

# INTRODUCTION

The *Louisiana Short Term Oil and Gas Forecast* report provides the following information. The oil and gas price chapter shows projected prices for the next five years. The oil and gas production chapter shows short term and long term production forecasts. The mineral royalty revenue chapter shows projected royalty revenue by source. The severance tax revenue chapter shows projected severance revenue by source. The bonus, rentals, and overriding royalty (BR&O) revenue chapter shows projected revenue by source. The last chapter is a summary of the royalty, severance tax, and BR&O historical and projected state mineral revenue, and proceeds from federal lands and the Outer Continental Shelf (OCS) area. Appendix A shows definition of abbreviations and acronyms used in the report. Appendix B shows definition of terms used in the Forecast. Appendix C shows some Louisiana severance tax exemptions. Appendix D lists state oil and gas severance tax rates. Appendix E shows the rules of mineral revenue allocation to parishes. Appendix F shows royalty and severance tax for FY2008/09 through FY2011/12 at multiple assumed prices. Appendix G shows oil and gas historical data on price, production, bonus, rental, royalty revenue, and severance tax revenue by calendar year.

The Department of Natural Resources, Technology Assessment Division (TAD) short term forecast models projected the following Louisiana oil and gas productions, excluding federal OCS regions.

Forecasted state production for FY2007/08 through FY2012/13:

YEAR	CRUDE OIL (Barrels)	NATURAL GAS (MCF)
FY2007/08	75,673,979	1,336,929,887
FY2008/09	74,978,917	1,308,505,554
FY2009/10	73,982,646	1,274,981,241
FY2010/11	72,162,963	1,237,771,654
FY2011/12	69,751,415	1,199,439,462
FY2012/13	67,509,397	1,160,837,489

Projected prices and tax rates for FY2007/08 through FY2012/13:

YEAR	OIL	GAS	SEVERANCE TAX	
	PRICE (\$/Barrel)	PRICE (\$/MCF)	OIL FULL RATE (% of value)	GAS FULL RATE (\$/MCF)
FY2007/08	\$80.42	\$6.55	12.50%	\$0.269
FY2008/09	\$78.35	\$6.76	12.50%	\$0.288
FY2009/10	\$74.87	\$6.70	12.50%	\$0.261
FY2010/11	\$74.18	\$6.80	12.50%	\$0.258
FY2011/12	\$74.58	\$7.06	12.50%	\$0.262
FY2012/13	\$75.18	\$7.12	12.50%	\$0.272

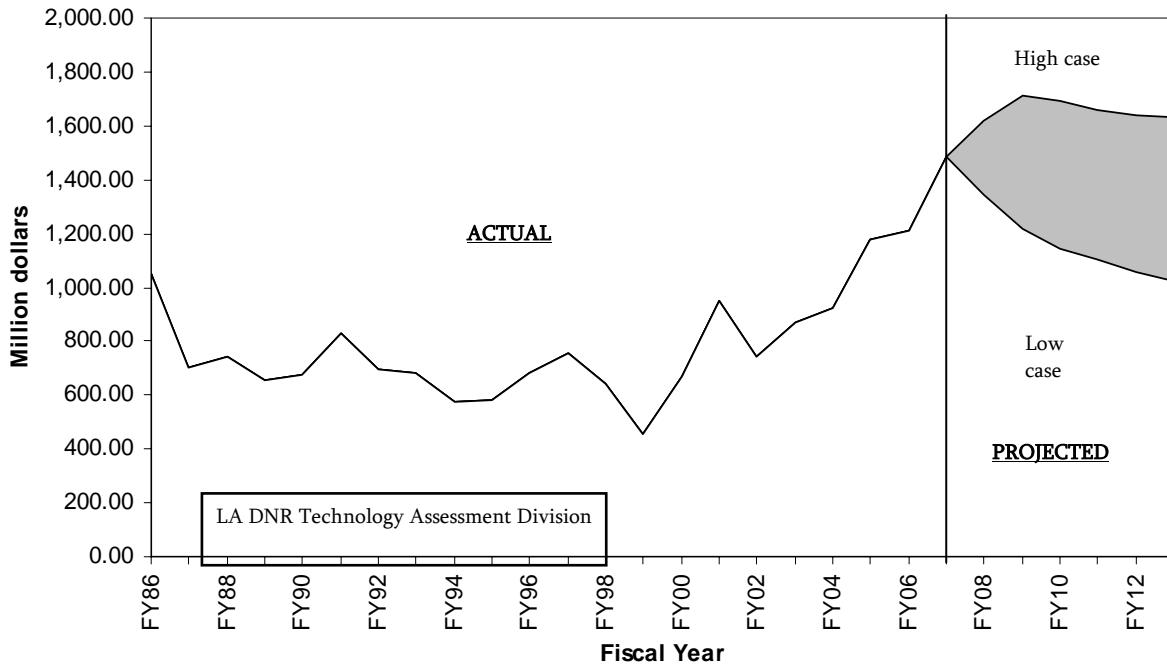
Using the above data and empirical equations we can project the state mineral revenue, excluding revenue from federal regions (Louisiana federal lands and federal offshore-outer continental shelf).

State mineral revenue in million of dollars for FY2007/08 through FY 2012/13:

YEAR	SEVERANCE	ROYALTY	BONUS, RENTAL & OVERRIDE	TOTAL REVENUE	PERCENT CHANGE
FY2007/08	924.62	517.56	47.05	1,489.22	0.15%
FY2008/09	916.15	512.82	48.60	1,477.58	-0.78%
FY2009/10	845.54	491.00	48.60	1,385.15	-6.26%
FY2010/11	816.14	480.32	48.60	1,345.06	-2.89%
FY2011/12	796.16	476.60	48.60	1,321.36	-1.76%
FY2012/13	784.13	465.46	48.60	1,298.19	-1.75%

**Figure 1**

**STATE TOTAL REVENUE FROM  
MINERAL PRODUCTION  
(Excluding Federal Lands & OCS)**



# OIL AND GAS PRICES

## CRUDE OIL PRICE PROJECTION

Oil prices are determined in the international markets and are difficult to project. As 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 restraints by OPEC countries, f) economy changes in consumer nations, g) stability in labor forces, and h) wars in producing countries. If crude oil supply and demand for petroleum products is well balanced and refiners have the sufficient downstream capacity to process difficult crudes, the price of crude oil will seek a stable market condition.

Calendar year data is provided in Appendix F. The historical and projected fiscal year average Louisiana wellhead crude oil prices are as follows:

**Table 1**

### **Louisiana Crude Oil Price Projections**

(Dollars per barrel)

	<b>Year</b>	<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Actual	FY1999/00	\$23.24	86.44%	N/A	N/A
Actual	FY2000/01	\$28.84	24.07%	N/A	N/A
Actual	FY2001/02	\$22.64	-21.51%	N/A	N/A
Actual	FY2002/03	\$29.81	31.69%	N/A	N/A
Actual	FY2003/04	\$31.14	4.47%	N/A	N/A
Actual	FY2004/05	\$45.91	47.43%	N/A	N/A
Actual	FY2005/06	\$61.29	33.51%	N/A	N/A
Actual	FY2006/07	\$61.50	0.33%	N/A	N/A
Projected	FY2007/08	\$80.42	30.77%	\$71.26	\$90.36
Projected	FY2008/09	\$78.35	-2.57%	\$68.54	\$89.39
Projected	FY2009/10	\$74.87	-4.45%	\$65.24	\$86.24
Projected	FY2010/11	\$74.18	-0.92%	\$63.90	\$85.40
Projected	FY2011/12	\$74.58	0.54%	\$63.33	\$86.33
Projected	FY2012/13	\$75.18	0.81%	\$62.86	\$87.56

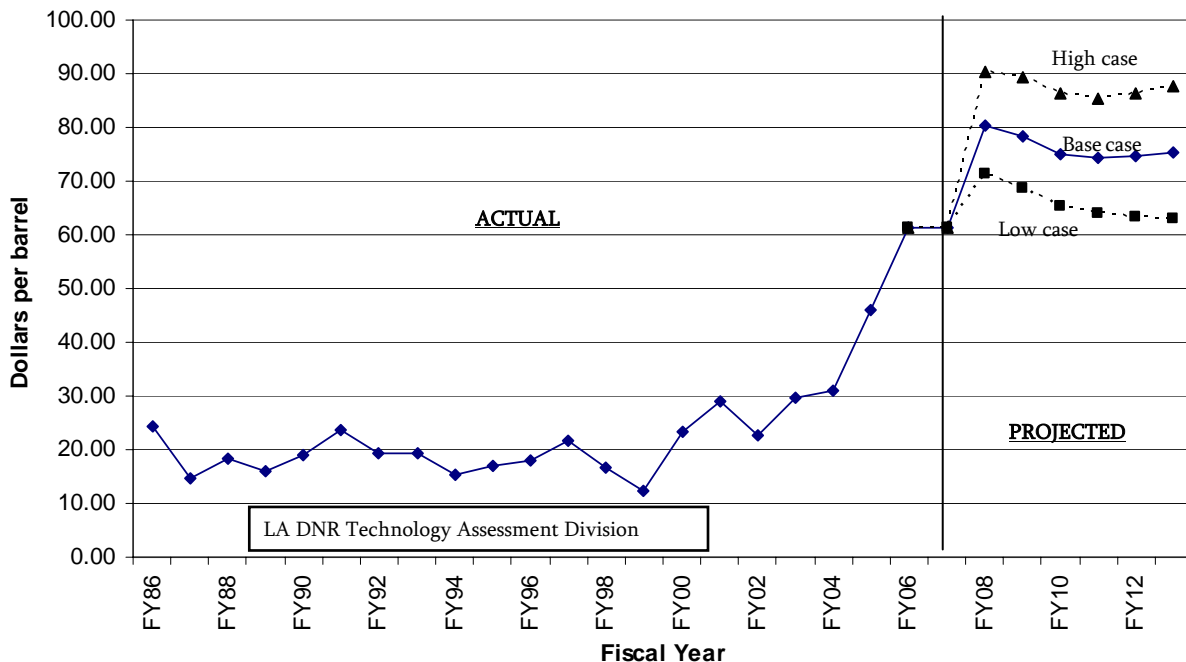
The base case assumes: a) world oil demand will grow at an average annual rate of 1.1 percent between 2008-2013, b) OPEC will keep their daily production quotas and other producing countries will restrain their production, c) weather demand will be normal with normal heating demand in winter and normal cooling demand in late spring and early summer, or d) production will not be disrupted by man-made instability or wheater related in non-OPEC producing countries.

The low case assumes: a) world oil demand will grow less than 1.0 percent annually from 2008 to 2013, b) OPEC countries will produce more than their allowed quotas, and Iraq will be able to produce more than 2 million barrels per day, c) weather will be mild, or d) no major storms hit producing areas.

The high case assumes: a) world oil demand will grow at a rate higher than 1.2 percent per year between 2008-2013, fueled by the economic boom in Southeast Asia, b) OPEC countries such as Nigeria, Iran, Indonesia and Iran will lower their production due political unrest, c) production will be disrupted in non-OPEC producers due to weather, accidents or workers' strikes, or d) war escalation either in the Middle East, Africa, or South America.

**Figure 2**

**LOUISIANA AVERAGE CRUDE OIL WELLHEAD PRICE**



## **NATURAL GAS PRICE PROJECTION**

Natural gas prices act differently than crude oil prices. Oil prices are driven by the international oil market. Gas prices are driven by factors such as weather, demand for gas not satisfied by the pipeline system, availability of spot supplies, and competing fuel prices. **Natural gas is traded in the form of liquid natural gas (LNG). LNG is harder to transport and store, and needs the proper infrastructure (pipelines, compression stations, LNG tanks, etc.) and fighting the NIMBY (not in my back yard) phenomenon. LNG has a damping effect on the natural gas spot market prices.**

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 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 player 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.

Factors that could affect prices are weather, storage levels, curtailments, market changes, new consumption, **LNG availability**, 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.

**Table 2**

### **Louisiana Natural Gas Price Projections**

(Dollars per MCF)

	<b>Year</b>	<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Actual	FY2000/01	5.91	99.02%	N/A	N/A
Actual	FY2001/02	2.94	-50.33%	N/A	N/A
Actual	FY2002/03	4.88	66.11%	N/A	N/A
Actual	FY2003/04	5.78	18.46%	N/A	N/A
Actual	FY2004/05	6.62	14.68%	N/A	N/A
Actual	FY2005/06	9.15	38.11%	N/A	N/A
Actual	FY2006/07	6.83	-25.34%	N/A	N/A
Projected	FY2007/08	6.55	-4.17%	6.29	8.81
Projected	FY2008/09	6.76	3.19%	5.88	9.46
Projected	FY2009/10	6.70	-0.87%	5.92	9.59
Projected	FY2010/11	6.80	1.51%	5.94	9.84
Projected	FY2011/12	7.06	3.84%	6.04	10.11
Projected	FY2012/13	7.12	0.84%	6.13	10.35

Table 2 is a list of historical and projected fiscal year averages of Louisiana wellhead natural gas prices. Calendar year data is provided in Appendix F.

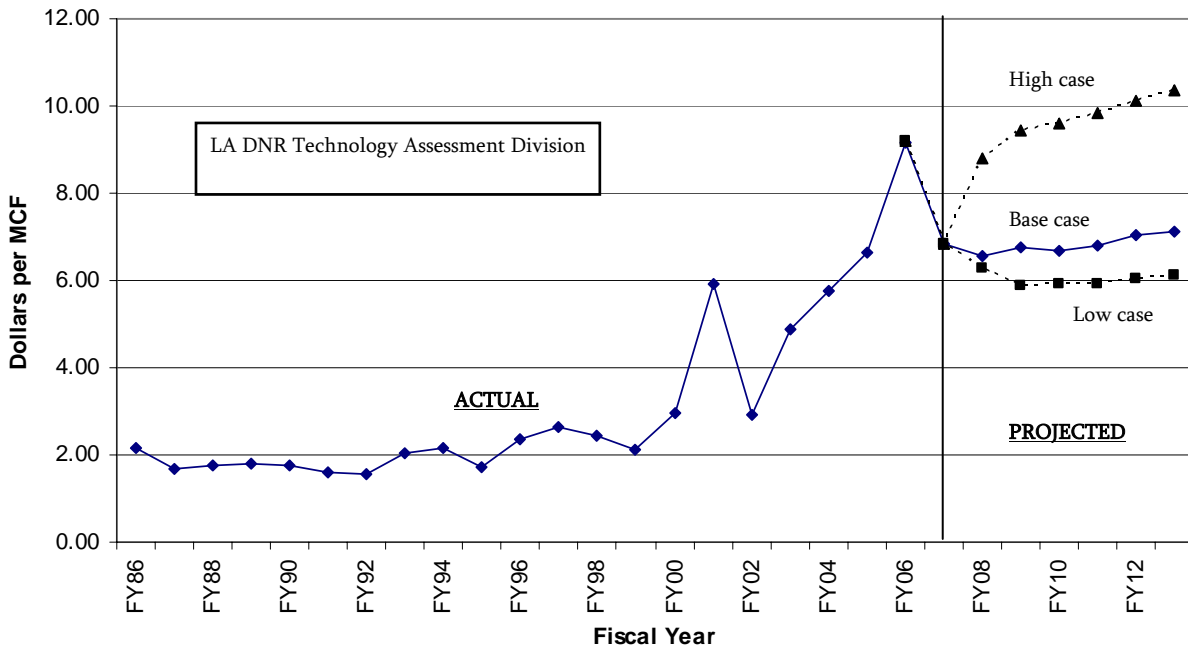
The base case assumes: a) U.S. gas demand will grow at an average annual rate of 1.3 percent between 2008-2013, b) LNG imports will remain at the present level, c) weather demand will be relatively normal, high heating demand in winter, and high cooling in late spring and early summer, or d) total U.S. gas imports will be only 15-20 percent of total U.S. consumption.

The low case assumes: a) U.S. gas demand will grow less than one percent annually from 2008 to 2013, b) total U.S. gas imports will be more than 20 percent of total U.S. consumption, c) inventory levels in storages will be high, and d) weather demand will be low because of mild temperatures.

The high case assumes: a) U.S. gas demand will grow annually at a rate higher than 2 percent from 2008 to 2013, b) total U.S. gas imports will be less than 15 percent of total U.S. consumption, c) inventory in storage will be at low levels, and d) some production or distribution disruption will occur due to weather or accidents.

**Figure 3**

**LOUISIANA AVERAGE NATURAL GAS WELLHEAD PRICE**



# OIL AND GAS PRODUCTION

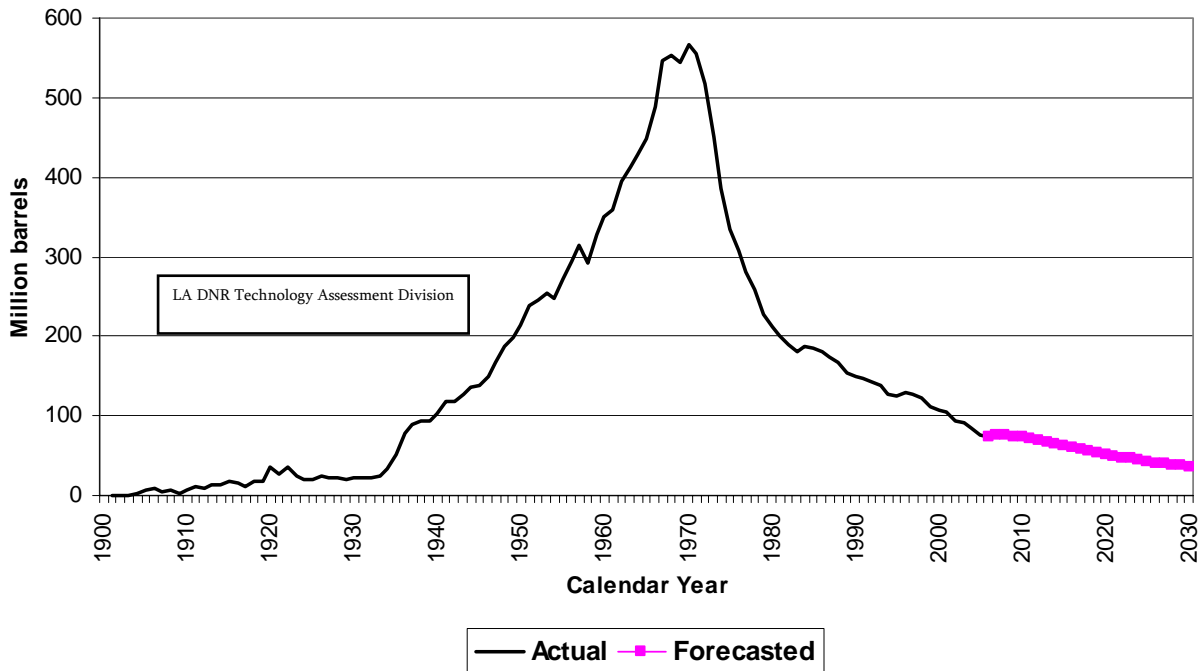
Louisiana ranks among the top four states in oil and gas production and is second in per capita energy consumption. It has produced oil and gas for almost a century. The following section presents forecast data for oil (crude oil and condensate) and gas (casinghead gas and natural gas) production from state regulated land and water bottoms. Calendar year data is provided in Appendix F.

## OIL PRODUCTION FORECAST

The average annual rate of decline over the past ten year period was 4.8%, and the DNR Technology Assessment Division **long term** model is projecting a 3.3% decline per year. The **long term** model is accurate over long periods (10 to 30 years). The **short term** model is needed to forecast production over periods of 1 to 5 years because of the wide fluctuations from year to year as shown in Table 3.

Figure 4

### LOUISIANA STATE LONG TERM OIL PRODUCTION FORECAST



Condensate oil included, Federal OCS excluded

Factors contributing 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 stripper wells by major producers
- Unstable prices of crude oil
- Changes in environmental laws, especially those concerning salt water discharge
- World crude oil supply growing faster than demand, causing an oil glut similar to the gas bubble
- The number of active rigs in the region
- Military conflicts or political instability in some producing countries (OPEC members and the former the Soviet Union)
- Application of advanced technology such as 3-D and 4-D seismic
- State and local tax incentives

The **short term** forecast model is predicting a 2.1% per year decline in oil production for the next six years, FY2007/08 to FY2012/13. The 2005/06 data deep decline was caused by hurricanes Katrina and Rita, and 2006/07 forecast showed increases which is attributed to the recovery from the disaster rather than the reverse in production trend. The forecasted production rates may be low depending on factors such as crude oil prices, number of active drilling rigs, consumer demand, exploration activities, OPEC production curtailment, non-OPEC producers' production capacity improvement, and Iraq returning to the crude oil market.

Calendar year oil production data is provided in Appendix F. Louisiana fiscal year crude oil and condensate production is as follows:

**Table 3**

**Louisiana Crude Oil Production Forecast**

(Barrels)

	<b>Year</b>	<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Actual	FY2000/01	106,200,245	-2.09%	N/A	N/A
Actual	FY2001/02	100,711,766	-5.17%	N/A	N/A
Actual	FY2002/03	91,071,712	-9.57%	N/A	N/A
Actual	FY2003/04	87,225,583	-4.22%	N/A	N/A
Actual	FY2004/05	83,535,767	-4.23%	N/A	N/A
Actual	FY2005/06	68,882,483	-17.54%	N/A	N/A
Actual	FY2006/07	76,857,497	11.58%	N/A	N/A
Projected	FY2007/08	75,673,979	-1.54%	73,463,872	78,550,579
Projected	FY2008/09	74,978,917	-0.92%	70,257,219	80,454,371
Projected	FY2009/10	73,982,646	-1.33%	69,290,760	79,610,461
Projected	FY2010/11	72,162,963	-2.46%	67,160,437	77,728,277
Projected	FY2011/12	69,751,415	-3.34%	64,496,886	75,373,500
Projected	FY2012/13	67,509,397	-3.21%	62,018,290	73,353,997



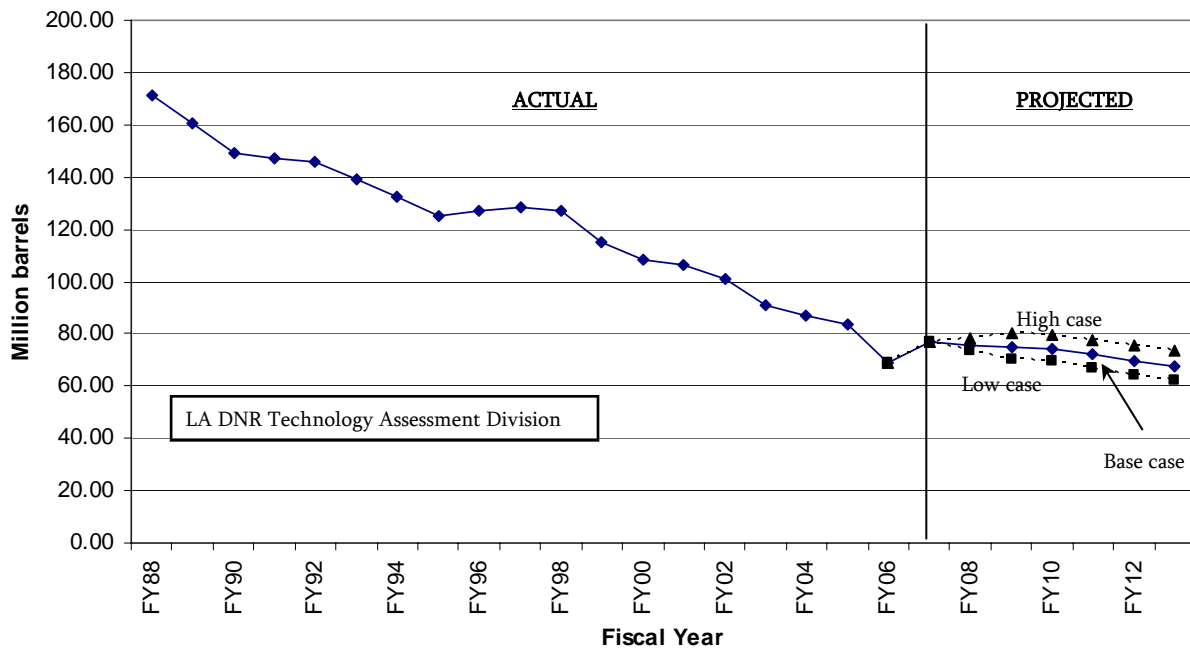
The base case assumes: a) the price of crude oil will be as shown in the base case crude oil price projection, and b) drilling activities will remain stable (average running rigs in Louisiana onshore and offshore, excluding Louisiana federal OCS, should be around 115 rigs, and around 170 drilling permits issued per month).

The low case assumes: a) the price and pricing assumptions for crude oil will be as shown in the low case crude oil price forecast, and b) drilling activities will drop further than present levels.

The high case assumes: a) the price and pricing assumptions for crude oil will be as shown in the high case crude oil price forecast, and b) drilling activities will increase from present levels.

**Figure 5**

**STATE CRUDE OIL AND CONDENSATE PRODUCTION**



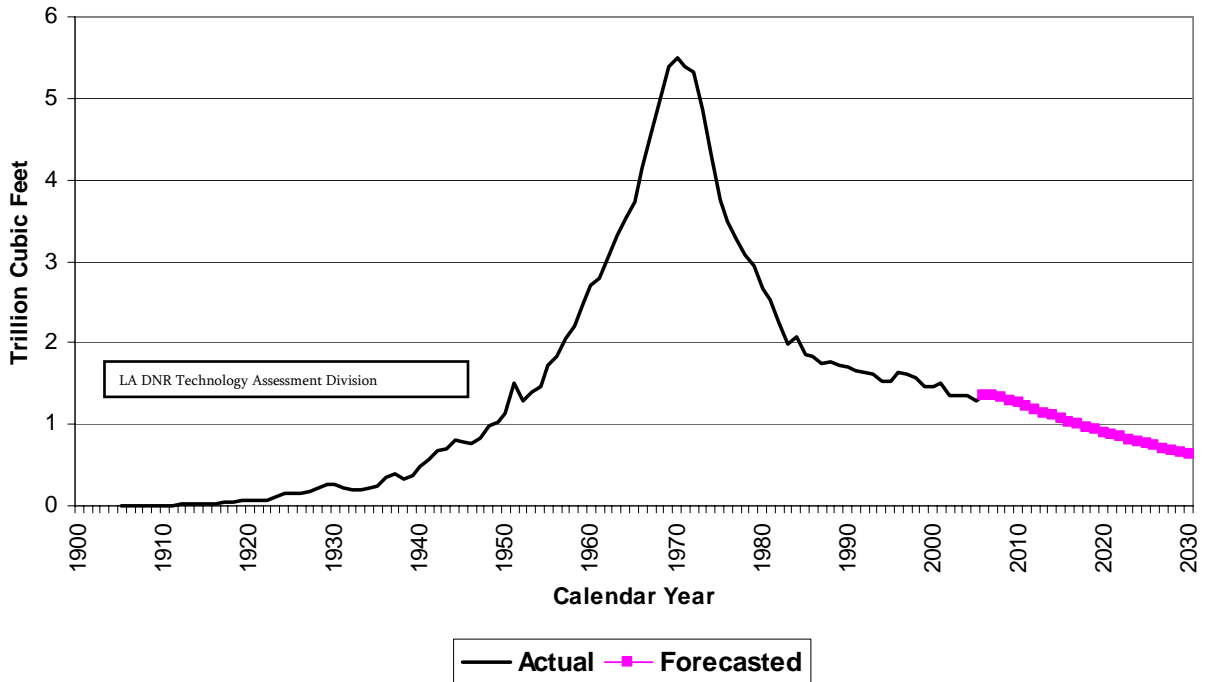
**GAS PRODUCTION FORECAST**

The average annual rate of decline over the last 10 years was 2.0%, which is less than the DNR Technology Assessment Division **long term** model projection of 3.2% per year. Year-to-year production rate changes in this period went from a 6.5% decline to 3.6% increase in production. Three years out of the last ten have shown production increases. Even though the long term

model is accurate over a 10 to 30 year period, these short term fluctuations illustrate why a separate **short term** model is required to forecast production over periods of one to five years.

**Figure 6**

**LOUISIANA STATE LONG TERM GAS PRODUCTION FORECAST**



Casinghead gas included, Federal OCS excluded

Factors contributing to the year-to-year deviations are:

- Effects on industrial gas demand from chemical industry activity
- Growth in use of natural gas to meet clean air requirements in electric power generation and transportation
- Mild or severe winter weather patterns
- Offshore drilling moratoriums in other states
- Changes in environmental laws, especially the Clean Air Act Amendments of 1990
- Production capacity higher than demand
- Price of gas relative to fuel oil and the amount of switching between these two fuels
- Peak day deliver ability of the U.S. pipeline system
- Foreign imports (LNG availability)
- State and local tax incentives

The average annual rate of decline predicted by the **long term** forecast model is 3.2% per year. The **short term** forecast model predicts a 2.9% per year decline for FY2007/08 through FY2012/13. The FY2005/06 data deep decline was caused by hurricanes Katrina and Rita, and FY2006/07 forecast showed increases is attributed to the recovery from the disaster rather than the reverse in production trend. The natural gas production forecast may be low if gas demand in the U.S. is higher than the U.S. consumption predicted by the U.S. Department of Energy, Energy Information Administration; cheaper fuel substitutes are not available for users capable of fuel switching; and more new drilling targets gas. The demand for gas may increase as the manufacturing and utilities industries switch to gas for cleaner energy, and if natural gas prices remain competitive.

Calendar year gas production data is provided in Appendix F. Louisiana natural gas and casing-head gas fiscal year production are as follows:

**Table 4**

**Louisiana Natural Gas Production Forecast**  
(MCF)

	<b>Year</b>	<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Actual	FY2000/01	1,493,782,173	3.61%	N/A	N/A
Actual	FY2001/02	1,438,954,284	-3.67%	N/A	N/A
Actual	FY2002/03	1,345,284,191	-6.51%	N/A	N/A
Actual	FY2003/04	1,334,038,708	-0.84%	N/A	N/A
Actual	FY2004/05	1,355,400,786	1.60%	N/A	N/A
Actual	FY2005/06	1,284,416,433	-5.24%	N/A	N/A
Actual	FY2006/07	1,352,415,980	5.29%	N/A	N/A
Projected	FY2007/08	1,336,929,887	-1.15%	1,300,892,522	1,376,521,281
Projected	FY2008/09	1,308,505,554	-2.13%	1,238,106,270	1,382,699,492
Projected	FY2009/10	1,274,981,241	-2.56%	1,192,074,943	1,366,465,942
Projected	FY2010/11	1,237,771,654	-2.92%	1,152,454,593	1,330,338,381
Projected	FY2011/12	1,199,439,462	-3.10%	1,112,271,928	1,292,992,623
Projected	FY2012/13	1,160,837,489	-3.22%	1,073,144,600	1,256,294,728

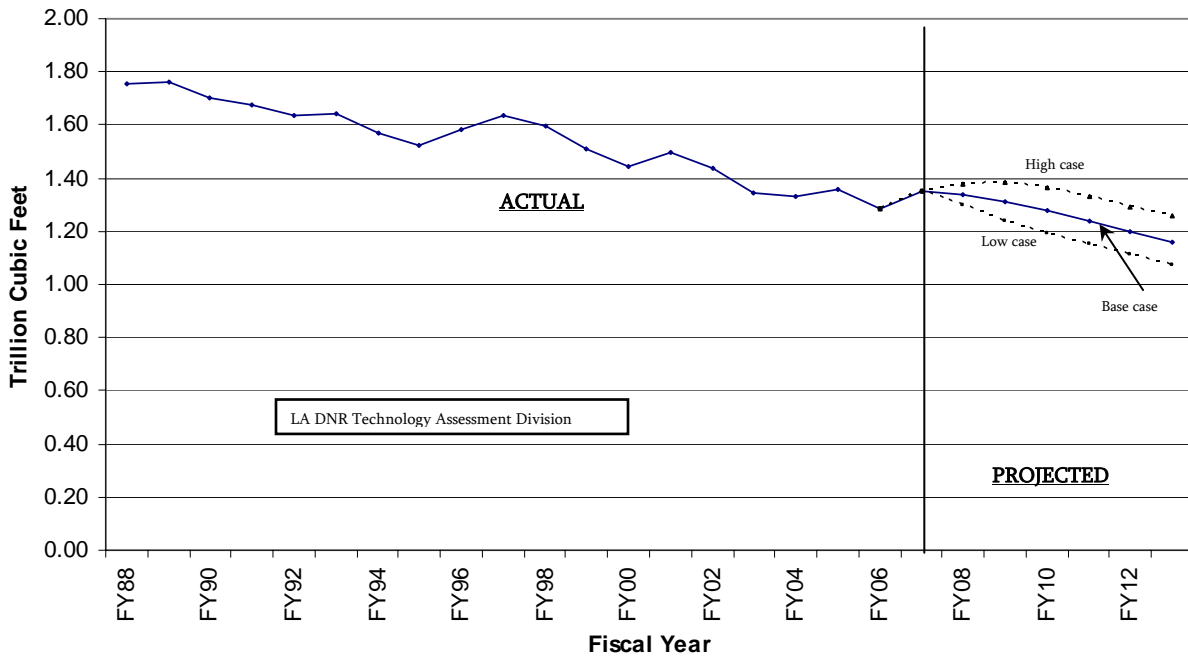
The base case assumed that: a) the price and pricing assumptions for natural gas will be as shown in the base case natural gas price forecast, and b) drilling activities will remain stable (average running rigs in Louisiana onshore and offshore, excluding Louisiana federal OCS, should be around 115 rigs, and around 170 drilling permits issued per month).

The low case assumed that: a) the price and pricing assumptions for natural gas will be as shown in the low case natural gas price forecast, and b) drilling activities will drop further than present levels.

The high case assumed that: a) the price and pricing assumptions for natural gas will be as shown in the high case natural gas price forecast, and b) drilling activities will increase from present levels.

**Figure 7**

**STATE NATURAL GAS AND CASINGHEAD GAS PRODUCTION**



# MINERAL ROYALTY REVENUE

Royalty is the payment, in value (cash) or in kind (a portion of the commodity), of a stated share of production from mineral deposits by the lessee to the lessor. In other words, royalty is the property owner's (lessor's) share of revenue from minerals produced on his land. Royalty may be an established minimum, a sliding-scale, or a step-scale. A step-scale royalty rate increases by steps as the average production on the lease increases. A sliding-scale royalty rate is based on average production and applies to all production from the lease. State royalties are a combination of established minimum and sliding-scale types.

The following table shows the base, low, and high cases of total mineral royalty revenue estimated for FY2007/08 through FY2012/13, and historical mineral royalty revenue for FY1995/96 through FY2006/07.

**Table 5**

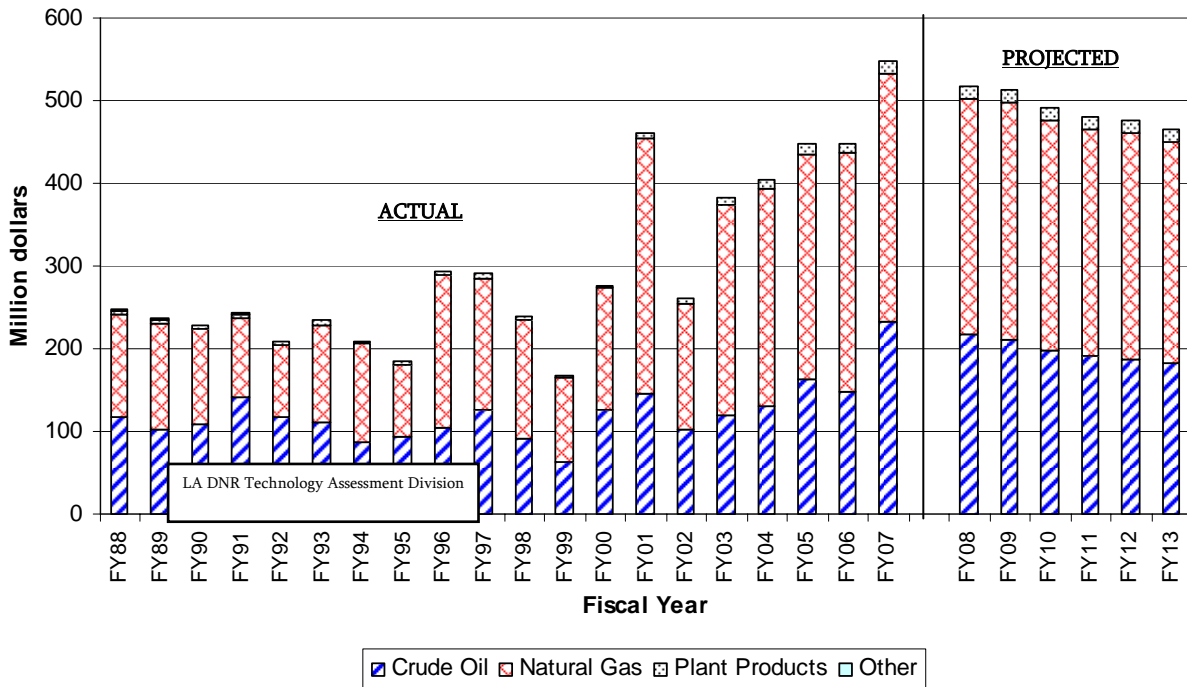
## **Louisiana State Total Royalty Revenue** (Dollars)

		<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Historical	FY1995/96	294,155,068	59.09%	N/A	N/A
Historical	FY1996/97	291,422,410	-0.93%	N/A	N/A
Historical	FY1997/98	239,702,187	-17.75%	N/A	N/A
Historical	FY1998/99	167,998,346	-29.91%	N/A	N/A
Historical	FY1999/00	276,701,604	64.70%	N/A	N/A
Historical	FY2000/01	460,031,424	66.26%	N/A	N/A
Historical	FY2001/02	261,546,218	-43.15%	N/A	N/A
Historical	FY2002/03	382,722,527	46.33%	N/A	N/A
Historical	FY2003/04	405,115,577	5.85%	N/A	N/A
Historical	FY2004/05	448,237,881	10.64%	N/A	N/A
Historical	FY2005/06	447,396,658	-0.19%	N/A	N/A
Historical	FY2006/07	547,938,119	22.47%	N/A	N/A
Projected	FY2007/08	517,556,633	-5.54%	468,460,109	663,355,739
Projected	FY2008/09	512,822,509	-0.91%	424,476,712	697,540,832
Projected	FY2009/10	491,004,200	-4.25%	406,429,414	686,797,592
Projected	FY2010/11	480,320,025	-2.18%	391,250,352	677,836,459
Projected	FY2011/12	476,600,753	-0.77%	379,874,049	672,956,893
Projected	FY2012/13	465,455,730	-2.34%	368,522,822	667,508,027

The following plot, Figure 8, shows historical and estimated future fiscal year mineral royalty revenue by source. Calendar year historical royalty revenue from 1983 through 2007 and projected royalty revenue from 2008 through 2013 are listed in Appendix G.

**Figure 8**

**LOUISIANA MINERAL ROYALTY REVENUE BY SOURCE  
(Excluding Federal OCS)**



## CRUDE OIL ROYALTY

The estimated crude oil royalty revenue was calculated using the forecasted oil production from the DNR Technology Assessment Division **short term** models and oil price projections discussed in the price chapter. The fiscal year projected base, low, and high cases of crude oil royalty revenue from FY2007/08 through FY2012/13, and historical crude oil royalty revenue from FY2000/01 through FY2006/07 are listed in Table 6.

We believe our estimates of production and prices are conservative. As always, changing world events might cause demand to rise or fall sharply and supply to remain constant or decrease. Given this possibility, prices can also fluctuate faster than expected. Changes in any of the listed parameters will change our base case projection.

Calendar year historical crude oil royalty revenue from 1983 through 2007 and projected crude oil royalty revenue from 2008 through 2013 are listed in Appendix G. Also, the percentage changes from the previous period are listed. Crude oil royalty revenue estimates for FY2008/09 through FY2011/12 at multiple assumed oil prices are listed in Appendix F.

**Table 6**

### **Louisiana Crude Oil Royalty Revenue** (Dollars)

		<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Historical	FY2000/01	146,178,524	15.86%	N/A	N/A
Historical	FY2001/02	101,761,450	-30.39%	N/A	N/A
Historical	FY2002/03	119,514,854	17.45%	N/A	N/A
Historical	FY2003/04	129,703,750	8.53%	N/A	N/A
Historical	FY2004/05	163,490,025	26.05%	N/A	N/A
Historical	FY2005/06	148,807,615	-8.98%	N/A	N/A
Historical	FY2006/07	232,732,389	56.40%	N/A	N/A
Projected	FY2007/08	218,126,753	-6.28%	187,636,760	254,403,982
Projected	FY2008/09	210,572,603	-3.46%	172,604,702	257,781,444
Projected	FY2009/10	198,528,314	-5.72%	162,032,966	246,087,265
Projected	FY2010/11	191,867,292	-3.36%	153,813,430	237,914,785
Projected	FY2011/12	186,448,188	-2.82%	146,401,260	233,226,267
Projected	FY2012/13	181,911,044	-2.43%	139,729,881	230,210,728

## **NATURAL GAS ROYALTY**

The gas royalty revenue estimates are highly speculative due to the probability of significant market factor influences and changes that cannot be accurately predicted. The projected natural gas royalty revenue was calculated using the gas production volumes forecasted by the DNR Technology Assessment Division models, and gas price projections discussed in the price chapter.

Table 7 lists the historical fiscal year natural gas royalty revenue from FY2000/01 through FY2006/07, and projected natural gas royalty revenue from FY2007/08 through FY2012/13. Also, the percentage changes from the previous period are listed. Natural gas royalty revenue estimates for FY2008/09 through FY2011/12 at multiple assumed gas prices are listed in Appendix F. Calendar year historical natural gas royalty revenue from 1983 through 2007, and projected crude oil royalty revenue from 2008 through 2013, is listed in Appendix G.

The natural gas royalty projections may be low if average gas prices are higher than projected, gas production goes higher than forecasted by DNR Technology Assessment Division models, oil prices drop from the present high, or U.S. gas demand increases faster than predicted by the Energy Information Administration, US Department of Energy.

**Table 7**

### **Louisiana Natural Gas Royalty Revenue** (Dollars)

	<b>Year</b>	<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Historical	FY2000/01	308,773,218	109.27%	N/A	N/A
Historical	FY2001/02	153,526,436	-50.28%	N/A	N/A
Historical	FY2002/03	253,849,639	65.35%	N/A	N/A
Historical	FY2003/04	263,573,284	3.83%	N/A	N/A
Historical	FY2004/05	270,961,017	2.80%	N/A	N/A
Historical	FY2005/06	288,476,094	6.46%	N/A	N/A
Historical	FY2006/07	299,585,811	3.85%	N/A	N/A
Projected	FY2007/08	283,809,961	-5.27%	265,203,430	393,331,837
Projected	FY2008/09	286,629,987	0.99%	236,252,091	424,139,469
Projected	FY2009/10	276,855,968	-3.41%	228,776,529	425,090,408
Projected	FY2010/11	272,832,814	-1.45%	221,817,003	424,301,754
Projected	FY2011/12	274,532,646	0.62%	217,852,870	424,110,707
Projected	FY2012/13	267,924,767	-2.41%	213,173,022	421,677,379



## NON-HYDROCARBON MINERALS ROYALTY

Royalty revenue produced from salt, sulfur and other non-hydrocarbon minerals was: \$1.9 million in 1986; \$1.6 million in 1987; \$1.3 million in 1988; \$1.4 million in 1989; \$0.9 million in 1990; and \$0.4 million in 1991. The last active non-hydrocarbon lease on state owned land or water-bottom was in Jefferson Parish. It ceased operations on September 30, 1991. No royalty revenue is expected from salt, sulfur and other non-hydrocarbons in the near future.

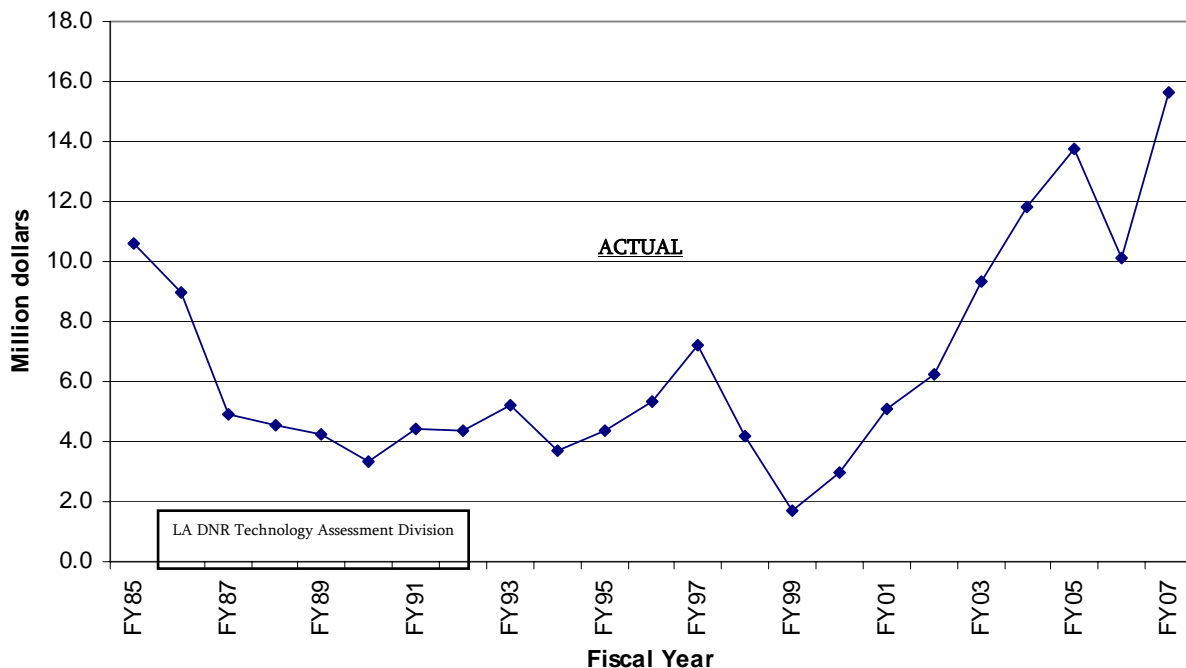
## PLANT PRODUCTS ROYALTY

The plant products (natural gas liquids) royalty revenue is dependent on oil for its value, and gas production for its volume. The forces that control oil prices and gas production will also control plant products production and its royalty revenue. The Technology Assessment Division has not developed a mathematical model or empirical equation for projecting gas liquids production. Therefore, no definitive estimate of plant products royalty revenue is available. The average of the past five years plant products royalty revenue is assumed to be the revenue from plant products royalty each year for the projected period. It is expected that the state can at least reach this level of royalty revenue from plant products.

The following plot shows historical, fiscal year, plant products royalty revenue from FY1984/85 through FY2006/07.

**Figure 9**

### **LOUISIANA PLANT PRODUCTS ROYALTY REVENUE (Excluding Federal OCS)**



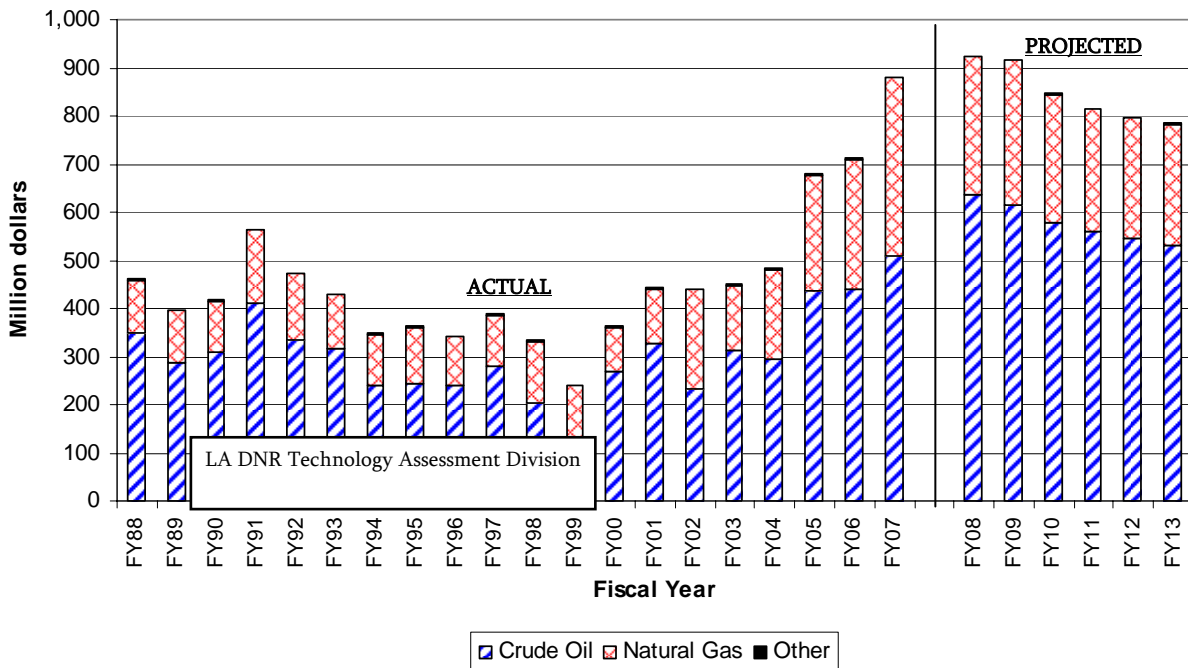
# SEVERANCE TAX REVENUE

Severance tax is levied on production of natural resources taken from land or water bottoms within the territorial boundaries of the state. The state collects no severance from production in federal waters in the Gulf which start three miles from the Louisiana coast line. Natural resources are minerals, other natural deposits, rock salt and salt content in brine, and all forms of timber, including pulp woods, and turpentine and other forest products. Severance tax is paid by the owners of the natural resources at the time of severance. Only revenue from minerals such as oil, gas, natural gasoline, distillate, condensate, casinghead gas, sulphur, salt, coal, lignite, and ores are considered in this chapter.

The following plot, Figure 10, shows historical fiscal year mineral severance tax revenue by source and projected future severance tax revenue.

**Figure 10**

## LOUISIANA MINERAL SEVERANCE TAX REVENUE BY SOURCE (Excluding Federal OCS)



The total severance tax revenue estimates are dependent on oil and gas production volumes and their market values. The oil and gas production volumes and prices used to estimate the severance revenue were forecasted by the DNR Technology Assessment Division models. The following table is the projected base, low, and high case total mineral severance tax revenue for FY2007/08 through FY2012/13, and historical severance tax revenue for FY1994/95 through FY2006/07.

**Table 8**

**Louisiana State Total Severance Tax Revenue**  
(Dollars)

	<b>Year</b>	<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Historical	FY1994/95	363,419,047	4.39%	N/A	N/A
Historical	FY1995/96	343,412,476	-5.51%	N/A	N/A
Historical	FY1996/97	388,779,377	13.21%	N/A	N/A
Historical	FY1997/98	333,670,455	-14.17%	N/A	N/A
Historical	FY1998/99	241,799,648	-27.53%	N/A	N/A
Historical	FY1999/00	363,350,443	50.27%	N/A	N/A
Historical	FY2000/01	442,795,242	21.86%	N/A	N/A
Historical	FY2001/02	440,111,896	-0.61%	N/A	N/A
Historical	FY2002/03	450,168,430	2.28%	N/A	N/A
Historical	FY2003/04	482,419,459	7.16%	N/A	N/A
Historical	FY2004/05	678,897,867	40.73%	N/A	N/A
Historical	FY2005/06	711,993,234	4.87%	N/A	N/A
Projected	FY2006/07	879,855,168	23.58%	N/A	N/A
Projected	FY2007/08	924,616,208	5.09%	829,650,492	1,041,247,509
Projected	FY2008/09	916,151,136	-0.92%	746,214,567	1,130,267,134
Projected	FY2009/10	845,540,816	-7.71%	691,699,311	1,118,733,989
Projected	FY2010/11	816,137,794	-3.48%	661,662,137	1,089,770,125
Projected	FY2011/12	796,155,827	-2.45%	633,237,502	1,074,630,077
Projected	FY2012/13	784,134,290	-1.51%	609,997,726	1,065,465,685

**CRUDE OIL SEVERANCE TAX**

The severance tax on oil severed from the land or water-bottom is levied based on the value (gross receipts received from the first purchaser, less charges for trucking, barging and pipeline fees) of the products. The standard transportation allowance is \$0.25 per barrel regardless of its historical cost. The following estimated oil severance revenue was calculated using oil production volumes forecasted by the DNR Technology Assessment Division **short term** models, and oil price projections discussed in the price chapter.

**Table 9**

**Louisiana Crude Oil Severance Tax Revenue**  
(Dollars)

	<b>Year</b>	<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Historical	FY2000/01	325,653,074	21.69%	N/A	N/A
Historical	FY2001/02	232,353,920	-28.65%	N/A	N/A
Historical	FY2002/03	310,959,695	33.83%	N/A	N/A
Historical	FY2003/04	296,123,577	-4.77%	N/A	N/A
Historical	FY2004/05	436,245,970	47.32%	N/A	N/A
Historical	FY2005/06	440,303,432	0.93%	N/A	N/A
Projected	FY2006/07	507,520,900	15.27%	N/A	N/A
Projected	FY2007/08	636,308,350	25.38%	549,071,369	744,448,704
Projected	FY2008/09	614,221,271	-3.47%	505,083,866	754,331,989
Projected	FY2009/10	579,002,838	-5.73%	474,148,362	720,111,940
Projected	FY2010/11	559,558,763	-3.36%	450,095,975	696,197,253
Projected	FY2011/12	543,764,362	-2.82%	428,406,141	682,477,494
Projected	FY2012/13	530,546,351	-2.43%	408,884,043	673,653,284

Table 9 lists the projected crude oil severance tax revenue for FY2007/08 through FY2012/13, and historical severance tax revenue for FY2000/01 through FY2006/07. Crude oil severance tax revenue projected for FY2008/09 through FY2011/12 at multiple assumed oil prices are listed in Appendix F.

The projected crude oil severance tax revenue may turn out low if the prices of oil increases, foreign oil imports remain at the present level, and domestic demand for oil increases. Severance tax revenue from stripper wells was included in the above estimates when average oil prices are projected to be over \$20 per barrel for the year. Act 2 of 1994 exempted stripper oil wells from severance tax when the price of oil is less than \$20 per barrel. Historical calendar year crude oil severance tax revenue is shown in Appendix G.

**NATURAL GAS SEVERANCE TAX**

The severance tax on natural gas severed from the land or water-bottom is levied based on gas volumes or equivalent gas volumes, of natural gasoline, casinghead gasoline, and other natural gas liquids, including but not limited to, ethane, methane, butane or propane. Volume is measured at a base pressure of 15.025 pounds per square inch (psi) absolute and at the temperature

base of 60 degrees Fahrenheit; provided that whenever the conditions of pressure and temperature differ from the above bases, conversion of the volume from these conditions to the above bases shall be made following the Ideal Gas Law with correction for deviation from Boyle's Law.

Table 10 shows the projected natural gas severance tax revenue for FY2007/08 through FY2012/13, and historical severance tax revenue for FY2000/01 through FY2006/07. Natural gas severance tax revenue estimates for FY2008/09 through FY2011/12 at multiple assumed gas prices are listed in Appendix F.

**Table 10**

**Louisiana Natural Gas Severance Tax Revenue**  
(Dollars)

	<b>Year</b>	<b>Base Case</b>	<b>Percent Change</b>	<b>Low Case</b>	<b>High Case</b>
Historical	FY2000/01	115,689,636	22.82%	N/A	N/A
Historical	FY2001/02	206,203,245	78.24%	N/A	N/A
Historical	FY2002/03	137,664,958	-33.24%	N/A	N/A
Historical	FY2003/04	184,595,021	34.09%	N/A	N/A
Historical	FY2004/05	240,888,520	30.50%	N/A	N/A
Historical	FY2005/06	270,139,926	12.14%	N/A	N/A
Projected	FY2006/07	370,750,377	37.24%	N/A	N/A
Projected	FY2007/08	286,723,967	-22.66%	278,995,232	295,214,915
Projected	FY2008/09	300,345,975	4.75%	239,546,811	374,351,255
Projected	FY2009/10	264,954,088	-11.78%	215,967,059	397,038,158
Projected	FY2010/11	254,995,141	-3.76%	209,982,271	391,988,982
Projected	FY2011/12	250,807,575	-1.64%	203,247,471	390,568,693
Projected	FY2012/13	252,004,048	0.48%	199,529,792	390,228,510

The above estimated gas severance tax revenue was calculated using gas production volumes forecasted by the DNR Technology Assessment Division **short term** models, and gas price projections discussed in the price chapter. Historical calendar year natural gas severance tax revenue is shown in Appendix G.

The projected gas severance tax revenue is subject to change if the national economy changes, gas prices change that may entice users to switch to residual oil from natural gas, gas production volume deviates from the base level forecasted by the DNR Technology Assessment Division **short term** model, or gas demand increases more than predicted by the Energy Information Administration, US Department of Energy used in the projection.

## PLANT PRODUCTS SEVERANCE TAX

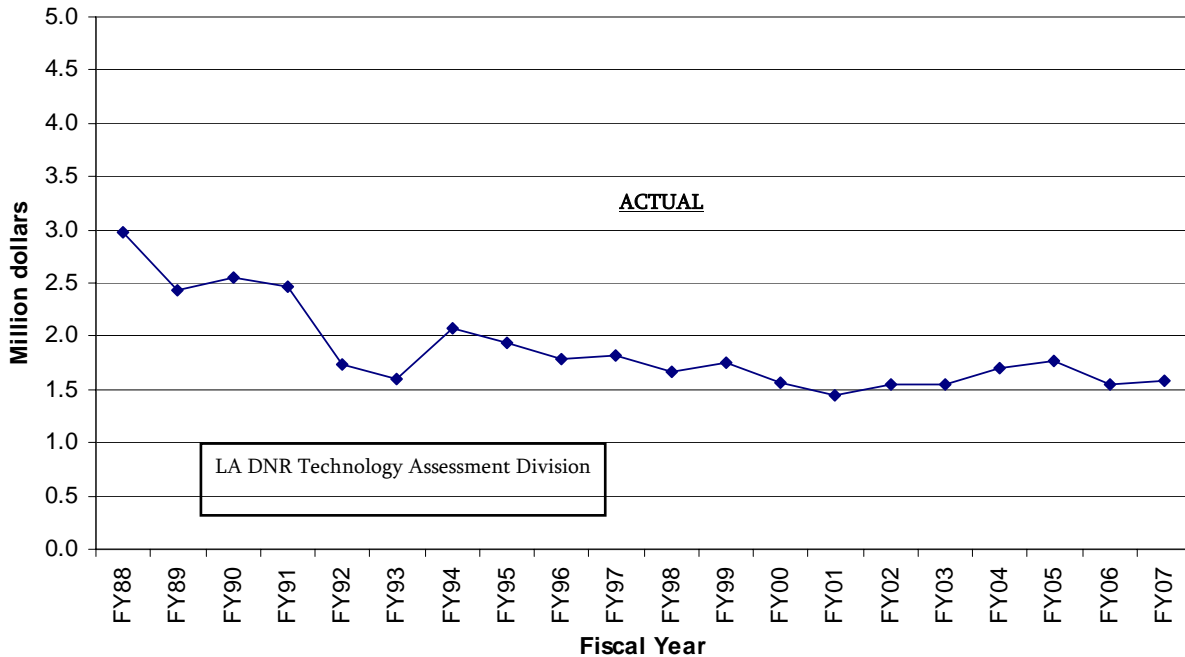
All natural gas liquids or plant products are taxed at the natural gas rate at a calculated equivalent gaseous volume. Severance tax revenue from these liquids is included with natural gas revenue figures.

## NON-HYDROCARBON MINERALS SEVERANCE TAX

Other minerals that pay severance tax are coal, lignite, ore, salt and sulfur. The Technology Assessment Division has not developed a mathematical model or empirical equation for projecting non-hydrocarbon minerals severance tax, therefore, no definitive revenue projection is available. The latest year is assumed to be the revenue for each year in the projected period. It is expected that the state can at least reach this level revenue from the non-hydrocarbon mineral's severance. The non-hydrocarbon severance tax historical revenue is shown in the following figure.

**FIGURE 11**

### **LOUISIANA NON-HYDROCARBON MINERALS SEVERANCE TAX REVENUE (Excluding Federal OCS)**



# BONUS, RENTAL & OVERRIDING ROYALTY REVENUES

Major sources of Louisiana mineral income are royalties and severance taxes which were discussed in the previous chapter. This chapter covers the mineral income from bonuses, rentals and overriding royalties (BR&O). The prospect of getting high bonuses or rentals is slimmer in the future than in the past, because Louisiana is an old, and well-developed, oil and gas producing province. It is possible that Louisiana can get high bonuses for some offshore tracks. The historical data on bonuses, rentals, and overriding royalties do not have a pattern. **The projected values were estimated using the average of the latest five years actual collection.** It is unlikely that it would ever be effective to try to develop mathematical models that represent their behavior.

**Figure 12**

## LOUISIANA BONUS, RENTAL AND OVERRIDING ROYALTY REVENUES (Excluding Federal OCS)

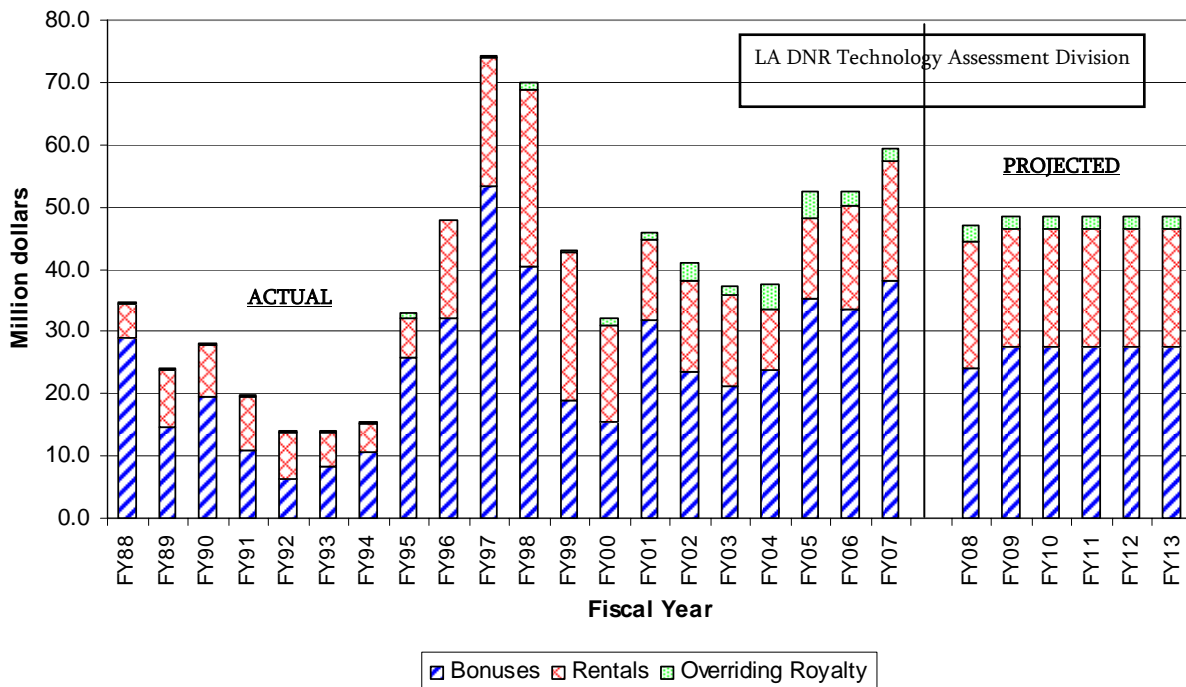


Figure 12 shows historical and projected future fiscal year bonus, rental and overriding royalty revenues. Source and numeric values are shown in Table 11.

## **BONUS REVENUE**

A bonus is a cash payment by the lessee for the execution of a lease. A lease is a contract that gives a lessee the right to: (a) search for minerals, (b) develop the surface for extraction, and (c) produce minerals within the area covered by the contract.

## **RENTAL REVENUE**

A rental is money paid by the lessee to maintain the lease after the first year if it is not producing or under development. A lease is considered expired when the rental is not paid on time on an unproductive lease.

## **OVERRIDING ROYALTY REVENUE**

An overriding royalty, or royalty override, is an interest in oil and gas produced at the surface free of any cost of production. It is royalty in addition to the usual landowner's royalty reserved to the lessor. The *Layman's Guide to Oil & Gas* by Brown and Miller defines overriding royalty as a percentage of all revenue earned by a well and carrying no cost obligation.

**Table 11**

### **LOUISIANA BONUS, RENTAL AND OVERRIDING ROYALTY REVENUES**

(Dollars)

	<b>Year</b>	<b>Bonus</b>	<b>Rental</b>	<b>Overriding Royalty</b>	<b>TOTAL</b>
Historical	FY1995/96	32,152,653	15,636,109	-381,879	47,406,883
Historical	FY1996/97	53,234,839	20,666,495	327,365	74,228,699
Historical	FY1997/98	40,443,116	28,393,761	1,175,985	70,012,862
Historical	FY1998/99	19,062,489	23,739,122	233,545	43,035,157
Historical	FY1999/00	15,614,797	15,377,758	1,141,162	32,133,718
Historical	FY2000/01	31,833,691	12,828,281	1,177,876	45,839,847
Historical	FY2001/02	23,488,161	14,789,958	2,587,800	40,865,919
Historical	FY2002/03	21,330,985	14,388,095	1,667,304	37,386,383
Historical	FY2003/04	23,834,928	9,673,130	4,053,170	37,561,229
Historical	FY2004/05	35,317,921	12,725,098	4,369,304	52,412,322
Historical	FY2005/06	33,603,101	16,633,012	2,228,690	52,464,803
Projected	FY2006/07	38,105,210	19,138,865	1,971,091	59,215,165
Projected	FY2007/08	24,226,946	20,138,865	2,683,087	47,048,897
Projected	FY2008/09	27,515,019	18,858,186	2,228,690	48,601,895
Projected	FY2009/10	27,515,019	18,858,186	2,228,690	48,601,895
Projected	FY2010/11	27,515,019	18,858,186	2,228,690	48,601,895
Projected	FY2011/12	27,515,019	18,858,186	2,228,690	48,601,895
Projected	FY2012/13	27,515,019	18,858,186	2,228,690	48,601,895

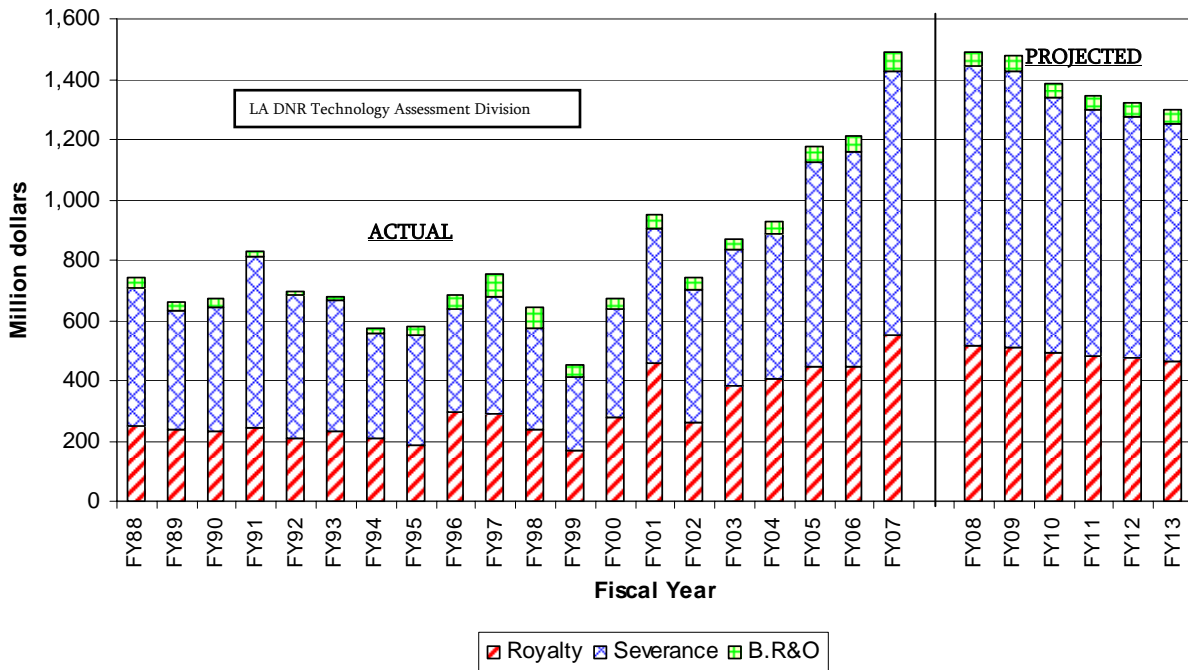


# TOTAL MINERAL REVENUE

Louisiana produces crude oil, natural gas, sulfur, salt, gravel, and lignite. The state takes in revenue: 1) Directly from production of mineral resources when they are produced within the state boundaries. If the minerals are produced from lands owned by the state or from water bottoms, the state receives additional revenue. 2) Indirectly from production of mineral resources from lands owned by the federal government within state boundaries, in which case the state receives a 50% share of the royalty revenue. From the Federal OCS, Louisiana only receives revenue from the 8g section which lies between 3 miles and 6 miles from shore.

**Figure 13**

## STATE TOTAL FISCAL YEAR REVENUE FROM MINERAL PRODUCTION (Excluding Federal OCS)



## STATE BOUNDARIES

Minerals produced within the state boundaries provide direct revenues to the state in the following forms:

- Severance taxes on all minerals production.
- Bonuses before leasing the land, if on state properties.
- Rentals after leasing if it is not in production or under active development, if on state properties.
- Royalties and overrides if it is in production, if on state properties.
- A share of the mineral revenue (bonus, rental and royalty), for federal properties if the deposit is on federal public lands, lands administrated by the U.S. Army Corps of Engineers, or military lands.

The main objective of this report is to focus on oil and gas production and its effects on severance tax, royalties on state lands, and bonuses and rentals on state leases. In this report we refer to **the sum of royalties on state lands, severance taxes, and BR&O** as Total State Mineral Revenue. These revenues were discussed in previous chapters.

Total state mineral revenue **first peaked in FY1981/82 at \$1.61 billion and Louisiana may surpass this level if prices for oil and gas continuous to rise in unison from present levels despite decline in oil and gas production die to maturity in most Louisiana producing fields and the high cost of finding new fields.** The preceding plot in Figure 13 shows fiscal year total mineral revenue by type.

State oil and gas production peaked in FY1970/71, at 577 million barrels for oil and 5.5 trillion cubic feet for gas. By FY1980/81, oil production was 205 million barrels and gas production was 2.6 trillion cubic feet or less than half of FY1970/71 production. By FY1990/91, gas production was less than a third of FY1970/71, 1.7 trillion cubic feet, and oil production was around a quarter of FY1970/71, 148 million barrels. By FY2000/01, oil production was 106 million barrels, less than a fifth of FY1970/71, and gas production was 1.4 trillion cubic feet, a little more than a quarter of FY1970/71. **In FY 2006/07 oil production was 76.8 million barrels and gas production was 1.35 trillion cubic feet.** Barring some kind of breakthrough in new reservoir or technology development, this decline will continue.

Mineral revenue peaked in FY1981/82 at \$1.61 billion. In FY1981/82, average oil prices were around \$35 per barrel, and average gas prices were around \$2 per MCF. The state's \$1.61 billion revenue from mineral resources in FY1981/82 is the highest in history **and it might be hard to repeat. Recents oil prices are around \$100 per barrel and gas prices are around the \$8 per MCF. In the past the major dollar component in mineral revenue comes from oil production, but in recent years gas revenue is catching up with the rapid increases in gas prices** as shown in Figures 8 and 10.

The following table shows historical revenue from fiscal year FY1985/86 through FY2005/06, and estimated revenue from FY2006/07 through FY2011/12, and the percentage changes in mineral revenue from the previous year.

**Table 12**

**Louisiana Total Fiscal Year Mineral Revenue**  
**(Excluding Federal Lands & OCS)**  
(Million Dollars)

	<b>YEAR</b>	<b>TOTAL SEVERANCE</b>	<b>TOTAL ROYALTY</b>	<b>BONUS, RENTAL &amp; OVERRIDE</b>	<b>TOTAL REVENUE</b>	<b>PERCENT CHANGE</b>
	-----	-----	-----	-----	-----	-----
Historical	FY1986/87	440.76	239.87	21.19	701.82	-33.37%
Historical	FY1987/88	462.45	245.17	34.71	742.33	5.77%
Historical	FY1988/89	397.61	234.82	24.15	656.59	-11.55%
Historical	FY1989/90	416.72	227.94	28.18	672.84	2.48%
Historical	FY1990/91	565.35	242.25	19.71	827.32	22.96%
Historical	FY1991/92	473.42	208.42	14.13	695.97	-15.88%
Historical	FY1992/93	430.90	234.37	14.02	679.29	-2.40%
Historical	FY1993/94	348.13	209.37	15.38	572.87	-15.67%
Historical	FY1994/95	363.42	184.90	32.89	581.21	1.46%
Historical	FY1995/96	343.41	294.16	47.41	684.97	17.85%
Historical	FY1996/97	388.78	291.42	74.23	754.43	10.14%
Historical	FY1997/98	333.67	239.70	70.01	643.39	-14.72%
Historical	FY1998/99	241.80	168.00	43.04	452.83	-29.62%
Historical	FY1999/00	363.35	276.70	32.13	672.19	48.44%
Historical	FY2000/01	442.80	460.03	45.84	948.67	41.13%
Historical	FY2001/02	440.11	261.55	40.87	742.52	-21.73%
Historical	FY2002/03	450.17	382.72	37.39	870.28	17.21%
Historical	FY2003/04	482.42	405.12	37.56	925.10	6.30%
Historical	FY2004/05	678.90	448.24	52.41	1,179.55	27.51%
Historical	FY2005/06	711.99	447.40	52.46	1,211.85	2.74%
Historical	FY2006/07	879.86	547.94	59.22	1,487.01	22.71%
Projected	FY2007/08	924.62	517.56	47.05	1,489.22	0.15%
Projected	FY2008/09	916.15	512.82	48.60	1,477.58	-0.78%
Projected	FY2009/10	845.54	491.00	48.60	1,385.15	-6.26%
Projected	FY2010/11	816.14	480.32	48.60	1,345.06	-2.89%
Projected	FY2011/12	796.16	476.60	48.60	1,321.36	-1.76%
Projected	FY2012/13	784.13	465.46	48.60	1,298.19	-1.75%

## ASSUMPTIONS:

**Table 13**

### **Values Used In The Calculation of Louisiana Total Mineral Revenue**

YEAR	OIL PRICE (\$/Barrel)	GAS PRICE (\$/MCF)	SEVERANCE TAX	
			OIL FULL RATE (% of value)	GAS FULL RATE (\$/MCF)
FY2007/08	\$80.42	\$6.55	12.50%	\$0.269
FY2008/09	\$78.35	\$6.76	12.50%	\$0.288
FY2009/10	\$74.87	\$6.70	12.50%	\$0.261
FY2010/11	\$74.18	\$6.80	12.50%	\$0.258
FY2011/12	\$74.58	\$7.06	12.50%	\$0.262
FY2012/13	\$75.18	\$7.12	12.50%	\$0.272

## **FEDERAL OCS, INCLUDING 8(g)**

Louisiana does not collect any severance tax on production in the federal OCS area. Louisiana only receives partial royalties, rentals and bonuses from a 3-mile wide strip defined in Section 8(g) of the Outer Continental Shelf Lands Act Amendments of 1978 and of 1985, Public Law 99-272.

Royalty revenue from Federal offshore leases on the Outer Continental Shelf (OCS) are distributed to the Land and Water Conservation Fund, the Historic Preservation Fund, and the General Fund of the U.S. Treasury. Transfers are made in each fiscal year from OCS royalties, rentals and bonuses in order to maintain the Land and Water Conservation Fund's annual authorization of \$900 million. Annually, \$150 million is put into the Historic Preservation Fund. The balance of offshore revenue receipts is directed to the General Fund of the U.S. Treasury.

Section 8(g) of the Outer Continental Shelf Lands Act Amendments of 1978 provided that the states were to receive a "fair and equitable" division of revenues generated from the leasing of lands within 3 miles of the seaward boundary of a coastal state that contains one or more oil and gas pools or fields underlying both the OCS and lands subject to the jurisdiction of the state. The states and the federal government, however, were unable to reach agreement concerning the meaning of the term "fair and equitable." Revenues generated in the 3-mile boundary zone were subsequently placed into an escrow fund in August 1979.

Congress resolved the dispute over the meaning of "fair and equitable" in the Outer Continental Shelf Lands Act Amendments of 1985, Public Law 99-272. The law provided for the following distribution of revenues to the states under section 8(g):

**Before 1986:** Louisiana did not receive any shared revenue from OCS production prior to 1986.

**1986:** Louisiana received a payment of \$68.7 million from royalties, rentals and bonuses collected in 1986 and prior years.

**1998-2000:** In 1987, Louisiana received an initial settlement payment of \$572 million from the escrow funds. A series of annual settlement payments have been disbursed to the states over a 15-year period along with an annual disbursement of 27 percent of royalty, rental, and bonus revenues received within each affected state's 8(g) zone. The annual settlement payments are: From 1987-1991, Louisiana received an annual settlement payment of \$2.52 million per year. From 1992-1996, the state received an annual settlement payment of \$5.88 million per year. Beginning in 1997, until the last payment in 2001, Louisiana will receive an annual settlement payment of, approximately, \$8.40 million per year.

**2002 and After:** No further settlement payments; states receive only a recurring annual disbursement of 27 percent of royalty, rental, and bonus revenues received within each affected state's 8(g) zone. Louisiana will receive an annual disbursement of 27 percent of royalty, rental, and bonus revenues received within Louisiana's affected 8(g) zone.

**Table 14**

**State Section 8(g) Revenues from Louisiana's OCS**

**(Dollars)**

<b><u>Year</u></b>	<b><u>Rentals</u></b>	<b><u>Bonuses</u></b>	<b><u>Royalties</u></b>	<b><u>8g Escrow</u></b>	<b><u>Settlement</u></b>	<b><u>Total</u></b>
1987	148,578	3,150,519	11,043,115	572,000,000	2,520,000	588,862,212
1988	153,561	5,528,006	8,708,079	0	2,520,000	16,909,646
1989	175,817	2,890,298	7,163,105	0	2,520,000	12,749,220
1990	430,198	5,570,375	6,239,368	0	2,520,000	14,759,941
1991	303,824	2,220,094	8,461,261	0	2,520,000	13,505,179
1992	258,787	1,189,989	6,405,279	0	5,880,000	13,734,055
1993	235,250	965,504	7,373,550	0	5,880,000	14,454,304
1994	1,016,932	1,913,682	11,780,932	0	5,880,000	20,591,546
1995	255,213	890,002	8,012,718	0	5,880,000	15,037,933
1996	292,445	4,666,400	12,283,395	0	5,880,000	23,122,240
1997	686,051	5,689,689	11,855,454	0	8,400,000	26,631,194
1998	412,229	1,744,928	9,621,860	0	8,400,000	20,179,017
1999	357,379	241,659	6,284,879	0	8,400,000	15,283,917
2000	321,695	1,268,244	12,690,937	0	8,400,000	22,680,876
2001	303,675	2,148,111	30,454,058	0	8,400,000	41,305,844
2002	94,841	N/A	11,863,317	0	0	11,863,244
2003	284,563	2,842,662	26,447,045	0	0	29,574,271
2004	490,745	7,620,500	30,145,237	0	0	38,256,482
2005	374,717	2,521,931	27,995,948	0	0	30,892,596
2006	494,362	5,947,411	24,325,787	0	0	30,767,560
2007	196,129	-2,695,489	25,498,932	0	0	22,999,572

## **FEDERAL LANDS**

The following list is the historical data of mineral revenue distributed to Louisiana by the Bureau of Land Management and Minerals Management Services from Federal onshore minerals leases. The data is provided by the U.S. Department of the Interior, Minerals Management Service.

**Table 15**

### **Louisiana Federal Lands Royalty Mineral Revenue**

<b>Year</b>	<b>Royalty (dollars)</b>	<b>Year</b>	<b>Royalty (dollars)</b>
1980	355,000	1994	532,000
1981	612,000	1995	728,000
1982	617,000	1996	943,209
1983	637,000	1997	817,329
1984	905,000	1998	996,000
1985	795,000	1999	1,276,465
1986	555,000	2000	1,024,730
1987	517,000	2001	1,481,176
1988	545,000	2002	730,156
1989	452,000	2003	1,182,451
1990	542,000	2004	1,364,964
1991	328,000	2005	1,569,882
1992	376,000	2006	1,170,670
1993	782,000	2007	940,888

# APPENDIX A

## ABBREVIATIONS AND ACRONYMS

AGA	American Gas Association
BCF	Billion cubic feet of gas
DNR	Louisiana Department of Natural Resources
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DRI	Data Resources, Inc.
DRT	Louisiana Department of Revenue and Taxation
EIA	Energy Information Administration, U.S. DOE
FERC	Federal Energy Regulatory Commission
FOB	Free On Board
FPC	Federal Power Commission
FYXXX1/X2	Fiscal Year - From July 1 of year <i>X1</i> to June 30 of year <i>X2</i>
GRI	The Gas Research Institute
MCF	Thousand cubic feet of gas
MMBTU	Million British Thermal Units
MMS	Minerals Management Service, DOI
N/A	Not Applicable
NAFTA	North America Free Trade Agreements
NGC	Natural Gas Clearinghouse, Houston, Texas
NGPA	Natural Gas Policy Act
NYMEX	New York Mercantile Exchange
OCS	Federal Offshore - Outer Continental Shelf
OPEC	Organization of Petroleum Exporting Countries
PSC	Louisiana Public Service Commission
BR&O	Louisiana bonus, rental, and override mineral revenue
SLS	South Louisiana Sweet crude oil
SPR	Strategic Petroleum Reserve
TEAR	Total Energy Resource Analysis
UN	United Nations
WEFT	Formerly the Whatnot Econometric Forecasting Associates
WTI	West Texas Intermediate crude oil

# APPENDIX B

## GLOSSARY

**CASINGHEAD GAS** -- All natural gas released from oil during production from underground reservoirs.

**CONDENSATE** -- (See LEASE CONDENSATE).

**CRUDE OIL** -- A mixture of hydrocarbons that existed in the liquid phase in natural underground reservoirs, and remains liquid under atmospheric pressure after passing through surface separating facilities.

**GAS** -- The combination of natural gas and casinghead gas.

**LEASE CONDENSATE** -- A mixture consisting primarily of pentane and heavier hydrocarbons which is recovered as a liquid from natural gas in lease or field separation facilities, exclusive of products recovered at natural gas processing plants or facilities.

**LOUISIANA OFFSHORE** -- A 3 mile strip of submerged lands under State regulatory jurisdiction located between the State coast line and the State boundary line offshore. The OCS region and federal jurisdiction begins at the State offshore boundary line and extends seaward.

**LOUISIANA ONSHORE** -- Region defined between the State boundary line and the coast line.

**LOUISIANA OCS** -- Submerged lands under federal regulatory jurisdiction that comprise the Continental Margin or Outer Continental Shelf adjacent to Louisiana and seaward of the Louisiana Offshore region (seaward of the State boundary line offshore). Production in the OCS is under federal jurisdiction.

**NATURAL GAS** -- A mixture of hydrocarbon compounds and small quantities of various non-hydrocarbons existing in the gaseous phase or in solution with crude oil in natural underground reservoirs at reservoir conditions. The principal hydrocarbons usually contained in the mixture are methane, ethane, propane, butanes and pentanes. Typical non-hydrocarbon gases which may be present in reservoir natural gas are carbon dioxide, helium, hydrogen sulfide, and nitrogen. Under reservoir conditions, natural gas and the liquefiable portions occur either in a single gaseous phase in the reservoir or in solution with crude oil, and are not distinguishable at the time as separated substances.

**NATURAL GAS LIQUIDS** -- Lease condensate plus natural gas plant liquids.

**NATURAL GAS PLANT LIQUIDS** -- Those hydrocarbons remaining in a natural gas stream after field separation and are later separated and recovered at a natural gas processing plant, or cycling plant through the processes of absorption, adsorption, condensation, fractionation, or



other methods. Generally, such liquids consist of propane and heavier hydrocarbons and are commonly referred to as condensate, natural gasoline, or liquefied petroleum gases. Where hydrocarbon components lighter than propane (e.g., ethane) are recovered as liquids, these components are included with natural gas liquids.

**NON-HYDROCARBON MINERALS** -- The term non-hydrocarbon minerals in Louisiana refers to coal, lignite, salt, or sulphur

**OIL** -- The combination of crude oil and condensate.

**OUTER CONTINENTAL SHELF (OCS)** -- All submerged lands that comprise the Continental Margin adjacent to the U.S. and seaward of the state offshore boundary line. Production in the OCS is under federal regulatory jurisdiction and ownership.

# APPENDIX C

## LOUISIANA GAS SEVERANCE TAX EXEMPTIONS

(The following is the Technology Assessment Division summary of the law.  
For legal definitions look them up in the LSA at the indicated statutory citation.)

### NATURAL GAS TAX EXCLUSIONS

1. **Injection** STATUTORY CITATION: R.S. 47:633(9)(e)(i)  
An exclusion for gas injected into producing reservoirs. The injected gas maintains reservoir pressure and enhances the recovery of hydrocarbons. This gas can be reproduced and sold at a later time, and at that time the tax will be paid. This is really more of a deferred payment than exclusion. The purpose is to promote secondary recovery and repressurization programs. Origin: Acts 1940, No.145
  
2. **Produced outside the state of Louisiana** STATUTORY CITATION: R.S. 47:633(9)(e)(ii)  
Exclusion is allowed for gas produced outside the state and brought into Louisiana to be injected into producing reservoirs. The purpose of this exclusion is to clarify that natural gas severed outside the state is not taxable. Origin: Acts 1960, No.2
  
3. **Flared or vented** STATUTORY CITATIONS: R S 47 633(9)(e)(iii)  
STATUTORY CITATIONS: R S 47.633(9)(e)(vi)  
Exclusion is allowed for gas, which is normally vented or flared when testing, waiting on sales line, or when produced in noncommercial quantities. The purpose of this exclusion is to provide financial relief to producers of natural gas and casinghead gas. Origin: Acts 1935, No.24
  
4. **Consumed in field operations** STATUTORY CITATIONS: R.S.47:633(9)(e)(iv)  
Exclusion is allowed for gas used or consumed for fuel in maintaining the operation of a field, including gas used for heating, separating, producing, dehydrating, compressing, and pumping of oil and gas in the field where produced provided that such gas is not otherwise sold. The purpose of this exclusion is to provide financial assistance to qualifying producers. Origin: Acts 1958, No.2
  
5. **Consumed in the production of natural resources in the state of Louisiana** STATUTORY CITATION: R.S.47:633(9)(e)(v)  
Exclusion is allowed for gas consumed in the production of natural resources, other than oil and gas, in the state of Louisiana. The purpose of this exclusion is to provide financial assistance to qualifying producers. Origin: Acts 1974, No.5

**6. Used in the manufacture of carbon black**

STATUTORY CITATION: R.S.47:633(9)(e)(vii)

Exclusion is allowed for gas consumed in the manufacture of carbon black in plants. The producer and seller of the gas are allowed an exclusion from the severance tax that, in turn, lowers the sales price. The purpose of this exclusion is to provide financial assistance to carbon-black manufacturers. Origin: Acts 1958, Ex. Sess.,

**LOUISIANA OIL SEVERANCE TAX EXEMPTIONS**

(The following is the Technology Assessment Division summary of the law.  
For legal definitions look them up in the LSA at the indicated statutory citation.)

**OIL TAX DEDUCTION**

**Trucking, barging, and pipeline fees**      STATUTORY CITATION: R.S. 47:633(7)(a)

The Department of Revenue and Taxation's regulation, LAC 61:1.2903, allows producers to deduct a 25¢ per barrel fee for transporting oil or condensate from producing fields to processing facilities or the actual amount charged by transporters. The purpose of the regulation is to allow a standard 25¢ per barrel deduction for all producers.

**SEVERANCE TAX SUSPENSIONS**

**1. Tertiary recovery**      STATUTORY CITATION: R.S.47:633.4

This suspension allows crude oil production, from a qualified tertiary (large scale carbon dioxide injection projects) project approved by the Department of Natural Resources, not to pay severance tax until such project has reached payout. Origin: Acts 1983, Ex. Sess., No. 643

**2. Horizontal mining and drilling projects**

STATUTORY CITATION: R.S. 47:633(7)(c)(ii)(aa)

The working-interest owners of horizontal mining and drilling projects approved by the Office of Conservation are taxed at the special reduced rate of 3.125 percent of value until the cumulative value of hydrocarbon production from the project equals 2.33 times the private investment invested by the working interest owners. Origin: Acts 1990, No.551

# **LOUISIANA OTHER SEVERANCE TAX EXEMPTIONS**

(The following is the Technology Assessment Division summary of the law.  
For legal definitions look them up in the LSA at the indicated statutory citation.)

## **SEVERANCE TAX SUSPENSIONS - Act 2 of the 1994 Regular Session**

Act 2 was enacted in the summer of 1994 to give the oil and gas industry some relief by providing economic incentives to drill new wells and to continue production from marginal wells. Provisions 3 and 5 below that would have expired in 1996 were extended for two years in 1996 and again in 1998 by the legislature. Provisions 3 and 5 expired in 2000. Provision 3 was renewed in a modified form by Act 74 of 2002 and by Act 492 of 2005. The current provisions of this legislation are summarized below:

### **1. Stripper oil**

**value less than \$20 per barrel** STATUTORY CITATION: R.S. 47:633(c)(i)(bb)

Any oil well certified as a stripper well (0 - 10 barrels per day) shall be exempt from severance tax in any month in which the average posted price for a 30-day period is less than \$20.00 per barrel.

### **2. Horizontal wells** STATUTORY CITATION: R.S. 47:633(7)(c)(iii)

On any horizontally drilled well, or any horizontal recompletion from which production commences after July 31, 1994, all severance tax shall be suspended for a period of 24 months or until payout of well cost is achieved, whichever comes first. Payout of well cost shall be the cost of completing the well to commencement of production.

### **3. Inactive wells** STATUTORY CITATION: R.S. 47:633(7)(c)(iv)

To qualify for this exemption oil and gas wells must be inactive for 2 or more years or have 30 days or less of production during the past 2 years and an application for the exemption must be made to the Department of Natural Resources before commencement of production.

- a) For wells certified between July 31, 1994 and June 30, 2000, and between July 1, 2002 and December 31, 2004 production shall be exempt from severance tax for a period of 2 years.
- b) For wells certified between January 1, 2005 and June 30, 2010 production shall be exempt from severance tax for a period of 5 years, and the exemption shall be extended by the length of any inactivity of a well that has commenced production when such inactivity is caused by a force majeure.

### **4. Deep wells** STATUTORY CITATION: R.S. 47:633(9)(d)(v)

Wells drilled to a true vertical depth of 15,000 feet or more, where production commences after July 31, 1994, shall be exempt from severance tax for 24 months from the date production begins, or until payout of well cost, whichever comes first.

### **5. New discovery wells *EXPIRED*** STATUTORY CITATION: R.S. 47:648.1 et seq.

All severance tax on production from certified new oil and natural gas discovery wells is suspended for a period of 24 months from the date of completion, or until recovery of pay-



# APPENDIX D

## SEVERANCE TAX RATES

(The following is the Technology Assessment Division summary of the law.  
For legal definition look them up in the LSA at the indicated statutory citation.)

Severance tax is levied on production of natural resources taken from land or water bottoms within the territorial boundaries of the state. The state collects no severance from production in federal waters in the Gulf which start three miles from the Louisiana coast line. Natural resources are all forms of timber, including pulp woods, turpentine, and other forest products; minerals such as oil, gas, natural gasoline, distillate, condensate, casinghead gasoline, sulphur, salt, coal, lignite, and ores; also, marble, stone, gravel, sand, shells, and other natural deposits; and the salt content in brine. Oil and gas collections account for almost 92 percent, of all severance tax collections. Because of the significant revenues generated, the focus centered on the oil and gas Severance tax is paid by the owners of the natural resources at the time of severance.

### LOUISIANA OIL SEVERANCE TAX RATES

1. **Oil Full Rate** STATUTORY CITATION: R.S. 47:633(7)(a)  
12-1/2 % of its value at the time and place of severance. It has not changed since 1974. For previous tax rate see Historical Oil Severance Tax Rates page.
2. **Incapable Oil Rate** STATUTORY CITATION: R.S. 47:633(7)(b)  
6-1/4 % of its value. Oil produced from a well that is incapable of producing an average of more than twenty-five barrels of oil per day during the entire taxable month, and which also produces at least fifty percent salt water per day. On multiple well leases, all wells must meet the criteria to be able to qualify for the exemption.
3. **Stripper Oil Rate** STATUTORY CITATION: R.S. 47:633(7)(c)  
3-1/8 % of its value. Oil produced from a well that is incapable of producing an average of more than ten barrels of oil per day during the entire taxable month.
4. **Reclaimed Oil Rate** STATUTORY CITATION: R.S. 47:648.21  
3-1/8 % of its value. Reclaimed oil which has been reclaimed by class one salvage crude reclamation facilities which are permitted by the Office of Conservation - 3-1/8% of value received for the first purchase. Any person, or affiliate of a person, engaged in severing oil, gas or other natural resources, or operating oil or gas property, or other property from which natural resources are severed, shall not be eligible for the reduced tax rate.
5. **Condensate Rate** STATUTORY CITATION: R.S. 47:633(8)  
12-1/2 % of its value at the time and place of severance.

## **GAS SEVERANCE TAX RATES**

1. **Gas Full Rate** STATUTORY CITATION: R.S. 47:633(9)(a)  
The adjusted severance gas full rate is:
  - from July 1, 2006, through June 30, 2007, was **37.3 cents** per MCF,
  - from July 1, 2007, through June 30, 2008, is **26.9 cents** per MCF.For previous year tax rate see Historical Severance Gas Tax Rates page.
  
2. **Incapable Oil Well Gas** STATUTORY CITATION: R.S. 47:633(9)(b)  
3 cents per MCF for gas produced from an oil well, which has a wellhead pressure of fifty pounds per square inch gauge or less under operating conditions. To qualify for the reduced rate an oil well must have a casinghead pressure of fifty pounds or less per square inch for the entire taxable month.
  
3. **Incapable Gas Well Gas** STATUTORY CITATION: R.S. 47:633(9)(c)  
1-3/10 cents per MCF for gas produced from a gas well, which is incapable of producing an average of 250,000 cubic feet of gas per day. To qualify for the reduced rate a gas well must be incapable of producing 250,000 cubic feet of gas per day during the entire taxable month.
  
4. **Contract Rate** STATUTORY CITATION: R.S. 47:633.1(C)  
Gas sold under a written agreement requiring seller to pay tax without any reimbursement or with less than fifty percent reimbursement:
  - 3 cents per MCF for gas sold under a contract, in existence prior to May 1, 1972, at a price less than the Federal Power Commission (FPC) authorized area rate, which requires the seller to pay and bear all of the severance tax without reimbursement of any portion of it.
  - 4 cents per MCF for gas sold at a rate less than that authorized as the area ceiling ordered by the FPC in opinion nos. 598 and 607, under contracts in existence prior to November 25, 1973, which require the seller to pay and bear more than fifty percent of any increase in severance tax.
  - Not to exceed 7 cents per MCF for gas sold, at a rate less than fifty-two cents per MCF under contract prior to July 1, 1970. This rate is effective for the duration of the contract, whether or not such contract has been amended or supplemented subsequent to July 1, 1970, provided that the gas is sold for less than the prices previously specified.

## **GAS SEVERANCE TAX BASE RATE ADJUSTMENT**

Natural gas severance tax rate has changed numerous times since it was first instituted. The historical gas severance full rate is listed in the Historical Gas Severance Tax Rates page. In 1989, the legislative Act 387 amended R.S. 47:633 to change the base severance tax on natural gas to \$0.10 per MCF effective July 1, 1990, and to be adjusted annually thereafter by a *gas base rate adjustment*. Act 387 further stipulated that the base rate of \$0.10 per MCF would be in effect until June 30, 1992. Effective July 1, 1992 the base rate decreased to \$0.07 per MCF, subject to the annual rate adjustment. The Act also provides that the tax rate shall never be less than \$0.07 per MCF. The Act also directs the secretary of the Department of Natural Resources (R.S. 47:633(9)(d)(i) ) to determine the *gas base rate adjustment* for the 12-month period beginning July 1 of each year. In September 2002, Natural Gas Clearing House stopped the publication of spot market prices used in the calculation of the *gas base rate adjustment*. To change the source of price data used to annually adjust natural gas severance tax House Bill 1010 was introduced. House Bill 1010 became Act 1 of the 2003 Regular Session.

The *gas base rate adjustment* is as follows:

Starting in Fiscal Year 2004/2005, the *gas base rate adjustment* for the applicable twelve-month period is a fraction, the numerator of which shall be the average of the New York Mercantile Exchange (NYMEX) Henry Hub settled price on the last trading day for the month, as reported in the Wall Street Journal, for the previous twelve-month period ending on March 31, and the denominator of which shall be the average of the monthly average spot market prices of gas fuels delivered into the pipelines in Louisiana as reported by the Natural Gas Clearing House for the twelve-month period ending March 31, 1990 (1.7446 \$/MMBTU).

For the transitional year, Fiscal Year 2003/2004, the *gas base rate adjustment* for the twelve month period ending March 31, 2003, the monthly average gas prices used in making the numerator for the average gas prices for the months April 2002 through September 2002 shall be the monthly average spot market price of gas fuels delivered into the pipelines into Louisiana as reported by Dynegy, Inc. (formerly Natural Gas Clearinghouse in Houston), and the average gas prices for the months October 2002 through March 2003 shall be the New York Mercantile Exchange (NYMEX) Henry Hub settled price on the last trading day for the month, as reported in the Wall Street Journal.

Prior to these changes, the *gas base rate adjustment* for the applicable 12-month period was a fraction, the numerator of which was the average of the monthly spot market price of gas fuels delivered into the pipelines in Louisiana as reported by the Dynegy Inc. (formerly Natural Gas Clearinghouse) for the previous 12-month period ending on March 31, and the denominator of which was the average of the monthly spot market price of gas fuels delivered into the pipelines in Louisiana as reported by the Natural Gas Clearinghouse for the 12-month period ending March 31, 1990 (1.7446 \$/MMBTU).

This *gas base rate adjustment* is then to be used by the secretary of the Department of Revenue and Taxation to adjust the annual gas tax rate for the next fiscal year beginning on July 1 by multiplying the base tax rate by the *gas base rate adjustment*.



The following is a list of severance full tax rates, base rates, and tax rate adjustment indexes since it was first instituted.

<b>YEAR</b>	<b>TAX RATE</b> (cents/MCF)	<b>BASE RATE</b> (cents/MCF)	<b>RATE</b> <b>ADJUSTMENT</b>
FY1990/91	10.0	10.0	1.0000
FY1991/92	9.0	10.0	0.9031
FY1992/93	7.0	7.0	0.7970
FY1993/94	7.5	7.0	1.0679
FY1994/95	8.7	7.0	1.2402
FY1995/96	7.0	7.0	0.9464
FY1996/97	7.7	7.0	1.0938
FY1997/98	10.1	7.0	1.4446
FY1998/99	9.3	7.0	1.3340
FY1999/00	7.8	7.0	1.1153
FY2000/01	9.7	7.0	1.3855
FY2001/02	19.9	7.0	2.8403
FY2002/03	12.2	7.0	1.7390
FY2003/04	17.1	7.0	2.4383
FY2004/05	20.8	7.0	2.9644
FY2005/06	25.2	7.0	3.6058
FY2006/07	37.3	7.0	5.3272
FY2007/08	26.9	7.0	3.8378
FY2008/09	28.8	7.0	4.1136

## **OTHER SEVERANCE TAX RATES**

1. **Brine** STATUTORY CITATION: R.S. 47:633(20)  
One-half cents per ton (two thousand pounds).
2. **Coal** STATUTORY CITATION: R.S. 47:633(12)  
Ten cents per ton (two thousand pounds).
3. **Gravel** STATUTORY CITATION: R.S. 47:633(17)  
Six cents per ton (two thousand pounds).
4. **Lignite** STATUTORY CITATION: R.S. 47:633(13)  
Twelve cents per ton (two thousand pounds).
5. **Marble** STATUTORY CITATION: R.S. 47:633(15)  
Twenty cents per ton (two thousand pounds).
6. **Ores** STATUTORY CITATION: R.S. 47:633(14)  
Ten cents per ton (two thousand pounds).
7. **Pulpwood** STATUTORY CITATION: R.S. 47:633(2)  
Five percent current stumpage as determined by the Louisiana Forestry Commission and the Louisiana Tax Commission.
8. **Salt** STATUTORY CITATION: R.S. 47:633(11)  
Six cents per ton (two thousand pounds).
9. **Sand** STATUTORY CITATION: R.S. 47:633(18)  
Six cents per ton (two thousand pounds).
10. **Shell** STATUTORY CITATION: R.S. 47:633(19)  
Six cents per ton (two thousand pounds).
11. **Stone** STATUTORY CITATION: R.S. 47:633(16)  
Three cents per ton (two thousand pounds).
12. **Sulphur** STATUTORY CITATION: R.S. 47:633(10)  
One dollar and three cents per long ton, (two thousand two hundred forty pounds).
13. **Timber** STATUTORY CITATION: R.S. 47:633(1)  
Two and one-quarter percent of the current stumpage value by the Louisiana Forestry Commission and the Louisiana Tax Commission.

# **APPENDIX E**

## **MINERAL REVENUE ALLOCATION TO PARISHES**

Based on article VII, Section 4(E) of the Louisiana Constitution of 1974:

### **Distribution of Mineral Royalty to Parishes**

The state treasurer of the state of Louisiana is hereby authorized and directed, to remit an amount equal to one-tenth of the royalty accruing to the state each month from mineral leases on state owned lands, lake and river beds, and other water bottoms belonging to the state or the title to which is in the public for mineral development to the governing authority of the parish in which severance or production occurs. Effective January 1, 1975, the state treasurer will distribute the aforesaid royalties on the twentieth day after the last day of every third month. Notwithstanding the provisions of the preceding sentences, so long as any bonds issued by a parish payable from a pledge and dedication of money deposited in the Royalty Fund established by Article IV, Section 2, of the Louisiana Constitution of 1921, or additional bonds hereafter issued on a principal and interest, the state treasurer, prior to remitting any such royalty payments directly to the parish in any calendar year, shall make all payments required for debt servicing by the resolution or other instruments providing for the issuance of such bonds in that calendar year. Added by Act 1975, 1<sup>st</sup> Ex.Sess., No.29 &1, eff. February 20, 1975.

### **Distribution of Mineral Severance Tax to Parishes**

One-third of the sulphur severance tax, but not to exceed one hundred thousand dollars, one-fifth of the severance tax on all natural resources other than sulphur or timber, but not to exceed five hundred thousand dollars, and three-fourths of the timber severance tax shall be allocated to the governing authority of the parish in which severance or production occurs as provided in Article VII, Section 4 of the Constitution of 1974. When these limits have been reached, there shall be no further allocation, and all additional collections for the year shall be credited in full to the state treasurer.