



A Few Thoughts on US Petroleum Demand, Inventories, and Prices

Posted by [Gail the Actuary](#) on February 26, 2009 - 4:50pm

Topic: [Demand/Consumption](#)

Tags: [eia](#), [gasoline demand](#), [inventories](#), [petroleum demand](#), [west texas intermediate](#) [[list all tags](#)]

The price of West Texas Intermediate (WTI) oil finally seems to be rising. At least part of this may be occurring because inventories at Cushing finally seem to be drawing rather than increasing:

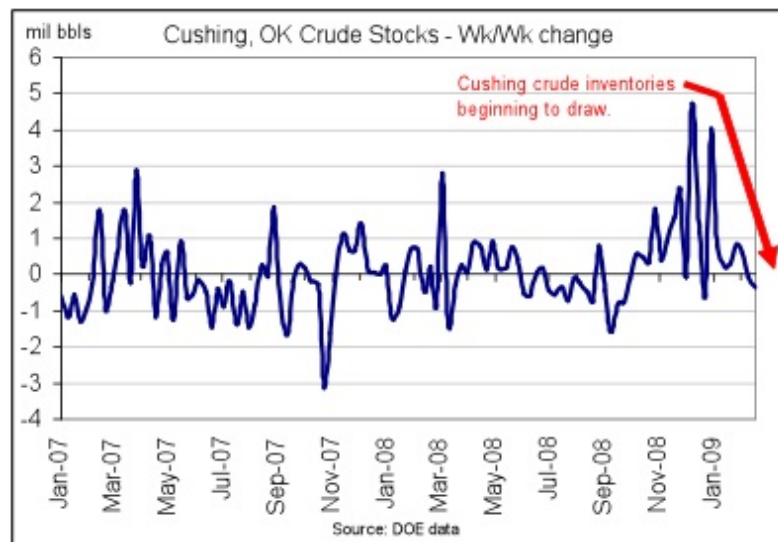


Figure 1. Weekly Change in Crude Stocks in Cushing OK--Graph by Morgan Downey

WTI has recently been trading at a discount to Brent. The shift in the inventory situation may help get this relationship back to a more normal relationship, with WTI priced above Brent.

One might also ask whether US demand is playing a role in higher prices. Below the fold I show a few graphs that seem to indicate that US demand is really not up much yet.

Gasoline Demand

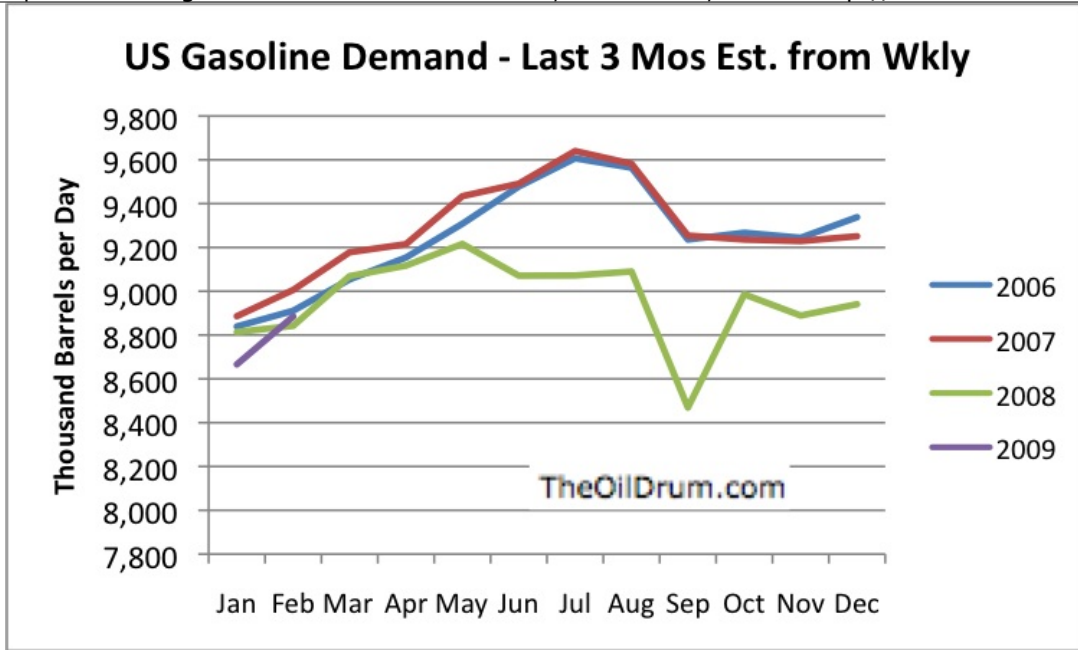


Figure 2. EIA Gasoline Demand; Actual through November 08; December, January and February estimated based weekly data

One can see from this graph that January and February are months where little discretionary driving is done. January and February 2009 demand is only a bit lower than demand for the same months for 2006, 2007, and 2008. If we look back at 2008, we see that the big drop in demand was during the summer months, when a lot of discretionary driving is done. There was also a big drop in demand (or really, gasoline available) in September 2008, after the hurricanes hit. Demand bounced a little in October, as customers refilled their empty tanks. November and December 2008 demand seems to be down about 3.5% from a year earlier. While January and February 2009 are closer to demand of prior years, their absolute level is not very high.

Demand for Other Petroleum Products (Diesel, Jet Fuel, etc.)

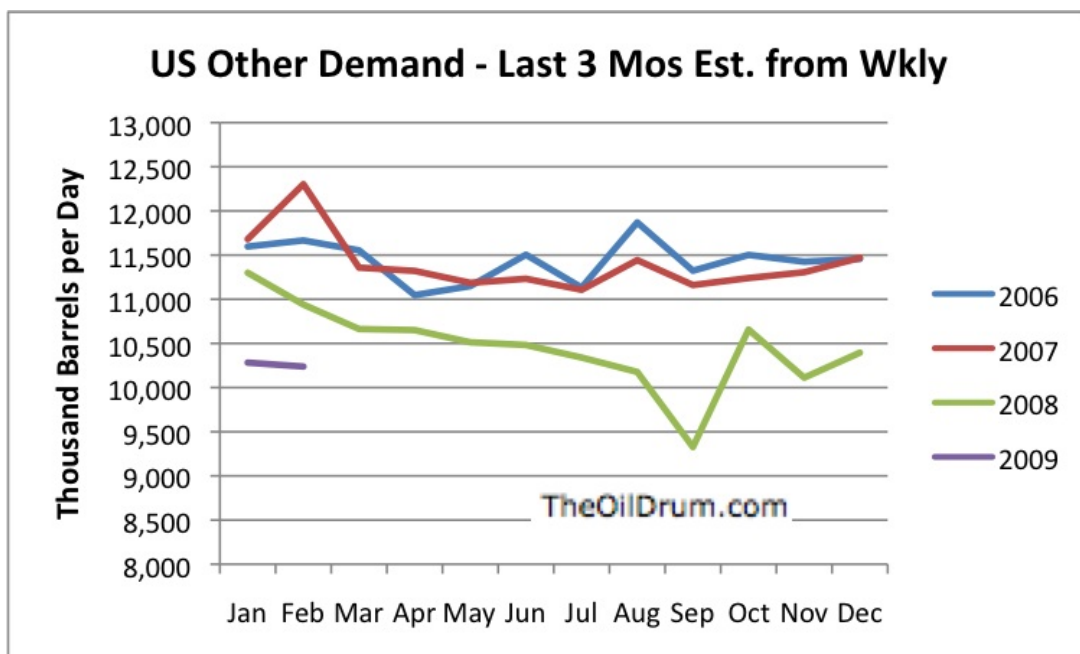


Figure 3. Demand for Petroleum Products Other than Gasoline, Based on EIA Data. Actual through November 08; December, January and February estimated based on weekly

One can see that demand for petroleum products other than gasoline was down during all of 2008. Demand in the first two months of 2009 seems to be down even more. Exports play a fairly big role in the "other than gasoline" category, and these are difficult to estimate accurately, so my estimates for December 2008, January 2009 and February 2009 are subject to change.

Total Petroleum Products Demand

If one adds together the demand graphs for gasoline (Figure 2) and for other petroleum products (Figure 3), one gets this demand graph:

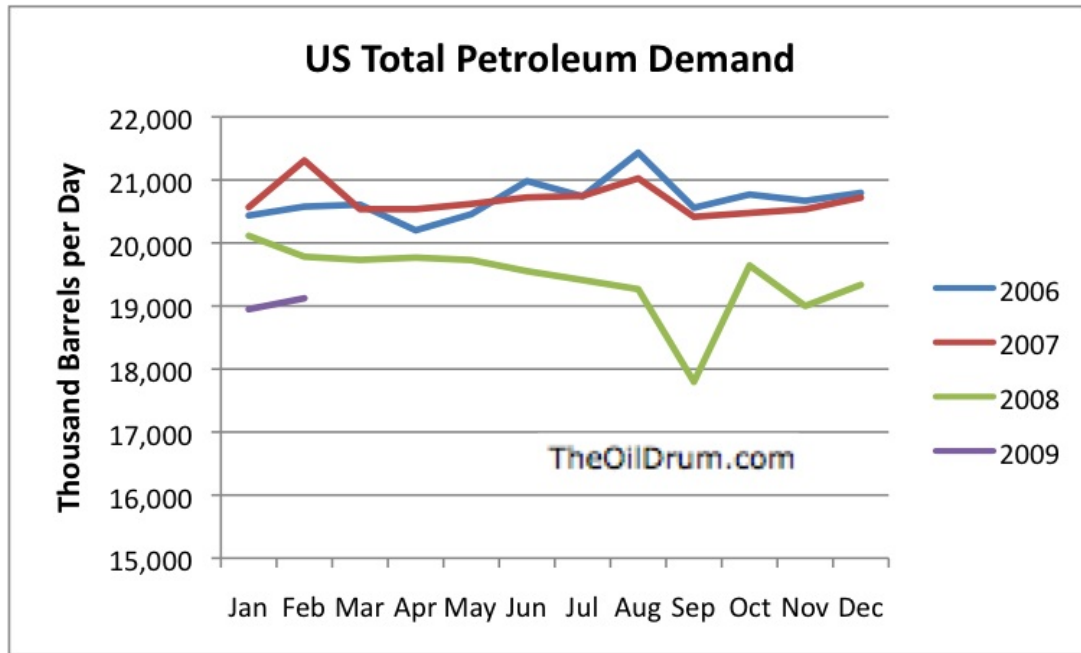


Figure 4. Total Petroleum Products Demand, Based on EIA Data. Actual through November 08; December, January and February estimated based weekly

Total demand still seems to be down in the 19 million barrel a day range. This is quite low for the US. Refiners are adapting gasoline supply to today's reduced demand level. The lower supply is tightening inventories, and tending to keep gasoline prices higher.



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