

Our View: EIA Gasoline Consumption Data – PKVerleger LLC Vindicated

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Late Friday night (September 30), the EIA, an organization we criticize often, issued revised monthly data for 2015 and data for 2016. Unlike the BEA or other highly competent statistical agencies, the EIA put the data out without fanfare. BEA, in contrast, always issues a press release and discusses any changes in the data provided.

The EIA may have stayed quiet for a reason. The revisions are significant in several areas. For us, the headline should read as follows:

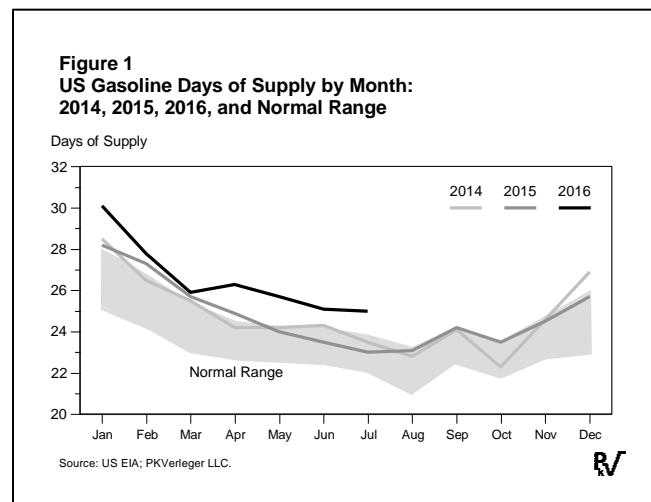
EIA Reduces Estimate for Gasoline Consumption Growth for 2016 from Four Percent Year over Year to Two Percent

Of course there will be no headline. The agency does not admit making mistakes.

The same day, the competent BEA issued its estimate of gasoline use for August. The BEA revised estimates for previous months (something readers understand the EIA does not do). For the first eight months of 2016, the BEA puts the increase in gasoline use at 1.8 percent. Its estimates in this regard have been correct all along.

Sadly, there is a very significant cost for these mistakes. Misled by the EIA, refiners produced excess amounts of gasoline that went into inventories. Figure 1 shows days of supply of gasoline by month for 2016 compared to 2015 and 2014. On average in 2016, stocks have been higher by two days of supply or 20 million barrels.

Significant costs are associated with higher inventories. In particular, refining margins are lower, as are distribution margins. The July *Petroleum Economics Monthly* coming out this weekend details the costs. Table 1 (page 2) shows estimated refining margins and after-tax margins for gasoline distribution (retail plus distributor margins) associated with days of supply.



As explained in the monthly, downstream margins are much more sensitive than refining margins, as Figure 2 (page 2) shows, because the independent marketers such as Costco thrive when there are excess supplies while losing to branded marketers when inventories are low.

The overproduction of gasoline caused in part by the EIA’s mistakes boosted days of supply from twenty-four to twenty-six. This reduced refining margins by \$1.10 per barrel. As a result, over the last one hundred eighty days, refiners lost \$1.9 billion. The downstream saw margins cut from \$39 per barrel to \$28, racking up an aggregate loss of \$17 billion.

One would think that the magnitude of the loss would motivate organizations that lobby for the retail sector such as the National Association of Convenience Stores to call on the EIA to improve its data collection. Perhaps they will if they learn that the EIA deprived them of \$17 billion in margins in 2016.

The losses do not end here, though. Stockholders in refining companies saw share prices beaten down relative to the S&P 500 during the six months ending September 30. A key cause of the decline was lower margins, blame for which belongs at least in part to the EIA. The total loss in value for a group of refining companies amounted to \$16 billion. Had shares kept pace with the S&P 500 and risen by 5.5 percent over the period, the share value would be \$16 billion higher. Table 2 (page 3) shows the calculation.

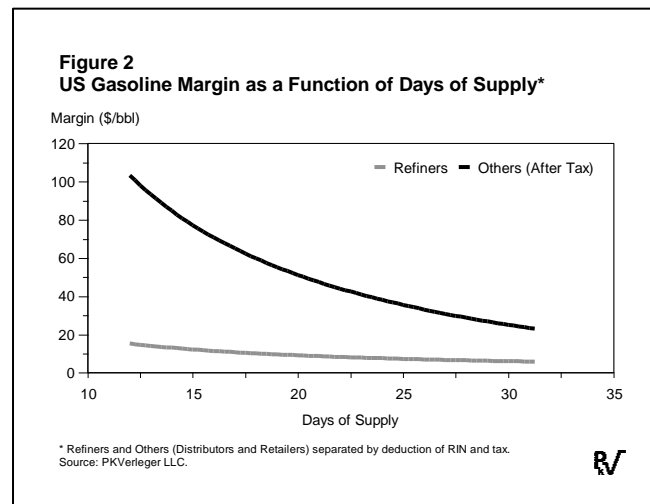
PKVerleger LLC has been harping on the EIA’s data errors for over a year. Our complaints have fallen on deaf ears in general. Perhaps the demonstration that the agency’s mistake has resulted in a loss of \$33 billion for those associated with oil will motivate some in the industry to take action.

In sum, the EIA data are unreliable. Reliance on them can have very expensive consequences.

Table 1. National Gasoline Margins for Refiners and Distributor/ Marketers based on Days of Gasoline Supply (Dollars per Barrel)

Days of Supply	Refiners	Others (After Tax)
18	10.30	60.00
19	9.70	55.40
20	9.20	51.30
21	8.80	47.60
22	8.40	44.20
23	8.00	41.10
24	7.70	38.20
25	7.40	35.60
26	6.60	28.90

Source: PKVerleger LLC.



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Table 2. Estimated Loss in Share Value for Selected Firms in 2016 Caused by the EIA Errors in Estimating US Gasoline Consumption

	<u>3/31/16 Share Price</u>	<u>9/30/16 Share Price</u>	<u>% Change</u>	<u>Share Price Had Stock Matched 5.5% S&P Rise</u>	<u>Shares Outstanding (Millions)</u>	<u>Loss in Value Attributed to EIA (\$ million)</u>
Holly	33.54	24.50	(27.0)	35.40	176	1,916
Marathon	36.50	40.59	11.2		529	
PBF	32.60	21.64	(33.6)	34.40	98	1,250
Phillips 66	85.33	80.55	(5.6)	90.05	532	5,055
Tesoro	84.96	79.56	(6.4)	89.66	119	1,200
Valero	62.94	53.00	(15.8)	66.42	461	6,192
Western Refining	28.33	26.46	(6.6)	29.90	108	373
S&P 500	2,060	2,174	5.5			
Total						15,985

Source: PKVerleger LLC.