HIGHLIGHTS OF THE 17TH EDITION OF THE LOUISIANA CRUDE OIL REFINERY SURVEY REPORT

by

J. Bryan Crouch, P.E.

The 17th edition of DNR's *Louisiana Crude Oil Refinery Survey Report* covers the 12-month period from July 1, 2007 to June 30, 2008. Louisiana has 17 operating refineries with a combined capacity of 3,071,216 barrels per calendar day (bcd). The throughput for the 12-month period was 1,021,102,360 barrels, and the operating rate was 91.1%. ExxonMobil has the most refining capacity in Louisiana as well as the largest single refinery. See Table 1 for details and comparison to the results of DNR's last survey.

Regular gasoline and ultra low sulfur diesel (ULSD) make up the largest percentages of the Louisiana refinery product slate at 34.8% and 15.9% respectively. The total diesel component (ULSD and other diesel) is 26.5%. See Table 2. The phase-in for ULSD is continuing with a final deadline of December 1, 2010 for all refinery output of on-highway diesel to be 100% ULSD.

The expansion of Placid's refinery in Port Allen is still underway. The \$300 million investment is scheduled for completion in 2010 and will bring the facility's crude capacity up to 80,000 bcd, allow the processing of lower quality crudes, and increase its gasoline and diesel production capacity. Alon USA Energy, Inc. acquired Valero's Krotz Springs refinery in 2008. Marathon's expansion of its Garyville facility is nearing completion and will result in a capacity increase of 180,000 bcd.

Data is also presented in the report from the *Oil and Gas Journal's* annual Worldwide Refinery Report, and the Energy Information Agency's annual Refinery Capacity Report.

The only 2008 storm to impact Louisiana refineries was Hurricane Gustav, which affected 14 of the 17 operating refineries in Louisiana. On September 1st, in anticipation of Gustav, 11 Louisiana refineries with a total capacity of 1.9 million bcd were shutdown. ExxonMobil in Baton Rouge, and Citgo in Lake Charles, remained in operation, but with reduced runs. As Gustav moved through the area, ExxonMobil in Baton Rouge and Placid in Port Allen shutdown, bringing the total shutdown capacity to 2.5 million bcd, which is approximately 83 % of the total Louisiana capacity. Citgo in Lake Charles continued operating with reduced runs. Gustav caused only minor damage to area refineries, so outages did not last long. By September 13th, most refineries were back to normal operation with a few operating with reduced runs or in start-up procedures.

The full report is available online in PDF format on the Department of Natural Resources Technology Assessment Division website (<u>http://dnr.louisiana.gov/sec/execdiv/techasmt/oil_gas/refineries/</u>), and printed copies will be available soon. If you are currently on our mailing list as a subscriber to this publication, a printed copy will be mailed to you automatically. If you would like to be added to our mailing list to receive a free copy, submit an email request to <u>techasmt@la.gov</u> (include your name and address, and specify which publication you are requesting), or contact Jan Janney at 225-342-1270.

Refinery	Operating Capacity as of 6/30/08 (bcd)	Operating Capacity Change ¹ (%)	Throughput 7/1/07 - 6/30/08 (barrels)	Throughput Change ² (%)
Calcasieu Refining Co - Lake Charles	78,000	0.00	18,493,896	-26.09
Calumet Lubricants Co LP - Cotton Valley	12,158	0.00	2,735,295	-4.01
Calumet Lubricants Co LP - Princeton	7,158	-1.86	2,619,828	1.34
Calumet Shreveport LLC - Shreveport	65,000	62.50	13,127,890	3.35
Chalmette Refining LLC - Chalmette	196,000	0.00	58,684,766	-5.88
Citgo Petroleum Corp - Lake Charles	429,500	0.00	131,480,397	-6.81
ConocoPhillips - Belle Chasse	247,000	0.00	86,506,300	-3.15
ConocoPhillips - West Lake	239,000	0.00	84,960,254	-3.45
ExxonMobil Refining & Supply Co - Baton Rouge	503,000	0.00	184,252,000	1.02
Marathon Petroleum Co LLC - Garyville	255,000	0.00	90,701,028	-2.54
Motiva Enterprises LLC - Convent	235,000	2.17	79,157,000	-3.21
Motiva Enterprises LLC - Norco	236,400	-2.39	84,620,968	19.49
Murphy Oil USA Inc - Meraux	125,000	4.17	39,055,000	1.03
Placid Refining Co - Port Allen	58,000	3.57	19,853,369	1.93
Shell Chemical Co - St. Rose	55,000	0.00	17,003,657	-5.45
Valero Refining Co - Krotz Springs	80,000	0.00	25,358,333	-10.60
Valero Refining Co - Norco	250,000	35.14	82,492,379	-3.33
Totals	3,071,216	3.23	1,021,102,360	-1.98

Table 1. Louisiana Operating Refinery Capacity and Throughput

1. Change from end date (6/30/2007) of previous DNR survey to end date (6/30/2008) of current DNR survey.

2. Change from previous DNR survey throughput (7/2006 - 6/2007) to current DNR survey throughput (7/2007 - 6/2008).

Product	Total Product Slate (%)
Regular gasoline	34.81
Diesel	26.54
Jet fuel/Kerosene	10.61
Fuel oil	5.84
Residual/Coke	6.50
Premium gasoline	3.80

Table 2. Top Products from LA Refineries by % of Product Slate