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The Honorable Chuck Grassley
135 Hart Senate Office Building
Washington, DC 20510

Dear Senator Grassley:

I have been asked by fuel retailers and renewable fuel producers to summarize a report I published February 5, 2018, regarding the bankruptcy of Philadelphia Energy Solutions (PES) and its false claim regarding the impact of renewable fuels legislation as the cause.

PES operates a refinery in Philadelphia, Pennsylvania. It is one of the largest and oldest facilities on the US East Coast.

In the press release announcing their decision to take PES into bankruptcy, the owners explained that the refinery would have been profitable but for the firm's financial obligations under the Renewable Fuel Standard (RFS) program mandated by Congress and administered by the US Environmental Protection Agency. In its "Disclosure Statement for the Joint Prepackaged Chapter 11 Plan of Reorganization," PES specifically blames the firm's obligations under the RFS for its economic difficulties.

In the report I sent to my clients, I disputed the PES claim. I explained that the firm's financial problems resulted from 1) PES' failed gamble regarding the availability of lower-cost US crude, 2) its refusal to invest in its facility, and 3) competitive pressures in the US East Coast market. Here I summarize each of these findings.

**The Crude Availability Gamble**

Sunoco had planned to shut the refinery now owned by PES. The PES investors, however, saw the increase in US crude production from fracking in North Dakota as an opportunity to profit because these inputs could be acquired at a significant discount to world prices. Petroleum refineries on the US East Coast have historically been forced to buy imported oil.

The PES facility was disadvantaged in this market because it required light sweet crudes, the most expensive in the world. Whereas other refiners had invested in capacity to process lower-cost "heavy" crude oils, PES had not. The refinery required what one might call "the high-priced spread."

The fracking evolution offered PES access to a source of sweet crude oil meeting its needs at lower prices. The oil produced in North Dakota's Bakken field met the requirements of the PES refinery. The absence of pipeline facilities also prevented the crude from reaching refineries. Producers in North Dakota turned to moving crude by rail to get it to market. This transport method is much more expensive than movement by pipeline.

PES seized on the North Dakota producers' reliance on rail movement to obtain feedstocks at lower prices. The firm could buy their crude at a discount because producers lacked an alternative outlet.

PES expected this discount to continue. In September 2014, the company filed a Form S1 with the SEC indicating its intention of selling shares to the public. In the S1, it noted the financial benefit it reaped from the inability of North Dakota producers to obtain world prices for their crude and its expectation that the benefit would be permanent.

This forecast was wrong. When completed, the Dakota Access Pipeline gave North Dakota producers access to refiners on the US Gulf Coast and removed the necessity of shipping by rail. These producers then received an added boost from the US Congress' 2016 decision to remove the ban on exporting US crude oil.

These two events eliminated PES' price advantage and put the firm back in the economic environment faced by the previous refinery owner in 2011. Under those circumstances, PES was not economically viable.

**Failure to Invest**

Petroleum refining is an industry in transition. The products sold in 1960—gasoline, diesel, and jet fuel—were very different from the products sold today. Environmental regulators and the public have demanded that refiners remove various toxins and reform the chemical composition of their products to improve public health.

Most companies have invested in the capacities required to produce the new products. A few, though, chose to produce inferior quality material until they could no longer meet the tighter standards. PES and its predecessor, Sunoco, fall into the latter category. Since acquiring the refinery, PES has repeatedly delayed the investments needed to meet the requirements of the twenty-first century.

For example, the company stated in its S1 filing with the SEC that twelve percent of its output was low-valued products. Historically, such products have been sold as ship bunker fuel for the world's commercial transport. However, after 2020 new rules promulgated by the International Maritime Organization (IMO) will prohibit ship owners from using such fuels. On that date, PES will lose a market. The past failures to upgrade the refinery will likely force its closure.

The problems of PES can be contrasted to those facing Munroe Energy, another Philadelphia refinery. Delta Airlines bought the closed facility in 2012. Delta restarted the refinery and

invested substantial funds to upgrade its operations. Delta has achieved a significant benefit from its investment because its entry into the market led to a reduction in jet fuel prices

Historically, oil companies have used their market power to extract excessive amounts from airlines. By buying a refinery, Delta was able to depress the price of jet fuel in New York by almost seven cents per gallon relative to the key benchmark. The price decrease may have saved the airline as much as $200 million. Delta's investment paid off.

**Competition**

PES is also the victim of aggressive competition from firms that have made the needed investments. PES faces the threat of increased product supply from refiners in the Midwest. Firms in Chicago and Ohio have made the investments needed to process heavy Canadian crude. Their breakeven prices are below those of PES because they made these investments.

The Midwest refiners now have excess product supplies that match those produced by PES in quality. The companies are working to push the product into the middle of Pennsylvania. Ultimately, they will make it to Philadelphia and the East, depressing prices and making PES an even less rational economic proposition.

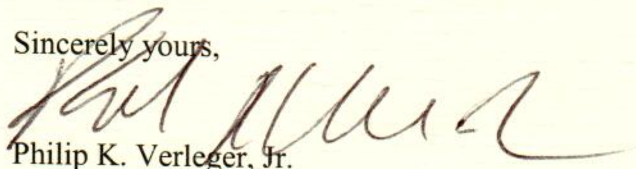
PES also faces competition from product supplies from Canada. Canadian refiners have invested to produce fuels meeting the most stringent standards. They have also bought distribution facilities in New England, effectively excluding PES from that market.

Competition from newer, more sophisticated refineries has made PES superfluous. Its refinery cannot stand on its own.

**The RIN Fallacy**

PES claims it would be profitable if relieved of its obligations under the Renewable Fuels Act. The claim is correct *if and only if* PES is relieved of such obligations. PES cannot compete on a level playing field. Its owners have failed to invest in the units needed by a modern refinery. Instead, they relied on US regulations that prohibited the export of domestically produced crude oil. Their gambit failed. They deserve no mercy.

Sincerely yours,



Philip K. Verleger, Jr.

Note:
I am writing this letter at the request of several individuals who have seen a long report I sent to clients. I chose not to distribute the entire report but rather to summarize its key points. I have received no compensation from any of the interested parties. The observations in this letter are strictly those of an independent economist.