PA's gasoline volume by other means are very difficult. 10% of PA's volume is huge. It simply can't be done by truck. If you look at the numbers, there just simply aren't enough hours in a day to do this. The only way to do it is by rail. And when I say rail, I do not mean rail to a rail siding somewhere, where a rail car is unloaded into a tanker truck, one truck at a time, and then tugged to a pipeline terminal and off-loaded one truck at a time. The turn around time for this type of operation which is referred to as trans-loading, takes several hours for each truck. It simply won't work when you run the numbers. PA needs 360 trucks per day – every day - of ethanol and biodiesel to be sourced from the Midwest, trucked to PA's pipeline terminals, and off-loaded at the pipeline terminals. (750,000,000 of ethanol and bio / 8,000 gal truck / 52 weeks / 5 days = 360 trucks) When I say rail, what I do mean is rail constructed up to and frankly, right into the pipeline terminals where rail cars can be delivered and pumped off simultaneously into storage tanks right there at the pipeline terminal.

Assuming for arguments sake a 10% blend of ethanol and biodiesel and given that rail companies won't deliver on weekends, PA will need 96 rail cars a day – every day – of ethanol and biodiesel. (750,000,000 ethanol & bio / 30,000 rail car / 52 weeks / 5 working days = 96 rail cars) Any interruption in these deliveries means outages. This infrastructure does not exist today. It will have to be built. This will take years.

There are a lot of considerations in handling ethanol and biodiesel, but if PA logistically can't get the supply we need into the distribution facilities, everything else pales by comparison.

Once again the logistical considerations for biodiesel are essentially the same with the added complexity of having to heat the product while it is in storage and up until is blended into the tanker trucks at the pipeline terminals during the winter months. This would be entirely new for us and a huge construction project as well.

When it comes to ethanol and biodiesel, the reality is that a large portion if not most of the renewable fuels we'll need, will be manufactured outside the state and will need to be transported here. Even if a good portion of the renewable fuels are

manufactured in PA, they still need to be moved to the petroleum pipeline terminal by rail or truck. If the gasoline or diesel fuel is not able to be blended with the required renewable fuels, essentially, even though you might have 90% of what you need to supply a convenience store, service station, or truckstop, you can't supply them. You're essentially out of product.

All of these items that I have described are not impossible. However, there is a cost associated with all of them. A cost that to the extent it can, they will be passed on to the consumer.

Thank you for your time and I will answer any questions that you make have.