

# Win or Lose: Louisiana and the High Cost of Energy

## Background: Our Oil and Gas Industry

For the entire 20<sup>th</sup> century, Louisiana yielded its vast oil and gas riches to risk-taking capitalists, hard-working rig crews and bright engineers and scientists who built the state's petroleum industry into an economic powerhouse. From Caddo Lake near the Arkansas border down to the coastal marshes - and beyond - virtually every parish in the state has been touched by the oil and gas enterprise.

The numbers are staggering. Nearly 20,000 Louisiana oil wells pull up 228 thousand barrels of oil a day [one barrel of oil equals 42 gallons]. That makes the state the 4<sup>th</sup> biggest producer of crude oil in the US. Louisiana is number five in natural gas production. These figures are just for onshore wells and wells within Louisiana's coastal boundaries, which extend 3 miles out into the Gulf. Even more oil is pumped by rigs in federally-controlled waters known as the OCS – the Outer Continental Shelf.

Seventeen Louisiana refineries distill nearly 2.8 millions barrels of crude oil a day. As with refineries across America, much of this oil is imported.

About 12 percent of the crude oil imported into the US passes through Louisiana. The Louisiana Offshore Oil Port [LOOP], located 20 miles off Louisiana's coast, off-loads a steady stream of super tankers around the clock.

Manning these on-shore and off-shore facilities is an army of oil and gas industry workers. According to the Louisiana Mid-continent Oil & Gas Association [LMOGCA], nearly 57,000 people in the state are involved in Production, Refining, and Oil and Gas Pipeline work. For this class of work, these are some of the highest paying jobs in the state.

An economic impact study commissioned by LMOGA and conducted by Loren Scott found that the total direct and indirect economic impact of the oil and gas industry on the state was about \$93 billion. That's a very large number, considering the size of Louisiana's overall economy.

The oil and gas industry provides the state treasury millions annually in revenues, mostly in the form of royalty payments and severance taxes<sup>1</sup>. These amounted to over \$852 million in 2003-04, including Section 8g income from the OCS.

Section 8(g) of the Outer Continental Shelf Lands Act Amendments of 1978 provides states a 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. Louisiana receives an annual disbursement of 27 percent

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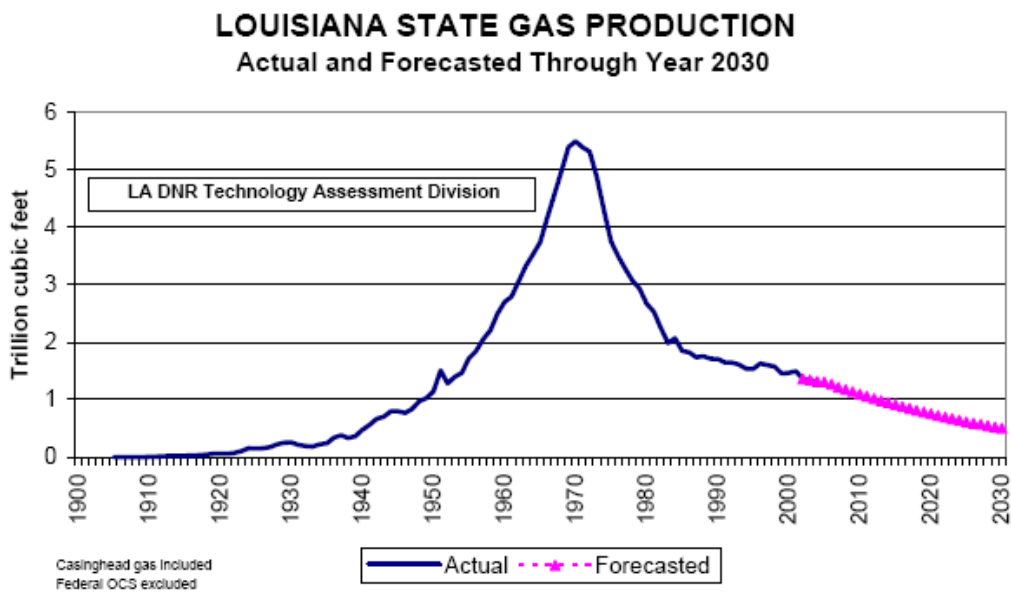
<sup>1</sup> Royalties are collected by the state on all oil and natural gas production on state-owned lands and water bottoms. Royalty amounts vary with each lease. The royalty represents a portion of the value earned from the wellhead sale of oil and gas. Severance taxes are collected on all oil and natural gas production within the State of Louisiana out to the 3 mile offshore boundary. The basic severance tax rate on oil is 12.5 percent of value. An indexing system, adjusted annually, sets the natural gas severance tax rate. The natural gas severance tax has a floor of 7 cents per thousand cubic feet (MCF).

of federal royalty, rental, and bonus revenues received within Louisiana's affected 8(g) zone.

## Trends and Projections

While these statistics are impressive, for the most part the numbers represent low points in historical trends. The 17 refineries currently operating in the state were once 27, in 1983<sup>2</sup>. The 57,000 Production, Refining, and Oil and Gas Pipeline workers numbered 103,000 twenty-five years ago. Market forces and efficiencies gained through technological improvements and increased productivity account for much of these job losses. But dwindling output has also taken its toll.

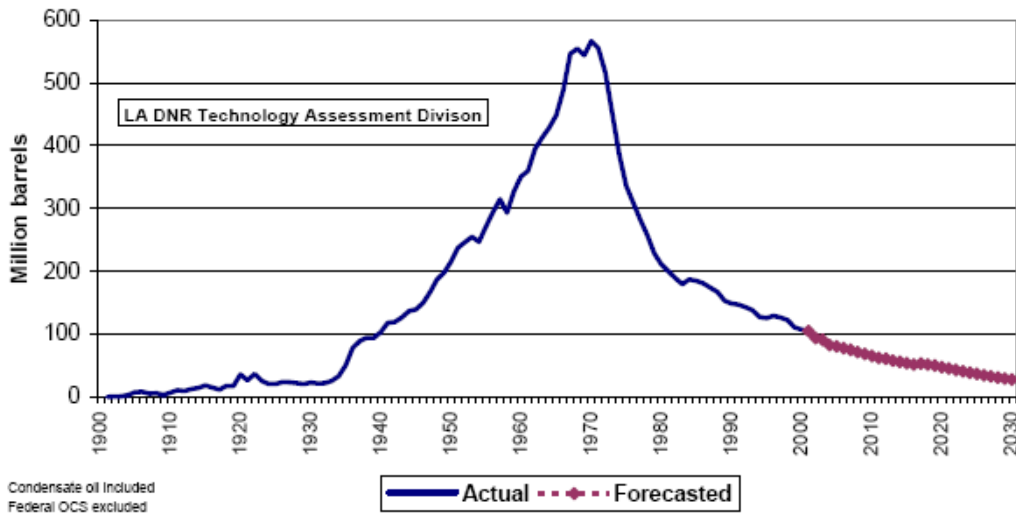
Louisiana's oil and gas fields are "mature". Their peak years of production are behind them, as the following charts prepared by the Louisiana Department of Natural Resources show.



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<sup>2</sup> Hurricane Katrina shut down 20 % of the country's oil- refining capacity, causing gasoline prices to soar more than 45 cents a gallon. It's been about 30 years since the last new US refinery was built. Industry and Congress are looking at how to boost capacity, but no new refineries are likely for Louisiana.

## LOUISIANA STATE OIL PRODUCTION Actual and Forecasted Through Year 2030



State government has felt the sting of reduced revenues from the oil and gas industry. In the 1980s, well over a billion dollars a year in royalties and severance taxes were filling state coffers annually. The industry accounted for nearly 40 percent of all state general fund revenues. Today, that figure is about 13 percent. Not all of this change is due to declining production, of course. The total state budget has grown, and new sources and/or increases in existing sources of revenue have become available.

### Effects of High Energy Prices

As one of the top exporting states in the nation, Louisiana is increasingly bound in economic fortunes to the international economy. Louisiana's petrochemical industry is currently experiencing downsizing due to very high energy costs that make it harder to compete globally..

Louisiana petrochemical plants have been outfitted to use natural gas exclusively as an energy source, due to its clean- burning attributes. Additionally, natural gas often serves as a feedstock, the raw material for the products made at chemical plants.

Unlike oil, a globally traded commodity, natural gas is priced locally and its distribution is usually local. Current U.S. policy limits natural gas production at a time when demand is increasing due to a proliferation of new power plants that use it for fuel. With needs pushing the available resources, prices have risen dramatically. Since 2002, natural gas prices have more than doubled, from \$3 to as high as more than \$10 per thousand cubic feet [MCF]. Chemical plants in Louisiana are competing with international companies that are located in countries that have a glut of natural gas, such as Trinidad where it's priced at \$1 per British thermal unit, and sixty cents in Saudi Arabia. With the addition of

drastically lower labor wages, the cost of producing chemicals in Louisiana is making the state less competitive.

This becomes an ironic dilemma in a state where oil and gas extraction, transmission and processing are major industries. While high energy prices will benefit oil and gas producers in the long-term, a crisis in the petrochemical industry is being felt today.

## **State Petrochemical Industry Begins to Shrink**

A series of plant layoffs and closings have been announced in Louisiana over the last two years, as companies shift investment to plants overseas, where production costs are cheaper.

Recent announced layoffs include:

BASF - approximately 500 workers from its Geismar plant.

Formosa Plastics - 89 jobs in North Baton Rouge.

DSM Elastomers - 180 jobs with the closure of its Addis plant.

ExxonMobil - 200 jobs over three years.

Mississippi Chemical Corp - 24 jobs.

Several ammonia plants along the Mississippi River between Baton Rouge and New Orleans have temporarily shut down.

## **Losing High Wage Jobs**

The effect of job losses in the chemical manufacturing sector is particularly troublesome since they are high paying jobs (averaging \$25.23 per hour), that have a high multiplier effect. According to LSU economist Loren Scott, in East Baton Rouge Parish each chemical job supports another 4.6 positions. Conversely, when a chemical job is lost, the parish in effect loses 4.6 jobs.

Overall, Louisiana has lost over 4,100 chemical industry jobs since 1998.
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The loss of income from layoffs also hurts local governments by decreasing tax revenue. Susan Tully, human resources manager at Vulcan Chemical reports the chemical industry brings \$790 million annually to state and local governments.

Petrochemical companies aren't the only ones hurt by high energy costs. The 3<sup>rd</sup> highest user of energy in the state's manufacturing sector is the paper and pulp industry. Since the late 1990's, they have lost about 2,000 jobs

## **The Problem of Supply**

### **Drilling Limits in the Gulf**

In 2003, Louisiana legislators worked to impress upon the federal government the need to end its moratorium on natural-gas exploration in some

areas of the Gulf of Mexico. New drilling could produce badly needed jobs, as well as provide additional fuel and feedstock for chemical manufacturers.

Dan Borne, president of the Louisiana Chemical Association, claims the immediate cause of the current crises in the industry is “government policy that, in effect, promotes the use of natural gas – and at the same time restricts its supply.” Borne calls for “a comprehensive strategy for growing our natural gas supply in an environmentally responsible way.”

Proponents of ending drilling moratoria say the Gulf should be opened to further oil and gas exploration to bring the price of gas down, and allow our companies to be competitive globally. Opponents wonder: why use our reserves of oil when it is available cheaply elsewhere? They say there is environmental risk involved, that we don’t have to take. The United States may have a greater need in the future for these reserves.

Proponents of Gull drilling have put forward a number of proposals over the years. One plan that would greatly benefit Louisiana [and several other states bordering the Gulf] would increase revenue sharing up to 50%. Louisiana’s jurisdiction over land submerged beneath the Gulf waters would be extended from the current 3 miles to 10.35 miles. The LSU Center of Energy Studies has created a chart indicating what this could mean to the state in terms of increased annual revenue. The best-case scenario in the chart [a modest projection, considering current oil and gas prices] looks at a price of \$50 a barrel oil and \$11 per thousand cubic feet for natural gas. In this scenario, Louisiana could stand to gain additional income of \$629 million dollars – per year.

Gas \$/MCF	Oil \$/barrel		
	\$30	\$40	\$50
\$5	\$317	\$360	\$402
\$8	\$430	\$473	\$515
\$11	\$543	\$586	\$629

*Additional Royalties Generated to Louisiana with a Three-League Seaward Boundary (millions of dollars)*

Note: Production is based on FY 04/05. Existing revenue sharing from 8G tracts are taken into account. All leases are assumed to have the standard federal one-sixth royalty. No potential severance taxes are included.

## **Liquefied Natural Gas Terminals**

One supply method for natural gas which is gaining popularity is construction of liquefied natural gas (LNG) terminals. These terminals take in a chilled, compressed form of gas that can be transported in greater amounts than regular natural gas, thereby reducing costs. Supplies may come from countries that currently do not have a viable market, and where gas prices are relatively low.

LSU Researcher David Dismukes paints as dark picture of Louisiana's future if the state doesn't pursue LNG facility investment. According to Dismukes, an aggressive construction plan calling for 15 Liquefied Gas Terminals [LGTs] could mean \$929 million in economic impact and 11,612 jobs. With low development – 6 to 12 LGTs – Louisiana would lose \$1.67 billion and 20,902 jobs. Fewer than six terminals could result in a loss of \$2.8 billion in economic activity and 61,926 jobs lost over 10 years.

A fast-track construction time table worries environmentalists. They say that plans to “streamline” the permitting process could come at the expense of environmental concerns. Groups such as the Louisiana Environmental Action Network, want the environmental community to be involved in LNG planning discussions.

In Louisiana, 25 to 30 square miles of the state's coastland disappear each year. A half century of oil extraction activities in the coastal marshes have contributed to land loss, though quantifying the damage attributable to exploration and drilling activities is difficult. Most experts agree that the major contributors to coastal loss are: Mississippi River levees [which direct land-building river sediments far out into the Gulf], natural subsidence [a process that compresses subsoil materials and “sinks” the land], and rising ocean levels connected to global warming.

Other concerns about these terminals usually revolve around the highly explosive nature of the materials being transferred. Terminals in the Gulf, however, would not be near populated areas, and the industry has a good safety record. But the high value of the product and its volatile nature could make LNG facilities attractive terrorist targets.

Proponents say Liquefied Gas Terminals would provide natural gas, a clean fuel, to a hungry Louisiana [and national] market. Opponents note that additional pipelines to support LGTs may further erode Louisiana's disappearing coastline. They claim that legislation would be needed to make sure owners are maintaining existing pipelines properly. Building these LGTs would take time, and some environmentalists fear that “streamlining” the process could compromise needed public oversight.

Hurricanes Katrina and Rita caused significant disruptions in oil and gas production and processing in the Gulf. Many expect home heating costs to rise dramatically this winter. Price hikes and possible shortages may strengthen proponents' arguments for more drilling in the gulf.