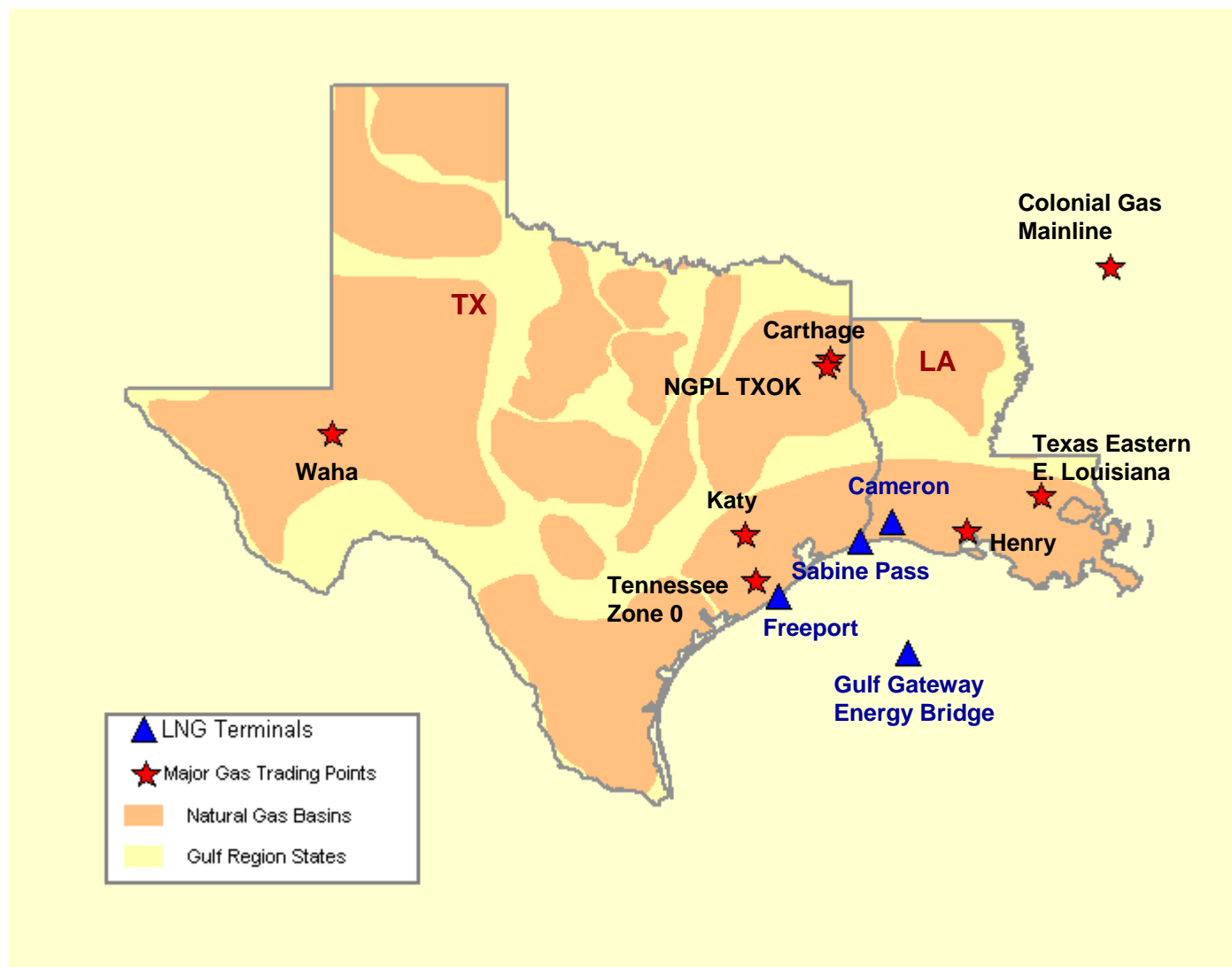


## Gulf Natural Gas Region



## OVERVIEW

### Market Description

The Gulf region is the key natural gas producing region in the United States. In 2007 it accounted for 58 percent of total estimated dry natural gas production and over 48 percent of proved dry natural gas reserves. In addition, the region is experiencing burgeoning production from shale gas plays. The Gulf is home to almost 2 Tcf of storage capacity and innumerable interstate and intrastate pipeline interconnections and natural gas market centers and hubs such as the Henry, Carthage, Katy, Moss Bluff, Perryville and Waha Hubs. In 2007, regional gas consumption exceeded one-third of lower-48 natural gas production and represented almost one-third of lower-48 natural gas consumed by the electric power sector.

### Geography

**States covered:** Louisiana and Texas.

### Major Trading Hubs

Henry Hub, Egan Hub, Waha Hub, Katy Hub, Carthage Hub, Houston Ship Channel, Moss Bluff Hub, NGPL TexOK, NGPL South Texas, Southern Natural (Louisiana), and Columbia Gulf Mainline (used as a proxy for gas purchased in Perryville, LA).

### Production

Increased shale gas production in the Gulf region and in neighboring regions has changed the production landscape. The output from shale gas resources in the Barnett, Woodford, Fayetteville and Haynesville shale deposits in Texas, Oklahoma, Arkansas and Louisiana is prodigious. Since 2005, these basins are responsible for 7.5 Bcfd of new incremental gas supply prompting the construction of three new interstate pipelines, the expansion of two others, and numerous intrastate pipelines in Texas to transport the gas to markets in the Southeast, Midwest, Mid-Atlantic and Northeast.

## Gulf Gas Market: Overview and Focal Points

Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

### Storage

Over one-quarter of the region's storage facilities are salt cavern facilities. In 2008 over 53 Bcf of working gas capacity was added and another 105 Bcf is expected to go into service in 2009. Again, most of this new capacity is multi-turn, high-deliverability salt cavern storage.

### Pipeline Flows

Average Daily Supply: The Gulf Region is a net exporter of natural gas mainly to downstream markets in the Midwest, Southeast, Mid-Atlantic and Northeast regions.

**Major Pipelines:** Texas Eastern, Tennessee, Sonat, Transco, Trunkline, NGPL, Columbia, Texas Gas, Florida Gas, Gulf Crossing Pipeline, Midcontinent Express, and Southeast Supply Header.

### Imports and Exports

International gas imports and exports continue to play a minor role in the Gulf market when compared to regional domestic gas production. Pipeline imports from Mexico remain negligible; exports to Mexico averaged about 1.0 Bcfd in 2008, up 0.2 Bcfd from 2007. The Freeport LNG Terminal received commissioning cargoes in 2008 and the Sabine Pass and Cameron LNG terminals began operations in April 2008 and July 2009, respectively, but overall utilization of the terminals remains low and imports depend mainly on U.S. supply and demand market dynamics versus gas requirements, pricing, and logistics in competing markets in Europe and Asia.

### Send-out at Lake Charles LNG facility:

2005: 0.28 Bcf/d

2006: 0.39 Bcf/d

2007: 0.71 Bcf/d

2008: 0.03 Bcf/d

2009: 0.08 Bcf/d (Jan – June)

## Gulf Gas Market: Overview and Focal Points

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### **Send-out at Gulf Gateway LNG facility:**

2005: 0.02 Bcf/d

2006: 0.001 Bcf/d

2007: 0.05 Bcf/d

2008: none

2009: none (Jan – June)

### **Send-out at Sabine Pass LNG facility:**

2005: NA

2006: NA

2007: NA

2008: 0.02 Bcf/d

2009: 0.01 Bcf/d (Jan – June 2009)

**Send-out at Cameron LNG facility:** Flows are negligible averaging only 0.001 Bcf/d through second quarter 2009.

## Gulf Gas Market: Overview and Focal Points

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Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

**Imports from Mexico into the U.S.:** Flows are negligible averaging 0.1 Bcf/d in 2008.

**Exports from US into Mexico:**

2007: 0.8 Bcf/d

2008: 1.0 Bcf/d

**Contact Information**

For specific issues regarding the Northeast Natural Gas Region please contact the following Analysts:

Ken Kohut – [kenneth.kohut@ferc.gov](mailto:kenneth.kohut@ferc.gov)

## Annual Average Spot Hub Prices

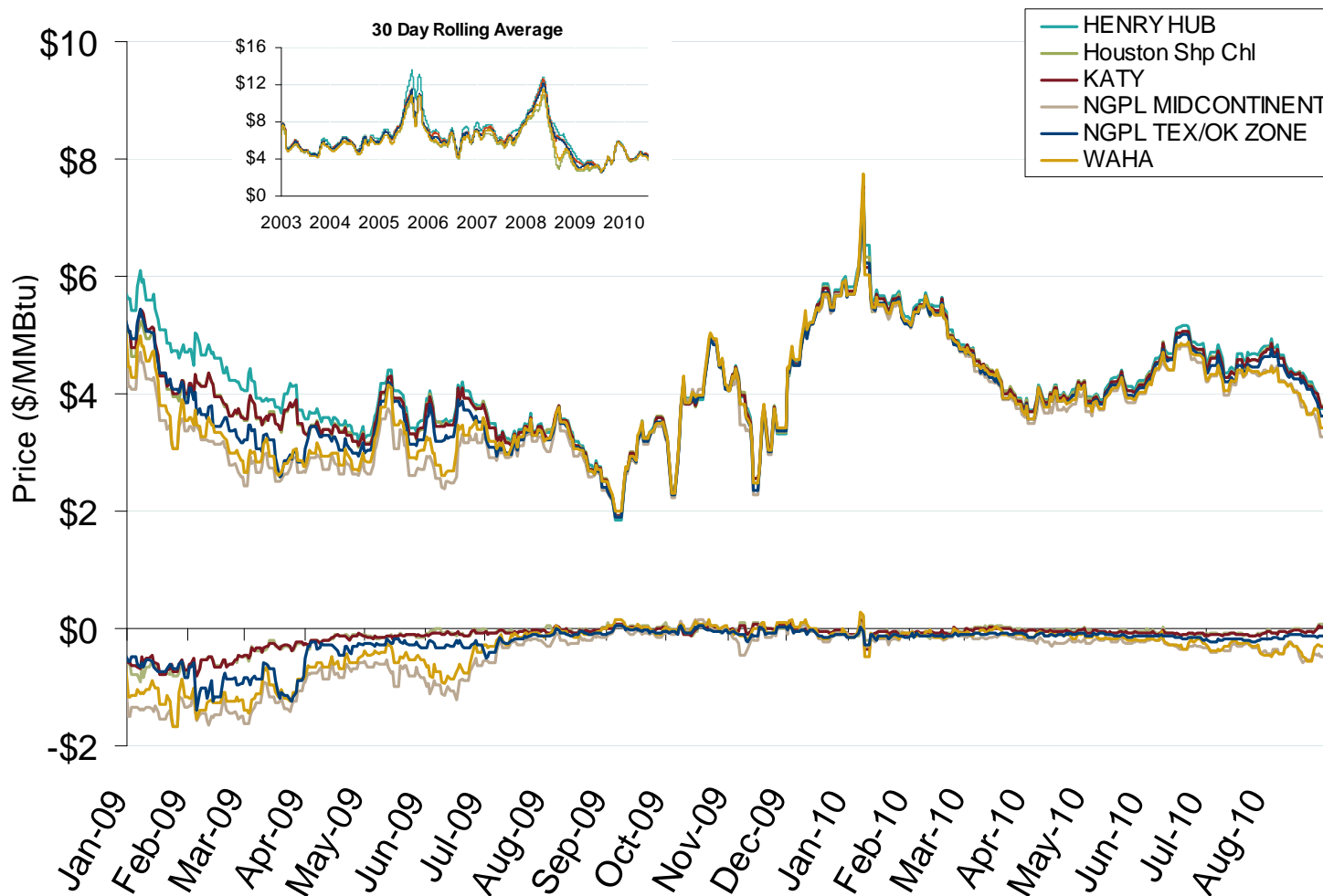
Annual Average Day Ahead Prices (\$/MMBtu)						
	2005	2006	2007	2008	2009	5-Year Avg
Henry Hub	\$8.69	\$6.74	\$6.94	\$8.85	\$3.92	\$7.03
NGPL Midcontinent	\$7.57	\$5.89	\$6.12	\$7.11	\$3.32	\$6.01
Houston Ship Channel	\$8.03	\$6.38	\$6.63	\$8.50	\$3.75	\$6.66
Katy	\$7.99	\$6.36	\$6.61	\$8.51	\$3.75	\$6.65
Waha	\$7.59	\$5.99	\$6.34	\$7.57	\$3.47	\$6.19
El Paso Permian	\$7.54	\$5.89	\$6.20	\$7.44	\$3.41	\$6.10
Panhandle TXOK	\$7.59	\$5.89	\$6.09	\$7.07	\$3.27	\$5.98
Tennessee Zone 0	\$8.00	\$6.38	\$6.59	\$8.50	\$3.74	\$6.64

Source: Derived from *Platts* data.

Updated January 8, 2010

2040

## Gulf Day-Ahead Hub Spot Prices and Basis

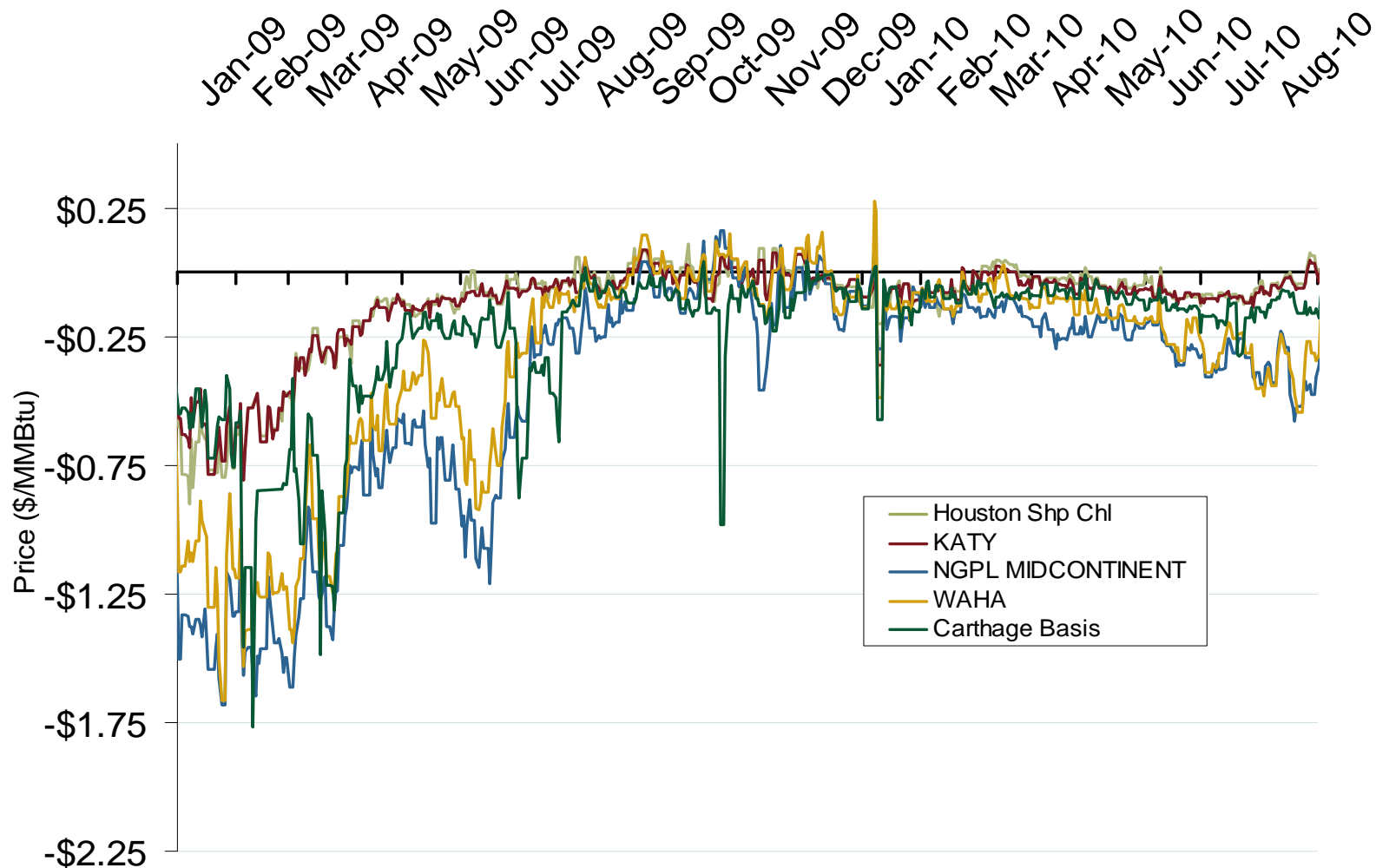


Source: Derived from *Platts* data.

Updated September 7, 2010

2044

## Gulf Natural Gas Market: Recent Basis

Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)**Gulf Day-Ahead Basis**Source: Derived from *Platts* data.

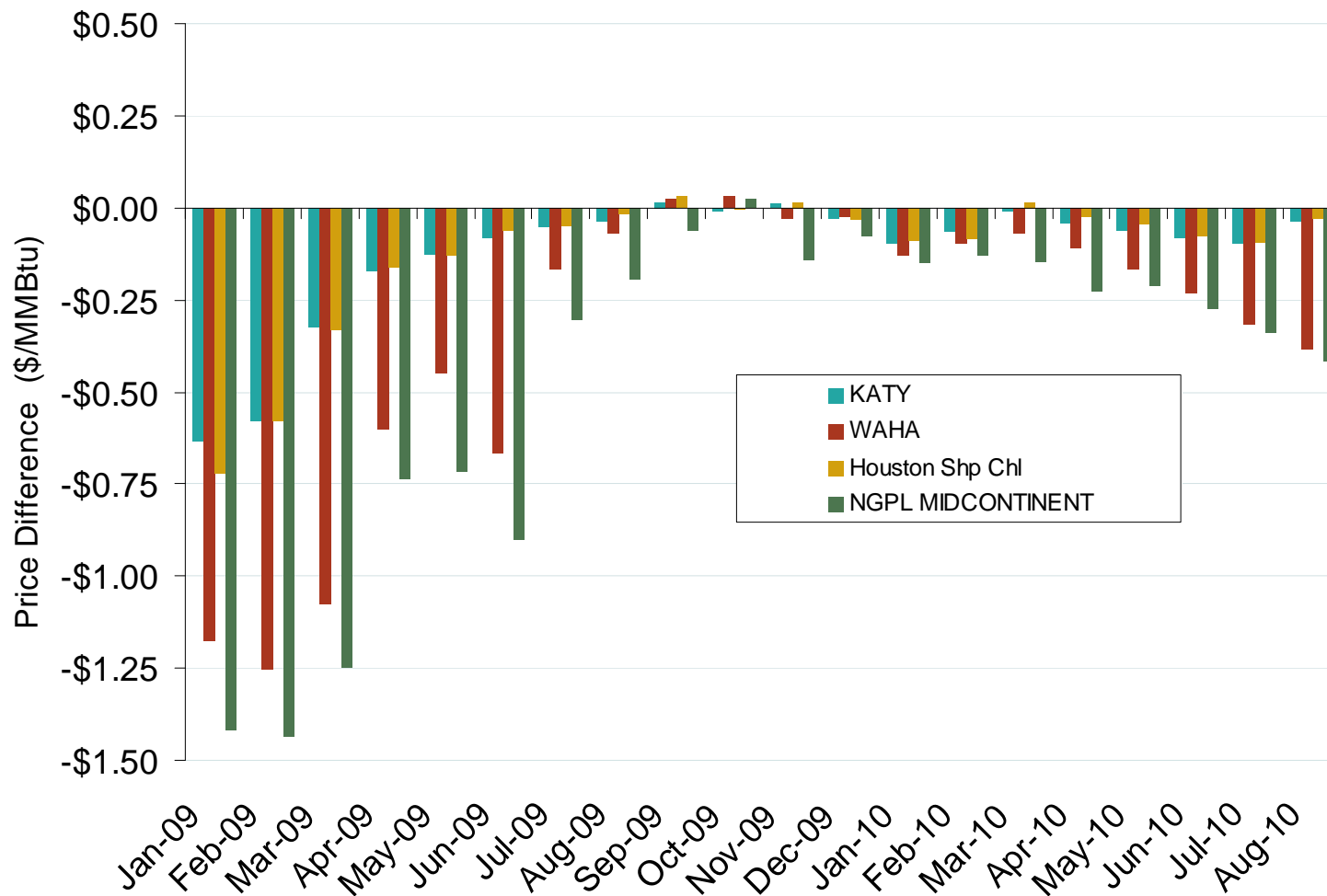
Updated September 7, 2010 2052



## Gulf Natural Gas Market: Average Basis to Henry Hub

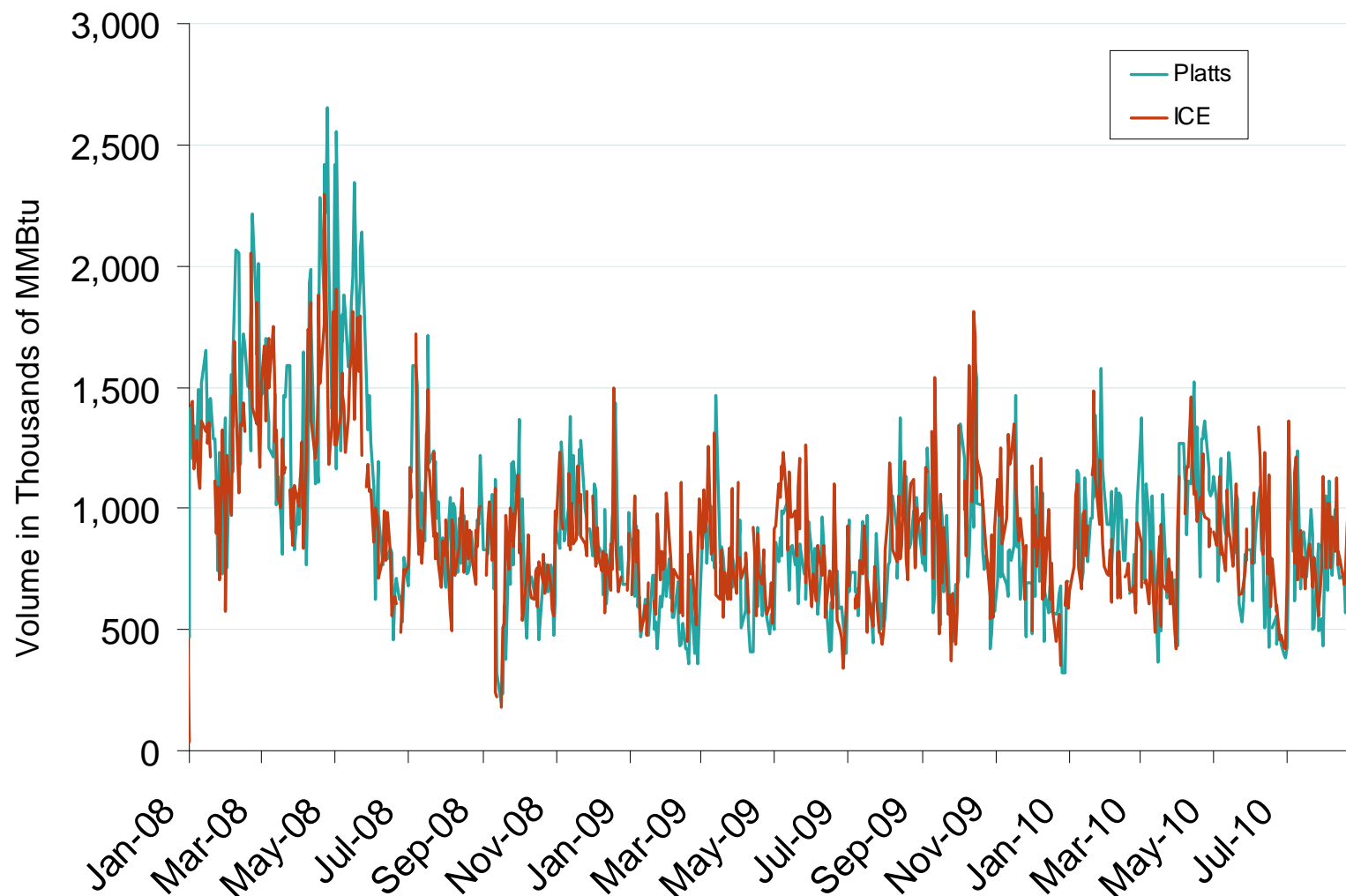
Federal Energy Regulatory Commission • Market Oversight • [www.ferc.gov/oversight](http://www.ferc.gov/oversight)

## Gulf Monthly Average Basis Value to Henry Hub

Source: Derived from *Platts* data.

Updated September 7, 2010 2045

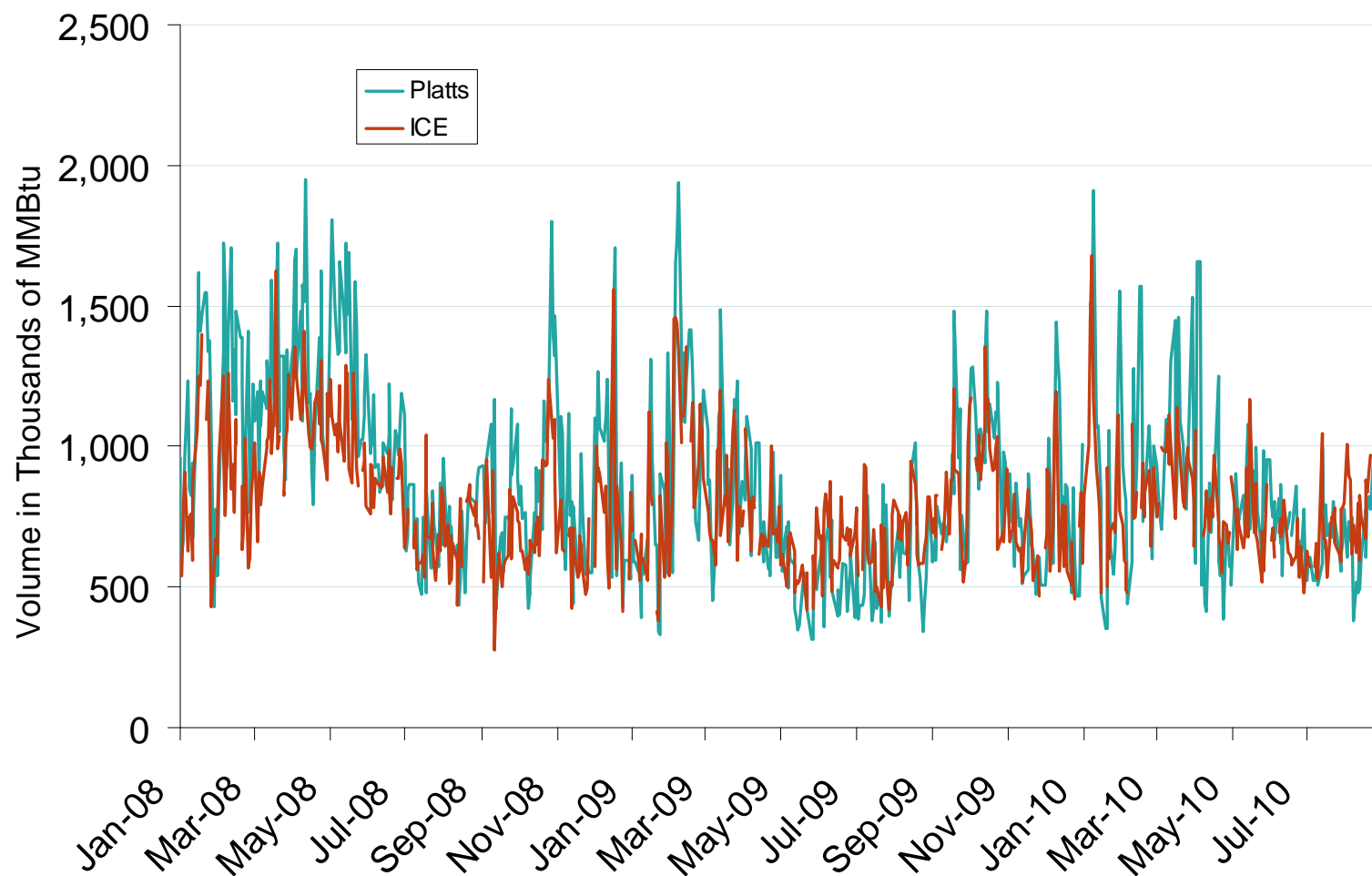
## Published and Traded Daily Spot Volumes at Henry Hub



Source: Derived from *Platts* and *ICE* data.

Updated September 7, 2010<sup>2152</sup>

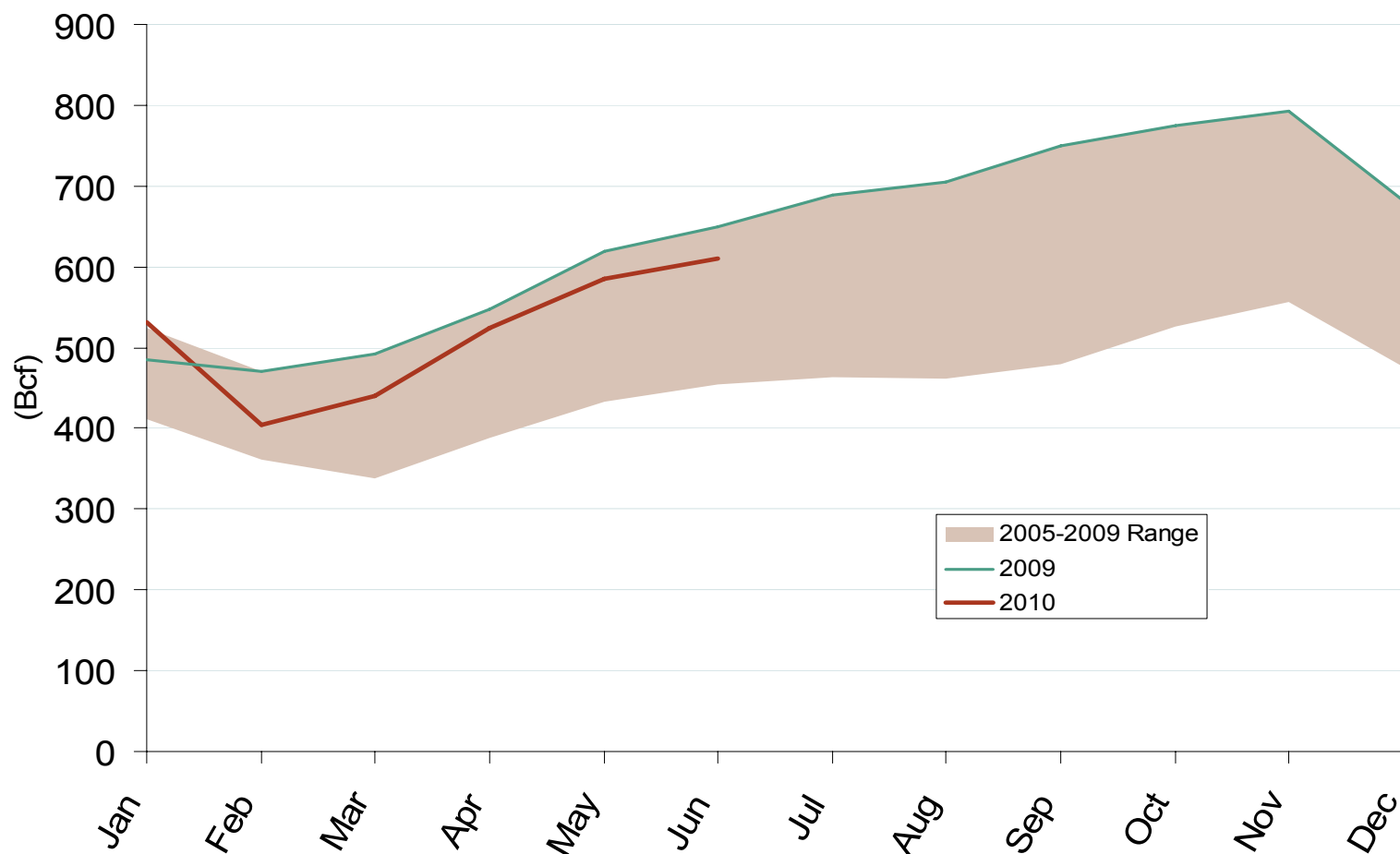
## Published and Traded Daily Spot Volumes at NGPL Texok



Source: Derived from *Platts* data.

Updated September 7, 2010<sub>2152</sub>

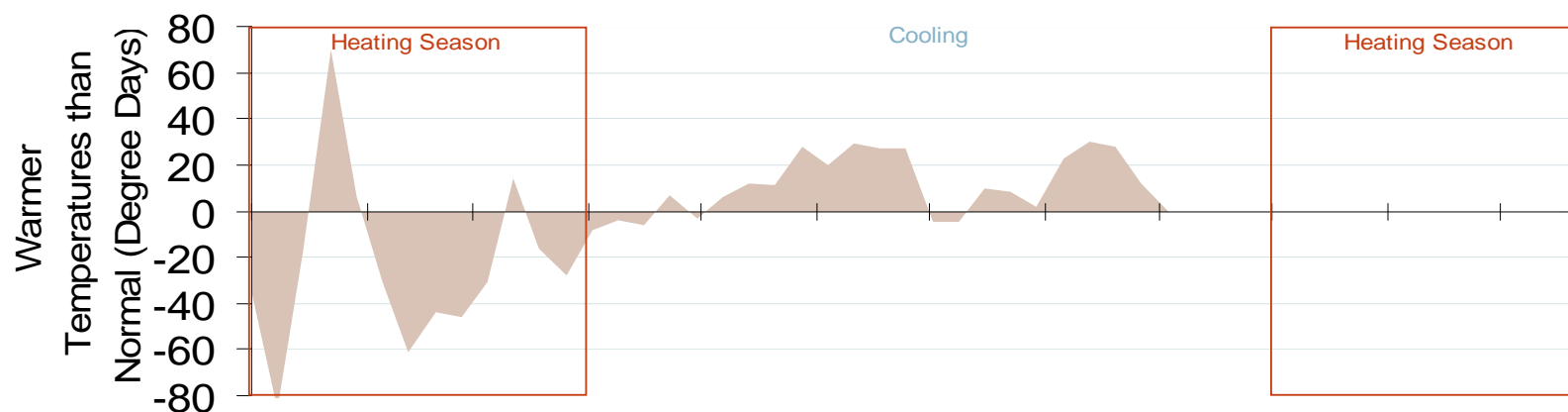
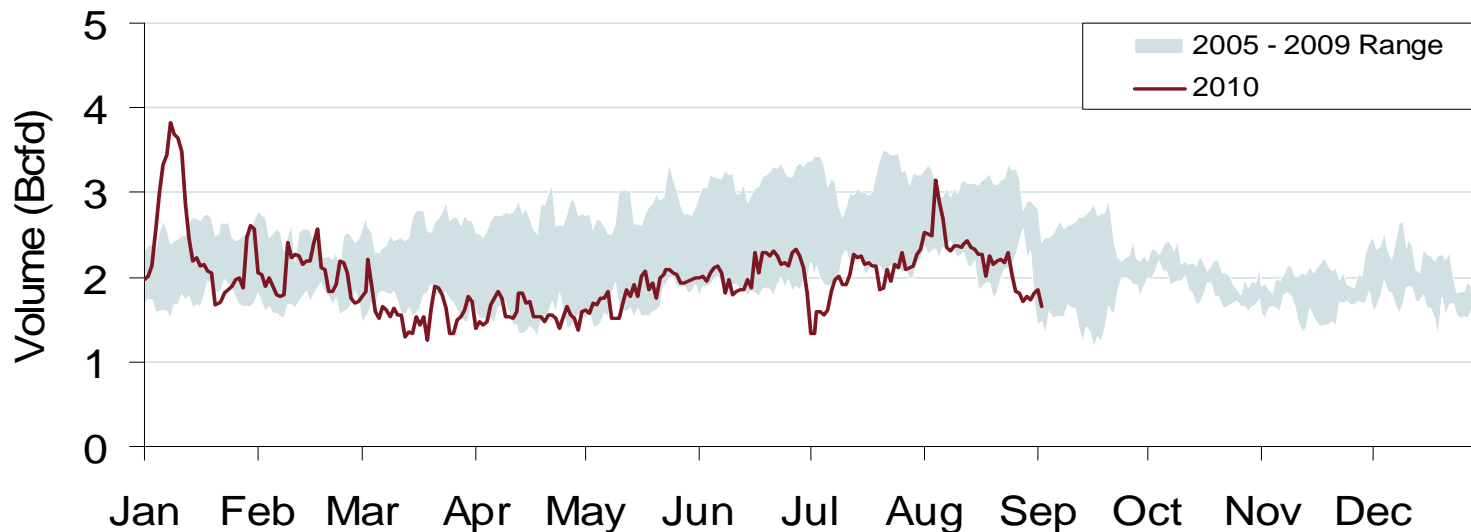
## Gulf Region Underground Working NG In Storage



Source: Derived from EIA. Due to a change in methodology, as of October '09 AR, KS, NE, and OK are no longer in the Gulf region.

Updated September 7, 2010 2051

## Daily Gulf Natural Gas Demand All Sectors

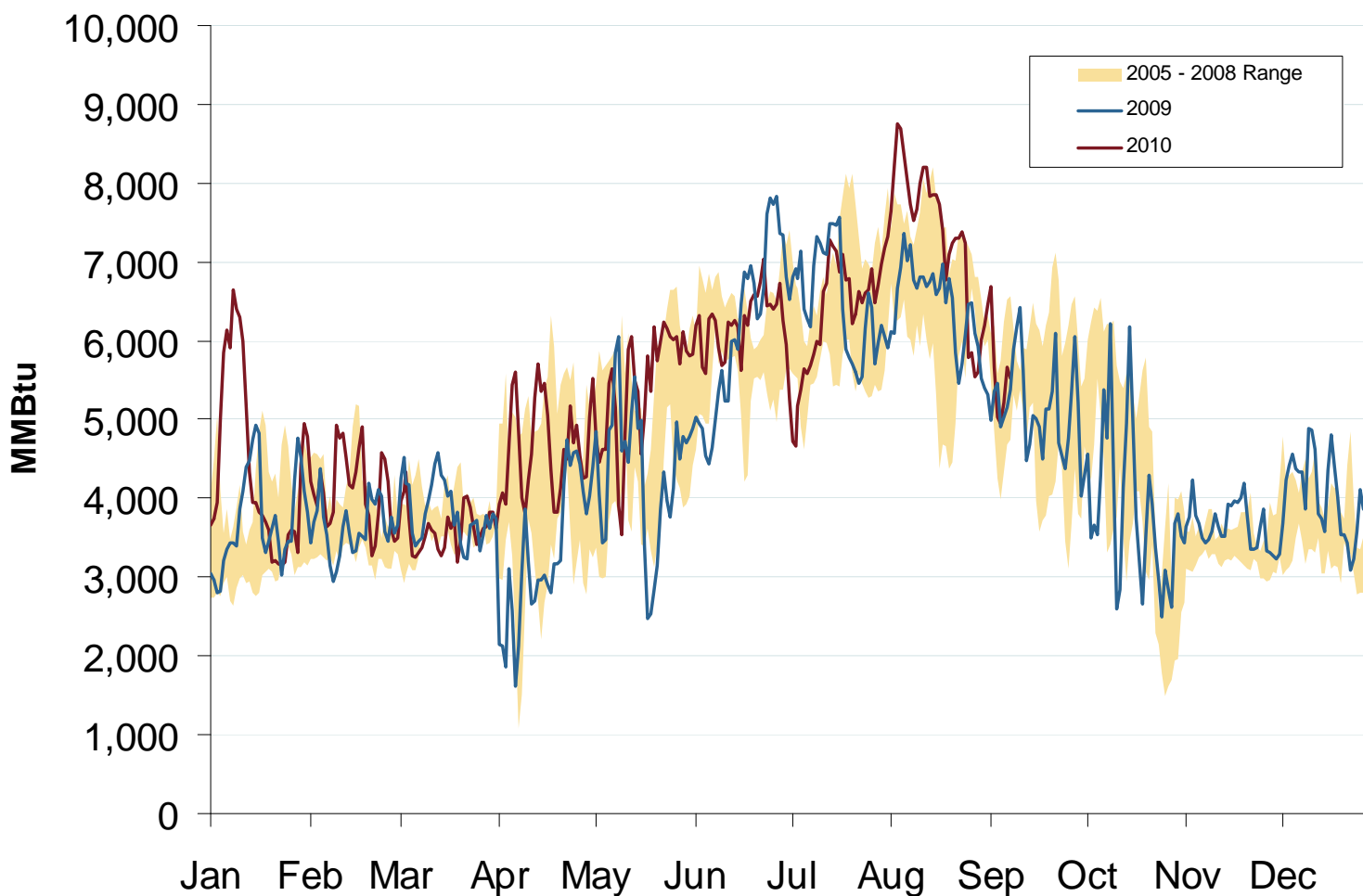


Source: Derived from Bentek Energy and Weekly NOAA data.

Updated September 7, 2010

22500

## Gulf Natural Gas Consumption for Power Generation



## Gulf Infrastructure Additions

- **ETP's Tiger Pipeline** – Will add 2.6 Bcfd of takeaway capacity from the Haynesville, Bossier Sands, and Fort Worth supply basins into the Perryville Hub in northern LA. Will interconnect with Texas Gas, Tennessee, TETCO, Trunkline, ANR and SESH.
- **Texas Gas Greenville Lateral Stage 2 Expansion** - adds 250 MMcfd of capacity in Mississippi through additional compression, giving Fayetteville shale producers increased access to markets served by ANR, Trunkline, Sonat and TETCO.
- **CenterPoint CP Line Phase IV** - Stage 4 compression expansion adds 340 MMcfd of capacity to the CP Line.
- **Regency Energy Partners Haynesville Expansion and Red River Lateral** - This 1.2 Bcfd intrastate line is designed to move Haynesville shale gas to interconnects with Texas Gas, Tennessee, Trunkline, Sonat, Columbia Gulf and ANR at the Perryville Hub.

