

McCULLOUGH RESEARCH

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Date: May 14, 2015
To: McCullough Research Clients
From: Robert McCullough
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Subject: Market Power in West Coast Gasoline Markets: An Update

On February 1, 2015 a strike began at a refinery in Martinez, California, and on February 18 an explosion occurred at Torrance, another California refinery. Prior to these events, consumers on the West Coast had been enjoying low gasoline prices, largely due to the lowest crude oil prices since 2009. McCullough Research maintains that today's gasoline prices represent an exercise of uncompetitive market power by gasoline producers operating in a concentrated industry. We estimate that in the three months after the Torrance explosion, market power has cost West Coast consumers over \$1.8 billion above what they would have paid had gas prices remained commensurate with crude oil prices.

While it appears reasonable to assume that the Martinez strike and Torrance explosion both disrupted the supply of gasoline in California – which provides the majority of all West Coast gas production – there is no real evidence of any such supply disruption.

What follows are charts of year-over-year production and storage of gasoline by California refineries. The type of gasoline tracked, called CARBOB, is that which is intended for sale within California's borders.¹ The data derive from a weekly report published by the California Energy Commission.²

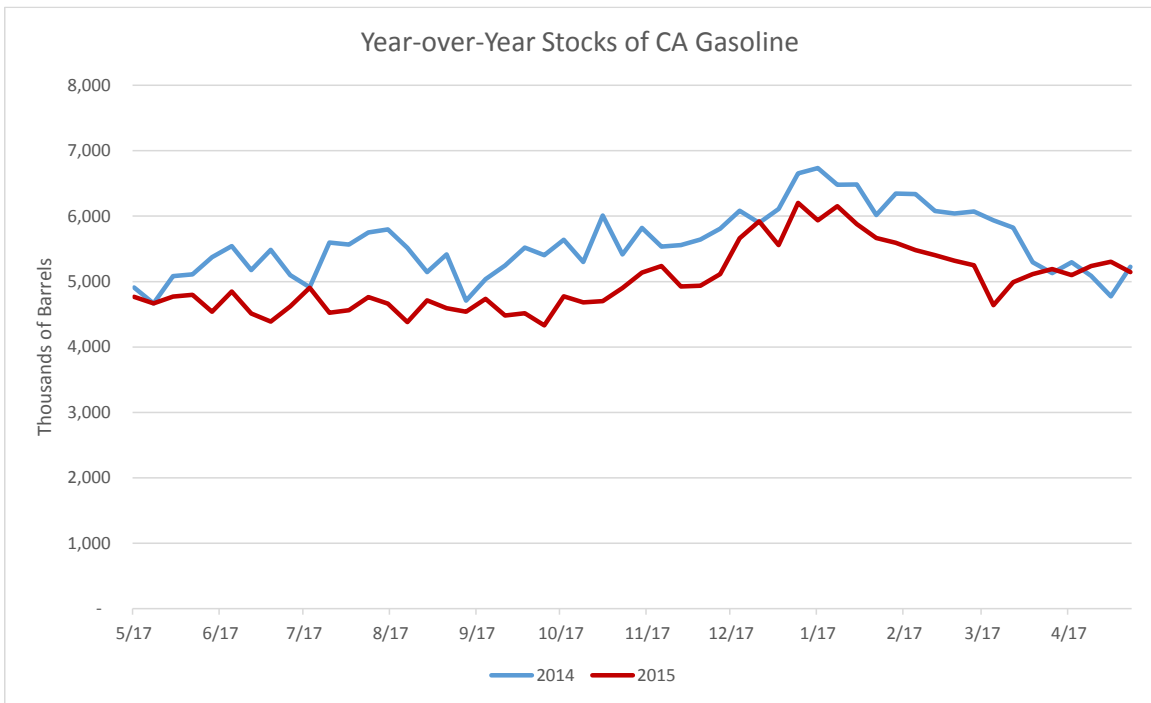
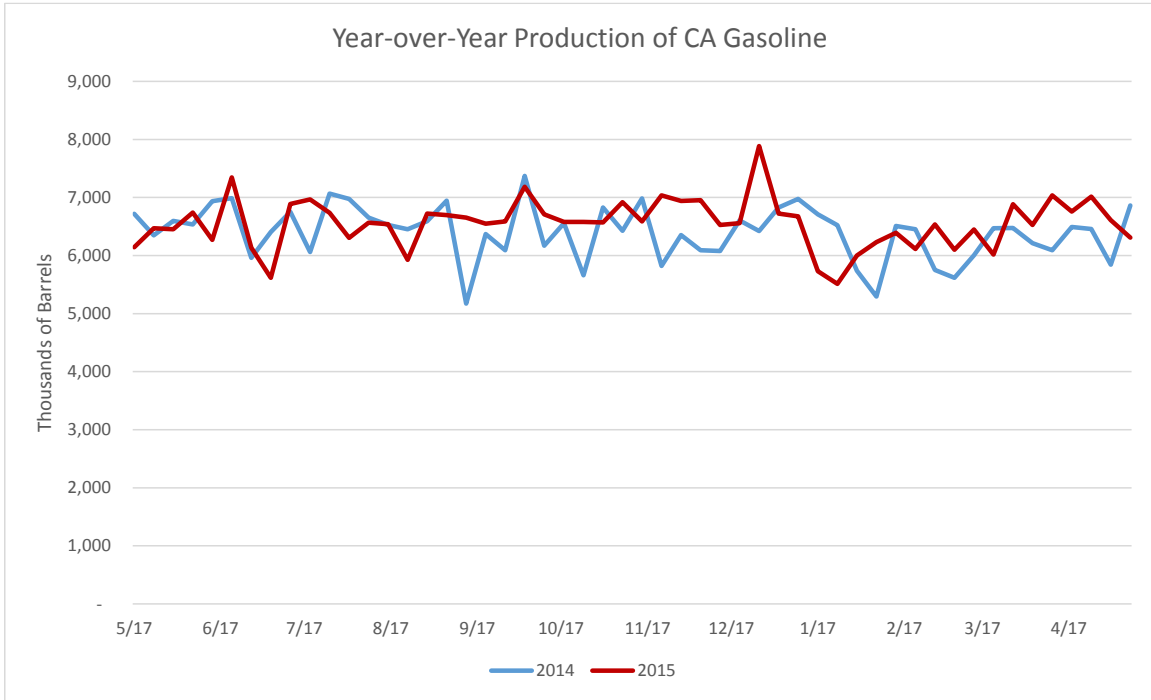
¹ CARBOB stands for California Reformulated Gasoline Blendstocks for Oxygenate Blending. It is defined by the State of California as “Unfinished motor gasoline that meets the requirements of the CA RBOB regulations promulgated by the California Air Resources Board.” http://energyalmanac.ca.gov/gasoline/types_of_gasoline.html

² http://energyalmanac.ca.gov/petroleum/fuels_watch

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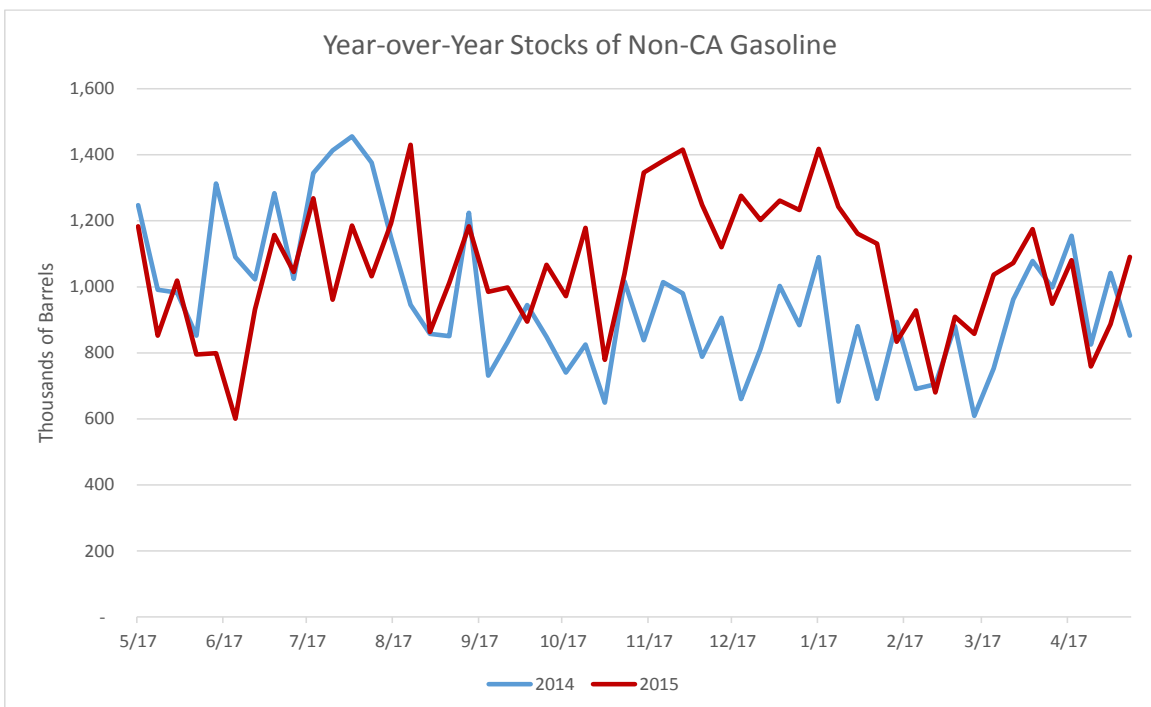
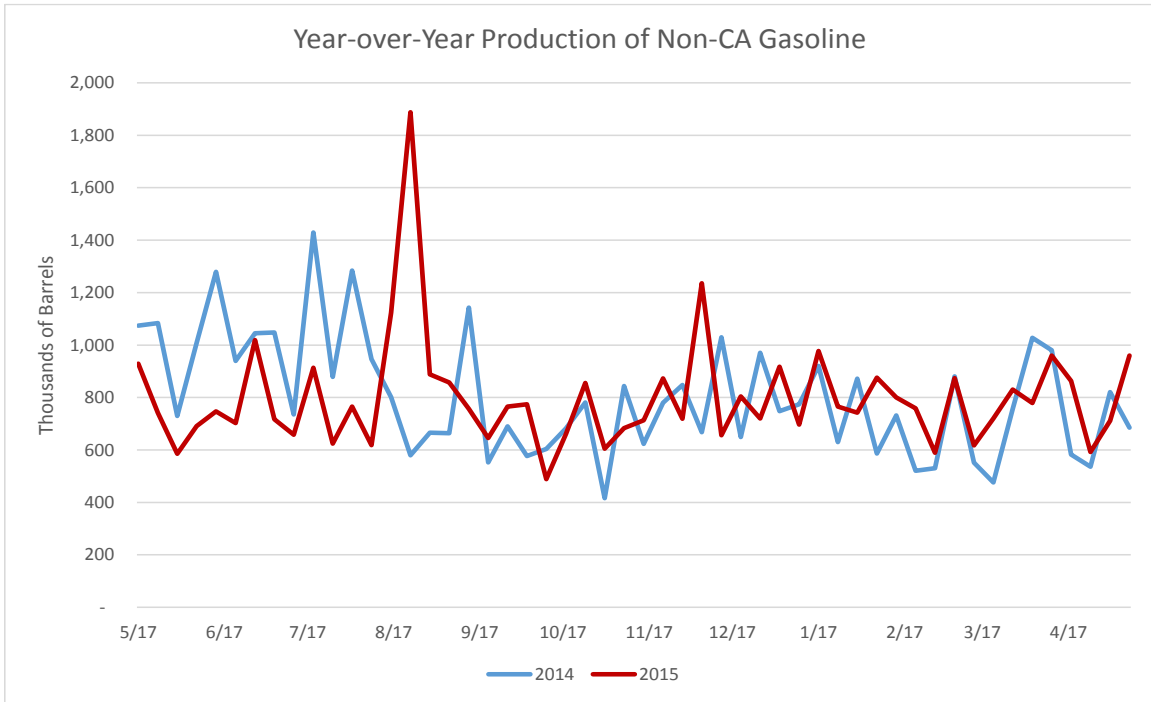
While stocks of gasoline in California refineries were slightly lower than a year ago, the levels of storage today are similar to February 2014. On the other hand, production is considerably

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outpacing 2014 levels. The production and stocks of gasoline intended for sale out-of-state have also been unaffected since this February:

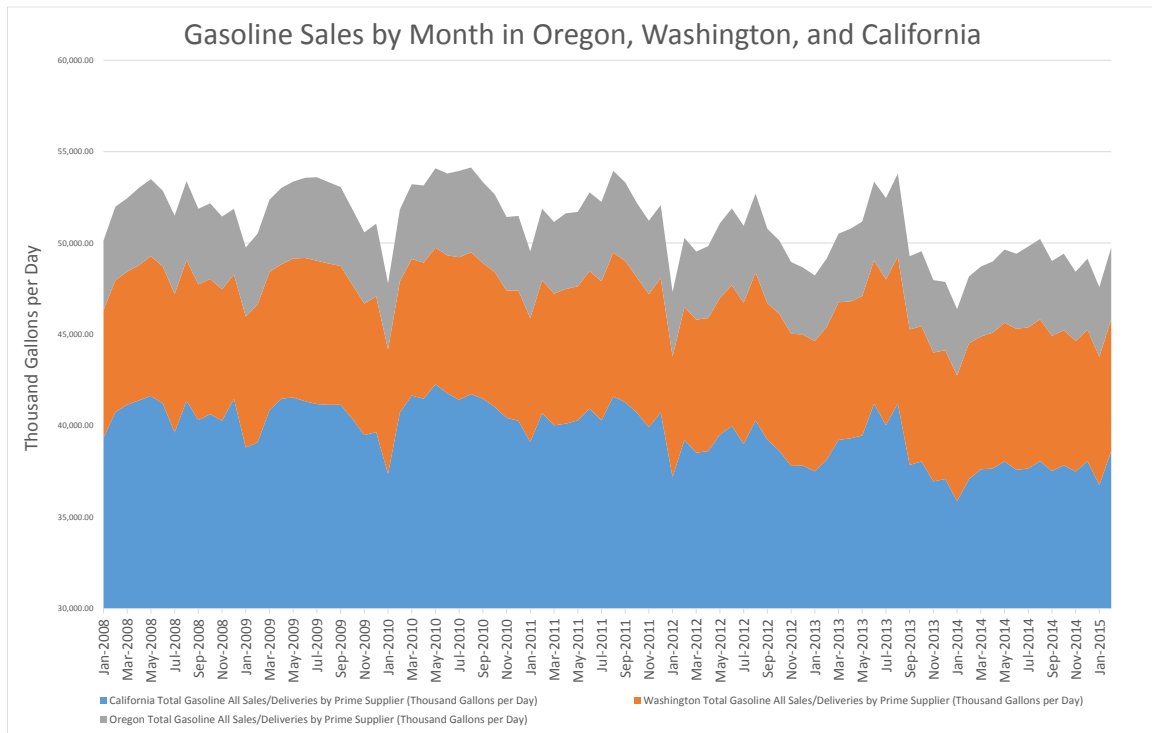


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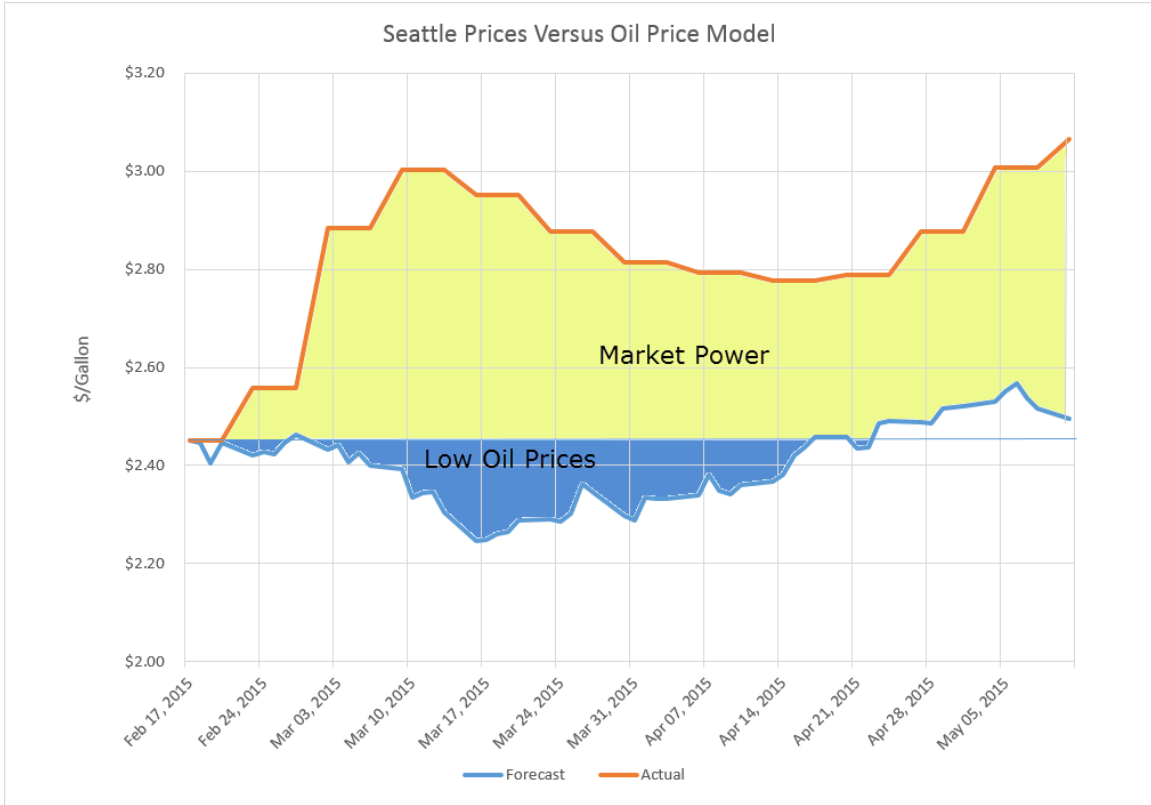
The next reasonable assumption is that demand rather than supply is driving up the cost of gasoline on the West Coast. However, US EIA data on gasoline consumption shows no real jump in demand:³



Gasoline consumption ticked up in February, but the total amount is only 3% higher than February 2014, and only 1% higher than December 2014. Absent evidence of a supply disruption or a spike in demand, we conclude that recent high gas prices result from the exercise of market power in a concentrated industry.

Historical gas prices have predictably followed crude oil prices. However, this has not been the case after the Torrance explosion. The graph below shows how much higher actual gasoline prices have been over forecasted prices, which are based on the price of crude:

³ <http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=C100050061&f=M>



Unfortunately, actual prices continue to diverge from their expected values. To date, over-priced gasoline has cost consumers in California, Oregon, and Washington an estimated \$1.8 billion since February 18, 2015.

Excess West Coast Fuel Costs after Torrance Fire		
2015	Avg \$/gal above forecast	Cost to consumers
<i>Feb 18 - Mar 16</i>	\$0.355	\$526,074,480.00
<i>Mar 17 - Mar 23</i>	\$0.677	\$230,839,533.40
<i>Mar 24 - Mar 30</i>	\$0.564	\$190,945,552.00
<i>Mar 30 - Apr 6</i>	\$0.494	\$168,025,067.00
<i>Apr 7 - Apr 13</i>	\$0.439	\$150,879,652.00
<i>Apr 14 - Apr 20</i>	\$0.357	\$123,446,988.00
<i>Apr 21 - Apr 27</i>	\$0.339	\$116,588,822.00
<i>Apr 28 - May 4</i>	\$0.388	\$133,942,120.20
<i>May 5 - May 11</i>	\$0.486	\$166,807,200.00
Total	\$0.456	\$1,807,549,414.60