Our View: The Trump Administration's Estimate of the IMO 2020 Impact Differs from that of the EIA

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The Trump administration has two assessments of the impact of the IMO 2020 marine fuel sulfur regulation to consider. The first was issued in January by the Energy Information Administration (EIA), a division of the Department of Energy (DOE). The second was released by the president's Council of Economic Advisers (CEA) last week as part of the *2019 Economic Report of the President*. The two analyses are, shall we say, a bit different.

The EIA summarized its view of the impact in a January 15 "Today in Energy" post. The key paragraphs read as follows:

> EIA forecasts that the implementation of the new IMO fuel specification will widen discounts between light-sweet crude oil and heavy-sour crude oil, while also widening the price spreads between high- and low-sulfur petroleum products. In the January STEO [Short-Term Energy Outlook] forecast, Brent crude oil spot prices increase from an average of $61 per barrel (b) in 2019 to $65/b in 2020 with about $2.50/b of this increase being attributable to higher demand for light-sweet crude oils priced off of Brent.
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> The expected increased premium on low sulfur fuels will likely mean higher diesel fuel refining margins, which EIA forecasts will increase from an average of 43 cents per gallon (gal) in 2018 to 48 cents/gal in 2019 and 65 cents/gal in 2020. Motor gasoline margins averaged 28 cents/gal in 2018 and are expected to increase slightly to an average of 29 cents/gal in 2019 and 33 cents/gal in 2020."[1]

In hard numbers, the EIA now sees retail diesel prices rising from $3.01 per gallon in 2019 to $3.15 in 2020. For reference, the EIA reports that retail diesel prices averaged $3.18 per gallon in 2018.[2] The projected increases are hardly earth-shaking numbers.

The second forecast comes from the CEA, which includes a long chapter on energy in its 2019 report. At the very end, the document devotes several pages to the IMO 2020 impact. The president's advisers are not as sanguine as the EIA. They write that there will be a global shortfall of diesel fuel of between two hundred thousand and six hundred thousand barrels per day. They also offer this warning:

> "The shortfall will likely trigger higher prices, though estimates of price shocks to fuels including diesel, gasoline, and jet fuel vary substantially."[3]

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[1] "Changes in marine fuel sulfur limits will put temporary upward pressure on diesel margins," *Today In Energy,* EIA, January 15, 2019 [https://tinyurl.com/y8nd5zdh].
[2] EIA, *Short-Term Energy Outlook*, March 2019 [https://tinyurl.com/y853wr8s].
[3] CEA, *Economic Report of the President*, March 2019 [https://tinyurl.com/y5g6gkb7], p. 294.

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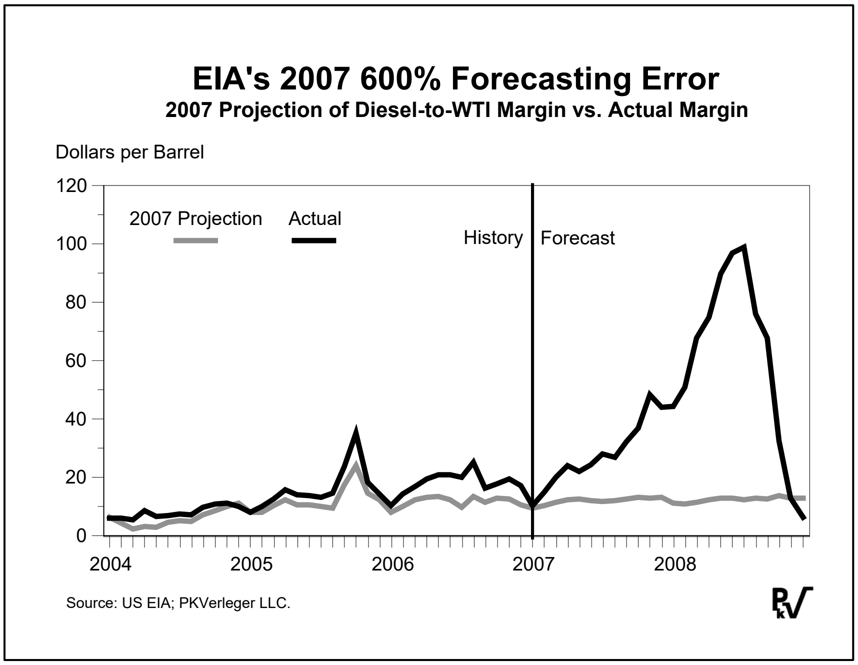
The CEA based this assessment not on the EIA supply-and-demand projection but on the more complete analysis published in the International Energy Agency's *Oil 2019*. In assessing the IMO 2020 impact, the president's economists ignored the EIA's findings.

How should one think of these two competing forecasts from the US government? The answer is straightforward. The CEA has it right. The EIA's forecasts should be disregarded. I have several reasons for this conclusion.

First, the EIA's forecasters, some of whom may be economists, have a poor record of anticipating important structural changes. For example, the forecasts issued in 2007 completely missed the increase in distillate margins caused by the shift to low-sulfur diesel. This error is captured in the figure below.



The graph above shows the margin between retail diesel and crude as projected in 2007, several years after the low-sulfur regulations were set in motion. The projected margin in the figure is identical to the projected margin noted in the January 15 "Today in Energy" commentary. The 2007 projection saw the retail diesel-to-crude margin staying between $12 per barrel and $15 through 2008. The actual margin peaked at a slightly higher number, reaching $100 per barrel in July 2008. The error is a trifling *five hundred sixty-seven percent*, possibly the largest forecasting mistake ever made by a government agency.

I realize, though, that it is unfair to criticize the EIA forecasters for the 2007 error. The agency is required by law and approaches instituted in the past to report results based on their current modeling methodologies. Occasionally, as with the IMO program, such approaches will mislead. The restrictions on the EIA were implemented because its predecessor organization issued projections that were adjusted to support the views of William Simon, President Nixon's Secretary of Treasury, and Frank Zarb, the administrator of the Federal Energy Administration. In the Department of Energy Organization Act of 1977 that created the DOE and the EIA, the Democrat-controlled Congress included language that effectively tied the EIA's hands as it approached forecasting.

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Thus, my first conclusion is that the EIA's structure and mandate limits its ability to assess the IMO 2020 impact.

Second, the CEA is configured perfectly to gauge the impact of important economic changes. The organization has no constraints on how it evaluates issues. Furthermore, its members and senior staffers are selected from top universities, banks, and consulting firms for their economic expertise. They are not bureaucrats hoping to remain at a job for life. Instead, they come to the CEA for one or two years and leave. The CEA chairmen have included top economists such as Alan Greenspan and Ben Bernanke. Nobel laureate Robert Solow served as a senior staff economist as did John Taylor, considered today to be one of the nation's leading monetary economists. The CEA is generally populated with all-stars. The staff at the EIA, in contrast, are at best very low-level minor leaguers.

Third, the CEA brings expertise from all areas of economics, not just energy. The analysts at the EIA are focused on energy. They know their British thermal units (Btu). They do not, though, have colleagues who have dealt in depth with the impact of regulatory changes. They also do not have colleagues who are focused on the behavior of markets and the macroeconomy. When they need this analysis, they hire consultants to help. The agency's past failures to foresee the impact of significant structural changes in the market attest to this deficiency.

For these reasons, I put a great deal of weight on the CEA forecast and no weight on the EIA projection. As the CEA warns, "The shortfall will likely trigger higher prices."

One should also note that President Trump's economic advisers are fully attuned to the potential impact of IMO 2020. If retail prices do rise, one can be sure the president's advisers will explain the problem. One can also be sure that one of his trade advisers, Peter Navarro, will be counseling him on his options. Peter once wrote several papers on energy markets before turning his attention to China.

[Note: In making this endorsement, I should advise readers that I am a CEA alum. I served when Alan Greenspan was chairman. I also participated in the creation of the EIA—and watched Congress handcuff those who work for the agency.]