Jambalaya on the Bayou – Changes Ahead for Crude Oil Flows in Louisiana

Pipelines, Refineries, Crude Oil Balances Show a Region in Flux

- **Louisiana, Southern Arkansas refinery capacity accounts for nearly one-fifth of U.S. total**
- **Refineries clustered in three regions, with the largest in Southeastern and Southwestern Louisiana**
- **Each region has its own approach to sourcing, with most crude coming from the offshore Gulf, Texas**
- **Pipeline expansions are already shifting regional crude oil flows; more changes are coming**

1. Introduction

When it comes to crude oil and refining, Texas gets most of the attention, and for good reason. It's #1 in oil production, refining capacity, and exports of both crude and refined products. But don't forget about Louisiana. While it's not a Texas-sized oil producer, ranking only #10 if you count onshore and the state's territorial waters (and #3 if you add production in the federally controlled portion of the Gulf off Louisiana), it's #2 in refining, crude oil exports and refined products exports. Louisiana also is home to some of the world's largest and most technologically complex refineries, with the ability to break down vast amounts of heavy and medium oils into highly valuable gasoline, diesel and jet fuel.

In addition to being major refined products exporters, Louisiana refineries are critically important suppliers of refined products to the Southeastern U.S. and the Mid-Atlantic states. Most of the larger refiners in Louisiana have ties to either the 2.5-MMb/d Colonial Pipeline, which runs to Northern New Jersey, or the 660-Mb/d Products (SE) Pipeline — formerly known as the Plantation Pipeline — which runs to Northern Virginia.

Given all that, it's important to understand where the Bayou State's refineries — and a couple of smaller refineries just over the state line in Southern Arkansas — source their crude oil, how that crude is delivered to the refineries, and how capital investments in oil pipelines and the refineries themselves have been impacting crude oil flows into, across and out of the state.

That's the aim of this Drill Down Report, which discusses in some detail the pipelines that transport crude oil to Louisiana refineries from the offshore Gulf, from Houston and Nederland, and from the hub in Longview, TX, which feeds refineries in Northwestern Louisiana and Southern Arkansas. The report also groups the 16 refineries in our study area into three refining regions, explains how oil reaches them, and provides detailed crude oil balances for each region.

As we'll discuss in more detail later, Southeastern Louisiana relies heavily on offshore Gulf production, Southwestern Louisiana depends primarily on inflows from Texas and waterborne crude, and Northwestern Louisiana gets its oil from pipelines and rail and truck deliveries. Those supply/demand patterns have defined Louisiana's crude balances for years, but forces beyond the state's borders may be emerging that could begin to reshape the state's flow dynamics.

One more thing is worth noting, namely that the refineries in Louisiana and Southern Arkansas run the gamut, from massive and highly complex facilities like Marathon Petroleum's 627-Mb/d refinery in Garyville, LA,; ExxonMobil's 546-Mb/d Baton Rouge plant; CITGO's 480-Mb/d Lake Charles refinery, Phillip 66's 273-Mb/d Westlake, LA refinery and Valero Energy's 235-Mb/d Norco refinery (all with Nelson Complexity Index values in double digits) to a handful of smaller (<100-Mb/d), niche refineries (most of them in Northwestern Louisiana and Southern Arkansas) that focus primarily on lubricants and other specialty products.

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