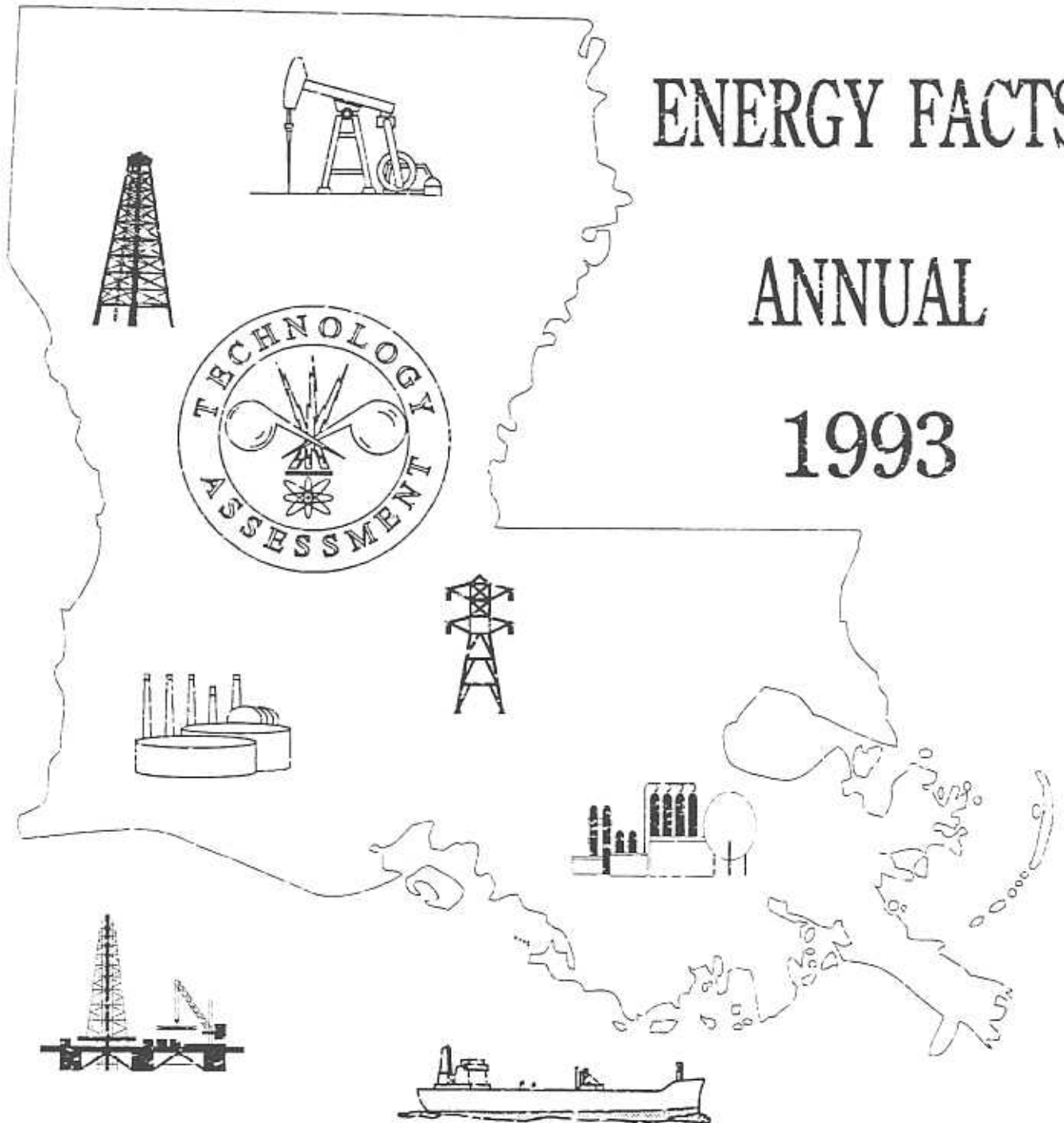


LOUISIANA

ENERGY FACTS

ANNUAL

1993



DEPARTMENT OF NATURAL RESOURCES
TECHNOLOGY ASSESSMENT DIVISION
October 30, 1994

This issue of **Louisiana Energy Facts Annual-1993** is funded 100% (\$2422.28) with Petroleum Violation Escrow funds as part of the State Energy Conservation Program as approved by the U.S. Department of Energy and the Department of Natural Resources.

This public document was published at a total cost of \$2422.28. 800 copies of this public document were published in this first printing at a total cost of \$2422.28. The total cost of all printings of this document, including reprints, is \$2422.28. This document was published by Emprint Digital Imaging, 5425 Florida Blvd., Baton Rouge, LA, to promulgate the State Energy Conservation Plan developed under authority of P.L. 94-163. This material was printed in accordance with the standards for printing by State agencies established pursuant to R.S. 43:31. Printing of this material was purchased in accordance with the provisions of Title 43 of the Louisiana Revised Statutes.

LOUISIANA ENERGY FACTS ANNUAL

1993

Department of Natural Resources
Jack McClanahan
Secretary of Natural Resources



Technology Assessment Division

T. Michael French, Director
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Phyllis S. Ortego, Editor

October 30, 1994

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The **Louisiana Energy Facts Annual - 1993** was published by the Technology Assessment Division of the Louisiana Department of Natural Resources. The Director of the Division is T. Michael French and the Assistant Director is William J. Delmar, Jr.

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INTRODUCTION

1993 HIGHLIGHTS

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

Natural gas production showed signs of recovery.

Natural gas production in areas under Louisiana state jurisdiction increased around 0.5 percent. Natural gas prices were higher and more stable in 1993. Gas demand increased steadily and gas supplies nearly balanced or tilted toward tight. Prices peaked with a May 1993 average price of \$2.68 per MMBTU. The average spot price in 1993 of \$2.15 per MCF was about 36 percent higher than the 1992 average price of \$1.80 per MCF.

Oil prices continued to fluctuate.

Oil prices fluctuated between \$18 and \$22 per barrel in 1993. Factors affecting prices were oversupply of crude oil on the market counterbalanced with growth in gasoline consumption, heating fuel purchases, and industrial output. In 1993, U.S. petroleum use grew by 172,000 barrels per day over the 1992 level. In 1994, U.S. petroleum demand is expected to grow by an additional 200,000 barrels per day.

Drilling activity was up.

Drilling activity increased in Louisiana. The rise could be attributed to the higher gas prices. However, exploration and development activity responded very slowly to gas prices. The crude oil oversupply put a roadblock on Louisiana drilling recovery.

Reserves were moving down.

State oil and gas proved reserves fell. The Energy Information Administration (EIA) reported a 6 percent decline in state gas reserves and a 4 percent decline in state oil reserves in Louisiana. Louisiana OCS gas proved reserves fell while Louisiana OCS oil proved reserves increased. Federal OCS proved gas reserves declined by 1 percent and Federal OCS proved oil reserves increased by 14 percent.

ABOUT THIS PUBLICATION

The **Louisiana Energy Facts Annual** is a digest of energy production and use statistics. It is information from public sources condensed to highlight the information about our state. We hope the graphs and charts provided also help to make clear the trends of those statistics.

Data availability lags limit this **Facts Annual** to include data through December of 1993. Some figures included here are more current than our monthly **1993 Louisiana Energy Facts** due to revisions since the **Facts** were published. This data by its nature continues to be revised, sometimes years after it is first published. We try to bring attention to these changes as we republish them.

We hope you will find this **Facts Annual** useful, and we welcome any comments or suggestions.

SUBDIVISIONS OF LOUISIANA



TABLE 1

LOUISIANA STATE CRUDE OIL PRODUCTION
Excluding Condensate and OCS
(Barrels)

<u>DATE</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>OFFSHORE</u>	<u>TOTAL</u>
1975	34,072,947	211,500,323	37,017,114	282,590,384
1976	34,843,495	190,567,868	34,695,350	260,106,713
1977	33,548,990	169,446,753	30,477,122	233,472,865
1978	31,666,528	151,493,817	28,840,730	212,001,075
1979	28,831,653	130,427,990	25,990,326	185,249,969
1980	29,004,703	116,638,403	24,834,002	170,477,108
1981	30,736,984	103,284,948	23,924,888	157,946,820
1982	31,485,800	96,155,535	22,793,085	150,434,420
1983	29,831,731	93,737,027	22,806,268	146,375,026
1984	29,590,376	96,690,421	25,117,916	151,398,713
1985	29,436,551	97,622,513	24,292,173	151,351,237
1986	26,795,748	97,853,602	24,619,169	149,268,519
1987	25,036,758	95,476,492	23,372,480	143,885,730
1988	23,958,703	88,673,893	22,792,851	135,425,447
1989	22,224,981	78,275,666	20,869,917	121,370,564
1990	22,445,972	72,017,903	21,128,443	115,592,318
1991	22,704,171	69,546,140	22,499,961	114,750,272
January	1,894,693	5,973,369	1,968,829	9,836,891
February	1,809,882	5,567,231	1,855,325	9,232,438
March	1,883,052	5,889,967	1,981,975	9,754,994
April	1,825,858	5,690,265	1,987,338	9,503,461
May	1,875,493	5,909,853	1,910,767	9,696,113
June	1,762,615	5,772,788	1,860,745	9,396,148
July	1,828,366	6,037,592	1,827,246	9,693,204
August	1,834,228	5,326,520	1,525,261	8,686,009
September	1,806,574	5,379,117	1,762,858	8,948,549
October	1,854,528	5,703,819	1,779,273	9,337,620
November	1,800,278	5,442,138	1,636,357	8,878,773
December	1,820,553	5,853,323	1,807,406	9,481,282
1992 Total	21,996,120	68,545,982	21,903,380	112,445,482
January	1,800,150	5,611,636	1,793,885	9,205,671
February	1,665,085	5,181,800	1,540,878	8,387,763
March	1,811,019	5,832,452	1,678,405	9,321,876
April	1,725,373	5,525,328	1,762,102	9,012,803
May	1,734,786	5,688,013	1,893,192	9,315,991
June	1,646,931	5,506,873	1,853,299	9,007,103
July	1,729,659	5,632,028	1,934,326	9,296,013
August	1,653,440	5,636,772	1,927,931	9,218,143
September	1,583,279	5,428,112	1,890,443	8,901,834
October	1,678,997	5,623,804	1,913,094	9,215,895
November	1,600,443	5,163,727	1,759,744	8,523,914
December	1,581,259	5,267,402	1,775,156	8,623,817
1993 Total	20,210,421	66,097,947	21,722,455	108,030,823

TABLE 2

LOUISIANA STATE CONDENSATE PRODUCTION
Excluding OCS
(Barrels)

<u>DATE</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>OFFSHORE</u>	<u>TOTAL</u>
1975	3,199,729	45,922,653	3,967,783	53,090,169
1976	3,552,038	41,495,384	3,662,830	48,710,254
1977	3,678,121	39,698,090	3,327,558	46,703,775
1978	3,736,714	36,763,098	3,524,770	44,024,582
1979	3,378,399	35,213,787	3,369,666	41,961,852
1980	3,222,000	34,744,956	2,757,941	40,724,897
1981	4,371,074	35,181,456	2,348,549	41,901,079
1982	4,120,663	32,663,371	2,147,896	38,931,930
1983	3,598,850	27,638,588	1,996,504	33,233,942
1984	3,140,006	30,785,661	1,918,564	35,844,231
1985	2,668,233	29,260,762	1,721,098	33,650,093
1986	2,755,749	26,709,496	2,176,970	31,642,215
1987	2,512,024	25,594,838	1,811,598	29,918,460
1988	2,718,031	26,401,604	1,700,428	30,820,063
1989	2,943,821	26,446,428	1,835,017	31,225,266
1990	3,356,554	27,602,203	1,701,098	32,659,855
1991	4,078,811	26,726,276	1,715,899	32,520,986
January	354,317	2,097,898	155,778	2,607,993
February	325,613	1,947,960	138,110	2,411,683
March	312,674	2,130,865	140,457	2,583,996
April	320,225	1,969,158	133,212	2,422,595
May	322,257	2,071,082	135,295	2,528,634
June	295,148	2,038,511	128,202	2,461,861
July	278,111	2,159,861	122,884	2,560,856
August	295,256	1,964,995	105,827	2,366,078
September	282,749	1,897,068	113,256	2,293,073
October	307,757	2,799,900	148,070	3,255,727
November	307,877	2,099,045	134,881	2,541,803
December	344,287	2,119,351	131,478	2,595,116
1992 Total	3,746,271	25,295,694	1,587,450	30,629,415
January	362,732	2,103,667	126,167	2,592,566
February	314,277	1,980,191	96,524	2,390,992
March	319,037	2,191,186	127,213	2,637,436
April	308,647	2,045,979	153,679	2,508,305
May	310,881	2,194,289	141,765	2,646,935
June	246,922	2,107,989	155,335	2,510,246
July	275,588	1,999,804	156,457	2,431,849
August	289,219	2,104,857	141,096	2,535,172
September	285,068	1,976,415	137,417	2,398,900
October	289,342	2,068,547	120,533	2,478,422
November	279,206	2,043,875	125,820	2,448,901
December	316,373	2,077,088	124,125	2,517,586
1993 Total	3,597,292	24,893,887	1,606,131	30,097,310

TABLE 3
LOUISIANA STATE CRUDE OIL AND CONDENSATE PRODUCTION
Excluding OCS
(Barrels)

<u>DATE</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>OFFSHORE</u>	<u>TOTAL</u>
1975	37,272,676	257,422,976	40,984,897	335,680,553
1976	38,395,533	232,063,252	38,358,180	308,816,967
1977	37,227,111	209,144,843	33,804,680	280,176,640
1978	35,403,242	188,256,914	32,365,500	256,025,656
1979	32,210,052	165,641,777	29,359,992	227,211,821
1980	32,226,703	151,383,359	27,591,943	211,202,005
1981	35,108,058	138,466,404	26,273,437	199,847,899
1982	35,606,463	128,818,906	24,940,981	189,366,350
1983	33,430,581	121,375,615	24,802,772	179,608,968
1984	32,730,382	127,476,082	27,036,480	187,242,944
1985	32,104,784	126,883,275	26,013,271	185,001,330
1986	29,551,497	124,563,098	26,796,139	180,910,734
1987	27,548,782	121,071,330	25,184,078	173,804,190
1988	26,676,734	115,075,497	24,493,279	166,245,510
1989	25,168,802	104,722,094	22,704,934	152,595,830
1990	25,802,526	99,620,106	22,829,541	148,252,173
1991	26,782,982	96,272,416	24,215,860	147,271,258
January	2,249,010	8,071,267	2,124,607	12,444,884
February	2,135,495	7,515,191	1,993,435	11,644,121
March	2,195,726	8,020,832	2,122,432	12,338,990
April	2,146,083	7,659,423	2,120,550	11,926,056
May	2,197,750	7,980,935	2,046,062	12,224,747
June	2,057,763	7,811,299	1,988,947	11,858,009
July	2,106,477	8,197,453	1,950,130	12,254,060
August	2,129,484	7,291,515	1,631,088	11,052,087
September	2,089,323	7,276,185	1,876,114	11,241,622
October	2,162,285	8,503,719	1,927,343	12,593,347
November	2,108,155	7,541,183	1,771,238	11,420,576
December	2,164,840	7,972,674	1,938,884	12,076,398
1992 Total	25,742,391	93,841,676	23,490,830	143,074,897
January	2,162,882	7,715,303	1,920,052	11,798,237
February	1,979,362	7,161,991	1,637,402	10,778,755
March	2,130,056	8,023,638	1,805,618	11,959,312
April	2,034,020	7,571,307	1,915,781	11,521,108
May	2,045,667	7,882,302	2,034,957	11,962,926
June	1,893,853	7,614,862	2,008,634	11,517,349
July	2,005,247	7,631,832	2,090,783	11,727,862
August	1,942,659	7,741,629	2,069,027	11,753,315
September	1,868,347	7,404,527	2,027,860	11,300,734
October	1,968,339	7,692,351	2,033,627	11,694,317
November	1,879,649	7,207,602	1,885,564	10,972,815
December	1,897,632	7,344,490	1,899,281	11,141,403
1993 Total	23,807,713	90,991,834	23,328,586	138,128,133

TABLE 4

**LOUISIANA TOTAL CRUDE OIL AND CONDENSATE PRODUCTION
(Barrels)**

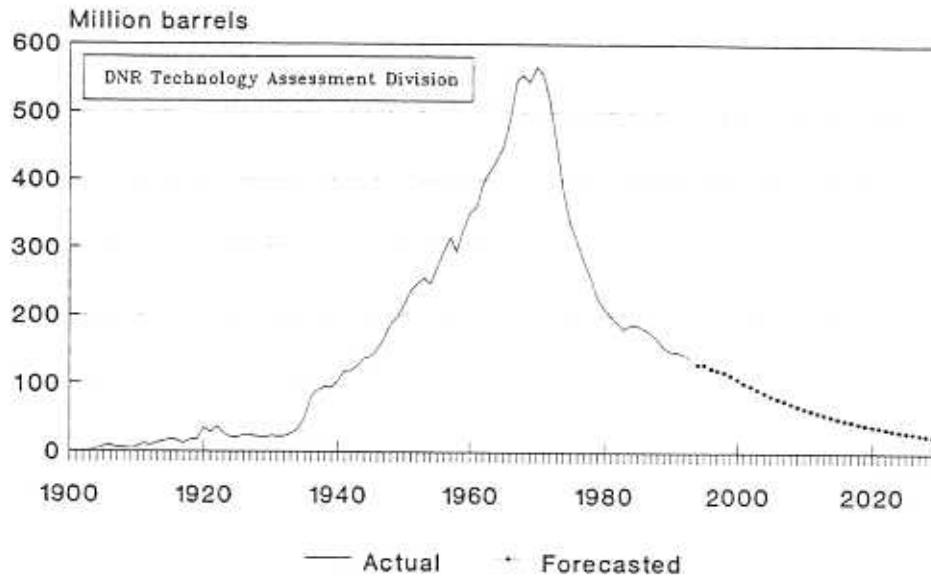
DATE	ONSHORE	-----OFFSHORE-----		TOTAL
		STATE	OCS ¹²	
1975	294,695,652	40,984,897	313,592,559	649,273,108
1976	270,458,786	38,358,180	301,887,002	610,703,968
1977	246,371,954	33,804,680	290,771,605	570,948,239
1978	223,660,156	32,365,500	278,071,535	534,097,191
1979	197,851,829	29,359,992	271,008,916	498,220,737
1980	183,610,062	27,591,943	256,688,082	467,890,087
1981	173,574,462	26,273,437	255,875,717	455,723,616
1982	164,425,369	24,940,981	275,513,489	464,879,839
1983	154,806,196	24,802,772	298,093,559	477,702,527
1984	160,206,464	27,036,480	318,024,622	505,267,566
1985	158,988,059	26,013,271	338,901,863	523,903,193
1986	154,114,595	26,796,139	340,152,276	521,063,010
1987	148,620,112	25,184,078	307,950,881	481,755,071
1988	141,752,231	24,493,279	261,936,530	428,182,040
1989	129,890,896	22,704,934	246,207,653	398,803,483
1990	125,422,632	22,829,541	264,670,535	412,922,708
1991	123,055,398	24,215,860	262,647,733	409,918,991
January	10,320,277	2,124,607	25,938,934 ^R	38,383,818 ^R
February	9,650,686	1,993,435	23,827,614 ^R	35,471,735 ^R
March	10,216,558	2,122,432	25,930,050 ^R	38,269,040 ^R
April	9,805,506	2,120,550	24,381,354 ^R	36,307,410 ^R
May	10,178,685	2,046,062	23,569,991 ^R	35,794,738 ^R
June	9,869,062	1,988,947	23,298,550 ^R	35,156,559 ^R
July	10,303,930	1,950,130	25,563,851 ^R	37,817,911 ^R
August	9,420,999	1,631,088	21,738,996 ^R	32,791,083 ^R
September	9,365,508	1,876,114	21,581,067 ^R	32,822,689 ^R
October	10,666,004	1,927,343	24,871,923 ^R	37,465,270 ^R
November	9,649,338	1,771,238	24,262,907 ^R	35,683,483 ^R
December	10,137,514	1,938,884	23,952,970 ^R	36,029,368 ^R
1992 Total	119,584,067	23,490,830	288,918,208^R	431,993,105^R
January	9,878,185	1,920,052	23,087,398	34,885,635
February	9,141,353	1,637,402	20,303,875	31,082,630
March	10,153,694	1,805,618	22,132,250	34,091,562
April	9,605,327	1,915,781	21,648,824	33,169,932
May	9,927,969	2,034,957	23,149,514	35,112,440
June	9,508,715	2,008,634	22,428,427	33,945,776
July	9,637,079	2,090,783	23,264,744	34,992,606
August	9,684,288	2,069,027	22,811,926	34,565,241
September	9,272,874	2,027,860	22,289,791	33,590,525
October	9,660,690	2,033,627	22,609,374	34,303,691
November	9,087,251	1,885,564	21,954,904	32,927,719
December	9,242,122	1,899,281	23,127,008	34,268,411
1993 Total	114,799,547	23,328,586	268,808,033	406,936,166

Note: The 1991 and 1992 OCS production is estimated from DOE's production figures.

^RRevised

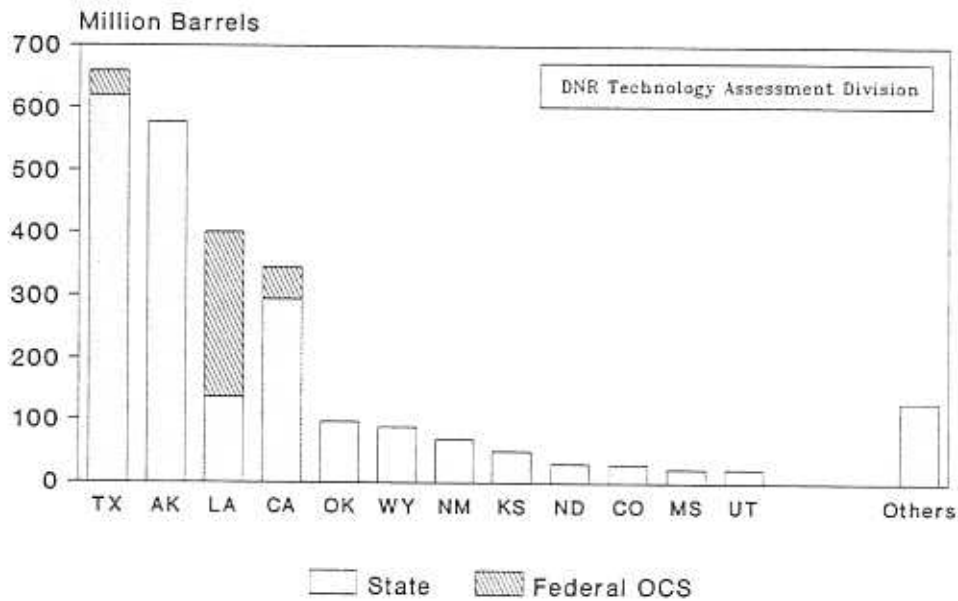
See footnotes in Appendix A.

FIGURE 1
 LOUISIANA STATE OIL PRODUCTION
 ACTUAL AND FORECASTED THROUGH YEAR 2030



Condensate included
 Federal OCS excluded

FIGURE 2
 1993 UNITED STATES OIL PRODUCTION
 BY STATE



SOURCE: U.S. Department of Energy

TABLE 5

UNITED STATES OCS CRUDE OIL AND CONDENSATE PRODUCTION¹²
(Barrels)

<u>YEAR</u>	<u>LOUISIANA</u>	<u>TEXAS</u>	<u>CALIFORNIA</u>	<u>TOTAL</u>
PRIOR	1,150,697	0	0	1,150,697
1954	3,342,230	0	0	3,342,230
1955	6,703,528	1,956	0	6,705,484
1956	11,001,248	13,284	0	11,014,532
1957	16,064,395	5,792	0	16,070,187
1958	24,769,037	0	0	24,769,037
1959	35,697,264	257	0	35,697,521
1960	49,665,891	98	0	49,665,989
1961	64,330,078	0	0	64,330,078
1962	89,733,099	3,483	0	89,736,582
1963	104,526,436	52,804	0	104,579,240
1964	122,495,173	4,953	0	122,500,126
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	26,439,927	33,312,719	324,423,181
1991	262,647,733	23,899,428	29,146,090	315,693,251
1992	288,918,208	23,582,162	41,222,801	353,726,380

See footnotes in Appendix A.

TABLE 6

**UNITED STATES CRUDE OIL AND CONDENSATE PRODUCTION AND IMPORTS
(Thousand Barrels)**

DATE	ALL OCS ¹²	DOMESTIC PRODUCTION* ⁷	IMPORTS OTHER ⁷	IMPORTS SPR ⁷
1975	330,237	3,056,875	1,498,325	N/A
1976	316,920	2,976,312	1,935,042	N/A
1977	303,948	3,009,425	2,406,810	7,665
1978	292,265	3,178,055	2,261,175	59,130
1979	285,566	3,121,480	2,354,980	24,455
1980	277,389	3,146,502	1,910,154	16,104
1981	289,765	3,128,780	1,511,465	93,440
1982	321,211	3,156,885	1,212,895	60,225
1983	348,331	3,171,120	1,130,040	85,410
1984	370,239	3,249,714	1,181,814	72,102
1985	389,324	3,274,415	1,125,295	43,070
1986	389,216	3,168,200	1,507,450	17,520
1987	366,142	3,047,385	1,679,365	26,645
1988	320,667	2,979,240	1,850,130	18,666
1989	305,168	2,778,745	2,112,255	20,440
1990	324,423	2,684,575	2,141,455	9,855
1991	315,693	2,707,039	2,110,332	0
January	31,017 ^R	228,253 ^R	182,424 ^R	0
February	28,906 ^R	213,813 ^R	145,966 ^R	0
March	31,203 ^R	226,776 ^R	164,876 ^R	0
April	29,737 ^R	218,721 ^R	183,391 ^R	0
May	29,043 ^R	220,400 ^R	186,766 ^R	0
June	28,273 ^R	214,155 ^R	179,569 ^R	1,008 ^R
July	31,608 ^R	219,969 ^R	210,673 ^R	0
August	27,008 ^R	214,779 ^R	199,594 ^R	571 ^R
September	26,854 ^R	210,571 ^R	185,675 ^R	494 ^R
October	30,557 ^R	219,009 ^R	206,042 ^R	1,521 ^R
November	29,788 ^R	210,797 ^R	183,635 ^R	0
December	29,730 ^R	220,882 ^R	183,733 ^R	0
1992 Total	353,726^R	2,618,125^R	2,212,344^R	3,594^R
January	29,393	217,235	195,059	0
February	26,250	194,804	172,358	0
March	28,839	216,258	200,918	998
April	27,907	206,919	197,588	3,356
May	30,014	211,830	203,007	0
June	29,160	202,678	215,255	0
July	30,274	206,259	225,110	0
August	29,718	208,686	205,041	0
September	29,117	201,327	195,731	1,013
October	29,579	211,297	222,6240	0
November	28,826	206,653	206,7580	0
December	30,102	211,987	211,9660	0
1993 Total	349,179	2,495,933	2,451,415	5,367

*Includes OCS

^RRevised

See footnotes in Appendix A.

TABLE 7

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)

<u>DATE</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>OFFSHORE</u>	<u>TOTAL</u>
1975	301,887,189	2,608,074,710	461,823,702	3,371,785,579
1976	305,008,371	2,358,362,638	469,995,985	3,133,366,927
1977	299,677,274	2,220,671,254	450,666,115	2,971,014,560
1978	281,294,066	2,060,987,405	460,027,607	2,802,309,078
1979	318,678,322	1,956,099,964	451,195,720	2,725,974,006
1980	330,884,663	1,767,558,650	386,259,849	2,484,703,162
1981	365,532,522	1,619,182,208	352,913,474	2,337,628,204
1982	322,562,084	1,401,264,770	336,247,316	2,060,074,170
1983	309,779,141	1,197,313,110	295,223,244	1,802,315,495
1984	330,928,158	1,265,569,410	288,926,246	1,885,423,814
1985	300,663,731	1,158,015,879	224,447,933	1,683,127,543
1986	313,753,687	1,125,245,664	216,313,931	1,655,313,282
1987	307,115,420	1,055,195,652	201,763,178	1,564,074,250
1988	325,963,115	1,067,940,357	193,310,392	1,587,213,864
1989	338,950,374	1,044,297,352	182,501,789	1,565,749,515
1990	348,400,863	1,019,951,674	158,125,352	1,526,477,889
1991	347,794,923	1,028,714,344	130,244,999	1,506,754,266
January	29,787,128	89,619,617	11,427,040	130,833,785
February	26,555,255	78,358,816	8,970,251	113,884,322
March	27,769,345	80,064,285	9,621,849	117,455,479
April	27,694,162	78,860,469	8,992,650	115,547,281
May	29,285,252	83,020,821	9,991,110	122,297,183
June	27,931,438	82,335,054	10,235,586	120,502,078
July	28,356,525	84,107,608	10,499,132	122,963,265
August	29,332,535	77,766,680	9,068,282	116,167,497
September	27,753,319	78,595,332	10,089,855	116,438,506
October	27,979,249	84,942,679	11,641,476	124,563,404
November	29,058,100	82,876,495	11,030,194	122,964,789
December	29,460,172	86,294,854	11,437,166	127,192,192
1992 Total	340,962,480	986,842,710	123,004,591	1,450,809,781
January	29,284,964	85,817,523	11,059,669	126,162,156
February	26,574,457	77,734,295	10,320,510	114,629,262
March	28,676,880	84,597,573	11,859,469	125,133,922
April	28,448,102	81,361,437	11,880,088	121,689,627
May	29,135,678	83,741,661	11,290,669	124,168,008
June	27,478,268	80,939,120	10,753,157	119,170,545
July	28,617,920	82,199,515	11,640,518	122,457,953
August	28,402,245	80,079,861	10,718,488	119,200,594
September	25,090,121	77,076,894	10,051,325	112,218,340
October	27,306,732	78,464,514	10,214,295	115,985,541
November	26,580,574	78,475,382	10,520,840	115,576,796
December	27,769,502	80,070,442	10,335,152	118,175,096
1993 Total	333,365,443	970,558,217	130,644,180	1,434,567,840

TABLE 8

LOUISIANA STATE CASINGHEAD GAS PRODUCTION, WET AFTER LEASE SEPARATION
 Excluding OCS
 (Thousand Cubic Feet (MCF), at 15.025 psia and 60 degrees Fahrenheit)

<u>DATE</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>OFFSHORE</u>	<u>TOTAL</u>
1975	39,365,666	297,273,123	47,659,685	384,298,468
1976	42,727,221	273,525,032	42,938,947	359,191,184
1977	48,518,052	246,986,172	35,430,093	330,934,328
1978	51,844,748	218,284,388	29,701,044	299,830,180
1979	40,787,977	183,313,733	25,769,504	249,871,214
1980	38,744,387	164,256,351	22,524,274	225,525,012
1981	54,461,955	145,002,268	21,922,829	221,387,052
1982	55,863,596	134,358,406	23,337,433	213,559,435
1983	54,943,524	124,511,997	26,206,906	205,662,427
1984	55,963,897	125,127,837	29,081,452	210,173,186
1985	55,735,829	112,306,864	29,635,701	197,678,394
1986	55,221,898	110,422,742	33,507,683	199,152,323
1987	53,856,458	111,715,474	29,145,755	194,717,687
1988	51,713,587	111,548,808	22,788,966	186,051,361
1989	43,151,092	95,472,705	22,389,901	161,013,698
1990	34,770,189	93,283,902	20,537,696	148,591,787
1991	36,210,214	93,599,557	20,340,594	150,150,365
January	2,514,389	11,412,494	1,942,872	15,869,755
February	2,511,969	11,118,019	1,954,706	15,584,694
March	2,536,524	11,743,767	2,331,706	16,611,997
April	2,385,722	11,214,386	2,120,763	15,720,871
May	2,637,071	11,419,715	1,837,544	15,894,330
June	2,490,079	11,094,307	1,917,981	15,502,367
July	2,696,805	11,500,410	2,013,590	16,210,805
August	2,543,218	10,213,704	1,828,255	14,585,177
September	2,647,930	10,500,260	1,868,682	15,016,872
October	2,738,602	10,994,188	2,016,756	15,749,546
November	1,877,901	10,791,945	1,791,444	14,461,290
December	1,885,285	11,233,742	1,985,397	15,104,424
1992 Total	29,465,495	133,236,937	23,609,696	186,312,128
January	1,916,696	11,107,238	2,221,096	15,245,030
February	1,625,368	9,996,638	1,996,095	13,618,101
March	1,873,762	10,827,512	2,051,753	14,753,027
April	1,771,525	10,826,561	1,901,006	14,499,092
May	1,758,328	11,181,188	1,924,705	14,864,221
June	1,645,052	11,257,235	1,977,122	14,879,409
July	1,710,457	12,274,535	1,920,812	15,905,804
August	1,733,959	12,238,517	1,973,637	15,946,113
September	1,310,973	11,539,183	1,942,533	14,792,689
October	1,322,338	11,694,004	1,851,762	14,868,104
November	2,098,452	10,894,507	1,786,909	14,779,868
December	1,817,028	10,696,297	1,736,794	14,250,119
1993 Total	20,583,938	134,533,415	23,284,224	178,401,577

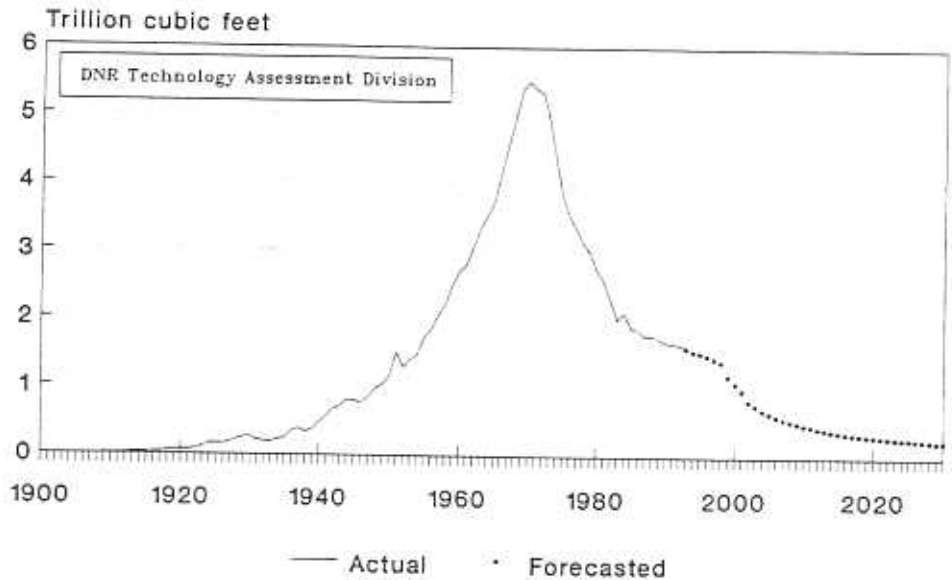
TABLE 9

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)*

<u>DATE</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>OFFSHORE</u>	<u>TOTAL</u>
1975	341,252,856	2,905,347,833	509,483,387	3,756,084,047
1976	347,735,592	2,631,887,670	512,934,932	3,492,558,111
1977	348,195,326	2,467,657,426	486,096,208	3,301,948,888
1978	333,138,814	2,279,271,793	489,728,651	3,102,139,258
1979	359,466,299	2,139,413,697	476,965,224	2,975,845,220
1980	369,629,050	1,931,815,001	408,784,123	2,710,228,174
1981	419,994,477	1,764,184,476	374,836,303	2,559,015,256
1982	378,425,680	1,535,623,176	359,584,749	2,273,633,605
1983	364,722,665	1,321,825,107	321,430,150	2,007,977,922
1984	386,892,055	1,390,697,247	318,007,698	2,095,597,000
1985	356,399,560	1,270,322,743	254,083,634	1,880,805,937
1986	368,975,585	1,235,668,406	249,821,614	1,854,465,605
1987	360,971,878	1,166,911,126	230,908,933	1,758,791,937
1988	377,676,702	1,179,489,165	216,099,358	1,773,265,225
1989	382,101,466	1,139,770,057	204,891,690	1,726,763,213
1990	383,171,052	1,113,235,576	178,663,048	1,675,069,676
1991	384,005,137	1,122,313,901	150,585,593	1,656,904,631
January	32,301,517	101,032,111	13,369,912	146,703,540
February	29,067,224	89,476,835	10,924,957	129,469,016
March	30,305,869	91,808,052	11,953,555	134,067,476
April	30,079,884	90,074,855	11,113,413	131,268,152
May	31,922,323	94,440,536	11,828,654	138,191,513
June	30,421,517	93,429,361	12,153,567	136,004,445
July	31,053,330	95,608,018	12,512,722	139,174,070
August	31,875,753	87,980,384	10,896,537	130,752,674
September	30,401,249	89,095,592	11,958,537	131,455,378
October	30,717,851	95,936,867	13,658,232	140,312,950
November	30,936,001	93,668,440	12,821,638	137,426,079
December	31,345,457	97,528,596	13,422,563	142,296,616
1992 Total	370,427,975	1,120,079,647	146,614,287	1,637,121,909
January	31,201,660	96,924,761	13,280,765	141,407,186
February	28,199,825	87,730,933	12,316,605	128,247,363
March	30,550,642	95,425,085	13,911,222	139,886,949
April	30,219,627	92,187,998	13,781,094	136,188,719
May	30,894,006	94,922,849	13,215,374	139,032,229
June	29,123,320	92,196,355	12,730,279	134,049,954
July	30,328,377	94,474,050	13,561,330	138,363,757
August	30,136,204	92,318,378	12,692,125	135,146,707
September	26,401,094	88,616,077	11,993,858	127,011,029
October	28,629,070	90,158,518	12,066,057	130,853,645
November	28,679,026	89,369,889	12,307,749	130,356,664
December	29,586,530	90,766,739	12,071,946	132,425,215
1993 Total	353,949,381	1,105,091,632	153,928,404	1,612,969,417

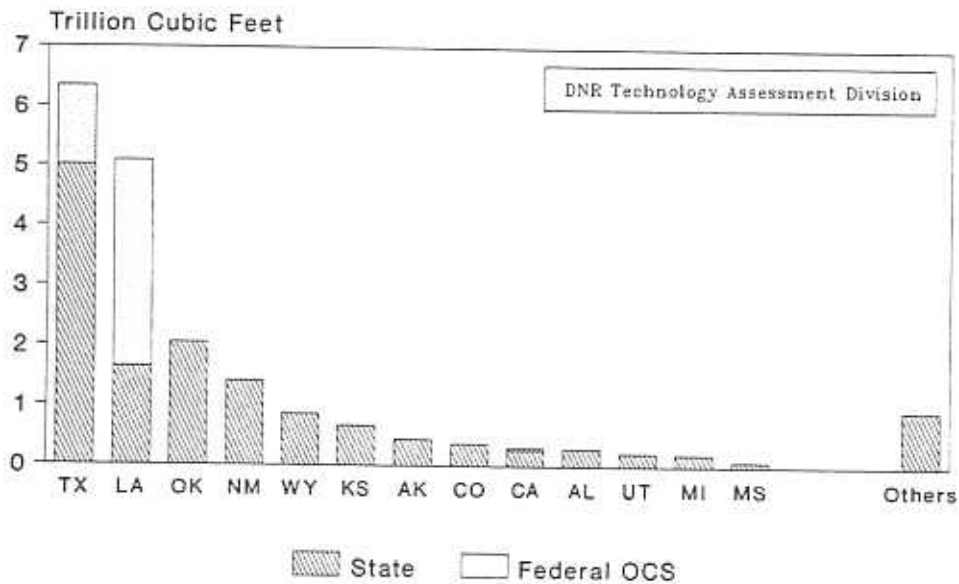
*See Appendix E-1 for corresponding volumes at 14.73 psia.

FIGURE 3
 LOUISIANA STATE GAS PRODUCTION
 ACTUAL AND FORECASTED THROUGH YEAR 2030



Casinghead gas included
 Federal OCS excluded

FIGURE 4
 1993 UNITED STATES MARKETED GAS
 PRODUCTION BY STATE



SOURCE: U.S. Department of Energy
 Federal OCS production is estimated.

TABLE 10

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)*

<u>DATE</u>	<u>ONSHORE</u>	<u>OFFSHORE STATE</u>	<u>OCS¹²</u>	<u>TOTAL</u>
1975	3,246,600,688	509,483,387	3,266,745,456	7,022,829,531
1976	2,979,623,262	512,934,932	3,431,149,749	6,923,707,943
1977	2,815,852,752	486,096,208	3,575,898,616	6,877,847,576
1978	2,612,410,607	489,728,651	4,068,255,571	7,170,394,829
1979	2,498,879,996	476,965,224	4,076,873,552	7,052,718,772
1980	2,301,444,051	408,784,123	3,934,902,550	6,645,130,724
1981	2,184,178,953	374,836,303	4,025,867,929	6,584,883,185
1982	1,914,048,856	359,584,749	3,729,057,653	6,002,691,258
1983	1,686,547,772	321,430,150	3,111,576,348	5,119,554,270
1984	1,777,589,302	318,007,698	3,508,475,799	5,604,072,799
1985	1,626,722,303	254,083,634	3,055,687,773	4,936,493,710
1986	1,604,643,991	249,821,614	2,870,347,386	4,724,812,991
1987	1,527,883,004	230,908,933	3,117,669,167	4,876,461,104
1988	1,557,165,867	216,099,358	3,036,077,646	4,809,342,871
1989	1,521,871,523	204,891,690	2,947,545,132	4,674,308,345
1990	1,496,406,628	178,663,048	3,633,554,307	5,308,623,983
1991	1,506,319,038	150,585,593	3,225,373,562	4,882,278,193
January	133,333,628	13,369,912	299,770,675 ^R	446,474,215 ^R
February	118,544,059	10,924,957	245,232,038 ^R	374,701,054 ^R
March	122,113,921	11,953,555	276,012,692 ^R	410,080,168 ^R
April	120,154,739	11,113,413	274,917,496 ^R	406,185,648 ^R
May	126,362,859	11,828,654	304,051,612 ^R	442,243,125 ^R
June	123,850,878	12,153,567	280,865,079 ^R	416,869,524 ^R
July	126,661,348	12,512,722	273,608,759 ^R	412,782,829 ^R
August	119,856,137	10,896,537	248,600,709 ^R	379,353,383 ^R
September	119,496,841	11,958,537	232,760,514 ^R	364,215,892 ^R
October	126,654,718	13,658,232	297,940,779 ^R	438,253,729 ^R
November	124,604,441	12,821,638	249,486,559 ^R	386,912,638 ^R
December	128,874,053	13,422,563	289,314,458 ^R	431,611,074 ^R
1992 Total	1,490,507,622	146,614,287	3,272,561,370^R	4,909,683,279^R
January	128,126,421	13,280,765	320,988,623	462,395,809
February	115,930,758	12,316,605	236,531,098	364,778,461
March	125,975,727	13,911,222	262,279,822	402,166,771
April	122,407,625	13,781,094	269,463,063	405,651,782
May	125,816,855	13,215,374	290,653,667	429,685,896
June	121,319,675	12,730,279	281,874,135	415,924,089
July	124,802,427	13,561,330	309,303,303	447,667,060
August	122,454,582	12,692,125	281,607,026	416,753,733
September	115,017,171	11,993,858	293,236,637	420,247,666
October	118,787,588	12,066,057	298,907,196	429,760,841
November	118,048,915	12,307,749	301,660,507	432,017,171
December	120,353,269	12,071,946	296,330,983	428,756,198
1993 Total	1,459,041,013	153,928,404	3,442,836,061	5,055,805,478

Note: The 1991 and 1992 Federal OCS production is estimated from the marketed production. OCS gas is mostly dry.

*See Appendix E-2 for corresponding volumes at 14.73 psia.

^RRevised

See footnotes in Appendix A.

TABLE 11

LOUISIANA NATURAL GAS AND CASINGHEAD GAS PRODUCTION
 (Billion Cubic Feet (BCF), at 15.025 psia and 60 degrees Fahrenheit)*

DATE	MARKETED			EXTRACTION LOSS ³	DRY ³
	STATE	OCS	TOTAL ³		
1975	3,355	3,597	6,951	186	6,766
1976	3,133	3,736	6,869	169	6,700
1977	2,930	4,143	7,073	163	6,910
1978	2,733	4,597	7,330	158	7,171
1979	2,632	4,491	7,124	162	6,961
1980	2,391	4,118	6,509	139	6,370
1981	2,219	4,428	6,647	140	6,507
1982	1,974	4,077	6,050	126	5,924
1983	1,722	3,505	5,227	122	5,106
1984	1,835	3,875	5,711	130	5,581
1985	1,656	3,259	4,915	115	4,800
1986	1,625	3,174	4,799	113	4,686
1987	1,544	3,478	5,022	122	4,899
1988	1,664	3,415	5,079	118	4,961
1989	1,620	3,359	4,978	119	4,859
1990	1,597	3,542	5,139	117	5,022
1991	1,544	3,391 ^R	4,936	127	4,809
January	149 ^R	289 ^R	439 ^R		
February	153 ^R	237 ^R	389 ^R		
March	141 ^R	267 ^R	408 ^R		
April	133 ^R	265 ^R	399 ^R		
May	124 ^R	294 ^R	418 ^R		
June	132 ^R	271 ^R	403 ^R		
July	150 ^R	264 ^R	414 ^R		
August	130 ^R	240 ^R	370 ^R		
September	144 ^R	225 ^R	369 ^R		
October	114 ^R	288 ^R	402 ^R		
November	152 ^R	241 ^R	393 ^R		
December	135 ^R	279 ^R	415 ^R		
1992 Total	1,658^R	3,160^R	4,818^R	130	4,688
January	120	305	424		
February	156	228	384		
March	154	262	417		
April	138	265	403		
May	137	279	416		
June	126	274	399		
July	116	294	410		
August	135	277	411		
September	124	293	417		
October	132	299	431		
November	127	302	428		
December	135	301	436		
1993 Total	1,599	3,379	4,978		

*See Appendix E-3 for corresponding volumes at 14.73 psia.

^RRevised

See footnotes in Appendix A.

TABLE 12

UNITED STATES OCS GAS PRODUCTION¹²
Natural Gas and Casinghead Gas
 (Thousand Cubic Feet (MCF), at 15.025 psia and 60 degrees Fahrenheit)*

<u>YEAR</u>	<u>LOUISIANA</u>	<u>TEXAS</u>	<u>CALIFORNIA</u>	<u>TOTAL</u>
PRIOR	19,490,712	0	0	19,490,712
1954	55,219,200	0	0	55,219,200
1955	79,683,214	0	0	79,683,214
1956	81,265,031	0	0	81,265,031
1957	80,947,656	4,703	0	80,952,359
1958	125,185,735	0	0	125,185,735
1959	203,089,002	0	0	203,089,002
1960	267,673,709	0	0	267,673,709
1961	312,031,003	0	0	312,031,003
1962	443,079,048	0	0	443,079,048
1963	553,272,142	0	0	553,272,142
1964	609,524,401	0	0	609,524,401
1965	632,914,005	0	0	632,914,005
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	3,225,368	3,664,360,230
1978	4,068,255,571	227,305,175	3,404,117	4,298,964,864
1979	4,076,873,552	501,546,069	2,810,535	4,581,230,155
1980	3,934,902,550	612,378,333	3,046,020	4,550,326,904
1981	4,025,867,929	715,937,640	12,515,654	4,754,321,224
1982	3,729,057,653	841,173,981	17,402,403	4,587,634,037
1983	3,111,576,348	834,112,318	15,709,672	3,961,398,338
1984	3,508,475,799	913,008,621	27,260,940	4,448,745,360
1985	3,055,687,773	818,533,627	48,198,926	3,922,420,326
1986	2,870,347,386	959,161,285	41,850,867	3,871,359,539
1987	3,117,669,167	1,180,839,487	40,181,438	4,338,690,093
1988	3,036,077,646	1,155,285,485	33,891,880	4,225,255,011
1989	2,947,545,132	1,142,237,197	28,013,874	4,117,796,204
1990	3,633,554,307	1,321,607,333	37,775,234	4,992,936,873
1991	3,225,373,562	1,161,671,524	39,828,917	4,426,874,003
1992	3,272,561,370	1,215,055,449	40,071,149	4,593,647,066

*See Appendix E-4 for corresponding volumes at 14.73 psia.

See footnotes in Appendix A.

TABLE 13

UNITED STATES NATURAL GAS AND CASINGHEAD GAS PRODUCTION³
 (Billion Cubic Feet (BCF), at 15.025 psia and 60 degrees Fahrenheit)*

<u>DATE</u>	<u>GROSS</u>	<u>WET AFTER LEASE SEPARATION</u>	<u>MARKETED</u>	<u>DRY</u>	<u>IMPORTS</u>
1975	20,689	19,845	19,714	18,859	934
1976	20,533	19,690	19,561	18,723	945
1977	20,683	19,766	19,632	18,787	991
1978	20,890	19,732	19,582	18,746	947
1979	21,454	20,233	20,069	19,277	1,229
1980	21,440	19,907	19,784	19,022	965
1981	21,164	19,660	19,564	18,805	886
1982	19,874	18,309	18,217	17,470	915
1983	18,293	16,646	16,553	15,778	900
1984	19,869	18,051	17,945	17,124	827
1985	19,222	17,024	16,931	16,131	931
1986	18,755	16,623	16,528	15,744	736
1987	19,745	17,212	17,091	16,294	973
1988	20,587	17,706	17,567	16,767	1,268
1989	20,661	17,879	17,740	16,971	1,354
1990	21,100	18,376	18,229	17,460	1,502
1991	21,322 ^R	18,336 ^R	18,169 ^R	17,351 ^R	1,738
January	1,914 ^R	1,644 ^R	1,630 ^R	1,555 ^R	162 ^R
February	1,714 ^R	1,451 ^R	1,438 ^R	1,371 ^R	172 ^R
March	1,801 ^R	1,531 ^R	1,517 ^R	1,446 ^R	176 ^R
April	1,766 ^R	1,501 ^R	1,488 ^R	1,419 ^R	173 ^R
May	1,806 ^R	1,538 ^R	1,527 ^R	1,456 ^R	171 ^R
June	1,765 ^R	1,500 ^R	1,485 ^R	1,416 ^R	159 ^R
July	1,806 ^R	1,549 ^R	1,533 ^R	1,462 ^R	164 ^R
August	1,764 ^R	1,507 ^R	1,492 ^R	1,423 ^R	172 ^R
September	1,751 ^R	1,493 ^R	1,478 ^R	1,409 ^R	163
October	1,862 ^R	1,589 ^R	1,576 ^R	1,503 ^R	173 ^R
November	1,834 ^R	1,570 ^R	1,556 ^R	1,484 ^R	206 ^R
December	1,918 ^R	1,637 ^R	1,623 ^R	1,548 ^R	205 ^R
1992 Totals	21,698^R	18,509^R	18,344^R	17,490^R	2,093^R
January	1,931	1,649	1,635	1,559	194
February	1,739	1,475	1,461	1,392	179
March	1,926	1,643	1,628	1,552	195
April	1,846	1,577	1,562	1,489	181
May	1,869	1,591	1,575	1,502	157
June	1,785	1,529	1,513	1,442	175
July	1,832	1,573	1,557	1,484	186
August	1,857	1,581	1,566	1,493	180
September	1,833	1,567	1,551	1,478	184
October	1,911	1,612	1,596	1,522	185
November	1,912	1,603	1,588	1,515	200
December	1,978	1,656	1,639	1,563	213
1993 Total	22,420	19,057	18,871	17,991	2,230

*See Appendix E-5 for corresponding volumes at 14.73 psia.

^RRevised

See footnotes in Appendix A.

FIGURE 5
LOUISIANA OIL PRODUCTION AND PRICE

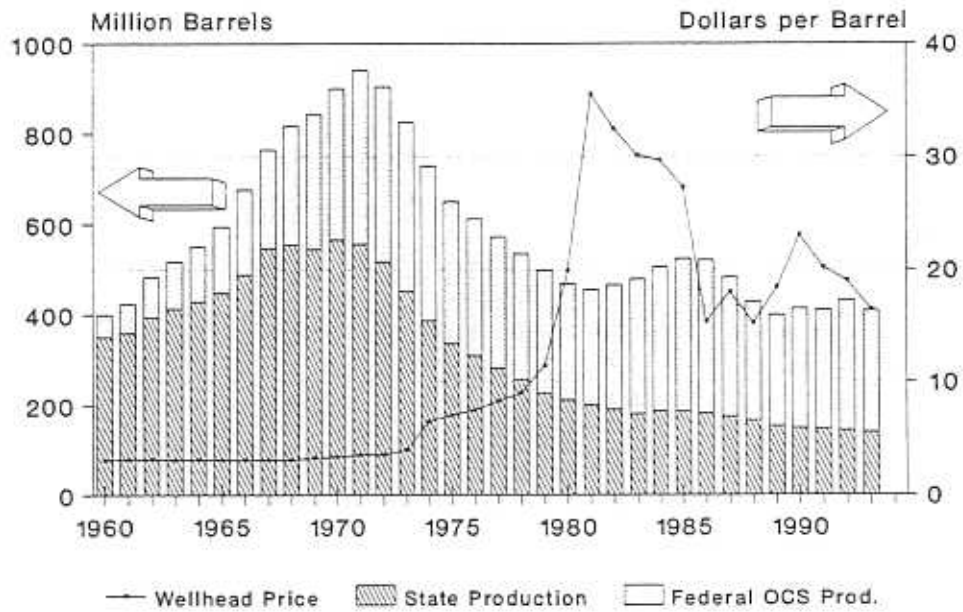


FIGURE 6
LOUISIANA GAS PRODUCTION AND PRICE

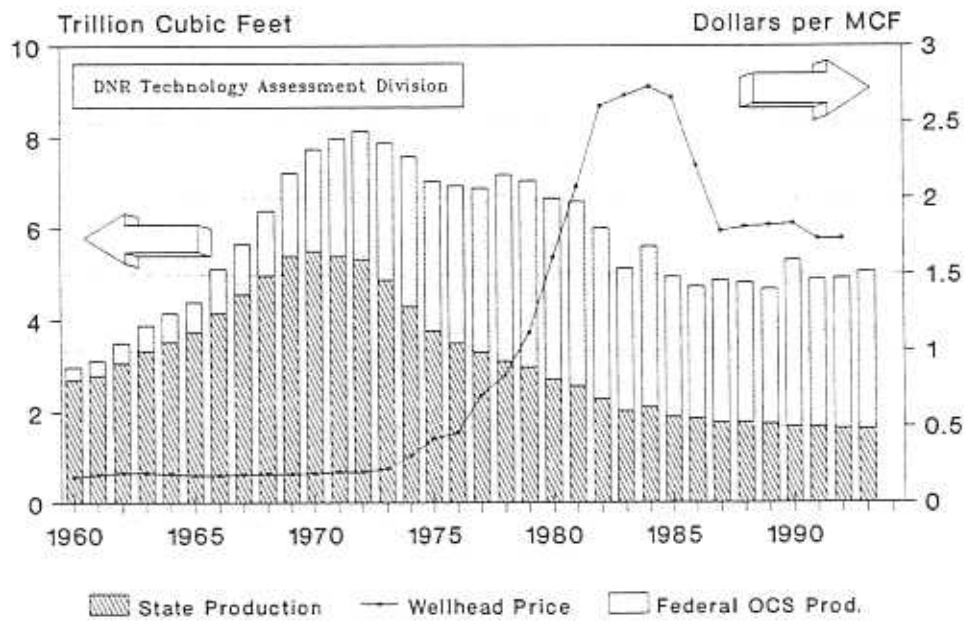


TABLE 14

LOUISIANA AVERAGE CRUDE OIL PRICES
(Dollars/Barrel)

DATE	SOUTH LOUISIANA SWEET		ALL GRADES AT WELLHEAD			
	SPOT MARKET ¹⁰	REFINERY POSTED	STATE ⁶	OCS GULF ⁶	SEVERANCE TAX ³	STATE ROYALTY
1975	N/A	8.14	17.09	7.51	16.88	6.75
1976	N/A	11.67	7.51	8.14	7.39	7.13
1977	N/A	12.49	8.33	9.00	7.79	7.46
1978	N/A	13.48	9.03	9.86	8.59	9.85
1979	N/A	19.07	11.42	11.23	10.23	10.03
1980	N/A	23.32	19.87	18.87	17.64	17.80
1981	N/A	36.12	35.45	35.07	33.07	34.94
1982	N/A	32.91	32.44	32.61	33.55	32.33
1983	30.63	30.63	30.02	29.77	30.38	29.02
1984	29.64	30.04	29.67	29.36	29.98	29.47
1985	28.42	27.86	27.22	27.33	27.18	27.40
1986	14.72	15.71	15.32	15.27	17.23	15.71
1987	19.38	18.52	17.97	17.54	17.55	17.87
1988	16.13	15.79	15.22	14.71	16.38	14.85
1989	19.75	18.97	18.39	17.83	17.87	17.97
1990	25.11	23.35	23.04	22.40	22.54	22.73
1991	21.36	20.59 ^R	20.15	19.40	21.13	19.90
January	18.90	17.94 ^R	17.58	16.64	18.61	17.25 ^R
February	19.14	18.01 ^R	17.60	16.62 ^R	18.20	17.29 ^R
March	19.03	17.96 ^R	17.49	16.57	17.36	17.21 ^R
April	20.52	19.41	18.86 ^R	17.87 ^R	17.22	18.74 ^R
May	21.32	20.16 ^R	19.69	18.79	18.90	19.37 ^R
June	22.73	21.61 ^R	21.09	20.23	19.06	20.76 ^R
July	21.79	20.98 ^R	20.50 ^R	19.71 ^R	21.07	21.32 ^R
August	22.05	20.51 ^R	19.72	19.27	20.45	19.88 ^R
September	22.05	21.02 ^R	20.00	19.88 ^R	20.37	20.10 ^R
October	21.81	20.87 ^R	19.70	19.59	20.69	20.35 ^R
November	20.73	19.51 ^R	18.35	18.16	20.54	18.86 ^R
December	19.54	18.60 ^R	17.57	17.27	19.24	18.10 ^R
1992 Average	20.80	19.72^R	19.01	18.38	19.31	19.10^R
January	19.10	18.16	17.16	16.95	18.41	17.56
February	20.10	19.09	18.07	17.85	17.98	18.53
March	20.29	19.22	18.25	18.06	18.46	18.69
April	20.25	19.14	18.16	17.99	18.68	18.69
May	20.09	18.81	17.74	17.73	18.64	18.23
June	19.15	17.84	16.78	16.67	18.49	17.35
July	17.96	16.52	15.51	15.53	17.46	16.06
August	18.25	16.72	15.68	15.66	16.19	16.26
September	17.70	16.15	15.15	15.04	16.48	15.70
October	18.31	16.90	16.44	15.58	16.42	16.36
November	16.78	15.43	15.07	14.48	16.09	15.09
December	14.73	13.23	12.92	12.46	15.42	12.83
1993 Average	18.56	17.27	16.41	16.17	17.39	16.78

^RRevised

See footnotes in Appendix A.

TABLE 15

UNITED STATES AVERAGE CRUDE OIL PRICES²
(Dollars/Barrel)

DATE	REFINERY ACQUISITIONS		DOMESTIC WELLHEAD	IMPORTS LANDED	IMPORTS	
	DOMESTIC COSTS	IMPORTS COSTS			IMPORTS FOB	OPEC FOB
1975	18.39	13.93	7.67	12.70	11.18	11.34
1976	8.84	13.48	8.19	13.32	12.15	12.23
1977	9.55	14.53	8.57	14.36	13.24	13.29
1978	10.61	14.57	9.00	14.35	13.29	13.31
1979	14.27	21.67	12.64	21.45	20.07	19.88
1980	24.23	33.89	21.59	33.67	32.37	32.21
1981	34.33	37.05	31.77	36.47	35.15	35.17
1982	31.32	33.55	28.52	33.18	32.02	33.48
1983	28.87	29.30	26.19	28.93	27.81	28.46
1984	28.53	28.88	25.88	28.54	27.60	27.79
1985	26.66	26.99	24.09	26.67	25.84	25.67
1986	14.82	14.00	12.51	13.49	12.52	12.21
1987	17.76	18.13	15.40	17.65	16.69	16.43
1988	14.74	14.56	12.58	14.08	13.25	13.43
1989	17.87	18.06	15.86	17.68	16.89	17.06
1990	22.59	21.76	20.03	21.13	20.37	20.40
1991	19.33	18.70	16.54	18.02	16.89	16.99
January	16.80 ^R	16.10	13.93	15.28 ^R	14.32 ^R	14.50 ^R
February	16.54 ^R	16.00	14.07	15.60 ^R	14.68 ^R	15.04 ^R
March	16.71 ^R	16.36	14.12	16.00 ^R	14.96 ^R	15.28 ^R
April	17.88	17.37	15.36 ^R	17.40 ^R	16.57 ^R	17.25 ^R
May	18.86	18.79	16.38	18.38 ^R	17.56 ^R	17.83 ^R
June	20.13	19.83	17.95	19.44	18.38 ^R	18.44 ^R
July	20.42	19.74	17.80	19.13 ^R	18.01 ^R	18.09 ^R
August	19.84	19.25	17.07 ^R	18.74 ^R	17.65 ^R	17.69 ^R
September	19.88	19.26	17.20	18.90 ^R	18.04 ^R	18.01 ^R
October	19.64	19.34	17.16 ^R	18.75 ^R	17.68 ^R	17.42 ^R
November	18.90	18.40	16.00 ^R	17.64 ^R	16.49 ^R	15.97 ^R
December	17.85	16.94	14.94	16.58 ^R	15.62 ^R	15.60 ^R
1992 Average	18.62^R	18.12	16.00^R	17.65^R	16.66^R	16.76^R
January	17.40	16.78	14.64	16.34	15.24	15.62
February	17.84	17.41	15.47	17.12	16.09	16.49
March	18.31	17.82	15.88	17.56	16.61	16.92
April	18.49	18.35	16.08	17.58	16.39	16.59
May	18.43	17.89	15.97	17.35	16.27	16.32
June	17.70	16.80	15.00	16.31	15.12	14.94
July	16.36	15.82	13.78	15.44	14.23	14.18
August	16.03	15.62	13.69	15.26	14.21	14.24
September	15.82	15.32	13.39	15.00	14.19	14.37
October	16.04	15.59	13.87	15.07	14.21	13.94
November	14.99	14.05	12.65	13.79	12.87	12.37
December	12.45	12.56	10.39	12.30	11.65	11.40
1993 Average	16.66	16.17	14.23	15.76	14.76	14.78

^RRevised

See footnotes in Appendix A.

TABLE 16

LOUISIANA NATURAL GAS WELLHEAD PRICES
(Dollars/Thousand Cubic Feet)

DATE	MMS OCS ³	DOE STATE WELLS ³	DNR STATE ROYALTY	SPOT MARKET ⁵		
				LOW	HIGH	AVERAGE
1975	0.35	0.42	0.39	N/A	N/A	N/A
1976	0.46	0.46	0.46	N/A	N/A	N/A
1977	0.74	0.70	0.60	N/A	N/A	N/A
1978	0.93	0.84	0.79	N/A	N/A	N/A
1979	1.26	1.12	1.00	N/A	N/A	N/A
1980	1.64	1.61	1.27 ^R	N/A	N/A	N/A
1981	2.11	2.07	1.67	N/A	N/A	N/A
1982	2.65	2.60	2.22	N/A	N/A	N/A
1983	2.72	2.67	2.48	N/A	N/A	N/A
1984	2.70	2.73	2.54	N/A	N/A	N/A
1985	2.72	2.66	2.37 ^R	2.13	3.07	2.61
1986	2.26	2.21	1.87 ^R	1.46	2.34	1.76
1987	1.82	1.78	1.65 ^R	1.40	1.82	1.55
1988	1.84	1.81	1.86 ^R	1.40	2.29	1.79
1989	1.86	1.82	1.77 ^R	1.40	2.29	1.76
1990	1.87	1.83	1.77 ^R	1.35	2.60	1.77
1991	1.77	1.73	1.58	1.09	2.03	1.50
January			1.64	1.66	1.77	1.72
February			1.23 ^R	0.99	1.09	1.05
March			1.30	1.20	1.25	1.23
April			1.43	1.40	1.46	1.42
May			1.66 ^R	1.56	1.61	1.58
June			1.80 ^R	1.66	1.77	1.73
July			1.36 ^R	1.51	1.56	1.52
August			1.84 ^R	1.87	1.98	1.92
September			1.89	1.98	2.03	1.99
October			2.40 ^R	2.60	2.81	2.76
November			2.25	2.29	2.50	2.41
December			2.13 ^R	2.18	2.39	2.31
1992 Average	1.77	1.73	1.74^R	1.80	0.99	2.81
January			2.20	1.92	2.03	1.99
February			1.87	1.61	1.72	1.68
March			1.67	1.87	2.03	1.95
April			1.95	2.18	2.29	2.25
May			2.02	2.60	2.76	2.68
June			1.97	1.92	2.08	2.02
July			1.95	1.92	2.08	2.00
August			1.80	1.98	2.18	2.09
September			2.19	2.34	2.44	2.40
October			1.88	2.03	2.18	2.09
November			2.23	2.13	2.18	2.15
December			2.00	2.39	2.50	2.44
1993 Average	N/A	N/A	1.98	2.15	1.61	2.76

^RRevised

See footnotes in Appendix A.

FIGURE 7
CRUDE OIL AVERAGE PRICES

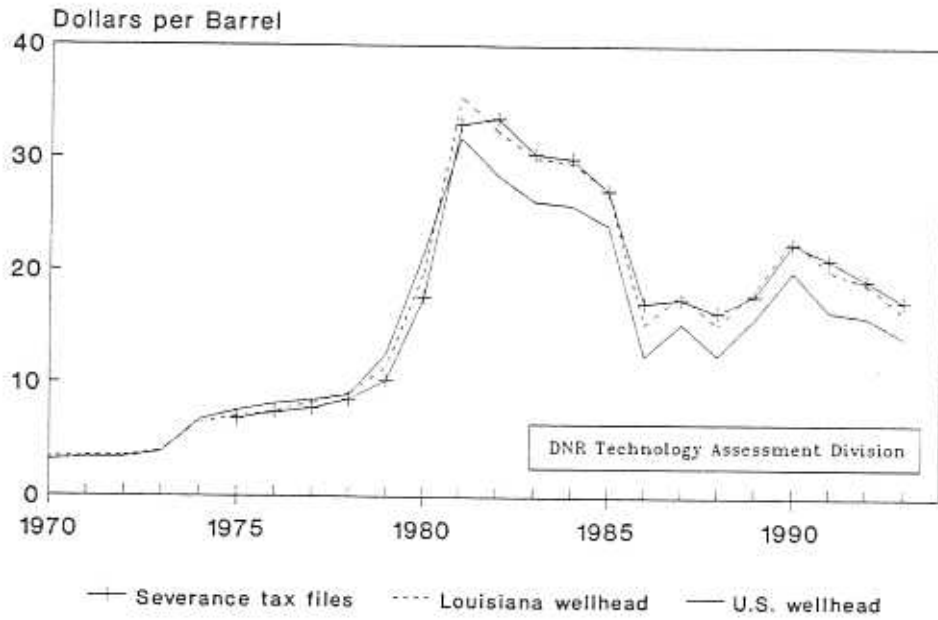


FIGURE 8
NATURAL GAS AVERAGE PRICES

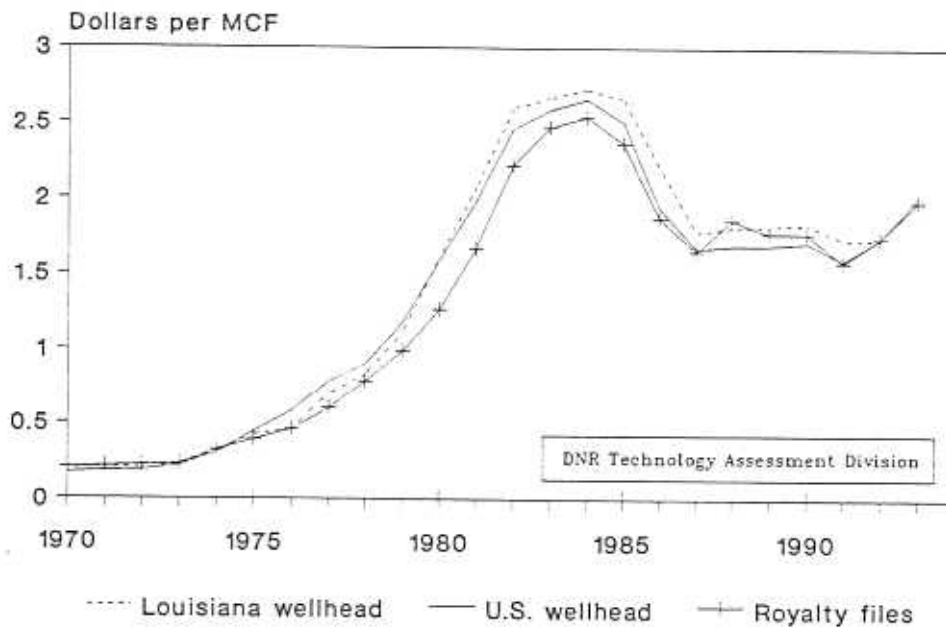


TABLE 17

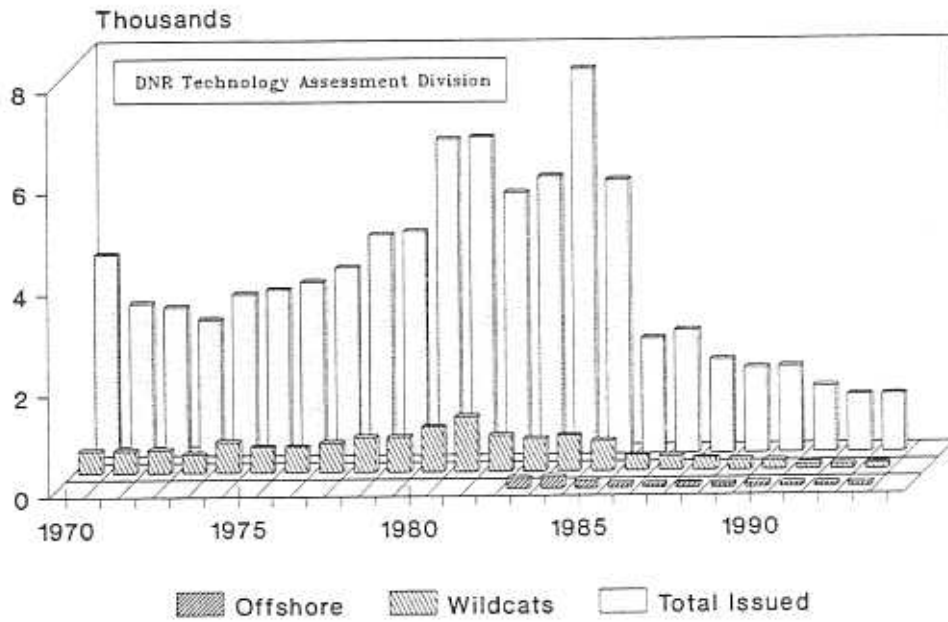
LOUISIANA AVERAGE NATURAL GAS PRICES DELIVERED TO CONSUMERS³
(Dollars/Thousand Cubic Feet)

<u>DATE</u>	<u>CITY GATES</u>	<u>RESIDENTIAL</u>	<u>COMMERCIAL</u>	<u>INDUSTRIAL</u>	<u>UTILITY</u>
1975	0.78 ^E	1.37	0.80	0.76	0.54
1976	0.96 ^E	1.57	1.10	0.94	0.83
1977	1.24 ^E	1.97	1.40	1.18	0.96
1978	1.21 ^E	2.47	1.44	0.96	1.18
1979	1.37 ^E	2.71	2.28	0.92	1.54
1980	1.85 ^E	3.40	2.69	1.28	2.09
1981	2.38 ^E	4.15	3.69	1.88	2.82
1982	3.38 ^E	5.32	4.93	3.16	3.23
1983	3.59 ^E	6.12	5.71	3.13	3.30
1984	3.78	5.96	5.54	3.18	3.18
1985	3.55	5.67	5.28	3.03	2.86
1986	2.95	5.77	5.25	1.91	1.94
1987	2.38	5.56	4.97	1.80	1.67
1988	3.09	5.74	5.14	1.99	1.70
1989	2.98	5.97	5.27	1.97	1.78
1990	2.97	6.09	5.25	2.00	1.73
1991	2.56 ^R	5.77	4.90	1.74	1.59
January	2.34 ^R	4.80 ^R	4.67	2.02 ^R	1.75
February	1.93 ^R	4.43 ^R	4.28 ^R	1.49 ^R	1.31
March	2.06 ^R	5.09 ^R	4.43 ^R	1.37 ^R	1.36
April	2.25 ^R	4.85 ^R	4.08 ^R	1.54 ^R	1.56
May	2.42 ^R	6.27 ^R	4.69 ^R	1.73 ^R	1.78
June	2.30 ^R	6.78 ^R	4.80 ^R	1.84 ^R	1.90
July	2.26 ^R	7.06 ^R	4.71 ^R	1.85 ^R	1.72
August	2.60 ^R	7.41 ^R	5.06 ^R	1.99 ^R	2.04
September	2.70 ^R	7.34 ^R	4.91 ^R	2.19 ^R	2.16
October	3.24 ^R	7.87 ^R	5.60 ^R	2.69 ^R	2.73
November	2.83 ^R	6.61 ^R	5.54 ^R	2.70 ^R	2.51
December	2.82 ^R	5.73 ^R	5.39 ^R	2.54 ^R	2.35 ^R
1992 Average	2.48^R	5.60^R	4.79	1.93^R	1.91^R
January	2.59	5.44	5.11	2.27	2.35
February	2.38	4.71	4.55	1.96	2.10
March	2.59	5.30	4.91	1.96	2.31
April	2.78	5.67	5.05	2.27	2.55
May	3.23	6.98	5.43	2.62	2.98
June	2.77	7.29	5.46	2.43	2.34
July	2.69	7.26	5.39	2.16	2.34
August	2.89	8.06	5.66	2.22	2.51
September	2.74	8.11	5.67	2.40	2.71
October	2.62	7.89	5.88	2.40	2.36
November	2.80	6.62	5.92	2.42	2.52
December	2.87	6.45	6.21	2.53	2.77
1993 Average	2.75	6.65	5.44	2.30	2.49

^EEstimated^RRevised

See footnotes in Appendix A.

FIGURE 9
LOUISIANA STATE DRILLING PERMITS ISSUED



Federal OCS excluded

FIGURE 10
LOUISIANA AVERAGE ACTIVE RIGS

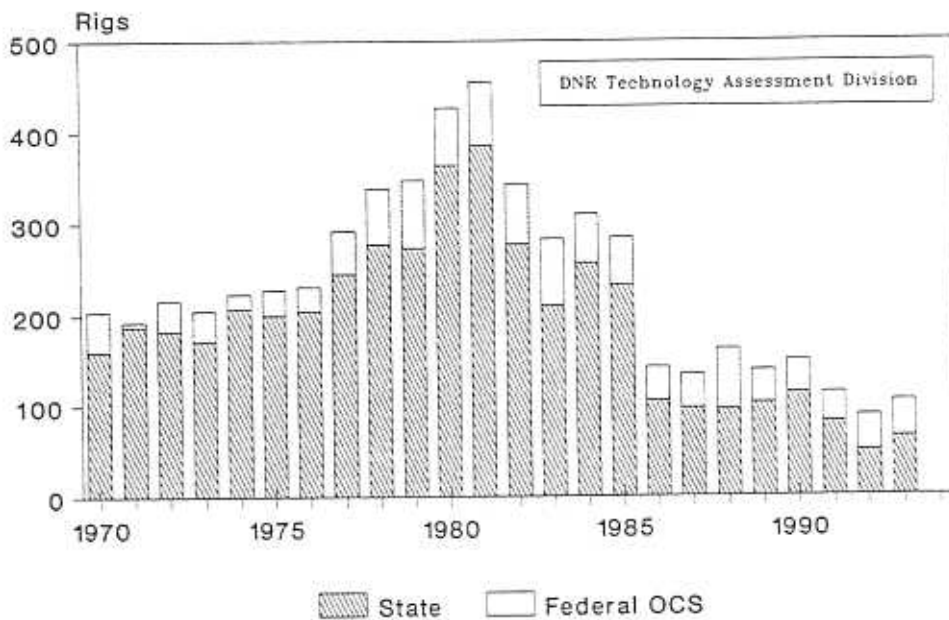


TABLE 19

LOUISIANA STATE OIL AND GAS DRILLING PERMITS ISSUED BY TYPE
Excluding OCS

<u>DATE</u>	<u>DEVELOPMENTAL</u> +	<u>WILDCATS</u>	=	<u>TOTAL</u>	=	<u>OFFSHORE</u> +	<u>ONSHORE</u>
1975	2,773	513		3,286		N/A	N/A
1976	2,913	515		3,428		N/A	N/A
1977	3,119	588		3,707		N/A	N/A
1978	3,657	695		4,352		N/A	N/A
1979	3,725	694		4,419		N/A	N/A
1980	5,344	893		6,237		N/A	N/A
1981	5,195	1,086		6,281		N/A	N/A
1982	4,454	727		5,181		N/A	N/A
1983	4,852	642		5,494	201		5,293
1984	6,929	702		7,631	231		7,400
1985	4,811	599		5,410	165		5,245
1986	1,984	298		2,282	84		2,198
1987	2,148	284		2,432	73		2,359
1988	1,601	249		1,850	94		1,756
1989	1,486	204		1,690	75		1,615
1990	1,526	181		1,707	85		1,622
1991	1,209	100		1,309	77		1,232
January	78	2		80	4		76
February	73	8		81	11		70
March	67	9		76	4		72
April	79	12		91	2		89
May	93	11		104	6		98
June	77	7		84	2		82
July	93	4		97	3		94
August	98	8		106	5		101
September	93	3		96	3		93
October	131	11		142	2		140
November	68	12		80	5		75
December	94	5		99	12		87
1992 Total	1,044	92		1,136	59		1,077
January	60	5		65	2		63
February	53	8		61	7		54
March	82	7		89	8		81
April	77	3		80	11		69
May	76	9		85	7		78
June	121	8		129	4		125
July	94	14		108	7		101
August	133	17		150	9		141
September	93	10		103	7		96
October	99	16		115	5		110
November	72	5		77	5		72
December	80	7		87	4		83
1993 Total	1,040	109		1,149	76		1,073

TABLE 20

LOUISIANA AVERAGE RIGS RUNNING

DATE	SOUTH-INLAND			OFFSHORE			TOTAL RIGS ⁴
	NORTH ⁴	WATER ⁴	LAND ⁴	STATE	OCS	STATE + OCS ⁴	
1975	31	55	64	50	27	77	227
1976	34	49	65	57	26	83	231
1977	45	56	81	62	47	109	292
1978	40	63	114	60	62	122	338
1979	35	62	112	64	75	139	347
1980	55	77	156	76	63	139	427
1981	58	83	160	85	69	154	455
1982	40	60	108	69	67	136	344
1983	29	47	82	51	73	124	283
1984	30	51	96	78	54	132	310
1985	25	44	86	78	52	130	283
1986	12	20	42	31	38	69	143
1987	11	23	36	26	39	65	135
1988	14	27	35	20	68	88	163
1989	16	17	35	34	38	72	140
1990	19	20	36	40	36	76	151
1991	11	16	31	23	34	57	115
January	5	12	24	9	32	41	82
February	9	12	28	14	19	33	82
March	7	14	30	18	21	39	90
April	13	13	32	18	23	41	99
May	12	15	29	8	24	32	88
June	6	18	29	9	21	30	83
July	9	13	28	18	16	34	4
August	10	10	26	21	16	37	83
September	10	9	22	21	14	35	76
October	10	8	22	22	20	42	82
November	8	14	28	21	27	48	98
December	14	17	30	13	33	46	107
1992 Average	9	13	27	16	23	39	88
January	12	13	23	16	35	51	99
February	11	12	18	18	33	51	92
March	9	6	19	14	31	45	9
April	7	9	18	13	39	52	86
May	7	10	15	21	33	54	86
June	11	11	17	14	43	58	97
July	15	12	20	11	51	62	109
August	11	12	27	20	43	63	113
September	14	11	28	29	37	65	117
October	12	13	29	26	39	65	119
November	10	18	26	23	47	71	125
December	11	18	26	26	52	78	134
1993 Average	11	12	22	19	40	59	104

See footnotes in Appendix A.

TABLE 21

LOUISIANA STATE PRODUCING CRUDE OIL WELLS
Excluding OCS

<u>DATE</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>OFFSHORE</u>	<u>TOTAL</u>
1975	12,259	2,827	936	16,022
1976	12,393	2,819	1,073	16,285
1977	12,915	2,797	1,067	16,778
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	23,489
1991	17,731	5,143	868	23,742
January	18,718	5,097	853	24,668
February	17,645	5,157	865	23,667
March	17,496	5,106	875	23,477
April	17,531	5,142	885	23,558
May	17,446	5,171	869	23,486
June	17,733	5,226	864	23,823
July	17,472	5,230	869	23,571
August	17,157	5,167	852	23,176
September	17,352	5,163	769	23,284
October	17,170	5,119	795	23,084
November	17,143	5,106	800	23,049
December	16,529	5,173	803	22,505
1992 Average	17,449	5,155	842	23,446
January	17,433	5,200	787	23,420
February	17,104	5,179	764	23,047
March	17,134	5,155	779	23,068
April	17,000	5,139	796	22,935
May	16,846	5,076	808	22,730
June	16,681	5,034	805	22,520
July	16,721	4,965	835	22,521
August	16,524	4,892	848	22,264
September	16,508	4,950	843	22,301
October	16,623	4,891	840	22,354
November	16,652	4,848	832	22,332
December	16,494	4,856	832	22,182
1993 Average	16,810	5,015	814	22,640

TABLE 22

**LOUISIANA STATE PRODUCING NATURAL GAS WELLS
Excluding OCS**

<u>DATE</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>OFFSHORE</u>	<u>TOTAL</u>
1975	5,373	1,394	308	7,075
1976	5,851	1,396	362	7,609
1977	6,343	1,408	449	8,200
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	14,116
1984	10,812	2,955	532	14,299
1985	11,026	2,887	511	14,181
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
January	10,680	2,199	502	13,381
February	10,595	2,217	505	13,317
March	10,668	2,150	496	13,314
April	10,518	2,170	486	13,174
May	10,438	2,197	506	13,141
June	10,461	2,170	491	13,122
July	10,485	2,173	483	13,141
August	10,480	2,034	484	12,998
September	10,450	2,118	504	13,072
October	10,360	2,111	494	12,965
November	10,451	2,110	501	13,062
December	10,395	2,133	501	13,029
1992 Average	10,498	2,149	496	13,143
January	10,468	2,143	499	13,110
February	10,408	2,154	492	13,054
March	10,428	2,149	488	13,065
April	10,514	2,148	489	13,151
May	10,520	2,148	488	13,156
June	10,505	2,172	493	13,170
July	10,512	2,144	495	13,151
August	10,509	2,214	491	13,214
September	10,501	2,203	493	13,197
October	10,515	2,223	487	13,225
November	10,614	2,229	485	13,328
December	10,576	2,382	483	13,441
1993 Average	10,506	2,192	490	13,189

FIGURE 11
LOUISIANA WELL COMPLETIONS BY TYPE

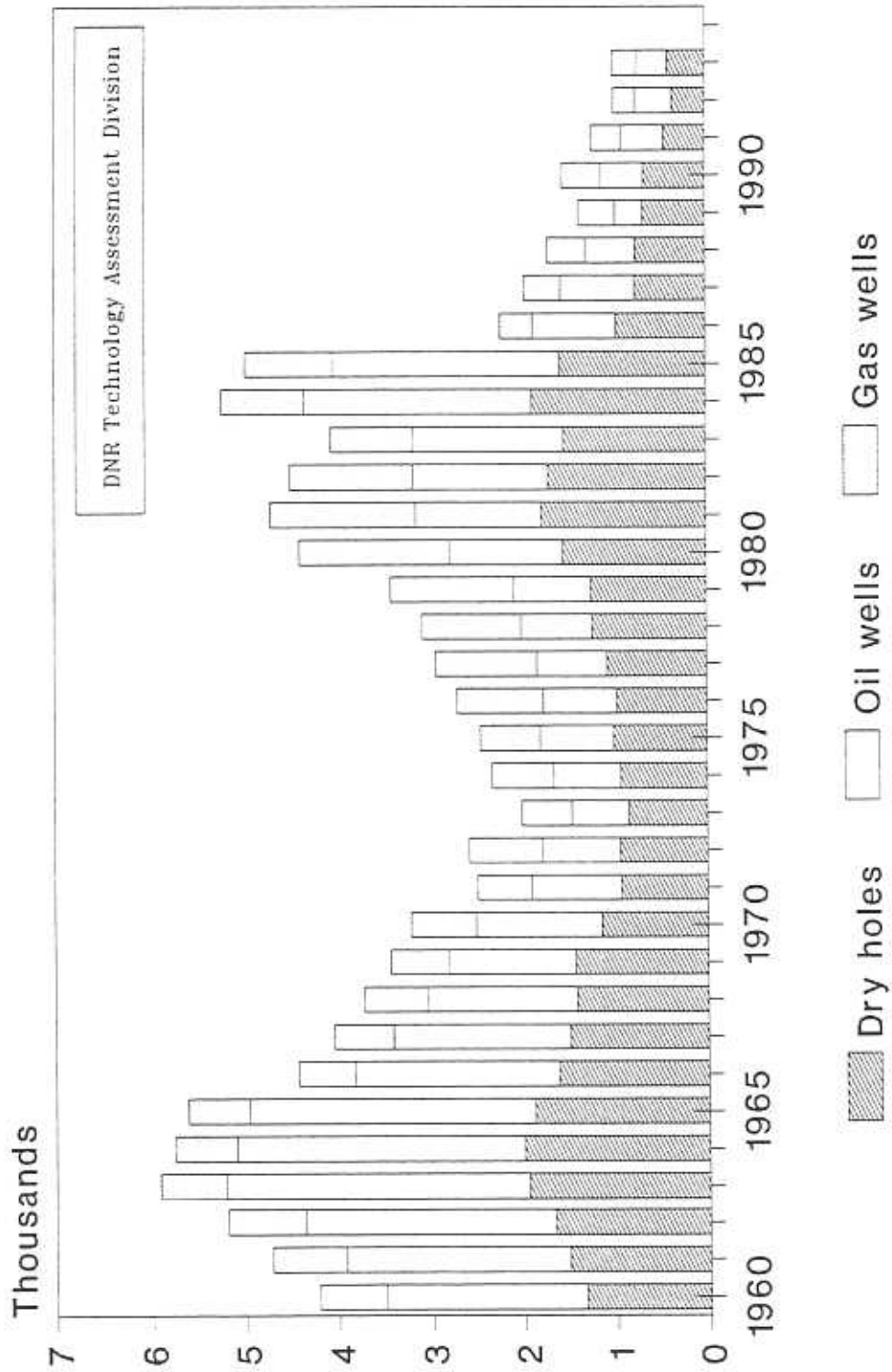


TABLE 23

LOUISIANA STATE WELL COMPLETIONS BY TYPE AND BY REGION
Excluding OCS

		<u>YEAR</u>	<u>OFFSHORE</u>	<u>SOUTH</u>	<u>NORTH</u>	<u>TOTAL</u>
C R U D E	O I L	1979	28	244	552	824
		1980	20	272	926	1,218
		1981	18	296	977	1,291
		1982	13	305	1,137	1,455
		1983	22	315	1,290	1,627
		1984	89	440	1,926	2,455
		1985	27	448	1,965	2,440
		1986	24	241	640	905
		1987	21	348	434	803
		1988	11	211	312	534
		1989	7	126	170	303
		1990	9	164	288	461
		1991	22	178 ^R	266 ^R	466 ^R
		1992	19	163 ^R	222 ^R	404 ^R
1993	24	137	172	333		
<hr/>						
N A T U R A L	G A S	1979	30	312	989	1,331
		1980	40	282	1,301	1,623
		1981	31	314	1,167	1,512
		1982	50	331	944	1,325
		1983	25	224	635	884
		1984	28	240	628	896
		1985	28	240	678	946
		1986	9	145	198	352
		1987	5	124	264	393
		1988	11	149	258	418
		1989	17	132	254	403
		1990	11	157	258	426
		1991	9	126	192 ^R	327 ^R
		1992	8	111	113 ^R	232 ^R
1993	6	87	176	269		
<hr/>						
D R Y	H O L E	1979	36	643	575	1,254
		1980	51	682	822	1,555
		1981	52	842	869	1,763
		1982	38	696	978	1,712
		1983	52	575	915	1,542
		1984	41	734	1,106	1,881
		1985	37	571	974	1,582
		1986	17	442	503	962
		1987	14	302	435	766
		1988	17	325	418	760
		1989	13	281	373	667
		1990	15	283	366	664
		1991	11	205	228	444
		1992	5	158	190	353
1993	4	166	233	403		

^RRevised

TABLE 24

LOUISIANA STATE MINERAL ROYALTY REVENUE
Excluding OCS
(Million Dollars)

<u>DATE</u>	<u>OIL</u>	<u>GAS</u>	<u>PLANT LIQUIDS</u>	<u>OTHERS</u>	<u>TOTAL</u>
1975	105.27	49.08	6.20	2.30	162.84
1976	98.17	60.76	7.37	2.74	169.04
1977	90.98	74.69	9.36	2.86	177.89
1978	92.61	92.14	8.76	2.39	195.90
1979	98.30	113.65	11.50	3.36	226.82
1980	158.27	131.95	17.05	3.34	310.61
1981	291.90	160.24	18.20	3.28	473.62
1982	248.44	204.25	14.35	1.82	468.86
1983	224.62	211.84	13.00	1.83	451.29
1984	226.64	210.99	13.06	2.29	452.98
1985	201.14	174.45	9.55	2.62	387.76
1986	122.22	154.83	6.34	1.96	285.34
1987	125.72	120.54	4.90	1.60	252.76
1988	98.55	132.06	4.39	1.35	236.35
1989	112.30	116.18	3.92	1.42	233.82
1990	135.40	112.91	4.01	0.90	253.22
1991	120.49	91.43	4.51	0.34 ^R	216.85
January	8.72 ^R	8.45 ^R	0.34	0.00 ^R	17.52 ^R
February	8.43 ^R	5.31 ^R	0.29	0.00 ^R	14.02 ^R
March	9.09 ^R	5.88 ^R	0.32 ^R	0.00 ^R	15.29 ^R
April	9.73 ^R	6.21 ^R	0.35	0.00 ^R	16.29 ^R
May	10.05 ^R	7.16 ^R	0.36 ^R	0.00 ^R	17.57 ^R
June	10.64 ^R	8.17 ^R	0.42 ^R	0.00 ^R	19.23 ^R
July	10.57 ^R	7.35 ^R	0.45 ^R	0.00 ^R	18.38 ^R
August	8.83 ^R	7.71 ^R	0.42 ^R	0.00 ^R	16.96 ^R
September	9.27 ^R	8.29 ^R	0.44 ^R	0.00 ^R	18.00 ^R
October	10.19	11.76 ^R	0.45 ^R	0.00 ^R	22.40 ^R
November	8.88 ^R	10.39 ^R	0.38 ^R	0.00 ^R	19.65 ^R
December	8.83 ^R	10.35 ^R	0.42 ^R	0.00 ^R	19.59 ^R
1992 Average	113.22^R	97.04^R	4.64^R	0.00^R	214.91^R
January	8.69	10.18	0.42	0.00	19.30
February	8.28	7.84	0.11	0.00	16.23
March	9.03	9.26	0.47	0.00	18.75
April	9.40	10.38	0.46	0.00	20.24
May	9.33	12.07	0.42	0.00	21.82
June	8.64	9.01	0.43	0.00	18.08
July	8.16	8.79	0.41	0.00	17.36
August	8.30	9.27	0.35	0.00	17.92
September	7.65	10.31	0.34	0.00	18.29
October	8.19	8.75	0.31	0.00	17.25
November	7.13	9.57	0.27	0.00	16.97
December	6.14	10.94	0.21	0.00	17.29
1993 Average	98.94	116.37	4.18	0.00	219.49

Note: Settlements of past due royalty are include in the year that payments are received.

Other minerals include: sulfur, salt, lignite, etc.

^RRevised

TABLE 25

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

<u>DATE</u>	<u>OIL (Barrels)</u>	<u>GAS (MCF)</u>	<u>PLANT LIQUIDS (Barrels)</u>
1975	17,919,284	156,334,125	22,743,609
1976	16,605,787	158,762,651	16,037,639
1977	14,009,689	140,654,808	1,276,959
1978	12,727,995	136,457,323	1,120,660
1979	11,184,340	123,983,451	1,096,427
1980	10,156,242	111,210,699	1,017,183
1981	9,460,901	100,944,844	966,222
1982	8,756,198	95,448,648	808,946
1983	8,956,936	88,029,268	694,641
1984	8,786,732	86,315,477	944,965
1985	8,404,223	76,612,605	845,349
1986	8,859,310	81,463,285	1,751,664
1987	8,040,773	78,166,315	511,790
1988	7,544,770	69,991,244	456,976
1989	7,184,774	69,936,929	461,237
1990	6,788,626	66,373,610	348,776
1991	6,923,565	61,809,109	1,063,909
January	577,156 ^R	5,408,832	204,418 ^R
February	556,297 ^R	4,608,714	107,413 ^R
March	602,648 ^R	4,798,127	159,869 ^R
April	592,406 ^R	4,597,304	180,299 ^R
May	291,732 ^R	4,664,434	193,871 ^R
June	584,340 ^R	4,699,836	183,439 ^R
July	633,171 ^R	4,880,228	164,710 ^R
August	506,783 ^R	4,314,708	134,361 ^R
September	525,207 ^R	4,533,804	66,904 ^R
October	572,321 ^R	5,020,077	88,033 ^R
November	536,297 ^R	4,834,361	108,496 ^R
December	555,694 ^R	4,915,234	94,859 ^R
1992 Total	6,534,051^R	57,275,658	1,686,671^R
January	564,738	4,831,163	97,449
February	509,305	4,417,382	87,827
March	550,563	5,779,673	96,091
April	568,015	5,545,945	81,954
May	586,526	5,975,031	12,669
June	567,735	4,761,239	46,207
July	579,070	4,507,675	45,373
August	581,909	5,367,196	41,733
September	555,947	4,897,107	28,462
October	571,630	4,850,603	42,287
November	538,664	4,472,178	38,734
December	545,821	5,692,143	29,442
1993 Total	6,719,925	61,097,335	648,229

^RRevised

TABLE 26

**LOUISIANA STATE MINERAL BONUSES, RENTALS AND
ROYALTY OVERRIDE REVENUES**

Excluding OCS
(Million Dollars)

<u>DATE</u>	<u>BONUSES</u>	<u>OVERRIDE ROYALTY</u>	<u>RENTALS</u>	<u>TOTAL</u>
1975	27.96	0.00	4.39	32.35
1976	56.02	0.02	6.00	62.04
1977	19.16	0.27	12.25	31.68
1978	97.58	0.48	15.61	113.67
1979	108.67	0.33	22.19	131.18
1980	140.29	0.51	31.55	172.36
1981	150.70	0.81	49.31	200.82
1982	61.23	0.70	53.66	115.60
1983	53.03	0.67	27.73	81.43
1984	67.98	0.80	21.21	89.99
1985	32.08	0.90	20.86	53.84
1986	15.89	0.50	12.25	28.64
1987	26.82	0.39	6.70	33.90
1988	17.65	0.29	9.28	27.22
1989	11.59	0.29	8.34	20.21
1990	19.02	0.32	6.76	26.10
1991	9.82	0.32	8.71	18.85
January	0.00	0.01	0.27	0.28
February	1.13	0.01	0.68	1.82
March	0.02	0.01	0.70	0.74
April	0.00	0.03	1.10	1.13
May	0.60	0.01	1.02	1.62
June	0.25	0.08	0.32	0.66
July	0.41	0.01	1.18	1.61
August	0.29	0.04	0.09	0.42
September	0.53	0.03	0.41	0.96
October	0.38	0.03	0.15	0.56
November	0.30	0.03	0.21	0.53
December	0.35	0.03	0.83	1.21
1992 Total	4.26	0.32	6.97	11.55
January	0.47	0.02	0.15	0.64
February	0.32	0.02	0.21	0.54
March	1.23	0.03	0.80	2.06
April	0.36	0.02	0.54	0.92
May	1.38	0.01	0.65	2.04
June	2.24	0.01	0.26	2.51
July	0.98	0.01	0.46	1.45
August	0.67	0.02	0.00	0.69
September	0.73	0.01	0.16	0.91
October	0.62	0.02	0.31	0.94
November	1.61	0.01	0.05	1.67
December	2.68	0.02	0.60	3.30
1993 Total	13.29	0.20	4.20	17.68

TABLE 27

FEDERAL REVENUE FROM LOUISIANA OCS OIL AND GAS LEASES¹⁵
(Dollars)

<u>YEAR</u>	<u>BONUS PAYMENTS</u>	<u>RENTAL PAYMENTS</u>	<u>MINIMUM ROYALTIES</u>	<u>PRODUCTION ROYALTIES</u>	<u>STATE 8G SHARE*</u>
1960	246,909,784	2,422,790	299,695	336,807,678	N/A
1961	0	1,984,441	291,790	46,733,742	N/A
1962	488,923,341	7,707,267	497,202	65,253,373	N/A
1963	0	7,059,246	632,376	75,347,238	N/A
1964	60,340,626	7,040,422	823,439	86,532,857	N/A
1965	0	5,909,553	1,021,505	99,654,618	N/A
1966	238,958,065	4,736,294	1,327,830	131,253,307	N/A
1967	510,079,178	5,500,516	1,888,758	149,096,032	N/A
1968	149,868,789	5,275,979	2,140,858	190,907,982	N/A
1969	110,945,535	5,584,162	1,922,340	225,790,127	N/A
1970	945,064,773	6,243,362	1,692,274	259,127,186	N/A
1971	96,304,523	5,687,848	1,564,845	319,156,649	N/A
1972	2,251,347,556	6,396,291	1,725,573	336,217,455	N/A
1973	193,031,709	5,272,797	2,005,785	373,021,276	N/A
1974	3,528,744,084	8,350,760	1,739,159	515,872,881	N/A
1975	325,424,688	8,947,571	1,837,253	576,540,767	N/A
1976	482,592,035	12,974,770	1,879,704	662,712,620	N/A
1977	813,991,004	7,740,185	1,248,616	870,287,638	N/A
1978	1,015,873,944	8,616,027	1,502,963	1,075,668,664	N/A
1979	2,521,190,635	7,328,999	1,105,865	1,341,797,062	N/A
1980	2,676,927,673	7,361,904	1,277,987	1,862,965,354	N/A
1981	3,308,009,881	8,205,515	1,211,959	2,824,108,356	N/A
1982	1,110,172,751	7,288,316	1,349,850	3,166,294,042	N/A
1983	3,796,644,766	13,620,158	2,540,294	2,764,348,600	N/A
1984	1,154,495,009	16,323,567	2,010,462	3,148,858,526	N/A
1985	830,710,260	33,756,447	2,139,530	2,914,344,227	N/A
1986	113,731,609	34,110,029	3,199,547	1,981,629,033	8,699,504
1987	247,344,486	52,115,828	19,239,027	1,790,245,932	588,862,212
1988	388,730,457	35,752,757	8,727,373	1,552,682,937	16,909,646
1989	386,710,637	48,498,402	26,261,190	1,590,332,918	12,749,220
1990	421,375,632	55,568,777	16,028,740	2,021,989,883	14,759,941
1991	276,234,849	59,126,732	15,444,167	1,792,204,560	13,505,179
1992	53,716,797	49,087,621	33,533,897	1,778,124,263	13,734,055

See footnotes in Appendix A.

TABLE 28

LOUISIANA STATE MINERAL SEVERANCE TAX REVENUE^B
Excluding OCS
(Million Dollars)

<u>DATE</u>	<u>OIL</u>	<u>GAS</u>	<u>OTHER MINERALS</u>	<u>SEVERANCE TOTAL</u>
1975	278.77	234.34	N/A	513.10
1976	273.71	216.76	N/A	490.47
1977	261.91	206.88	N/A	468.79
1978	264.19	195.52	N/A	459.71
1979	276.40	186.87	N/A	463.27
1980	427.68	161.87	N/A	589.55
1981	815.38	164.07	N/A	979.44
1982	766.49	147.53	N/A	914.02
1983	662.00	131.52	2.45	795.98
1984	652.39	130.99	3.62	787.00
1985	598.67	120.96	3.73	723.37
1986	389.87	125.14	3.42	518.42
1987	345.18	111.84	2.99	460.01
1988	296.45	106.29	2.65	405.39
1989	312.99	108.84	2.43	424.26
1990	373.21	124.61	2.75	500.58
1991	367.13	146.83	1.97	515.93
January	30.96	12.34	0.17	43.47
February	27.24	12.70	0.07	40.01
March	23.28	11.51	0.12	34.92
April	25.86	10.98	0.15	36.98
May	26.87	10.14	0.13	37.14
June	27.98	10.98	0.13	39.08
July	28.64	12.35	0.16	41.15
August	28.52	9.36	0.08	37.95
September	27.74	9.58	0.20	37.52
October	22.05	7.36	0.12	29.53
November	34.49	9.89	0.15	44.53
December	22.45	9.05	0.16	31.66
1992 Total	326.07	126.24	1.63	453.94
January	25.21	7.76	0.08	33.05
February	26.97	10.15	0.13	37.24
March	24.93	10.13	0.19	35.25
April	24.74	9.31	0.10	34.16
May	25.82	9.07	0.10	34.99
June	25.34	8.40	0.13	33.87
July	23.65	7.54	0.19	31.38
August	21.22	8.99	0.18	30.39
September	22.24	8.56	0.22	31.02
October	22.86	9.04	0.14	32.04
November	21.33	9.04	0.15	30.52
December	19.37	9.31	0.16	28.85
1993 Total	283.68	107.32	1.76	392.76

Note: Forest and shell severance are not included in the above total.

Other minerals include sulfur, salt, lignite, etc.

See footnotes in Appendix A.

TABLE 29

LOUISIANA STATE OIL SEVERANCE TAX VOLUMES⁸
CRUDE OIL AND CONDENSATE
Excluding OCS
(Barrels)

<u>DATE</u>	<u>FULL RATE</u>	<u>INCAPABLE WELL RATE</u>	<u>STRIPPER WELL RATE</u>	<u>TOTAL TAXED OIL VOLUME</u>
1975	331,502,123	2,352,082	6,624,508	340,478,712
1976	300,896,349	2,191,464	8,064,555	311,152,365
1977	272,300,080	2,536,223	7,806,470	282,642,770
1978	247,355,532	2,494,756	7,797,695	257,647,988
1979	216,097,568	2,768,062	7,726,193	226,591,822
1980	192,285,668	2,521,676	7,679,875	202,487,219
1981	193,725,528	2,579,437	9,072,057	205,377,024
1982	180,197,905	2,955,008	9,103,966	192,301,881
1983	172,094,095	2,884,691	9,731,435	184,710,221
1984	171,425,402	3,099,053	9,830,262	184,354,717
1985	173,545,432	3,110,740	10,513,745	187,169,920
1986	180,108,437	3,208,451	10,059,344	193,376,232
1987	155,987,737	3,201,095	8,809,543	168,015,044
1988	142,605,746	3,288,994	8,242,330	154,150,151
1989	139,442,253	3,265,429	7,429,510	150,165,554
1990	131,140,448	3,274,774	7,154,125	141,577,610
1991	136,212,521	3,888,128	8,112,117	148,220,451
January	3,182,457	287,287	760,998	14,231,639
February	11,840,051	263,425	626,170	12,729,646
March	10,515,522	320,620	750,317	11,590,928
April	11,917,655	280,990	656,350	12,868,137
May	11,184,521	347,662	620,775	12,157,924
June	11,604,567	305,145	651,636	12,563,182
July	10,663,082	325,820	663,745	11,657,174
August	11,031,844	272,046	529,463	11,838,400
September	10,700,727	328,509	640,506	11,674,754
October	8,343,692	269,607	586,738	9,201,348
November	13,241,344	362,170	676,213	14,286,537
December	9,174,386	302,014	555,785	10,036,687
1992 Total	133,399,849	3,665,298	7,718,696	144,836,355
January	10,800,179	334,028	614,883	11,749,089
February	11,869,534	280,970	641,730	12,792,234
March	10,635,702	302,178	677,567	11,615,447
April	10,443,031	292,817	620,267	11,356,114
May	10,948,723	279,850	573,822	11,802,395
June	10,822,155	297,206	603,692	11,723,053
July	10,697,101	271,357	602,495	11,570,954
August	10,351,139	326,575	671,086	11,348,799
September	10,649,120	320,198	611,054	11,580,371
October	11,012,992	294,208	528,417	1,835,617
November	10,508,841	272,615	551,489	1,332,945
December	9,960,915	242,500	543,562	10,746,977
1993 Total	128,699,431	3,514,500	7,240,065	139,453,996

See footnotes in Appendix A.

TABLE 30

LOUISIANA STATE GAS SEVERANCE TAX VOLUMES⁸
NATURAL GAS AND CASINGHEAD GAS
Excluding OCS

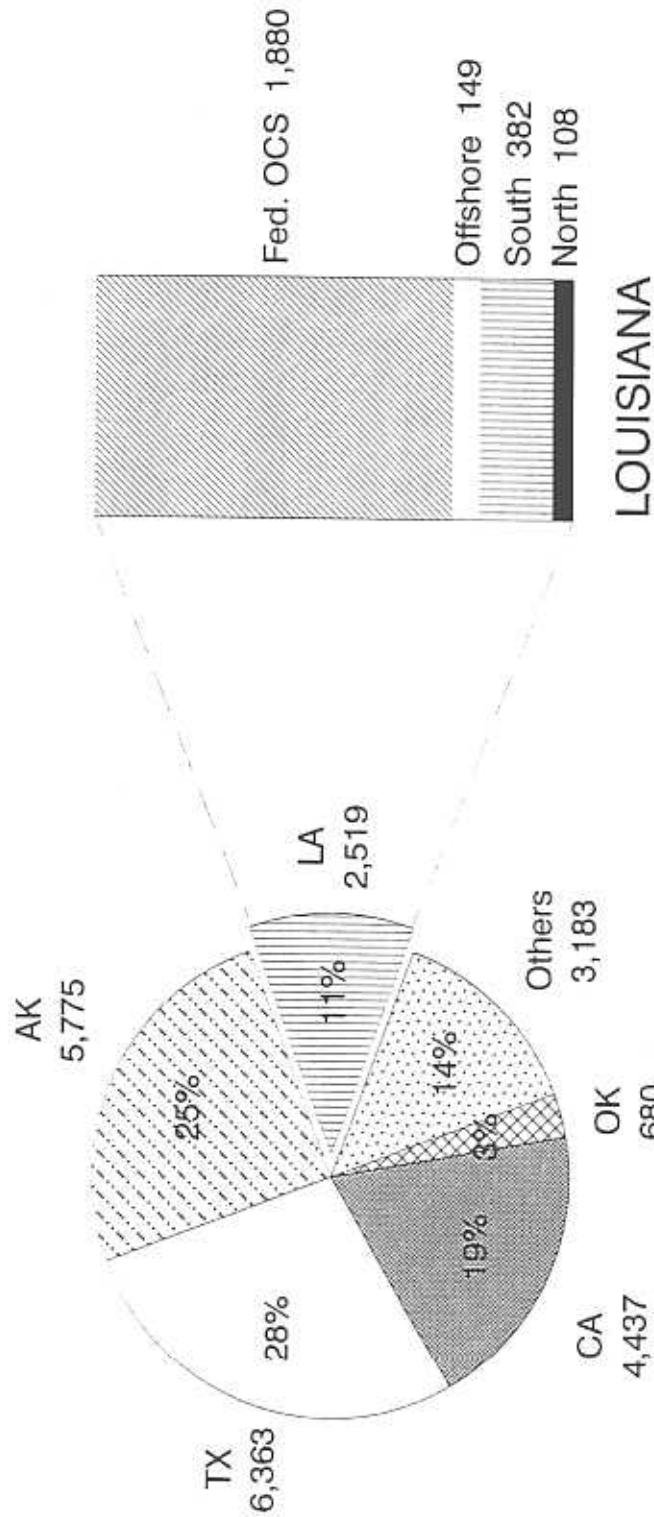
(Thousand Cubic Feet (MCF), at 15.025 psia and 60 degrees Fahrenheit)

<u>DATE</u>	<u>FULL RATE</u>	<u>INCAPABLE GAS WELL RATE</u>	<u>OTHER RATES</u>	<u>TOTAL TAXED GAS VOLUME</u>
1975	3,265,635,082	49,638,433	144,857,574	3,460,131,089
1976	3,055,617,983	50,386,997	67,782,556	3,173,787,536
1977	2,950,831,436	52,271,169	N/A	3,003,102,605
1978	2,766,602,076	57,431,282	28,997,865	2,853,031,223
1979	2,648,241,341	61,371,377	27,915,984	2,737,528,702
1980	2,287,994,563	64,299,362	25,614,034	2,378,154,110
1981	2,259,226,741	69,127,132	27,821,281	2,356,175,154
1982	2,040,417,849	67,415,215	23,885,266	2,131,718,329
1983	1,830,549,223	66,037,859	20,750,463	1,917,337,545
1984	1,849,689,870	61,394,328	22,460,870	1,933,548,068
1985	1,710,600,175	56,471,054	22,020,986	1,789,092,195
1986	1,748,310,878	56,729,077	22,829,692	1,827,869,647
1987	1,577,841,418	56,316,278	20,374,445	1,654,532,141
1988	1,487,438,834	54,709,819	22,370,768	1,564,519,421
1989	1,529,057,929	54,419,642	31,800,386	1,615,277,957
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
January	134,971,164	5,100,575	2,355,443	142,427,182
February	138,865,951	4,193,342	2,428,192	145,487,485
March	127,334,520	4,741,475	2,423,493	134,499,488
April	119,834,198	4,398,037	2,695,243	126,927,478
May	110,262,216	4,898,963	2,957,735	118,118,914
June	119,888,646	4,529,760	1,390,975	125,809,381
July	135,212,787	5,071,104	2,321,334	142,605,225
August	117,839,254	4,290,051	1,993,448	124,122,753
September	130,755,542	4,820,570	1,538,105	137,114,217
October	102,724,233	4,991,841	931,222	108,647,296
November	138,371,960	4,060,070	2,875,854	145,307,884
December	123,429,151	4,050,873	1,555,830	129,035,854
1992 Total	1,499,489,622	55,146,661	25,466,874	1,580,103,157
January	110,058,011	3,189,613	716,124	113,963,748
February	142,930,133	3,467,397	2,123,650	148,521,180
March	142,957,408	2,850,244	1,338,781	147,146,433
April	126,148,677	4,312,771	1,391,110	131,852,558
May	125,002,079	4,044,163	1,288,998	130,335,240
June	114,384,547	4,054,226	1,392,315	119,831,088
July	105,523,954	4,307,150	778,779	110,609,883
August	124,117,343	3,035,538	1,053,824	128,206,705
September	113,576,430	3,915,564	796,486	118,288,480
October	119,589,587	5,001,309	1,124,328	125,715,224
November	116,252,922	3,697,227	882,863	120,833,012
December	123,181,936	4,141,869	952,192	128,275,997
1993 Total	1,463,723,027	46,017,071	13,839,450	1,523,579,548

See footnotes in Appendix A.

FIGURE 12

1994 UNITED STATES CRUDE OIL RESERVES
Million Barrels



SOURCE: U.S. Department of Energy

DNR Technology Assessment Division

TABLE 31

**LOUISIANA ESTIMATED CRUDE OIL PROVED RESERVES⁹
EXCLUDING LEASE CONDENSATE
As of December 31st of Each Year
(Million Barrels)**

<u>YEAR</u>	<u>NORTH</u>	<u>SOUTH ONSHORE</u>	<u>SOUTH OFFSHORE</u>	<u>FEDERAL OCS</u>	<u>TOTAL STATE</u>
1977	244	1,382	1,974	N/A	3,600
1978	255	1,242	1,951	N/A	3,448
1979	216	682	1,882	N/A	2,780
1980	248	682	1,821	N/A	2,751
1981	317	642	2,026	N/A	2,985
1982	240	611	1,677	N/A	2,528
1983	223	569	1,915	N/A	2,707
1984	165	585	1,911	N/A	2,661
1985	196	565	122	1,759	2,642
1986	160	547	119	1,640	2,466
1987	175	505	127	1,514	2,321
1988	154	511	135	1,527	2,327
1989	123	479	143	1,691	2,436
1990	120	435	150	1,772	2,477
1991	127	408	144	1,775	2,454
1992	125	417	126	1,643	2,311
1993	108	382	149	1,880	2,519

NOTE: Federal OCS is included in the south offshore figure from 1977 through 1984.

TABLE 32

**LOUISIANA ESTIMATED LEASE CONDENSATE PROVED RESERVES⁹
As of December 31st of Each Year
(Million Barrels)**

<u>YEAR</u>	<u>NORTH</u>	<u>SOUTH ONSHORE</u>	<u>SOUTH OFFSHORE</u>	<u>FEDERAL OCS</u>	<u>TOTAL STATE</u>
1979	42	263	309	N/A	614
1980	36	267	296	N/A	599
1981	36	253	280	N/A	569
1982	26	243	310	N/A	579
1983	24	238	300	N/A	562
1984	19	229	269	N/A	517
1985	18	220	257	N/A	495
1986	18	208	11	230	467
1987	17	194	13	223	447
1988	17	193	13	223	446
1989	20	196	12	278	506
1990	20	182	12	258	472
1991	21	175	9	253	458
1992	19	151	8	226	404
1993	19	133	9	235	396

NOTE: Federal OCS is included in the south offshore figure from 1979 through 1985.

See footnotes on Appendix A.

TABLE 33

LOUISIANA ESTIMATED DRY NATURAL GAS PROVED RESERVES⁹
As of December 31st of Each Year
(Billion Cubic Feet (BCF), at 14.73 psia and 60 degrees Fahrenheit)

<u>YEAR</u>	<u>NORTH</u>	<u>SOUTH ONSHORE</u>	<u>SOUTH OFFSHORE</u>	<u>FEDERAL OCS</u>	<u>TOTAL STATE</u>
1977	3,135	18,580	35,295	N/A	57,010
1978	3,203	14,755	34,767	N/A	55,725
1979	2,798	13,994	33,250	N/A	50,042
1980	3,076	13,026	31,223	N/A	47,325
1981	3,270	12,645	31,462	N/A	47,377
1982	2,919	11,801	30,203*	N/A	44,923*
1983	2,939	11,142	28,480*	N/A	42,561*
1984	2,494	10,331	28,574*	N/A	41,399*
1985	2,587	9,808	1,643	26,113*	40,151*
1986	2,515	9,103	1,312	25,454*	38,384*
1987	2,306	8,693	1,431	23,260*	35,690*
1988	2,398	8,654	1,172	23,471*	35,695*
1989	2,652	8,645	1,219	24,187*	36,703*
1990	2,588	8,171	969	22,679*	34,407*
1991	2,384	7,504	1,024	21,611*	32,523*
1992	2,311	6,693	776	19,653*	29,433*
1993	2,325	5,932	917	19,383	28,557

NOTE: Federal OCS is included in the south offshore figure from 1977 through 1984.

*Alabama State and Federal Offshore are included prior to 1990. After 1990, only Alabama Federal Offshore is included.

TABLE 34

LOUISIANA ESTIMATED NATURAL GAS LIQUIDS PROVED RESERVES⁹
EXCLUDING LEASE CONDENSATE
As of December 31st of Each Year
(Million Barrels)

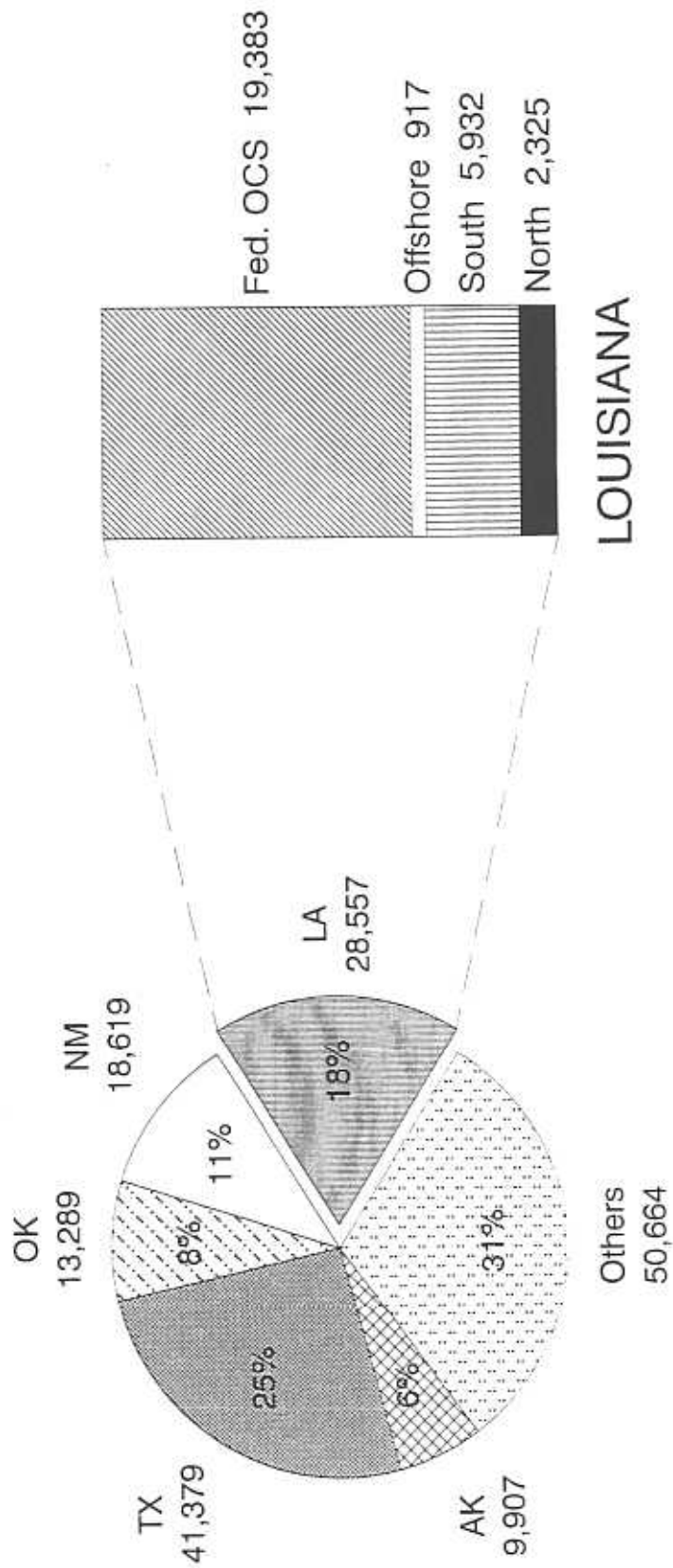
<u>YEAR</u>	<u>NORTH</u>	<u>SOUTH ONSHORE</u>	<u>SOUTH OFFSHORE</u>	<u>FEDERAL OCS</u>	<u>TOTAL STATE</u>
1979	63	560	373	N/A	996
1980	60	409	356	N/A	825
1981	59	287	431	N/A	777
1982	73	301	374	N/A	748
1983	61	263	409	N/A	733
1984	55	298	462	N/A	815
1985	39	234	420	N/A	693
1986	39	220	28	336	623
1987	33	235	33	309	610
1988	39	228	27	289	583
1989	40	215	39	297	591
1990	38	249	37	261	585
1991	38	242	41	292	613
1992	41	229	47	246	563
1993	38	201	21	255	515

NOTE: Federal OCS is included in the south offshore figure from 1979 through 1985.

See footnotes on Appendix A.

FIGURE 13

1994 UNITED STATES NATURAL GAS RESERVES
Billion Cubic Feet



SOURCE: U.S. Department of Energy

DNR Technology Assessment Division

TABLE 35

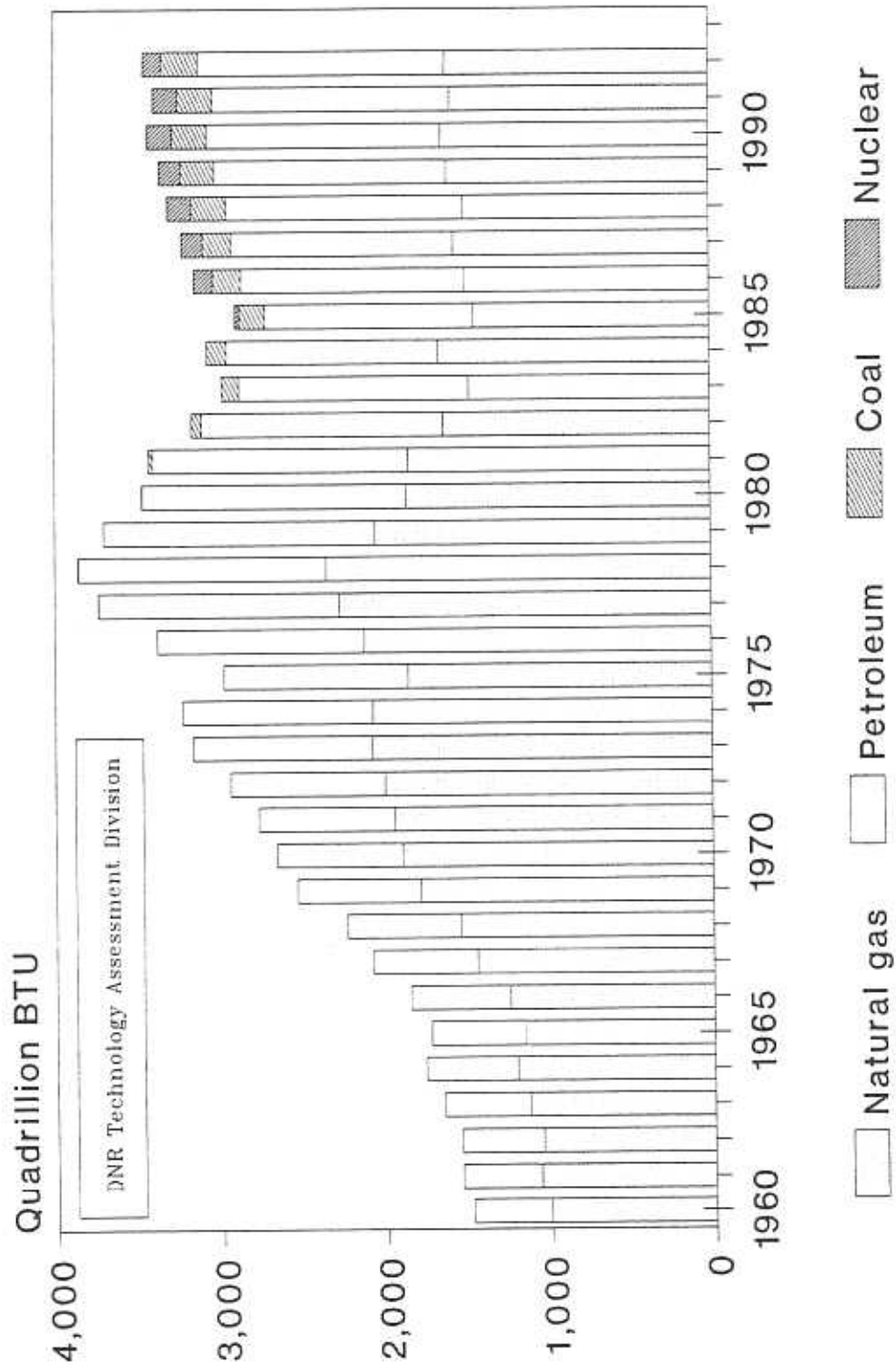
LOUISIANA NONAGRICULTURAL EMPLOYMENT¹

<u>DATE</u>	<u>OIL & GAS PRODUCTION</u>	<u>CHEMICAL INDUSTRY</u>	<u>OIL REFINING</u>	<u>OIL PIPELINE</u>	<u>TOTAL EMPLOYMENT</u>
1975	59,950	26,419	10,570	950	1,336,000
1976	62,678	28,904	10,499	900	1,285,500
1977	64,032	30,446	10,678	900	1,444,600
1978	70,678	31,627	11,599	1,000	1,509,100
1979	74,017	31,831	12,608	1,100	1,554,370
1980	85,778	33,490	13,287	1,200	1,599,600
1981	94,772	32,711	16,314	1,200	1,627,796
1982	92,225	33,984	13,111	1,033	1,571,017
1983	77,283	30,272	13,140	1,282	1,531,480
1984	78,032	29,104	13,053	1,247	1,568,064
1985	77,781	28,093	12,458	1,144	1,550,443
1986	58,888	25,998	12,233	1,168	1,475,318
1987	52,117	25,345	12,225	1,051	1,438,793
1988	54,565	26,957	11,258	1,039	1,468,508
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 ^R	29,412	12,268	1,073	1,566,779 ^R
January	48,128	30,293	12,328	1,087	1,548,877
February	47,452	30,337	12,370	1,088	1,551,409
March	45,622	30,051	12,440	1,088	1,557,166
April	46,669	30,404	12,603	1,089	1,576,470
May	46,575	30,446	12,691	1,085	1,591,441
June	45,758	30,572	12,779	1,107	1,595,566
July	45,564	30,528	12,732	1,106	1,574,157
August	44,799	30,453	12,675	1,107	1,575,223
September	42,896	30,362	12,476	1,098	1,587,861
October	44,036	30,130	12,426	1,093	1,603,051
November	44,474	30,163	12,470	1,087	1,605,336
December	44,612 ^R	30,225	12,520	1,109	1,606,210
1992 Average	45,549^R	30,330	12,543	1,095	1,581,064
January	43,931	30,319	12,874	1,073	1,567,574
February	43,987	30,364	12,787	1,059	1,577,378
March	43,392	30,328	12,788	1,067	1,586,447
April	43,441	30,516	12,651	1,077	1,601,354
May	43,837	30,512	12,653	1,083	1,615,232
June	44,593	30,706	12,722	1,106	1,625,328
July	44,059	30,557	12,709	1,096	1,609,108
August	44,904	30,507	12,773	1,096	1,613,210
September	44,751	30,375	12,695	1,074	1,626,734
October	44,658	30,282	12,605	1,063	1,638,665
November	44,793	30,232	12,678	1,059	1,644,904
December	45,237	30,334	12,783	1,080	1,654,188
1993 Average	44,299	30,419	12,727	1,078	1,613,344

^RRevised

See footnotes in Appendix A.

FIGURE 14
 LOUISIANA ENERGY CONSUMPTION BY SOURCE



SOURCE: U.S. Department of Energy

TABLE 36

LOUISIANA ENERGY CONSUMPTION ESTIMATES BY SOURCE¹¹

<u>YEAR</u>	<u>TOTAL ENERGY</u> TBTU	<u>TOTAL NATURAL GAS</u> BCF	<u>TOTAL PETROLEUM</u> MBBLS	<u>COAL</u> MST	<u>NUCLEAR</u> Million KWH
1960	1,469	970	188,852	N/A	0
1961	1,534	1,029	89,889	N/A	0
1962	1,548	1,015	94,051	N/A	0
1963	1,651	1,091	99,427	N/A	0
1964	1,755	1,144	106,260	N/A	0
1965	1,729	1,110	109,325	N/A	0
1966	1,843	1,202	115,895	N/A	0
1967	2,087	1,394	123,074	N/A	0
1968	2,255	1,521	134,822	N/A	0
1969	2,532	1,763	148,052	N/A	0
1970	2,660	1,841	150,124	0	0
1971	2,767	1,884	163,298	0	0
1972	2,945	1,940	186,445	0	0
1973	3,180	2,010	212,662	0	0
1974	3,268	2,008	222,611	0	0
1975	2,986	1,789	214,065	0	0
1976	3,374	2,044	237,208	0	0
1977	3,748	2,191	270,987	79	0
1978	3,882	2,249	279,482	172	0
1979	3,779	1,978	307,896	118	0
1980	3,595	1,794	296,347	111	0
1981	3,615	1,782	295,551	1,363	0
1982	3,369	1,556	287,818	3,724	0
1983	3,209	1,413	276,220	6,154	0
1984	3,339	1,594	248,977	6,855	0
1985	3,121	1,386	248,327	9,217	2,457
1986	3,253	1,439	260,617	10,459	10,637
1987	3,336	1,501	257,394	10,391	12,324
1988	3,366	1,446	271,682	12,848	13,785
1989	3,462 ^R	1,538	266,185 ^R	12,471	12,391
1990	3,498 ^R	1,571	268,420 ^R	12,547	14,197
1991	3,478 ^R	1,508	273,474 ^R	12,965	13,956
1992	3,558	1,546	283,962	13,674	10,356

TBTU = Trillion BTU

BCF = Billion Cubic Feet

KWH = Kilowatt-hours

MBBLS = Thousand Barrels

MST = Thousand Short Tons

^RRevised

See footnotes in Appendix A.

TABLE 37

LOUISIANA REFINERY STATISTICS

<u>DATE</u>	<u>AVERAGE STOCK ON HAND</u> (Barrels)	<u>DAILY AVERAGE RUNS TO STILL</u> (Barrels)	<u>LICENSED REFINERIES</u>
1975	8,842,871	1,517,909	20
1976	11,114,424	1,681,034	21
1977	13,978,218	1,890,650	23
1978	13,509,825	1,857,223	25
1979	13,525,870	1,905,514	29
1980	16,403,667	1,781,168	32
1981	14,207,520	1,727,400	31
1982	12,905,202	1,716,091	31
1983	13,317,761	1,649,283	27
1984	13,182,207	1,720,172	25
1985	13,425,129	1,735,402	24
1986	13,391,258	1,901,450	23
1987	13,967,381	1,947,187	22
1988	14,295,591	1,946,861	21
1989	14,158,306	2,051,304	23
1990	13,783,012	2,045,697	23 ^R
1991	14,197,185 ^R	2,071,276 ^R	23 ^R
January	13,247,310	2,080,522	23
February	15,152,901	1,884,975	23
March	15,083,901	2,141,283	23
April	15,848,899	2,106,202	23
May	14,567,466	2,059,483	23
June	13,864,905	2,179,621	23
July	14,550,391	2,132,741	23
August	16,033,268	1,921,247	23
September	14,175,074	2,126,603	21
October	13,396,527	2,173,336	21
November	13,558,227	2,137,752	21
December	12,510,951	2,138,704	21
1992 Average	14,332,485	2,090,206	22
January	14,282,569	2,025,540	21
February	13,065,522	2,076,308	22
March	14,614,111	1,973,884	22
April	14,374,239	2,003,620	22
May	14,585,678	2,102,014	23
June	12,800,830	2,086,888	23
July	13,917,352	2,121,869	23
August	14,747,995	2,099,087	22
September	14,284,946	2,087,847	22
October	14,139,968	1,987,971	22
November	13,854,024	2,107,809	23
December	12,980,678	1,909,168	22
1993 Average	13,970,659	2,048,500	22

^RRevised

TABLE 38

**LOUISIANA ELECTRIC UTILITIES NET ELECTRICITY GENERATION
BY FUEL TYPE, 1960-1992
(Million KWH)**

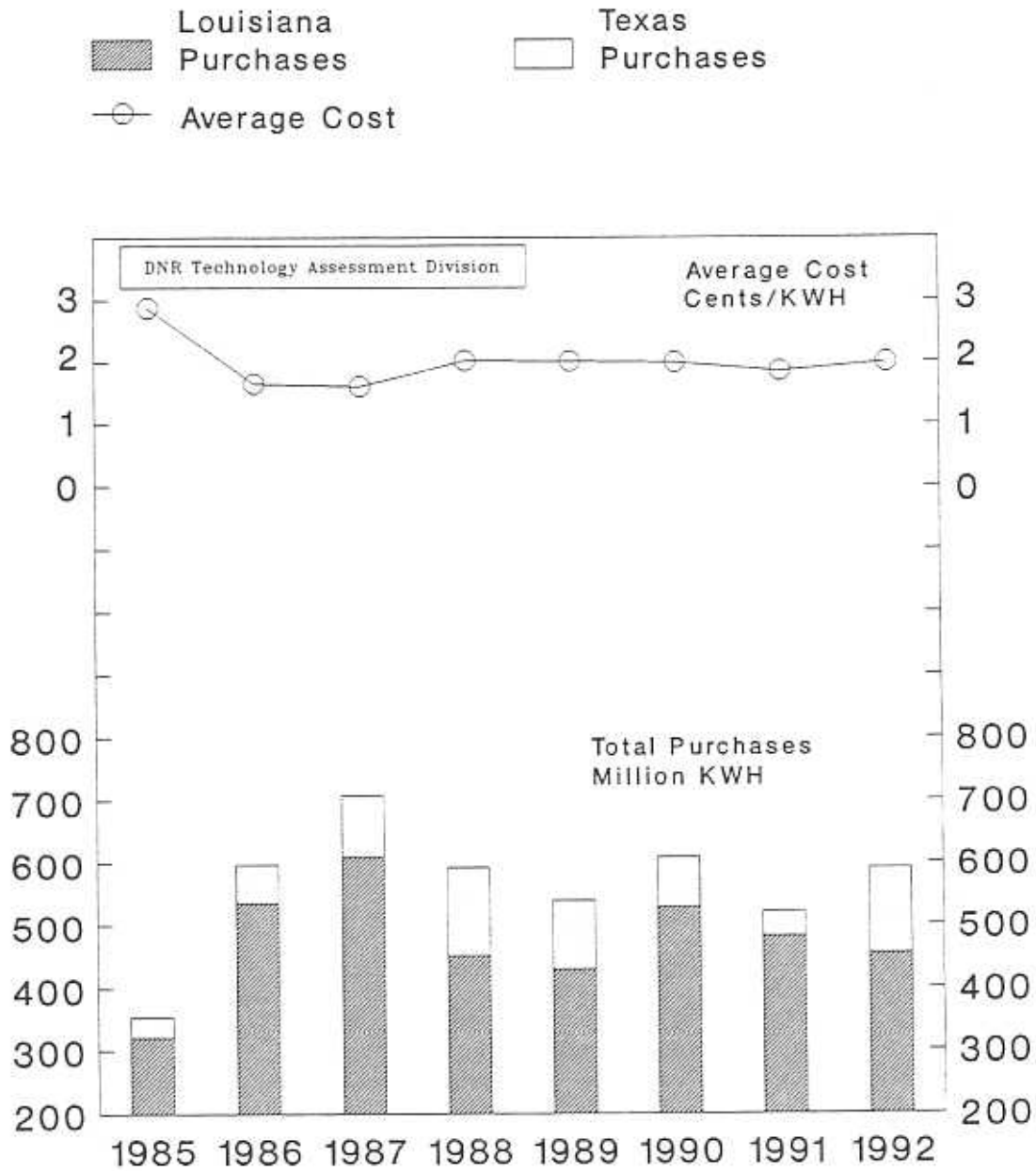
<u>YEAR</u>	<u>TOTAL</u>	<u>COAL</u>	<u>OIL</u>	<u>GAS</u>	<u>NUCLEAR</u>
1960	11,865	-	28	11,837	-
1961	12,628	-	23	12,605	-
1962	13,575	-	34	13,541	-
1963	14,835	-	37	14,808	-
1964	16,061	-	54	16,007	-
1965	17,845	-	26	17,819	-
1966	21,667	-	24	21,643	-
1967	23,152	-	20	23,132	-
1968	26,155	-	32	26,123	-
1969	32,327	-	26	32,301	-
1970	33,703	-	79	33,623	-
1971	37,118	-	-	-	-
1972	39,348	-	-	-	-
1973	41,474	-	4,353	36,351	-
1974	39,504	-	5,034	34,472	-
1975	39,224	-	3,257	35,967	-
1976	45,116	-	7,773	37,343	-
1977	48,451	-	13,255	35,196	-
1978	51,205	-	14,283	36,921	-
1979	46,655	-	8,260	38,394	-
1980	45,744	-	4,789	40,956	-
1981	44,111	1,528	2,535	39,948	-
1982	41,532	4,998	940	35,594	-
1983	37,044	8,377	356	28,311	-
1984	39,330	9,830	140	29,360	-
1985	44,261	13,968	100	27,736	2,457
1986	52,843	15,586	419	26,202	10,637
1987	51,309	15,102	60	23,823	12,324
1988	56,774	18,431	272	24,286	13,785
1989	52,670	18,081	298	21,900	12,391
1990	58,188	17,800	130	26,061	14,197
1991	57,158	18,912	45	24,245	13,956
1992	55,188	19,796	483	24,554	10,356

^RRevised

See footnotes in Appendix A.

FIGURE 15

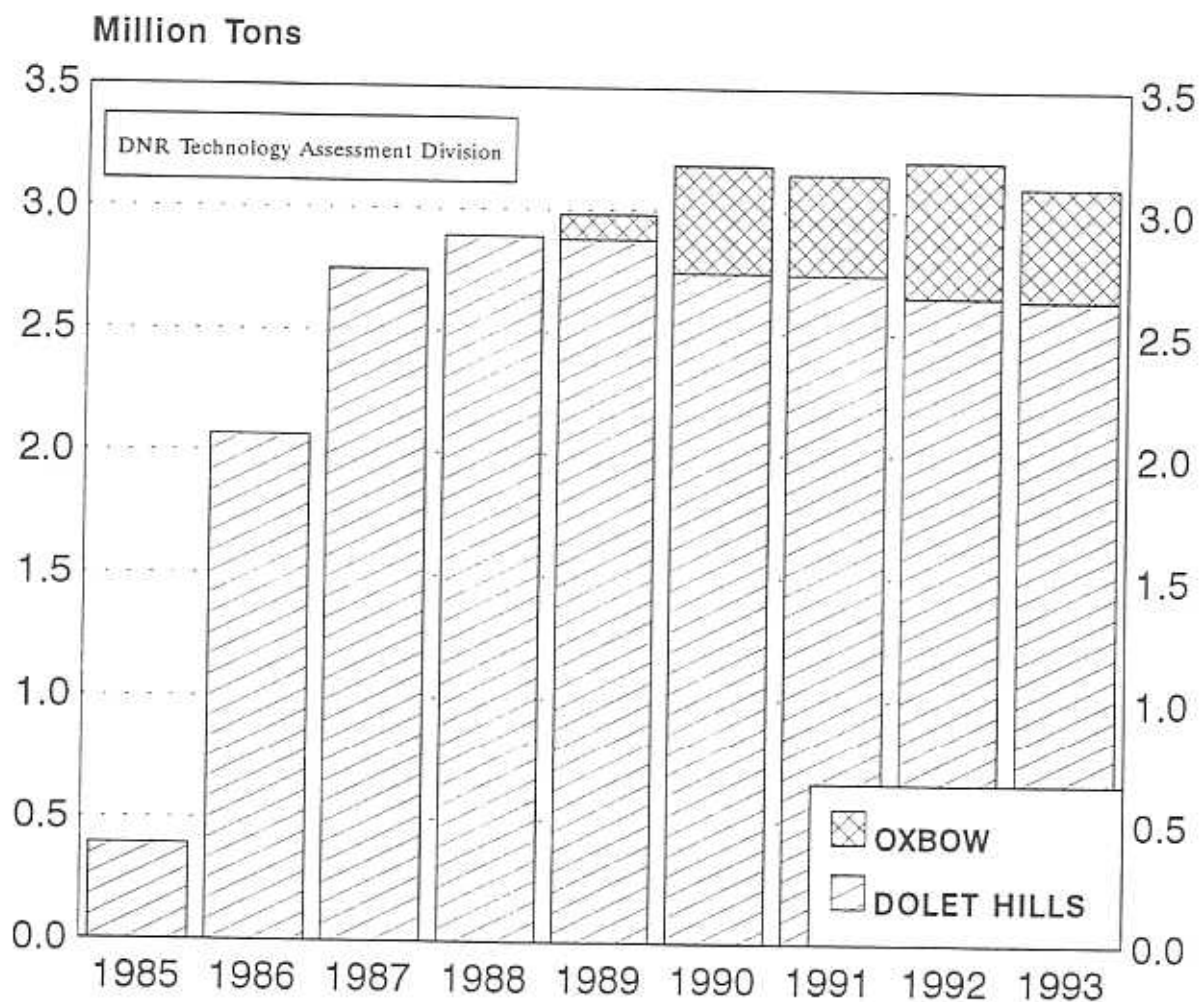
LOUISIANA ELECTRIC UTILITIES COGENERATION PURCHASES AND AVERAGE COST



Source: Louisiana Public Service Commission and personal communication with utility representatives

FIGURE 16
LOUISIANA LIGNITE PRODUCTION
(TONS SHIPPED)

YEAR	MINE		TOTAL
	DOLET HILLS	OXBOW	
1985	392,815	-0-	392,815
1986	2,067,867	-0-	2,067,867
1987	2,750,652	-0-	2,750,652
1988	2,889,489	-0-	2,889,489
1989	2,879,806	102,753	2,982,559
1990	2,746,096	440,093	3,186,189
1991	2,740,733	410,015	3,150,748
1992	2,653,455	553,950	3,207,405
1993	2,643,806	460,099	3,103,905



Source: 1985-1992 Louisiana Geological Survey
1993 Dolet Hills-CLECO
Oxbow-Red River Mining Co.

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
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	MI	Michigan
AK	Alaska	MS	Mississippi
CA	California	NM	New Mexico
CO	Colorado	OK	Oklahoma
KS	Kansas	TX	Texas
LA	Louisiana	UT	Utah
MI	Michigan	WY	Wyoming

APPENDIX B
DATA SOURCES

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

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. NATURAL GAS CLEARINGHOUSE SURVEY OF DOMESTIC SPOT MARKET PRICES, Houston, TX: 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, Minerals Management Service.
13. STATISTICAL YEARBOOK OF THE ELECTRIC UTILITY INDUSTRY, Washington, D.C.: Edison Electric Institute.
14. ELECTRIC POWER MONTHLY, Washington, D.C.: U.S. Department of Energy, Energy Information Administration.
15. MINERAL REVENUE, Washington, D.C.: U.S. Department of the Interior, Minerals Management Service, Royalty Management Program.

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 nonmanufacturing 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 nonmanufacturing 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 South Louisiana Sweet (SLS) crude, which are effective on the middle and 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 South Louisiana Sweet (SLS) 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. Goods 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.

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. Goods received in the Continental United States (including Alaska) from a foreign country.

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. 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 repressurizing, quantities vented and flared, and non-hydrocarbon gases removed in treating or processing operations. Includes all quantities of gas used in field and processing operations.

NATURAL GAS, OCS GAS. OCS gas volume is as reported. It is mostly "dry" gas and some is "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.

Spot Market. The average price of natural gas paid at the regional spot market receipt points or zones as reported by the Natural Gas Clearinghouse (NGC) in Houston, Texas. The data is from the NGC's survey of the domestic natural gas spot market receipt points.

The Louisiana natural gas spot market is a subset of the U.S. spot market. It only includes spot market receipt points or zones located in Louisiana. These points or zones are:

Eunice, Louisiana - Market accessed by ANR
Onshore Lateral, La - Market accessed by Columbia Gulf
Anywhere On System - Market accessed by Faustina, Louisiana Intrastate Gas, Bridgeline and Monterrey
South Louisiana - Market accessed by Southern Natural
Vinton Louisiana - Market accessed by Tennessee Gas Pipeline
Northern Louisiana - Market accessed by Texas Gas Transmission
Onshore Louisiana - Market accessed by United

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 therefrom. 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*).

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)*

<u>DATE</u>	<u>NORTH</u>	<u>SOUTH</u>	<u>OFFSHORE</u>	<u>TOTAL</u>
1975	348,087,178	2,963,533,670	519,686,887	3,831,307,734
1976	354,699,745	2,684,596,879	523,207,556	3,562,504,180
1977	355,168,686	2,517,077,571	495,831,330	3,368,077,587
1978	339,810,635	2,324,919,111	499,536,520	3,164,266,266
1979	366,665,384	2,182,260,056	486,517,478	3,035,442,919
1980	377,031,666	1,970,503,750	416,970,904	2,764,506,320
1981	428,405,769	1,799,516,063	382,343,206	2,610,265,038
1982	386,004,468	1,566,377,332	366,786,207	2,319,168,006
1983	372,027,021	1,348,297,497	327,867,480	2,048,191,997
1984	394,640,400	1,418,548,949	324,376,486	2,137,565,835
1985	363,537,227	1,295,763,687	259,172,205	1,918,473,120
1986	376,365,114	1,260,415,323	254,824,829	1,891,605,266
1987	368,201,116	1,190,281,030	235,533,381	1,794,015,527
1988	385,240,490	1,203,110,971	220,427,212	1,808,778,674
1989	389,753,869	1,162,596,403	208,995,087	1,761,345,359
1990	390,844,876	1,135,530,512	182,241,160	1,708,616,548
1991	391,695,665	1,144,790,650	153,601,393	1,690,087,709
January	32,948,424	103,055,496	13,637,673	149,641,594
February	29,649,358	91,268,801	11,143,753	132,061,911
March	30,912,809	93,646,706	12,192,951	136,752,465
April	30,682,298	91,878,798	11,335,983	133,897,079
May	32,561,636	96,331,911	12,065,548	140,959,095
June	31,030,773	95,300,485	12,396,968	138,728,226
July	31,675,240	97,522,774	12,763,316	141,961,330
August	32,514,133	89,742,380	11,114,764	133,371,277
September	31,010,099	90,879,923	12,198,032	134,088,055
October	31,333,042	97,858,209	13,931,767	143,123,018
November	31,555,561	95,544,352	13,078,419	140,178,332
December	31,973,217	99,481,816	13,691,379	145,146,412
1992 Total	377,846,592	1,142,511,650	149,550,553	1,669,908,795
January	31,826,540	98,865,888	13,546,741	144,239,169
February	28,764,587	89,487,934	12,563,271	130,815,792
March	31,162,484	97,336,177	14,189,824	142,688,486
April	30,824,840	94,034,261	14,057,090	138,916,191
May	31,512,725	96,823,883	13,480,040	141,816,648
June	29,706,577	94,042,785	12,985,230	136,734,593
July	30,935,768	96,366,096	13,832,925	141,134,789
August	30,739,746	94,167,252	12,946,312	137,853,310
September	26,929,833	90,390,804	12,234,061	129,554,698
October	29,202,429	91,964,136	12,307,706	133,474,271
November	29,253,385	91,159,713	12,554,238	132,967,336
December	30,179,064	92,584,538	12,313,713	135,077,315
1993 Total	361,037,978	1,127,223,468	157,011,151	1,645,272,597

*See Table 9 for corresponding volumes at 15.025 psia.

APPENDIX D-2

LOUISIANA GAS PRODUCTION, WET AFTER LEASE SEPARATION
Natural Gas and Casinghead Gas

DATE	ONSHORE	OFFSHORE STATE	OCS ¹²	TOTAL
1975	3,311,620,847	519,686,887	3,332,169,057	7,163,476,791
1976	3,039,296,624	523,207,556	3,499,865,900	7,062,370,080
1977	2,872,246,257	495,831,330	3,647,513,674	7,015,591,261
1978	2,664,729,746	499,536,520	4,149,731,136	7,313,997,402
1979	2,548,925,441	486,517,478	4,158,521,710	7,193,964,629
1980	2,347,535,416	416,970,904	4,013,707,434	6,778,213,754
1981	2,227,921,833	382,343,206	4,106,494,590	6,716,759,628
1982	1,952,381,800	366,786,207	3,803,740,050	6,122,908,056
1983	1,720,324,517	327,867,480	3,173,892,354	5,222,084,351
1984	1,813,189,350	324,376,486	3,578,740,570	5,716,306,405
1985	1,659,300,915	259,172,205	3,116,884,490	5,035,357,610
1986	1,636,780,437	254,824,829	2,927,832,264	4,819,437,530
1987	1,558,482,146	235,533,381	3,180,107,195	4,974,122,722
1988	1,588,351,461	220,427,212	3,096,881,628	4,905,660,302
1989	1,552,350,272	208,995,087	3,006,576,061	4,767,921,420
1990	1,526,375,388	182,241,160	3,706,324,044	5,414,940,592
1991	1,536,486,315	153,601,393	3,289,968,602	4,980,056,311
January	136,003,921	13,637,673	305,774,227 ^R	455,415,821 ^R
February	120,918,159	11,143,753	250,143,336 ^R	382,205,248 ^R
March	124,559,515	12,192,951	281,540,439 ^R	418,292,905 ^R
April	122,561,096	11,335,983	280,423,310 ^R	414,320,389 ^R
May	128,893,547	12,065,548	310,140,899 ^R	451,099,994 ^R
June	126,331,258	12,396,968	286,490,007 ^R	425,218,233 ^R
July	129,198,014	12,763,316	279,088,362 ^R	421,049,692 ^R
August	122,256,514	11,114,764	253,579,473 ^R	386,950,750 ^R
September	121,890,022	12,198,032	237,422,044 ^R	371,510,098 ^R
October	129,191,251	13,931,767	303,907,684 ^R	447,030,702 ^R
November	127,099,913	13,078,419	254,483,064 ^R	394,661,396 ^R
December	131,455,033	13,691,379	295,108,602 ^R	440,255,013 ^R
1992 Total	1,520,358,242	149,550,553	3,338,101,447^R	5,008,010,242^R
January	130,692,428	13,546,741	327,417,110	471,656,279
February	118,252,521	12,563,271	241,268,142	372,083,934
March	128,498,662	14,189,824	267,532,540	410,221,026
April	124,859,101	14,057,090	274,859,640	413,775,831
May	128,336,608	13,480,040	296,474,632	438,291,280
June	123,749,362	12,985,230	287,519,271	424,253,864
July	127,301,864	13,832,925	315,497,766	456,632,555
August	124,906,998	12,946,312	287,246,812	425,100,122
September	117,320,637	12,234,061	299,109,331	428,664,029
October	121,166,565	12,307,706	304,893,455	438,367,725
November	120,413,098	12,554,238	307,701,907	440,669,244
December	122,763,602	12,313,713	302,265,649	437,342,963
1993 Total	1,488,261,446	157,011,151	3,511,786,255	5,157,058,852

NOTE: The 1992 and 1993 Federal OCS production is estimated from the marketed production.

*See Table 10 for corresponding volumes at 15.025 psia.

^RRevised

See footnotes in Appendix A.

APPENDIX D-3

LOUISIANA NATURAL GAS AND CASINGHEAD GAS PRODUCTION
(Billion Cubic Feet (BCF), at 14.73 psia and 60 degrees Fahrenheit)*

DATE	MARKETED			EXTRACTION LOSS ³	DRY ³
	STATE	OCS	TOTAL ³		
1975	3,422	3,669	7,091	190	6,901
1976	3,196	3,811	7,007	173	6,834
1977	2,989	4,226	7,215	166	7,049
1978	2,788	4,689	7,476	162	7,315
1979	2,685	4,581	7,266	166	7,101
1980	2,439	4,200	6,639	142	6,497
1981	2,264	4,517	6,780	142	6,638
1982	2,013	4,159	6,172	129	6,043
1983	1,757	3,575	5,332	124	5,208
1984	1,872	3,953	5,825	133	5,693
1985	1,689	3,325	5,014	118	4,896
1986	1,658	3,238	4,895	116	4,780
1987	1,575	3,548	5,123	125	4,998
1988	1,697	3,483	5,180	120	5,060
1989	1,652	3,426	5,078	121	4,957
1990	1,629	3,613	5,242	119	5,123
1991	1,575	3,459	5,034	129	4,905
January	152 ^R	295 ^R	448 ^R		
February	156 ^R	242 ^R	397 ^R		
March	144 ^R	272 ^R	416 ^R		
April	136 ^R	271 ^R	407 ^R		
May	126 ^R	299 ^R	426 ^R		
June	135 ^R	277 ^R	411 ^R		
July	153 ^R	269 ^R	422 ^R		
August	133 ^R	245 ^R	378 ^R		
September	147 ^R	229 ^R	376 ^R		
October	116 ^R	293 ^R	410 ^R		
November	156 ^R	246 ^R	401 ^R		
December	138 ^R	285 ^R	423 ^R		
1992 Total	1,691^R	3,223^R	4,914^R	133	4,782
January	122	311	433		
February	159	233	392		
March	157	268	425		
April	141	270	411		
May	139	285	424		
June	128	279	407		
July	118	300	419		
August	137	282	420		
September	127	299	426		
October	135	305	439		
November	129	308	437		
December	137	307	445		
1993 Total	1,631	3,447	5,078		

*See Table 11 for corresponding volumes at 15.025 psia.

^RRevised

See footnotes in Appendix A.

APPENDIX D-4

UNITED STATES OCS GAS PRODUCTION¹²
Natural Gas and Casinghead Gas
 (Thousand Cubic Feet (MCF), at 14.73 psia and 60 degrees Fahrenheit)*

<u>YEAR</u>	<u>LOUISIANA</u>	<u>TEXAS</u>	<u>CALIFORNIA</u>	<u>TOTAL</u>
PRIOR	19,881,055	0	0	19,881,055
1954	56,325,083	0	0	56,325,083
1955	81,279,042	0	0	81,279,042
1956	82,892,538	0	0	82,892,538
1957	82,568,807	4,797	0	82,573,604
1958	127,692,848	0	0	127,692,848
1959	207,156,296	0	0	207,156,296
1960	273,034,451	0	0	273,034,451
1961	318,280,095	0	0	318,280,095
1962	451,952,659	0	0	451,952,659
1963	564,352,606	0	0	564,352,606
1964	621,731,438	0	0	621,731,438
1965	645,589,469	0	0	645,589,469
1966	965,387,849	42,059,386	0	1,007,447,235
1967	1,087,262,804	99,952,946	0	1,187,215,750
1972	2,881,364,733	147,156,459	10,033,581	3,038,554,773
1973	3,055,628,236	148,673,637	7,286,549	3,211,588,422
1974	3,349,170,864	159,979,401	5,573,642	3,514,723,907
1975	3,332,169,057	122,572,764	3,951,633	3,458,693,454
1976	3,499,865,900	92,582,425	3,475,201	3,595,923,526
1977	3,647,513,674	86,943,285	3,289,963	3,737,746,922
1978	4,149,731,136	231,857,450	3,472,292	4,385,060,878
1979	4,158,521,710	511,590,607	2,866,822	4,672,979,139
1980	4,013,707,434	624,642,526	3,107,023	4,641,456,983
1981	4,106,494,590	730,275,831	12,766,307	4,849,536,728
1982	3,803,740,050	858,020,298	17,750,924	4,679,511,272
1983	3,173,892,354	850,817,211	16,024,292	4,040,733,857
1984	3,578,740,570	931,293,582	27,806,899	4,537,841,051
1985	3,116,884,490	834,926,523	49,164,213	4,000,975,226
1986	2,927,832,264	978,370,552	42,689,021	3,948,891,837
1987	3,180,107,195	1,204,488,337	40,986,158	4,425,581,690
1988	3,096,881,628	1,178,422,561	34,570,638	4,309,874,827
1989	3,006,576,061	1,165,112,953	28,574,912	4,200,263,926
1990	3,706,324,044	1,348,075,361	38,531,764	5,092,931,169
1991	3,289,968,602	1,184,936,494	40,626,577	4,515,531,673
1992	3,338,101,447	1,239,389,547	40,873,660	4,685,644,725

*See Table 12 for corresponding volumes at 15.025 psia.

See footnotes in Appendix A.

APPENDIX D-5

UNITED STATES NATURAL GAS AND CASINGHEAD PRODUCTION³
(Billion Cubic Feet (BCF), at 14.73 psia and 60 degrees Fahrenheit)*

<u>DATE</u>	<u>GROSS</u>	<u>WET AFTER LEASE SEPARATION</u>	<u>MARKETED</u>	<u>DRY</u>	<u>IMPORTS</u>
1975	21,104	20,243	20,109	19,236	953
1976	20,944	20,084	19,952	19,098	964
1977	21,097	20,162	20,025	19,163	1,011
1978	21,309	20,127	19,974	19,122	966
1979	21,883	20,638	20,471	19,663	1,253
1980	21,870	20,305	20,180	19,403	985
1981	21,587	20,054	19,956	19,181	904
1982	20,272	18,675	18,582	17,820	933
1983	18,659	16,979	16,884	16,094	918
1984	20,267	18,412	18,304	17,466	843
1985	19,607	17,365	17,270	16,454	950
1986	19,131	16,956	16,859	16,059	750
1987	20,140	17,557	17,433	16,621	993
1988	20,999	18,061	17,918	17,103	1,294
1989	21,074	18,237	18,095	17,311	1,382
1990	21,523	18,744	18,594	17,810	1,532
1991	21,749 ^R	18,703 ^R	18,532 ^R	17,698 ^R	1,773 ^R
January	1,952 ^R	1,677 ^R	1,663 ^R	1,586 ^R	165 ^R
February	1,748 ^R	1,480 ^R	1,467 ^R	1,398 ^R	175 ^R
March	1,837 ^R	1,561 ^R	1,547 ^R	1,475 ^R	180 ^R
April	1,801 ^R	1,531 ^R	1,518 ^R	1,447 ^R	176 ^R
May	1,842 ^R	1,569 ^R	1,557 ^R	1,485 ^R	174 ^R
June	1,800 ^R	1,530 ^R	1,515 ^R	1,444 ^R	162 ^R
July	1,842 ^R	1,580 ^R	1,564 ^R	1,491 ^R	167 ^R
August	1,799 ^R	1,537 ^R	1,522 ^R	1,451 ^R	175 ^R
September	1,786 ^R	1,523 ^R	1,508 ^R	1,437 ^R	166
October	1,899 ^R	1,621 ^R	1,608 ^R	1,533 ^R	176 ^R
November	1,871 ^R	1,602 ^R	1,588 ^R	1,514 ^R	210 ^R
December	1,956 ^R	1,670 ^R	1,656 ^R	1,579 ^R	209 ^R
1992 Total	22,133^R	18,880^R	18,712^R	17,840^R	2,135^R
January	1,970	1,682	1,668	1,590	198
February	1,774	1,505	1,490	1,420	183
March	1,965	1,676	1,661	1,583	199
April	1,883	1,609	1,593	1,519	185
May	1,906	1,623	1,607	1,532	160
June	1,821	1,560	1,543	1,471	178
July	1,869	1,605	1,588	1,514	190
August	1,894	1,613	1,597	1,523	184
September	1,870	1,598	1,582	1,508	188
October	1,949	1,644	1,628	1,552	189
November	1,950	1,635	1,620	1,545	204
December	2,018	1,689	1,672	1,594	217
1993 Total	22,869	19,439	19,249	18,351	2,275

*See Table 13 for corresponding volumes at 15.025 psia.

^RRevised

See footnotes in Appendix A.

APPENDIX E

8 (g)

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

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

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

- Escrow funds disbursed in FY 1986-87;

- A series of annual settlement payments to be disbursed to the States over a 15-year period from FY 1987-2001; and

- Recurring annual disbursement of 27 percent of royalty, rental and bonus revenues received within each affected State's 8(g) zone.

Louisiana received \$572 million in 1987 from the escrow funds and expects to receive \$2.52 million per year as the annual settlement from 1987 through 2001.

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

APPENDIX F

Included in the Annual this year are reprints of the Louisiana Energy Facts inserts, the Louisiana Energy Topics.

1993 LOUISIANA ENERGY TOPICS

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THE ENERGY POLICY ACT OF 1992 AND LOUISIANA'S ELECTRIC POWER INDUSTRY

by Alan A. Troy, P.E.

The Energy Policy Act of 1992 is designed to encourage competition in energy markets. A persistent capacity surplus discourages new entrants into the Louisiana market. The Act makes it easier for utilities to own unregulated independent power facilities and invest in power projects in other states and countries. Two large multi-state investor-owned utility holding companies operating in Louisiana are making such investments. The smaller, independent Louisiana utilities lack the resources for such ventures and are likely to stay close to their home bases.

The Act amends the Public Utility Holding Company Act of 1935 (PUHCA) by creating a new class of power producers, called exempt wholesale generators (EWG's), that are not subject to PUHCA and are exclusively engaged in owning and/or operating facilities generating electricity for sale at wholesale. They can be independent companies, or the utilities can own them. In addition, the utilities can now make foreign investments without SEC approval, within certain restrictions.

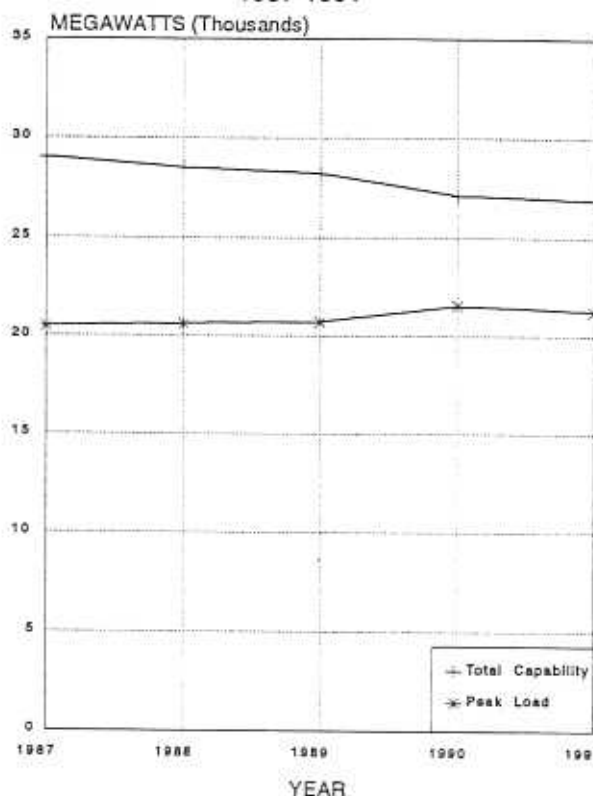
Entergy Corporation, the multi-state New Orleans based holding company for Louisiana Power & Light and New Orleans Public Service Co., has transferred two of its Arkansas plants to its independent power subsidiary, Entergy Power, Inc., and is investing \$515 million in two utilities in Argentina through its Entergy Services subsidiary. Dallas based Central & South West Corp., the holding company for Southwestern Electric Power Co., Shreveport, is participating in independent power projects in Florida and Washington State through its CSW Energy subsidiary. Spokesmen for the other utilities operating in the state indicated they are not presently seeking to own EWG's or invest in foreign countries, but might consider it in the future.

A key provision of the Act mandates open access of the transmission systems of private and public utilities to all wholesale power producers provided they pay the entire cost of transmission as determined by the Federal Energy Regulatory Commission (FERC). This could make it easier for the Louisiana Energy and Power Authority and Cajun Electric Cooperative, which have very little transmission capability, to gain access to potential new members. Also, Louisiana's fourteen cogenerators presently selling power to Louisiana utilities now have the right to have it wheeled anywhere they choose. Although FERC is empowered to order wheeling, it is not required to do so if service to the transmitting utilities' existing customers is impaired. Since transmission lines are in the rate base established by the Louisiana Public Service Commission (LPSC), there will have to be some collaboration between the FERC and the LPSC on rates. Pricing is sure to dominate the issues open access has created.

The Act directs state regulatory commissions to look at the effects of wholesale power purchases on utility cost of capital and to consider utility investments in energy conservation and efficiency in the rate-making process so such investments are as profitable as those in new generating plants. The idea is to provide a financial incentive for utilities to use measures other than building new power plants to meet their customers' needs. Even without this incentive every Louisiana utility is planning or is implementing such measures.

While the country finally has an energy policy, many of the regulations needed to implement it are not in place. The burden of providing this regulatory framework is still the domain of the FERC and state public service commissions as it was before the Act was passed. In the months to come it will be interesting to see what they do.

**PEAK LOAD VS. TOTAL CAPABILITY
OF LOUISIANA INVESTOR-OWNED ELECTRIC UTILITIES
1987-1991**



Note: In 1990 Entergy Corp. reduced its total system capability by 809 megawatts when it sold two Arkansas power plants to its independent power subsidiary, Entergy Power.

Source: Annual Reports of Central Louisiana Electric Co., Gulf States Utilities, Southwestern Electric Power Co., Entergy Corp. SEC 10K Forms and Company Representative.

**LOUISIANA INVESTOR-OWNED ELECTRIC UTILITIES
PEAK LOAD (MEGAWATTS) 1987-1991**

<u>UTILITY</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
CLECO	1,141	1,123	1,148	1,218	1,233
GSU	4,991	4,910	5,040	4,910	4,991
ENTERGY	11,272	11,437	11,478	12,163	11,831
SWEPCO	3,085	3,153	3,045	3,252	3,200
Total Peak Load	20,489	20,623	20,711	21,543	21,255

**LOUISIANA INVESTOR-OWNED ELECTRIC UTILITIES
TOTAL SYSTEM CAPABILITY AT TIME OF PEAK (MEGAWATTS) 1987-1991**

<u>UTILITY</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
CLECO	1,708	1,701	1,706	1,706	1,706
GSU	6,926	6,866	6,609	6,553	6,471
ENTERGY	15,884	15,460	15,460	14,403	14,245
SWEPCO	4,499	4,499	4,464	4,464	4,464
Total System Capability	29,017	28,526	28,239	27,126	26,886
Net Reserve	8,528	7,903	7,528	5,583	5,631
Percent Reserve Margin	41.62%	38.32%	36.35%	25.92%	26.49%

LOUISIANA CRUDE OIL REFINERY SURVEY

by Alan A. Troy, P.E.

In December 1992 the Technology Assessment Division conducted its fourth survey of Louisiana's crude oil refineries. Environmental and safety over-regulation, low profit margins, and an uncertain tax structure were the main concerns voiced by survey respondents. Most projects relating to the 1992 and 1993 deadlines mandated by the 1990 Clean Air Act Amendments (CAA) are complete, or nearly so. The few new projects planned are also related to environmental compliance. Total Louisiana refinery operating capacity and product mix remain virtually unchanged. Operating rates have improved slightly. A small lube oil refinery plans to increase capacity this year, but no other expansions were disclosed.

Three owners of non-operating refineries stated their intentions to reopen this year. Another could reopen pending the satisfactory conclusion of purchase negotiations now in the final stage. In the past, owners of several closed refineries have stated their intention to reopen without doing so. Several investors are looking for small refineries to purchase.

The total operating capacity of Louisiana refineries in December was 2,320,640 barrels per calendar day (bcd) as compared to 2,314,000 bcd reported in February 1992. Operating rates improved 1.1% to 90.9%. While there have been some significant changes in product slate among individual refineries, the total state weighted product slate percentages have changed very little.

Most respondents felt making a profit in the refining business was becoming increasingly difficult. They cited the sheer volume of new regulations as a major component in the cost of doing business without providing any return. A typical comment was that environmental regulations were important, but without profits there will be no industry to regulate.

The next CAA deadline is October 1, 1993. By then the sulfur content of diesel fuel cannot exceed 0.05% by weight. This requirement applies to all diesel fuel sold in the U.S. Seventeen of Louisiana's twenty refineries produce diesel fuel, but not all of them intend to meet this requirement by installing process equipment to remove the sulfur. Some will use only low sulfur Louisiana "sweet" crude, which they say is already low enough in sulfur content. The opposing view is that even Louisiana crude is not low enough in sulfur content to meet the requirement.

The above information was obtained from DNR's March 1993 **Louisiana Crude Oil Refinery Survey Report**, which is now available. Other information in the report includes key personnel, mailing addresses, geographical location descriptions, crude capacity, and product slate. New developments on the status of the non-operating refineries are also presented.

LOUISIANA OPERATING REFINERIES
CRUDE CAPACITY (barrels/calendar day) AND PRODUCT SLATE (%)
 December 1992 DNR Technology Assessment Division Survey

NAME	OPERATING CAPACITY	IDLE CAPACITY	OPERATING RATE%	PRODUCT SLATE (%)										OTHER PRODUCTS							
				GASOLINE		OTHER FUELS			MISCELLANEOUS			PRODUCT 1			PRODUCT 2			PRODUCT 3			UNSPECIFIED
				REG GRADE	MID- GRADE	DIESEL	JET/ KERO	FUEL OIL	LPG's	NAPTH	RESID	18.9	10.7	2.1	2.4	2.5	7.7	0.0	0.0	0.0	
Atlas Processing Co.- Div. Pennzoil	46,200	0	79.5	10.4	1.6	1.7	22.9	12.7	0.0	0.0	4.9	7.4	Lubes/Motor Oil	Cat Feed	Waxes	6.7					
B. P. Oil Co./Alliance Refinery	220,000	4,000	98.2	28.8	7.3	9.4	27.7	11.1	0.0	0.0	1.7	0.0	1.4	5.0	Intermediates	6.0					
Calcasieu Refining Company	13,500	0	92.8	0.0	0.0	0.0	22.9	54.7	0.0	0.0	3.7	5.1	0.7	0.0	0.0	0.0					
Calumet Lubricants Co., L.P.	5,440	560	99.7	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	75.0	22.0	0.0	0.0					
Canal Refining Co.	10,000	0	78.5	20.0	3.0	7.0	50.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0					
CITGO Petroleum Corp.	295,000	0	90.4	24.3	7.1	23.2	13.7	15.8	0.0	0.0	3.1	0.0	2.4	2.5	7.7	0.2					
Conoco Inc./Lake Charles Refinery	178,000	0	96.6	28.0	2.9	5.7	38.2	9.4	1.8	2.5	3.4	0.0	5.4	0.0	Misc.	2.7					
Dubach Gas Co./Claiborne Plant	8,000	0	80.5	30.0	0.0	0.0	12.0	0.0	20.0	7.0	8.0	0.0	23.0	0.0	0.0	0.0					
Dubach Gas Co./Dubach Plant	10,000	0	62.1	0.0	52.5	0.0	0.0	19.7	0.0	10.4	6.1	0.0	11.3	0.0	0.0	0.0					
Exxon Co. U.S.A.	421,000	0	95.5	23.8	7.2	10.7	17.5	10.6	2.0	2.5	1.4	4.2	2.9	12.9	4.0	0.3					
Gold Line Refining, Ltd.	12,000	8,000	81.1	0.0	0.0	0.0	24.0	57.0	5.0	2.0	0.0	0.0	12.0	0.0	0.0	0.0					
Kerr - McGee Refining Corp.	7,800	0	62.5	0.0	0.0	0.0	11.2	0.0	0.0	0.0	36.7	0.0	32.0	20.0	0.0	0.1					
Marathon Oil Co.	255,000	0	84.8	41.0	1.7	7.8	0.0	1.7	29.4	4.3	0.6	12.8	0.4	0.3	0.0	0.0					
Mobil Oil Corp./Chalmelle Refinery	160,000	0	93.9	30.8	4.1	8.9	21.5	9.8	3.0	3.0	0.0	9.4	4.2	5.2	0.0	0.1					
Murphy Oil U.S.A. Inc./Meraux Ref.	95,000	0	84.8	39.0	3.0	8.8	21.7	11.2	13.6	2.2	0.3	0.1	0.1	0.0	0.0	0.0					
Philbro Energy U.S.A./Krotz Springs	59,700	300	87.0	13.3	1.5	1.2	16.1	19.2	0.0	1.5	15.0	6.5	21.8	3.9	0.0	0.0					
Philbro Energy U.S.A./St. Rose	37,000	3,000	65.4	0.0	0.0	0.0	12.8	9.2	0.0	0.0	15.0	24.9	38.1	0.0	0.0	0.0					
Placid Refining Co.	47,000	0	95.0	22.6	1.7	7.3	28.3	11.1	5.6	4.7	0.6	0.0	11.1	5.1	0.0	1.9					
Shell Oil Co.	215,000	0	65.1	21.8	8.3	13.2	0.0	14.8	1.6	5.6	2.4	0.0	32.3	0.0	0.0	0.0					
Star Enterprise	225,000	0	91.0	42.0	1.0	3.0	19.0	11.0	15.0	4.0	1.0	0.0	1.0	1.0	0.0	2.0					
WEIGHTED STATE AVERAGE %			80.9	27.8	4.9	9.8	17.3	11.3	6.1	3.1	1.8	3.6	6.8	4.3	1.9	1.3					
TOTAL LA. OPERATING CAPACITY	2,320,640																				

NOTE: All data are for the twelve month period ending November 30, 1992. They may differ slightly from data reported elsewhere for a different time frame. Operating rates are computed by dividing the daily average crude input by the operating capacity provided by survey respondents.

COAL AND LIGNITE IN LOUISIANA

by Alan A. Troy, P.E.

Interest in developing new projects involving coal and lignite as boiler fuel in Louisiana has waned since the shortages and high prices of oil and gas in the 1970's disappeared. Used almost exclusively for the generation of electricity, consumption of coal and lignite in Louisiana and the nation has barely increased since 1988 as electricity demand has lagged. In Louisiana this trend is expected to continue through the end of the century.

The bulk of coal consumed in Louisiana by non-utilities is by industrial plants for cogeneration of electricity and process steam. Coal consumption for cogeneration in 1991 was 559,000 tons.

Atlanta-based Royal Oak Enterprises has announced the company will open a mine and build a plant in Red River Parish to make charcoal from lignite. At maximum capacity the plant will use 240,000 tons/year of lignite to make 80,000 tons/year of charcoal briquettes.

The New Orleans Customs District was second in the nation in handling coal exports in 1991. The coal came from mines in seven midwestern and eastern states. The Baton Rouge port's coal loading/monitoring facility is among the most modern in the nation. At midstream the facility can transfer, blend, sample, and cool export coal at a rate of 1,800 tons per hour.

The federal Clean Air Act Amendments of 1990 (CAAA) are a major influence on the choice of fuels for Louisiana electric generating plants. Air pollutant emissions of existing coal and lignite-fired plants are below the limits prescribed by the CAAA. But the limits for new plants are more stringent and will affect the choice of fuels when new plants are needed. New clean coal technologies are being introduced and continually improved so coal and lignite can meet the CAAA standards. Coal gasification and circulating fluidized bed combustion generating plants with emissions that are well below the CAAA limits are already in operation in Louisiana.

The Energy Policy Act of 1992 could also affect the choice of fuels used in new power plants constructed in Louisiana. The Act encourages competition in energy markets by making it easier for unregulated independent power producers to own and invest in power projects. While the new plants that independent power producers are building in other parts of the country do include some coal-fired ones, the trend seems to be more toward gas-fired combined cycle plants.

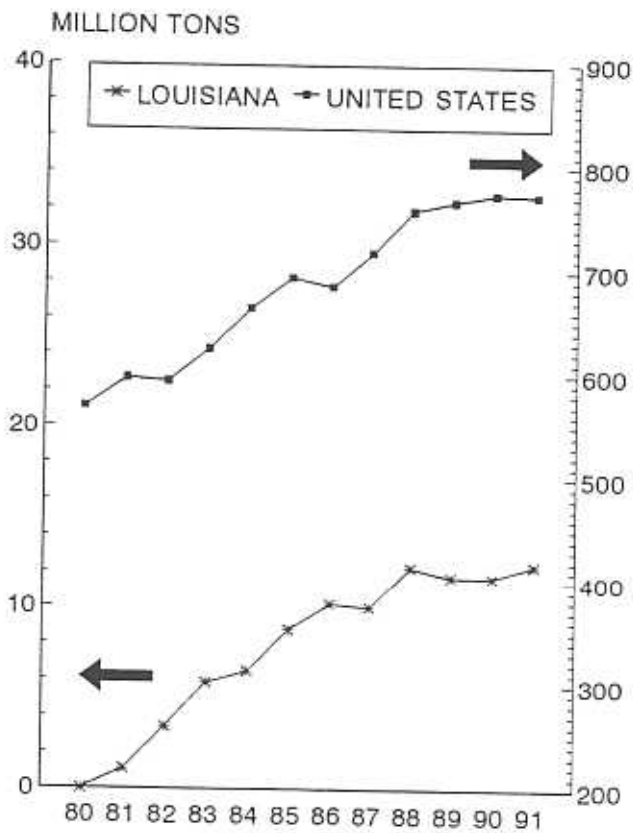
Proposed legislation by the Clinton administration for a new energy tax is now being debated in Congress. Its provisions have not yet been put in final form so it is not possible to assess the ultimate impact on coal and lignite use.

The above information was obtained from DNR's May 1993 **Coal and Lignite in Louisiana** report, which is now available. Other information in the report includes a historical perspective on the development of coal and lignite and production and consumption statistics.

COAL CONSUMPTION BY LOUISIANA AND U.S. ELECTRIC UTILITIES

THOUSAND TONS

YEAR	LOUISIANA	UNITED STATES
1980	-0-	569,274
1981	1,077	596,797
1982	3,398	593,666
1983	5,840	625,211
1984	6,463	664,399
1985	8,760	693,841
1986	10,196	685,056
1987	10,029	717,894
1988	12,301	758,372
1989	11,770	766,888
1990	11,748	773,549
1991	12,406	772,268



Note: Louisiana coal consumption includes lignite.

Source: Energy Information Administration
DOE/EIA - 0348, "Electric Power Annual", 1983-1991 editions

DNR Technology Assessment Division

SELECTED LOUISIANA ENERGY STATISTICS

Among the 50 states, Louisiana's rankings (in 1993 unless otherwise indicated) were:

PRIMARY ENERGY PRODUCTION

(Including Louisiana OCS)

2ND in total energy

2ND in natural gas

3RD in crude oil

REFINING AND PETROCHEMICALS

2ND in refining capacity

2ND in primary petrochemical production

PRIMARY ENERGY PRODUCTION

(Excluding Louisiana OCS)

3RD in natural gas

4TH in crude oil

5TH in total energy

ENERGY CONSUMPTION (1992)

2ND in industrial energy

3RD in per capita energy

3RD in natural gas

5TH in petroleum

6TH in total energy

21ST in residential energy

PRODUCTION

State controlled (i.e., excluding OCS) natural gas production peaked at 5.6 TCF per year in 1970 and had declined to 1.6 TCF by the end of 1993.

State controlled gas production is on a long term decline rate of 4.2% per year, though the current short term (1994-98) forecast decline is only about 3.0% per year.

State controlled crude oil and condensate production peaked at 566 million barrels per year in 1970 and had declined to 138 million barrels by the end of 1993.

State controlled crude oil production is on a long term decline rate of 4.4% per year, though the current short term (1994-98) forecast decline is around 2.8% per year. Price changes have so far had little effect on this rate of decline.

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

Louisiana OCS territory has produced 90.8% of the 9.5 billion barrels of crude oil and condensate and 84.5% of the 102 TCF of natural gas extracted from all federal OCS territories from the beginning of time through the end of 1992.

Louisiana OCS gas production peaked at 4.2 TCF per year in 1979, declined to 3.0 TCF in 1989, and rose to 3.3 TCF in 1992.

Louisiana OCS crude oil and condensate production peaked at 388 million barrels per year in 1972, declined to 246 million barrels in 1989, and rose to 288 million barrels in 1992.

REVENUE

At their peak in Fiscal Year (FY) 1981/82, oil and gas revenues from severance, royalties and bonuses amounted to \$1.6 billion, or 41% of total state taxes, licenses, and fees. For FY 1993/94, these revenues are estimated to be in the vicinity of \$554 million or about 9.5% of total estimated taxes, licenses and fees.

At constant production, the State Treasury gains or loses about \$28 million of direct revenue from oil severance taxes and royalty payments for every \$1 per barrel change in oil prices. This figure rises to \$40 to \$45 million per dollar change when indirect revenue impacts are included (e.g., income □ tax, sales tax, etc.).

DRILLING ACTIVITY

Drilling permits on state controlled territory peaked at 7631 permits issued in 1984, and had declined to 1149 permits in 1993.

The average active rotary rig count for Louisiana, excluding OCS, reached a high of 386 rigs in 1981, and had fallen 83% to 64 rigs in 1993. The previous low was 81 rigs in 1991.

The average active rotary rig count for Louisiana OCS reached a peak of 75 rigs in 1979 and had risen 46% to 40 rigs in 1993, which is up from 22 rigs in 1992 and 34 rigs in 1991.

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

TCF = trillion cubic feet

LOUISIANA MOVES TO ALTERNATIVE MOTOR VEHICLE FUELS

by Alan A. Troy, P.E.

On March 29, 1993, Governor Edwards signed Executive Order No. EWE 93 - 9 directing the Louisiana Department of Natural Resources (DNR) to "prepare and issue Requests for Proposals (RFP's) to solicit bids for conversion of the State motor vehicle fleet to a natural gas using fleet to the maximum extent feasible." The Order marks Louisiana's first major step to convert the state's motor vehicle fleet to an alternative fuel. It also expresses the desire to be a leader in converting state vehicles to alternative fuels and proclaims Louisiana's commitment to natural gas produced within the state as the fuel of choice. The form of natural gas that seems to have the biggest following in the state and the nation is compressed natural gas (CNG). Proposals to convert 25% of the state's fleet were received by DNR. They have been evaluated, and a recommendation has been made.

The main impetus pushing the states to cleaner-burning vehicular fuels is the alternative fuel provisions of the federal Clean Air Act Amendments of 1990 (CAAA) and the Energy Policy Act of 1992 (EPA-92). The intent of the CAAA is to reduce air pollution and the EPA-92 to lessen dependence on foreign oil. Both acts mandate greater use of alternative fuels in certain motor vehicles and prescribe strict schedules for compliance. In 1990, the Louisiana legislature enacted Acts 927 and 924 with provisions that actually exceed the targets of the CAAA and EPA-92.

DNR's Energy Division is in the final stages of establishing a five year low-interest revolving loan program to assist state and local governmental entities to convert a portion of their fleets to fuels derived from natural gas. The interest rate will be 3%. Money for the loans will come from the Exxon Petroleum Violation Escrow Fund. There is presently \$3.1 million available for this purpose. The program is similar to those in other states and should be in place in September of 1993.

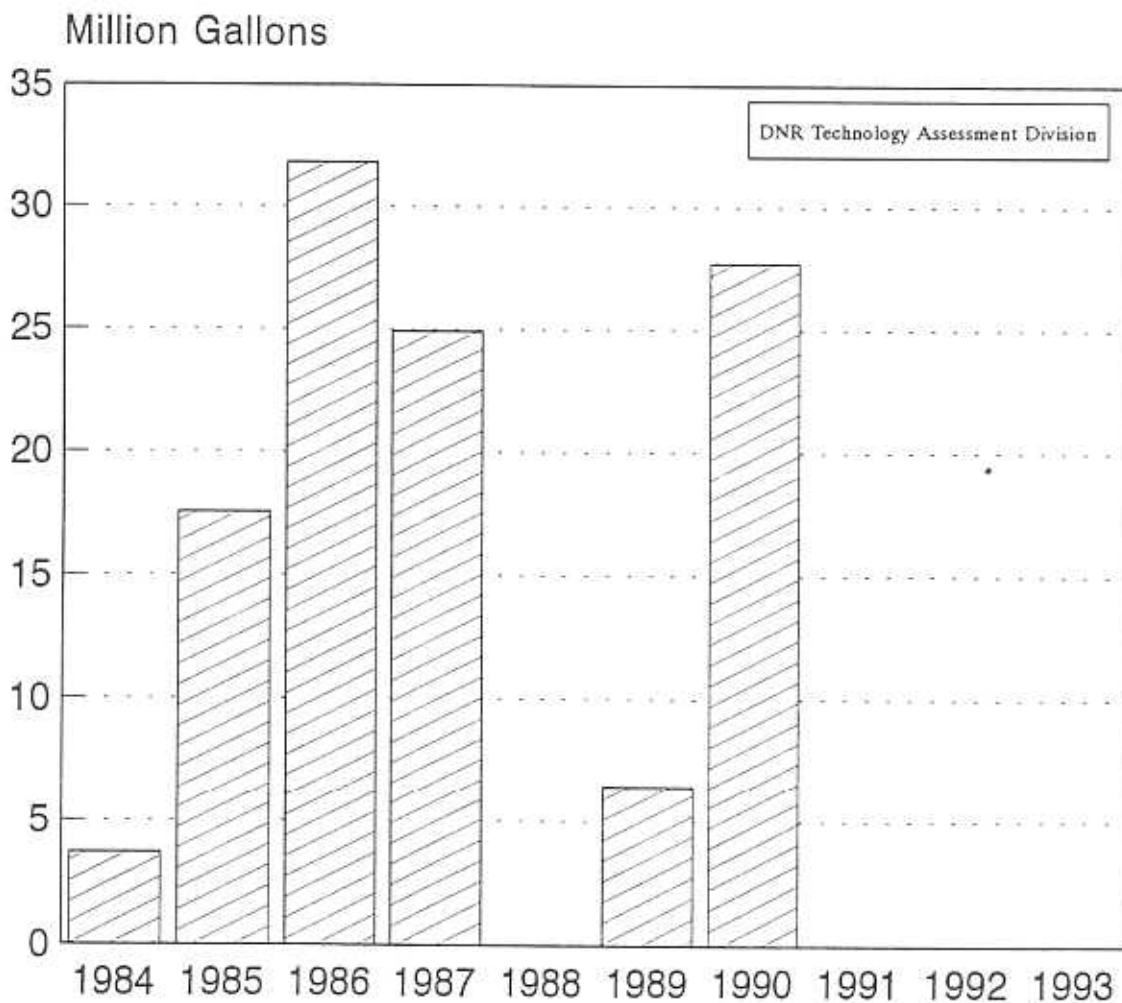
During the mid 1980's ethanol was Louisiana's preferred alternative fuel in the form of gasohol (gasoline containing 10% ethanol). Encouraged by federal and state subsidies, ethanol production in Louisiana soared to a peak of 32 million gallons in 1986, but after the state subsidy ran out in January 1988, production ceased. One plant did start up again, but it closed in 1990. From 1984 through 1990, more than 112 million gallons was produced by six plants.

Although ethanol is no longer produced in Louisiana, gasohol made with ethanol produced in other states is still widely used in the state. In 1992, nearly 84 million gallons of gasohol was consumed in Louisiana. This is more than double the lowest recent consumption of gasohol of about 39 million gallons in 1990, indicating gasohol is making somewhat of a comeback.

The above information is from DNR's June 1993 **Alternative Energy in Louisiana - Motor Vehicle Fuels (A Progress Report)**, which is now available. Other information in the report includes a more comprehensive look at CNG as a motor vehicle fuel, current Louisiana state government initiatives pertaining to alternative motor vehicle fuels, an historical perspective on the development of the ethanol industry in Louisiana, ethanol production and gasohol consumption statistics, and recent information on the status of the state's idle ethanol plants.

LOUISIANA ETHANOL PRODUCTION 1984-1990

YEAR	GALLONS
1984	3,693,179
1985	17,551,969
1986	31,828,206
1987	24,917,101
1988	-0-
1989	6,450,902
1990	27,702,297
TOTAL	112,143,654



Source: 1984-1988 La. Dept. of Revenue and Taxation
1989-1990 Shepherd Oil Company

LOUISIANA AN ENERGY CONSUMING STATE

Louisiana is the second largest oil and gas producing state in the nation. Louisiana also has the third highest energy use per capita for any state in the nation. These statistics are to a great degree misleading. Let's take a look at who produces this energy, and where it is ultimately used.

Louisiana energy production in 1992 was dominated by oil and gas. There were small but significant amounts of lignite produced for the generation of electricity. Louisiana oil and gas production accounted for 7,788 trillion BTUs (TBTU). Of that production, 5,092 TBTU was actually produced in the Federal OCS. That territory is not controlled by nor does it directly benefit the state of Louisiana. Louisiana's fossil fuel consumption (oil, gas, and coal), for 1992 was 3,345 TBTU. Once net electricity purchases from interstate sources is factored in, the energy balance for Louisiana excluding federal OCS shows a deficit of 861.1 TBTU, making it a net energy consumer.

The large energy use sectors in Louisiana continue to be the industrial and transportation users. Again, transportation use of motor gasoline is about average for the U.S., but the dominating factor is energy used in producing and transporting oil and gas, such as: pipelines, barges, and ships.

The truly large energy user in Louisiana is its industrial sector. Because of its low energy prices, the state has been the haven for many energy intensive industrial complexes. Louisiana's industry has been dominated by those plants upgrading the raw materials such as oil, gas, and other minerals to only slightly more refined intermediates, bulk chemicals, or commodities. Whether it was the primary aluminum metal industry in the 1960s and 70s or its continuing relationship with the chlor-alkali ammonia, petroleum refining, and petrochemical industries into the 1980s and 90s, low energy prices have meant large industrial energy use. This makes Louisiana high in per capita energy use and per worker bulk chemical production.

Much of the energy consumed here is really energy exported in the form of goods shipped to the rest of the U.S. and the world. The ultimate consumers of most of the ammonia produced here are the farmers in the Midwest U.S. The plastics and other petrochemicals produced here enter the competitive U.S. and world bulk chemical markets.

Louisiana's oil and gas production has remained relatively steady these past few years. Louisiana on balance remains an energy consuming state.

LOUISIANA ENERGY PRODUCTION AND CONSUMPTION - 1992

ENERGY SOURCE	PRODUCTION	CONSUMPTION	NET STATE ENERGY PRODUCTION BY SOURCE	
			Excluding OCS	Including OCS
PETROLEUM	STATE OIL*	829.8 TBTU ₁ (143.1 MMBBL)		
	LA. OCS OIL*	1,675.7 TBTU ₂ (288.9 MMBBL)	1,508.2 TBTU ₂ (283.962 MMBBL)	-678.4 TBTU
NATURAL GAS	STATE GAS**	1,709.2 TBTU ₁ (1.637 TCF)		
	LA. OCS GAS**	3,416.6 TBTU ₂ (3.273 TCF)	1,613.8 TBTU ₂ (1.546 TCF)	+95.4 TBTU
COAL	LIGNITE	46.8 TBTU ₂ (3.207 MMSTON)	223.5 TBTU ₂ (13.674 MMSTON)	-176.7 TBTU
NUCLEAR ELECTRIC POWER		110.6 TBTU ₂ (10.356 Billion KWH)	110.6 TBTU ₂ (10.356 Billion KWH)	0.0 TBTU
NET INTERSTATE PURCHASES OF ELECTRICITY INCLUDING ASSOCIATED LOSSES			101.4 TBTU ₂ (29.713 Billion KWH)	-101.4 TBTU
			NET STATE ENERGY PRODUCTION ALL SOURCES	-861.1 TBTU
				+4,231.2 TBTU

This balance indicates that in 1992, Louisiana was a net consumer of energy if OCS production were not credited to the state. Louisiana imported 861.1 TBTU more energy than it produced. In 1992, total energy production in Louisiana was 7,788.7 TBTU (2,696.4 TBTU if OCS is excluded), and consumption totalled 3,557.5 TBTU.

All units are in TBTU except where noted.

*Includes Condensate

**Includes Gas Plant Liquids

DEFICIT(-)/SURPLUS(+)

TCF = Trillion Cubic Feet

TBTU = Trillion BTU's

MMBBL = Million Barrels

MMSTON = Million Short Tons

OCS = Outer Continental Shelf (Federal)

KWH = Kilowatt hour

MMSTON = Million Short Tons

Data Sources: 1Louisiana Department of Natural Resources

2U.S. Department of Energy

COGENERATION IN LOUISIANA

by Alan A. Troy, P.E.

In 1992 Louisiana cogenerators, with about 13% of the state's total electric generating capacity, generated 24.5% of all the power generated in the state. This compares with 22.9% of all power generated in 1991. If the Sidney A. Murray Hydroelectric Station is included, the total share generated by privately owned non-utilities was 25.4%. Nearly all electricity generated by cogenerators was consumed internally as only 2.5% of it was sold to the electric utilities.

A total of 23 cogenerators sold electricity to the five investor-owned utilities operating in Louisiana in 1992. Fourteen are located in Louisiana and nine in Texas. Louisiana cogenerators accounted for about 77% of these sales. Both GSU and SWEPCO purchase cogenerated power from Texas cogenerators since the service area of both utilities includes portions of both states.

Cogeneration sales by Louisiana cogenerators decreased 5.4% in 1992 as compared to 1991, following the same downward path as overall generation. The price paid for the cogenerated power increased from an annual average of 1.85 cents/Kilowatthour (KWH) to 1.95 cents/KWH. Nevertheless, the average price paid was still below the 2.05 cents/KWH peak reached in 1988.

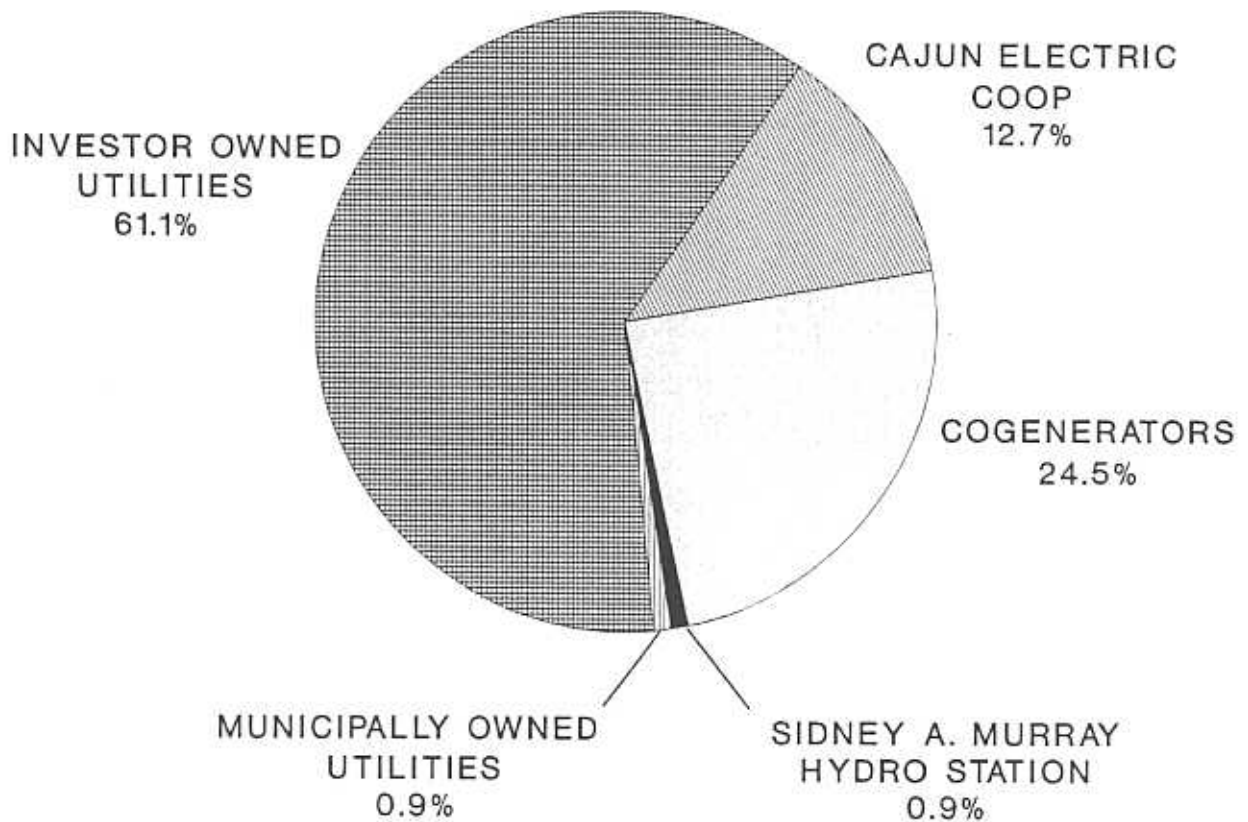
GSU continues to be the largest purchaser of cogenerated power. In 1992 the company purchased nearly 75% of all cogenerated power sold to Louisiana utilities, up from 71% in 1991. LP&L was next with slightly more than 23%. The other three utilities combined purchased less than 2%. The 1992 average purchase price the utilities paid ranged from a low of 1.35 cents/KWH paid by NOPSI to a high of 4.44 cents/KWH paid by SWEPCO.

Reflecting Louisiana's sputtering economy in 1992, the state's total power generation by all sources declined about 1.5%. Utility net generation, often used as a barometer of economic health, declined even more at 3.4%, continuing the downward trend experienced in 1991.

The Energy Policy Act of 1992 gives cogenerators and other private power generators the opportunity to enter the wholesale power business by allowing access to the transmission lines of the utilities. So far, Louisiana cogenerators have shown little interest. Only Dow Chemical, through its partial ownership of two leading power development companies, has made a significant financial commitment to exploit the domestic and overseas market for private power.

The above information was obtained from DNR's October 1993 **Cogeneration in Louisiana** report, which is now available. The 57-page report update is primarily a statistical compilation and graphical representation of data relating to industrial cogeneration. It includes detailed information on power sales by cogenerators to Louisiana electric utilities and aggregate capacity and generating statistics of all cogenerators, including those that consume all of their output internally. The period covered is from 1986-1992, with special emphasis on 1992 activity. A statistical overview of all identified Louisiana generating sources is also provided.

1992 LOUISIANA NET GENERATION BY TYPE OF OPERATOR



Source: For Investor and Municipally Owned Utilities and Cajun Electric Coop, source is DOE/EIA-0226(93/04) 'Electric Power Monthly', April 1993, Table 64.

For LA Cogenerators, source is Edison Electric Institute preliminary data for '1992 Capacity and Generation of Non-Utility Sources of Energy', Table 18, scheduled to be published in November 1993.

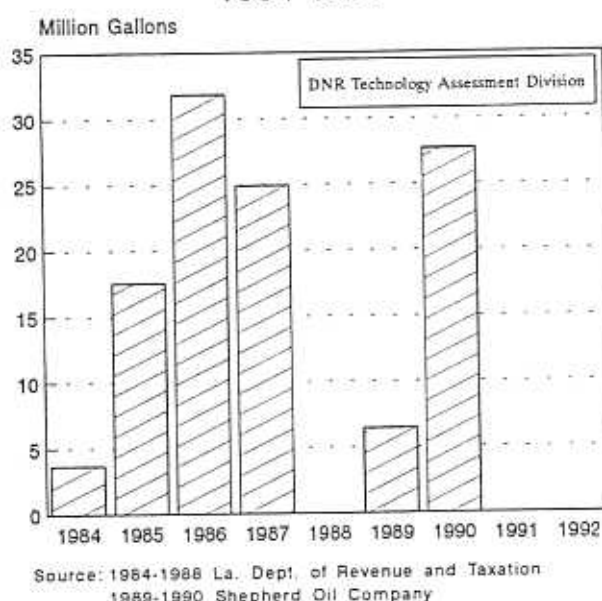
Source for Sidney A. Murray Hydro Station is LP&L.

DNR Technology Assessment Division

ETHANOL IN LOUISIANA 1993

During the 1980's ethanol was Louisiana's preferred alternative motor vehicle fuel in the form of gasohol, a blend of gasoline containing 10% ethanol. Encouraged by federal and state subsidies enacted in the late 1970's and generously expanded through the mid-1980's in reaction to the energy crises of that era, ethanol production in Louisiana soared to a peak of 32 million gallons in 1986 (Figure 1). But after the state subsidy ran out in January 1988, production ceased. One plant did reopen in 1989, but it closed again in 1990.

Figure 1
LOUISIANA ETHANOL PRODUCTION
1984-1990



Although the total installed capacity of all the plants was 155 million gallons per year (MM GPY), actual total cumulative production over the entire seven year period from 1984 through 1990 that ethanol was produced in Louisiana was only 112 million gallons (Figure 1).

Present Status of the Industry

The two plants still capable of operating have a total capacity of about 77 MM GPY. They are the 35 MM GPY capacity Shepherd Oil Inc. plant near Jennings and the 42 MM GPY capacity Mississippi River Alcohol Corporation (Missalco) plant near Belle Chasse next to a grain terminal on the Mississippi River. The Shepherd plant is for sale and the Missalco plant has been in litigation over design performance since it was completed in 1986. It operated briefly in 1987. Reopening the plant is contingent on a satisfactory settlement.

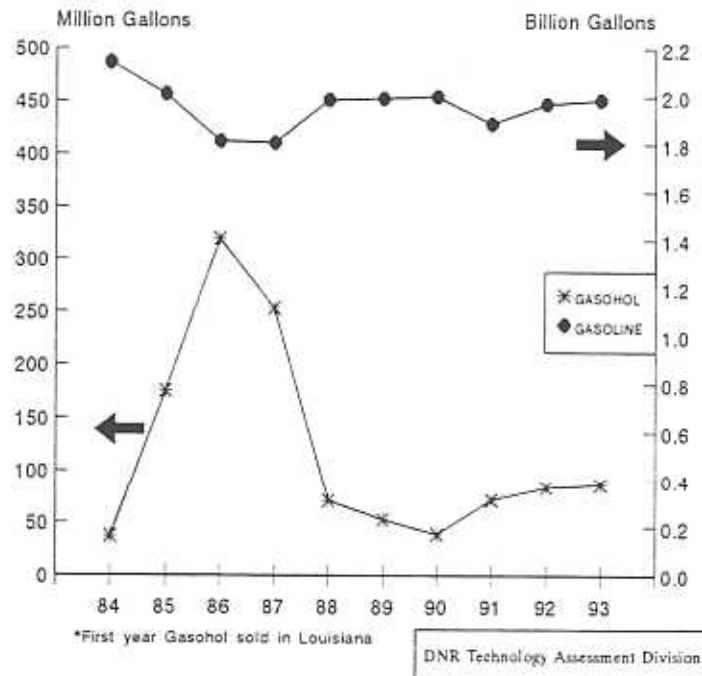
A third plant, the 35 MM GPY capacity Louisiana Agrifuels plant in New Iberia, was sold by the U.S. Department of Energy (DOE) on June 11, 1993, to High Plains Corporation of Colwich, Kansas, for \$3 million. The plant has been dismantled and the production equipment moved to Nebraska, where the company is building an ethanol plant. The equipment left behind at the old site in New Iberia is for sale. The total original investment in the plant was \$105 million with \$78.9 million of it coming from a loan guaranteed by DOE in 1985. Construction was completed in 1987, but the plant never operated. After the company defaulted on the loan, DOE took possession of the plant in 1989 and spent some \$50,000 to \$100,000 per month maintaining it.

The bankruptcy court is asking \$8.5 million for the Shepherd plant. A spokesman indicated it would cost about \$5 million more to refurbish it as compared to about \$80 million to construct a new plant. The plant operated the longest and produced the most ethanol, about 74 million gallons. This was two-thirds of the total cumulative production of all ethanol plants that had operated in the state. In 1987 it was converted to use grain as a feedstock instead of molasses. A hearing on the sale of the plant was held on October 26, 1993, in Phoenix, Arizona, where the company is domiciled. Two offers for the plant were recorded. The terms and conditions of the offers were sent to the court and creditors for their consideration. Two other groups are also interested in purchasing the plant. The hearing was continued, but no specific date for reconvening was set. Another hearing is expected to be held in late November. For additional information contact:

Mr. Scott Phillips, Trustee
 Shepherd Oil Inc.
 307 Briarpark Drive
 Houston, Texas 77042
 Phone: 713/783-0155

Although ethanol is no longer produced in Louisiana, gasohol made with ethanol produced in other states is still widely used in the state as a motor vehicle fuel. Since 1990, gasohol's most recent low point, Louisiana consumption has more than doubled from about 39 million gallons to nearly 84 million gallons in 1992, while gasoline consumption has remained about the same at about two billion gallons (Figure 2). Louisiana gasohol consumption as a percent of gasoline consumption was about 3.8% in 1991 as compared to the national average of 8.5%.

Figure 2
 LOUISIANA
 GASOHOL AND GASOLINE CONSUMPTION
 1984*-1992



Source: La. Dept. of Revenue and Taxation
 Research and Technical Services Division

Historical Perspective

The first federal legislation providing an ethanol production subsidy was the *Energy Tax Act of 1978*, which exempted 10% ethanol blends (gasohol) from gasoline excise taxes in the amount of \$0.04/gallon of gasohol. It also created a supplemental 10% investment tax credit on equipment for converting biomass to alcohol. In 1980 the *Windfall Profits Tax* gave, as an alternate to the tax exemption, a *Blender's Tax Credit* of \$0.40/gallon of ethanol. In 1982, the *Surface Transportation Assistance Act* raised the tax exemption to \$0.05/gallon of gasohol, and the blender's credit to \$0.50/gallon of ethanol. The *Tax Reform Act of 1984* again raised the tax exemption and blender's credit to \$0.06/gallon of gasohol and \$0.60/gallon of ethanol, respectively. Finally, the *Energy and Environmental Security Act of 1990* extended to the year 2000 the partial excise tax exemption and the blender's income tax credit. But they were reduced to \$0.054/gallon of gasohol and \$0.54/gallon of ethanol, respectively. The reduction was done to pay for a new subsidy for small producers having a production capacity of less than 30 MM GPY. This subsidy established an income tax credit of \$0.10/gallon of ethanol for these producers up to the first 15 million gallons of production, but is not available for production consisting of only distillation. Effective January 1, 1993, the subsidy was prorated for ethanol percentages of 7.7% and 5.7% to correspond to the oxygen content requirements of the *Clean Air Act Amendments of 1990 (CAAA)* and California's unique requirements, respectively.

Effective October 1, 1993, the *Omnibus Budget Reconciliation Act of 1993*, signed into law by President Clinton on August 10, 1993, increased the excise tax on gasoline, diesel fuel, gasohol, and other transportation fuels by \$0.043/gallon. The new federal tax rate on these three fuels is now \$0.183, \$0.244, and \$0.130/gallon, respectively. The state tax remains at \$0.20/gallon for all three fuels. The federal excise tax on the two new ethanol blends of 7.7% and 5.7% that qualify for the federal ethanol production subsidy is \$0.1424 and \$0.1532/gallon, respectively.

Shortly after the federal government began subsidizing ethanol production, the *Louisiana Gasohol Act* was enacted by the Louisiana legislature in 1979. It exempted gasohol produced in Louisiana from state gasoline taxes. The legislation gained favor by being promoted as a boon to the state's sugarcane industry by using molasses as the feedstock for the ethanol plants. At that time the state gasoline tax was \$0.08/gallon, so when added to the then \$0.04/gallon federal exemption, the total exemption was \$0.12/gallon of gasohol, or \$1.20/gallon of ethanol. Since \$1.20/gallon was the full cost of production of the ethanol at the time, the exemption, in effect, provided the ethanol at no cost.

In 1982 the U.S. raised its tax exemption to \$0.05/gallon of gasohol, and in 1984 raised it again to \$0.06. Also in 1984 the state gasoline tax was doubled to \$0.16/gallon to bolster lagging revenues. This automatically doubled the ethanol exemption. So from 1979 to 1984 the total exemption went from \$0.12 to \$0.22/gallon of gasohol, or to \$2.20/gallon of ethanol. This enticed many new entrepreneurs to build ethanol plants.

Louisiana's high tax exemption attracted out-of-state producers, but this was not the intent of the legislature, so in 1985 the *Louisiana Gasohol Act of 1979* was amended so that to qualify for the exemption, the ethanol had to be produced in Louisiana from crops grown in Louisiana. This action was legally challenged, and the legislature responded by eliminating the tax exemption altogether. In its place they established an Agricultural Industrial Incentive Fund to provide direct subsidies to in-state producers. The fund, financed by the gasoline tax, was to be administered by an Agricultural Industry Board presided over by the Commissioner of Agriculture. The members were to be appointed by him, the Governor, and various other sectors of the legislative and agricultural communities. The amount of the subsidy was equal to the previous tax exemption of \$0.22/gallon of ethanol. Of this, \$0.30 was to be paid to the growers and \$1.30 to the ethanol producers. Later this was changed to a direct subsidy to producers of \$1.40/gallon of ethanol provided they pay farmers \$2.25/bushel for corn, a premium of \$0.60/bushel over the market price of corn at the time.

This direct subsidy program went into effect in September 1986. Due to the weak economy and mounting criticism of the subsidy program, the 1987 regular session of the legislature enacted *Act 18*, which appropriated total subsidy payments of only \$15.1 million for fiscal year 1987-88. This

amount was reached in January of 1988, and no further payments were made. Without the subsidy all of the plants closed. In 1989 the Shepherd Oil Co. plant reopened and operated with the federal subsidy alone after having gone bankrupt and been sold to a new owner, but it closed again in December of 1990. The 1989 Legislature repealed all subsidies without which ethanol production in Louisiana was not economically feasible.

The corn subsidy to farmers was a windfall and had a predictable result. Corn acreage soared from 70,000 acres in 1983 to 400,000 by 1986. Production rose from 5 million bushels to 45 million. After the subsidy ended, the acreage settled back to 150,000 acres in 1989, but the experience did teach farmers that corn was a viable crop in the state. Acreage and production have steadily climbed so that in 1992 the state produced 37 million bushels on 309,000 acres.

A total of 18 ethanol plants were seriously planned in Louisiana at one time or another. The size varied from less than a million gallons per year to 100 million. Nine were actually built, and the maximum number that operated at any one time was six.

Although gasohol was widely available in Louisiana in the mid-eighties, it fell out of favor with consumers amid complaints about injector fouling, water in the fuel, performance problems, and car manufacturers ambivalence about using it. Laws were passed requiring labeling of the ethanol content on the pumps in big, bold letters. Finally, in February of 1987 the three major gasohol marketers in Louisiana - Tenneco, Texaco, and TimeSaver - gave up and gasohol was removed from 600 of their pumps.

Future Outlook

The historical cost of ethanol production of \$1.00 to \$2.00 per gallon is too high to be profitable in Louisiana without a subsidy larger than the \$0.54/gallon federal tax credit now available. Large agribusiness firms in the Midwest, like Archer-Daniels-Midland, do manage to produce ethanol profitably, and they dominate the industry. These large, vertically integrated companies already have corn milling, byproduct handling and marketing facilities, and economies of scale with plants with capacities of over 100 MM GPY. They are also located in the heart of the source of their feedstock, thereby minimizing transit costs. None of these conditions exist in Louisiana, so future investment in new ethanol plants in the state is unlikely as evidenced by the decision of the new owners of the Agrifuels plant to move it to Nebraska rather than make the necessary process and equipment modifications to operate it in Louisiana.

The *CAAA* requires the use of additives to boost the oxygen content of traditional gasolines in areas with air pollution problems. Ethanol's high vapor pressure is a disadvantage for gasoline blending, but its excellent oxygenating characteristics and octane blending value increase the potential for increased use as gasohol. Moreover, the reformulated gasoline requirements effective in 1995 will provide an additional market opportunity for ethanol manufactured into the oxygenate and octane blending component ethyl tert-butyl ether (ETBE). Because of its lower volatility and superior blending characteristics, ETBE may prove to be a more valuable octane/oxygenate fuel additive than either ethanol or methyl tert-butyl ether (MTBE), the petroleum derived oxygenate now most widely used. However, ethanol is at a cost disadvantage as a raw material for ETBE compared to the petroleum derived raw material for MTBE, and only holds its niche in the marketplace because of tax subsidies. Also, as an alcohol, ethanol has an affinity for water, which limits its transportation and storage options. ETBE eliminates all of the disadvantages of ethanol except for cost.

A technological breakthrough that would reduce the cost of making ethanol to make it competitive with gasoline without the subsidy could conceivably increase its market share dramatically. BIONOL Corp. and BioEnergy International are presently in the engineering phase of a project to build jointly the world's first waste-to-ethanol plant near Glen Falls, N.Y. An official of BIONOL said the ethanol derived from the process could cost motorists as little as \$1.00/gallon. The plant will use paper waste as a feedstock, but any agricultural waste such as bagasse and corn stalks could also be used. He said a sugar mill could be retrofitted to process bagasse into ethanol, and then use the resulting waste byproduct as boiler fuel.

LOUISIANA CRUDE OIL REFINERY SURVEY

by Alan A. Troy, P.E.

In October the Technology Assessment Division conducted its fifth survey of Louisiana's crude oil refineries. Low profit margins and environmental and safety over-regulation were again the main concerns voiced by survey respondents. Projects relating to the 1992 and 1993 deadlines mandated by the 1990 Clean Air Act Amendments (CAAA) are complete. Almost all new projects under way are also related to environmental or safety compliance. Some refineries have started engineering to produce the reformulated gasoline mandated by the CAAA in certain areas by January 1995. The exact formulation has yet to be set by the EPA.

Total Louisiana refinery operating capacity remained virtually unchanged at 2,328,264 barrels per calendar day (bcd) as of June 30, 1993 as compared to 2,320,640 bcd as of November 30, 1992. Operating rates improved slightly from 90.9% to 91.2%. The total state product mix changed very little. The Calumet Lubricants refinery was the only one to report an increase in capacity this year. None of the other refineries disclosed plans for capacity expansions. The crude capacity, operating rate, and percent product slate of each refinery is shown on the following table.

Most respondents representing operating refineries again felt crude oil refining as a stand alone operation in the U.S. was a marginally profitable business with little prospect for growth. Most felt profit margins will stay squeezed as long as the price of their products remains relatively stable while the cost of complying with a steady stream of new regulations continues spiraling upwards. No operating refineries were closed, but the owners of at least four small operating refineries indicated they would like to reduce their involvement in their refinery operations by merger, partnership, or outright sale.

Three owners of non-operating refineries have again, as in previous surveys, disclosed their intentions to reopen. Financing to reopen the 10,000 bcd Sabine Gas Operators refinery at Stonewall has been secured, and the target date for start-up is January 15, 1994. The TransAmerican refinery at Norco, though closed since 1982, employs 200 people and has invested \$10 million so far in 1993 and will spend another \$25 million in 1994. Financing has been obtained to reopen it by the fourth quarter of 1994.

The 14,800 bcd CAS refinery near Jennings will be acquired and reopened by Sabine Gas Operators pending satisfactory conclusion of financing negotiations that have been going on for at least a year. Britt Processing & Refining is still seeking financing to reopen their 10,000 bcd refinery at Egan. Obtaining financing appears to be the pivotal consideration that determines whether a closed refinery actually reopens.

The above information was obtained from DNR's November 1993 **Louisiana Crude Oil Refinery Survey Report**, which is now available. Other information in the report includes key personnel, mailing addresses, geographical location descriptions, crude capacity, and product slate. New developments on the status of the non-operating refineries are also presented.

LOUISIANA OPERATING REFINERIES
CRUDE CAPACITY (barrels/calendar day) AND PERCENT PRODUCT SLATE
 October 1993 DNR Technology Assessment Division Survey

NAME	CAPACITY As of June 30, 1993	OPERATING CAPACITY %	GASOLINE		OTHER FUELS		MISCELLANEOUS		OTHER PRODUCTS						
			REG GRADE	MID- PREM	DIESEL	JET/ KERO	FUEL OIL	LPGs	NAPTH	RESID	PRODUCT 1	PRODUCT 2	PRODUCT 3	UNSPECIFIED	
Alfas Processing Co.- Div. Pennzoll	46,200	0	84.8	13.8	1.6	1.7	22.9	13.7	0.0	4.9	7.4	18.4	9.7	1.9	4.0
B. P. Oil Co./Alliance Refinery	222,764	5,736	100.0	30.1	5.2	10.7	30.2	8.2	0.0	1.7	0.0	3.3	3.3	1.3	6.0
Calcasieu Refining Company	13,500	0	88.7	0.0	0.0	0.0	21.2	58.6	0.0	3.4	2.7	0.8	0.0	0.0	0.0
Calumet Lubricants Co., L.P.	6,500	500	93.1	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	75.0	22.0	0.0	0.0
Canal Refining Co.	10,000	0	71.8	20.0	3.0	7.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CITGO Petroleum Corp.	295,000	0	90.5	25.3	4.8	19.2	15.5	14.5	0.0	2.7	0.0	7.0	3.4	2.4	5.2
Conoco Inc./Lake Charles Refinery	178,000	0	97.4	20.0	2.2	4.4	29.7	16.9	8.9	3.2	4.3	9.1	0.0	0.0	1.3
Dubach Gas Co./Claiborne Plant	8,500	0	71.8	30.0	0.0	0.0	12.0	0.0	20.0	7.0	8.0	23.0	0.0	0.0	0.0
Dubach Gas Co./Dubach Plant	10,000	0	66.9	0.0	52.5	0.0	0.0	19.7	0.0	10.4	6.1	11.3	0.0	0.0	0.0
Exxon Co. U.S.A.	421,000	0	89.4	24.1	6.4	10.4	16.0	11.4	2.3	1.9	0.8	11.6	4.2	2.9	3.9
Gold Line Refining, Ltd.	15,000	5,000	94.5	0.0	0.0	0.0	23.0	55.9	5.3	1.8	0.0	12.0	0.0	0.0	2.0
Karr-McGee Refining Corp.	7,800	0	64.1	0.0	0.0	0.0	12.0	0.0	0.0	0.0	41.0	28.0	19.0	0.0	0.0
Marathon Oil Co.	255,000	0	83.8	43.1	1.5	6.5	0.0	1.8	29.1	4.2	0.8	0.3	0.0	0.0	0.0
Mobil Oil Corp./Chalmette Refinery	160,000	0	98.3	31.1	0.7	13.5	0.0	9.1	22.4	2.9	0.5	4.9	3.9	1.3	0.4
Murphy Oil U.S.A. Inc./Meraux Ref.	95,000	0	82.7	38.1	3.6	8.3	21.7	12.8	12.8	2.2	0.0	0.5	0.0	0.0	0.0
Phibro Energy U.S.A./Kroez Springs	60,000	0	86.3	26.8	1.4	2.8	12.9	15.2	0.0	1.2	12.1	19.9	3.3	0.2	0.0
Phibro Energy U.S.A./St. Rose	37,000	3,000	83.1	0.0	0.0	0.0	14.5	11.2	0.0	0.0	15.5	38.3	0.5	0.0	0.0
Placid Refining Co.	47,000	0	100.0	23.6	0.0	9.5	29.4	11.9	5.3	5.0	0.0	15.3	0.0	0.0	0.0
Shell Oil Co.	215,000	0	97.0	33.1	7.7	17.8	0.0	16.6	1.0	4.2	2.0	15.5	0.0	0.0	0.0
Star Enterprise	225,000	0	88.9	41.8	1.1	3.2	20.4	9.5	16.8	3.0	0.9	0.8	0.6	0.0	1.9
WEIGHTED STATE AVERAGE *			91.2	29.1	3.9	10.1	15.2	11.8	8.1	2.8	1.7	8.2	2.2	1.1	2.4
TOTAL LA OPERATING CAPACITY	2,328,264														

NOTE: All data are for the twelve month period ending June 30, 1993. It may differ slightly from data reported elsewhere for a different time frame. Operating rates are computed by dividing the daily average crude input by the operating capacity provided by survey respondents. * Individual product percentage components may not total 100% because of independent rounding.