# LOUISIANA ENERGY FACTS

## ANNUAL 2011

Department of Natural Resources
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# General Questions and Comments

The **Louisiana Energy Facts Annual - 2011** (**Annual**) was published by the Technology Assessment Division of the Louisiana Department of Natural Resources under the direction of Manuel Lam. The division director is Christopher Knotts, P.E., William J. Delmar, Jr., is assistant director.

General questions and comments regarding the **Annual** may be referred to Technology Assessment Division staff at (225) 342-1270. Questions concerning specific areas of the **Annual** may be directed to the Technology Assessment Division staff members listed below.

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# Table of Contents

**Table** **Page**

## REVENUE



## RESERVES



## OTHER

# List of Figures

**Page**

## APPENDICES



## Appendix E

## Louisiana Energy Topics

# Louisiana Energy Facts
# Annual 2011

## INTRODUCTION

### ABOUT THIS PUBLICATION

The **Louisiana Energy Facts Annual** (**Annual**) is published to provide a comprehensive compendium of Louisiana related energy production and use statistics on a yearly basis. The data tables are supplemented with numerous graphs and charts to aid in the interpretation of the data and the discernment of trends. The **Annual** is published as soon as sufficient data for the previous calendar year is available. Due to time lags in the availability of some of the data, there is approximately a six month lag before the current **Annual** can be published. Some changes have been introduced in order to incorporate the latest available data.

If you receive our monthly **Louisiana Energy Facts** newsletter, you may find that some of the previously published data has been revised in the **Annual**. This data, by its nature, continues to be revised, sometimes years after its initial publication. We try to bring attention to these changes by marking them as revisions.

The most recent **Louisiana Energy Facts** monthly newsletter may contain even more updates. Please refer to the recent monthlies for the very latest data. The **Louisiana Energy Facts** monthly newsletter is available in print and online at our website:

**http://www.dnr.louisiana.gov/tad**

- For newsletters, select:

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- For tables covering longer time periods than in the Louisiana Energy Facts Reports, select:

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Note: the data in these tables will be updated throughout the year. The data files are not audited and will change as more reliable data becomes available.

The state oil and gas production data has been modified. Starting with the 2002 Annual, current production data and all future reports will reflect changes due to modifications in the reporting system by the DNR Office of Conservation, Production Audit Section. The new data for oil does not include crude oil, condensate, or raw make recovered from gas plants. In the past, these products were added to the state production as crude oil or condensate. A separate report on gas plant liquids production is not available at present. The gas data system was adjusted to reflect production from the well on the date produced. It was previously reported on the date first purchased.

Also the producing oil and gas well data since 2000 reflect changes due to modifications in the reporting system by the Department of Natural Resources Office of Conservation. The new data for oil and natural gas producing wells count them as productive if they had any production in the month, previous system counted only the producing wells at the end of the month.

This new reporting system aims to produce more accurate and timely data. The Technology Assessment Division is not the source of the data, but merely reports data provided to us by the responsible agency. We understand that users of our time series data need consistency and, for that reason, our time series have been adjusted backward to reflect these new modifications.

We hope you find this document useful, and we appreciate your feedback. Please fill, detach and return the survey form at the back of this report.

Additional comments or suggestions about this publication can be directed to the Technology Assessment Division staff members listed on the General Questions and Comments page.

## 2011 HIGHLIGHTS

The data in the 2011 **Louisiana Energy Facts Annual** contains some recent trends.

### Crude Oil and Natural Gas Prices

Gas spot price average was $4.55 per MCF in 2010, and it was $4.11 per MCF in 2011; which is 9.58% lower than in 2010. The Louisiana natural gas spot market average in January 2011 was $4.52 per MCF and fell to $3.33 per MCF in December. The 2012 average price for gas is expected to be around $3 per MCF.

Light Louisiana Sweet (LLS) average spot crude oil price was 112.29 per barrel in 2011 and it was $82.72 per barrel in 2010, a 35.7% increase. The LLS crude oil spot market average in January 2011 was $102.88 per barrel and rose to $112.32 per barrel in December. The 2012 LLS average spot price is expected to be around $100 per barrel.

### Oil and Gas Production

Oil and gas production increased in 2011 over 2010. The Louisiana state crude oil and condensate production, excluding the federal Outer Continental Shelf (OCS), was 68.1 million barrels in 2011, a 0.6% increase from 2010. The Louisiana state natural gas and casinghead, excluding OCS production was 2.9 TCF in 2011, a 33.4% increase over 2010. The increase in oil was caused by the high oil prices, and the increase in gas was driven by the high production in the Haynesville shale area. The Haynesville shale is producing more than 60% of the state total gas production.

### Drilling

Louisiana rig count, including the OCS area, averaged 165 rigs operating in 2011 a 14% decrease from 2010. On state areas the South showed drilling activity increased 29% and the North showed a 28% decrease over 2010, while the Federal OCS increased 4% due to the expiration of the offshore moratorium. The North LA drilling rigs decreased due to decreased in the Haynesville shale areas caused by low gas prices; and the South LA increase was caused by the high oil prices.

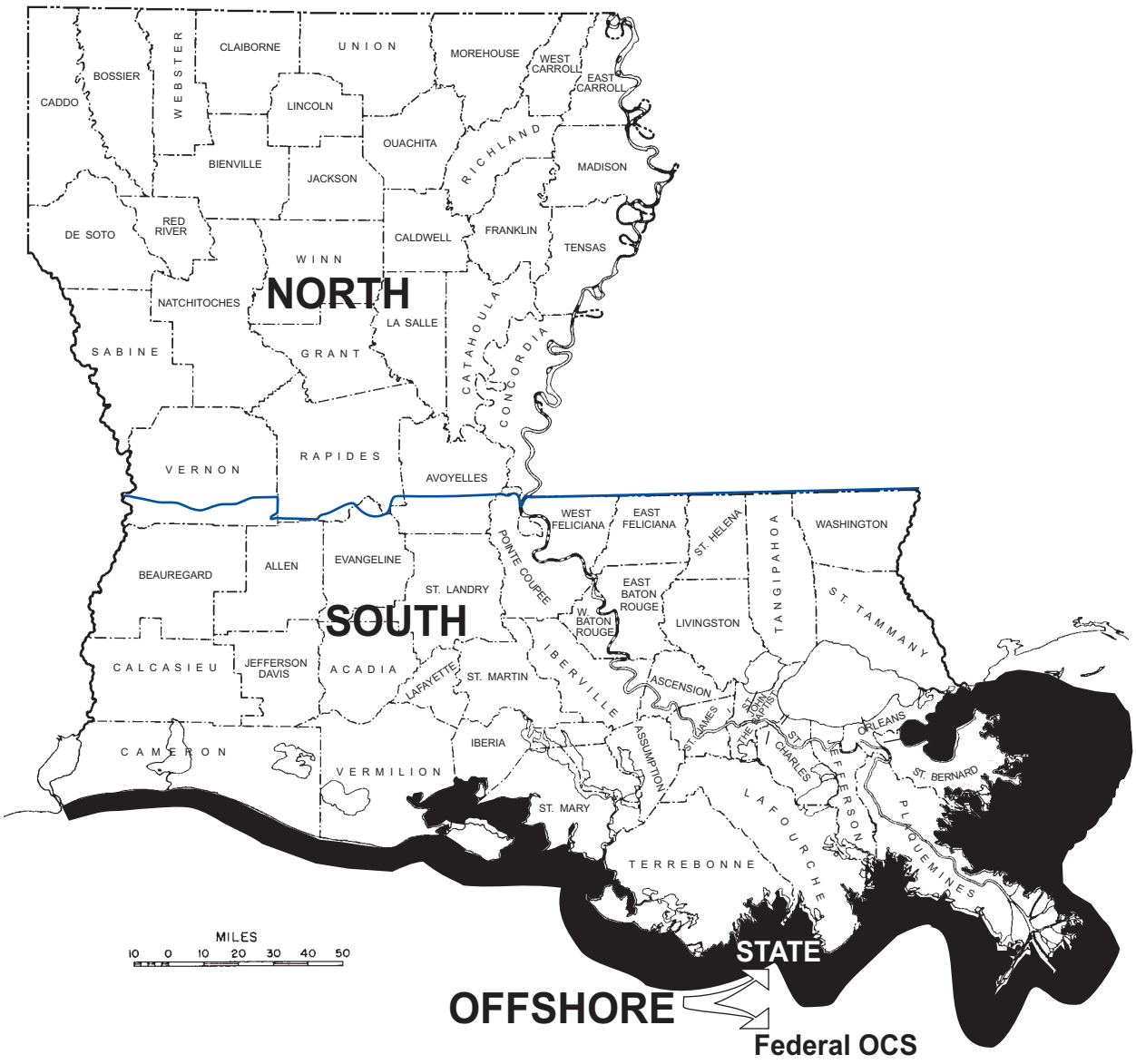
### Other significant items

Louisiana state areas proved oil and gas reserves data for 2010 were not available.

Louisiana refineries' 2011 daily crude oil average runs to stills were 2.75 million barrels per day, 3.9% higher than the 2010 average reflecting the increase in refinery capacity.

Average employment in the oil and gas extraction industries was 47,916 in 2010, a 2% increase from 2009, due to high activities in the Haynesville shale areas.

# SUBDIVISIONS OF LOUISIANA



# Table 1

## LOUISIANA STATE CRUDE OIL PRODUCTION

**Excluding OCS**
**(Barrels)**

| DATE | NORTH | SOUTH | OFFSHORE | TOTAL |
|---|---|---|---|---|
| 1990 | 22,681,173 | 72,770,216 | 21,356,618 | 116,808,007 |
| 1991 | 22,693,470 | 69,567,532 | 22,498,111 | 114,759,114 |
| 1992 | 21,914,801 | 68,285,536 | 21,820,087 | 112,020,424 |
| 1993 | 20,088,542 | 65,698,407 | 21,593,063 | 107,380,012 |
| 1994 | 17,236,407 | 59,754,375 | 21,163,672 | 98,154,453 |
| 1995 | 16,643,923 | 59,472,528 | 20,140,864 | 96,257,315 |
| 1996 | 16,900,516 | 58,970,676 | 19,117,088 | 94,988,280 |
| 1997 | 17,099,931 | 60,458,696 | 17,213,800 | 94,772,427 |
| 1998 | 15,607,719 | 60,784,952 | 15,120,246 | 91,512,918 |
| 1999 | 12,904,010 | 56,035,888 | 12,098,536 | 81,038,434 |
| 2000 | 11,740,980 | 53,090,500 | 11,131,564 | 75,963,044 |
| 2001 | 10,894,643 | 51,355,403 | 9,330,512 | 71,580,558 |
| 2002 | 9,783,288 | 43,558,030 | 7,664,577 | 61,005,894 |
| 2003 | 9,249,374 | 42,407,022 | 8,491,699 | 60,148,095 |
| 2004 | 8,755,584 | 41,804,382 | 7,032,177 | 57,592,143 |
| 2005 | 8,628,554 | 37,316,842 | 5,606,166 | 51,551,562 |
| 2006 | 8,405,302 | 36,905,015 | 4,655,982 | 49,966,299 |
| 2007 | 8,228,068 | 39,307,081 | 5,473,474 | 53,008,624 |
| 2008 | 8,245,198 | 36,616,971 | 3,988,829 | 48,850,998 |
| 2009 | 7,828,058 r | 35,811,219 r | 3,823,528 | 47,462,805 r |
| | | | | |
| January | 617,643 r | 2,813,801 r | 296,348 r | 3,727,792 r |
| February | 567,671 r | 2,675,481 r | 293,461 r | 3,536,613 r |
| March | 648,467 r | 3,131,057 r | 338,790 r | 4,118,314 r |
| April | 646,039 r | 2,971,392 r | 338,974 r | 3,956,405 r |
| May | 665,319 r | 3,139,789 r | 385,504 r | 4,190,612 r |
| June | 636,798 r | 3,051,354 r | 412,988 r | 4,101,140 r |
| July | 667,608 r | 3,174,041 r | 435,527 r | 4,277,176 r |
| August | 660,810 r | 3,188,681 r | 432,298 r | 4,281,789 r |
| September | 646,274 r | 3,134,933 r | 435,524 r | 4,216,731 r |
| October | 680,202 r | 3,204,862 r | 457,665 r | 4,342,729 r |
| November | 666,110 r | 3,053,515 r | 418,389 r | 4,138,014 r |
| December | 685,590 r | 3,098,400 r | 416,000 r | 4,199,990 r |
| **2010 Total** | **7,788,531 r** | **36,637,306 r** | **4,661,468 r** | **49,087,305 r** |
| | | | | |
| January | 702,186 | 3,045,791 | 382,144 | 4,130,121 |
| February | 635,270 | 2,782,959 | 355,462 | 3,773,691 |
| March | 724,968 | 3,269,643 | 429,395 | 4,424,006 |
| April | 681,717 | 3,101,951 | 383,464 | 4,167,132 |
| May | 722,374 | 3,188,911 | 433,769 | 4,345,054 |
| June | 742,863 | 2,994,453 | 435,629 | 4,172,945 |
| July | 775,182 | 3,099,646 | 415,416 | 4,290,244 |
| August | 774,187 | 3,212,732 | 408,100 | 4,395,019 |
| September | 758,262 | 3,129,288 | 343,480 | 4,231,030 |
| October | 786,022 | 3,424,319 | 439,585 | 4,649,926 |
| November | 669,762 p | 2,845,168 p | 309,946 p | 3,824,877 p |
| December | 699,997 e | 2,967,597 e | 319,971 e | 3,987,564 e |
| **2011 Total** | **8,672,790 e** | **37,062,458 e** | **4,656,362 e** | **50,391,609 e** |

e Estimated r Revised p Preliminary

# Table 2

## LOUISIANA STATE CONDENSATE PRODUCTION

**Excluding OCS**
**(Barrels)**

| DATE | NORTH | SOUTH | OFFSHORE | TOTAL |
|---|---|---|---|---|
| 1990 | 3,341,804 | 26,878,867 | 1,686,289 | 31,906,959 |
| 1991 | 4,009,441 | 26,227,271 | 1,685,555 | 31,922,267 |
| 1992 | 3,787,973 | 25,395,894 | 1,601,573 | 30,785,440 |
| 1993 | 3,647,665 | 25,236,291 | 1,629,298 | 30,513,254 |
| 1994 | 3,726,903 | 23,751,352 | 1,497,320 | 28,975,575 |
| 1995 | 3,927,927 | 22,866,531 | 2,177,611 | 28,972,069 |
| 1996 | 5,162,593 | 26,495,266 | 2,313,383 | 33,971,242 |
| 1997 | 4,397,384 | 24,247,395 | 2,737,982 | 31,382,760 |
| 1998 | 3,962,756 | 24,405,878 | 2,400,173 | 30,768,807 |
| 1999 | 3,555,355 | 24,032,940 | 2,233,271 | 29,821,566 |
| 2000 | 3,670,053 | 25,212,928 | 2,339,594 | 31,222,575 |
| 2001 | 3,352,988 | 28,003,761 | 1,933,594 | 33,290,343 |
| 2002 | 2,926,737 | 27,980,334 | 1,761,536 | 32,668,607 |
| 2003 | 2,789,398 | 25,616,633 | 1,850,882 | 30,256,912 |
| 2004 | 2,926,460 | 21,468,353 | 1,684,363 | 26,079,176 |
| 2005 | 3,270,729 | 19,685,719 | 1,171,950 | 24,128,398 |
| 2006 | 3,682,224 | 18,262,702 | 2,063,292 | 24,008,218 |
| 2007 | 4,193,850 | 18,062,445 | 2,117,929 | 24,374,224 |
| 2008 | 4,878,509 | 16,668,316 | 2,243,840 | 23,790,665 |
| 2009 | 4,264,791 r | 15,298,761 r | 2,166,499 r | 21,730,051 r |
| | | | | |
| January | 321,854 r | 1,161,145 r | 190,505 r | 1,673,504 r |
| February | 292,573 r | 1,089,120 r | 169,808 r | 1,551,501 r |
| March | 310,891 r | 1,174,353 r | 127,658 r | 1,612,902 r |
| April | 279,465 r | 1,125,580 r | 146,855 r | 1,551,900 r |
| May | 269,084 r | 1,127,882 r | 190,519 r | 1,587,485 r |
| June | 256,165 r | 1,104,786 r | 164,702 r | 1,525,653 r |
| July | 248,827 r | 1,140,971 r | 157,463 r | 1,547,261 r |
| August | 251,654 r | 1,111,538 r | 183,404 r | 1,546,596 r |
| September | 229,910 r | 1,093,511 r | 168,200 r | 1,491,621 r |
| October | 246,166 r | 1,122,107 r | 150,328 r | 1,518,601 r |
| November | 259,466 r | 1,067,159 r | 125,589 r | 1,452,214 r |
| December | 261,627 r | 1,162,877 r | 150,710 r | 1,575,214 r |
| **2010 Total** | **3,227,682 r** | **13,481,029 r** | **1,925,741 r** | **18,634,452 r** |
| | | | | |
| January | 271,265 | 1,152,406 | 141,364 | 1,565,035 |
| February | 250,576 | 1,023,551 | 108,109 | 1,382,236 |
| March | 270,816 | 1,181,689 | 135,098 | 1,587,603 |
| April | 246,931 | 1,093,137 | 126,055 | 1,466,123 |
| May | 251,951 | 1,102,629 | 126,705 | 1,481,285 |
| June | 235,707 | 1,038,170 | 107,671 | 1,381,548 |
| July | 239,528 | 1,089,620 | 113,520 | 1,442,668 |
| August | 221,469 | 1,087,137 | 128,196 | 1,436,802 |
| September | 216,859 | 1,035,164 | 96,249 | 1,348,272 |
| October | 216,067 | 1,155,295 | 117,299 | 1,488,661 |
| November | 299,454 p | 1,153,484 p | 135,173 p | 1,588,110 p |
| December | 297,056 e | 1,111,766 e | 146,500 e | 1,555,321 e |
| **2011 Total** | **3,017,678 e** | **13,224,048 e** | **1,481,939 e** | **17,723,664 e** |

e Estimated r Revised p Preliminary

# Table 3

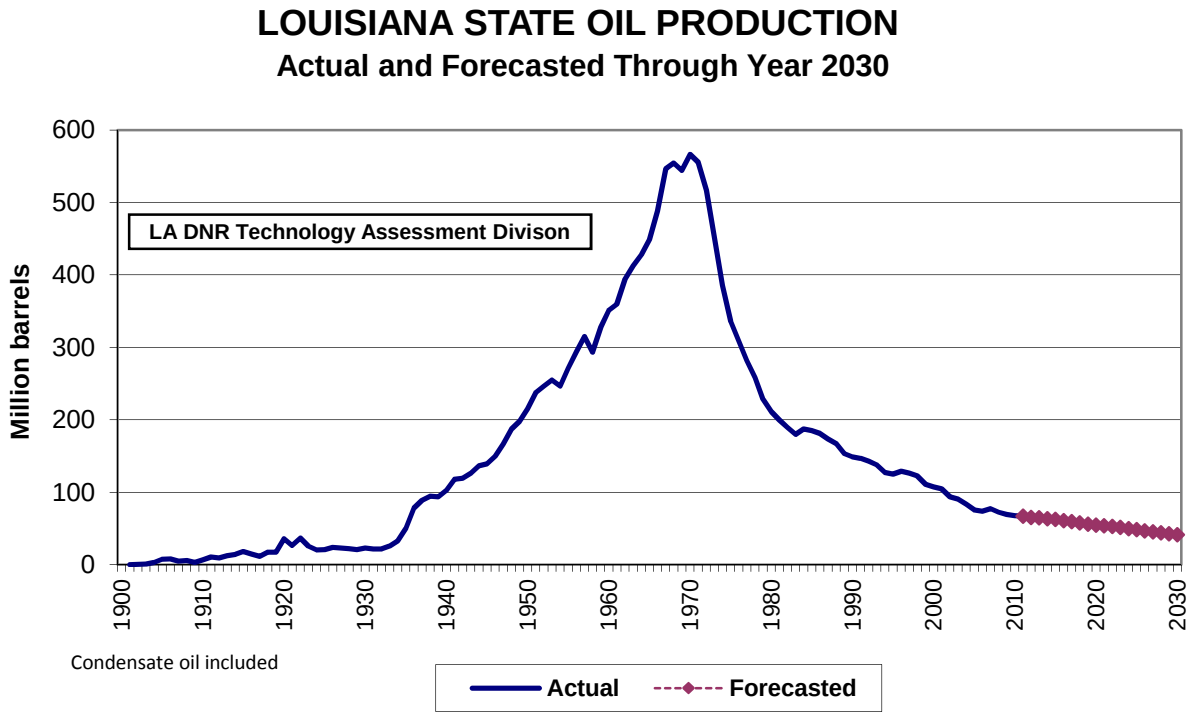
## LOUISIANA STATE CRUDE OIL and CONDENSATE PRODUCTION

**Excluding OCS**
**(Barrels)**

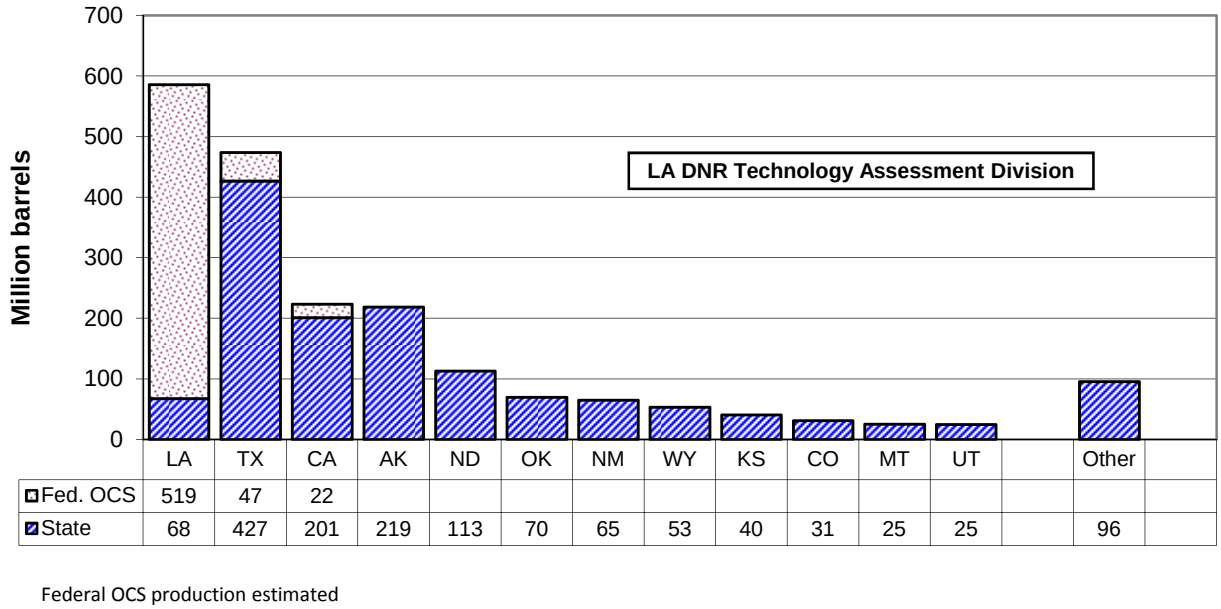
| DATE | NORTH | SOUTH | OFFSHORE | TOTAL |
|---|---|---|---|---|
| 1990 | 26,022,976 | 99,649,083 | 23,042,907 | 148,714,966 |
| 1991 | 27,366,301 | 101,809,303 | 17,498,281 | 146,673,885 |
| 1992 | 25,927,357 | 100,590,634 | 16,202,453 | 142,720,444 |
| 1993 | 24,176,815 | 97,956,877 | 15,596,342 | 137,730,034 |
| 1994 | 21,324,702 | 90,907,553 | 14,892,953 | 127,125,208 |
| 1995 | 20,595,093 | 87,613,455 | 17,016,027 | 125,224,575 |
| 1996 | 22,078,179 | 89,743,267 | 17,137,665 | 128,959,111 |
| 1997 | 21,829,276 | 88,295,426 | 16,030,812 | 126,155,514 |
| 1998 | 20,304,949 | 87,523,706 | 14,312,144 | 122,140,799 |
| 1999 | 16,711,501 | 81,260,610 | 12,850,588 | 110,822,699 |
| 2000 | 15,307,562 | 80,304,828 | 11,549,975 | 107,162,365 |
| 2001 | 14,274,475 | 79,328,486 | 11,264,058 | 104,867,019 |
| 2002 | 12,726,261 | 71,523,765 | 9,440,089 | 93,690,115 |
| 2003 | 12,049,211 | 67,975,624 | 10,349,488 | 90,374,323 |
| 2004 | 11,696,648 | 63,270,406 | 8,725,050 | 83,692,104 |
| 2005 | 11,909,370 | 56,993,657 | 6,782,960 | 75,685,987 |
| 2006 | 12,101,998 | 55,150,979 | 6,717,312 | 73,970,289 |
| 2007 | 12,428,707 | 57,380,373 | 7,591,511 | 77,400,591 |
| 2008 | 13,106,830 | 53,229,244 | 6,282,009 | 72,618,083 |
| 2009 | 12,092,849 r | 51,109,980 r | 5,990,027 r | 69,192,856 r |
| | | | | |
| January | 939,497 r | 3,974,946 r | 486,853 r | 5,401,296 r |
| February | 860,244 r | 3,764,601 r | 463,269 r | 5,088,114 r |
| March | 959,358 r | 4,305,410 r | 466,448 r | 5,731,216 r |
| April | 925,504 r | 4,096,972 r | 485,829 r | 5,508,305 r |
| May | 934,403 r | 4,267,671 r | 576,023 r | 5,778,097 r |
| June | 892,963 r | 4,156,140 r | 577,690 r | 5,626,793 r |
| July | 916,435 r | 4,315,012 r | 592,990 r | 5,824,437 r |
| August | 912,464 r | 4,300,219 r | 615,702 r | 5,828,385 r |
| September | 876,184 r | 4,228,444 r | 603,724 r | 5,708,352 r |
| October | 926,368 r | 4,326,969 r | 607,993 r | 5,861,330 r |
| November | 925,576 r | 4,120,674 r | 543,978 r | 5,590,228 r |
| December | 947,217 r | 4,261,277 r | 566,710 r | 5,775,204 r |
| **2010 Total** | **11,016,213 r** | **50,118,335 r** | **6,587,209 r** | **67,721,757 r** |
| | | | | |
| January | 973,451 | 4,198,197 | 523,508 | 5,695,156 |
| February | 885,846 | 3,806,510 | 463,571 | 5,155,927 |
| March | 995,784 | 4,451,332 | 564,493 | 6,011,609 |
| April | 928,648 | 4,195,088 | 509,519 | 5,633,255 |
| May | 974,325 | 4,291,540 | 560,474 | 5,826,339 |
| June | 978,570 | 4,032,623 | 543,300 | 5,554,493 |
| July | 1,014,710 | 4,189,266 | 528,936 | 5,732,912 |
| August | 995,656 | 4,299,869 | 536,296 | 5,831,821 |
| September | 975,121 | 4,164,452 | 439,729 | 5,579,302 |
| October | 1,002,089 | 4,579,614 | 556,884 | 6,138,587 |
| November | 969,216 p | 3,998,652 p | 445,119 p | 5,412,987 p |
| December | 997,052 e | 4,079,362 e | 466,471 e | 5,542,885 e |
| **2011 Total** | **11,690,468 e** | **50,286,506 e** | **6,138,300 e** | **68,115,274 e** |

e Estimated r Revised p Preliminary

## Figure 1




## Figure 2



# Table 4

## LOUISIANA TOTAL CRUDE OIL and CONDENSATE PRODUCTION

**(Barrels)**

| DATE | ONSHORE | OFFSHORE | | TOTAL |
|---|---|---|---|---|
| | | State | Federal OCS | |
| 1990 | 125,672,059 | 23,042,907 | 264,670,535 | 413,385,501 |
| 1991 | 122,492,061 | 24,183,350 | 262,647,733 | 409,323,144 |
| 1992 | 119,379,190 | 23,421,386 | 288,918,208 | 431,718,784 |
| 1993 | 114,666,029 | 23,222,089 | 293,443,881 | 431,331,999 |
| 1994 | 104,464,211 | 22,660,730 | 293,077,191 | 420,202,132 |
| 1995 | 102,907,063 | 22,318,172 | 320,255,087 | 445,480,322 |
| 1996 | 107,529,051 | 21,430,471 | 349,101,048 | 478,060,570 |
| 1997 | 106,203,405 | 19,951,782 | 399,536,004 | 525,691,191 |
| 1998 | 104,761,306 | 17,520,419 | 425,865,901 | 548,147,626 |
| 1999 | 96,528,193 | 14,331,807 | 451,391,454 | 562,251,454 |
| 2000 | 93,714,460 | 13,471,159 | 477,645,662 | 584,831,281 |
| 2001 | 93,606,795 | 11,264,106 | 502,115,031 | 606,985,932 |
| 2002 | 84,248,389 | 9,426,112 | 508,630,349 | 602,304,850 |
| 2003 | 80,062,426 | 10,342,581 | 505,203,116 | 595,608,123 |
| 2004 | 74,954,779 | 8,716,540 | 477,182,586 e | 560,853,905 e |
| 2005 | 68,901,844 | 6,778,116 | 407,154,253 e | 482,834,213 e |
| 2006 | 67,255,244 | 6,719,273 | 419,555,392 e | 493,529,909 e |
| 2007 | 69,809,080 | 7,591,511 | 427,033,161 e | 504,433,752 e |
| 2008 | 66,336,074 | 6,282,009 | 385,638,041 e | 458,256,124 e |
| 2009 | 63,202,829 r | 5,990,027 r | 528,228,126 e r | 597,420,982 e r |
| January | 4,914,443 | 486,853 | 47,696,924 e r | 53,098,220 e r |
| February | 4,624,845 | 463,269 | 44,522,634 e r | 49,610,748 e r |
| March | 5,264,768 | 466,448 | 46,205,155 e r | 51,936,371 e r |
| April | 5,022,476 | 485,829 | 40,492,334 e r | 46,000,639 e r |
| May | 5,202,074 | 576,023 | 42,180,164 e r | 47,958,261 e r |
| June | 5,049,103 | 577,690 | 41,609,806 e r | 47,236,599 e r |
| July | 5,231,447 | 592,990 | 39,981,755 e r | 45,806,192 e r |
| August | 5,212,683 | 615,702 | 44,156,982 e r | 49,985,367 e r |
| September | 5,104,628 | 603,724 | 44,151,009 e r | 49,859,361 e r |
| October | 5,253,337 | 607,993 | 45,042,446 e r | 50,903,776 e r |
| November | 5,046,250 | 543,978 | 40,654,495 e r | 46,244,723 e r |
| December | 5,208,494 | 566,710 | 42,222,572 e r | 47,997,776 e r |
| **2010 Total** | **61,134,548** | **6,587,209** | **518,916,275 e r** | **586,638,032 e r** |
| January | 5,171,648 | 523,508 | 43,986,415 e | 49,681,571 e |
| February | 4,692,356 | 463,571 | 35,836,435 e | 40,992,362 e |
| March | 5,447,116 | 564,493 | 39,213,673 e | 45,225,282 e |
| April | 5,123,736 | 509,519 | 36,502,868 e | 42,136,123 e |
| May | 5,265,865 | 560,474 | 38,087,561 e | 43,913,900 e |
| June | 5,011,193 | 543,300 | 35,738,099 e | 41,292,592 e |
| July | 5,203,976 | 528,936 | 33,186,198 e | 38,919,110 e |
| August | 5,295,525 | 536,296 | 34,204,289 e | 40,036,110 e |
| September | 5,139,573 | 439,729 | 29,373,086 e | 34,952,388 e |
| October | 5,581,703 | 556,884 | 31,222,079 e | 37,360,666 e |
| November | 4,967,868 p | 445,119 p | 29,222,564 e | 34,635,551 e |
| December | 5,076,415 e | 466,471 e | 30,125,423 e | 35,668,308 e |
| **2011 Total** | **61,976,974 e** | **6,138,300 e** | **416,698,690 e** | **484,813,964 e** |

e Estimated r Revised p Preliminary

# Table 5

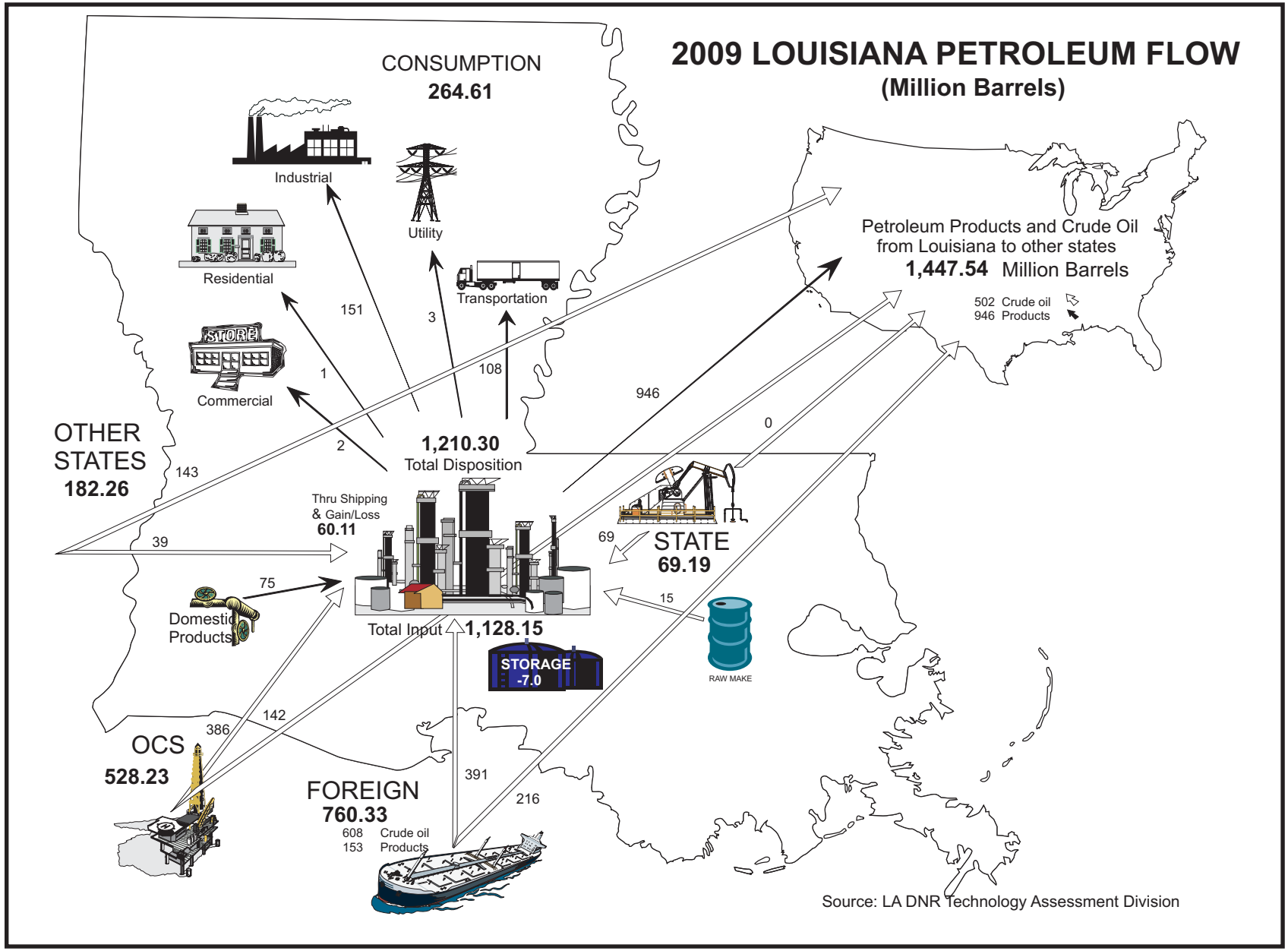
## LOUISIANA STATE OIL PRODUCTION* BY TAX RATES AS PUBLISHED IN SEVERANCE TAX REPORTS[8] (Barrels)

| DATE | FULL RATE | INCAPABLE WELLS RATE | STRIPPER WELLS RATE | TAXED VOLUME |
|---|---|---|---|---|
| 1990 | 131,140,448 | 3,274,774 | 7,154,125 | 141,577,610 |
| 1991 | 136,212,521 | 3,888,128 | 8,112,117 | 148,212,765 |
| 1992 | 133,399,849 | 3,665,298 | 7,718,696 | 144,783,843 |
| 1993 | 128,699,431 | 3,448,387 | 7,240,065 | 139,387,883 |
| 1994 | 118,109,958 | 3,691,802 | 6,347,047 e | 128,148,807 e |
| 1995 | 108,373,913 | 4,239,717 | 6,230,454 e | 118,844,084 e |
| 1996 | 103,524,192 | 3,786,147 | 6,240,956 e | 113,551,295 e |
| 1997 | 101,772,533 | 3,466,389 | 6,101,247 e | 111,340,169 e |
| 1998 | 89,083,365 | 2,878,225 | 5,892,007 e | 97,853,597 e |
| 1999 | 85,207,438 | 2,786,515 | 5,690,984 e | 93,684,937 e |
| 2000 | 88,411,207 | 2,783,268 | 5,322,515 | 96,516,990 |
| 2001 | 83,994,058 | 2,576,683 | 5,175,142 | 91,745,883 |
| 2002 | 79,038,703 e | 2,571,901 e | 4,681,607 e | 86,292,211 e |
| 2003 | 75,070,785 | 2,565,017 | 4,912,890 | 82,548,691 |
| 2004 | 73,133,821 | 2,852,851 | 4,838,681 | 80,825,353 |
| 2005 | 61,356,971 | 2,754,911 | 4,784,530 | 68,896,412 |
| 2006 | 61,520,365 | 2,621,592 | 4,786,820 | 68,928,778 |
| 2007 | 64,036,607 | 2,612,497 | 4,531,456 | 71,180,560 |
| 2008 | 61,520,109 | 2,564,615 | 4,974,960 | 69,059,684 |
| 2008 | 55,212,475 | 1,927,478 | 4,364,995 | 61,504,949 |
| | | | | |
| January | 3,731,155 | 145,780 | 332,128 | 4,209,063 |
| February | 4,610,852 | 175,544 | 340,738 | 5,127,134 |
| March | 4,357,554 | 259,944 | 380,313 | 4,997,812 |
| April | 3,397,268 | 149,749 | 301,750 | 3,848,767 |
| May | 4,732,328 | 147,431 | 338,519 | 5,218,278 |
| June | 4,581,386 | 169,103 | 365,929 | 5,116,418 |
| July | 4,934,142 | 212,539 | 387,935 | 5,534,616 |
| August | 4,241,808 | 160,400 | 367,152 | 4,769,360 |
| September | 4,899,184 | 182,008 | 365,556 | 5,446,748 |
| October | 5,051,887 | 199,885 | 413,774 | 5,665,546 |
| November | 3,844,643 | 142,678 | 333,575 | 4,320,895 |
| December | 4,616,349 | 199,678 | 388,312 | 5,204,339 |
| **2010 Total** | **52,998,554** | **2,144,740** | **4,315,681** | **59,458,975** |
| | | | | |
| January | 4,620,085 | 192,347 | 406,910 | 5,219,341 |
| February | 4,305,997 | 220,389 | 418,165 | 4,944,551 |
| March | 4,496,984 | 176,888 | 384,250 | 5,058,123 |
| April | 4,336,873 | 184,340 | 323,675 | 4,844,888 |
| May | 3,875,538 | 307,431 | 482,622 | 4,665,590 |
| June | 4,495,616 | 210,138 | 426,867 | 5,132,621 |
| July | 4,354,321 | 155,232 | 409,169 | 4,918,722 |
| August | 3,763,959 | 162,189 | 362,309 | 4,288,458 |
| September | 4,294,281 | 193,391 | 402,904 | 4,890,576 |
| October | 4,166,955 | 174,563 | 395,033 | 4,736,551 |
| November | 4,200,265 | 177,055 | 364,674 | 4,741,994 |
| December | 4,141,487 | 206,143 | 387,947 | 4,735,577 |
| **2011 Total** | **51,052,360** | **2,360,106** | **4,764,525** | **58,176,991** |

e Estimated r Revised p Preliminary

* Due to reporting time lag and well exemptions the above figures are different from actual production. See footnote in Appendix B.

## Figure 3


2009 LOUISIANA PETROLEUM FLOW
(Million Barrels)
CONSUMPTION
264.61
Industrial
Utility
Residential
Transportation
Commercial
151
3
1
108
946
0
2
143
39
75
OTHER STATES
182.26
1,210.30
Total Disposition
Thru Shipping & Gain/Loss
60.11
69
STATE
69.19
15
Domestic Products
Total Input
1,128.15
STORAGE
-7.0
RAW MAKE
386
142
OCS
528.23
391
216
FOREIGN
760.33
608 Crude oil
153 Products
Petroleum Products and Crude Oil
from Louisiana to other states
1,447.54 Million Barrels
502 Crude oil
946 Products
Source: LA DNR Technology Assessment Division

# Table 6

## UNITED STATES OCS CRUDE OIL AND CONDENSATE PRODUCTION[12]

**(Barrels)**

| YEAR | LOUISIANA | TEXAS | CALIFORNIA | TOTAL |
|---|---|---|---|---|
| 1965 | 144,964,868 | 3,747 | 0 | 144,968,615 |
| 1966 | 187,831,472 | 882,598 | 0 | 188,714,070 |
| 1967 | 218,995,828 | 2,865,786 | 0 | 221,861,614 |
| 1968 | 263,825,359 | 3,110,642 | 2,059,889 | 268,995,890 |
| 1969 | 300,159,292 | 2,759,851 | 9,940,844 | 312,859,987 |
| 1970 | 333,411,492 | 2,247,048 | 24,987,628 | 360,646,168 |
| 1971 | 385,760,351 | 1,685,047 | 31,103,548 | 418,548,946 |
| 1972 | 387,590,662 | 1,733,018 | 22,562,213 | 411,885,893 |
| 1973 | 374,196,856 | 1,617,829 | 18,915,314 | 394,729,999 |
| 1974 | 342,435,496 | 1,381,825 | 16,776,744 | 360,594,065 |
| 1975 | 313,592,559 | 1,340,136 | 15,304,757 | 330,237,452 |
| 1976 | 301,887,002 | 1,054,554 | 13,978,553 | 316,920,109 |
| 1977 | 290,771,605 | 909,037 | 12,267,598 | 303,948,240 |
| 1978 | 278,071,535 | 2,107,599 | 12,085,908 | 292,265,042 |
| 1979 | 271,008,916 | 3,595,546 | 10,961,076 | 285,565,538 |
| 1980 | 256,688,082 | 10,502,007 | 10,198,886 | 277,388,975 |
| 1981 | 255,875,717 | 14,284,661 | 19,605,027 | 289,765,405 |
| 1982 | 275,513,489 | 17,263,766 | 28,434,202 | 321,211,457 |
| 1983 | 298,093,559 | 19,710,197 | 30,527,487 | 348,331,243 |
| 1984 | 318,024,622 | 21,960,086 | 30,254,306 | 370,239,014 |
| 1985 | 338,901,863 | 20,640,957 | 29,781,465 | 389,324,285 |
| 1986 | 340,152,276 | 19,835,882 | 29,227,846 | 389,216,004 |
| 1987 | 307,950,881 | 24,634,142 | 33,556,686 | 366,141,709 |
| 1988 | 261,936,530 | 26,115,776 | 32,615,118 | 320,667,424 |
| 1989 | 246,207,653 | 25,887,841 | 33,072,161 | 305,167,655 |
| 1990 | 264,670,535 | 24,970,114 | 33,312,719 | 324,423,181 |
| 1991 | 262,647,733 | 24,380,908 | 29,146,090 | 323,831,064 |
| 1992 | 288,918,208 | 23,639,788 | 41,222,801 | 346,053,626 |
| 1993 | 293,443,881 | 20,376,996 | 50,078,144 | 358,655,540 |
| 1994 | 293,077,191 | 26,819,958 | 57,229,464 | 371,300,873 |
| 1995 | 320,255,087 | 20,419,104 | 71,254,440 | 416,293,300 |
| 1996 | 349,101,048 | 25,841,553 | 67,804,200 | 436,634,538 |
| 1997 | 399,536,004 | 28,718,405 | 58,279,489 | 469,873,968 |
| 1998 | 425,865,901 | 27,837,631 | 40,636,231 | 484,861,417 |
| 1999 | 451,391,454 | 31,758,296 | 42,071,101 | 537,198,889 |
| 2000 | 477,645,662 | 35,044,216 | 34,373,524 | 557,370,524 |
| 2001 | 502,115,031 | 42,991,844 | 34,763,192 | 592,514,727 |

| | GULF OF MEXICO | | PACIFIC | TOTAL |
|---|---|---|---|---|
| | CENTRAL | WESTERN | | |
| 2002 | 478,652,767 | 88,169,359 | 29,783,000 | 596,606,889 |
| 2003 | 476,746,239 | 83,696,697 | 30,001,000 | 590,477,590 |
| 2004 | 447,625,460 | 86,932,724 | 27,052,000 | 561,629,979 |
| 2005 | 327,825,527 | 74,791,038 | 26,554,000 | 429,172,427 |
| 2006 | 393,445,174 | 76,794,758 | 26,113,000 | 496,352,933 |
| 2007 | 407,038,554 | 59,225,206 | 24,599,000 | 490,878,085 |
| 2008 | 371,922,492 | 48,984,103 | 24,145,000 | 445,092,125 |
| 2009 | 514,730,687 | 52,407,408 | 22,231,000 | 589,427,519 |
| 2010 | 504,148,908 | 48,983,407 | 22,548,000 | 575,716,844 |

NOTE: Starting in 2002 MMS has not formally published production by state adjacent areas

# Table 7

## UNITED STATES CRUDE OIL AND CONDENSATE PRODUCTION AND IMPORTS

**(Thousand barrels)**

| DATE | ALL OCS[7] | DOMESTIC PRODUCTION[7] | IMPORTS TOTAL[7] | IMPORTS SPR[7] |
|---|---|---|---|---|
| 1990 | 299,835 | 2,684,575 | 2,151,387 | 9,772 |
| 1991 | 323,274 | 2,707,205 | 2,110,532 | 0 |
| 1992 | 335,258 | 2,617,998 | 2,226,341 | 3,594 |
| 1993 | 349,179 | 2,495,933 | 2,477,230 | 5,367 |
| 1994 | 365,107 | 2,418,981 | 2,578,072 | 4,485 |
| 1995 | 408,872 | 2,383,404 | 2,638,810 | 0 |
| 1996 | 431,807 | 2,368,535 | 2,747,839 | 0 |
| 1997 | 446,857 | 2,339,981 | 3,002,299 | 0 |
| 1998 | 490,777 | 2,293,763 | 3,177,584 | 0 |
| 1999 | 515,782 | 2,162,752 | 3,186,663 | 3,041 |
| 2000 | 557,989 | 2,130,706 | 3,319,816 | 3,006 |
| 2001 | 588,855 | 2,117,512 | 3,404,894 | 3,912 |
| 2002 | 596,605 | 2,097,124 | 3,336,175 | 5,767 |
| 2003 | 590,444 | 2,073,454 | 3,527,696 | 0 |
| 2004 | 561,610 | 1,983,300 | 3,692,063 | 0 |
| 2005 | 494,332 | 1,890,107 | 3,695,971 | 18,889 |
| 2006 | 500,113 | 1,862,259 | 3,693,081 | 3,086 |
| 2007 | 490,712 | 1,848,450 | 3,661,404 | 2,703 |
| 2008 | 445,842 | 1,811,816 | 3,580,694 | 7,113 |
| 2009 | 590,902 | 1,956,596 | 3,289,675 | 20,368 |
| | | | | |
| January | 53,182 | 167,589 | 263,249 | 0 |
| February | 49,754 | 156,193 | 245,302 | 0 |
| March | 51,571 | 170,670 | 289,582 | 0 |
| April | 46,381 | 161,703 | 291,766 | 0 |
| May | 49,526 | 167,083 | 299,304 | 0 |
| June | 48,187 | 162,753 | 297,814 | 0 |
| July | 46,276 | 163,926 | 307,894 | 0 |
| August | 49,967 | 168,648 | 295,837 | 0 |
| September | 49,400 | 169,563 | 276,863 | 0 |
| October | 50,180 | 172,695 | 264,726 | 0 |
| November | 46,185 | 166,583 | 260,966 | 0 |
| December | 47,619 | 170,731 | 269,553 | 0 |
| **2010 Total** | **588,228** | **1,998,137** | **3,362,856** | **0** |
| | | | | |
| January | 50,258 | 169,959 | 281,139 | 0 |
| February | 45,395 | 157,127 | 224,364 | 0 |
| March | 48,836 | 174,629 | 280,016 | 0 |
| April | 46,415 | 167,805 | 261,437 | 0 |
| May | 47,000 | 173,978 | 278,630 | 0 |
| June | 44,580 | 168,732 | 277,419 | 0 |
| July | 45,136 | 173,918 | 288,602 | 0 |
| August | N/A | 178,361 | 279,664 | 0 |
| September | N/A | 169,235 | 270,173 | 0 |
| October | N/A | N/A | N/A | N/A |
| November | N/A | N/A | N/A | N/A |
| December | N/A | N/A | N/A | N/A |
| **2011 Total** | **327,620** | **1,533,744** | **2,441,444** | **0** |

e Estimated r Revised p Preliminary

# Table 8

## LOUISIANA STATE ROYALTY OIL, GAS AND PLANT PRODUCTS
## CALCULATED VOLUMES, Excluding OCS

| DATE | OIL (Barrels) | GAS (MCF) | PLANT LIQUIDS (Barrels) |
|---|---|---|---|
| 1990 | 6,781,765 | 66,417,089 | 348,776 |
| 1991 | 6,923,565 | 61,809,109 | 933,307 |
| 1992 | 6,837,552 | 57,911,258 | 1,689,942 |
| 1993 | 6,721,350 | 67,052,274 | 698,857 |
| 1994 | 6,288,843 | 54,798,617 | 600,660 |
| 1995 | 6,385,269 | 57,013,225 | 925,825 |
| 1996 | 6,489,394 | 60,326,587 | 477,640 |
| 1997 | 6,534,913 | 60,778,002 | 1,440,435 |
| 1998 | 6,604,124 | 56,691,269 | 331,767 |
| 1999 | 6,030,138 | 51,051,870 | 204,124 |
| 2000 | 6,366,604 | 53,780,835 | 355,112 |
| 2001 | 7,059,789 | 65,034,347 | 983,641 |
| 2002 | 4,707,772 | 53,434,290 | 800,697 |
| 2003 | 4,910,469 | 53,135,969 | 1,459,006 |
| 2004 | 4,222,899 | 45,261,610 | 2,185,235 |
| 2005 | 3,340,640 | 34,454,802 | 1,101,153 |
| 2006 | 3,603,987 | 40,571,954 | 1,397,470 |
| 2007 | 4,561,171 | 42,954,419 | 1,410,975 |
| 2008 | 4,243,502 | 44,041,174 | 1,482,044 |
| 2009 | 4,092,197 | 41,292,625 | 720,111 |
| | | | |
| January | 305,929 r | 3,098,112 r | 54,284 r |
| February | 305,049 r | 2,685,190 r | 342,259 r |
| March | 325,054 r | 2,586,530 r | 423,851 r |
| April | 328,341 r | 3,119,153 r | 435,315 r |
| May | 326,865 r | 3,112,421 r | 472,297 r |
| June | 314,932 r | 3,215,186 r | 410,996 r |
| July | 328,202 r | 3,606,345 r | 437,786 r |
| August | 367,406 r | 3,548,092 r | 430,391 r |
| September | 326,898 r | 3,051,226 r | 436,793 r |
| October | 345,931 r | 3,111,151 r | 347,970 r |
| November | 308,100 r | 2,882,758 r | 435,710 r |
| December | 324,202 r | 3,421,952 r | 552,622 r |
| **2010 Total** | **3,906,856 r** | **37,433,263 r** | **4,780,242 r** |
| | | | |
| January | 273,359 | 3,375,680 | 495,540 |
| February | 306,326 | 3,160,630 | 434,934 |
| March | 335,638 | 3,671,275 | 451,169 |
| April | 317,231 | 3,571,237 | 534,164 |
| May | 329,700 | 3,349,722 | 465,011 |
| June | 310,736 | 3,199,842 | 463,350 |
| July | 316,036 | 3,426,494 | 495,580 |
| August | 368,678 | 3,945,674 | 483,057 |
| September | 305,081 | 2,654,944 | 369,710 |
| October | 343,065 | N/A | N/A |
| November | N/A | N/A | N/A |
| December | N/A | N/A | N/A |
| **2011 Total** | **3,205,849** | **30,355,499** | **4,192,515** |

e Estimated r Revised p Preliminary

# Table 9
## LOUISIANA STATE NATURAL GAS PRODUCTION
## WET AFTER LEASE SEPARATION
### Excluding OCS and Casinghead Gas
### (Thousand Cubic Feet (MCF) at 15.025 psia and 60 degrees Fahrenheit)

| DATE | NORTH | SOUTH | OFFSHORE | TOTAL |
|---|---|---|---|---|
| 1990 | 363,815,835 | 1,073,173,565 | 128,747,309 | 1,565,736,709 |
| 1991 | 353,306,368 | 1,053,556,868 | 98,562,669 | 1,505,425,905 |
| 1992 | 347,457,229 | 1,027,264,984 | 95,668,773 | 1,470,390,986 |
| 1993 | 337,285,840 | 1,000,882,139 | 106,161,644 | 1,444,329,623 |
| 1994 | 334,991,404 | 963,252,221 | 111,049,367 | 1,409,292,992 |
| 1995 | 348,385,615 | 942,253,430 | 117,647,934 | 1,408,286,979 |
| 1996 | 390,027,306 | 968,846,558 | 142,807,837 | 1,501,681,701 |
| 1997 | 406,306,877 | 900,334,348 | 143,913,520 | 1,450,554,745 |
| 1998 | 386,628,112 | 891,315,044 | 127,056,460 | 1,404,999,616 |
| 1999 | 355,536,417 | 858,338,237 | 100,525,024 | 1,314,399,678 |
| 2000 | 358,193,670 | 880,522,742 | 94,251,610 | 1,332,968,022 |
| 2001 | 370,998,160 | 903,068,572 | 97,208,445 | 1,371,275,177 |
| 2002 | 370,358,148 | 803,816,704 | 87,069,617 | 1,261,244,469 |
| 2003 | 401,217,674 | 779,381,241 | 72,327,053 | 1,252,925,968 |
| 2004 | 462,100,053 | 741,913,556 | 59,881,419 | 1,263,895,028 |
| 2005 | 526,863,613 | 645,073,330 | 46,609,741 | 1,218,546,684 |
| 2006 | 562,603,788 | 659,253,087 | 62,090,849 | 1,283,947,724 |
| 2007 | 603,091,131 | 611,343,569 | 65,570,627 | 1,280,005,327 |
| 2008 | 677,228,483 | 542,367,086 | 79,879,793 | 1,299,475,362 |
| 2009 | 954,044,041 | 445,943,541 | 70,848,164 | 1,470,835,746 |
| | | | | |
| January | 109,074,701 r | 31,161,917 r | 5,324,857 r | 145,561,475 r |
| February | 104,773,134 r | 29,222,143 r | 4,523,200 r | 138,518,477 r |
| March | 125,104,452 r | 32,245,445 r | 2,945,788 r | 160,295,685 r |
| April | 123,049,041 r | 30,719,807 r | 5,730,663 r | 159,499,511 r |
| May | 133,075,336 r | 31,266,540 r | 5,225,656 r | 169,567,532 r |
| June | 138,555,179 r | 29,733,045 r | 5,571,743 r | 173,859,967 r |
| July | 149,138,611 r | 30,636,024 r | 5,878,271 r | 185,652,906 r |
| August | 153,340,637 r | 30,479,934 r | 5,776,207 r | 189,596,778 r |
| September | 154,515,159 r | 29,763,042 r | 5,095,158 r | 189,373,359 r |
| October | 159,287,298 r | 29,519,461 r | 5,695,702 r | 194,502,461 r |
| November | 164,307,040 r | 27,614,782 r | 4,696,061 r | 196,617,883 r |
| December | 175,907,175 r | 29,450,449 r | 5,713,659 r | 211,071,283 r |
| **2010 Total** | **1,690,127,763 r** | **361,812,589 r** | **62,176,965 r** | **2,114,117,317 r** |
| | | | | |
| January | 180,317,506 | 29,705,149 | 5,422,462 | 215,445,117 |
| February | 168,645,577 | 27,147,348 | 4,960,796 | 200,753,721 |
| March | 200,712,532 | 29,796,033 | 5,734,383 | 236,242,948 |
| April | 198,505,332 | 28,661,649 | 5,236,635 | 232,403,616 |
| May | 209,892,707 | 29,035,296 | 5,410,294 | 244,338,297 |
| June | 200,159,945 | 27,969,184 | 4,968,448 | 233,097,577 |
| July | 210,859,717 | 29,887,447 | 5,060,123 | 245,807,287 |
| August | 218,623,282 | 29,834,331 | 5,492,223 | 253,949,836 |
| September | 217,403,220 | 26,947,772 | 4,701,681 | 249,052,673 |
| October | 223,761,114 | 30,355,889 | 4,988,870 | 259,105,873 |
| November | 201,315,437 p | 27,426,938 p | 5,154,247 p | 233,896,622 p |
| December | 202,294,706 e | 28,135,024 e | 5,272,329 e | 235,702,059 e |
| **2011 Total** | **2,432,491,075 e** | **344,902,059 e** | **62,402,492 e** | **2,839,795,626 e** |

e Estimated r Revised p Preliminary

# Table 10

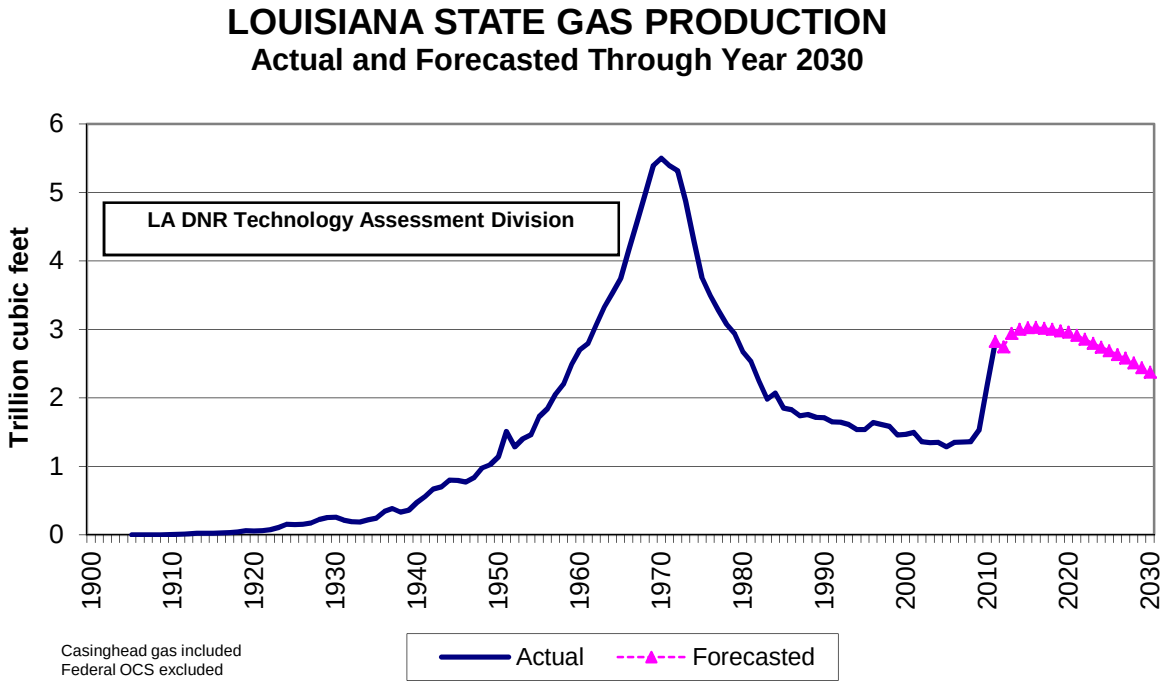
## LOUISIANA STATE CASINGHEAD GAS PRODUCTION, WET AFTER LEASE SEPARATION, Excluding OCS

**(Thousand Cubic Feet (MCF) at 15.025 psia and 60 degrees Fahrenheit)**

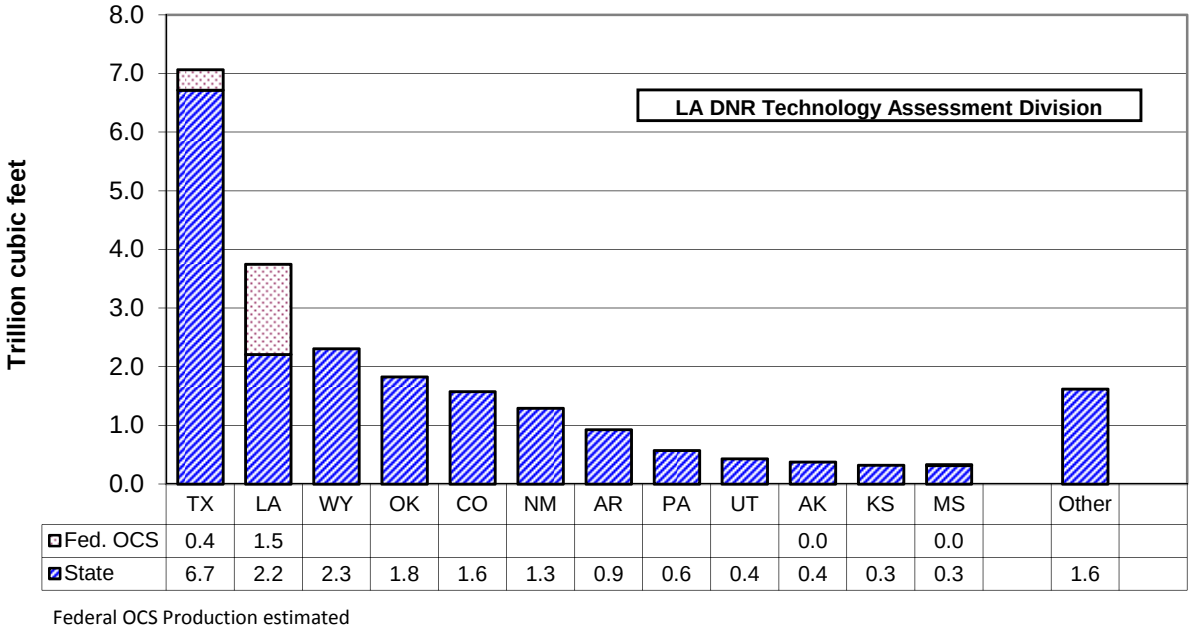
| DATE | NORTH | SOUTH | OFFSHORE | TOTAL |
|---|---|---|---|---|
| 1990 | 40,085,857 | 97,770,641 | 16,731,341 | 154,587,839 |
| 1991 | 33,434,906 | 102,249,162 | 15,933,292 | 151,617,360 |
| 1992 | 25,980,476 | 137,859,672 | 18,335,536 | 182,175,684 |
| 1993 | 23,009,433 | 136,674,314 | 17,880,673 | 177,564,420 |
| 1994 | 19,873,183 | 105,685,162 | 17,346,385 | 142,904,730 |
| 1995 | 18,829,476 | 104,638,062 | 18,858,344 | 142,325,882 |
| 1996 | 25,253,140 | 95,560,699 | 16,692,314 | 137,506,153 |
| 1997 | 35,537,210 | 107,984,665 | 17,042,997 | 160,564,872 |
| 1998 | 42,629,820 | 117,397,217 | 17,264,409 | 177,291,446 |
| 1999 | 29,943,303 | 99,043,293 | 15,304,875 | 144,291,471 |
| 2000 | 23,214,008 | 98,062,634 | 13,295,103 | 134,571,745 |
| 2001 | 19,843,912 | 90,200,751 | 14,001,877 | 124,046,540 |
| 2002 | 16,711,388 | 72,739,365 | 11,166,555 | 100,617,308 |
| 2003 | 15,270,654 | 65,328,195 | 11,086,256 | 91,685,105 |
| 2004 | 13,325,138 | 64,252,316 | 8,252,738 | 85,830,192 |
| 2005 | 11,006,284 | 48,525,678 | 6,876,708 | 66,408,670 |
| 2006 | 9,217,910 | 51,561,634 | 5,183,113 | 65,962,657 |
| 2007 | 8,385,311 | 60,946,975 | 5,841,867 | 75,174,153 |
| 2008 | 7,729,253 | 48,663,524 | 4,055,693 | 60,448,470 |
| 2009 | 7,120,784 | 45,768,516 | 4,026,917 | 56,916,217 |
| | | | | |
| January | 550,701 r | 3,597,927 r | 295,337 r | 4,443,965 r |
| February | 494,922 r | 3,520,312 r | 277,228 r | 4,292,462 r |
| March | 561,236 r | 3,959,351 r | 507,084 r | 5,027,671 r |
| April | 533,540 r | 3,869,212 r | 595,009 r | 4,997,761 r |
| May | 579,871 r | 4,303,097 r | 633,439 r | 5,516,407 r |
| June | 532,407 r | 4,075,623 r | 525,536 r | 5,133,566 r |
| July | 548,272 r | 4,081,837 r | 560,839 r | 5,190,948 r |
| August | 576,510 r | 4,289,532 r | 566,621 r | 5,432,663 r |
| September | 577,998 r | 4,205,403 r | 524,468 r | 5,307,869 r |
| October | 638,489 r | 4,515,689 r | 564,478 r | 5,718,656 r |
| November | 608,452 r | 4,194,134 r | 570,025 r | 5,372,611 r |
| December | 608,513 r | 4,394,580 r | 559,037 r | 5,562,130 r |
| **2010 Total** | **6,810,911 r** | **49,006,697 r** | **6,179,101 r** | **61,996,709 r** |
| | | | | |
| January | 591,546 | 4,181,775 | 387,988 | 5,161,309 |
| February | 513,231 | 3,824,553 | 376,521 | 4,714,305 |
| March | 590,723 | 4,620,102 | 518,645 | 5,729,470 |
| April | 551,513 | 4,311,754 | 448,822 | 5,312,089 |
| May | 583,074 | 4,368,637 | 457,306 | 5,409,017 |
| June | 567,115 | 4,184,247 | 472,656 | 5,224,018 |
| July | 591,702 | 4,387,509 | 584,684 | 5,563,895 |
| August | 604,873 | 4,434,840 | 578,811 | 5,618,524 |
| September | 556,675 | 4,125,284 | 637,114 | 5,319,073 |
| October | 558,936 | 4,648,003 | 728,681 | 5,935,620 |
| November | 558,979 p | 3,386,524 p | 337,094 p | 4,282,597 p |
| December | 536,253 e | 4,048,891 e | 393,051 e | 4,978,195 e |
| **2011 Total** | **6,804,620 e** | **50,522,119 e** | **5,921,373 e** | **63,248,112 e** |

e Estimated r Revised p Preliminary

## Figure 4




## Figure 5



# Table 11

## LOUISIANA STATE GAS PRODUCTION, WET AFTER LEASE SEPARATION

**Natural Gas and Casinghead Gas, Excluding OCS**

**(Thousand Cubic Feet (MCF) at 15.025 psia and 60 degrees Fahrenheit)***

| DATE | NORTH | SOUTH | OFFSHORE | TOTAL |
|---|---|---|---|---|
| 1990 | 403,901,692 | 1,170,944,206 | 145,478,650 | 1,720,324,548 |
| 1991 | 386,741,274 | 1,155,806,030 | 114,495,961 | 1,657,043,265 |
| 1992 | 373,437,705 | 1,165,124,656 | 114,004,309 | 1,652,566,670 |
| 1993 | 360,295,273 | 1,137,556,453 | 124,042,317 | 1,621,894,043 |
| 1994 | 354,864,587 | 1,068,937,383 | 128,395,752 | 1,552,197,722 |
| 1995 | 367,215,091 | 1,046,891,492 | 136,506,278 | 1,550,612,861 |
| 1996 | 415,280,446 | 1,064,407,257 | 159,500,151 | 1,639,187,854 |
| 1997 | 441,844,087 | 1,008,319,013 | 160,956,517 | 1,611,119,617 |
| 1998 | 429,257,932 | 1,008,712,261 | 144,320,869 | 1,582,291,062 |
| 1999 | 385,479,720 | 957,381,530 | 115,829,899 | 1,458,691,149 |
| 2000 | 381,407,678 | 978,585,376 | 107,546,713 | 1,467,539,767 |
| 2001 | 390,842,072 | 993,269,323 | 111,210,322 | 1,495,321,717 |
| 2002 | 387,069,536 | 876,556,069 | 98,236,172 | 1,361,861,777 |
| 2003 | 416,488,328 | 844,709,436 | 83,413,309 | 1,344,611,073 |
| 2004 | 475,425,191 | 806,165,872 | 68,134,157 | 1,349,725,220 |
| 2005 | 537,869,897 | 693,599,008 | 53,486,449 | 1,284,955,354 |
| 2006 | 571,821,698 | 710,814,721 | 67,273,962 | 1,349,910,381 |
| 2007 | 611,476,442 | 672,290,544 | 71,412,494 | 1,355,179,480 |
| 2008 | 684,957,736 | 591,030,610 | 83,935,486 | 1,359,923,832 |
| 2009 | 961,039,416 r | 492,214,810 r | 74,866,725 r | 1,528,120,951 r |
| | | | | |
| January | 109,625,402 r | 34,759,844 r | 5,620,194 r | 150,005,440 r |
| February | 105,268,056 r | 32,742,455 r | 4,800,428 r | 142,810,939 r |
| March | 125,665,688 r | 36,204,796 r | 3,452,872 r | 165,323,356 r |
| April | 123,582,581 r | 34,589,019 r | 6,325,672 r | 164,497,272 r |
| May | 133,655,207 r | 35,569,637 r | 5,859,095 r | 175,083,939 r |
| June | 139,087,586 r | 33,808,668 r | 6,097,279 r | 178,993,533 r |
| July | 149,686,883 r | 34,717,861 r | 6,439,110 r | 190,843,854 r |
| August | 153,917,147 r | 34,769,466 r | 6,342,828 r | 195,029,441 r |
| September | 155,093,157 r | 33,968,445 r | 5,619,626 r | 194,681,228 r |
| October | 159,925,787 r | 34,035,150 r | 6,260,180 r | 200,221,117 r |
| November | 164,915,492 r | 31,808,916 r | 5,266,086 r | 201,990,494 r |
| December | 176,515,688 r | 33,845,029 r | 6,272,696 r | 216,633,413 r |
| **2010 Total** | **1,696,938,674 r** | **410,819,286 r** | **68,356,066 r** | **2,176,114,026 r** |
| | | | | |
| January | 180,909,052 | 33,886,924 | 5,810,450 | 220,606,426 |
| February | 169,158,808 | 30,971,901 | 5,337,317 | 205,468,026 |
| March | 201,303,255 | 34,416,135 | 6,253,028 | 241,972,418 |
| April | 199,056,845 | 32,973,403 | 5,685,457 | 237,715,705 |
| May | 210,475,781 | 33,403,933 | 5,867,600 | 249,747,314 |
| June | 200,727,060 | 32,153,431 | 5,441,104 | 238,321,595 |
| July | 211,451,419 | 34,274,956 | 5,644,807 | 251,371,182 |
| August | 219,228,155 | 34,269,171 | 6,071,034 | 259,568,360 |
| September | 217,959,895 | 31,073,056 | 5,338,795 | 254,371,746 |
| October | 224,320,050 | 35,003,892 | 5,717,551 | 265,041,493 |
| November | 201,874,416 p | 30,813,462 p | 5,491,341 p | 238,179,219 p |
| December | 202,830,959 e | 32,183,915 e | 5,665,381 e | 240,680,254 e |
| **2011 Total** | **2,439,295,695** e | **395,424,178** e | **68,323,865** e | **2,903,043,738** e |

e Estimated r Revised p Preliminary

* See Appendix D-1 for corresponding volumes at 14.73 psia and footnote in Appendix B.

# Table 12

## LOUISIANA TOTAL GAS PRODUCTION, WET AFTER LEASE SEPARATION

**Natural Gas and Casinghead Gas**

**(Thousand Cubic Feet (MCF) at 15.025 psia and 60 degrees Fahrenheit)***

| DATE | ONSHORE | OFFSHORE | | TOTAL |
|---|---|---|---|---|
| | | State | Federal OCS[12] | |
| 1990 | 1,574,845,898 | 145,478,650 | 3,633,554,307 | 5,353,878,855 |
| 1991 | 1,542,547,304 | 114,495,961 | 3,225,373,562 | 4,882,416,827 |
| 1992 | 1,538,562,361 | 114,004,309 | 3,272,561,370 | 4,925,128,040 |
| 1993 | 1,497,851,726 | 124,042,317 | 3,320,312,261 | 4,942,206,304 |
| 1994 | 1,423,801,970 | 128,395,752 | 3,423,837,064 | 4,976,034,786 |
| 1995 | 1,414,106,583 | 136,506,278 | 3,564,677,663 | 5,115,290,524 |
| 1996 | 1,479,687,703 | 159,500,151 | 3,709,198,609 | 5,348,386,463 |
| 1997 | 1,450,163,100 | 160,956,517 | 3,825,354,038 | 5,436,473,655 |
| 1998 | 1,437,970,193 | 144,320,869 | 3,814,583,541 | 5,396,874,603 |
| 1999 | 1,342,861,250 | 115,829,899 | 3,836,619,562 | 5,295,310,711 |
| 2000 | 1,359,993,054 | 107,546,713 | 3,761,812,062 | 5,229,351,829 |
| 2001 | 1,384,111,395 | 111,210,322 | 3,818,657,416 | 5,313,979,133 |
| 2002 | 1,263,625,605 | 98,236,172 | 3,457,864,868 | 4,819,726,645 |
| 2003 | 1,261,197,764 | 83,413,309 | 3,276,387,510 e | 4,620,998,583 |
| 2004 | 1,281,591,063 | 68,134,157 | 2,840,552,489 e | 4,190,277,709 e |
| 2005 | 1,231,468,905 | 53,486,449 | 2,185,591,643 e | 3,470,546,997 e |
| 2006 | 1,282,636,419 | 67,273,962 | 2,048,437,877 e | 3,398,348,258 e |
| 2007 | 1,283,766,986 | 71,412,494 | 2,022,058,582 e | 3,377,238,062 e |
| 2008 | 1,275,988,346 | 83,935,486 | 1,644,624,969 e | 3,004,548,801 e |
| 2009 | 1,453,254,226 r | 74,866,725 r | 1,727,190,594 e r | 3,255,311,545 e r |
| January | 144,385,246 r | 5,620,194 r | 146,716,383 e r | 296,721,823 e r |
| February | 138,010,511 r | 4,800,428 r | 137,215,969 e r | 280,026,908 e r |
| March | 161,870,484 r | 3,452,872 r | 151,788,575 e r | 317,111,931 e r |
| April | 158,171,600 r | 6,325,672 r | 139,550,741 e r | 304,048,013 e r |
| May | 169,224,844 r | 5,859,095 r | 137,864,360 e r | 312,948,299 e r |
| June | 172,896,254 r | 6,097,279 r | 132,479,797 e r | 311,473,330 e r |
| July | 184,404,744 r | 6,439,110 r | 130,286,089 e r | 321,129,943 e r |
| August | 188,686,613 r | 6,342,828 r | 137,295,735 e r | 332,325,176 e r |
| September | 189,061,602 r | 5,619,626 r | 130,739,035 e r | 325,420,263 e r |
| October | 193,960,937 r | 6,260,180 r | 135,423,303 e r | 335,644,420 e r |
| November | 196,724,408 r | 5,266,086 r | 123,071,092 e r | 325,061,586 e r |
| December | 210,360,717 r | 6,272,696 r | 132,072,979 e r | 348,706,392 e r |
| **2010 Total** | **2,107,757,960 r** | **68,356,066 r** | **1,634,504,058 e r** | **3,810,618,084 e r** |
| January | 214,795,976 | 5,810,450 | 130,731,553 e | 351,337,979 e |
| February | 200,130,709 | 5,337,317 | 111,533,557 e | 317,001,583 e |
| March | 235,719,390 | 6,253,028 | 122,831,864 e | 364,804,282 e |
| April | 232,030,248 | 5,685,457 | 116,940,374 e | 354,656,079 e |
| May | 243,879,714 | 5,867,600 | 118,347,188 e | 368,094,502 e |
| June | 232,880,491 | 5,441,104 | 109,639,756 e | 347,961,351 e |
| July | 245,726,375 | 5,644,807 | 108,607,096 e | 359,978,278 e |
| August | 253,497,326 | 6,071,034 | 105,370,809 e | 364,939,169 e |
| September | 249,032,951 | 5,338,795 | 106,335,809 e | 360,707,555 e |
| October | 259,323,942 | 5,717,551 | 107,300,809 e | 372,342,302 e |
| November | 232,687,878 p | 5,491,341 p | 104,405,809 e | 342,585,028 e |
| December | 235,014,873 e | 5,665,381 e | 103,440,809 e | 344,121,063 e |
| **2011 Total** | **2,834,719,873 e** | **68,323,865 e** | **1,345,485,432 e** | **4,248,529,170 e** |

e Estimated r Revised p Preliminary

* See Appendix D-2 for corresponding volumes at 14.73 psia and footnote in Appendix B.

# Table 13

## LOUISIANA MARKETED AND DRY GAS PRODUCTION

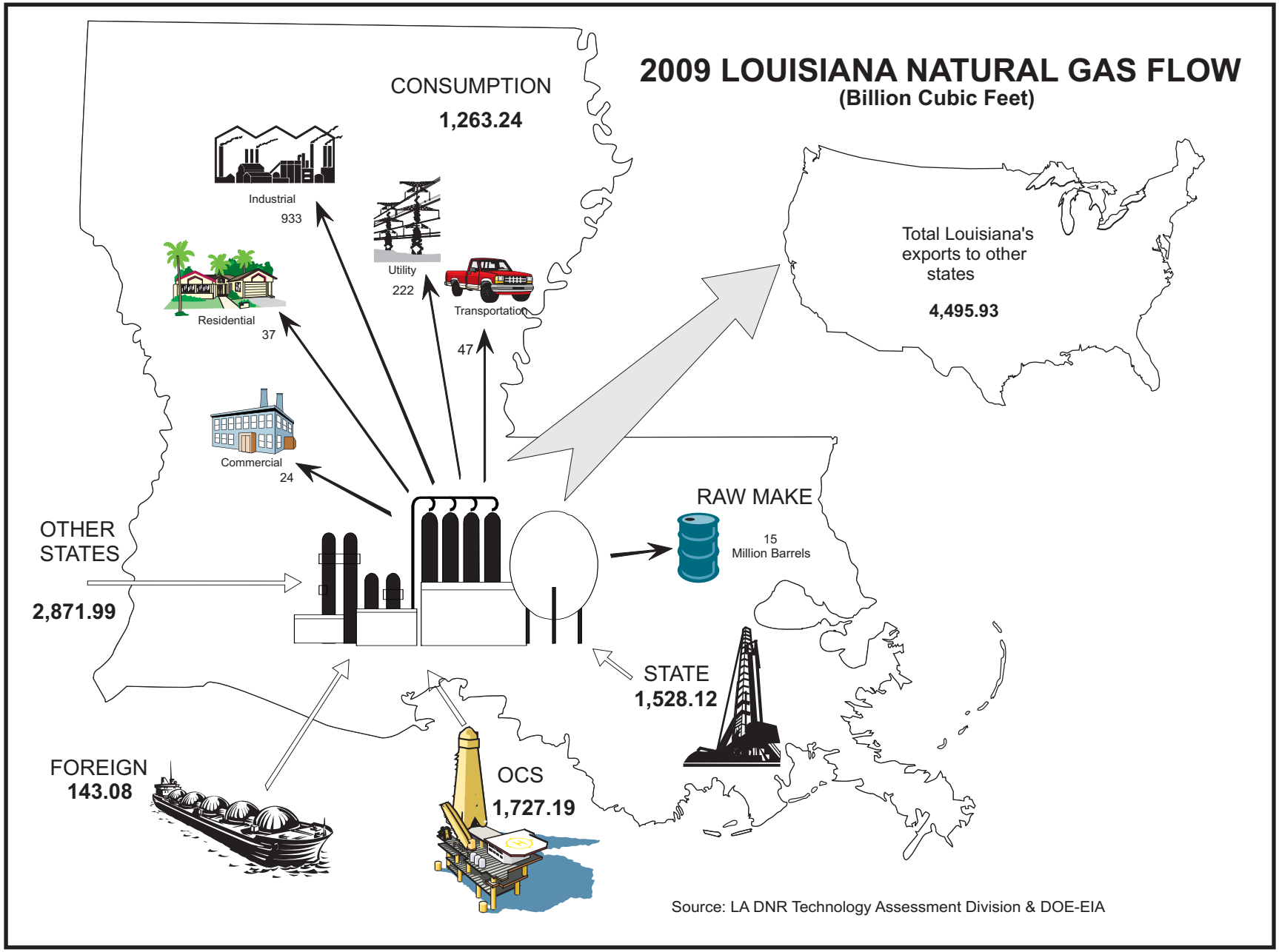
**(Billion Cubic Feet (BCF) at 15.025 psia and 60 degrees Fahrenheit)***

| | MARKETED | | | EXTRACTION | |
|---|---|---|---|---|---|
| DATE | State | OCS | Total[3] | LOSS[3] | DRY[3] |
| 1969 | 5,317 e | 1,769 [12] | 7,228 | 176 | 6,910 |
| 1970 | 5,429 e | 2,206 [12] | 7,788 | 189 | 7,446 |
| 1971 | 5,367 e | 2,556 [12] | 8,082 | 191 | 7,732 |
| 1972 | 5,020 e | 2,797 [12] | 7,973 | 194 | 7,622 |
| 1973 | 5,115 e | 2,966 [12] | 8,242 | 203 | 7,878 |
| 1974 | 4,351 e | 3,251 [12] | 7,754 | 191 | 7,411 |
| 1975 | 3,717 e | 3,234 [12] | 7,091 | 186 | 6,766 |
| 1976 | 3,472 e | 3,397 [12] | 7,007 | 169 | 6,700 |
| 1977 | 3,533 e | 3,540 [12] | 7,215 | 163 | 6,910 |
| 1978 | 3,302 e | 4,028 [12] | 7,476 | 158 | 7,171 |
| 1979 | 3,087 e | 4,036 [12] | 7,266 | 162 | 6,961 |
| 1980 | 2,908 e | 3,896 [12] | 6,940 | 139 | 6,664 |
| 1981 | 2,661 e | 3,986 [12] | 6,780 | 140 | 6,507 |
| 1982 | 2,359 e | 3,692 [12] | 6,172 | 126 | 5,924 |
| 1983 | 2,147 e | 3,080 [12] | 5,332 | 122 | 5,106 |
| 1984 | 2,237 e | 3,473 [12] | 5,825 | 130 | 5,581 |
| 1985 | 1,890 e | 3,025 [12] | 5,014 | 115 | 4,800 |
| 1986 | 1,958 e | 2,842 [12] | 4,895 | 113 | 4,686 |
| 1987 | 1,935 e | 3,086 [12] | 5,123 | 122 | 4,899 |
| 1988 | 2,073 e | 3,006 [12] | 5,180 | 118 | 4,961 |
| 1989 | 2,060 e | 2,918 [12] | 5,078 | 119 | 4,859 |
| 1990 | 1,542 e | 3,597 [12] | 5,242 | 117 | 5,022 |
| 1991 | 1,841 e | 3,193 [12] | 5,034 | 127 | 4,809 |
| 1992 | 1,713 e | 3,201 [12] | 4,914 | 130 | 4,688 |
| 1993 | 1,740 e | 3,252 [12] | 4,991 | 128 | 4,765 |
| 1994 | 1,759 e | 3,410 [12] | 5,170 | 126 | 4,942 |
| 1995 | 1,750 e | 3,358 [12] | 5,108 | 143 | 4,865 |
| 1996 | 1,700 e | 3,590 [12] | 5,290 | 137 | 5,049 |
| 1997 | 1,505 | 3,725 [12] | 5,230 | 144 | 4,882 |
| 1998 | 1,552 | 3,725 [12] | 5,277 | 139 | 4,933 |
| 1999 | 1,567 | 3,645 [12] | 5,212 | 158 | 4,912 |
| 2000 | 1,455 | 3,576 [12] | 5,031 | 165 | 4,928 |
| 2001 | 1,502 | 3,618 e | 5,120 e | 153 e | 4,967 e |
| 2002 | 1,362 | 3,270 e | 4,631 e | 157 e | 4,474 e |
| 2003 | 1,350 | 3,193 e | 4,544 e | 140 e | 4,404 e |
| 2004 | 1,353 | 2,876 e | 4,230 e | 133 e | 4,096 e |
| 2005 | 1,296 | 2,254 e | 3,550 e | 127 e | 3,423 e |
| 2006 | 1,361 | 2,074 e | 3,435 e | 119 e | 3,316 e |
| 2007 | 1,365 | 1,986 e | 3,351 e | 115 e | 3,236 e |
| 2008 | 1,377 | 1,640 e | 3,017 e | 114 e | 2,903 e |
| 2009 | 1,607 | 1,737 e | 3,344 e | 124 e | 3,220 e |
| 2010 | 2,246 | 1,615 e | 3,861 e | 129 e | 3,732 e |

e Estimated r Revised p Preliminary

* See Appendix D-3 for corresponding volumes at 14.73 psia and footnote in Appendix B.

**Figure 6**


2009 LOUISIANA NATURAL GAS FLOW
(Billion Cubic Feet)
CONSUMPTION
1,263.24
Industrial
933
Utility
222
Transportation
47
Residential
37
Commercial
24
Total Louisiana's exports to other states
4,495.93
RAW MAKE
15
Million Barrels
OTHER STATES
2,871.99
STATE
1,528.12
OCS
1,727.19
FOREIGN
143.08
Source: LA DNR Technology Assessment Division & DOE-EIA

# Table 14

## LOUISIANA STATE GAS PRODUCTION BY TAX RATES

### AS PUBLISHED IN SEVERANCE TAX REPORTS[8]

### (MCF at 15.025psia and 60 degrees Fahrenheit)

| DATE | FULL RATE | INCAPABLE GAS WELLS RATE | OTHER RATES | TAXED VOLUME |
|---|---|---|---|---|
| 1990 | 1,525,451,737 | 53,547,797 | 19,438,902 | 1,598,438,436 |
| 1991 | 1,492,986,396 | 52,500,178 | 35,820,609 | 1,581,307,183 |
| 1992 | 1,499,489,622 | 55,146,661 | 25,466,874 | 1,580,103,157 |
| 1993 | 1,463,723,027 | 46,017,071 | 13,839,450 | 1,523,579,548 |
| 1994 | 1,410,035,722 | 52,417,334 | 13,688,870 | 1,476,141,926 |
| 1995 | 1,334,980,887 | 53,491,942 | 13,759,192 | 1,402,232,021 |
| 1996 | 1,354,105,430 | 52,368,159 | 11,191,715 | 1,417,665,304 |
| 1997 | 1,343,182,922 | 57,663,413 | 9,951,387 | 1,410,797,722 |
| 1998 | 1,191,471,607 | 60,242,544 | 11,733,098 | 1,263,447,249 |
| 1999 | 1,151,493,116 | 57,308,865 | 10,617,631 | 1,219,419,612 |
| 2000 | 1,217,171,149 | 53,797,867 | 8,195,799 | 1,279,164,815 |
| 2001 | 1,264,513,132 | 74,687,708 | 7,806,688 | 1,347,007,528 |
| 2002 | 1,068,512,639 | 75,724,074 | 7,748,258 | 1,151,984,971 |
| 2003 | 1,091,483,424 | 80,659,914 | 7,963,553 | 1,180,106,891 |
| 2004 | 1,139,626,885 | 83,441,736 | 5,507,456 | 1,235,308,986 |
| 2005 | 1,130,014,025 | 91,951,579 | 4,642,451 | 1,227,085,699 |
| 2006 | 1,134,544,485 | 113,490,843 | 5,545,802 | 1,253,870,355 |
| 2007 | 1,070,511,169 | 122,399,829 | 7,365,200 | 1,200,461,343 |
| 2008 | 1,044,876,723 | 137,853,642 | 6,398,792 | 1,189,129,157 |
| 2009 | 994,356,639 | 168,793,831 | 4,489,808 | 1,167,640,278 |
| | | | | |
| January | 57,187,283 | 12,928,334 | 572,230 | 70,687,847 |
| February | 58,146,871 | 13,155,265 | 496,928 | 71,799,064 |
| March | 81,179,432 | 16,903,948 | 531,969 | 98,615,349 |
| April | 21,337,851 | 12,197,276 | 531,448 | 34,066,575 |
| May | 80,278,858 | 13,502,213 | 713,690 | 94,494,761 |
| June | 108,737,781 | 13,502,213 | 713,690 | 122,953,684 |
| July | 96,276,663 | 19,466,723 | 425,726 | 116,169,112 |
| August | 94,040,001 | 15,079,779 | 865,506 | 109,985,286 |
| September | 18,186,836 | 16,114,840 | 857,380 | 35,159,056 |
| October | 66,441,528 | 15,116,228 | 655,841 | 82,213,597 |
| November | 96,611,661 | 14,622,287 | 683,207 | 111,917,155 |
| December | 96,165,626 | 15,357,343 | 689,585 | 112,212,554 |
| **2010 Total** | **874,590,391** | **177,946,449** | **7,737,200** | **1,060,274,040** |
| | | | | |
| January | -33,714,269 | 15,229,812 | 568,196 | -17,916,261 |
| February | 71,359,589 | 15,230,729 | 820,199 | 87,410,517 |
| March | 41,556,939 | 15,529,484 | 994,617 | 58,081,040 |
| April | 38,721,356 | 14,475,551 | 804,172 | 54,001,079 |
| May | 105,731,462 | 15,845,714 | 629,220 | 122,206,396 |
| June | 82,161,344 | 15,219,394 | 772,943 | 98,153,681 |
| July | 62,374,120 | 15,475,308 | 778,477 | 78,627,905 |
| August | 61,212,583 | 14,743,331 | 760,488 | 76,716,402 |
| September | 45,796,243 | 12,679,941 | 673,018 | 59,149,202 |
| October | 72,359,652 | 16,669,095 | 800,577 | 89,829,324 |
| November | 90,025,846 | 15,161,240 | 877,740 | 106,064,826 |
| December | 91,657,500 | 13,211,526 | 771,700 | 105,640,726 |
| **2011 Total** | **729,242,365** | **179,471,125** | **9,251,347** | **917,964,837** |

e Estimated r Revised p Preliminary

See footnote in Appendix B.

# Table 15

## UNITED STATES OCS GAS PRODUCTION[12]

**Natural Gas and Casinghead Gas**
**(MCF at 15.025 psia and 60 degrees Fahrenheit)***

| YEAR | LOUISIANA | TEXAS | CALIFORNIA | TOTAL |
|---|---|---|---|---|
| 1966 | 946,433,484 | 41,233,595 | 0 | 987,667,078 |
| 1967 | 1,065,915,553 | 97,990,476 | 0 | 1,163,906,029 |
| 1968 | 1,385,715,670 | 107,752,805 | 783,984 | 1,494,252,460 |
| 1969 | 1,786,760,423 | 124,601,568 | 4,750,708 | 1,916,112,699 |
| 1970 | 2,228,516,212 | 130,683,192 | 11,989,041 | 2,371,188,444 |
| 1971 | 2,582,297,962 | 124,857,371 | 15,363,786 | 2,722,519,119 |
| 1972 | 2,824,792,196 | 144,267,198 | 9,836,582 | 2,978,895,976 |
| 1973 | 2,995,634,220 | 145,754,588 | 7,143,485 | 3,148,532,293 |
| 1974 | 3,283,413,450 | 156,838,375 | 5,464,209 | 3,445,716,035 |
| 1975 | 3,266,745,456 | 120,166,178 | 3,874,047 | 3,390,785,681 |
| 1976 | 3,431,149,749 | 90,764,667 | 3,406,969 | 3,525,321,386 |
| 1977 | 3,575,898,616 | 85,236,246 | 5,417,963 | 3,666,552,825 |
| 1978 | 4,068,255,571 | 227,305,175 | 5,166,292 | 4,300,727,039 |
| 1979 | 4,076,873,552 | 501,546,069 | 5,431,822 | 4,583,851,442 |
| 1980 | 3,934,902,550 | 612,378,333 | 5,900,023 | 4,553,180,906 |
| 1981 | 4,025,867,929 | 715,937,640 | 12,763,307 | 4,754,568,877 |
| 1982 | 3,729,057,653 | 841,173,981 | 17,751,924 | 4,587,983,558 |
| 1983 | 3,111,576,348 | 834,112,318 | 24,168,292 | 3,969,856,958 |
| 1984 | 3,508,475,799 | 913,008,621 | 46,363,899 | 4,467,848,319 |
| 1985 | 3,055,687,773 | 818,533,627 | 64,558,213 | 3,938,779,613 |
| 1986 | 2,870,347,386 | 959,161,285 | 59,078,021 | 3,888,586,692 |
| 1987 | 3,117,669,167 | 1,180,839,487 | 54,805,158 | 4,353,313,812 |
| 1988 | 3,036,077,646 | 1,155,285,485 | 49,167,638 | 4,240,530,769 |
| 1989 | 2,947,545,132 | 1,142,237,197 | 50,791,912 | 4,140,574,242 |
| 1990 | 3,633,554,307 | 1,321,607,333 | 49,972,764 | 5,005,134,404 |
| 1991 | 3,225,373,562 | 1,161,671,524 | 51,855,577 | 4,438,900,663 |
| 1992 | 3,272,561,370 | 1,215,055,449 | 55,231,660 | 4,608,807,577 |
| 1993 | 3,320,312,261 | 1,007,755,289 | 52,150,277 | 4,455,275,861 |
| 1994 | 3,423,837,064 | 994,291,314 | 53,560,686 | 4,578,282,175 |
| 1995 | 3,564,677,663 | 890,682,224 | 54,790,061 | 4,619,222,806 |
| 1996 | 3,709,198,609 | 953,772,416 | 66,783,677 | 4,955,474,989 |
| 1997 | 3,825,354,038 | 946,381,458 | 73,344,546 | 5,010,736,875 |
| 1998 | 3,814,583,541 | 850,572,237 | 74,984,850 | 4,789,522,576 |
| 1999 | 3,836,619,562 | 798,140,396 | 77,809,430 | 4,935,623,726 |
| 2000 | 3,761,812,062 | 869,068,079 | 76,074,550 | 4,919,901,921 |
| 2001 | 3,818,657,416 | 898,035,393 | 70,946,682 | 5,145,905,423 |

| | GULF OF MEXICO | | PACIFIC | TOTAL |
|---|---|---|---|---|
| | CENTRAL | WESTERN | | |
| 2002 | 3,510,522,709 | 999,720,152 | 67,816,000 | 4,607,640,353 |
| 2003 | 3,326,281,736 | 1,065,770,532 | 58,095,000 | 4,503,195,666 |
| 2004 | 2,883,809,634 | 1,099,125,084 | 54,655,000 | 4,104,828,091 |
| 2005 | 1,935,105,938 | 773,450,925 | 54,088,000 | 2,764,108,550 |
| 2006 | 2,122,733,551 | 779,987,637 | 40,407,000 | 2,943,406,324 |
| 2007 | 2,095,397,494 | 635,587,701 | 45,516,000 | 2,822,458,130 |
| 2008 | 1,704,274,579 | 481,863,516 | 42,961,500 | 2,368,172,160 |
| 2009 | 1,762,863,958 | 464,479,738 | 41,684,250 | 2,448,590,935 |
| 2010 | 1,676,904,867 | 401,887,097 | 40,229,000 e | 2,119,020,964 e |

NOTE: Starting in 2002 MMS has not formally published production by state adjacent areas

e Estimated r Revised p Preliminary

* See Appendix D-4 for corresponding volumes at 14.73 psia and footnote in Appendix B.

**Figure 7**

## LOUISIANA OIL PRODUCTION AND PRICE

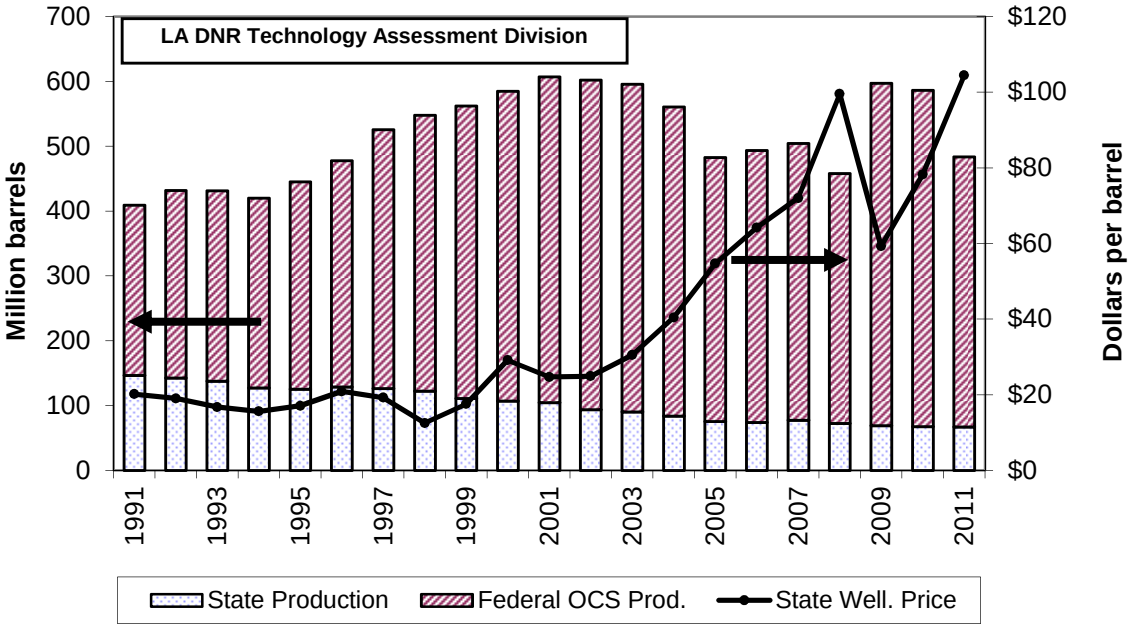
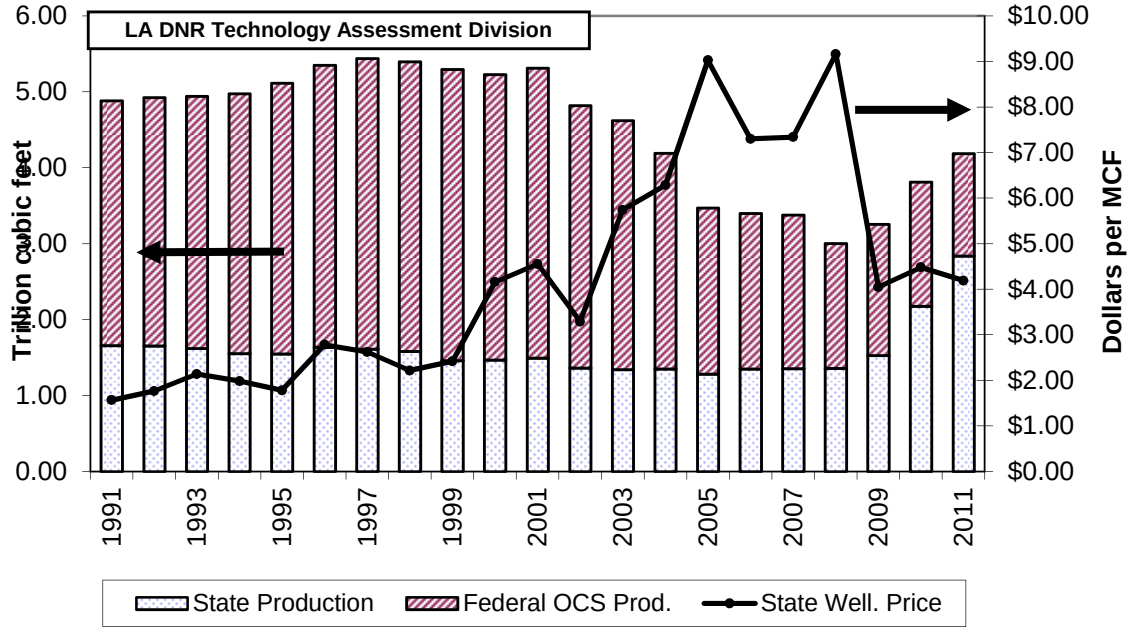



**Figure 8**

## LOUISIANA GAS PRODUCTION AND PRICE



# Table 16

## UNITED STATES NATURAL GAS AND CASINGHEAD GAS PRODUCTION[3]

**(Billion Cubic Feet (BCF) at 15.025 psia and 60 degrees Fahrenheit)***

| DATE | GROSS | WET AFTER LEASE SEPARATION | MARKETED | DRY | GROSS IMPORTS |
|---|---|---|---|---|---|
| 1990 | 21,100 | 18,376 | 18,229 | 17,460 | 1,502 |
| 1991 | 21,322 | 18,336 | 18,169 | 17,351 | 1,738 |
| 1992 | 21,698 | 18,509 | 18,344 | 17,490 | 2,096 |
| 1993 | 22,279 | 18,832 | 18,609 | 17,740 | 2,304 |
| 1994 | 23,118 | 19,547 | 19,323 | 18,451 | 2,572 |
| 1995 | 23,277 | 19,402 | 19,123 | 18,233 | 2,785 |
| 1996 | 23,640 | 19,690 | 19,423 | 18,484 | 2,880 |
| 1997 | 23,737 | 19,727 | 19,475 | 18,531 | 2,935 |
| 1998 | 23,635 | 19,670 | 19,569 | 18,650 | 3,090 |
| 1999 | 23,355 | 19,524 | 19,416 | 18,462 | 3,515 |
| 2000 | 23,699 | 19,890 | 19,801 | 18,805 | 3,707 |
| 2001 | 24,020 | 20,261 | 20,166 | 19,231 | 3,899 |
| 2002 | 23,471 | 19,592 | 19,530 | 18,591 | 3,937 |
| 2003 | 23,645 | 19,678 | 19,582 | 18,724 | 3,866 |
| 2004 | 23,499 | 19,230 | 19,134 | 18,226 | 4,175 |
| 2005 | 22,996 | 18,672 | 18,555 | 17,696 | 4,256 |
| 2006 | 23,046 | 19,156 | 19,001 | 18,113 | 4,104 |
| 2007 | 24,108 | 19,940 | 19,626 | 18,714 | 4,517 |
| 2008 | 25,249 | 20,861 r | 20,698 r | 19,763 r | 3,906 r |
| 2009 | 25,502 r | 21,318 r | 21,180 r | 20,176 r | 3,678 |
| | | | | | |
| January | 2,182 r | 1,825 r | 1,814 r | 1,735 r | 377 |
| February | 2,011 r | 1,674 r | 1,664 r | 1,590 r | 318 r |
| March | 2,258 r | 1,881 r | 1,868 r | 1,786 r | 313 r |
| April | 2,165 r | 1,822 r | 1,810 r | 1,731 r | 293 r |
| May | 2,207 r | 1,882 r | 1,871 r | 1,788 r | 292 r |
| June | 2,100 r | 1,796 r | 1,784 r | 1,706 r | 277 r |
| July | 2,151 r | 1,866 r | 1,854 r | 1,775 r | 322 r |
| August | 2,187 r | 1,902 r | 1,890 r | 1,807 r | 299 r |
| September | 2,197 r | 1,858 r | 1,846 r | 1,765 r | 276 r |
| October | 2,288 r | 1,921 r | 1,909 r | 1,825 r | 289 r |
| November | 2,239 r | 1,880 r | 1,870 r | 1,787 r | 268 r |
| December | 2,347 r | 1,955 r | 1,945 r | 1,859 r | 345 r |
| **2010 Total** | **26,331 r** | **22,261 r** | **22,126 r** | **21,154 r** | **3,667 r** |
| | | | | | |
| January | 2,264 | 1,943 | 1,934 | 1,850 | 364 |
| February | 2,068 | 1,727 | 1,718 | 1,647 | 302 |
| March | 2,375 | 1,991 | 1,980 | 1,890 | 308 |
| April | 2,317 | 1,952 | 1,940 | 1,854 | 273 |
| May | 2,373 | 2,018 | 2,006 | 1,914 | 265 |
| June | 2,284 | 1,950 | 1,938 | 1,851 | 260 |
| July | 2,298 | 2,016 | 2,003 | 1,913 | 287 |
| August | 2,324 | 2,022 | 2,010 | 1,920 | 273 |
| September | N/A | N/A | N/A | N/A | N/A |
| October | N/A | N/A | N/A | N/A | N/A |
| November | N/A | N/A | N/A | N/A | N/A |
| December | N/A | N/A | N/A | N/A | N/A |
| **2011 Total** | **18,302** | **15,619** | **15,529** | **14,839** | **2,332** |

e Estimated r Revised p Preliminary

* See Appendix D-5 for corresponding volumes at 14.73 psia and footnote in Appendix B.

# Table 17

## LOUISIANA AVERAGE CRUDE OIL PRICES

**(Dollars per Barrel)**

| | LIGHT LOUISIANA SWEET | | ALL GRADES AT WELLHEAD | | | |
|---|---|---|---|---|---|---|
| | Spot | Refinery | | OCS | Severance | State |
| DATE | Market[10] | Posted | State[6] | Gulf[6] | Tax[8] | Royalty |
| 1990 | 25.11 | 23.35 | 23.04 | 22.40 | 22.54 | 22.76 |
| 1991 | 21.70 | 20.60 | 20.15 | 19.40 | 21.13 | 19.90 |
| 1992 | 20.77 | 19.72 | 19.01 | 18.38 | 19.31 | 19.10 |
| 1993 | 18.56 | 17.27 | 16.72 | 16.17 | 17.39 | 16.84 |
| 1994 | 17.25 | 15.84 | 15.61 | 14.72 | 15.46 | 15.52 |
| 1995 | 18.60 | 17.16 | 17.06 | 16.16 | 16.98 | 17.06 |
| 1996 | 22.32 | 20.77 | 20.87 | 20.00 | 20.56 | 21.24 |
| 1997 | 20.69 | 18.90 | 19.23 | 18.63 | 19.80 | 19.22 |
| 1998 | 14.21 | 12.17 | 12.52 | 12.03 | 13.47 | 12.31 |
| 1999 | 19.00 | 16.73 | 17.55 | 16.46 | 16.09 | 17.22 |
| 2000 | 30.29 | 27.88 | 29.14 | 27.57 | 28.10 | 25.96 |
| 2001 | 25.84 | 23.23 | 24.70 | 23.36 | 26.23 | 19.81 |
| 2002 | 26.18 | 23.14 | 24.92 | 23.36 | 25.17 | 24.39 |
| 2003 | 31.20 | 27.88 | 30.50 | 28.69 | 30.28 | 29.77 |
| 2004 | 41.47 | 37.85 | 40.43 | 37.54 | 38.34 | 39.06 |
| 2005 | 56.86 | 52.75 | 54.68 | 50.97 | 54.62 | 52.20 |
| 2006 | 67.44 | 62.41 | 64.17 | 60.62 | 63.55 | 63.08 |
| 2007 | 74.60 | 68.96 | 71.98 | 67.62 | 64.14 | 71.87 |
| 2008 | 102.29 | 96.57 | 99.53 | 100.00 | 104.86 | 97.60 |
| 2009 | 64.28 | 59.04 | 59.27 | 57.57 | 52.78 | 57.50 |
| January | 80.16 | 74.74 | 76.12 | 73.91 | 69.75 | 75.25 r |
| February | 77.43 | 72.66 | 74.34 | 76.38 | 70.18 | 76.08 |
| March | 82.04 | 77.41 | 78.45 | 75.11 | 74.29 | 76.90 r |
| April | 87.90 | 80.80 | 81.90 | 79.06 | 82.92 | 76.47 r |
| May | 79.73 | 70.99 | 73.39 | 78.52 | 76.64 | 75.56 r |
| June | 78.87 | 71.88 | 74.95 | 76.33 | 78.28 | 75.76 r |
| July | 79.00 | 72.62 | 75.45 | 74.51 | 72.81 | 76.64 r |
| August | 79.61 | 73.07 | 75.80 | 74.55 | 75.14 | 71.05 r |
| September | 80.14 | 71.82 | 74.75 | 74.92 | 74.13 | 76.02 r |
| October | 85.23 | 78.38 | 81.41 | 76.31 | 71.50 | 81.40 r |
| November | 88.16 | 80.72 | 83.54 r | 81.02 r | 78.08 | 81.76 r |
| December | 94.31 | 85.76 | 88.65 r | 84.99 r | 79.20 | 88.59 r |
| **2010 Average** | **82.72** | **75.90** | **78.23 r** | **77.13 r** | **75.24** | **77.62 r** |
| January | 97.83 | 86.43 | 90.87 | 89.04 | 83.01 | 91.21 |
| February | 106.21 | 86.43 | 92.18 | 91.47 | 89.51 | 92.91 |
| March | 117.41 | 100.65 | 110.30 | 103.24 | 88.38 | 111.76 |
| April | 126.03 | 108.28 | 118.91 | 113.66 | 89.82 | 118.40 |
| May | 116.44 | 99.31 | 111.19 | 115.05 | 111.57 | 113.44 |
| June | 113.24 | 94.19 | 105.92 | 109.49 | 115.55 | 107.91 |
| July | 115.86 | 95.41 | 108.96 | 109.55 | 109.80 | 110.88 |
| August | 109.29 | 79.08 | 99.68 | 105.33 | 110.61 | 96.18 |
| September | 112.67 | 85.20 | 102.08 | 105.40 | 106.84 | 108.93 |
| October | 111.82 | 86.98 | 107.91 | 109.98 | 104.54 | 111.79 |
| November | 111.41 | 96.78 e | N/A | N/A | 104.41 | 108.88 e |
| December | 108.62 | 98.17 e | N/A | N/A | 102.77 | 99.78 e |
| **2011 Average** | **112.24** | **93.08 e** | **104.80** | **105.22** | **101.40** | **106.01 e** |

e Estimated r Revised p Preliminary

See footnote in Appendix B.

**Figure 9**

## CRUDE OIL AVERAGE PRICES

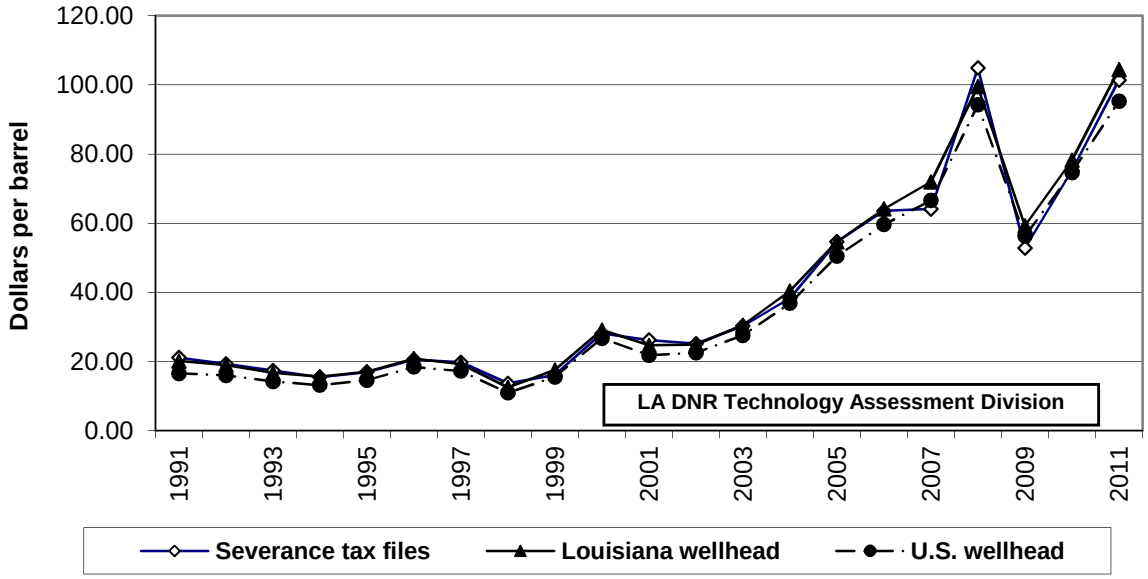
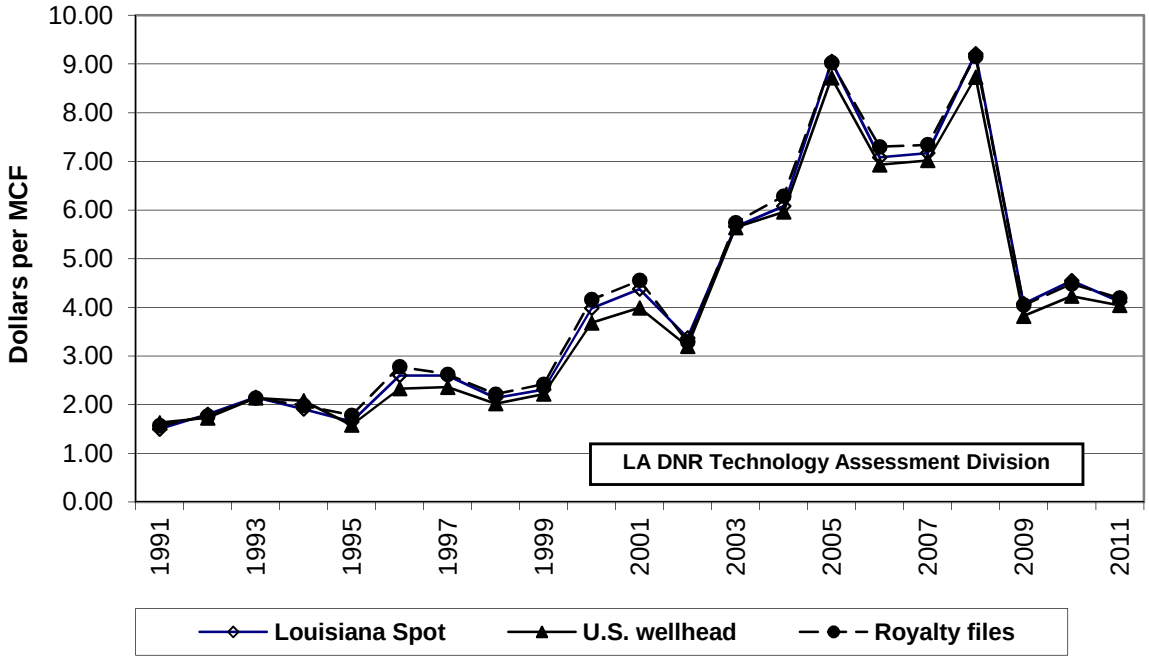



**Figure 10**

## NATURAL GAS AVERAGE PRICES



# Table 18

## UNITED STATES AVERAGE CRUDE OIL PRICES [2]

**(Dollars per Barrel)**

| DATE | REFINERY ACQUISITION | | DOMESTIC | IMPORTS | IMPORTS | IMPORTS |
|---|---|---|---|---|---|---|
| | Domestic Costs | Imports Costs | WELLHEAD | LANDED | FOB | OPEC FOB |
| 1991 | 19.35 | 18.74 | 16.53 | 18.02 | 16.91 | 17.01 |
| 1992 | 18.62 | 18.12 | 16.00 | 17.65 | 16.66 | 16.76 |
| 1993 | 16.66 | 16.17 | 14.24 | 15.75 | 14.72 | 14.72 |
| 1994 | 15.64 | 15.41 | 13.19 | 15.07 | 14.13 | 13.94 |
| 1995 | 17.32 | 17.15 | 14.62 | 16.77 | 15.69 | 15.35 |
| 1996 | 20.81 | 20.60 | 18.46 | 20.27 | 19.24 | 18.87 |
| 1997 | 19.65 | 18.55 | 17.23 | 18.14 | 16.98 | 16.33 |
| 1998 | 13.15 | 12.35 | 10.94 | 11.86 | 10.75 | 10.17 |
| 1999 | 17.64 | 17.27 | 15.53 | 17.38 | 16.48 | 16.01 |
| 2000 | 29.08 | 27.68 | 26.72 | 27.54 | 26.26 | 25.55 |
| 2001 | 24.34 | 21.99 | 21.90 | 21.77 | 20.45 | 19.56 |
| 2002 | 24.56 | 23.63 | 22.50 | 23.82 | 22.57 | 22.19 |
| 2003 | 29.78 | 27.87 | 27.54 | 27.83 | 26.06 | 25.61 |
| 2004 | 38.97 | 35.79 | 36.86 | 36.05 | 33.73 | 33.99 |
| 2005 | 53.05 | 48.93 | 50.53 | 49.41 | 47.74 | 49.75 |
| 2006 | 62.50 | 58.89 | 59.65 | 59.03 | 57.03 | 59.17 |
| 2007 | 69.56 | 67.13 | 66.56 | 67.86 | 66.12 | 68.98 |
| 2008 | 98.09 | 92.30 | 94.22 | 92.14 | 89.45 | 91.23 |
| 2009 | 58.95 | 59.37 | 56.31 | 60.30 | 58.12 | 58.92 |
| January | 76.04 | 75.07 | 72.89 | 74.78 | 72.96 | 73.42 |
| February | 75.91 | 73.73 | 72.74 | 75.01 | 71.50 | 71.77 |
| March | 78.52 | 76.77 | 75.77 | 77.65 | 75.41 | 75.83 |
| April | 82.12 | 80.03 | 78.80 | 79.34 | 78.27 | 78.88 |
| May | 75.23 | 71.15 | 70.90 | 72.00 | 69.21 | 70.45 |
| June | 73.93 | 71.91 | 70.77 | 72.62 | 70.17 | 71.39 |
| July | 74.54 | 73.25 | 71.37 | 73.43 | 71.01 | 72.16 |
| August | 76.21 | 73.50 | 72.07 | 73.63 | 71.27 | 72.38 |
| September | 74.87 | 73.20 | 71.23 | 74.25 r | 71.72 r | 73.24 r |
| October | 78.88 | 77.02 | 76.02 | 77.26 r | 75.52 r | 77.55 r |
| November | 82.05 r | 80.07 r | 79.20 r | 81.56 r | 79.56 r | 80.95 r |
| December | 86.48 r | 85.59 r | 83.98 r | 86.64 r | 83.95 r | 85.72 r |
| **2010 Average** | **77.90 r** | **75.94 r** | **74.65 r** | **76.51 r** | **74.21 r** | **75.31 r** |
| January | 88.73 | 87.99 | 85.66 | 89.61 | 86.80 | 89.74 |
| February | 89.50 | 91.72 | 86.69 | 94.25 | 92.07 | 96.01 |
| March | 102.34 | 102.48 | 99.19 | 104.80 | 104.19 | 106.19 |
| April | 111.96 | 113.08 | 108.80 | 112.54 | 111.52 | 115.15 |
| May | 107.55 | 107.99 | 102.46 | 108.28 | 105.92 | 108.50 |
| June | 102.53 | 105.36 | 97.30 | 105.19 | 104.35 | 108.22 |
| July | 102.67 | 105.94 | 97.82 | 106.19 | 105.60 | 110.09 |
| August | 95.89 | 99.01 | 89.00 | 99.27 | 97.72 | 104.19 |
| September | 96.89 | 101.05 | 90.22 | 100.72 | 101.05 | 105.81 |
| October | 98.42 | 102.06 | 92.28 | 100.79 | 101.69 | 104.92 |
| November | 106.69 | 111.43 | N/A | N/A | N/A | N/A |
| December | N/A | N/A | N/A | N/A | N/A | N/A |
| **2011 Average** | **100.29** | **102.56** | **94.94** | **102.16** | **101.09** | **104.88** |

e Estimated r Revised p Preliminary

See footnote in Appendix B.

# Table 19

## LOUISIANA NATURAL GAS WELLHEAD PRICES (MCF)

**(Dollars/Thousand Cubic Feet)**

| DATE | GOM Federal OCS[12] | DNR State Royalty | HENRY HUB Settled NYMEX | HENRY HUB Cash Spot | SPOT MARKET[5] Low | SPOT MARKET[5] High | SPOT MARKET[5] Average |
|---|---|---|---|---|---|---|---|
| 1991 | 1.77 | 1.57 | N/A | N/A | 1.43 | 1.56 | 1.50 |
| 1992 | 1.77 | 1.77 | N/A | N/A | 1.74 | 1.85 | 1.80 |
| 1993 | 2.18 | 2.14 | 2.19 | N/A | 2.08 | 2.21 | 2.15 |
| 1994 | 2.10 | 1.98 | 1.97 | N/A | 1.86 | 1.95 | 1.91 |
| 1995 | 1.61 | 1.78 | 1.70 | 1.75 | 1.62 | 1.68 | 1.65 |
| 1996 | 2.37 | 2.78 | 2.69 | 2.87 | 2.47 | 2.69 | 2.60 |
| 1997 | 2.63 | 2.62 | 2.69 | 2.63 | 2.54 | 2.67 | 2.60 |
| 1998 | 2.36 | 2.22 | 2.19 | 2.17 | 2.08 | 2.18 | 2.14 |
| 1999 | 2.18 | 2.42 | 2.36 | 2.36 | 2.25 | 2.36 | 2.31 |
| 2000 | 3.59 | 4.16 | 4.04 | 4.39 | 3.92 | 4.03 | 3.98 |
| 2001 | 4.05 | 4.55 | 4.44 | 4.11 | 4.27 | 4.47 | 4.38 |
| 2002 | 2.98 | 3.29 | 3.39 | 3.48 | 3.29 | 3.43 | 3.37 |
| 2003 | 5.12 | 5.74 | 5.61 | 5.71 | 5.32 | 5.92 | 5.66 |
| 2004 | 6.04 | 6.29 | 6.39 | 6.14 | 5.98 | 6.18 | 6.08 |
| 2005 | 8.58 | 9.03 | 8.96 | 9.19 | 8.84 | 9.26 | 9.05 |
| 2006 | 6.77 | 7.35 | 7.54 | 7.00 | 6.91 | 7.24 | 7.08 |
| 2007 | 7.30 | 7.39 | 7.13 | 7.26 | 7.08 | 7.29 | 7.17 |
| 2008 | 13.53 | 9.17 | 9.40 | 9.23 | 9.12 | 9.34 | 9.21 |
| 2009 | 4.34 | 4.05 | 4.15 | 3.95 | 3.98 | 4.16 | 4.07 |
| January | N/A | 5.83 | 6.05 | 5.82 | 6.05 | 6.20 | 6.12 |
| February | N/A | 5.48 | 5.48 | 5.32 | 5.53 | 5.68 | 5.60 |
| March | N/A | 4.75 | 5.01 | 4.29 | 4.56 | 4.68 | 4.63 |
| April | N/A | 4.16 | 4.00 | 4.04 | 3.97 | 4.11 | 4.05 |
| May | N/A | 4.40 | 4.44 | 4.12 | 4.19 | 4.32 | 4.26 |
| June | N/A | 4.82 | 4.32 | 4.81 | 4.75 | 4.95 | 4.84 |
| July | N/A | 4.87 | 4.91 | 4.63 | 4.69 | 4.83 | 4.76 |
| August | N/A | 4.63 | 4.96 | 4.32 | 4.60 | 4.68 | 4.62 |
| September | N/A | 4.02 | 3.80 | 3.89 | 3.87 | 4.00 | 3.95 |
| October | N/A | 3.78 | 3.99 | 3.43 | 3.57 | 3.72 | 3.65 |
| November | N/A | 3.66 | 3.42 | 3.71 | 3.59 | 3.71 | 3.66 |
| December | N/A | 4.47 | 4.44 | 4.26 | 4.31 | 4.47 | 4.39 |
| **2010 Average** | **5.16** | **4.48** | **4.57** | **4.39** | **4.47** | **4.61** | **4.55** |
| January | N/A | 4.68 | 4.38 | 4.50 | 4.45 | 4.57 | 4.52 |
| February | N/A | 4.35 | 4.49 | 4.09 | 4.19 | 4.32 | 4.27 |
| March | N/A | 4.22 | 3.94 | 3.97 | 3.92 | 4.06 | 4.00 |
| April | N/A | 4.45 | 4.55 | 4.24 | 4.24 | 4.39 | 4.33 |
| May | N/A | 4.54 | 4.55 | 4.31 | 4.33 | 4.47 | 4.41 |
| June | N/A | 4.73 | 4.50 | 4.53 | 4.57 | 4.70 | 4.66 |
| July | N/A | 4.59 | 4.53 | 4.42 | 4.44 | 4.57 | 4.52 |
| August | N/A | 4.35 | 4.54 | 4.05 | 4.22 | 4.34 | 4.30 |
| September | N/A | 4.02 | 4.01 | 3.90 | 3.93 | 4.07 | 4.01 |
| October | N/A | 3.67 | 3.91 | 3.56 | 3.61 | 3.76 | 3.69 |
| November | N/A | N/A | 3.66 | 3.27 | 3.31 | 3.40 | 3.34 |
| December | N/A | N/A | 3.50 | 3.17 | 3.25 | 3.38 | 3.33 |
| **2011 Average** | **4.16** | **4.19** | **4.21** | **4.00** | **4.04** | **4.17** | **4.11** |

e Estimated r Revised p Preliminary

See footnote in Appendix B.

# Table 19A

## LOUISIANA NATURAL GAS WELLHEAD PRICES (MMBTU)

**(Dollars/MMBTU)**

| DATE | GOM Federal OCS[12] | DNR State Royalty | HENRY HUB Settled NYMEX | HENRY HUB Cash Spot | SPOT MARKET[5] Low | SPOT MARKET[5] High | SPOT MARKET[5] Average |
|---|---|---|---|---|---|---|---|
| 1991 | 1.70 | 1.51 | N/A | N/A | 1.38 | 1.50 | 1.44 |
| 1992 | 1.70 | 1.70 | N/A | N/A | 1.68 | 1.78 | 1.73 |
| 1993 | 2.10 | 2.05 | N/A | N/A | 2.00 | 2.12 | 2.06 |
| 1994 | 2.02 | 1.91 | 1.89 | N/A | 1.79 | 1.88 | 1.84 |
| 1995 | 1.55 | 1.75 | 1.63 | 1.69 | 1.56 | 1.61 | 1.59 |
| 1996 | 2.28 | 2.67 | 2.59 | 2.76 | 2.37 | 2.58 | 2.50 |
| 1997 | 2.53 | 2.52 | 2.59 | 2.53 | 2.44 | 2.57 | 2.50 |
| 1998 | 2.27 | 2.13 | 2.10 | 2.08 | 2.00 | 2.10 | 2.05 |
| 1999 | 2.10 | 2.33 | 2.27 | 2.27 | 2.17 | 2.27 | 2.22 |
| 2000 | 3.45 | 4.00 | 3.88 | 4.23 | 3.77 | 3.88 | 3.83 |
| 2001 | 3.89 | 4.28 | 4.27 | 3.95 | 4.11 | 4.30 | 4.21 |
| 2002 | 2.87 | 3.16 | 3.26 | 3.35 | 3.16 | 3.30 | 3.24 |
| 2003 | 4.92 | 5.52 | 5.40 | 5.49 | 5.11 | 5.69 | 5.44 |
| 2004 | 5.81 | 6.04 | 6.15 | 5.90 | 5.75 | 5.95 | 5.85 |
| 2005 | 8.25 | 8.65 | 8.62 | 8.83 | 8.50 | 8.90 | 8.70 |
| 2006 | 6.51 | 7.10 | 7.25 | 6.73 | 6.64 | 6.96 | 6.81 |
| 2007 | 7.02 | 7.08 | 6.86 | 6.98 | 6.80 | 7.01 | 6.89 |
| 2008 | 13.01 | 9.25 | 9.03 | 8.88 | 8.77 | 8.99 | 8.86 |
| 2009 | 4.17 | 3.89 | 3.99 | 3.80 | 3.82 | 4.00 | 3.92 |
| January | N/A | 5.61 | 5.81 | 5.60 | 5.82 | 5.96 | 5.89 |
| February | N/A | 5.27 | 5.27 | 5.12 | 5.31 | 5.46 | 5.39 |
| March | N/A | 4.61 | 4.82 | 4.13 | 4.38 | 4.50 | 4.46 |
| April | N/A | 4.01 | 3.84 | 3.88 | 3.82 | 3.95 | 3.89 |
| May | N/A | 4.23 | 4.27 | 3.96 | 4.03 | 4.16 | 4.09 |
| June | N/A | 4.64 | 4.16 | 4.63 | 4.56 | 4.76 | 4.65 |
| July | N/A | 4.69 | 4.72 | 4.45 | 4.51 | 4.65 | 4.58 |
| August | N/A | 4.14 | 4.77 | 4.15 | 4.42 | 4.50 | 4.45 |
| September | N/A | 3.88 | 3.65 | 3.74 | 3.72 | 3.85 | 3.80 |
| October | N/A | 3.65 | 3.84 | 3.30 | 3.44 | 3.58 | 3.51 |
| November | N/A | 3.04 | 3.29 | 3.57 | 3.45 | 3.57 | 3.52 |
| December | N/A | 4.30 | 4.27 | 4.10 | 4.14 | 4.30 | 4.22 |
| **2010 Average** | **4.96** | **4.31** | **4.39** | **4.22** | **4.30** | **4.44** | **4.37** |
| January | N/A | 4.50 | 4.22 | 4.33 | 4.27 | 4.40 | 4.35 |
| February | N/A | 4.19 | 4.32 | 3.93 | 4.03 | 4.15 | 4.11 |
| March | N/A | 4.05 | 3.79 | 3.82 | 3.77 | 3.90 | 3.85 |
| April | N/A | 4.27 | 4.37 | 4.08 | 4.08 | 4.22 | 4.16 |
| May | N/A | 4.36 | 4.38 | 4.14 | 4.16 | 4.30 | 4.24 |
| June | N/A | 4.55 | 4.33 | 4.36 | 4.40 | 4.52 | 4.48 |
| July | N/A | 4.41 | 4.36 | 4.25 | 4.27 | 4.39 | 4.34 |
| August | N/A | 4.18 | 4.37 | 3.89 | 4.06 | 4.17 | 4.13 |
| September | N/A | 3.87 | 3.86 | 3.75 | 3.77 | 3.91 | 3.85 |
| October | N/A | 3.53 | 3.76 | 3.42 | 3.47 | 3.61 | 3.54 |
| November | N/A | N/A | 3.52 | 3.14 | 3.19 | 3.27 | 3.21 |
| December | N/A | N/A | 3.36 | 3.05 | 3.13 | 3.25 | 3.20 |
| **2011 Average** | **4.00** | **4.03** | **4.05** | **3.85** | **3.88** | **4.01** | **3.96** |

e Estimated r Revised p Preliminary

See footnote in Appendix B.

# Table 20

## LOUISIANA AVERAGE NATURAL GAS PRICES
## DELIVERED TO CONSUMER [3] (MCF)
**(Dollars/Thousand Cubic Feet)**

| DATE | CITY GATES | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | UTILITY |
|---|---|---|---|---|---|
| 1991 | 2.56 | 5.77 | 4.90 | 1.74 | 1.59 |
| 1992 | 2.48 | 5.60 | 4.79 | 1.93 | 1.91 |
| 1993 | 2.72 | 6.09 | 5.33 | 2.30 | 2.49 |
| 1994 | 2.54 | 6.24 | 5.42 | 2.17 | 2.17 |
| 1995 | 2.21 | 6.01 | 5.15 | 1.82 | 1.88 |
| 1996 | 3.13 | 6.76 | 6.09 | 2.84 | 2.94 |
| 1997 | 3.04 | 7.16 | 6.22 | 2.87 | 2.79 |
| 1998 | 2.33 | 6.68 | 5.64 | 2.31 | 2.37 |
| 1999 | 2.70 | 6.83 | 5.73 | 2.54 | 2.59 |
| 2000 | 4.61 | 8.34 | 7.41 | 4.03 | 4.55 |
| 2001 | 5.55 | 10.47 | 8.58 | 5.04 | 4.30 |
| 2002 | 4.07 | 8.06 | 6.74 | 3.69 | 3.63 |
| 2003 | 5.78 | 10.29 | 8.81 | 5.53 | 5.94 |
| 2004 | 6.56 | 11.20 | 9.56 | 6.58 | 6.50 |
| 2005 | 8.56 | 13.26 | 11.41 | 9.11 | 9.14 |
| 2006 | 7.67 | 14.66 | 11.84 | 7.42 | 7.66 |
| 2007 | 7.22 | 14.20 | 11.83 | 7.08 | 7.53 |
| 2008 | 9.58 | 15.49 | 13.52 | 9.32 | 10.01 |
| 2009 | 5.96 | 13.15 | 10.46 | 4.31 | 4.35 |
| | | | | | |
| January | 6.88 | 10.99 | 10.72 | 6.12 | 6.43 |
| February | 6.76 | 10.61 | 10.12 | 5.63 | 5.64 |
| March | 6.04 | 10.77 | 10.15 | 4.85 | 5.45 |
| April | 4.99 | 12.03 | 9.41 | 4.18 | 4.27 |
| May | 5.08 | 15.28 | 9.82 | 4.41 | 4.53 |
| June | 4.89 | 16.05 | 9.84 | 4.59 | 4.92 |
| July | 5.22 | 17.14 | 10.47 | 4.93 | 5.00 |
| August | 5.17 | 17.48 | 10.30 | 4.81 | 4.86 |
| September | 4.26 | 16.51 | 9.43 | 4.03 | 4.14 |
| October | 4.89 | 15.50 | 9.40 | 3.81 | 4.01 |
| November | 5.01 | 11.76 | 9.14 | 3.76 | 3.97 |
| December | 4.98 | 9.62 | 8.98 | 4.46 | 4.58 |
| **2009 Average** | **5.35** | **13.65** | **9.82** | **4.63** | **4.82** |
| | | | | | |
| January | 5.69 | 9.40 | 9.18 | 4.59 | 4.75 |
| February | 5.99 | 9.69 | 9.11 | 4.40 | 4.63 |
| March | 5.49 | 10.64 | 9.35 | 4.12 | 4.18 |
| April | 6.19 | 13.37 | 9.40 | 4.51 | 4.52 |
| May | 6.26 | 14.96 | 9.74 | 4.55 | 4.64 |
| June | 6.27 | 15.98 | 9.85 | 4.64 | 4.79 |
| July | 6.50 | 16.71 | 9.81 | 4.61 | 4.68 |
| August | 6.42 | 17.29 | 9.52 | 4.49 | 4.46 |
| September | 5.70 | 16.25 | 9.27 | 4.15 | 4.24 |
| October | 5.31 | 14.33 | 9.13 | 3.85 | N/A |
| November | N/A | N/A | N/A | N/A | N/A |
| December | N/A | N/A | N/A | N/A | N/A |
| **2010 Average** | **5.98** | **13.86** | **9.44** | **4.39** | **4.54** |

e Estimated r Revised p Preliminary

See footnote in Appendix B.

# Table 20A

## LOUISIANA AVERAGE NATURAL GAS PRICES
## DELIVERED TO CONSUMER [3] (MMBTU)
**(Dollars/MMBTU)**

| DATE | CITY GATES | RESIDENTIAL | COMMERCIAL | INDUSTRIAL | UTILITY |
|---|---|---|---|---|---|
| 1991 | 2.46 | 5.55 | 4.71 | 1.67 | 1.53 |
| 1992 | 2.38 | 5.38 | 4.61 | 1.86 | 1.84 |
| 1993 | 2.62 | 5.86 | 5.13 | 2.21 | 2.39 |
| 1994 | 2.44 | 6.00 | 5.21 | 2.09 | 2.09 |
| 1995 | 2.13 | 5.78 | 4.95 | 1.75 | 1.81 |
| 1996 | 3.01 | 6.50 | 5.86 | 2.73 | 2.83 |
| 1997 | 2.92 | 6.88 | 5.98 | 2.76 | 2.68 |
| 1998 | 2.24 | 6.42 | 5.42 | 2.22 | 2.28 |
| 1999 | 2.60 | 6.57 | 5.51 | 2.44 | 2.49 |
| 2000 | 4.43 | 8.02 | 7.13 | 3.88 | 4.38 |
| 2001 | 5.34 | 10.07 | 8.25 | 4.85 | 4.13 |
| 2002 | 3.91 | 7.75 | 6.48 | 3.55 | 3.49 |
| 2003 | 5.56 | 9.89 | 8.47 | 5.32 | 5.71 |
| 2004 | 6.31 | 10.77 | 9.19 | 6.33 | 6.25 |
| 2005 | 8.23 | 12.75 | 10.97 | 8.76 | 8.79 |
| 2006 | 7.38 | 14.10 | 11.38 | 7.13 | 7.37 |
| 2007 | 6.94 | 13.65 | 11.38 | 6.81 | 7.24 |
| 2008 | 9.21 | 14.89 | 13.00 | 8.96 | 9.63 |
| 2009 | 5.73 r | 12.64 r | 10.06 r | 4.14 r | 4.18 r |
| | | | | | |
| January | 6.62 | 10.57 r | 10.31 r | 5.88 r | 6.18 |
| February | 6.50 | 10.20 r | 9.73 r | 5.41 r | 5.42 r |
| March | 5.81 | 10.36 r | 9.76 r | 4.66 r | 5.24 |
| April | 4.80 | 11.57 r | 9.05 r | 4.02 r | 4.11 |
| May | 4.88 | 14.69 r | 9.44 r | 4.24 r | 4.36 |
| June | 4.70 | 15.43 r | 9.46 r | 4.41 r | 4.73 |
| July | 5.02 r | 16.48 r | 10.07 r | 4.74 r | 4.81 r |
| August | 4.97 r | 16.81 r | 9.90 r | 4.63 r | 4.67 r |
| September | 4.10 r | 15.88 r | 9.07 r | 3.88 r | 3.98 |
| October | 4.70 r | 14.90 r | 9.04 r | 3.66 r | 3.86 r |
| November | 4.82 r | 11.31 r | 8.79 r | 3.62 r | 3.82 r |
| December | 4.79 r | 9.25 r | 8.63 r | 4.29 r | 4.40 r |
| **2010 Average** | **5.14 r** | **13.12 r** | **9.44** | **4.45 r** | **4.63 r** |
| | | | | | |
| January | 5.47 | 9.04 | 8.83 | 4.41 | 4.57 |
| February | 5.76 | 9.32 | 8.76 | 4.23 | 4.45 |
| March | 5.28 | 10.23 | N/A | 3.96 | 4.02 |
| April | 5.95 | 12.86 | 9.04 | 4.34 | 4.35 |
| May | 6.02 | 14.38 | 9.37 | 4.38 | 4.46 |
| June | 6.03 | 15.37 | 9.47 | 4.46 | 4.61 |
| July | 6.25 | 16.07 | 9.43 | 4.43 | 4.50 |
| August | 6.17 | 16.63 | 9.15 | 4.32 | 4.29 |
| September | 5.48 | 15.63 | 8.91 | 3.99 | 4.08 |
| October | 5.11 | 13.78 | 8.78 | 3.70 | N/A |
| November | N/A | N/A | N/A | N/A | N/A |
| December | N/A | N/A | N/A | N/A | N/A |
| **2010 Average** | **5.75** | **13.33** | **9.08** | **4.22** | **4.37** |

e Estimated r Revised p Preliminary

See footnote in Appendix B.

# Table 21

## UNITED STATES AVERAGE NATURAL GAS PRICES (MCF)

**(Dollars/Thousand Cubic Feet)**

| DATE | WELLHEAD[3] | SPOT MARKET[5] | FOREIGN IMPORTS[3] | CITY GATES[3] | DELIVERED TO RESIDENTIAL[3] |
|---|---|---|---|---|---|
| 1991 | 1.63 | 1.45 | 1.82 | 2.90 | 6.22 |
| 1992 | 1.73 | 1.75 | 1.85 | 3.01 | 6.28 |
| 1993 | 2.03 | 2.10 | 2.03 | 3.21 | 6.67 |
| 1994 | 1.85 | 1.84 | 1.87 | 3.07 | 6.89 |
| 1995 | 1.55 | 1.56 | 1.49 | 2.78 | 6.58 |
| 1996 | 2.16 | 2.39 | 1.96 | 3.27 | 6.97 |
| 1997 | 2.32 | 2.54 | 2.15 | 3.66 | 6.94 |
| 1998 | 1.96 | 2.11 | 1.97 | 3.07 | 7.45 |
| 1999 | 2.19 | 2.28 | 2.23 | 3.10 | 7.34 |
| 2000 | 3.69 | 3.94 | 3.88 | 4.62 | 8.51 |
| 2001 | 4.00 | 4.34 | 4.36 | 5.24 | 9.91 |
| 2002 | 2.95 | 3.26 | 3.14 | 4.10 | 8.60 |
| 2003 | 4.88 | 5.48 | 5.18 | 5.84 | 10.62 |
| 2004 | 5.46 | 5.94 | 5.78 | 6.61 | 11.64 |
| 2005 | 7.33 | 8.67 | 8.09 | 8.72 | 13.72 |
| 2006 | 6.40 | 6.81 | 6.87 | 8.28 | 14.16 |
| 2007 | 6.38 | 6.89 | 6.87 | 8.02 | 14.19 |
| 2008 | 8.07 | 8.80 | 8.77 | 9.59 | 15.45 |
| 2009 | 3.66 | 4.00 | 4.14 | 6.14 r | 12.91 r |
| | | | | | |
| January | 5.69 r | 6.29 | 5.95 | 6.84 r | 10.56 r |
| February | 5.30 r | 5.78 | 5.62 | 6.64 r | 10.69 r |
| March | 4.70 r | 4.70 | 4.87 | 6.50 r | 10.98 r |
| April | 4.10 r | 4.08 | 4.13 | 5.88 r | 11.97 r |
| May | 4.24 r | 4.24 | 4.13 | 5.81 r | 13.12 r |
| June | 4.27 r | 4.73 | 4.23 r | 6.02 r | 14.86 r |
| July | 4.44 r | 4.51 | 4.40 | 6.31 r | 16.21 r |
| August | 4.38 r | 4.43 | 4.13 r | 6.22 r | 16.65 r |
| September | 3.83 r | 3.92 | 3.76 | 5.72 r | 15.64 r |
| October | 4.05 r | 3.70 | 3.83 r | 5.70 r | 13.37 r |
| November | 4.12 r | 3.79 | 3.96 r | 5.48 r | 10.88 r |
| December | 4.68 r | 4.79 | 4.56 r | 5.74 r | 9.88 r |
| **2010 Average** | **4.48 r** | **4.58** | **4.46 r** | **6.07 r** | **12.90 r** |
| | | | | | |
| January | 4.08 | 4.92 | 4.65 | 5.68 | 9.79 |
| February | 4.23 | 4.58 | 4.49 | 5.75 | 10.00 |
| March | 3.90 | 4.13 | 4.25 | 5.68 | 10.19 |
| April | 3.98 | 4.39 | 4.35 | 5.61 | 11.03 |
| May | 4.12 | 4.45 | 4.32 | 5.78 | 12.13 |
| June | 4.19 | 4.68 | 4.61 | 6.08 | 14.14 |
| July | 4.27 | 4.57 | 4.39 | 6.12 | 15.54 |
| August | 4.20 | 4.57 | 4.41 | 6.19 | 15.98 |
| September | 3.82 | 4.07 | 3.92 | 5.93 | 15.06 |
| October | 3.62 | 3.73 | 4.10 | 5.41 | 12.48 |
| November | N/A | 3.50 | N/A | N/A | N/A |
| December | N/A | 3.50 | N/A | N/A | N/A |
| **2011 Average** | **4.04** | **4.26** | **4.35** | **5.82** | **12.63** |

e Estimated r Revised p Preliminary

See footnote in Appendix B.

# Table 21A

## UNITED STATES AVERAGE NATURAL GAS PRICES (MMBTU)

**(Dollars/MMBTU)**

| DATE | WELLHEAD[3] | SPOT MARKET[5] | FOREIGN IMPORTS[3] | CITY GATES[3] | DELIVERED TO RESIDENTIAL[3] |
|---|---|---|---|---|---|
| 1991 | 1.57 | 1.40 | 1.75 | 2.79 | 5.98 |
| 1992 | 1.67 | 1.68 | 1.78 | 2.89 | 6.04 |
| 1993 | 1.95 | 2.02 | 1.95 | 3.09 | 6.42 |
| 1994 | 1.78 | 1.77 | 1.80 | 2.95 | 6.63 |
| 1995 | 1.49 | 1.50 | 1.43 | 2.67 | 6.33 |
| 1996 | 2.08 | 2.30 | 1.88 | 3.14 | 6.70 |
| 1997 | 2.23 | 2.44 | 2.07 | 3.52 | 6.67 |
| 1998 | 1.88 | 2.03 | 1.89 | 2.95 | 7.16 |
| 1999 | 2.11 | 2.19 | 2.15 | 2.98 | 7.06 |
| 2000 | 3.54 | 3.79 | 3.73 | 4.44 | 8.19 |
| 2001 | 3.85 | 4.17 | 4.19 | 5.04 | 9.53 |
| 2002 | 2.83 | 3.14 | 3.02 | 3.94 | 8.27 |
| 2003 | 4.69 | 5.27 | 4.98 | 5.62 | 10.21 |
| 2004 | 5.25 | 5.71 | 5.56 | 6.35 | 11.19 |
| 2005 | 7.05 | 8.34 | 7.77 | 8.38 | 13.19 |
| 2006 | 6.15 | 6.55 | 6.60 | 7.96 | 13.62 |
| 2007 | 6.13 | 6.63 | 6.61 | 7.72 | 13.64 |
| 2008 | 7.76 | 8.46 | 8.44 | 9.22 | 14.85 |
| 2009 | 3.52 | 3.85 | 3.98 | 5.91 r | 12.41 r |
| | | | | | |
| January | 5.47 r | 6.05 | 5.72 | 6.58 r | 10.15 r |
| February | 5.10 r | 5.56 | 5.40 | 6.38 r | 10.28 r |
| March | 4.52 r | 4.52 | 4.68 | 6.25 r | 10.56 r |
| April | 3.94 r | 3.92 | 3.97 | 5.65 r | 11.51 r |
| May | 4.08 r | 4.08 | 3.97 | 5.59 r | 12.62 r |
| June | 4.11 r | 4.55 | 4.07 r | 5.79 r | 14.29 r |
| July | 4.27 r | 4.34 | 4.23 | 6.07 r | 15.59 r |
| August | 4.21 r | 4.26 | 3.97 r | 5.98 r | 16.01 r |
| September | 3.68 r | 3.77 | 3.62 | 5.50 r | 15.04 r |
| October | 3.89 r | 3.55 | 3.68 r | 5.48 r | 12.86 r |
| November | 3.96 r | 3.64 | 3.81 r | 5.27 r | 10.46 r |
| December | 4.50 r | 4.60 | 4.38 r | 5.52 r | 9.50 r |
| **2010 Average** | **4.31 r** | **4.40** | **4.29 r** | **5.84 r** | **12.40 r** |
| | | | | | |
| January | 3.92 | 4.74 | 4.47 | 5.46 | 9.41 |
| February | 4.07 | 4.40 | 4.32 | 5.53 | 9.62 |
| March | 3.75 | 3.97 | 4.09 | 5.46 | 9.80 |
| April | 3.83 | 4.22 | 4.18 | 5.39 | 10.61 |
| May | 3.96 | 4.28 | 4.15 | 5.56 | 11.66 |
| June | 4.03 | 4.50 | 4.43 | 5.85 | 13.60 |
| July | 4.11 | 4.39 | 4.22 | 5.88 | 14.94 |
| August | 4.04 | 4.39 | 4.24 | 5.95 | 15.37 |
| September | 3.67 | 3.91 | 3.77 | 5.70 | 14.48 |
| October | 3.48 | 3.59 | 3.94 | 5.20 | 12.00 |
| November | N/A | 3.37 | N/A | N/A | N/A |
| December | N/A | 3.37 | N/A | N/A | N/A |
| **2011 Average** | **3.89** | **4.09** | **4.18** | **5.60** | **12.15** |

e Estimated r Revised p Preliminary

See footnote in Appendix B.

# Table 22

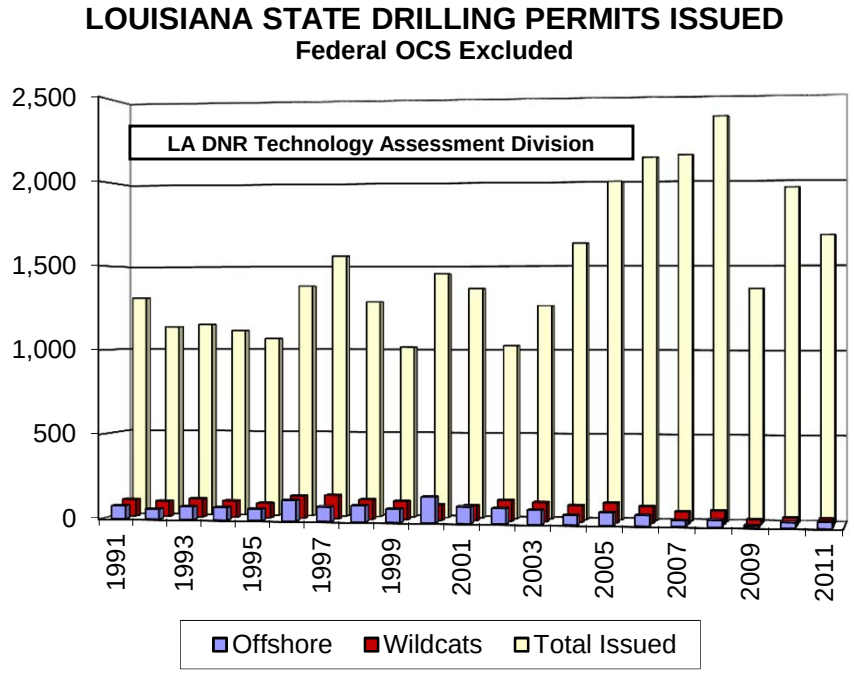
## LOUISIANA STATE OIL AND GAS DRILLING PERMITS ISSUED BY TYPE

**Excluding OCS**

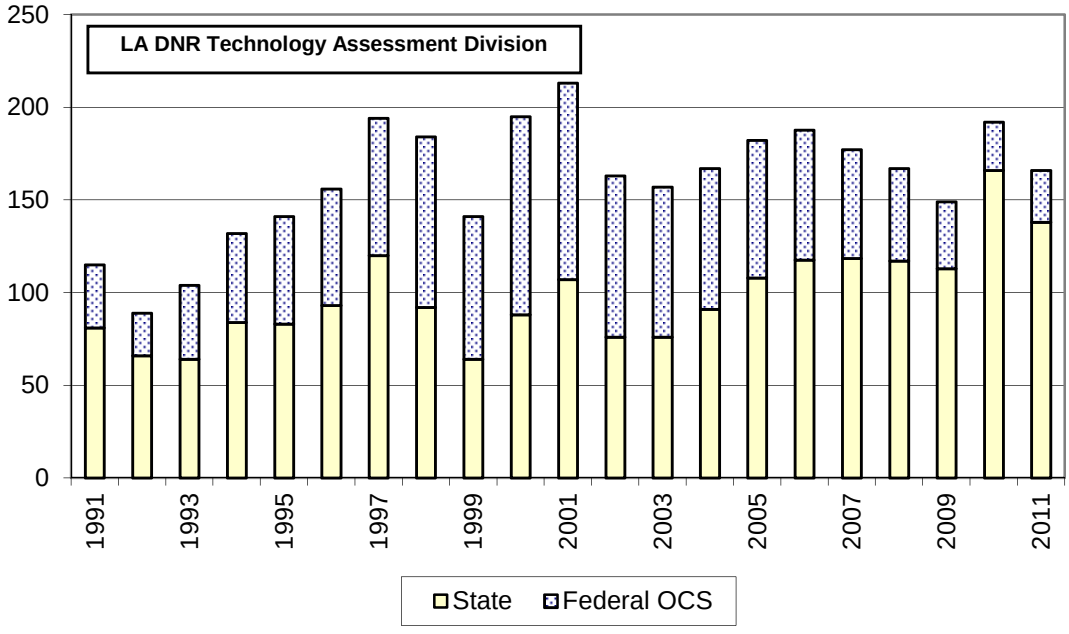
| DATE | DEVELOPMENTAL + | WILDCATS = | TOTAL = | OFFSHORE + | ONSHORE |
|---|---|---|---|---|---|
| 1990 | 1,526 | 181 | 1,707 | 85 | 1,622 |
| 1991 | 1,209 | 100 | 1,309 | 77 | 1,232 |
| 1992 | 1,044 | 92 | 1,136 | 59 | 1,077 |
| 1993 | 1,040 | 109 | 1,149 | 76 | 1,073 |
| 1994 | 1,015 | 98 | 1,113 | 74 | 1,039 |
| 1995 | 979 | 86 | 1,065 | 68 | 997 |
| 1996 | 1,248 | 133 | 1,381 | 121 | 1,260 |
| 1997 | 1,424 | 138 | 1,562 | 85 | 1,477 |
| 1998 | 1,171 | 115 | 1,286 | 96 | 1,190 |
| 1999 | 908 | 109 | 1,017 | 79 | 938 |
| 2000 | 1,363 | 90 | 1,453 | 151 | 1,302 |
| 2001 | 1,277 | 88 | 1,365 | 96 | 1,269 |
| 2002 | 902 | 123 | 1,025 | 90 | 935 |
| 2003 | 1,152 | 112 | 1,264 | 83 | 1,181 |
| 2004 | 1,535 | 98 | 1,633 | 57 | 1,576 |
| 2005 | 1,882 | 114 | 1,996 | 74 | 1,922 |
| 2006 | 2,040 | 97 | 2,137 | 61 | 2,076 |
| 2007 | 2,082 | 68 | 2,150 | 34 | 2,116 |
| 2008 | 2,296 | 78 | 2,374 | 40 | 2,334 |
| 2009 | 1,335 | 30 | 1,365 | 12 | 1,353 |
| | | | | | |
| January | 169 | 3 | 172 | 1 | 171 |
| February | 118 | 2 | 120 | 2 | 118 |
| March | 192 | 0 | 192 | 1 | 191 |
| April | 182 | 1 | 183 | 2 | 181 |
| May | 118 | 0 | 118 | 4 | 114 |
| June | 181 | 5 | 186 | 0 | 186 |
| July | 163 | 6 | 169 | 1 | 168 |
| August | 179 | 3 | 182 | 4 | 178 |
| September | 187 | 4 | 191 | 9 | 182 |
| October | 135 | 4 | 139 | 4 | 135 |
| November | 140 | 8 | 148 | 3 | 145 |
| December | 150 | 6 | 156 | 1 | 155 |
| **2010 Total** | **1,914** | **42** | **1,956** | **32** | **1,924** |
| | | | | | |
| January | 113 | 0 | 113 | 4 | 109 |
| February | 141 | 2 | 143 | 3 | 140 |
| March | 204 | 4 | 208 | 6 | 202 |
| April | 103 | 4 | 107 | 2 | 105 |
| May | 151 | 8 | 159 | 3 | 156 |
| June | 155 | 4 | 159 | 1 | 158 |
| July | 126 | 2 | 128 | 3 | 125 |
| August | 128 | 3 | 131 | 0 | 131 |
| September | 172 | 4 | 176 | 4 | 172 |
| October | 123 | 2 | 125 | 7 | 118 |
| November | 124 | 4 | 128 | 0 | 128 |
| December | 98 | 1 | 99 | 3 | 96 |
| **2011 Total** | **1,638** | **38** | **1,676** | **36** | **1,640** |

e Estimated r Revised p Preliminary

## Figure 11




## Figure 12



# Table 23

## LOUISIANA AVERAGE RIGS RUNNING

| DATE | State North[4] | State South Inland Water[4] | State South Inland Land[4] | State Offshore | Total State | Federal Offshore | Total Offshore[4] (State+OCS) | LA[4] TOTAL |
|---|---|---|---|---|---|---|---|---|
| 1990 | 19 | 20 | 36 | 40 | 115 | 36 | 76 | 151 |
| 1991 | 11 | 16 | 31 | 23 | 81 | 34 | 57 | 115 |
| 1992 | 9 | 13 | 27 | 16 | 66 | 23 | 39 | 88 |
| 1993 | 11 | 12 | 22 | 19 | 64 | 40 | 59 | 104 |
| 1994 | 14 | 16 | 25 | 29 | 84 | 48 | 78 | 132 |
| 1995 | 16 | 15 | 28 | 23 | 82 | 58 | 81 | 141 |
| 1996 | 19 | 19 | 31 | 25 | 93 | 63 | 88 | 156 |
| 1997 | 21 | 23 | 48 | 28 | 120 | 74 | 102 | 194 |
| 1998 | 19 | 21 | 38 | 14 | 93 | 92 | 106 | 184 |
| 1999 | 16 | 16 | 21 | 12 | 65 | 76 | 88 | 141 |
| 2000 | 24 | 16 | 37 | 10 | 86 | 108 | 118 | 195 |
| 2001 | 30 | 20 | 44 | 10 | 104 | 108 | 119 | 213 |
| 2002 | 23 | 16 | 32 | 5 | 76 | 87 | 92 | 163 |
| 2003 | 29 | 14 | 29 | 4 | 76 | 81 | 85 | 157 |
| 2004 | 39 | 18 | 30 | 3 | 91 | 76 | 79 | 167 |
| 2005 | 48 | 23 | 32 | 4 | 108 | 74 | 79 | 182 |
| 2006 | 57 | 19 | 38 | 3 | 118 | 70 | 73 | 188 |
| 2007 | 58 | 24 | 34 | 2 | 118 | 59 | 61 | 177 |
| 2008 | 68 | 20 | 26 | 3 | 117 | 50 | 53 | 167 |
| 2009 | 89 | 8 | 15 | 1 | 113 | 36 | 38 | 150 |
| January | 130 | 13 | 12 | 1 | 156 | 37 | 38 | 193 |
| February | 136 | 13 | 18 | 2 | 169 | 37 | 39 | 206 |
| March | 137 | 14 | 16 | 3 | 170 | 39 | 42 | 209 |
| April | 140 | 14 | 15 | 3 | 172 | 42 | 45 | 215 |
| May | 140 | 12 | 19 | 2 | 172 | 40 | 42 | 213 |
| June | 139 | 13 | 17 | 1 | 169 | 15 | 16 | 185 |
| July | 138 | 12 | 16 | 1 | 167 | 13 | 14 | 180 |
| August | 137 | 12 | 16 | 2 | 167 | 17 | 19 | 184 |
| September | 136 | 13 | 15 | 1 | 166 | 19 | 20 | 184 |
| October | 131 | 14 | 17 | 2 | 165 | 18 | 20 | 182 |
| November | 127 | 16 | 17 | 2 | 162 | 18 | 20 | 180 |
| December | 122 | 14 | 17 | 1 | 154 | 20 | 21 | 175 |
| **2010 Average** | **134** | **13** | **16** | **2** | **166** | **26** | **28** | **192** |
| January | 119 | 14 | 15 | 0 | 148 | 22 | 22 | 169 |
| February | 115 | 15 | 20 | 1 | 151 | 22 | 23 | 173 |
| March | 114 | 17 | 18 | 2 | 151 | 23 | 24 | 174 |
| April | 112 | 17 | 17 | 3 | 149 | 23 | 26 | 172 |
| May | 106 | 16 | 17 | 2 | 141 | 29 | 31 | 170 |
| June | 100 | 16 | 22 | 2 | 140 | 31 | 33 | 171 |
| July | 93 | 17 | 29 | 3 | 30 | 33 | 33 | 172 |
| August | 89 | 18 | 29 | 2 | 30 | 32 | 32 | 168 |
| September | 83 | 17 | 25 | 2 | 127 | 25 | 27 | 152 |
| October | 84 | 17 | 24 | 1 | 126 | 27 | 28 | 153 |
| November | 83 | 19 | 24 | 2 | 128 | 30 | 32 | 158 |
| December | 70 | 16 | 26 | 2 | 114 | 37 | 35 | 149 |
| **2011 Average** | **97** | **17** | **22** | **2** | **138** | **28** | **29** | **165** |

e Estimated r Revised p Preliminary

# Table 24

## LOUISIANA STATE PRODUCING CRUDE OIL WELLS

**Excluding OCS**

| DATE | NORTH | SOUTH | OFFSHORE | TOTAL |
|---|---|---|---|---|
| 1966 | 14,419 | 12,165 | 4,330 | 30,915 |
| 1967 | 14,191 | 12,183 | 4,677 | 31,051 |
| 1968 | 13,856 | 11,698 | 4,767 | 30,321 |
| 1969 | 13,670 | 11,131 | 4,954 | 29,756 |
| 1970 | 13,166 | 10,363 | 1,179 | 24,707 |
| 1971 | 12,889 | 9,626 | 1,107 | 23,623 |
| 1972 | 12,475 | 8,912 | 1,048 | 22,436 |
| 1973 | 11,698 | 8,249 | 1,025 | 20,972 |
| 1974 | 11,984 | 8,262 | 985 | 21,230 |
| 1975 | 12,259 | 8,094 | 936 | 21,288 |
| 1976 | 12,393 | 7,730 | 1,073 | 21,196 |
| 1977 | 12,915 | 7,444 | 1,067 | 21,425 |
| 1978 | 13,019 | 7,219 | 1,086 | 21,324 |
| 1979 | 12,961 | 6,859 | 1,078 | 20,898 |
| 1980 | 13,981 | 6,832 | 1,073 | 21,885 |
| 1981 | 15,084 | 6,777 | 1,105 | 22,966 |
| 1982 | 15,540 | 6,608 | 1,112 | 23,259 |
| 1983 | 16,299 | 6,374 | 1,037 | 23,710 |
| 1984 | 17,544 | 6,300 | 1,038 | 24,882 |
| 1985 | 18,794 | 6,223 | 1,014 | 26,031 |
| 1986 | 19,346 | 6,061 | 1,001 | 26,408 |
| 1987 | 18,630 | 5,768 | 945 | 25,343 |
| 1988 | 17,953 | 5,698 | 964 | 24,615 |
| 1989 | 16,849 | 5,474 | 927 | 23,250 |
| 1990 | 17,369 | 5,215 | 906 | 23,490 |
| 1991 | 17,731 | 5,143 | 868 | 23,742 |
| 1992 | 17,449 | 5,155 | 842 | 23,446 |
| 1993 | 16,810 | 5,015 | 814 | 22,640 |
| 1994 | 15,904 | 4,682 | 805 | 21,392 |
| 1995 | 15,260 | 4,451 | 769 | 20,479 |
| 1996 | 15,148 | 4,295 | 719 | 20,163 |
| 1997 | 14,573 | 4,165 | 619 | 20,358 |
| 1998 | 13,975 | 3,962 | 546 | 18,484 |
| 1999 | 13,747 | 3,971 | 546 | 18,264 |
| 2000 | 16,795 | 3,914 | 408 | 21,117 |
| 2001 | 16,494 | 4,257 | 393 | 21,144 |
| 2002 | 16,531 | 4,071 | 423 | 21,026 |
| 2003 | 16,516 | 3,583 | 467 | 20,566 |
| 2004 | 16,148 | 3,485 | 462 | 20,095 |
| 2005 | 17,153 | 3,648 | 317 | 21,117 |
| 2006 | 17,072 | 3,615 | 241 | 20,928 |
| 2007 | 16,994 | 3,711 | 262 | 20,966 |
| 2008 | N/A | N/A | N/A | 21,146 |
| 2009 | N/A | N/A | N/A | 20,852 |
| 2010 | N/A | N/A | N/A | 19,367 |
| 2011 | 14,333 | 4,045 | 411 | 18,789 |

e Estimated r Revised p Preliminary

**Figure 13**

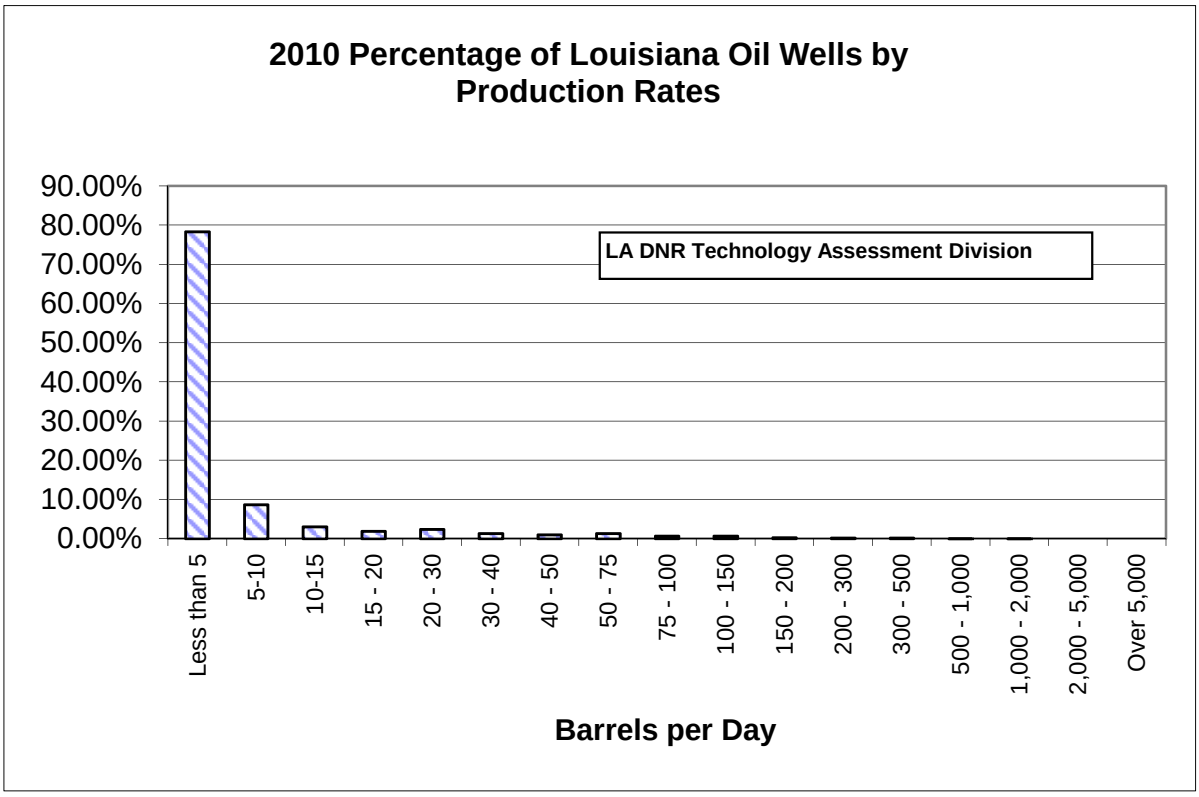
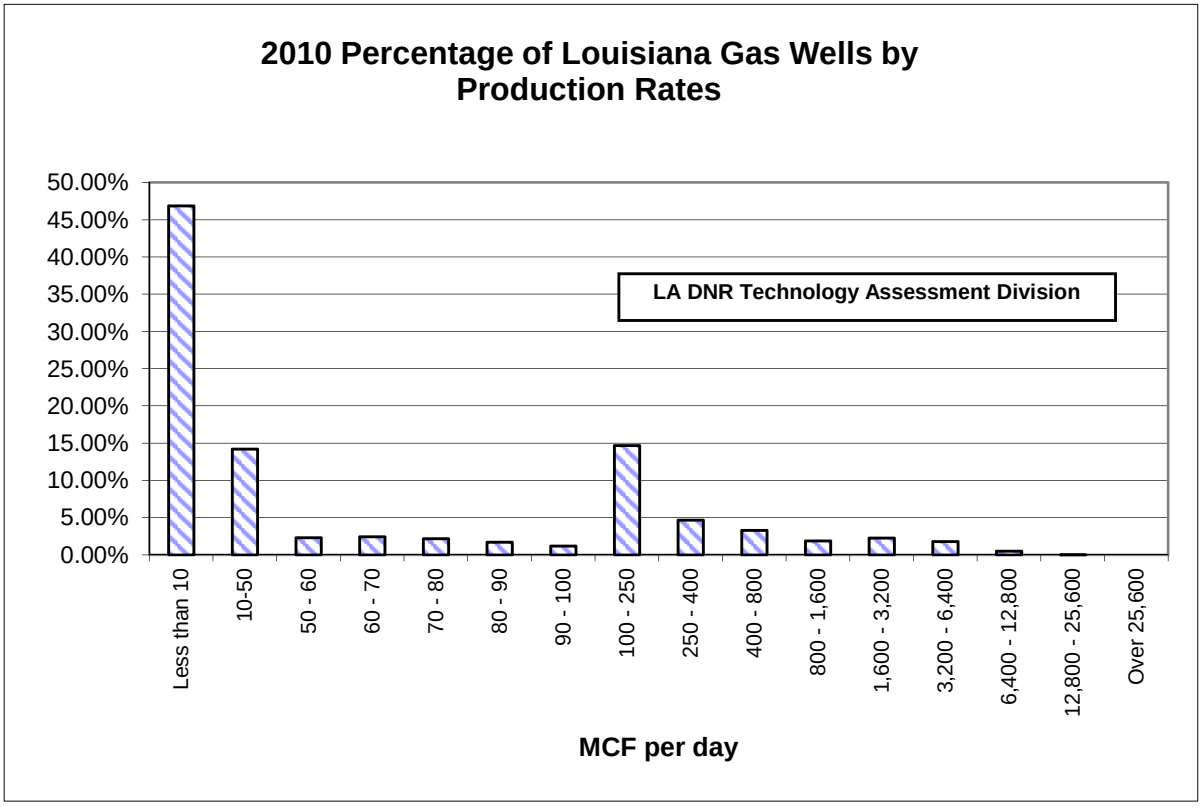



**Figure 14**



# Table 25

## LOUISIANA STATE PRODUCING NATURAL GAS WELLS

**Excluding OCS**

| DATE | NORTH | SOUTH | OFFSHORE | TOTAL |
|---|---|---|---|---|
| 1966 | 4,566 | 3,381 | 748 | 8,694 |
| 1967 | 4,548 | 3,448 | 882 | 8,878 |
| 1968 | 4,563 | 3,582 | 1,048 | 9,194 |
| 1969 | 4,558 | 3,451 | 1,297 | 9,306 |
| 1970 | 4,511 | 3,438 | 311 | 8,260 |
| 1971 | 4,449 | 3,389 | 327 | 8,164 |
| 1972 | 4,664 | 3,397 | 316 | 8,378 |
| 1973 | 4,927 | 3,449 | 332 | 8,707 |
| 1974 | 5,159 | 3,458 | 313 | 8,929 |
| 1975 | 5,373 | 3,331 | 308 | 9,012 |
| 1976 | 5,851 | 3,289 | 362 | 9,502 |
| 1977 | 6,343 | 3,331 | 449 | 10,123 |
| 1978 | 6,915 | 3,253 | 472 | 10,640 |
| 1979 | 7,372 | 3,214 | 514 | 11,100 |
| 1980 | 8,360 | 3,277 | 551 | 12,188 |
| 1981 | 9,479 | 3,226 | 557 | 13,262 |
| 1982 | 10,154 | 3,136 | 564 | 13,855 |
| 1983 | 10,502 | 3,065 | 549 | 14,115 |
| 1984 | 10,812 | 2,955 | 532 | 14,299 |
| 1985 | 11,026 | 2,887 | 511 | 14,424 |
| 1986 | 11,049 | 2,730 | 436 | 14,216 |
| 1987 | 10,726 | 2,635 | 413 | 13,774 |
| 1988 | 10,813 | 2,539 | 445 | 13,796 |
| 1989 | 10,861 | 2,474 | 501 | 13,836 |
| 1990 | 10,802 | 2,407 | 512 | 13,721 |
| 1991 | 10,702 | 2,261 | 496 | 13,459 |
| 1992 | 10,498 | 2,149 | 496 | 13,143 |
| 1993 | 10,506 | 2,192 | 490 | 13,189 |
| 1994 | 10,596 | 2,260 | 473 | 13,329 |
| 1995 | 10,452 | 2,200 | 335 | 12,987 |
| 1996 | 10,376 | 2,148 | 274 | 12,799 |
| 1997 | 10,446 | 2,149 | 296 | 12,891 |
| 1998 | 10,579 | 1,995 | 259 | 12,833 |
| 1999 | 10,581 | 2,010 | 262 | 12,853 |
| 2000 | 13,704 | 3,194 | 333 | 17,231 |
| 2001 | 13,054 | 3,369 | 311 | 16,734 |
| 2002 | 13,438 | 3,309 | 344 | 17,092 |
| 2003 | 13,607 | 2,952 | 384 | 16,944 |
| 2004 | 13,924 | 3,005 | 398 | 17,327 |
| 2005 | 13,996 | 2,977 | 258 | 17,231 |
| 2006 | 14,478 | 3,066 | 204 | 17,748 |
| 2007 | 14,707 | 3,211 | 227 | 18,145 |
| 2008 | N/A | N/A | N/A | 18,984 |
| 2009 | N/A | N/A | N/A | 19,009 |
| 2010 | N/A | N/A | N/A | 19,384 |
| 2011 | 18,542 | 1,851 | 159 | 20,552 |

e Estimated r Revised p Preliminary

# Table 26

## LOUISIANA STATE WELL COMPLETION BY TYPE AND BY REGION

**Excluding OCS**

| | YEAR | OFFSHORE | SOUTH | NORTH | TOTAL |
|---|---|---|---|---|---|
| | 1996 | 34 | 67 | 122 | 223 |
| | 1997 | 39 | 168 | 106 | 313 |
| | 1998 | 24 | 100 | 64 | 188 |
| C | 1999 | 4 | 35 | 60 | 99 |
| R O | 2000 | 10 | 51 | 77 | 138 |
| U I | 2001 | 11 | 92 | 97 | 200 |
| D L | 2002 | 5 | 91 | 89 | 185 |
| E | 2003 | 1 | 106 | 53 | 160 |
| | 2004 | 2 | 106 | 69 | 177 |
| | 2005 | 1 | 86 | 113 | 200 |
| | 2006 | 4 | 137 | 164 | 305 |
| | 2007 | 3 | 125 | 149 | 277 |
| | 2008 | 5 | 101 | 228 | 334 |
| | 2009 | 1 r | 63 r | 90 r | 154 r |
| | 2010 | 9 | 114 | 167 | 290 |
| | 1996 | 22 | 154 | 325 | 501 |
| | 1997 | 22 | 160 | 383 | 565 |
| | 1998 | 23 | 170 | 407 | 600 |
| N | 1999 | 17 | 169 | 287 | 473 |
| A | 2000 | 21 | 166 | 359 | 546 |
| T G | 2001 | 20 | 279 | 426 | 725 |
| U A | 2002 | 15 | 215 | 249 | 479 |
| R S | 2003 | 15 | 194 | 383 | 592 |
| A | 2004 | 7 | 186 | 649 | 842 |
| L | 2005 | 9 | 197 | 769 | 975 |
| | 2006 | 6 | 190 | 826 | 1,022 |
| | 2007 | 5 | 104 | 923 | 1,032 |
| | 2008 | 9 | 97 | 984 | 1,090 |
| | 2009 | 3 r | 39 r | 707 r | 749 r |
| | 2010 | 4 | 73 | 958 | 1,035 |
| | 1996 | 12 | 151 | 170 | 333 |
| | 1997 | 9 | 165 | 188 | 362 |
| | 1998 | 7 | 104 | 121 | 232 |
| | 1999 | 8 | 80 | 135 | 223 |
| D H | 2000 | 9 | 98 | 154 | 261 |
| R O | 2001 | 10 | 184 | 205 | 399 |
| Y L | 2002 | 4 | 122 | 147 | 273 |
| E | 2003 | 6 | 166 | 134 | 306 |
| | 2004 | 10 | 144 | 105 | 259 |
| | 2005 | 12 | 166 | 142 | 320 |
| | 2006 | 5 | 197 | 165 | 367 |
| | 2007 | 3 | 164 | 116 | 283 |
| | 2008 | 4 | 94 | 121 | 219 |
| | 2009 | 1 | 63 r | 75 r | 139 r |
| | 2010 | 2 | 61 | 76 | 139 |

# Table 27

## LOUISIANA STATE MINERAL BONUS, RENTAL AND ROYALTY OVERRIDE REVENUES, Excluding OCS

**(Million Dollars)**

| DATE | BONUSES | OVERRIDE ROYALTY | RENTALS | TOTAL |
|---|---|---|---|---|
| 1990 | 19.02 | 0.32 | 6.76 | 26.10 |
| 1991 | 9.82 | 0.32 | 8.71 | 18.85 |
| 1992 | 4.26 | 0.32 | 6.97 | 11.55 |
| 1993 | 13.29 | 0.20 | 4.20 | 17.68 |
| 1994 | 15.31 | 0.19 | 6.15 | 21.65 |
| 1995 | 31.96 | 0.69 | 9.47 | 42.12 |
| 1996 | 39.63 | -0.27 | 18.40 | 57.76 |
| 1997 | 38.27 | 0.84 | 25.00 | 64.11 |
| 1998 | 42.27 | 0.69 | 25.86 | 68.82 |
| 1999 | 14.17 | 0.45 | 20.27 | 34.89 |
| 2000 | 21.12 | 1.13 | 14.16 | 36.41 |
| 2001 | 29.70 | 1.89 | 13.75 | 45.34 |
| 2002 | 24.74 | 2.29 | 14.26 | 41.28 |
| 2003 | 19.54 | 3.36 | 12.93 | 35.83 |
| 2004 | 29.79 | 5.05 | 9.47 | 44.31 |
| 2005 | 35.78 | 2.03 | 13.75 | 51.56 |
| 2006 | 33.49 | 2.05 | 21.64 | 57.18 |
| 2007 | 45.91 | 3.35 | 22.59 | 71.85 |
| 2008 | 171.28 | 5.89 | 23.09 | 200.26 |
| 2009 | 17.70 | 4.26 | 25.13 | 47.09 |
| | | | | |
| January | 3.16 | 0.69 | 1.31 | 5.16 |
| February | 2.29 | 1.00 | 0.92 | 4.21 |
| March | 3.03 | 0.34 | 1.11 | 4.48 |
| April | 1.37 | -0.19 | 0.73 | 1.91 |
| May | 1.38 | 0.30 | 2.53 | 4.21 |
| June | 5.31 | 0.28 | 1.49 | 7.07 |
| July | 1.12 | 0.17 | 1.92 | 3.21 |
| August | 3.11 | 0.16 | 0.89 | 4.16 |
| September | 1.02 | 0.15 | 1.63 | 2.80 |
| October | 2.53 | 0.34 | 1.05 | 3.92 |
| November | 5.57 | 1.05 | 2.05 | 8.67 |
| December | 2.13 | 0.31 | 3.72 | 6.16 |
| **2010 Total** | **32.01** | **4.60** | **19.35** | **55.96** |
| | | | | |
| January | 0.86 | 1.65 | 0.99 | 3.50 |
| February | 0.73 | 0.65 | 1.17 | 2.54 |
| March | 1.34 | 0.60 | 1.39 | 3.32 |
| April | 1.02 | 0.78 | 1.64 | 3.44 |
| May | 1.91 | 0.56 | 1.40 | 3.87 |
| June | 2.27 | 0.45 | 1.18 | 3.90 |
| July | 0.70 | 0.56 | 2.04 | 3.29 |
| August | 0.56 | 0.77 | 1.66 | 2.99 |
| September | 2.52 | 0.84 | 0.43 | 3.79 |
| October | 2.64 | 0.51 | 0.59 | 3.75 |
| November | 1.35 | 0.40 | 2.10 | 3.85 |
| December | 3.59 | 0.65 | 1.77 | 6.01 |
| **2011 Total** | **19.48** | **8.42** | **16.36** | **44.27** |

e Estimated r Revised p Preliminary

# Table 28

## LOUISIANA STATE MINERAL ROYALTY REVENUE

**Excluding OCS**
**(Million Dollars)**

| DATE | OIL | GAS | PLANT LIQUIDS | OTHER | TOTAL |
|---|---|---|---|---|---|
| 1990 | 135.44 | 113.14 | 3.80 | 0.90 | 253.28 |
| 1991 | 120.49 | 91.43 | 4.51 | 0.34 | 216.76 |
| 1992 | 113.29 | 97.07 | 4.69 | 0.00 | 215.04 |
| 1993 | 99.20 | 125.01 | 4.53 | 0.00 | 228.74 |
| 1994 | 85.72 | 102.95 | 4.05 | 0.00 | 192.72 |
| 1995 | 95.82 | 146.60 | 4.60 | 0.00 | 247.02 |
| 1996 | 123.51 | 211.31 | 6.72 | 0.00 | 341.54 |
| 1997 | 112.76 | 154.62 | 5.93 | 0.00 | 273.31 |
| 1998 | 68.85 | 121.17 | 2.58 | 0.00 | 192.60 |
| 1999 | 91.52 | 115.10 | 2.05 | 0.00 | 208.66 |
| 2000 | 145.80 | 212.71 | 3.46 | 0.00 | 361.97 |
| 2001 | 122.16 | 252.68 | 6.33 | 0.00 | 381.17 |
| 2002 | 100.10 | 165.24 | 8.03 | 0.00 | 273.37 |
| 2003 | 127.61 | 288.91 | 9.31 | 0.00 | 425.83 |
| 2004 | 143.84 | 274.64 | 14.82 | 0.00 | 433.30 |
| 2005 | 149.97 | 279.03 | 10.51 | 0.00 | 439.50 |
| 2006 | 201.71 r | 287.24 r | 14.23 r | 0.00 | 503.19 r |
| 2007 | 288.57 r | 305.62 r | 18.98 r | 0.00 | 613.18 r |
| 2008 | 372.30 r | 419.94 r | 32.16 r | 0.00 | 824.41 r |
| 2009 | 210.54 r | 153.86 r | 14.91 r | 0.00 | 379.31 r |
| | | | | | |
| January | 20.86 r | 17.24 r | 1.74 r | 0.00 | 39.84 r |
| February | 20.66 r | 14.31 r | 1.78 r | 0.00 | 36.75 r |
| March | 22.32 r | 11.58 r | 1.16 r | 0.00 | 35.07 r |
| April | 22.38 r | 12.14 r | 1.25 r | 0.00 | 35.77 r |
| May | 21.73 r | 12.91 r | 1.84 r | 0.00 | 36.48 r |
| June | 21.42 r | 14.72 r | 1.43 r | 0.00 | 37.56 r |
| July | 22.36 r | 16.01 r | 1.89 r | 0.00 | 40.25 r |
| August | 23.19 r | 14.90 r | 2.05 r | 0.00 | 40.14 r |
| September | 22.10 r | 11.72 r | 2.17 r | 0.00 | 35.99 r |
| October | 25.08 r | 11.37 r | 2.83 r | 0.00 | 39.27 r |
| November | 22.83 r | 10.26 r | 1.99 r | 0.00 | 35.08 r |
| December | 25.64 r | 14.89 r | 2.38 r | 0.00 | 42.90 r |
| **2010 Total** | **270.56 r** | **162.03 r** | **22.50 r** | **0.00** | **455.10 r** |
| | | | | | |
| January | 22.61 | 15.36 | 2.43 | 0.00 | 40.40 |
| February | 25.38 | 13.38 | 2.24 | 0.00 | 41.00 |
| March | 33.52 | 14.73 | 2.49 | 0.00 | 50.73 |
| April | 34.12 | 15.35 | 3.62 | 0.00 | 53.09 |
| May | 33.66 | 14.67 | 2.01 | 0.00 | 50.34 |
| June | 30.19 | 14.65 | 3.02 | 0.00 | 47.86 |
| July | 31.70 | 15.25 | 3.07 | 0.00 | 50.02 |
| August | 31.65 | 16.60 | 3.20 | 0.00 | 51.44 |
| September | 28.31 | 10.55 | 2.60 | 0.00 | 41.45 |
| October | 34.51 | N/A | N/A | N/A | 34.51 |
| November | N/A | N/A | N/A | N/A | N/A |
| December | N/A | N/A | N/A | N/A | N/A |
| **2011 Total** | **305.63** | **130.53** | **24.67** | **0.00** | **460.84** |

e Estimated r Revised p Preliminary

# Table 29

## LOUISIANA STATE MINERAL SEVERANCE TAX REVENUE[8]

**Excluding OCS**
**(Million Dollars)**

| DATE | OIL | GAS | OTHER MINERALS | SEVERANCE TOTAL |
|---|---|---|---|---|
| 1990 | 373.21 | 124.61 | 2.75 | 500.58 |
| 1991 | 367.13 | 146.83 | 1.97 | 515.93 |
| 1992 | 326.07 | 126.24 | 1.63 | 453.94 |
| 1993 | 283.68 | 107.32 | 1.76 | 392.76 |
| 1994 | 229.40 | 114.58 | 2.02 | 346.00 |
| 1995 | 233.37 | 114.58 | 1.85 | 349.80 |
| 1996 | 270.36 | 98.60 | 1.88 | 370.84 |
| 1997 | 257.13 | 118.27 | 1.85 | 377.25 |
| 1998 | 148.96 | 120.98 | 1.40 | 271.34 |
| 1999 | 171.29 | 102.48 | 1.82 | 275.60 |
| 2000 | 337.51 | 104.33 | 1.50 | 443.34 |
| 2001 | 281.95 | 165.77 | 1.65 | 449.38 |
| 2002 | 235.84 | 173.51 | 1.33 | 410.67 |
| 2003 | 316.70 | 152.13 | 1.70 | 470.53 |
| 2004 | 359.77 | 216.73 | 1.73 | 578.23 |
| 2005 | 439.00 | 243.62 | 1.61 | 681.50 |
| 2006 | 506.31 | 331.40 | 1.69 | 839.41 |
| 2007 | 529.75 | 354.11 | 1.67 | 885.52 |
| 2008 | 842.94 | 293.66 | 1.65 | 1,138.25 |
| 2009 | 377.51 | 292.18 | 1.63 | 671.32 |
| | | | | |
| January | 33.68 | 17.17 | 0.13 | 50.98 |
| February | 41.89 | 19.54 | 0.06 | 61.48 |
| March | 42.40 | 27.55 | 0.16 | 70.10 |
| April | 36.80 | 6.96 | 0.09 | 43.86 |
| May | 46.96 | 27.08 | 0.16 | 74.19 |
| June | 46.44 | 35.13 | 0.17 | 81.74 |
| July | 46.56 | 29.74 | 0.11 | 76.41 |
| August | 41.55 | 30.47 | 0.19 | 72.21 |
| September | 46.97 | -8.38 | 0.11 | 38.70 |
| October | 47.02 | 6.88 | 0.16 | 54.06 |
| November | 39.07 | 15.63 | 0.12 | 54.82 |
| December | 47.57 | 16.41 | 0.13 | 64.11 |
| **2010 Total** | **516.90** | **224.18** | **1.58** | **742.67** |
| | | | | |
| January | 49.93 | -17.35 | 0.05 | 32.63 |
| February | 50.65 | 11.17 | 0.11 | 61.93 |
| March | 51.56 | 1.71 | 0.07 | 53.35 |
| April | 51.32 | 6.02 | 0.14 | 57.48 |
| May | 58.29 | 16.80 | 0.11 | 75.21 |
| June | 68.22 | 13.91 | 0.18 | 82.31 |
| July | 62.49 | 9.13 | 0.11 | 71.73 |
| August | 54.72 | 10.71 | 0.14 | 65.57 |
| September | 60.29 | 6.90 | 0.10 | 67.29 |
| October | 57.12 | 10.02 | 0.08 | 67.23 |
| November | 57.07 | 13.47 | 0.15 | 70.69 |
| December | 55.89 | 15.12 | 0.09 | 71.10 |
| **2011 Total** | **677.56** | **97.61** | **1.34** | **776.51** |

e Estimated r Revised p Preliminary

# Table 30

## STATE REVENUE FROM LOUISIANA'S OUTER CONTINENTAL SHELF[13]

**(Dollars)**

| YEAR | RENTALS | BONUSES | ROYALTIES | OTHERS REVENUE | GOMESA | TOTAL |
|---|---|---|---|---|---|---|
| 1986 | 610,567 | 1,912,734 | 66,176,203 | 0 | | 68,699,504 |
| 1987 | 148,578 | 3,150,519 | 11,043,115 | 574,520,000 | | 588,862,212 |
| 1988 | 153,561 | 5,528,006 | 8,708,079 | 2,520,000 | | 16,909,646 |
| 1989 | 175,817 | 2,890,298 | 7,163,105 | 2,520,000 | | 12,749,220 |
| 1990 | 430,198 | 5,570,375 | 6,239,368 | 2,520,000 | | 14,759,941 |
| 1991 | 303,824 | 2,220,094 | 8,461,261 | 2,520,000 | | 13,505,179 |
| 1992 | 258,787 | 1,189,989 | 6,405,279 | 5,880,000 | | 13,734,055 |
| 1993 | 235,250 | 965,504 | 7,373,550 | 5,880,000 | | 14,454,304 |
| 1994 | 1,016,932 | 1,913,682 | 11,780,932 | 5,880,000 | | 20,591,546 |
| 1995 | 255,213 | 890,002 | 8,012,718 | 5,880,000 | | 15,037,933 |
| 1996 | 292,445 | 4,666,400 | 12,283,395 | 5,880,000 | | 23,122,240 |
| 1997 | 686,051 | 5,689,689 | 11,855,454 | 8,400,000 | | 26,631,194 |
| 1998 | 412,229 | 1,744,928 | 9,621,860 | 8,400,000 | | 20,179,017 |
| 1999 | 357,379 | 241,659 | 6,284,879 | 8,400,000 | | 15,283,917 |
| 2000 | 321,695 | 1,268,244 | 12,690,937 | 15,254,978 | | 22,680,876 |
| 2001 | 303,675 | 2,148,111 | 30,454,058 | 7,735,941 | | 40,641,785 |
| 2002 | 94,841 | 0 | 11,768,383 | 28,363 | | 11,891,587 |
| 2003 | 284,563 | 2,842,662 | 26,447,045 | 21,775 | | 29,596,045 |
| 2004 | 490,745 | 7,620,500 | 30,145,237 | 6,613 | | 38,256,482 |
| 2005 | 374,717 | 2,521,931 | 27,995,948 | 7,849 | | 30,900,445 |
| 2006 | 494,362 | 5,947,411 | 24,325,787 | 1,304,257 | | 32,071,817 |
| 2007 | 196,129 | -2,695,489 | 25,498,932 | 89,134 | | 23,088,706 |
| 2008 | 412,813 | 6,196,386 | 36,547,175 | 2,607,022 | | 45,763,396 |
| 2009 | 339,802 | 463,332 | 21,433,896 | 80,201 | 6,347,321 | 28,664,552 |
| 2010 | 355,697 | 2,892,749 | 19,321,141 | 35,844 | 699,757 | 23,305,188 |
| 2011 | 268,106 | 0 | 20,325,825 | 93,441 | 222,725 | 20,910,097 |

See footnotes on Appendix B: "OCSLA" & "GOMESA"

# Table 31

## LOUISIANA STATE TOTAL MINERAL REVENUE

**(Dollars)**

| YEAR | FEDERAL OCS | FEDERAL ONSHORE | STATE BOUNDARIES | TOTAL |
|---|---|---|---|---|
| 1984 | 0 | 905,000 | 1,329,965,030 | 1,330,870,030 |
| 1985 | 0 | 795,000 | 1,164,969,360 | 1,165,764,360 |
| 1986 | 68,699,504 | 555,000 | 832,406,385 | 901,660,889 |
| 1987 | 588,862,212 | 517,000 | 746,675,897 | 1,336,055,109 |
| 1988 | 16,909,646 | 545,000 | 660,959,699 | 678,414,345 |
| 1989 | 12,749,220 | 452,000 | 678,301,987 | 691,503,207 |
| 1990 | 14,759,941 | 542,000 | 779,963,703 | 795,265,644 |
| 1991 | 13,505,179 | 328,000 | 751,117,246 | 764,950,425 |
| 1992 | 13,734,055 | 376,000 | 680,527,788 | 694,637,843 |
| 1993 | 14,454,304 | 782,000 | 639,182,812 | 654,412,032 |
| 1994 | 20,591,546 | 532,000 | 560,371,998 | 581,495,544 |
| 1995 | 15,037,933 | 728,000 | 638,942,698 | 654,708,631 |
| 1996 | 23,122,240 | 943,209 | 770,137,601 | 794,203,050 |
| 1997 | 26,631,194 | 817,329 | 714,672,685 | 742,121,208 |
| 1998 | 20,179,017 | 996,000 | 532,755,940 | 553,930,957 |
| 1999 | 15,283,917 | 1,276,465 | 519,144,200 | 535,704,582 |
| 2000 | 22,680,876 | 1,024,730 | 839,883,694 | 863,589,300 |
| 2001 | 40,641,785 | 1,481,176 | 875,887,102 | 918,010,063 |
| 2002 | 11,891,587 | 730,156 | 725,323,377 | 737,945,120 |
| 2003 | 29,596,045 | 1,182,451 | 932,191,569 | 962,970,065 |
| 2004 | 38,256,482 | 1,364,965 | 1,055,838,962 | 1,095,460,408 |
| 2005 | 30,900,445 | 1,569,882 | 1,166,491,860 | 1,198,962,188 |
| 2006 | 32,071,817 | 1,170,670 | 1,395,971,977 | 1,429,214,465 |
| 2007 | 23,088,706 | 940,888 | 1,545,321,941 | 1,569,351,535 |
| 2008 | 45,763,396 | 3,703,240 | 2,162,918,035 | 2,212,384,671 |
| 2009 | 28,664,552 | 914,421 | 1,097,717,147 | 1,127,296,119 |
| 2010 | 23,305,188 | 3,123,211 | 1,253,724,962 | 1,280,153,361 |
| 2011 | 20,910,097 | 17,982,455 | 1,325,963,268 e | 1,364,855,820 e |

e Estimated r Revised p Preliminary

**Federal OCS:** See footnotes on Appendix B "OCSLA" & "GOMESA"

**Federal Onshore:** Revenue distributed to the state under section 35 of the Mineral Leasing Act (MLA). MLA provides to the state 50% of mineral revenue from federal lands located within the state boundaries. Revenues came from royalties, rents and bonuses. It is fiscal year data.
Oil and gas produced on federal onshore pay severance tax to the state by the producer on the non-royalty share of the production, and the royalty share of the production is exempted.

**State Boundaries:** Revenue from mineral production such as bonuses, override royalties, rents, royalties and severance taxes within state boundaries.

# Table 32

## REVENUE TO FEDERAL GOVERNMENT COLLECTED FROM OIL AND GAS LEASES IN THE LOUISIANA OUTER CONTINENTAL SHELF [12]

**(Area beyond the state's 3-mile offshore boundary)**
**(Dollars)**

| YEAR | BONUS PAYMENTS | RENTAL PAYMENTS | OTHER REVENUES | PRODUCTION ROYALTIES | TOTAL[a] COLLECTION |
|---|---|---|---|---|---|
| 1976 | 482,592,035 | 12,974,770 | 1,879,704 | 682,922,971 | 1,180,369,480 |
| 1977 | 813,991,004 | 7,740,185 | 1,248,616 | 899,016,863 | 1,721,996,668 |
| 1978 | 1,015,873,944 | 8,616,027 | 1,502,963 | 1,086,517,424 | 2,112,510,358 |
| 1979 | 2,521,190,635 | 7,328,999 | 1,105,865 | 1,344,995,442 | 3,874,620,941 |
| 1980 | 2,676,927,673 | 7,361,904 | 1,277,987 | 1,866,737,837 | 4,552,305,401 |
| 1981 | 3,308,009,881 | 8,205,515 | 1,211,959 | 2,825,271,285 | 6,142,698,640 |
| 1982 | 1,110,172,751 | 7,288,316 | 1,349,850 | 3,166,294,042 | 4,285,104,959 |
| 1983 | 3,796,644,766 | 13,620,158 | 2,540,294 | 2,764,348,600 | 6,577,153,818 |
| 1984 | 1,154,495,009 | 16,323,567 | 2,010,462 | 3,195,995,282 | 4,368,824,320 |
| 1985 | 830,710,260 | 33,756,447 | 2,139,530 | 2,940,519,737 | 3,807,125,974 |
| 1986 | 113,731,609 | 34,110,029 | 3,199,547 | 2,006,205,199 | 2,157,246,384 |
| 1987 | 247,344,486 | 52,115,828 | 19,239,027 | 1,803,208,740 | 2,121,908,081 |
| 1988 | 388,730,457 | 35,752,757 | 8,727,373 | 1,571,981,500 | 2,005,192,087 |
| 1989 | 386,710,637 | 48,498,402 | 26,261,190 | 1,618,163,065 | 2,079,633,294 |
| 1990 | 421,375,632 | 55,568,777 | 16,028,740 | 2,068,487,831 | 2,561,460,980 |
| 1991 | 276,234,849 | 59,126,732 | 15,444,167 | 1,857,392,914 | 2,208,198,662 |
| 1992 | 53,716,797 | 49,087,621 | 33,533,897 | 1,848,599,157 | 1,984,937,472 |
| 1993 | 61,454,861 | 29,268,366 | 119,445,091 | 2,009,644,653 | 2,219,812,971 |
| 1994 | 256,271,643 | 30,003,884 | 141,190,812 | 1,888,953,102 | 2,316,419,441 |
| 1995 | 296,254,733 | 62,526,069 | 19,803,444 | 1,764,875,791 | 2,143,460,037 |
| 1996 | 24,330,068 | 53,231,380 | 40,394,227 | 2,549,759,516 | 3,154,940,691 |
| 1997 | 1,169,790 | 55,761,920 | 65,651,370 | 2,857,126,443 | 3,789,383,151 |
| 1998 | 9,207,972 | 51,518,286 | -14,452,431 | 2,267,502,514 | 2,313,776,341 |
| 1999 | 1,169,790 | 40,463,226 | 49,219,184 | 2,228,250,265 | 2,319,102,465 |
| 2000 | 83,630,219 | 32,710,256 | 167,647,231 | 3,045,847,943 | 3,329,835,649 |
| 2001 | 160,037,859 | 30,078,009 | 177,773,259 | 5,126,344,201 | 5,494,233,328 |
| | | | **GULF OF MEXICO TOTAL** | | |
| 2001 | 632,482,979 | 188,455,045 | 3,126,962 | 6,674,371,634 | 7,498,436,619 |
| 2002 | 138,423,162 | 153,303,576 | 3,252,702 | 3,841,164,517 | 4,136,143,958 |
| 2003 | 1,147,014,322 | 245,963,859 | 4,983,819 | 4,535,938,009 | 5,933,900,009 |
| 2004 | 523,416,154 | 214,303,045 | 2,570,343 | 4,607,776,092 | 5,348,065,634 |
| 2005 | 518,426,651 | 221,784,370 | 1,897,501 | 5,313,350,455 | 6,055,458,976 |
| 2006 | 865,262,735 | 224,006,816 | 2,839,550 | 6,514,658,836 | 7,606,767,938 |
| 2007 | 373,930,998 | 200,993,255 | 3,166,689 | 6,441,214,179 | 7,019,305,120 |
| 2008 | 6,818,747,137 | 231,026,391 | 3,105,849 | 7,850,622,155 | 14,903,501,532 |
| 2009 | 1,181,075,491 | 226,229,847 | 3,013,594 | 4,161,415,445 | 5,571,734,377 |
| 2010 | 979,569,294 | 236,631,251 | -3,531,170 | 3,743,286,144 | 4,955,955,519 |
| 2011 | 36,751,111 | 219,119,868 | 2,153,134 | 5,960,501,525 | 6,218,525,638 |

[a] Total collection, including state 8G shares.
See footnote in Appendix B.
e Estimated r Revised p Preliminary

# Table 33

## LOUISIANA ESTIMATED CRUDE OIL PROVED RESERVES[9] EXCLUDING LEASE CONDENSATE

**As of December 31st of Each Year**
**(Million Barrels)**

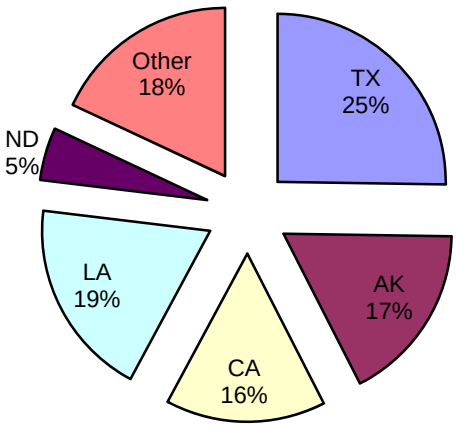
| YEAR | North | South Onshore | South Offshore | Federal OCS | Total Louisiana | TOTAL US |
|---|---|---|---|---|---|---|
| 1989 | 123 | 479 | 143 | 1,691 | 2,436 | 26,501 |
| 1990 | 120 | 435 | 150 | 1,772 | 2,477 | 26,254 |
| 1991 | 127 | 408 | 144 | 1,775 | 2,454 | 24,682 |
| 1992 | 125 | 417 | 126 | 1,643 | 2,311 | 23,745 |
| 1993 | 108 | 382 | 149 | 1,880 | 2,519 | 22,957 |
| 1994 | 108 | 391 | 150 | 1,922 | 2,571 | 22,457 |
| 1995 | 108 | 387 | 142 | 2,269 | 2,906 | 22,351 |
| 1996 | 128 | 382 | 148 | 2,357 | 3,015 | 22,017 |
| 1997 | 136 | 427 | 151 | 2,587 | 3,301 | 22,546 |
| 1998 | 101 | 357 | 97 | 2,483 | 3,038 | 21,034 |
| 1999 | 108 | 384 | 108 | 2,442 | 3,042 | 21,765 |
| 2000 | 97 | 310 | 122 | 2,751 | 3,280 | 22,045 |
| 2001 | 87 | 341 | 136 | 3,877 | 4,441 | 22,446 |
| 2002 | 75 | 335 | 91 | 4,088 | 4,589 | 22,677 |
| 2003 | 66 | 314 | 72 | 4,251 | 4,703 | 21,891 |
| 2004 | 58 | 304 | 65 | 3,919 | 4,346 | 21,371 |
| 2005 | 68 | 299 | 65 | 3,852 | 4,284 | 21,757 |
| 2006 | 68 | 312 | 48 | 3,500 | 3,928 | 20,972 |
| 2007 | 76 | 326 | 56 | 3,320 | 3,778 | 21,317 |
| 2008 | 60 | 277 | 51 | 3,388 | 3,776 | 19,121 |
| 2009 | 55 | 269 | 46 | 3,570 | 3,940 | 20,682 |

See footnotes on Appendix B

# Figure 15

**UNITED STATES CRUDE OIL RESERVES**
**December 31, 2009**
**Excluding Lease Condensate**
(Million Barrels)

| STATE | VOLUME |
|---|---|
| Texas | 5,217 |
| Alaska | 3,566 |
| California | 3,183 |
| Louisiana | 3,940 |
| N. Dakota | 1,046 |
| Other | 3,730 |
| **TOTAL** | **20,682** |




**LA DNR Technology Assessment Division**

# Table 34

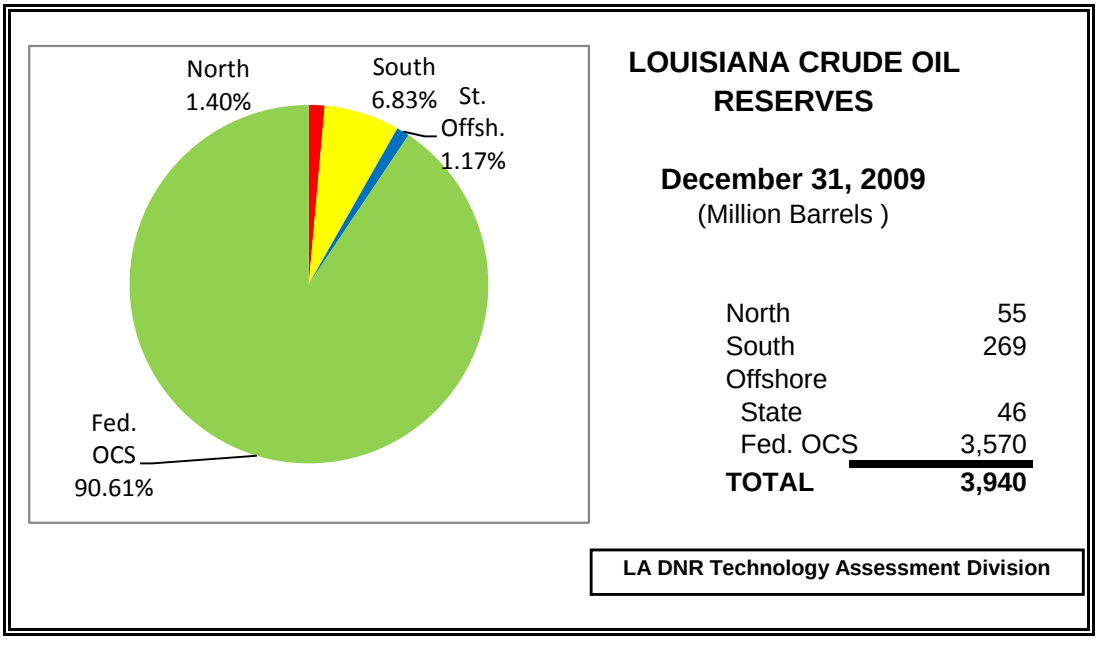
## LOUISIANA ESTIMATED LEASE CONDENSATE PROVED RESERVES[9]

**As of December 31st of Each Year**
**(Million Barrels)**

| YEAR | North | South Onshore | South Offshore | Federal OCS | Total Louisiana | TOTAL US |
|---|---|---|---|---|---|---|
| 1989 | 20 | 196 | 12 | 278 | 506 | 1,389 |
| 1990 | 20 | 182 | 12 | 258 | 472 | 1,302 |
| 1991 | 21 | 175 | 9 | 253 | 458 | 1,244 |
| 1992 | 19 | 151 | 8 | 226 | 404 | 1,226 |
| 1993 | 19 | 133 | 9 | 235 | 396 | 1,192 |
| 1994 | 21 | 123 | 9 | 233 | 386 | 1,147 |
| 1995 | 24 | 136 | 11 | 305 | 476 | 1,197 |
| 1996 | 24 | 127 | 11 | 422 | 584 | 1,307 |
| 1997 | 30 | 134 | 12 | 433 | 609 | 1,341 |
| 1998 | 23 | 138 | 16 | 435 | 612 | 1,336 |
| 1999 | 25 | 134 | 15 | 435 | 609 | 1,295 |
| 2000 | 22 | 130 | 17 | 437 | 606 | 1,333 |
| 2001 | 27 | 141 | 19 | 325 | 512 | 1,398 |
| 2002 | 19 | 107 | 11 | 300 | 437 | 1,346 |
| 2003 | 19 | 82 | 11 | 251 | 363 | 1,215 |
| 2004 | 21 | 66 | 9 | 205 | 301 | 1,221 |
| 2005 | 23 | 72 | 9 | 228 | 332 | 1,218 |
| 2006 | 29 | 65 | 10 | 185 | 289 | 1,339 |
| 2007 | 31 | 69 | 11 | 180 | 291 | 1,415 |
| 2008 | 27 | 64 | 8 | 151 | 250 | 1,433 |
| 2009 | 26 | 74 | 10 | 134 | 244 | 1,633 |

See footnotes on Appendix B

## Figure 16



# Table 35

## LOUISIANA ESTIMATED DRY NATURAL GAS PROVED RESERVES[9]

**As of December 31st of Each Year**

**(Billion Cubic Feet, at 14.73 psia and 60 degrees Fahrenheit)**

| YEAR | North | South Onshore | South Offshore | Federal OCS | Total Louisiana | TOTAL US |
|---|---|---|---|---|---|---|
| 1989 | 2,652 | 8,645 | 1,219 | 24,187 c | 36,703 c | 167,116 |
| 1990 | 2,588 | 8,171 | 969 | 22,679 c | 34,407 c | 169,346 |
| 1991 | 2,384 | 7,504 | 1,024 | 21,611 c | 32,523 c | 167,062 |
| 1992 | 2,311 | 6,693 | 776 | 19,653 c | 29,433 c | 165,015 |
| 1993 | 2,325 | 5,932 | 917 | 19,383 c | 28,557 c | 162,415 |
| 1994 | 2,537 | 6,251 | 960 | 20,835 c | 30,583 c | 163,837 |
| 1995 | 2,788 | 5,648 | 838 | 21,392 c | 30,666 c | 165,146 |
| 1996 | 3,105 | 5,704 | 734 | 21,856 c | 31,399 c | 166,474 |
| 1997 | 3,093 | 5,855 | 725 | 21,934 c | 31,607 c | 167,223 |
| 1998 | 2,898 | 5,698 | 551 | 20,774 c | 29,921 c | 164,041 |
| 1999 | 3,079 | 5,535 | 628 | 19,598 c | 28,840 c | 167,406 |
| 2000 | 3,298 | 5,245 | 696 | 19,788 c | 29,027 c | 177,427 |
| 2001 | 3,881 | 5,185 | 745 | 19,721 c | 29,532 c | 183,460 |
| 2002 | 4,245 | 4,224 | 491 | 18,500 c | 27,460 c | 186,946 |
| 2003 | 5,074 | 3,746 | 506 | 16,728 c | 26,054 c | 189,044 |
| 2004 | 5,770 | 3,436 | 382 | 14,685 c | 24,273 c | 192,513 |
| 2005 | 6,695 | 3,334 | 418 | 13,665 c | 24,112 c | 204,385 |
| 2006 | 6,715 | 3,335 | 424 | 11,824 c | 22,298 c | 211,085 |
| 2007 | 6,344 | 3,323 | 378 | 11,090 c | 21,135 c | 237,726 |
| 2008 | 7,876 | 2,799 | 898 | 10,450 c | 22,023 c | 244,656 |
| 2009 | 17,146 | 2,844 | 701 | 9,362 c | 30,053 c | 272,509 |

[C] Includes Federal Offshore Alabama

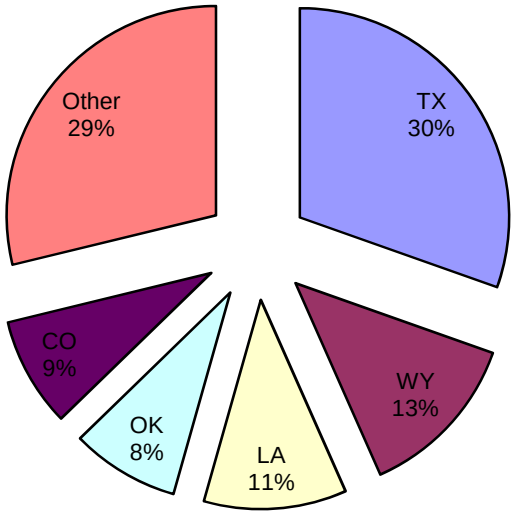
## Figure 17

**UNITED STATES NATURAL GAS RESERVES**

**December 31, 2009**

(Billion Cubic Feet)

| STATE | VOLUME |
|---|---|
| Texas | 82,875 |
| Wyoming | 35,283 |
| Louisiana | 30,050 |
| Oklahoma | 22,769 |
| Colorado | 23,058 |
| Other | 78,474 |
| **TOTAL** | **272,509** |




**LA DNR Technology Assessment Division**

# Table 36

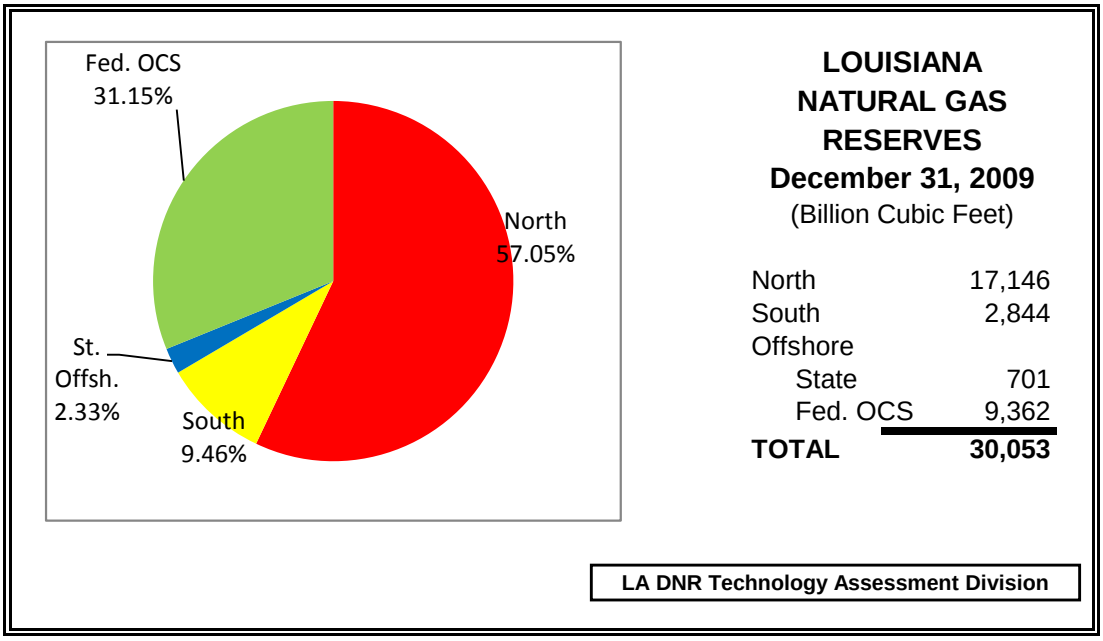
## LOUISIANA ESTIMATED NATURAL GAS LIQUIDS PROVED RESERVES [9] EXCLUDING LEASE CONDENSATE

**As of December 31st of Each Year**
**(Million Barrels)**

| YEAR | North | South Onshore | South Offshore | Federal OCS | Total Louisiana | TOTAL US |
|---|---|---|---|---|---|---|
| 1989 | 40 | 215 | 39 | 297 | 591 | 4,991 |
| 1990 | 38 | 249 | 37 | 261 | 585 | 4,982 |
| 1991 | 38 | 242 | 41 | 292 | 613 | 4,978 |
| 1992 | 41 | 229 | 47 | 246 | 563 | 4,999 |
| 1993 | 38 | 201 | 21 | 255 | 515 | 4,838 |
| 1994 | 48 | 214 | 19 | 267 | 548 | 4,876 |
| 1995 | 55 | 359 | 16 | 191 | 621 | 5,005 |
| 1996 | 61 | 284 | 36 | 199 | 580 | 5,209 |
| 1997 | 50 | 199 | 12 | 352 | 613 | 5,291 |
| 1998 | 34 | 187 | 13 | 341 | 575 | 4,852 |
| 1999 | 36 | 230 | 19 | 398 | 681 | 5,316 |
| 2000 | 39 | 207 | 21 | 315 | 582 | 7,012 |
| 2001 | 35 | 128 | 41 | 273 | 477 | 6,595 |
| 2002 | 30 | 119 | 37 | 346 | 532 | 6,648 |
| 2003 | 48 | 100 | 35 | 235 | 418 | 6,244 |
| 2004 | 53 | 87 | 27 | 410 | 577 | 6,707 |
| 2005 | 61 | 96 | 32 | 375 | 563 | 6,947 |
| 2006 | 60 | 94 | 22 | 390 | 484 | 7,133 |
| 2007 | 69 | 99 | 24 | 348 | 540 | 7,728 |
| 2008 | 68 | 78 | 55 | 313 | 514 | 7,842 |
| 2009 | 98 | 90 | 43 | 301 | 532 | 8,557 |

See footnotes on Appendix B

**Figure 18**



# Table 37

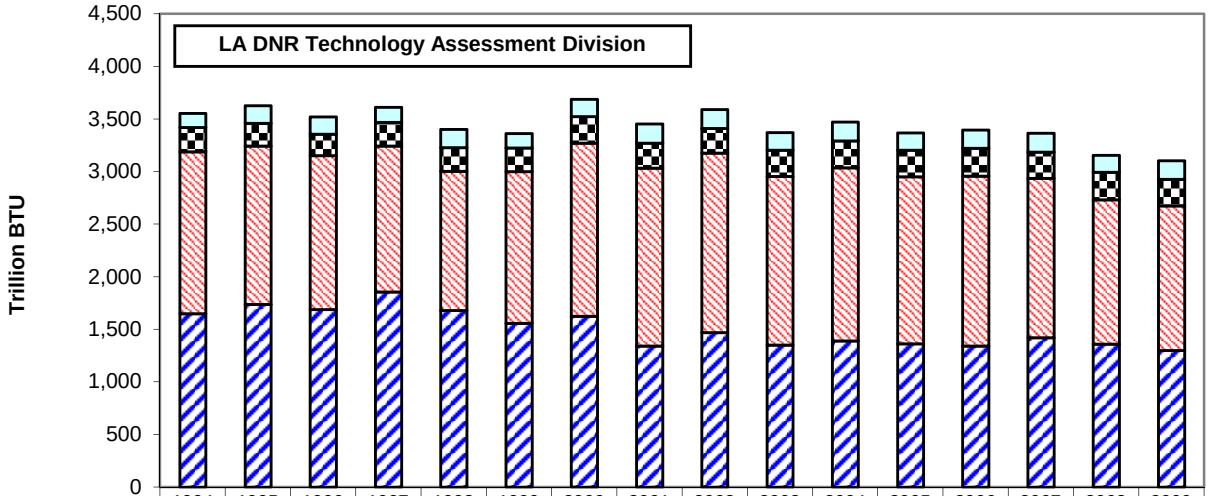
## LOUISIANA NONAGRICULTURAL EMPLOYMENT[1]

| DATE | OIL & GAS PRODUCTION | CHEMICAL INDUSTRY | PETROLEUM MANUFACTURING | ALL PIPELINE* | TOTAL EMPLOYMENT |
|---|---|---|---|---|---|
| 1989 | 52,509 | 27,717 | 11,321 | 1,016 | 1,492,051 |
| 1990 | 54,063 | 29,083 | 11,535 | 1,041 | 1,546,820 |
| 1991 | 54,412 | 29,412 | 12,268 | 1,073 | 1,566,779 |
| 1992 | 45,869 | 30,349 | 12,543 | 1,095 | 1,583,423 |
| 1993 | 44,422 | 30,419 | 12,728 | 1,078 | 1,613,577 |
| 1994 | 44,885 | 30,014 | 13,037 | 1,014 | 1,671,087 |
| 1995 | 44,279 | 30,168 | 11,603 | 932 | 1,721,651 |
| 1996 | 46,885 | 30,096 | 11,262 | 789 | 1,757,619 |
| 1997 | 51,559 | 29,935 | 11,038 | 792 | 1,797,225 |
| 1998 | 54,875 | 30,196 | 10,984 | 702 | 1,837,505 |
| 1999 | 44,645 | 28,898 | 11,046 | 693 | 1,846,026 |
| 2000 | 45,714 | 28,335 | 10,345 | 724 | 1,872,494 |
| 2001 | 47,009 | 27,337 | 10,643 | 2,417 | 1,868,902 |
| 2002 | 43,839 | 25,694 | 10,566 | 2,306 | 1,848,656 |
| 2003 | 42,339 | 24,558 | 10,395 | 2,334 | 1,851,570 |
| 2004 | 40,249 | 23,516 | 9,958 | 2,122 | 1,866,870 |
| 2005 | 41,179 | 23,269 | 10,240 | 2,179 | 1,843,237 |
| 2006 | 44,394 | 22,188 | 10,310 | 2,347 | 1,810,667 |
| 2007 | 46,764 | 22,612 | 10,764 | 2,454 | 1,869,965 |
| 2008 | 50,541 | 22,788 | 11,287 | 2,553 | 1,889,576 |
| January | 50,278 | 22,953 | 11,314 | 2,459 | 1,864,462 |
| February | 49,578 | 22,853 | 11,343 | 2,448 | 1,866,692 |
| March | 48,769 | 22,706 | 11,303 | 2,452 | 1,867,437 |
| April | 47,238 | 22,602 | 11,334 | 2,389 | 1,860,493 |
| May | 47,228 | 22,481 | 11,300 | 2,390 | 1,864,693 |
| June | 46,971 | 22,374 | 11,395 | 2,397 | 1,853,558 |
| July | 45,902 | 22,467 | 11,493 | 2,480 | 1,822,508 |
| August | 45,728 | 22,440 | 11,528 | 2,472 | 1,827,591 |
| September | 45,257 | 22,323 | 11,401 | 2,469 | 1,832,649 |
| October | 45,295 | 22,211 | 11,317 | 2,500 | 1,841,799 |
| November | 45,345 | 22,183 | 11,338 | 2,505 | 1,848,337 |
| December | 45,886 | 22,138 | 11,288 | 2,506 | 1,842,516 |
| **2009 Average** | **46,956** | **22,478** | **11,363** | **2,456** | **1,849,395** |
| January | 45,422 | 22,268 | 11,337 | 2,597 | 1,806,283 |
| February | 46,580 | 22,278 | 11,386 | 2,600 | 1,811,536 |
| March | 47,035 | 22,283 | 11,335 | 2,635 | 1,826,337 |
| April | 47,729 | 22,278 | 11,551 | 2,572 | 1,837,825 |
| May | 48,229 | 22,539 | 11,510 | 2,597 | 1,849,858 |
| June | 48,759 | 22,664 | 11,567 | 2,665 | 1,849,417 |
| July | 48,677 | 22,704 | 11,464 | 2,676 | 1,821,160 |
| August | 48,951 | 22,713 | 11,453 | 2,701 | 1,825,003 |
| September | 48,577 | 22,632 | 11,396 | 2,717 | 1,836,328 |
| October | 48,581 | 22,671 | 11,409 | 2,731 | 1,844,323 |
| November | 48,252 | 22,655 | 11,338 | 2,755 | 1,847,852 |
| December | 48,199 | 22,709 | 11,330 | 2,757 | 1,850,731 |
| **2010 Average** | **47,916** | **22,533** | **11,423** | **2,667** | **1,833,888** |

* Natural Gas Pipeline employment is included in 2001 forward but excluded in prior years.
See footnote in Appendix B.

## Figure 19

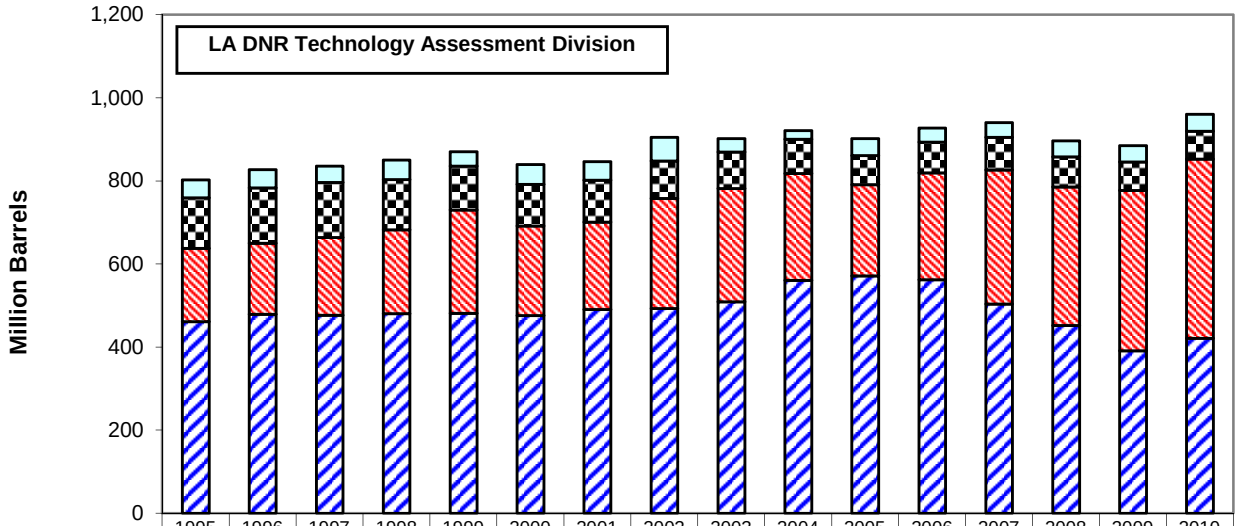
## LOUISIANA ENERGY CONSUMPTION BY SOURCE




| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nuclear | 134 | 165 | 166 | 142 | 172 | 137 | 165 | 181 | 181 | 168 | 178 | 164 | 175 | 179 | 161 | 176 |
| Coal | 231 | 217 | 205 | 226 | 225 | 228 | 253 | 240 | 232 | 248 | 257 | 254 | 265 | 250 | 263 | 253 |
| Petroleum | 1,541 | 1,507 | 1,464 | 1,387 | 1,325 | 1,441 | 1,645 | 1,691 | 1,708 | 1,606 | 1,647 | 1,587 | 1,615 | 1,514 | 1,373 | 1,375 |
| Natural Gas | 1,649 | 1,737 | 1,688 | 1,857 | 1,679 | 1,558 | 1,626 | 1,342 | 1,471 | 1,349 | 1,390 | 1,363 | 1,342 | 1,422 | 1,360 | 1,300 |
| Total | 3,796 | 3,846 | 3,847 | 3,910 | 3,644 | 3,657 | 3,968 | 3,691 | 3,831 | 3,673 | 3,794 | 3,600 | 3,707 | 3,676 | 3,412 | 3,366 |

## Figure 20

## LOUISIANA REFINERY CRUDE OIL INPUT BY SOURCE




| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Other States | 43 | 44 | 40 | 47 | 35 | 47 | 45 | 57 | 32 | 20 | 40 | 34 | 36 | 39 | 39 | 41 |
| Louisiana | 122 | 134 | 132 | 121 | 106 | 100 | 101 | 90 | 88 | 82 | 71 | 74 | 78 | 72 | 69 | 67 |
| Federal OCS | 176 | 171 | 187 | 201 | 249 | 216 | 210 | 265 | 273 | 257 | 219 | 257 | 323 | 334 | 386 | 432 |
| Foreign | 461 | 479 | 477 | 481 | 481 | 476 | 491 | 493 | 509 | 561 | 572 | 562 | 504 | 452 | 391 | 421 |
| Total | 802 | 828 | 836 | 850 | 871 | 839 | 847 | 905 | 902 | 921 | 902 | 928 | 941 | 896 | 885 | 967 |

# Table 38

## LOUISIANA ENERGY CONSUMPTION ESTIMATES BY SOURCE [11]

| Year | Total Energy (TBTU) | Total Natural Gas (BCF) | Total Petroleum (MBBLS) | Total Coal (MST) | Total Nuclear (Million KWH) | Imp(+) Exp(-) Net Electic (Million KWH) |
|---|---|---|---|---|---|---|
| 1969 | 2,572.3 | 1,763 | 147,947 | N/A | 0 | 0 |
| 1970 | 2,701.4 | 1,841 | 150,456 | 0 | 0 | 0 |
| 1971 | 2,809.3 | 1,884 | 162,470 | 0 | 0 | 0 |
| 1972 | 2,989.3 | 1,940 | 184,947 | 0 | 0 | 0 |
| 1973 | 3,225.9 | 2,010 | 209,641 | 0 | 0 | 0 |
| 1974 | 3,313.3 | 2,008 | 218,882 | 0 | 0 | 0 |
| 1975 | 3,028.8 | 1,789 | 210,174 | 0 | 0 | 0 |
| 1976 | 3,419.1 | 2,044 | 234,995 | 0 | 0 | 0 |
| 1977 | 3,794.6 | 2,191 | 268,572 | 79 | 0 | 0 |
| 1978 | 3,930.1 | 2,249 | 277,765 | 172 | 0 | 0 |
| 1979 | 3,805.3 | 1,978 | 304,884 | 118 | 0 | 0 |
| 1980 | 3,651.3 | 1,794 | 293,743 | 111 | 0 | 0 |
| 1981 | 3,688.6 | 1,782 | 295,191 | 1363 | 0 | 0 |
| 1982 | 3,441.2 | 1,556 | 287,419 | 3724 | 0 | 0 |
| 1983 | 3,284.5 | 1,413 | 275,058 | 6154 | 0 | 0 |
| 1984 | 3,413.5 | 1,594 | 248,344 | 6,855 | 0 | 0 |
| 1985 | 3,192.5 | 1,386 | 240,776 | 9,217 | 2457 | 0 |
| 1986 | 3,353.4 | 1,439 | 260,602 | 10,459 | 10637 | 0 |
| 1987 | 3,435.5 | 1,501 | 257,313 | 10,391 | 12324 | 0 |
| 1988 | 3,473.1 | 1,446 | 271,773 | 12,848 | 13,785 | 0 |
| 1989 | 3,592.6 | 1,538 | 266,193 | 12,471 | 12,391 | 0 |
| 1990 | 3,623.8 | 1,571 | 259,533 | 12,547 | 14,197 | 0 |
| 1991 | 3,545.9 | 1,508 | 256,789 | 12,965 | 13,956 | 0 |
| 1992 | 3,636.0 | 1,546 | 268,559 | 13,674 | 10,356 | 656 |
| 1993 | 3,688.6 | 1,578 | 273,580 | 13,676 | 14,398 | 1232 |
| 1994 | 3,837.3 | 1,624 | 294,700 | 14,100 | 12,779 | 972 |
| 1995 | 3,837.2 | 1,718 | 288,998 | 13,357 | 15,686 | 952 |
| 1996 | 3,848.5 | 1,664 | 279,292 | 12,534 | 15,765 | 964 |
| 1997 | 3,828.0 | 1,659 | 258,290 | 13,874 | 13,511 | 1036 |
| 1998 | 3,564.0 | 1,568 | 248,094 | 13,891 | 16,428 | 1063 |
| 1999 | 3,608.6 | 1,495 | 278,926 | 13,953 | 13,112 | 802 |
| 2000 | 3,965.2 | 1,537 | 327,692 | 15,737 | 15,796 | 532 |
| 2001 | 3,712.6 | 1,306 | 325,828 | 14,934 | 17,336 | 732 |
| 2002 | 3,762.1 | 1,426 | 331,522 | 14,676 | 17,305 | 891 |
| 2003 | 3,693.3 | 1,308 | 300,899 | 15,592 | 16,126 | 892 |
| 2004 | 3,815.9 | 1,346 | 310,503 | 16,059 | 17,080 | 1099 |
| 2005 | 3,613.0 | 1,310 | 297,878 | 15,856 | 15,676 | 811 |
| 2006 | 3,763.8 | 1,298 | 320,703 | 16,410 | 16,735 | 955 |
| 2007 | 3,766.2 | 1,378 | 302,200 | 15,500 | 17,100 | 833 |
| 2008 | 3,487.5 | 1,314 | 275,200 | 16,400 | 15,400 | 146 |
| 2009 | 3,387.5 | 1,264 | 264,612 | 15,736 | 15,100 | 117 |

e Estimated r Revised p Preliminary

TBTU = Trillion BTU BCF = Billion Cubic Feet KWH = Kilowatt-hours

MBBLS = Thousand Barrels MST = Thousand Short Tons

See footnote in Appendix B.

# Table 39

## LOUISIANA REFINERY'S CRUDE OIL STATISTICS

| DATE | AVERAGE STOCK ON HAND (Barrels) | DAILY AVERAGE RUNS TO STILL (Barrels) | LICENSED REFINERIES |
|---|---|---|---|
| 1991 | 14,197,185 | 2,071,276 | 23 |
| 1992 | 14,331,412 | 2,090,248 | 22 |
| 1993 | 14,521,046 | 2,159,422 | 20 |
| 1994 | 15,126,534 | 2,150,403 | 19 |
| 1995 | 14,325,305 | 2,109,245 | 19 |
| 1996 | 14,462,108 | 2,252,573 | 19 |
| 1997 | 14,275,221 | 2,257,275 | 19 |
| 1998 | 14,965,117 | 2,312,239 | 19 |
| 1999 | 15,467,674 | 2,414,781 | 17 |
| 2000 | 14,818,774 | 2,334,842 | 16 |
| 2001 | 15,425,670 | 2,480,357 | 17 |
| 2002 | 16,335,210 | 2,470,556 | 18 |
| 2003 | 15,246,004 | 2,469,756 | 17 |
| 2004 | 15,938,390 | 2,543,087 | 18 |
| 2005 | 16,217,856 | 2,458,189 | 18 |
| 2006 | 16,741,544 | 2,528,319 | 17 |
| 2007 | 16,108,022 | 2,687,658 | 17 |
| 2008 | 16,248,826 | 2,440,984 | 18 |
| 2008 | 13,019,604 | 2,412,848 | 19 |
| | | | |
| January | 13,621,850 | 2,117,149 | 19 |
| February | 13,361,331 | 2,039,755 | 19 |
| March | 15,158,713 | 2,376,899 | 19 |
| April | 14,754,289 | 2,810,551 | 19 |
| May | 14,234,034 | 2,799,208 | 19 |
| June | 13,631,902 | 2,829,975 | 19 |
| July | 15,282,793 | 2,841,795 | 19 |
| August | 14,722,037 | 2,727,811 | 19 |
| September | 14,595,680 | 2,766,679 | 19 |
| October | 14,261,974 r | 2,735,788 | 19 |
| November | 12,468,270 r | 2,775,824 r | 19 |
| December | 14,112,155 r | 2,765,949 r | 19 |
| **2010 Average** | **14,183,752 r** | **2,632,282 r** | **19** |
| | | | |
| January | 13,479,992 | 2,707,889 | 19 |
| February | 13,218,569 | 2,763,908 | 19 |
| March | 12,625,306 | 2,822,433 | 19 |
| April | 13,781,083 | 2,683,560 | 19 |
| May | 13,893,397 | 2,849,720 | 19 |
| June | 14,471,921 | 2,767,935 | 19 |
| July | 14,301,079 | 2,730,175 | 19 |
| August | 14,446,982 | 2,846,656 | 19 |
| September | 13,238,609 | 2,643,909 | 19 |
| October | 12,509,906 | 2,629,138 | 19 |
| November | 12,815,306 e | 2,665,560 e | 19 |
| December | 13,559,992 e | 2,715,889 e | 19 |
| **2011 Average** | **13,528,512** e | **2,735,564** e | **19** |

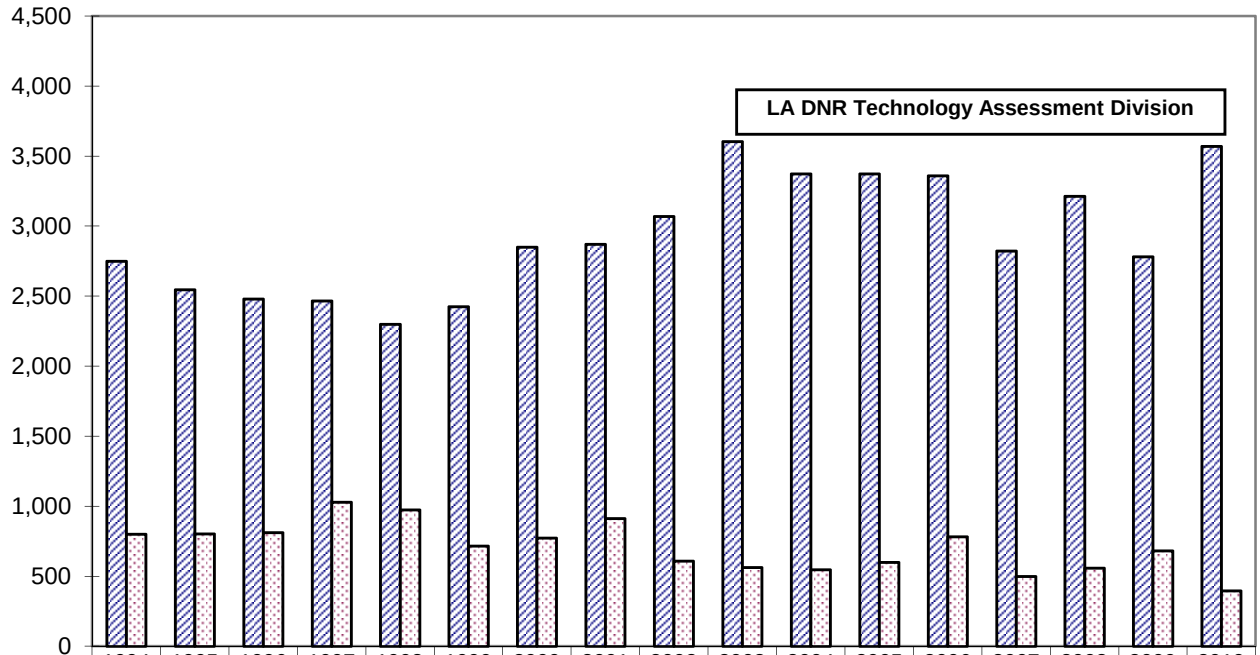
e Estimated r Revised p Preliminary

**Exxon-Mobil Refinery - Baton Rouge**

## Figure 21

## LOUISIANA LIGNITE PRODUCTION BY MINE SOURCE

(Thousand Tons Shipped)




| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dolet Hills | 2,750 | 2,546 | 2,480 | 2,466 | 2,301 | 2,426 | 2,850 | 2,872 | 3,069 | 3,604 | 3,373 | 3,374 | 3,361 | 2,823 | 3,213 | 2,783 | 3,571 |
| Oxbow | 800 | 804 | 812 | 1,029 | 974 | 717 | 773 | 912 | 609 | 564 | 548 | 599 | 783 | 500 | 559 | 681 | 397 |
| Total | 3,550 | 3,350 | 3,292 | 3,495 | 3,275 | 3,143 | 3,622 | 3,784 | 3,678 | 4,168 | 3,921 | 3,973 | 4,144 | 3,323 | 3,772 | 3,464 | 3,993 |

# Table 40

## LOUISIANA ELECTRIC UTILITIES NET ELECTRICITY GENERATION[14] BY FUEL TYPE

**(Million KWH)**

| YEAR | COAL | LIGNITE | OIL | GAS | NUCLEAR | TOTAL |
|---|---|---|---|---|---|---|
| 1971 | 0 | 0 | N/A | N/A | 0 | 37,118 |
| 1972 | 0 | 0 | N/A | N/A | 0 | 39,348 |
| 1973 | 0 | 0 | 14,353 | 36,351 | 0 | 40,704 |
| 1974 | 0 | 0 | 5,034 | 34,472 | 0 | 39,506 |
| 1975 | 0 | 0 | 3,257 | 35,967 | 0 | 39,224 |
| 1976 | 0 | 0 | 7,773 | 37,343 | 0 | 45,116 |
| 1977 | 0 | 0 | 13,255 | 35,196 | 0 | 48,451 |
| 1978 | 0 | 0 | 14,568 | 36,935 | 0 | 51,503 |
| 1979 | 0 | 0 | 8,259 | 38,396 | 0 | 46,655 |
| 1980 | 0 | 0 | 4,787 | 40,952 | 0 | 45,739 |
| 1981 | 1,529 | 0 | 2,634 | 39,947 | 0 | 44,110 |
| 1982 | 4,998 | 0 | 940 | 35,594 | 0 | 41,532 |
| 1983 | 8,377 | 0 | 356 | 28,311 | 0 | 37,044 |
| 1984 | 9,830 | 0 | 140 | 29,360 | 0 | 39,330 |
| 1985 | 13,968 | 0 | 100 | 27,736 | 2,457 | 44,261 |
| 1986 | 12,642 | 2,884 | 419 | 26,202 | 10,637 | 52,784 |
| 1987 | 12,176 | 2,926 | 60 | 23,823 | 12,324 | 51,309 |
| 1988 | 14,372 | 4,059 | 272 | 24,286 | 13,785 | 56,774 |
| 1989 | 14,227 | 3,854 | 298 | 21,900 | 12,391 | 52,670 |
| 1990 | 13,890 | 3,910 | 130 | 26,041 | 14,197 | 58,168 |
| 1991 | 14,786 | 4,126 | 45 | 24,245 | 13,956 | 57,158 |
| 1992 | 15,613 | 4,183 | 483 | 24,554 | 10,356 | 55,188 |
| 1993 | 15,794 | 3,572 | 1,838 | 23,751 | 14,398 | 59,353 |
| 1994 | 15,761 | 4,364 | 680 | 26,586 | 12,779 | 60,170 |
| 1995 | 14,632 | 4,321 | 49 | 30,867 | 15,686 | 65,555 |
| 1996 | 14,630 | 4,002 | 273 | 23,972 | 15,765 | 58,643 |
| 1997 | 16,453 | 4,499 | 646 | 26,010 | 13,511 | 61,120 |
| 1998 | 16,131 | 4,631 | 600 | 28,318 | 16,428 | 66,107 |
| 1999 | 16,386 | 4,780 | 397 | 30,162 | 13,112 | 64,837 |
| 2000 | 14,484 * | N/A | 625 | 26,696 | 15,796 | 57,601 |
| 2001 | 10,917 * | N/A | 1,722 | 20,402 | 17,336 | 50,378 * |
| 2002 | 12,259 * | N/A | 68 | 25,086 | 17,305 | 54,922 * |
| 2003 | 11,020 * | N/A | 1,008 | 15,094 | 16,126 | 43,485 * |
| 2004 | 11,324 * | N/A | 3,694 | 15,139 | 17,080 | 47,604 * |
| 2005 | 11,416 * | N/A | 3,378 | 13,688 | 15,676 | 44,158 * |
| 2006 | 11,545 * | N/A | 1,757 | 10,854 | 16,735 | 40,891 * |
| 2007 | 10,736 * | N/A | 1,977 | 13,872 | 17,078 | 43,523 * |
| 2008 | 11,213 * | N/A | 1,901 | 14,680 | 15,371 | 43,164 * |
| 2009 | 11,025 * | N/A | 1,460 | 14,325 | 16,782 | 43,592 * |
| 2010 | 11,226 * | N/A | 2,891 | 18,924 | 18,639 | 51,601 * |

* Cajun Electric Power Cooperative's purchase by Louisiana Generating LLC changed their classification from electric utility to independent power producer.

e Estimated r Revised

See footnotes on Appendix B

# APPENDICES



The Sol of New Orleans II
The University of New Orleans's solar powered car

# Appendix A

## Abbreviations

| | |
|---|---|
| BCF | Billion Cubic Feet |
| BTU | British Thermal Unit |
| DNR | Louisiana Department of Natural Resources |
| DOE | United States Department of Energy |
| DOI | United States Department of the Interior |
| EIA | Energy Information Administration, DOE |
| FOB | Free on Board |
| GOM | Gulf of Mexico |
| KWH | Kilowatt-hours |
| MBBLS | Thousand Barrels |
| MCF | Thousand Cubic Feet |
| MMS | Minerals Management Service, DOI |
| MST | Thousand Short Tons |
| NGC | Natural Gas Clearinghouse |
| OCS | Outer Continental Shelf |
| OPEC | Organization of Petroleum Exporting Countries |
| RAC | Refinery Acquisition Costs |
| SLS | South Louisiana Sweet Crude Oil |
| SPR | Strategic Petroleum Reserve |
| TBTU | Trillion BTU |
| TCF | Trillion Cubic Feet |

## State Abbreviations Used in the Louisiana Energy Facts Annual

| | | | |
|---|---|---|---|
| AL | Alabama | MS | Mississippi |
| AK | Alaska | MT | Montana |
| AR | Arkansas | ND | North Dakota |
| CA | California | NM | New Mexico |
| CO | Colorado | OK | Oklahoma |
| IL | Illinois | PA | Pennsylvania |
| KS | Kansas | TX | Texas |
| LA | Louisiana | UT | Utah |
| MI | Michigan | WY | Wyoming |

# Appendix B

# Data Sources*

1. EMPLOYMENT AND TOTAL WAGES PAID BY EMPLOYERS SUBJECT TO LOUISIANA EMPLOYMENT SECURITY LAW, Baton Rouge, LA: Louisiana Department of Labor, Office of Employment Security, Research and Statistics Unit.

2. MONTHLY ENERGY REVIEW and ANNUAL ENERGY REVIEW, Washington, D.C.: U.S. Department of Energy, Energy Information Administration.

3. NATURAL GAS MONTHLY and NATURAL GAS ANNUAL, Washington, D.C.: U.S. Department of Energy, Energy Information Administration.

4. Baker Hughes from OIL & GAS JOURNAL, Tulsa, OK: PennWell Publishing Co.

5. October 2002 to Present, NATURAL GAS WEEK, Washington, D.C.: Energy Intelligence Group. Prior, SURVEY OF DOMESTIC SPOT MARKET PRICES, Houston, TX: Dynegy Inc. (formerly Natural Gas Clearinghouse).

6. PETROLEUM MARKETING MONTHLY and PETROLEUM MARKETING ANNUAL, Washington, D.C.: U.S. Department of Energy, Energy Information Administration.

7. PETROLEUM SUPPLY MONTHLY and PETROLEUM SUPPLY ANNUAL, Washington, D.C.: U.S. Department of Energy, Energy Information Administration.

8. SEVERANCE TAX, Baton Rouge, LA: Louisiana Department of Revenue and Taxation, Severance Tax Section.

9. U.S. CRUDE OIL, NATURAL GAS and NATURAL GAS LIQUIDS RESERVES, Washington, D.C.: U.S. Department of Energy, Energy Information Administration.

10. THE WALL STREET JOURNAL, Gulf Coast Edition, Beaumont, TX: Dow Jones and Company.

11. STATE ENERGY DATA REPORT, Washington, D.C.: U.S. Department of Energy, Energy Information Administration.

12. FEDERAL OFFSHORE STATISTICS, Washington, D.C.: U.S. Department of the Interior, Bureau of Ocean Energy Management, Regulation, and Enforcement.

13. NATURAL RESOURCES REVENUE, Denver, CO: U.S. Department of the Interior, Office of Natural Resources Revenue.

14. ELECTRIC POWER MONTHLY, Washington, D.C.: U.S. Department of Energy, Energy Information Administration.

- Unless otherwise specified, data is from the Louisiana Department of Natural Resources.

## An Explanation of Changes in Oil and Gas Statistics

**Note # 1**

Current production data and all future reports will reflect changes due to modifications in the reporting system by the Department of Natural Resources Office of Conservation, Production Audit Section. Only the oil and gas production data in state jurisdiction is affected.

The new data for oil will not include crude oil, condensate or raw make recovered from natural gas processing plants. In the past these products were added to the state production as crude oil or condensate.

A separate report on gas plants liquids production is not available at the present.

In addition, the gas data system has been adjusted to reflect reporting production on the date produced. Previously it had been reported on the date first purchased.

The new reporting system should produce more accurate and timely data.

The Technology Assessment Division is not the source of these data sets, but merely reports data provided to us by the Office of Conservation. However, we understand that users of our time series data need consistency over time. For that reason our time series has been adjusted backwards to 1980 using these new definitions.

**Note # 2**

Producing oil and gas well data since 2000 reflect changes due to modifications in the reporting system by the Department of Natural Resources Office of Conservation.

The new data for oil and natural gas producing wells count them as productive if they had any production in the month, previous system counted only the producing wells at the end of the month. The new reporting system should produce more accurate and timely data.

The Technology Assessment Division is not the source of these data sets, but merely reports data provided to us by the Office of Conservation. However, we understand that users of our time series data need consistency over time, but due to lack of accurate information the time series has been adjusted backwards to 2000 using the new system.

Other factors that affected the big increase on wells numbers are the big jump on energy prices around 2000, and the inactive wells

# Outer Continental Shelf Lands Act (OCSLA)

The OCSLA of 1953 (67 Stat. 462), as amended (43 U.S.C. 1331 et seq. (1988)) established Federal jurisdiction over submerged lands on the Outer Continental Shelf (OCS) seaward of State boundaries. Under the OCSLA, the Secretary of the Interior is

responsible for the administration of mineral exploration and development of the OCS. The Act empowers the Secretary to grant leases to the highest qualified responsible bidder(s) on the basis of sealed competitive bids and to formulate such regulations as necessary to carry out the provisions of the Act. The Act, as amended, provides guidelines for implementing an OCS oil and gas exploration and development program. The basic goals of the Act include the following:

1. To establish policies and procedures for managing the oil and natural gas resources of the OCS that are intended to result in expedited exploration and development of the OCS in order to achieve national economic and energy policy goals, assure national security, reduce dependence on foreign sources, and maintain a favorable balance of payments in world trade.
2. To preserve, protect, and develop oil and natural gas resources of the OCS in a manner that is consistent with the need
    (a) to make such resources available to meet the nation's energy needs as rapidly as possible;
    (b) to balance orderly resource development with protection of the human, marine, and coastal environments;
    (c) to ensure the public a fair and equitable return on the resources of the OCS;
    (d) to preserve and maintain free enterprise competition.
3. To encourage development of new and improved technology for energy resource production, this will eliminate or minimize risk of damage to the human, marine, and coastal environments.

Royalty revenues from Federal offshore leases on the 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 OCSLA 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 amendments required that the affected coastal state will receive 27 percent of the

revenues generated from the leasing and development of oil and natural gas resources located in the Federal 8(g) zone. The law provided for the following distribution of revenues to Louisiana 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 through 1991, Louisiana received an annual settlement payment of $2.52 million per year. From 1992 through 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.

## Gulf of Mexico Energy Security Act (GOMESA)

On December 20, 2006, the President signed into law the GOMESA of 2006 (Pub. Law 109-432). The Act significantly enhances OCS oil and gas leasing activities and revenue sharing in the Gulf of Mexico (GOM). The Act:

A. Stipulated that 8.3 million acres be offered for oil and gas leases. This acreage is included in both the Central Gulf Planning Area and the Eastern Gulf Planning Area. The 8.3 million acres consist of approximately 2 million acres in the Central Gulf was first that was offered for lease after enactment of the law was and was included in Lease Sale 205 in October 2007; additional .5 million acres in the Eastern Gulf received additional environmental review and was offered in Lease Sale 224 in March 2008; and the remaining 5.8 million acres in the Central Gulf was offered for leasing at Lease Sale 208 in March, 2009.

B. Updated moratoria (bans) areas in the Gulf. Those tracts in the Eastern Gulf of Mexico that are within 125 miles of Florida, all tracts east of the Military Mission Line, and tracts in the Central Gulf of Mexico within 100 miles of Florida that are included in the moratorium area which extends until 2022.

C. Created revenue sharing provisions for four Gulf oil and gas producing States – Alabama, Louisiana, Mississippi and Texas, and their coastal political subdivisions. There are two phases in the GOMESA revenue sharing.

   a. Phase 1: Covers Fiscal Year 2007 through Fiscal Year 2016, 37.5 percent of all qualified OCS revenues will be shared among the four States (30%) and subdivisions (7.5%) for those new leases in the .5 million acres in the Eastern Gulf and the 5.8 million acres in the Central Gulf. Qualified OCS revenues are bonuses, selected rentals and production royalty (including RIK sales, except SPR transfer). Additionally, 12.5 percent of revenues are allocated to the Land and Water Conservation Fund (LWCF). The final regulations for Phase I revenue sharing were issued on December 23, 2008 and specify that the MMS intends to disburse funds on or before March 31st of the fiscal year following the fiscal year to which the qualified OCS revenues were attributed.

   b. Phase 2: Covers Fiscal Year 2017 and beyond, the four States and subdivisions will share 37.5 percent of revenues from all Gulf leases issued after December 20, 2006. GOMESA funds are to be used for coastal conservation, restoration and hurricane protection.

D. Allowed for the exchange of existing leases in the moratorium areas for bonus or royalty credit to be used in the Gulf of Mexico. A credit will be provided to lessees who relinquish certain eligible leases in the Gulf of Mexico. Leases are considered eligible if they lie within 125 miles of the Florida coast in the Eastern Planning Area or within 100 miles of the Florida coast in the Central Planning Area. The lessees will be allowed to use the credits in lieu of monetary payment for either a lease bonus bid or royalty due on oil and gas production from most other leases in the Gulf of Mexico or transfer the credits to other Gulf of Mexico lessees for their use.

# Appendix C

# Glossary

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

**Casinghead Gas**. All natural gas released from oil during the production of oil from underground reservoirs.

**City-Gate**. A point or measuring station at which a gas distribution company receives gas from a pipeline company or transmission system.

**Commercial Consumption**. Gas used by non-manufacturing organizations such as hotels, restaurants, retail stores, laundries, and other service enterprises. This also includes gas used by local, state, and federal agencies engaged in non-manufacturing activities.

**Condensate**. (See Lease Condensate)

**Crude Oil**. A mixture of hydrocarbons that existed in the liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities.

## CRUDE OIL PRICES

**Domestic Wellhead**. The average price at which all domestic crude oil is first purchased.

**Imports FOB**. The price actually charged at the producing country's port of loading. It is the responsibility of the buyer to arrange for transportation and insurance.

**Imports Landed**. The dollar per barrel price of crude oil at the port of discharge. It includes crude oil landed in the U.S. and U.S. company-owned refineries in the Caribbean, but excludes crude oil from countries that export only small amounts to the United States. The landed price does not include charges incurred at the port of discharge.

**Imports OPEC FOB**. The average price actually charged by OPEC at their country's port of loading. This price does not include transportation or insurance.

**OCS Gulf**. The average price at which all offshore, Outer Continental Shelf, Central Gulf region crude oil is first purchased as reported by the U.S. Department of Energy, Energy Information Administration.

**Refinery Acquisition Costs** (RAC). The average price paid by refiners in the U.S. for crude oil booked into their refineries in accordance with accounting procedures generally accepted and consistently and historically applied by the refiners.

a) **Domestic**. The average price of crude oil produced in the United States or from the Outer Continental Shelf of the U.S.

b**) Imports**. The average price of any crude oil not reported as domestic.

**Refinery Posted**. The average price from a survey of selected refiners' postings for Light Louisiana Sweet (LLS) crude, which is effective at the middle and at the end of the month.

**Severance Tax**. The average wellhead price calculated from oil severance taxes paid to the Louisiana Department of Revenue and Taxation.

**Spot Market**. The spot market crude oil price is the average of daily Light Louisiana Sweet (LLS) crude price futures traded in the month and usually includes transportation from the producing field to the St. James, Louisiana terminal.

**State**. The average price at which all Louisiana crude oil, excluding Louisiana OCS, is first purchased as reported in a survey by the U.S. Department of Energy, Energy Information Administration.

**State Royalty**. The average wellhead price from its royalty share of oil produced in state lands or water bottoms. The price is calculated by the ratio of received oil royalty gross revenue divided by royalty volume share reported to the Louisiana Department of Natural Resources.

**Developmental Well**. Wells drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

**Dry Gas**. (See Natural Gas, "Dry")

**Dry Hole**. An exploratory or developmental well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.

**Electric Utility Consumption**. Gas used as fuel in electric utility plants.

**Exploratory Well**. A well drilled to find and produce oil or gas in an unproved area, to find a new reservoir in an old field, or to extend the limits of a known oil or gas reservoir.

**Exports**. Crude oil or natural gas delivered out of the Continental United States and Alaska to foreign countries.

**Extraction Loss**. The reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants.

**Federal Offshore or Federal OCS**. (See Louisiana OCS)

**FOB Price** (Free on board). The price actually charged at the producing country's port of loading. The reported price includes deductions for any rebates and discounts or additions of premiums where applicable and should be the actual price paid with no adjustment for credit terms.

**Gate**. (See City-Gate)

**Gross Revenue**. Amount of money received from a purchaser, including charges for field gathering, transportation from wellhead to purchaser receiving terminal, and state production severance tax.

**Gross Withdrawals**. (See Natural Gas, Gross Withdrawals)

**Imports**. Crude oil or natural gas received in the Continental United States, Alaska, and Hawaii from foreign countries.

**Industrial Consumption**. Natural gas used by manufacturing and mining establishments for heat, power, and chemical feedstock.

**Lease Condensate**. A mixture consisting primarily of pentane and heavier hydrocarbons that 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.

**Lease Separator**. A facility installed at the surface for the purpose of: (a) Separating gases from produced crude oil and water at the temperature and pressure conditions of the separator, and/or (b) separating gases from that portion of the produced natural gas stream which liquefies at the temperature and pressure conditions of the separator.

**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.

**Louisiana Offshore**. A 3-mile strip of submerged lands under state regulatory jurisdiction located between the State coast line and the OCS region.

**Louisiana Onshore**. Region defined by the State boundary and the coast line.

**Major Pipeline Company**. A company whose combined sales for resale, and gas transported interstate or stored for a fee, exceeded 50 million thousand cubic feet in the previous year.

**Marketed Production**. (See Natural Gas, Marketed Production)

**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 that 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, "Dry"**. The actual or calculated volume of natural gas which remains after: (a) The liquefiable hydrocarbon portion has been removed from the gas stream, and (b) any volumes of non-hydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable.

**Natural Gas, Gross Withdrawals**. It is the full well-stream volume, including all natural gas plant liquids and all non-hydrocarbon gases, but excluding lease condensate.

**Natural Gas Liquids**. Lease condensate plus natural gas plant liquids.

**Natural Gas, Marketed Production**. Gross withdrawals less gas used for pressurizing, quantities vented and flared, and non-hydrocarbon gases removed in treating or processing operations. It includes all quantities of gas used in field and processing operations.

**Natural Gas, OCS Gas**. OCS gas volume is as reported. Most are "dry" gas, though some are "wet" gas.

**Natural Gas Plant Liquids**. Those hydrocarbons remaining in a natural gas stream after field separation and 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.

## NATURAL GAS PRICES

**Henry Hub Settled NYMEX.** The last trading day price for the month before delivery posted in the New York Mercantile Exchange for natural gas at Henry Hub.

**Spot Market.** The average price of natural gas paid at the regional spot market receipt points or zones as reported by the Energy Intelligence Group's NATURAL GAS WEEK. The data are a volume weighted average and reflect market activity information gathered during the entire month before the publication date, regardless of delivery date. The data are not an arbitrary weighting by production zone, but a true deal-by-deal volume weighting of prices gathered. Data prior to October 2002 were from Dynegy's survey of the domestic natural gas spot market receipt points or zones located in Louisiana. The new and old points or zones are as follows:

**NATURAL GAS PIPELINES AND SALES POINTS FOR PRICES**

| Dynegy | Natural Gas Week |
|---|---|
| ANR | ANR |
| Eunice, LA | Patterson, LA |
| COLUMBIA GULF | COLUMBIA GULF TRANSMISSION CO. |
| Average Louisiana onshore laterals | Average of Erath, Rayne, and Texaco Henry Plant in Louisiana |
| LOUISIANA INTRASTATES | LOUISIANA INTRASTATES |
| Average of Faustina, Bridgeline, LIG, and Monterrey pipelines | Average of LIG, Bridgeline, LRC, and Acadian pipelines |
| SOUTHERN NATURAL | SONAT |
| South Louisiana | Saint Mary Parish, LA |
| TENNESSEE GAS | TENNESSEE GAS |
| Vinton, LA | Average Zone 1 of 500 & 800 |
| TEXAS GAS TRANSMISSION | TEXAS GAS TRANSMISSION |
| Zone 1 (North Louisiana) | Zone 1 (North Louisiana) |
| GULF SOUTH PIPELINE | TRUNKLINE GAS CO. |
| | HENRY HUB |

**OCS.** The average wellhead price calculated from sales and volumes from Louisiana OCS natural gas as reported by the U.S. Department of Interior, Minerals Management Service.

**State Royalty**. The average wellhead price calculated from revenue received and volumes reported to the Louisiana Department of Natural Resources.

**State Wells**. The average price of gas sold at Louisiana wellhead. This price includes: (a) Value of natural gas plant liquids subsequently removed from the gas, (b) gathering and compression charges, and (c) state production, severance, and/or similar charges.

**MAJOR PIPELINES PURCHASES**.

a) **Domestic Producers**. The average price of natural gas produced in the United States or from the Outer Continental Shelf of the U.S.

b**) Foreign Imports**. The average price of any natural gas not reported as domestic.

**Wellhead**. The wellhead sales price including: (a) Value of natural gas plant liquids subsequently removed from the gas, (b) gathering and compression charges, and (c) state production, severance, and/or similar charges.

**Natural Gas, Wet After Lease Separation**. The volume of natural gas, if any, remaining after: (a) Removal of lease condensate in lease and/or field separation facilities, and (b) exclusion of non-hydrocarbon gases where they occur in sufficient quantities to render the gas unmarketable. Also excludes gas returned to formation in pressure maintenance and secondary recovery projects and gas returned to earth from cycling and/or gasoline plants. Natural gas liquids may be recovered from volumes of natural gas, wet after lease separation, at natural gas processing plants.

**Organization of Petroleum Exporting Countries (OPEC)**. Countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

**Outer Continental Shelf (OCS).** All submerged lands that comprise the Continental Margin adjacent to the U.S. and seaward of the state offshore lands. Production in the OCS is under federal regulatory jurisdiction and ownership.

**Processing Plant**. A facility designed to recover natural gas liquids from a stream of natural gas which may or may not have passed through lease separators and/or field separation facilities. Another function of natural gas processing plants is to control the quality of the processed natural gas stream.

**Proved Reserves of Crude Oil**. As of December 31 of the report year, the estimated quantities of all liquids defined as crude oil which geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions. Volumes of crude oil in underground storage are not considered proved reserves.

**Proved Reserves of Lease Condensate**. The volumes of lease condensate as of December 31 of the report year expected to be recovered in future years in conjunction with the production of proved reserves of natural gas as of December 31 of the report year.

**Proved Reserves of Natural Gas**. The estimated quantities of natural gas as of December 31 of the report year which analysis of geologic and engineering data demonstrates with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions. Volumes of natural gas in underground storage are not considered proved reserves.

**Proved Reserves of Natural Gas Liquids**. The volumes of natural gas liquids (including lease condensate) as of December 31 of the report year, which analysis of

geologic and engineering data demonstrates with reasonable certainty to be separable in the future from proved natural gas reserves under existing economic and operating conditions.

**Rental**. Money paid by the lessee to maintain the lease after the first year if it is not producing. A lease is considered expired when rental is not paid on time on an unproductive lease.

**Reservoir**. A porous and permeable underground formation containing an individual and separate natural accumulation of producible hydrocarbons (oil and/or gas) which is confined by impermeable rock or water barriers and is characterized by a single natural pressure system. Reservoirs are considered proved if economic producibility is supported by actual production or conclusive formation tests (drill stem or wire line), or if economic producibility is supported by core analysis and/or electric or other log interpretations. The area of a gas or oil reservoir considered proved includes: (a) That portion delineated by drilling and defined by gas-oil and/or gas-water contacts, if any; and (b) the immediately adjoining portions not yet drilled, but which can be reasonably judged as economically productive on the basis of available geological and engineering data.

**Residential Consumption**. Gas used in private dwellings, including apartments, for heating, cooking, water heating, and other household uses.

**Royalty (Including Royalty Override) Interest**. Those interests which entitle their owner(s) to a share of the mineral production from a property or to a share of the proceeds from there. These interests do not contain the rights and obligations of operating the property and normally do not bear any of the costs of exploration, development, or operation of the property.

**Royalty Override (Or Overriding Royalty)**. 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 & Miller defines overriding royalty as a percentage of all revenue earned by a well and carrying no cost obligation.

**State Offshore. (**See Louisiana Offshore**)**

**Wet After Lease Separation.** (See Natural Gas, Wet After Lease Separation)

**Wildcat Well.** (See Developmental Well)

Appendix D

# Gas Production at 14.73 psia

**Page**



# Appendix D-1

## LOUISIANA STATE GAS PRODUCTION, WET AFTER LEASE SEPARATION

**Natural Gas and Casinghead Gas, Excluding OCS**

**(Thousand Cubic Feet (MCF) at 14.73 psia and 60 degrees Fahrenheit)***

| DATE | NORTH | SOUTH | OFFSHORE | TOTAL |
|---|---|---|---|---|
| 1990 | 411,990,694 | 1,194,394,888 | 148,392,174 | 1,754,777,755 |
| 1991 | 394,486,602 | 1,178,953,537 | 116,788,989 | 1,690,229,128 |
| 1992 | 380,916,600 | 1,188,458,789 | 116,287,491 | 1,685,662,880 |
| 1993 | 367,510,962 | 1,160,338,473 | 126,526,532 | 1,654,375,967 |
| 1994 | 361,971,515 | 1,090,345,158 | 130,967,154 | 1,583,283,827 |
| 1995 | 374,569,365 | 1,067,857,751 | 139,240,110 | 1,581,667,226 |
| 1996 | 423,597,332 | 1,085,724,307 | 162,694,485 | 1,672,016,124 |
| 1997 | 450,692,967 | 1,028,512,775 | 164,180,018 | 1,643,385,760 |
| 1998 | 437,854,747 | 1,028,913,898 | 147,211,205 | 1,613,979,851 |
| 1999 | 393,199,782 | 976,555,159 | 118,149,642 | 1,487,904,583 |
| 2000 | 389,046,189 | 998,183,657 | 109,700,568 | 1,496,930,414 |
| 2001 | 398,669,527 | 1,013,161,682 | 113,437,548 | 1,525,268,757 |
| 2002 | 394,821,438 r | 894,110,994 r | 100,203,563 r | 1,389,135,995 |
| 2003 | 424,829,404 r | 861,626,563 r | 85,083,840 r | 1,371,539,808 |
| 2004 | 484,946,605 r | 822,311,081 r | 69,498,690 r | 1,376,756,377 |
| 2005 | 548,641,901 r | 707,489,823 r | 54,557,630 r | 1,310,689,355 |
| 2006 | 583,273,660 r | 725,050,318 r | 68,621,268 r | 1,376,945,246 |
| 2007 | 623,722,576 r | 685,754,611 r | 72,842,683 r | 1,382,319,870 |
| 2008 | 698,675,491 r | 602,867,272 r | 85,616,475 r | 1,387,159,238 |
| 2009 | 980,286,302 r | 502,072,473 r | 76,366,093 r | 1,558,724,867 r |
| | | | | |
| January | 111,820,887 r | 35,455,985 r | 5,732,750 r | 153,009,622 r |
| February | 107,376,276 r | 33,398,193 r | 4,896,567 r | 145,671,036 r |
| March | 128,182,414 r | 36,929,875 r | 3,522,023 r | 168,634,313 r |
| April | 126,057,589 r | 35,281,739 r | 6,452,357 r | 167,791,684 r |
| May | 136,331,941 r | 36,281,996 r | 5,976,436 r | 178,590,372 r |
| June | 141,873,115 r | 34,485,759 r | 6,219,390 r | 182,578,264 r |
| July | 152,684,685 r | 35,413,161 r | 6,568,067 r | 194,665,914 r |
| August | 156,999,670 r | 35,465,800 r | 6,469,857 r | 198,935,326 r |
| September | 158,199,232 r | 34,648,736 r | 5,732,171 r | 198,580,139 r |
| October | 163,128,646 r | 34,716,777 r | 6,385,554 r | 204,230,976 r |
| November | 168,218,280 r | 32,445,958 r | 5,371,551 r | 206,035,789 r |
| December | 180,050,795 r | 34,522,849 r | 6,398,320 r | 220,971,964 r |
| **2010 Total** | **1,730,923,529 r** | **419,046,828 r** | **69,725,044 r** | **2,219,695,400 r** |
| | | | | |
| January | 184,532,146 | 34,565,583 | 5,926,817 | 225,024,545 |
| February | 172,546,578 | 31,592,180 | 5,444,208 | 209,582,966 |
| March | 205,334,787 | 35,105,392 | 6,378,258 | 246,818,437 |
| April | 203,043,387 | 33,633,766 | 5,799,321 | 242,476,474 |
| May | 214,691,012 | 34,072,919 | 5,985,111 | 254,749,042 |
| June | 204,747,052 | 32,797,373 | 5,550,074 | 243,094,499 |
| July | 215,686,189 | 34,961,386 | 5,757,856 | 256,405,432 |
| August | 223,618,671 | 34,955,485 | 6,192,620 | 264,766,776 |
| September | 222,325,012 | 31,695,361 | 5,445,716 | 259,466,089 |
| October | 228,812,543 | 35,704,920 | 5,832,057 | 270,349,520 |
| November | 205,917,386 p | 31,430,568 p | 5,601,317 p | 242,949,271 p |
| December | 206,893,086 e | 32,828,467 e | 5,778,842 e | 245,500,395 e |
| **2011 Total** | **2,488,147,849** e | **403,343,400** e | **69,692,197** e | **2,961,183,446** e |

e Estimated r Revised p Preliminary

* See Table 11 corresponding volumes at 15.025 psia and footnote in Appendix B.

# Appendix D-2

## LOUISIANA TOTAL GAS PRODUCTION, WET AFTER LEASE SEPARATION

**Natural Gas and Casinghead Gas**

**(Thousand Cubic Feet (MCF) at 14.73 psia and 60 degrees Fahrenheit)***

| DATE | ONSHORE | OFFSHORE | | TOTAL |
|---|---|---|---|---|
| | | State | Federal OCS[12] | |
| 1990 | 1,606,385,582 | 148,392,174 | 3,706,324,064 | 5,461,101,819 |
| 1991 | 1,573,440,139 | 116,788,989 | 3,289,968,620 | 4,980,197,748 |
| 1992 | 1,569,375,389 | 116,287,491 | 3,338,101,465 | 5,023,764,345 |
| 1993 | 1,527,849,435 | 126,526,532 | 3,386,808,671 | 5,041,184,638 |
| 1994 | 1,452,316,673 | 130,967,154 | 3,492,406,781 | 5,075,690,608 |
| 1995 | 1,442,427,115 | 139,240,110 | 3,636,068,016 | 5,217,735,242 |
| 1996 | 1,509,321,639 | 162,694,485 | 3,783,483,306 | 5,455,499,430 |
| 1997 | 1,479,205,742 | 164,180,018 | 3,901,964,998 | 5,545,350,758 |
| 1998 | 1,466,768,646 | 147,211,205 | 3,890,978,799 | 5,504,958,650 |
| 1999 | 1,369,754,941 | 118,149,642 | 3,913,456,139 | 5,401,360,722 |
| 2000 | 1,387,229,846 | 109,700,568 | 3,837,150,457 | 5,334,080,871 |
| 2001 | 1,411,831,209 | 113,437,548 | 3,895,134,261 | 5,420,403,019 |
| 2002 | 1,288,932,431 r | 100,203,563 r | 3,527,116,066 | 4,916,252,060 |
| 2003 | 1,286,455,968 r | 85,083,840 r | 3,342,004,232 | 4,713,544,040 |
| 2004 | 1,307,257,686 r | 69,498,690 r | 2,897,440,676 | 4,274,197,053 |
| 2005 | 1,256,131,724 r | 54,557,630 r | 2,229,362,826 e | 3,540,052,181 e |
| 2006 | 1,308,323,978 r | 68,621,268 r | 2,089,462,261 e | 3,466,407,507 e |
| 2007 | 1,309,477,187 r | 72,842,683 r | 2,062,554,663 e | 3,444,874,533 e r |
| 2008 | 1,301,542,763 r | 85,616,475 r | 1,677,562,129 e | 3,064,721,367 e r |
| 2009 | 1,482,358,774 r | 76,366,093 r | 1,761,781,308 e | 3,320,506,175 e r |
| January | 147,276,872 r | 5,732,750 r | 149,654,695 e | 302,664,317 e r |
| February | 140,774,469 r | 4,896,567 r | 139,964,015 e | 285,635,050 e r |
| March | 165,112,289 r | 3,522,023 r | 154,828,468 e | 323,462,781 e r |
| April | 161,339,327 r | 6,452,357 r | 142,345,546 e | 310,137,230 e r |
| May | 172,613,936 r | 5,976,436 r | 140,625,391 e | 319,215,763 e r |
| June | 176,358,874 r | 6,219,390 r | 135,132,991 e | 317,711,255 e r |
| July | 188,097,846 r | 6,568,067 r | 132,895,349 e | 327,561,262 e r |
| August | 192,465,469 r | 6,469,857 r | 140,045,378 e | 338,980,704 e r |
| September | 192,847,968 r | 5,732,171 r | 133,357,366 e | 331,937,505 e r |
| October | 197,845,423 r | 6,385,554 r | 138,135,447 e | 342,366,423 e r |
| November | 200,664,238 r | 5,371,551 r | 125,535,856 e | 331,571,645 e r |
| December | 214,573,644 r | 6,398,320 r | 134,718,025 e | 355,689,989 e r |
| **2010 Total** | **2,149,970,356 r** | **69,725,044 r** | **1,667,238,525 e** | **3,886,933,925 e r** |
| January | 219,097,728 | 5,926,817 | 133,349,734 e | 358,374,279 e |
| February | 204,138,758 | 5,444,208 | 113,767,257 e | 323,350,223 e |
| March | 240,440,179 | 6,378,258 | 125,291,837 e | 372,110,274 e |
| April | 236,677,154 | 5,799,321 | 119,282,357 e | 361,758,832 e |
| May | 248,763,931 | 5,985,111 | 120,717,345 e | 375,466,388 e |
| June | 237,544,425 | 5,550,074 | 111,835,528 e | 354,930,027 e |
| July | 250,647,575 | 5,757,856 | 110,782,187 e | 367,187,618 e |
| August | 258,574,156 | 6,192,620 | 107,481,086 e | 372,247,862 e |
| September | 254,020,373 | 5,445,716 | 108,465,413 e | 367,931,501 e |
| October | 264,517,463 | 5,832,057 | 109,449,739 e | 379,799,259 e |
| November | 237,347,954 p | 5,601,317 p | 106,496,760 e | 349,446,032 e |
| December | 239,721,553 e | 5,778,842 e | 105,512,434 e | 351,012,829 e |
| **2011 Total** | **2,891,491,249 e** | **69,692,197 e** | **1,372,431,678 e** | **4,333,615,124 e** |

e Estimated r Revised p Preliminary

* See Table 12 corresponding volumes at 15.025 psia and footnote in Appendix B.

**NOTE**: The 2003 Federal OCS production is estimated from the marketed production

# Appendix D-3

## LOUISIANA MARKETED AND DRY GAS PRODUCTION[12]

**(Billion Cubic Feet (BCF) at 14.73 psia and 60 degrees Fahrenheit)***

| | MARKETED | | | EXTRACTION | |
|---|---|---|---|---|---|
| DATE | State | OCS[12] | Total[3] | LOSS[3] | DRY[3] |
| 1969 | 5,424 e | 1,804 | 7,373 e | 179 | 7,049 |
| 1970 | 5,538 e | 2,250 | 7,944 e | 193 | 7,595 |
| 1971 | 5,474 e | 2,608 | 8,244 e | 195 | 7,887 |
| 1972 | 5,120 e | 2,853 | 8,132 e | 198 | 7,775 |
| 1973 | 5,217 e | 3,025 | 8,407 e | 207 | 8,036 |
| 1974 | 4,438 e | 3,316 | 7,909 e | 194 | 7,559 |
| 1975 | 3,792 e | 3,299 | 7,233 e | 190 | 6,901 |
| 1976 | 3,542 e | 3,465 | 7,147 e | 173 | 6,834 |
| 1977 | 3,604 e | 3,611 | 7,360 e | 166 | 7,049 |
| 1978 | 3,368 e | 4,108 | 7,626 e | 162 | 7,315 |
| 1979 | 3,149 e | 4,117 | 7,412 e | 166 | 7,101 |
| 1980 | 2,966 e | 3,974 | 7,079 e | 142 | 6,798 |
| 1981 | 2,715 e | 4,065 | 6,916 e | 142 | 6,638 |
| 1982 | 2,406 e | 3,766 | 6,295 e | 129 | 6,043 |
| 1983 | 2,190 e | 3,142 | 5,439 e | 124 | 5,208 |
| 1984 | 2,282 e | 3,543 | 5,942 e | 133 | 5,693 |
| 1985 | 1,928 e | 3,086 | 5,114 e | 118 | 4,896 |
| 1986 | 1,997 e | 2,899 | 4,993 e | 116 | 4,780 |
| 1987 | 1,974 e | 3,148 | 5,225 e | 125 | 4,998 |
| 1988 | 2,114 e | 3,066 | 5,284 e | 120 | 5,060 |
| 1989 | 2,102 e | 2,977 | 5,180 e | 121 | 4,957 |
| 1990 | 1,573 e | 3,669 | 5,347 e | 119 | 5,123 |
| 1991 | 1,878 e | 3,257 | 5,135 e | 129 | 4,905 |
| 1992 | 1,748 e | 3,265 | 5,013 e | 133 | 4,782 |
| 1993 | 1,774 e | 3,317 | 5,091 e | 130 | 4,861 |
| 1994 | 1,795 e | 3,479 | 5,273 e | 129 | 5,041 |
| 1995 | 1,785 e | 3,425 | 5,211 e | 146 | 4,962 |
| 1996 | 1,734 e | 3,662 | 5,396 e | 140 | 5,150 |
| 1997 | 1,535 e | 3,799 | 5,335 e | 147 | 4,980 |
| 1998 | 1,583 e | 3,800 | 5,383 e | 142 | 5,032 |
| 1999 | 1,598 e | 3,718 | 5,316 e | 162 | 5,011 |
| 2000 | 1,484 | 3,647 | 5,131 | 168 | 5,027 |
| 2001 | 1,532 | 3,691 | 5,223 | 156 | 5,067 |
| 2002 | 1,389 | 3,335 | 4,724 | 160 | 4,564 |
| 2003 | 1,377 | 3,257 | 4,635 | 143 | 4,492 |
| 2004 | 1,380 | 2,934 | 4,314 | 136 | 4,178 |
| 2005 | 1,322 | 2,299 | 3,621 | 130 | 3,492 |
| 2006 | 1,388 r | 2,115 | 3,504 | 121 | 3,382 |
| 2007 | 1,393 r | 2,026 | 3,419 | 117 | 3,301 |
| 2008 | 1,405 r | 1,673 | 3,077 | 116 | 2,961 |
| 2009 | 1,639 r | 1,772 | 3,411 | 126 | 3,284 |
| 2010 | 2,291 r | 1,647 e | 3,939 e | 132 e | 3,807 e |

e Estimated r Revised p Preliminary

* See Table 13 corresponding volumes at 15.025 psia and footnote in Appendix B.

# Appendix D-4

## UNITED STATES OCS GAS PRODUCTION[12]

**Natural Gas and Casinghead Gas**

**(Thousand Cubic Feet (MCF) at 14.73 psia and 60 degrees Fahrenheit)***

| YEAR | LOUISIANA | TEXAS | CALIFORNIA | TOTAL |
|---|---|---|---|---|
| 1966 | 965,387,854 | 42,059,386 | 0 | 1,007,447,240 |
| 1967 | 1,087,262,810 | 99,952,947 | 0 | 1,187,215,756 |
| 1968 | 1,413,467,614 | 109,910,788 | 799,685 | 1,524,178,086 |
| 1969 | 1,822,544,152 | 127,096,983 | 4,845,851 | 1,954,486,985 |
| 1970 | 2,273,147,052 | 133,300,405 | 12,229,147 | 2,418,676,604 |
| 1971 | 2,634,014,045 | 127,357,909 | 15,671,479 | 2,777,043,433 |
| 1972 | 2,881,364,748 | 147,156,460 | 10,033,581 | 3,038,554,789 |
| 1973 | 3,055,628,252 | 148,673,638 | 7,286,549 | 3,211,588,439 |
| 1974 | 3,349,170,882 | 159,979,402 | 5,573,642 | 3,514,723,926 |
| 1975 | 3,332,169,075 | 122,572,765 | 3,951,633 | 3,458,693,473 |
| 1976 | 3,499,865,919 | 92,582,425 | 3,475,201 | 3,595,923,545 |
| 1977 | 3,647,513,694 | 86,943,285 | 5,526,469 | 3,739,983,448 |
| 1978 | 4,149,731,158 | 231,857,451 | 5,269,758 | 4,386,858,368 |
| 1979 | 4,158,521,732 | 511,590,610 | 5,540,606 | 4,675,652,948 |
| 1980 | 4,013,707,456 | 624,642,529 | 6,018,184 | 4,644,368,168 |
| 1981 | 4,106,494,612 | 730,275,835 | 13,018,920 | 4,849,789,367 |
| 1982 | 3,803,740,070 | 858,020,303 | 18,107,445 | 4,679,867,818 |
| 1983 | 3,173,892,371 | 850,817,216 | 24,652,314 | 4,049,361,901 |
| 1984 | 3,578,740,589 | 931,293,587 | 47,292,436 | 4,557,326,612 |
| 1985 | 3,116,884,507 | 834,926,527 | 65,851,130 | 4,017,662,165 |
| 1986 | 2,927,832,280 | 978,370,557 | 60,261,186 | 3,966,464,023 |
| 1987 | 3,180,107,212 | 1,204,488,343 | 55,902,749 | 4,440,498,305 |
| 1988 | 3,096,881,645 | 1,178,422,567 | 50,152,326 | 4,325,456,538 |
| 1989 | 3,006,576,077 | 1,165,112,959 | 51,809,130 | 4,223,498,166 |
| 1990 | 3,706,324,064 | 1,348,075,368 | 50,973,576 | 5,105,373,008 |
| 1991 | 3,289,968,620 | 1,184,936,500 | 52,894,097 | 4,527,799,217 |
| 1992 | 3,338,101,465 | 1,239,389,554 | 56,337,793 | 4,701,108,883 |
| 1993 | 3,386,808,671 | 1,027,937,761 | 53,194,699 | 4,544,502,364 |
| 1994 | 3,492,406,781 | 1,014,204,140 | 54,633,354 | 4,669,972,144 |
| 1995 | 3,636,068,016 | 908,520,055 | 55,887,350 | 4,711,732,699 |
| 1996 | 3,783,483,306 | 972,873,764 | 68,121,164 | 5,054,719,057 |
| 1997 | 3,901,964,998 | 965,334,787 | 74,813,429 | 5,111,087,682 |
| 1998 | 3,890,978,799 | 867,606,779 | 76,486,583 | 4,885,443,089 |
| 1999 | 3,913,456,139 | 814,124,878 | 79,367,732 | 5,034,470,230 |
| 2000 | 3,837,150,457 | 886,473,041 | 77,598,107 | 5,018,433,562 |
| 2001 | 3,895,134,261 | 916,020,487 | 72,367,542 | 5,248,963,271 |

| | GULF OF MEXICO | | PACIFIC | TOTAL |
|---|---|---|---|---|
| | CENTRAL | WESTERN | | |
| 2002 | 3,580,828,493 | 1,019,741,703 | 69,174,162 | 4,699,918,283 |
| 2003 | 3,392,897,697 | 1,087,114,884 | 59,258,478 | 4,593,381,866 |
| 2004 | 2,941,564,138 | 1,121,137,433 | 55,749,584 | 4,187,036,121 |
| 2005 | 1,973,860,605 | 788,940,947 | 55,171,229 | 2,819,465,782 |
| 2006 | 2,165,245,866 | 795,608,571 | 41,216,237 | 3,002,354,380 |
| 2007 | 2,137,362,345 | 648,316,715 | 46,427,556 | 2,878,983,938 |
| 2008 | 1,738,406,351 | 491,513,872 | 43,821,897 | 2,415,599,912 |
| 2009 | 1,798,169,109 | 473,781,946 | 42,519,067 | 2,497,629,246 |
| 2010 | 1,710,488,501 | 409,935,752 | 41,034,672 | 2,161,458,926 |

NOTE: Starting in 2002 MMS has not formally published production by state adjacent areas

e Estimated r Revised p Preliminary

* See Table 15 corresponding volumes at 15.025 psia and footnote in Appendix B.

# Appendix D-5

## UNITED STATES NATURAL GAS AND CASINGHEAD GAS PRODUCTION [3]

**(Billion Cubic Feet (BCF) at 14.73 psia and 60 degrees Fahrenheit)***

| DATE | GROSS | WET AFTER LEASE SEPARATION | MARKETED | DRY | GROSS IMPORTS |
|---|---|---|---|---|---|
| 1990 | 21,523 | 18,744 | 18,594 | 17,810 | 1,532 |
| 1991 | 21,749 | 18,703 | 18,532 | 17,698 | 1,773 |
| 1992 | 22,132 | 18,879 | 18,712 | 17,840 | 2,138 |
| 1993 | 22,725 | 19,209 | 18,982 | 18,095 | 2,350 |
| 1994 | 23,581 | 19,938 | 19,710 | 18,821 | 2,624 |
| 1995 | 23,743 | 19,790 | 19,506 | 18,598 | 2,841 |
| 1996 | 24,114 | 20,084 | 19,812 | 18,854 | 2,937 |
| 1997 | 24,213 | 20,122 | 19,865 | 18,902 | 2,994 |
| 1998 | 24,108 | 20,064 | 19,961 | 19,024 | 3,152 |
| 1999 | 23,823 | 19,915 | 19,805 | 18,832 | 3,586 |
| 2000 | 24,174 | 20,289 | 20,198 | 19,182 | 3,782 |
| 2001 | 24,501 | 20,667 | 20,570 | 19,616 | 3,977 |
| 2002 | 23,941 | 19,984 | 19,921 | 18,964 | 4,015 |
| 2003 | 24,119 | 20,072 | 19,974 | 19,099 | 3,944 |
| 2004 | 23,970 | 19,615 | 19,517 | 18,591 | 4,259 |
| 2005 | 23,457 | 19,046 | 18,927 | 18,051 | 4,341 |
| 2006 | 23,507 | 19,539 | 19,382 | 18,476 | 4,186 |
| 2007 | 24,591 | 20,340 | 20,019 | 19,089 | 4,608 |
| 2008 | 25,754 | 21,279 | 21,112 | 20,159 | 3,984 |
| 2009 | 26,013 | 21,745 | 21,604 | 20,580 | 3,751 |
| January | 2,225 r | 1,862 r | 1,850 r | 1,770 r | 385 r |
| February | 2,051 r | 1,708 r | 1,697 r | 1,622 r | 324 r |
| March | 2,304 r | 1,919 r | 1,906 r | 1,821 r | 319 r |
| April | 2,208 r | 1,859 r | 1,847 r | 1,766 r | 298 r |
| May | 2,251 r | 1,920 r | 1,909 r | 1,824 r | 298 r |
| June | 2,142 r | 1,831 r | 1,820 r | 1,740 r | 282 r |
| July | 2,194 r | 1,903 r | 1,891 r | 1,810 r | 329 r |
| August | 2,231 r | 1,940 r | 1,928 r | 1,844 r | 305 r |
| September | 2,241 r | 1,895 r | 1,883 r | 1,800 r | 282 r |
| October | 2,333 r | 1,959 r | 1,948 r | 1,861 r | 295 r |
| November | 2,284 r | 1,917 r | 1,907 r | 1,823 r | 273 r |
| December | 2,394 r | 1,994 r | 1,984 r | 1,897 r | 352 r |
| **2010 Total** | **26,858 r** | **22,707 r** | **22,569 r** | **21,577 r** | **3,741 r** |
| January | 2,309 | 1,982 | 1,972 | 1,887 | 371 |
| February | 2,109 | 1,762 | 1,752 | 1,679 | 308 |
| March | 2,423 | 2,031 | 2,020 | 1,928 | 314 |
| April | 2,363 | 1,991 | 1,979 | 1,891 | 278 |
| May | 2,420 | 2,058 | 2,046 | 1,953 | 271 |
| June | 2,330 | 1,989 | 1,977 | 1,888 | 265 |
| July | 2,344 | 2,057 | 2,044 | 1,952 | 293 |
| August | 2,370 | 2,062 | 2,050 | 1,958 | 279 |
| September | N/A | N/A | N/A | N/A | N/A |
| October | N/A | N/A | N/A | N/A | N/A |
| November | N/A | N/A | N/A | N/A | N/A |
| December | N/A | N/A | N/A | N/A | N/A |
| **2011 Total** | **18,669** | **15,932** | **15,840** | **15,136** | **2,379** |

e Estimated r Revised p Preliminary

* See Table 16 corresponding volumes at 15.025 psia and footnote in Appendix B.

# Appendix E

## Louisiana Energy Topics

# LOWER MISSISSIPPI HYDRO POTENTIAL

by
Sultan Alam

## Hydroelectric Potential Along the Lower Mississippi River

Along the Lower Mississippi River, the Old River Control Complex (ORC) area (see figure) has probably the best potential for generating hydroelectricity for the following reasons:

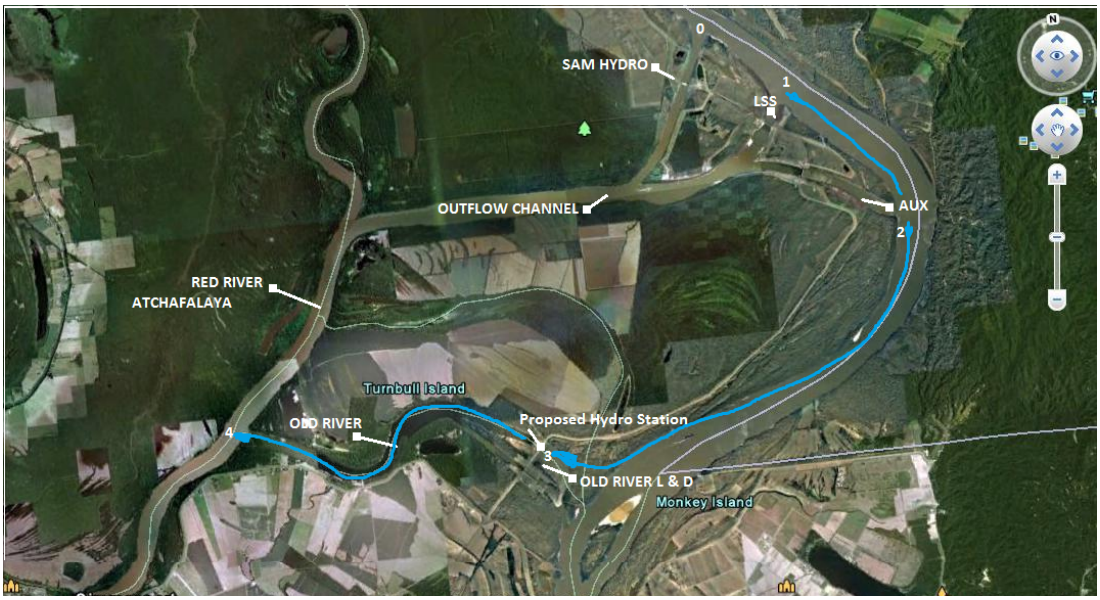
- Systematic diversion of a percentage of Mississippi River discharge to the Red-Atchafalaya Rivers system through existing U.S. Army Corps of Engineers (USACE) flow diversion structures.
- Significant abrupt head differentials between the Mississippi River and the Red-Atchafalaya Rivers system.
- Satisfactory power generation at the Sidney A. Murray Hydroelectric Station (SAM) over the last 20 years confirms that in spite of all the complexity the hydrological condition; the available discharge and corresponding head differential at the ORC is reliable and conducive to power generation.

By agreement, the Sidney A. Murray Hydroelectric Station is not allowed to use 100% of the diverted flow at the ORC. So every year depending on the Mississippi River discharge the Low Sill Structure and the Auxiliary Structure are passing a certain percent of the diverted discharge.

If the flow that is being currently diverted through the Low Sill Structure and the Auxiliary Structure was diverted through a hypothetical hydroelectric installation at the Old River Lock and Dam, it would be producing a significant amount of energy annually. Based on daily available discharge and the corresponding head differential, the annual energy output may be in the range of 300,000MWH to 600,000MWH. However, this would mean that USACE would have to shut down their two existing flow diversion structures (excepting when the percentage of Mississippi River discharge diverted to the Red-Atchafalaya Rivers system would exceed the capacity of the hydroelectric plants).

The consequences of having a Hydroelectric Station at Old River Lock and Dam would be the following:

- The potential head at the existing hydro station would increase (the headwater level will go up and the tail water level will go down), thus it will produce more energy with the same discharge.
- The sediment diversion through the new hydroelectric station would be less than that currently passing through the Auxiliary Structure. Thus, more sediment would go down the Mississippi River and in the long run may have a positive impact on delta restoration efforts.
- The outflow from the power plant would impact the navigation conditions in the portion of the Old River Lock connecting to the Red-Atchafalaya River due to the flow velocity and some sediment transport.




Mississippi River in the Old River Control Complex area with various existing flow diversion structures: (0) The Sidney A. Murray Hydroelectric Station, (1) The Low Sill Structure, (2) The Auxiliary Structure and (3) The Proposed Hydro Station at The Navigation Lock and Dam connecting Old River to the Red - Atchafalaya River.

## Conclusions and Comments

The Sydney A. Murray Hydroelectric Power Station has proven that hydro power generation is possible in Louisiana and off the Lower Mississippi River. As this plant is not using the totality of the diverted flow, it is possible to use the available discharge to produce more energy annually in the range of 300,000MWH to 600,000MWH. This would require some changes in the existing operating practices and the possibilities should be investigated.

The 30-70 split of the flow under all Mississippi River discharge conditions was decided at a time when the possibility of hydro power generation was not anticipated. With the 20 years experience at Sydney A. Murray Hydro Station it seems logical that this flow diversion rule should be reassessed to see if some modifications would enhance the potential of hydroelectric power generation in this area of Louisiana. Diverting more discharge to the Atchafalaya during the high flows of the Mississippi River might be feasible. A slight modification of this rule might allow Louisiana to get some more clean and renewable energy, which should be investigated further.

**Sultan Alam** was born in India, educated in India and France, and worked almost 45 years in the field of hydraulic engineering before retiring as SOGREAH's Chief Hydraulic Engineer in 1993. He now serves as a consultant to various engineering firms in the US, Canada, Europe, Brazil, Nepal and India. Mr. Alam has served on expert panels for the World Bank, the Asian Development Bank, and State Agencies. His experience includes hydroelectric, river engineering, reservoir sedimentation management, and coastal restoration projects. He is currently directing the hydraulic design and sediment management studies for the 3,300 MW JIRAU run of the river hydroelectric project on the Madeira River, a tributary of the Amazon with a maximum flood discharge of 2,965,200 cfs.

# THE LAVIN-BERNICK CENTER – TULANE UNIVERSITY

by

Howard Hershberg, AIA

Source: http://greensource.construction.com/projects/0807_LavinBernickCenter.asp
Photo Credit: Paul Crosby

The 2009 reopening of the renovated Lavin-Bernick Center on the Tulane University Campus in the City of New Orleans is an example of sustainable design as well as a symbol of recovery after the city was damaged by Hurricane Katrina. The building project was 33% new construction and 67% renovation. The redesign added approximately 40,000 square feet and extended the useful interior spaces by linking the interior spaces to outdoor spaces using porches and terraces. Existing oak trees with extensive root systems were preserved for shading the building and courtyard spaces. The Lavin-Bernick Center was one of the AIA/COTE[1] Top Ten Green projects for 2008. A summary of the project follows and the full case study of this project can be found at http://greensource.construction.com/projects/0807_LavinBernickCenter.asp[2]

The original 110,000 Square foot building was completed in 1959 and modified several times. It had been compartmentalized, sealed up, and air-conditioned. The decision was made to reuse parts of the existing concrete structure, as well as to use passive cooling (shading and ventilation) and daylighting. Reusing parts of the structure saved Tulane approximately $8 million dollars, as well as the embodied energy from the production of new concrete.

A cooling strategy that uses both natural ventilation and mechanical air conditioning enhances the inside/outside experience. In the summer, the building can be cooled in a conventional way while in fall, winter, or spring the building can rely on natural ventilation. A building management system allows the building to remain open when weather conditions permit. Air is moved by fans, cool/dry

[1] **The American Institute of Architects Committee on the Environment**: http://www.aiatopten.org/hpb/overview.cfm?ProjectID=840

[2] **The Louisiana Department of Natural Resources disseminates information about green building and the green building industry as part of the mission of the State Energy Office.**

radiant surfaces, porous air cooled metal ceilings, chilled water walls, and stack effect ventilation through the skylights.

Source: http://greensource.construction.com/projects/0807_LavinBernickCenter.asp
Photo Credit: Paul Crosby

Glass replaced the blank masonry facades of the original building to increase natural light into the interior. Window walls are protected from solar heat gain by a variegated louver shading system.
Other shading devices include trellis plant scrims, trees, and umbrellas. Light fixtures in the perimeter spaces have auto dimming to adjust to varying natural light levels.

Since the building is located in New Orleans, which is a city with a very distinctive architecture, the design team had the challenge of making a contemporary, environmentally friendly, space that did not clash with the city's traditional architecture. The building's layered facades, louvers, overhangs, and terraces are a modern interpretation of the more traditional balconies, trellises, and courtyards.

# STATE OIL AND GAS:
# PRODUCTION AND PRICE PROJECTIONS, AND PROVED RESERVES

by
Manuel Lam

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, the price projection of the oil and gas prices for the near future, and the latest figure of oil and gas proved reserves. Oil and gas production is intimately linked with the economy of our state. Presently, Louisiana is the fifth largest producer of crude oil and the fourth largest producer of natural gas in the U.S. Louisiana is also second in per capita energy consumption. More than 228,000 wells have been drilled searching for oil and gas in Louisiana since the first commercial oil well was drilled in 1901 in Jennings. The Louisiana OCS oil and gas production is greater than any other federally regulated offshore areas in the US.

Some other interesting benchmarks in the Louisiana oil and gas production history are that in 1910 the first freestanding above-water platform was used in Caddo Lake, near Shreveport; in 1938 the first well over water was completed in the Gulf of Mexico near Creole, offshore Cameron Parish; in 1947 the first oil well was completed out of the sight of land in Ship Shoal Block 32, south of Morgan City, offshore St. Mary Parish; in 1951 the first concrete-coated pipeline was laid in the Gulf of Mexico; in 1954 the state started to produce more natural gas in terms of barrels of oil equivalents than crude oil; and in 2006 Haynesville Shale gas started producing making the gas domination more predominant.

## Production Projections

Louisiana state oil production, excluding federal OCS, declined an average of 4.4% per year over the past ten years. The DNR Technology Assessment Division's short-term model is projecting a 1.4 % decline per year for oil over the next five years. The short model projections for the next five years are listed below:

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

| | Date | Base Case (Barrels) | % Change | Low Case (Barrels) | High Case (Barrels) |
|---|---|---|---|---|---|
| Actual | 2007 | 77,400,591 | 4.64% | N/A | N/A |
| Actual | 2008 | 72,620,203 | -6.18% | N/A | N/A |
| Actual | 2009 | 69,219,935 | -4.68% | N/A | N/A |
| Actual | 2010 | 67,526,541 | -2.45% | N/A | N/A |
| Projected | 2011 | 66,571,833 | -1.41% | 64,574,678 | 68,568,988 |
| Projected | 2012 | 66,334,253 | -0.36% | 63,017,541 | 68,987,624 |
| Projected | 2013 | 65,923,590 | -0.62% | 62,100,022 | 70,076,776 |
| Projected | 2014 | 63,963,349 | -2.97% | 59,741,768 | 69,144,381 |
| Projected | 2015 | 62,898,205 | -1.67% | 58,243,738 | 68,181,654 |

Louisiana state gas production, excluding federal OCS, from 2000-2005 gas declined an average of 2.0% per year, while from 2006-2010 increased an average 11.0% per year. The difference is attributed

to better weather and the discovery of Haynesville Shale gas in 2006-2010. The DNR Technology Assessment Division short-term model is projecting a 6.3 % increase per year for gas over the next five years, if no major weather disruption occurs. The short model projections for the next five years are listed below:

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

| | Date | Base Case (MCF) | % Change | Low Case (MCF) | High Case (MCF) |
|---|---|---|---|---|---|
| Actual | 2007 | 1,355,179,480 | 0.39% | N/A | N/A |
| Actual | 2008 | 1,359,923,832 | 0.35% | N/A | N/A |
| Actual | 2009 | 1,528,082,054 | 12.37% | N/A | N/A |
| Actual | 2010 | 2,090,447,458 | 36.80% | N/A | N/A |
| Projected | 2011 | 2,325,646,978 | 11.25% | 2,201,224,864 | 2,453,092,432 |
| Projected | 2012 | 2,792,568,310 | 20.08% | 2,615,240,222 | 2,987,489,578 |
| Projected | 2013 | 3,150,443,586 | 12.82% | 2,939,363,866 | 3,381,371,101 |
| Projected | 2014 | 2,876,447,319 | -8.70% | 2,673,657,783 | 3,097,358,473 |
| Projected | 2015 | 2,765,223,229 | -3.87% | 2,560,596,710 | 2,987,270,654 |

Factors that contribute to the year-to-year deviations in oil and gas production are:

- Changes in wildcat drilling and development of marginal fields within the state
- 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

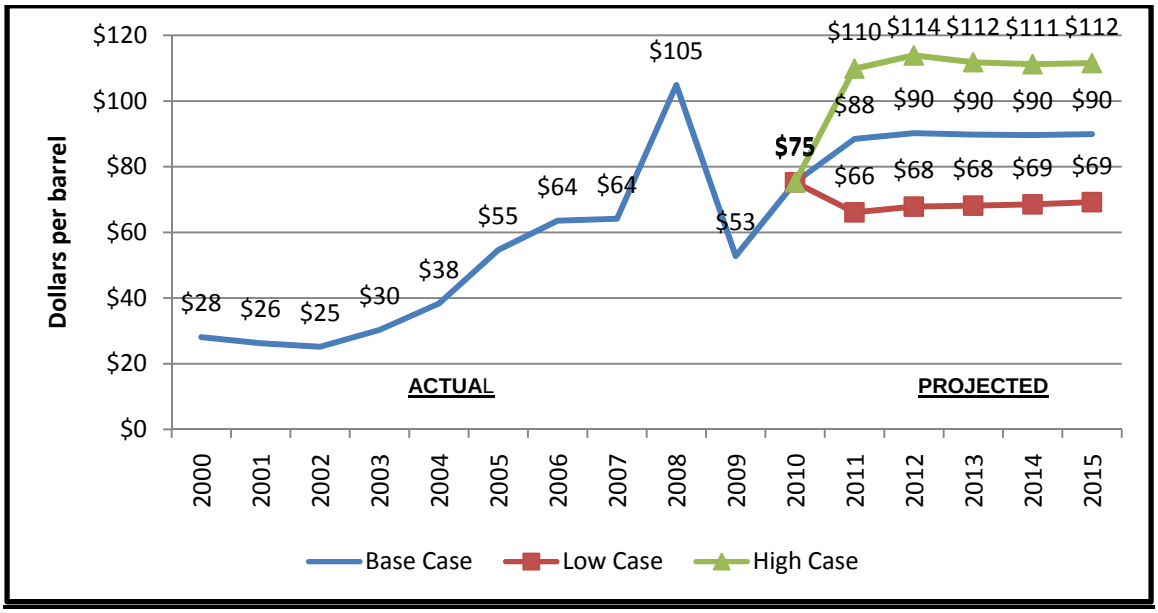
## Price Projection

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.

Natural gas also is traded in the world market. The most used relationship between crude oil price and natural gas price is the so-called “6-to-1” rule, where the price of one barrel of crude oil should

be approximately six times the price of natural gas per million BTUs (MMBTUs). The reason is that the BTU content of a barrel of oil is around six times the quantity of a million BTU of natural gas.

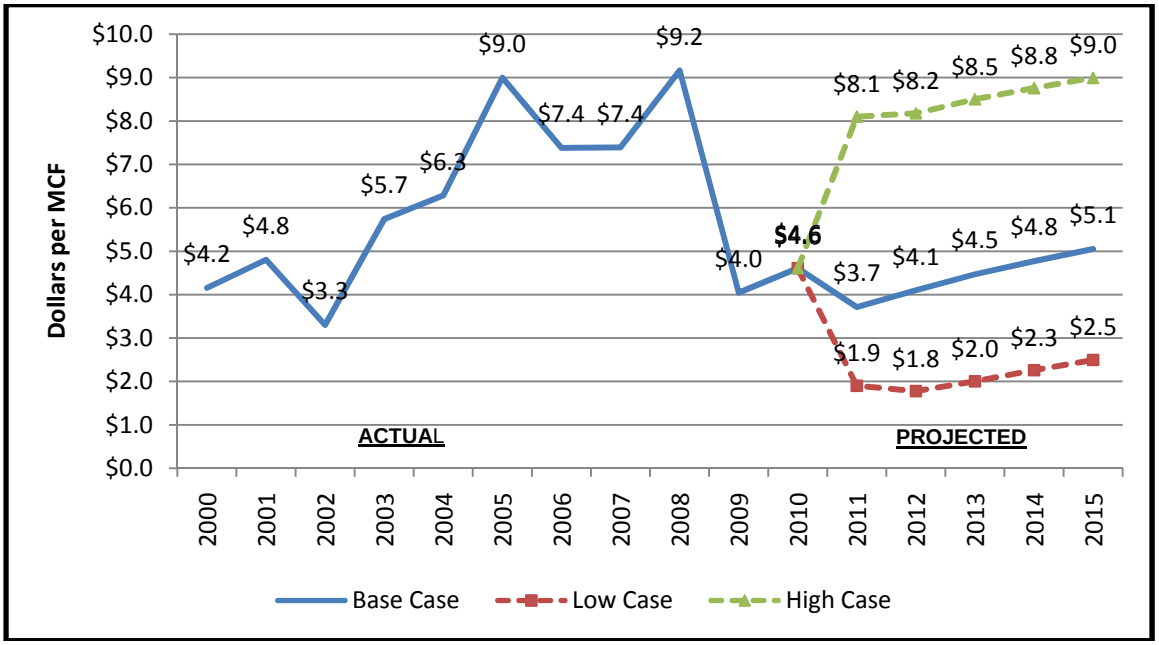
Louisiana Crude Oil Prices Projections




Natural gas prices recently started to diverge from this relationship. Oil prices have risen rapidly while gas prices are slowly falling, because Asian countries are consuming more oil than gas as they recover from recent recession; the political unrest in Northern Africa and Middle Eastern countries are disrupting more heavily oil supply than gas supply; and increasing gas supply with new discoveries of unconventional sources such as shale and coalbed methane in North America. 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.

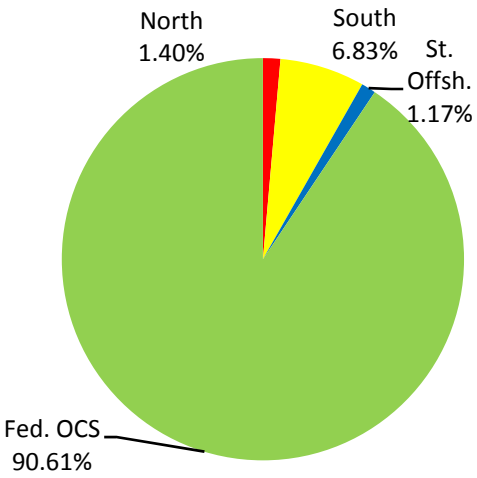
Louisiana Natural Gas Price Projections



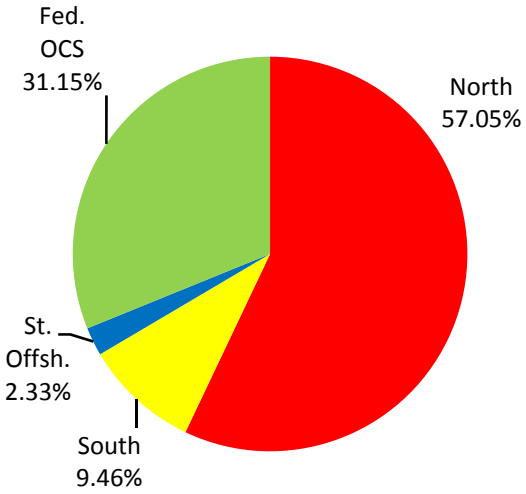

## Proved Reserves

Louisiana oil and gas proved reserves as of December 31, 2009 published by the US Department of Energy-Energy Information Administration.

CRUDE OIL
3,940 Million Barrels




NATURAL GAS
30,053 Billion Cubic Feet




The 2010 Louisiana Energy Facts Annual is available in print and online at our website http://www.dnr.louisiana.gov/tad

# LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)

by

Howard Hershberg, AIA

LEED is a certification system, developed by the U. S. Green Building Council (USGBC)[1], which provides a framework for implementing green building design, construction, operations, and maintenance solutions.

**What LEED measures**:

A. Sustainable Sites: LEED can assist owners and designers, etc. in selecting and maintaining sustainable sites. This category discourages development on undeveloped land. It also minimizes building's impact on ecosystems and waterways, encourages regionally appropriate landscaping, rewards smart transportation choices, controls storm water runoff, and reduces erosion, etc.

B. Water Efficiency: This category encourages smarter uses of water. Water reduction is typically achieved through more efficient appliances, fixtures and fittings inside, and landscaping that requires less water.

C. Energy and Atmosphere: According to the U.S.DOE, buildings use 39% of the Energy and 74% of the electricity produced each year in the United States. The Energy and Atmosphere category encourages a wide variety of energy strategies, which include: Commissioning, energy use monitoring, efficient design, construction, appliances, systems, and lighting.

D. Materials and resources: During both the construction and operations phases, buildings generate a lot of waste, and use a lot of materials and resources. This category encourages the selection of sustainably grown, harvested, produced and transported products and materials. At the same time it promotes the reduction of waste as well as reuse and recycling. It also takes into account the reduction of waste at a product's source.

E. Indoor Environmental quality: The U.S. Environmental Protection Agency (EPA) estimates that Americans spend about 90% of their day indoors, where the air quality can be significantly worse than outside. The LEED indoor Environmental Quality Credit category promotes strategies that can improve indoor air, as well provide access to natural daylight, views and improve acoustics.

F. Locations and linkages: The LEED for homes rating system recognizes that much of a home's impact on the environment comes from where it is located and how it fits into the community. The LEED Locations & Linkages credits encourage homes being built away from environmentally sensitive places and instead being built in infill, previously developed and other preferable sites. It rewards homes that are built near already existing infrastructure, community resources and transit. It also encourages access to open spaces for walking, physical activity, and time spent outdoors.

[1] http://www.usgbc.org/

G. Awareness and education: The LEED for homes rating system acknowledges that a green home is a home in which the people who live in it use the green features to maximum effect. The Awareness & Education credits encourage home builders and real estate professionals to provide homeowners, tenants, and building managers with the education and tools they need to understand what makes their home green and how to make the most of those features.

H. Innovation in Design: The Innovation in Design credit category provides bonus points for projects that use new and innovative technologies and strategies to improve a building's performance well beyond what is required by other LEED credits.

## Definitions[2]

Green Building

A building that conforms to environmentally sound principles of construction practices, is insulated, and oriented properly for efficient energy use.

Green Neighborhood

A neighborhood that is typically moderately dense, includes a range of uses, is designed for people (pedestrians and bikers) first – including an integrated network of paths and streets, human-scaled buildings and pedestrian-oriented street design. It has "green" elements, including a network of green spaces and corridors, street trees, significant private landscaping (including possibly green roofs). Buildings are often "green" buildings with excellent environmental performance. Green infrastructure is commonplace, from low-impact storm water management to district energy systems.

Green Roof

Contained green space on, or integrated with, a building roof. Green roofs maintain living plants in a growing medium on top of a membrane and drainage system. They are also excellent natural insulators.

[2] http://www.greenplaybook.org/resources/glossary.htm

# CONTINUITY OF OPERATIONS (COOP)

by

Patty Nussbaum and Bryan Crouch

Continuity of Operations (COOP) planning ensures the execution of essential functions for any event that makes it impossible for employees to work in their regular facility. This event could be a fire in the building, a local weather event, a large scale natural disaster, a terrorist attack or any other emergency. Louisiana is also concerned with preparing for and responding to events that impact energy infrastructure and supply disruptions.

At the heart of COOP planning is identifying all functions which must be continued under all circumstances and identifying an alternate facility or facilities which will satisfy an organization's requirements. The alternate facility should provide the capability to perform essential functions within 12 hours, up to 30 days with reliable logistical support, services, and infrastructure systems as well as interoperable communications and computer equipment.

The State of Louisiana Emergency Operations Plan (EOP)[1] lists the Emergency Support Functions (ESFs) and the departments, offices, agencies and organizations of state government with primary and support responsibilities for carrying out the functions. In the EOP the head of each department, office, agency and organization is charged with designating a COOP Coordinator who will prepare and maintain plans to ensure that the organization will continue to carry out its mission in an emergency. The Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) have the responsibility for updating the plan under the direction of the Governor. The plan provides the framework for developing detailed Continuity of Government (COG) plans. All emergency activities will be managed from the state Emergency Operations Center (EOC). All parishes are required to have an EOC at the parish level and communicate with the state EOC.

State government departments agencies and offices which do not have specific ESF responsibilities will provide for resource management, direction and control of their personnel, COG, COOP and situation intelligence and reporting during emergency situations.

The federal government has adopted the National Incident Management System (NIMS)[2] to manage emergencies and disasters and the State of Louisiana adopts NIMS by reference.

Disasters can interfere with the ability of state or local governments to carry out their functions. Following are continuity requirements:

- Essential Functions: Critical activities performed by organizations
- Orders of Succession: Provisions for the assumption of agency offices during an emergency in the event any of those officials are or become unavailable

[1] http://gohsep.la.gov/plans.aspx

[2] http://www.fema.gov/emergency/nims/

- Delegation of Authority: An effective emergency management system depends upon continuity of Government and Continuity of Operations at all levels. Generally, pre-determined delegations of authority will take effect when normal channels of direction have been disrupted and will lapse when these channels have been reestablished.
- Continuity Facilities: These are locations other than the primary facility. These alternate facilities refer not only to other locations but also to working from home, telecommuting, and mobile-office situations.
- Continuity Communications: Communications that provide the capability to perform essential functions under all conditions.
- Vital Records Management: The availability of electronic and hard copy documents, references, records, information systems, data management software and equipment needed to support essential functions.
- Human Capital: Emergency employees and other special categories of employees who are activated by an agency to perform assigned response duties.
- Devolution of Control and Direction: Capability to transfer statutory authority and responsibility for essential functions from an agency's primary operating staff and facilities to other agency employees and facilities.
- Reconstitution: The process by which agency personnel resume normal operations from the original or a replacement primary operating facility.

## Four Phases of Continuity of Operations Activation

- **Phase I –** Readiness and Preparation
- **Phase II –** Activation and Relocation: plans, procedures, and schedules to transfer activities, personnel, records, and equipment to alternate facilities are activated
- **Phase III –** Continuity Operations: Full execution of essential operations at alternate operating facilities is commenced
- **Phase IV –** Reconstitution: Operations at alternate facility are terminated and normal operations resume

The Federal Emergency Management Agency (FEMA) has developed a COOP Plan Template and instructions. General guidance and sample information is provided for reference so organizations can tailor the COOP plan for their own needs. The instructions accompany an electronic template that may be downloaded from the FEMA website.[3]

[3] http://www.fema.gov/about/org/ncp/coop/templates.shtm#0

# AIA TOP TEN GREEN PROJECTS: LOTT CLEAN WATER ALLIANCE REGIONAL SERVICES CENTER

by

Howard Hershberg, AIA

Photos: Nic Lehoux

The American Institute of Architects (AIA)[1] Committee on the Environment (COTE) has named the year's top ten examples of sustainable architecture and green design[2]. Many of the new buildings have been awarded, or are expected to earn, LEED Platinum certification, the highest level in the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) certification program[3]. The Lott Clean Water Alliance Regional Services Center (Lott Center), located in Olympia, Washington, was one of the projects. The full case study appears on the AIA website http://aiatopten.org/hpb/overview.cfm?ProjectID=1954.

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[1] American Institute of Architects: For 150 years plus, members of the American Institute of Architects (AIA) worked with each other and their communities to create more valuable, healthy, secure, and sustainable buildings and cityscapes. By using sustainable design practices, materials, and techniques, AIA Architects are uniquely poised to provide the leadership and guidance needed to combat "Climate Change."

[2] Green Building: A green building is a building located and constructed in a sustainable manner, and allows its occupants to live, work, and play in a sustainable manner. This means building in such a way that we don't use up or deplete our resources; that is, it has the least environmental impact possible. The less the environmental impact, the "greener" the project.

[3] Leadership in Energy and Environmental Design (LEED) certification measures how well a building or a community performs in the categories of sustainable siting, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation and design process. LEED certification is obtained after submitting an application documenting compliance with the LEED rating system. LEED certification is granted by the U.S. Green Building Certification Institute.

LEED Certification Classifications:

1. Certified: 40% - 50% of non-innovation points.
2. Silver Certification: 50% - 60% of non-innovation points.
3. Gold: 60% - 80% of non-innovation points.
4. Platinum: 80% or more non-innovation points.

http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222

The Lott Center is a LEED Platinum certified wastewater treatment plant. It was designed by Miller – Hull Architects, AIA. The contemporary industrial aesthetic was designed to complement its surroundings and the sewerage treatment plant has become the public face of the town of Olympia, Washington.

Lott's new facility uses reclaimed water, reused water that has been cleaned, for a pond surrounding the center, for irrigating the grounds for the building's green roof and for toilet flushing. The building reused timbers from a port warehouse that was demolished near the site. Natural light in the offices reduces or eliminates the need for artificial lighting. External louvers control sunlight and minimize solar heat gain reducing the need for air conditioning.

Photos: Nic Lehoux

Photos: Nic Lehoux

The Louisiana State Energy Office (SEO) disseminates information about green building and the green building industry. The information includes: articles, facts, products, and applications being proposed, designed, and used by the green building industry.

# SELECTED LOUISIANA ENERGY STATISTICS

Among the 50 states, Louisiana's rankings (in 2010, unless otherwise indicated) were:

## *PRIMARY ENERGY PRODUCTION*
(Including Louisiana OCS*)

1st in crude oil
1st in OCS crude oil
1st in OCS natural gas
1st in OCS revenue generated for federal government
1st in mineral revenues from any source to the federal government
1st in LNG terminal capacity
1st in foreign oil import volume
2nd in natural gas
2nd in crude oil proved reserves
3rd in dry natural gas proved reserves
3rd in total energy from all sources

## *REFINING AND PETROCHEMICALS*

1st in natural gas processing capacity
2nd in petroleum refining capacity
2nd in primary petrochemical production

## *PRIMARY ENERGY PRODUCTION*
(Excluding Louisiana OCS)

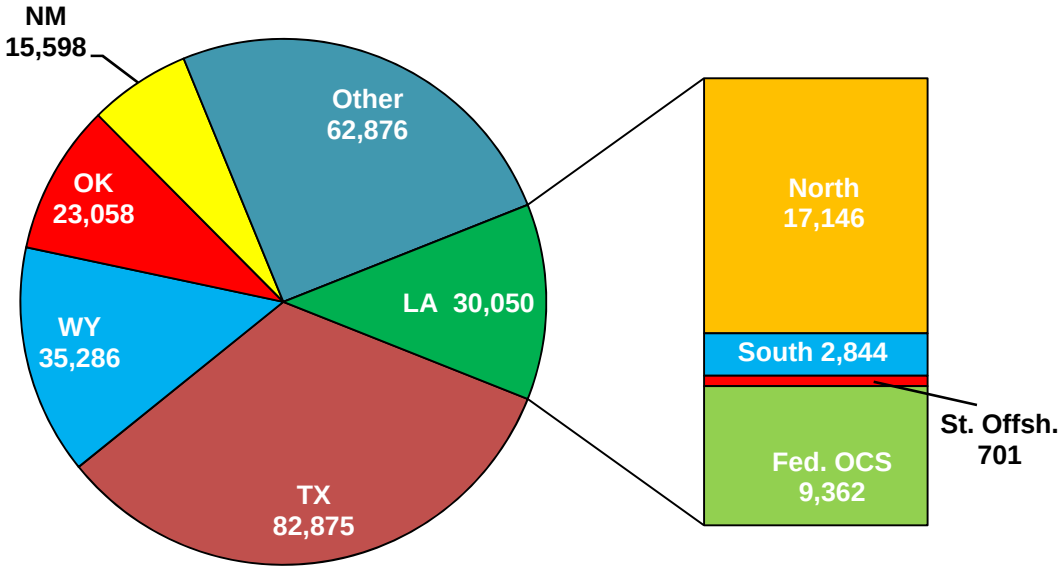
5th in crude oil
3rd in natural gas
5th in dry natural gas proved reserves
8th in crude oil proved reserves
12th in total energy
16th in nuclear electricity

## *ENERGY CONSUMPTION (2009)*

2nd in industrial energy
3rd in per capita energy
3rd in natural gas
5th in petroleum
8th in total energy
23th in residential energy

Figure 1

**2010 U.S. Natural Gas Reserves**
(Billion Cubic Feet)



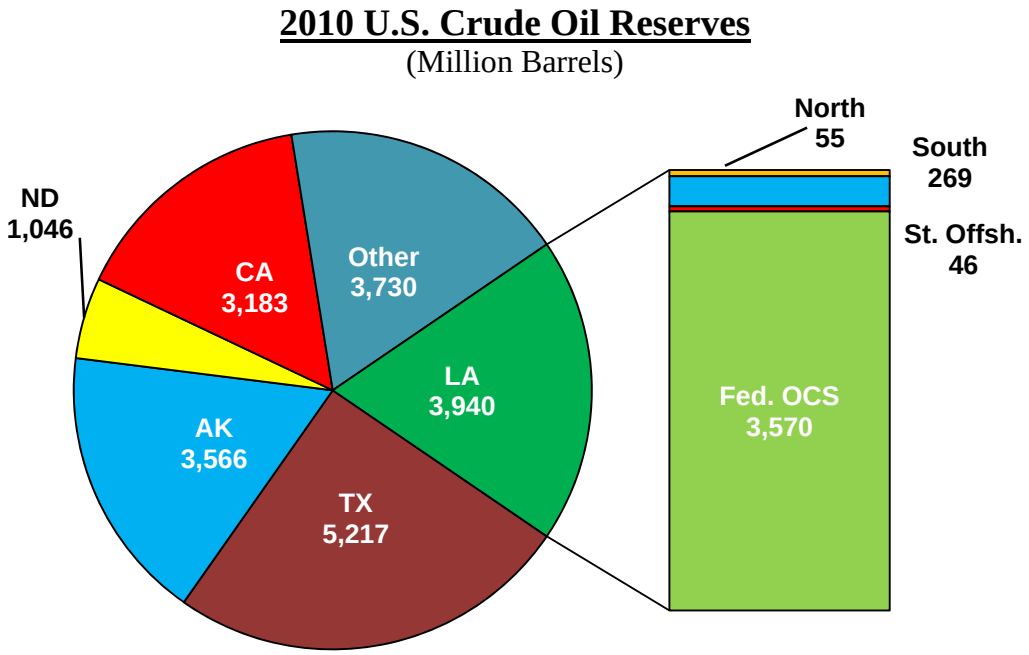
## PRODUCTION

State controlled natural gas production peaked at 5.6 trillion cubic feet (TCF) per year in 1970 and declined to 1.28 TCF in 2005. The trend started to reverse in 2006 when production increased to 1.35 TCF. The increasing trend continued with 1.36 TCF in 2007, 1.36 TCF in 2008, 1.51 TCF in 2009 and 2.16 TCF in 2010. The production surge is primarily due to production in the Haynesville shale play. Prior to the Haynesville discovery, the long-term decline rate was around 3.2% per year. With the start of production in the Haynesville in 2007, the state production has shown an increase of 0.3% in 2008 over the previous year, 12.4% in 2009, and 41.19% in 2010. The production rate is expected to increase at an average of 8.6% per year for the next five years, with the price of natural gas averaging around $4.50 per MCF.

State controlled crude oil and condensate production peaked at 566 million barrels per year in 1970, declined to 129 million barrels in 1996, declined to 72.6 million barrels in 2008, declined to 69.2 million barrels in 2009, and declined to 67.7 million barrels in 2010.

State controlled crude oil production decline rate averaged 3.6% per year for the past five years, and the projected decline rate for the next five years is 1.7% if the price of oil is around $90 per barrel. If the oil price were above $100 per barrel, the decline trend would be negligible.

Figure 2




Louisiana OCS territory has produced approximately 87.2% of the 18.5 billion barrels of crude oil and condensate, and 80.3% of the 172 TCF of natural gas extracted from all federal OCS territories from the beginning of time through the end of 2010. Currently, Louisiana OCS territory produces 25.8% of the oil and 7.5% of the natural gas produced in the entire U.S., and 93.3% of the oil and 72.8% of the natural gas produced in the Gulf of Mexico OCS.

Louisiana OCS gas production peaked at 4.07 TCF per year in 1979, declined to 2.95 TCF in 1989, then recovered to 3.84 TCF in 1999, fell to 2.02 TCF in 2007, 1.65 TCF in 2008, rose to 1.73 TCF in 2009, and fell to 1.63 TCF in 2010.

Louisiana OCS crude oil and condensate production first peaked at 388 million barrels per year in 1972 and then declined to 246 million barrels in 1989. The production has steadily risen from 264 million barrels in 1990 to 508 million barrels in 2002 due to the development of deep water drilling. The production in 2007 was 427 million barrels, dropped to 385 million barrels in 2008, increased to 528 million barrels in 2009, and fell to 518 in 2010. The roller coaster ride in oil production can be attributed to weather events and production mishaps.

Louisiana OCS (federal) territory is the most extensively developed and mature OCS territory in the U.S.

## REVENUE

In Fiscal Year (FY) 2007/08, oil and gas revenue (severance tax, royalties, and bonuses) reached to an all time high at $1.94 billion and it was 16% of state income (total state taxes, licenses, and fees); the previous peak occurred in FY 1981/82, it was $1.62 billion but it was 41% of state income. In FY 2008/09, oil and gas revenue was $1.54 billion, or 14% of state income. In FY2010/2011, it is expected to reach $1.25 billion, or 13% of state income.

At constant production, the state treasury gains or loses about $9.6 million of direct revenue from oil severance taxes and royalty payments for every $1 per barrel change in oil prices.

For every $1 per MCF change in gas price, at constant production, the state treasury gains or loses $36.3 million in royalty payments, and increases or decreases gas full rate severance tax by 1.0 cent per MCF would have cause a $10.1 million dollars change in revenue in the past, but today it is hard to estimate due to advent of large production volume from Haynesville shale and which are mostly exempted from severance taxes and fast dismissing production in others areas of the state.

There are no studies available on indirect revenue to the state from changes in gas and oil prices.

## DRILLING ACTIVITY

Drilling permits issued on state controlled territory peaked at 7,631 permits in 1984 and declined to a low of 1,017 permits in 1999. In 2007 increased to 2,150 permits, in 2008 increased to 2,374 permits, in 2009 decreased to 1365 permits and in 2010 increased to 1,956.

The average active rotary rig count for Louisiana, excluding OCS, reached a high of 386 rigs in 1981 and fell to 76 active rigs in 2002. In 2007, there were an average of 119 active rigs, fell to 117 active rigs in 2008, fell 113 active rigs in 2009, and increased to 166 active rigs in 2010 due to the strength in the development in the Haynesville shale region. The lowest year average between 1981 and 2010 was 64 active rigs in 1993.

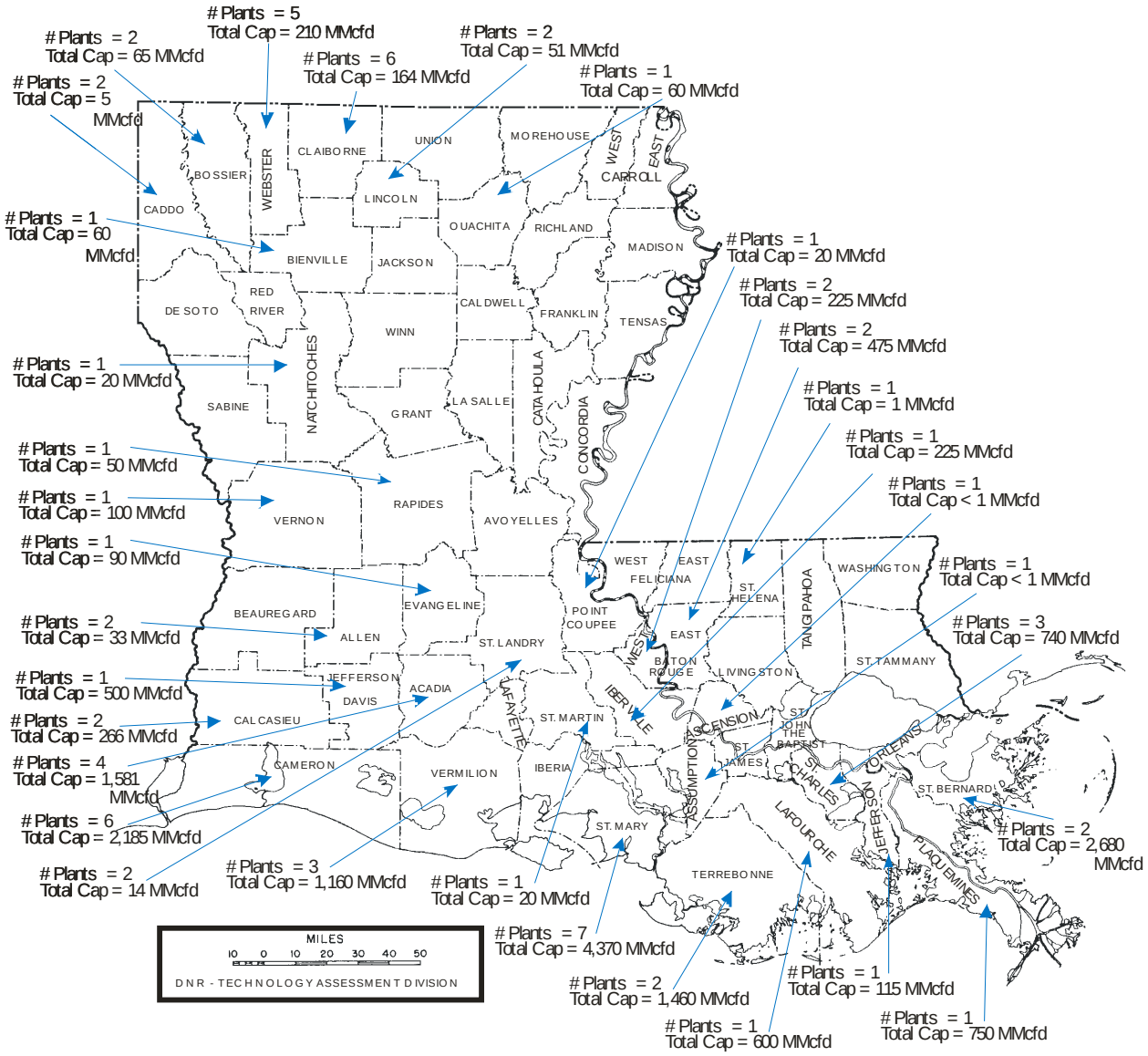
- Note: Louisiana OCS or Outer Continental Shelf is federal offshore territory adjacent to Louisiana's coast beyond the three mile limit of the state's offshore boundary.

The annual average active rotary rig count for Louisiana OCS reached a high of 109 rigs in 2001 and it is in a downward trend. It was 70 in 2006, 59 in 2007, 50 in 2008, 36 in 2009, and 26 in 2010. The lowest year average between 1981 and 2010 was 23 active rigs in 1992.

Figure 3

## Louisiana Gas Plants and Total Capacity by Parish

As of January 1, 2011




State total: 70 plants, 18,180.3 MMcfg

Data source: Oil & Gas Journal (6/6/2011)

# LOUISIANA, AN ENERGY CONSUMING STATE: AN UPDATE USING 2009 DATA

by
Bryan Crouch, P.E.

Louisiana ranks high among the states in overall energy consumption. In 2009, Louisiana remained ranked 8th in total energy consumption and 3rd in per capita energy consumption. The main reason for Louisiana's high energy consumption is the extremely energy intensive petrochemical and petroleum refining industry that is located in the state. The abundance of Louisiana's natural resources has historically meant low energy prices, which have attracted a large cluster of energy intensive industries to the state. Figures 1 & 2 below show Louisiana energy consumption by sector and source. The large amount of energy consumed by the petrochemical and petroleum refining industry is reflected in the high percentage for the industrial sector and the high percentages for natural gas and petroleum.

**Figure 1. Louisiana Energy Consumption Percentage by Sector - 2009**

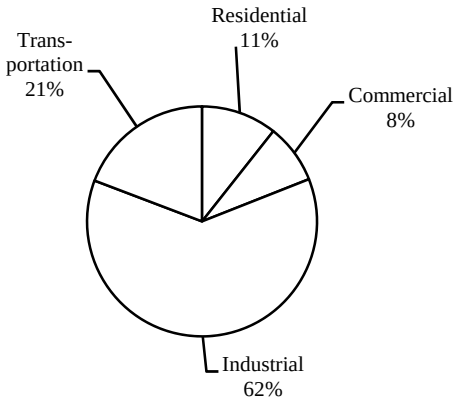



**Figure 2. Louisiana Energy Consumption Perecentage by Source - 2009**

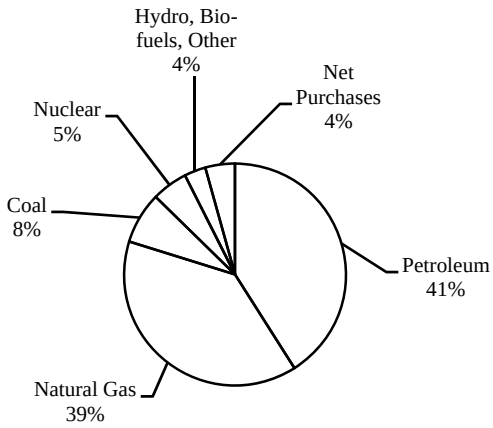



Table 1 shows where Louisiana ranks among the states in various energy consumption categories, and lists the top energy consuming state for each category.

**Table 1. Louisiana Energy Consumption Rankings Among the States - 2009**

| Category | Rank | TBTU | #1 State (TBTU) |
|---|---|---|---|
| Residential | 23 | 358.1 | Texas (1,611.5) |
| Commercial | 23 | 282.2 | California (1,578.7) |
| Industrial | 2 | 2,079.2 | Texas (5,502.2) |
| Transportation | 13 | 646.8 | California (3,129.5) |
| Coal | 30 | 252.5 | Texas (1,497.9) |
| Natural Gas | 3 | 1,300.3 | Texas (3,462.2) |
| Petroleum | 5 | 1,385.4 | Texas (5,512.4) |
| Electricity | 18 | 268.4 | Texas (1,178.1) |
| Total | 8 | 3,366.3 | Texas (11,297.4) |
| Per Capita (MBTU) | 3 | 749.8 | Wyoming (955.8) |

Louisiana is also a large producer of energy, mainly in the form of crude oil and natural gas. Table 2 on the following page presents the Louisiana energy balance for 2009. Energy production from Louisiana's federal OCS area dwarfs state production. The energy balance is calculated both inclusive and exclusive of Louisiana's OCS oil and gas production.

## Table 2. Louisiana Energy Balance - 2009 [1]

| ENERGY SOURCE | | | PRODUCTION | | CONSUMPTION | | NET STATE ENERGY PRODUCTION Excluding OCS | | NET STATE ENERGY PRODUCTION Including OCS | |
|---|---|---|---|---|---|---|---|---|---|---|
| PETROLEUM: | STATE OIL[2] | 401.5 | TBTU[4] (69.2 MMBBL) | 1,374.5 | TBTU (264.6 MMBBL) | -973.0 | TBTU | 2,088.4 | TBTU |
| | LOUISIANA OCS OIL[2] | 3,061.4 | TBTU[4] (527.8 MMBBL) | | | | | | |
| NATURAL GAS: | STATE GAS [3] | 1,572.3 | TBTU[4] (1.528 TCF) | 1,300.3 | TBTU (1.263 TCF) | 272.0 | TBTU | 2,047.2 | TBTU |
| | LOUISIANA OCS GAS [3] | 1,775.2 | TBTU[4] (1.725 TCF) | | | | | | |
| COAL: | LIGNITE | 50.2 | TBTU (3.657 MMSTON) | 252.5 | TBTU (15.7 MMSTON) | -202.3 | TBTU | -202.3 | TBTU |
| NUCLEAR ELECTRIC POWER | | 175.5 | TBTU (16.8 Billion kWH) | 175.5 | TBTU (16.8 Billion kWH) | 0.0 | TBTU | 0.0 | TBTU |
| HYDROELECTRIC, BIOFUELS & OTHER | | 104.4 | TBTU | 104.4 | TBTU | 0.0 | TBTU | 0.0 | TBTU |
| NET INTERSTATE PURCHASES OF ELECTRICITY INCLUDING ASSOCIATED LOSSES | | | | 145.0 | TBTU | -145.0 | TBTU | -145.0 | TBTU |
| TOTALS: | EXCLUDING LOUISIANA OCS | 2,303.9 | TBTU | 3,352.2 | TBTU | -1,048.3 | TBTU | | |
| | INCLUDING LOUISIANA OCS | 7,140.5 | TBTU | 3,352.2 | TBTU | | | 3,788.3 | TBTU |

The Louisiana energy balance for 2009 shows that the state consumed 1,048 more TBTUs of energy than it produced if Louisiana OCS production is not included. If Louisiana OCS production is included, the state is a net producer of energy by 3,788 TBTUs.

TCF = Trillion Cubic Feet
TBTU = Trillion BTU's
MMBBL = Million Barrels
OCS = Outer Continental Shelf (federal waters seaward of the state's 3-mile offshore boundary)
kWH = Kilowatt hour
MMSTON = Million Short Tons

1. Unless otherwise noted, data is obtained from the Energy Information Administration's latest published figures for state energy consumption.
2. Includes condensate
3. Includes gas plant liquids
4. Louisiana Department of Natural Resources data

# MICRO-GRIDS

by

Patricia Nussbaum, P.E.

A Micro-Grid is a stand-alone electrical island that can be connected to the power grid. When connected to the grid it looks like any other electricity consumer. Standing alone it is a distributed system with its own generation and load.

The U.S. Department of Energy (DOE) has been tasked with modernizing the country's electrical power grid. The modernized grid is often referred to as the Smart Grid and Micro-Grid technology is part of the ongoing discussion of the challenges and opportunities surrounding a smarter electrical grid.

Blackouts, national security concerns, and natural disasters (in Louisiana this often means hurricanes or tropical weather) highlight our dependence on electricity. Plant production stops, refrigerated and frozen food spoils, traffic lights stop working and traffic grinds to a halt, credit card and ATM transactions stop, and gas pumps don't work. The centralized grid structure makes us more vulnerable. Other countries like Germany and Japan, which did not have a large central grid to work around, have developed a more distributed approach with photovoltaic (PV) solar power and advanced battery storage technology, respectively. A Micro-Grid system for urban applications and another for suburban applications, taken from the Shimizu Company website, are shown below (http://www.shimz.co.jp/english/theme/sit/technology_03.html).

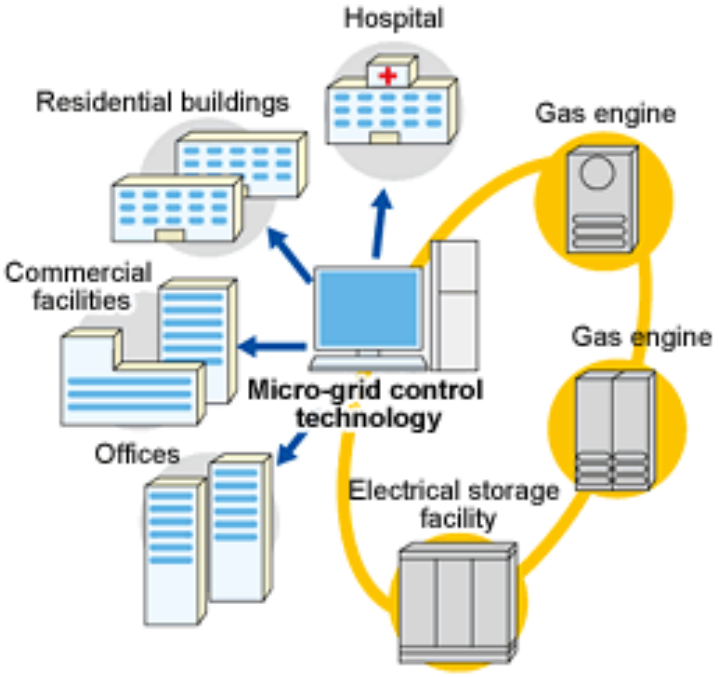
Micro-Grids take advantage of distributed resources and support the smart grid concept of "islanding." Islanding allows the distributed generator to continue generating power when there is no power coming from the utility. The Micro-Grid uses things such as rooftop PV solar, fuel cells, combined heat and power, and perhaps even electric vehicles (where the grid is taking power from the vehicle's storage battery rather than the other way around). In this way, a building or a community can generate enough electricity to sustain itself until the larger utility grid is restored.

The United States military is looking to the Micro-Grid to ensure energy security as well as to meet renewable energy goals. The military has a long history of self-sufficiency and this technology is a natural extension of military resiliency as it relates to national security.

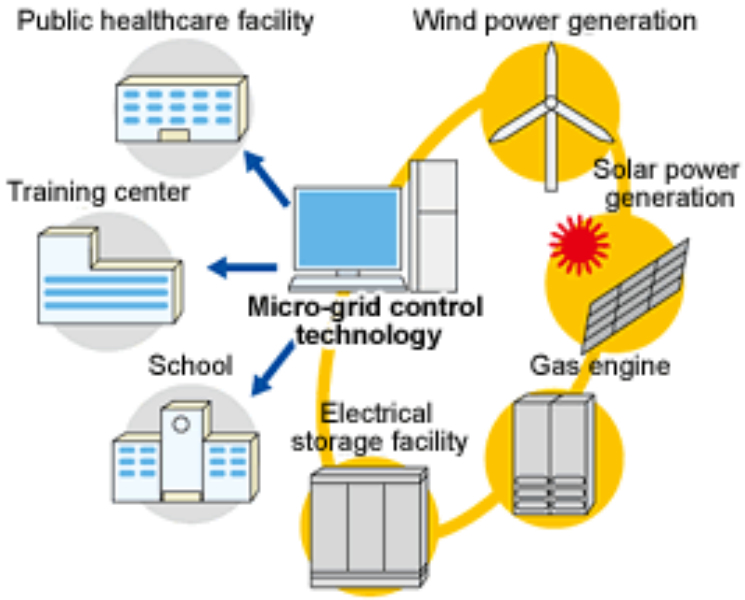
The DOE Office of Electricity Delivery and Energy Reliability funded a Micro-Grid R&D effort called the Consortium for Electric Reliability Technology Solutions (CERTS) (http://certs.lbl.gov/certs-der-micro.html).

The Micro-Grid concept treats load and generation as a single, distributed system that can operate on its own as an island or be connected to the larger utility grid. This is a piece of the larger Smart Grid concept of an affordable, integrated power system that can isolate itself from the power grid when needed, such as in the event of a blackout or brownout situation, and then automatically reconnect when the event is over.

The Smart-Grid of the future will no doubt have distributed resources that automatically detect and respond to problems. It will also be resilient when faced with "attack" or natural disasters, and have rapid restoration capabilities.




Micro-Grid System – Urban




Micro-Grid System – Suburban

# 355 11TH STREET, SAN FRANCISCO, CALIFORNIA

by

Howard Hershberg, AIA

Photo Credit: Matthew Millman

The 14,000 square foot building was originally built in 1912 as a bottle storage facility for the nearby Jackson Brewery, and it is now San Francisco's very first LEED – NC Gold-Certified building. The full case study can be found at http://www.aiatopten.org/hpb/overview.cfm?ProjectID=1704.

The building's skin, however, held the key to transforming 355 Eleventh into a low-tech, yet innovative example of green design and construction. By replacing its old corrugated panels (which contained lead) with new zinc panels that are perforated and set in front of the windows (instead of being flush), the architects (Aidlin Darling Design) created a breathable envelope.

The perforated panels filter sunlight, reduce solar loads, and because they are set in front of the operable windows, they create tempered air pockets to be circulated inside the building. As part of the Jackson Brewery Complex, 355 Eleventh is listed on the National Register of Historic Places, so the architects had to preserve or repair the original fenestration on the building's North and South facades and convince city officials that the new west (front façade) respected its history.

The building architects employed a range of sustainable strategies in addition to retaining 75% of the original building's structure.

## Building Features:

1. The entire building is naturally ventilated, and a 30kw solar array on the roof provides 79% of the building's electrical power.

2. A wireless connection from the solar array to the computers inside allows them to monitor energy performance in real time.
3. A "green" roof on the two-story portion of the building insulates that part of the building, and filters storm water.
4. Areas planted with native/adapted species which require no irrigation after a one-year establishment time, cover more than 20% of the project's total site.
5. Fifty percent of the steel is recycled, and some of the interior finishes and furniture are made from wood salvaged when the workers cut through the building's timber frame to create a 2-story lobby.
6. Environmentally friendly materials were specified, such as bamboo and concrete for interior floors and exterior hardscape with 20% fly ash, instead of Portland cement.
7. For the exterior, ceramic-based pavers that are porous were specified to allow storm water to seep into the ground.
8. All paints and coatings are low VOC, and most are 100% acrylic.
9. For inside countertops, they used a special concrete mixture with crushed, recycled glass as the aggregate.
10. Inside the building, the old timber frame was sandblasted to bring out its warmth and strength.
11. To keep air circulating throughout the interior spaces, they installed 18-inch clerestory windows on walls separating conference rooms from private offices, and separating private offices from open work areas.

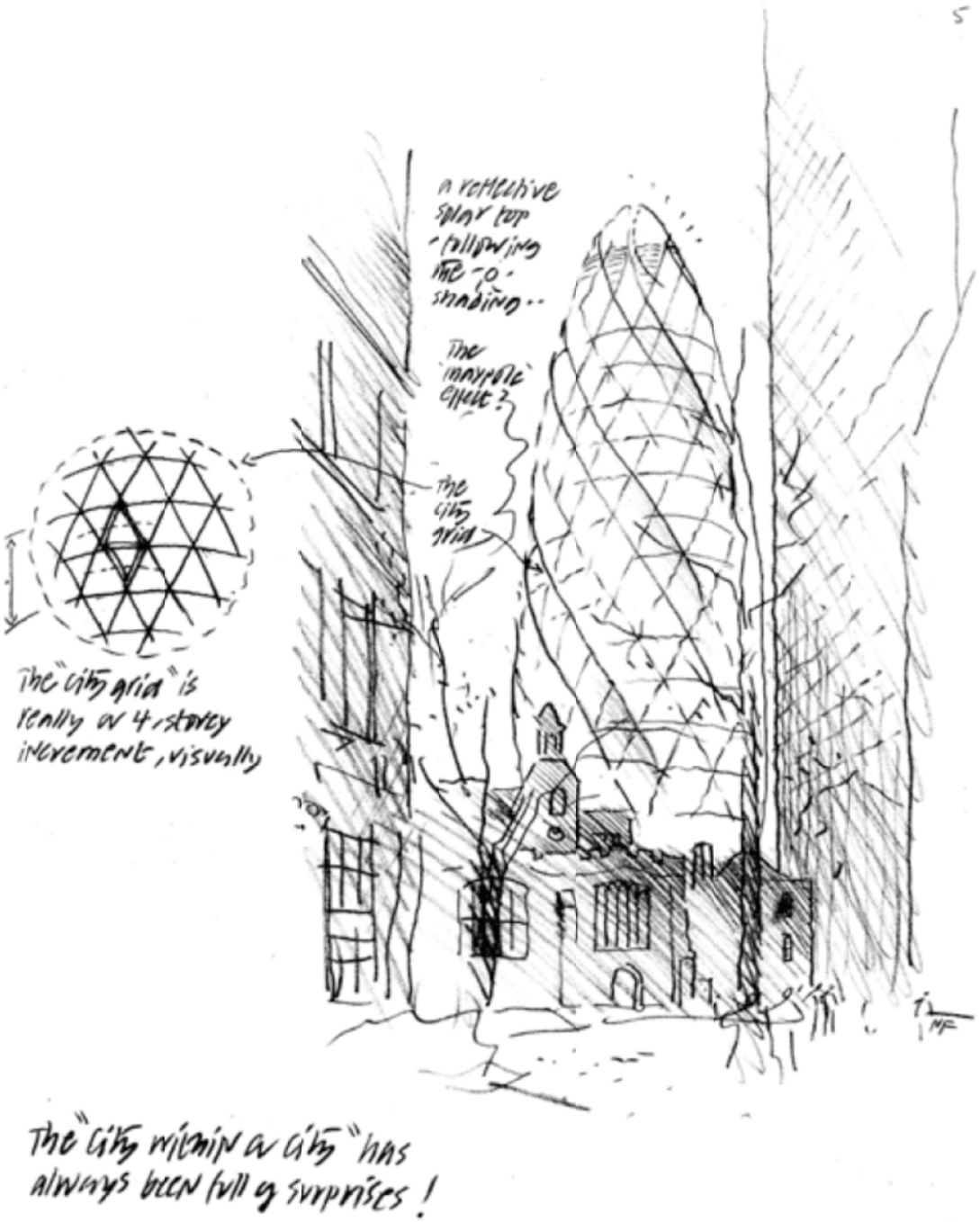
Photo Credit: Matthew Millman

The Louisiana State Energy Office (SEO) disseminates information about green building and the green building industry. The information includes: articles, facts, products, and applications being proposed, designed, and used by the green building industry.

# DIAGRID: NOT A RECENT IDEA

by

Howard Hershberg, AIA




SOURCE: Diagrid: Structural Efficiency & Increasing Popularity by Ian McClain

The word "Diagrid" is an abbreviation for diagonal grid. The identifying trait of a Diagrid is the triangle. Over the last several years something new has been brewing in the architectural and structural engineering fields. This is not a new structural discovery or system. However, its implementation in projects since 2003 has been unprecedented.

What is Diagrid? Yoram Eilon, Vice President of WSP Cantor Seinuk, and the structural engineering manager on the Hearst Tower in New York City, defines Diagrid as "a series of triangles that combine gravity and lateral support into one, making the building stiff, efficient, and lighter than a traditional high rise." By utilizing the Diagrid exoskeleton one can reduce interior supports. This saves space and building materials, allows naturally broad apertures, and provides flexibility for systems installation. Because of Diagrid's ability to change by varying the bases and heights of the triangles, it is one of the most flexible building types known to man.

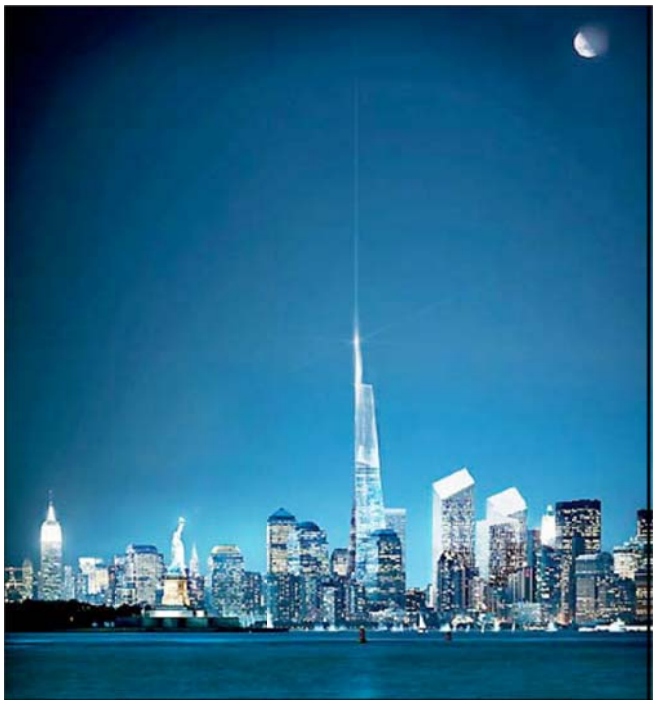
SOURCE: Diagrid: Structural Efficiency & Increasing Popularity by Ian McClain

The foremost developer of the Diagrid was the famous inventor, architect, and engineer, R. Buckminster Fuller, who stated, "Nature's own system of coordination is based on the triangle. Provided its joints are strong enough, the triangle doesn't collapse due to pressure being applied at any one point, as each side is buttressed by its neighbors." Mr. Fuller elaborated his triangular concept into buildings of all kinds, notably in his tensegrity and geodesic structures.

An example of the use of the Diagrid is the Swiss Reinsurance Building (The "Re") in New York City (NYC). It was designed by Norman Foster Architects to "read Green." The legibility and openness of the Diagrid fitted the bill exactly.

SOURCE: Diagrid: Structural Efficiency & Increasing Popularity by Ian McClain

Ever since the violence and destruction that brought down NYC's World Trade Center (WTC) on September 11, 2001, structural systems and buildings that signal structural sustainability, relative indestructability, and safety are of great importance to society. These are also paramount reasons for the popularity and proliferation of Diagrid buildings today. In fact, Diagrid is featured in the submissions to the WTC Competition. Below are the Libeskind submission and the Foster submission to the WTC competition.



A model of the proposed Freedom Tower shows the latticework effect of a structural diagrid.

SOURCE: Diagrid: Structural Efficiency & Increasing Popularity by Ian McClain

SOURCE: Diagrid: Structural Efficiency & Increasing Popularity by Ian McClain

The Louisiana State Energy Office (SEO) disseminates information about energy efficiency and sustainable construction. The information includes articles, facts, products, and applications being proposed, designed, and used by the building industry. For more information about Diagrid, see Diagrid: Structural Efficiency & Increasing Popularity, by Ian McCain (www.dsg.fgg.uni-lj.si/dubaj2009/images/stories/Diagrid%20tehnologija.pdf, accessed 11/8/2011).

# 2012 SERVICE QUESTIONNAIRE

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