

# STATE OIL AND GAS PRODUCTION AND PRICE PROJECTIONS FOR THE NEXT FIVE YEARS

by  
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Louisiana has produced oil and gas for more than a century. This is the production projection of the oil and gas from state regulated land and water bottoms and the price projection of the oil and gas prices for the near future. Oil and gas production is intimately linked with the economy of our state. Presently, Louisiana is the fourth largest producer of crude oil and the fifth largest producer of natural gas in the U.S. Louisiana is also second in per capita energy consumption. More than 225,000 wells have been drilled searching for oil and gas in Louisiana since the first commercial oil well was drilled in 1901 in Jennings.

## Production Forecast

Oil production declined an average of 5.1% per year and gas production declined an average of 1.5% per year over the past ten years. The DNR Technology Assessment Division long term model is projecting a 3.1 % decline per year for oil and a 2.6% decline per year for gas. Even though the long term model is accurate over long periods (10 to 30 years), the short term fluctuation, as shown in the following tables, illustrates the need for a short term model. The short model projections, listed below, are accurate for production over periods of one to five years.

### DNR's Short Term Crude Oil Production Projection

	<u>Date</u>	<u>Base Case</u> (Barrels)	<u>% Change</u>	<u>Low Case</u> (Barrels)	<u>High Case</u> (Barrels)
Actual	2006	73,974,517	-2.25%	N/A	N/A
Actual	2007	77,391,320	4.62%	N/A	N/A
Actual	2008	72,043,958	-6.91%	N/A	N/A
Projected	2009	75,887,338	5.33%	72,092,971	78,922,831
Projected	2010	74,376,603	-1.99%	70,062,760	79,062,329
Projected	2011	72,077,261	-3.09%	67,320,161	77,915,519
Projected	2012	69,816,525	-3.14%	64,650,102	75,681,113
Projected	2013	67,737,588	-2.98%	62,183,106	73,630,759

### DNR's Short Term Natural Gas Production Projection

	<u>Date</u>	<u>Base Case</u> (MCF)	<u>% Change</u>	<u>Low Case</u> (MCF)	<u>High Case</u> (MCF)
Actual	2006	1,349,819,887	5.06%	N/A	N/A
Actual	2007	1,353,918,237	0.30%	N/A	N/A
Actual	2008	1,348,906,562	-0.37%	1,348,906,562	1,348,906,562
Projected	2009	1,322,197,335	-1.98%	1,238,237,804	1,414,486,709
Projected	2010	1,317,989,164	-0.32%	1,229,683,890	1,414,597,770
Projected	2011	1,318,345,476	0.03%	1,225,402,120	1,419,594,409
Projected	2012	1,321,722,742	0.26%	1,223,915,259	1,427,857,078
Projected	2013	1,325,520,993	0.29%	1,222,793,116	1,436,599,653

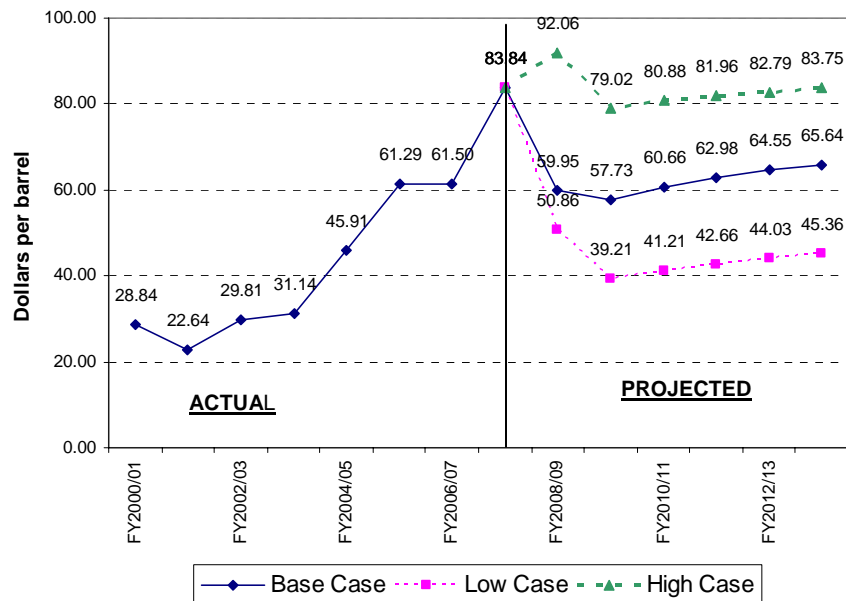
Factors which contribute to the year-to-year deviations in oil production are:

- Changes in wildcat drilling and development of marginal fields within the state
- Early capping of incapable wells by major producers
- Unstable prices of crude oil and natural gas
- Changes in environmental laws, especially those concerning salt water discharge, and the Clean Air Act Amendments of 1990
- World supply and demand, causing an a glut or shortage depending on its growth rate
- The number of active rigs in the region
- Military conflicts or political instability in some producing countries
- Application of advanced technology such as 3-D and 4-D seismic
- State and local tax incentives
- Mild or severe weather patterns
- Foreign imports

### Price Projection

Oil prices are determined in the international markets and are difficult to project. Just as the historical data shows great swings in the price of oil, there is also considerable uncertainty about future prices. The future price of oil is linked to the unpredictability of world oil supplies and world economics. Major factors affecting oil prices are: a) political stability of producing countries, b) world environmental issues, c) industrialized countries' conservation practices, d) weather related demand for petroleum products, e) production restrictions by OPEC countries, f) economic changes in consumer nations, and g) stability in the labor force. If crude oil supply and demand for petroleum products is well balanced and refiners have sufficient downstream capacity to process difficult crudes, the price of crude oil will seek a stable market condition.

Louisiana Crude Oil Prices Projections



Natural gas prices recently started to behave similarly to crude oil prices, but with a lag. Oil prices are heavily driven by the international oil market while gas prices only recently started to feel its effect. Gas prices usually are driven by factors such as weather, demand for gas not satisfied by the pipeline system, availability of spot supplies, and competing fuel prices. There is less international trade of natural gas than there is of oil. It is harder to find producers with export capabilities, transport vessels, and receiving ports with the necessary infrastructure (pipelines, compression stations, LNG tanks, etc.). Natural gas also has to fight the NIMBY (Not In My Back Yard) resistance from residents to its infrastructure. The major cost components of natural gas prices are: cost of infield production, cost of transportation, cost of marketing, and investment rate of return. As the historical data shows, most of the components of natural gas prices are stable with the exception of marketing cost. Marketing cost is the only cost that oscillates widely. Gas prices increased as regulations faded out in the early 80's. With deregulation, natural gas started trading in the spot and commodity markets. Since 1985, this spot market for gas has grown in importance and today, it is the major factor in the determination of gas prices. In April 1990, natural gas futures contracts started trading in the New York Mercantile Exchange (NYMEX). A NYMEX gas future contract calls for delivery of 10,000 MCF of gas during a specific month, 1 to 12 months in the future. The contract delivery point of the gas is Sabine Pipe Line Company's Henry Hub terminal near Erath, Louisiana.

Others factors that could affect prices are storage levels, curtailments, market changes, new consumption and NAFTA (North America Free Trade Agreement). Gas prices are also affected by psychological factors and often the expectation of soft prices is enough to bring them about. A good dose of cold winter weather will usually erase much of the psychological element of low gas prices.

Louisiana Natural Gas Price Projections

