

# **COGENERATION IN LOUISIANA**

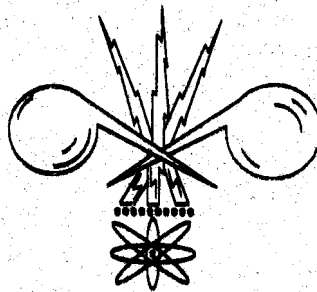
**October 1992 Update**

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# INTRODUCTION

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## **Purpose**

This report is primarily a statistical compilation and graphical representation of data relating to industrial cogeneration power sales to Louisiana electric utilities for the period 1985-1991, with special emphasis on 1991. A statistical overview of the Louisiana electric power industry is also provided. The purpose of this report is to provide the single, most complete reference source on the current status of cogeneration in Louisiana by furnishing statistical information and identifying trends that may be useful as analytical tools for electric utilities, current and potential cogenerators and independent power producers, planners, researchers, the media, libraries, and other interested parties.

## **Background**

About two-thirds of the industrial cogeneration projects now operating were completed during the mid-1980s. At that time the economic feasibility of cogeneration projects was most favorable and interest was high. Numerous inquiries by potential cogenerators for information on the subject were made to the Louisiana Public Service Commission (LPSC) and the Department of Natural Resources (DNR). Although the information requested was available in monthly reports filed by the electric utilities with the LPSC, it was not easily accessed and was presented in a format difficult to use. As a result each question had to be researched individually, a time-consuming process.

In 1986 the Technology Assessment Division of DNR decided to prepare a comprehensive report on cogeneration in Louisiana. The report was to include the information most frequently requested and would be updated periodically. The first report was published in March of 1987. Two more have since been published, the last one in June 1990.

This is the fourth report on cogeneration in Louisiana. It has been greatly expanded in scope to include additional information on cogeneration not contained in the previous reports plus summary statistics on the Louisiana electric power industry. It also updates and revises the data provided in all previous reports, which should be replaced.

## **Sources of Information**

The cogeneration information presented in this report was obtained from the monthly Cost-of-Fuel Adjustment Reports filed with the Utilities Division of the Louisiana Public Service Commission (LPSC) by the Louisiana electric utilities that purchase cogenerated power. In those few cases where these reports were incomplete, the information was obtained directly from the utilities. The LPSC also provided background information about the cogenerators and the utilities. There is no information in this report on cogenerators or non-utility generators that use all the power they generate internally.

The sources for the statistical summary on the Louisiana electric power industry were utility annual reports and financial reports, Edison Electric Institute and DOE/EIA publications.

## **Acknowledgment**

We would like to acknowledge the generous help and support given this project by the Utilities Division of the Louisiana Public Service Commission (LPSC), and particularly Arnold Chauviere, Jr. and his staff. Much of the information used to prepare this report was obtained through the auspices of the Utilities Division and references they provided. We sincerely appreciate their assistance.

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## DISCUSSION

For the past several years the trend of cogeneration activity and electric power generation in Louisiana has mirrored the State's generally stagnant economy. While cogeneration purchases from Louisiana cogenerators have increased 50% since 1985, the average annual purchase price has declined nearly 36% (See Figure 1 and Tables 1 & 2). More recently, after peaking in 1987, cogeneration purchases have fallen 21% despite an increase in the number of cogenerators from 9 to 14 and an 11% increase in total net generation by the utilities (See Figures 2 & 3 and Table 3). Since 1988 the utilities' growth has been negligible, and the price of cogenerated power has declined nearly 10%.

Because Louisiana utilities have a sizeable capacity surplus, the price they are required to pay for cogenerated power is only the price of the fuel the utility avoids using by not generating the power itself. Since the mid-1980's, this "avoided cost" has steadily declined as the price of natural gas has fallen. A dwindling market and a falling price offer little incentive for additional cogeneration development.

In 1991 cogeneration sales by Louisiana cogenerators declined 9% as compared to 1990 while net electricity generation by all Louisiana generating sources fell slightly more than 1%. The price paid for the cogenerated power declined from an annual average of 2.03 cents/Kilowatthour (KWH) to 1.85 cents/KWH, or about 9% .

Since the last **Cogeneration in Louisiana** update in June 1990, there have been no new projects announced, but two Louisiana projects cited in that report have gone on-line. These are the 84 megawatt (MW) Exxon Chemical project and the 90 MW Formosa Plastics project. Gulf States Utilities is the purchasing utility. Both began operation in 1990, but Formosa did not actually sell power to Gulf States until 1991. These additions raised the total installed Louisiana cogeneration generating capacity to 1,421 MW.

Louisiana's total generating capacity consists of the operable generating plants within the state owned by the electric utilities and non-utility generators (NUGs). Electric utilities include investor-owned, publicly-owned, cooperatively-owned, and government-owned systems. NUGs include cogenerators and independent power producers (IPPs) that sell their power wholesale to the utilities. At the close of 1990, Louisiana's total generating capability was 18,164 MW. Of that total 16,551 MW was provided by the Louisiana generating plants of the utilities, 1,421 MW by cogenerators, and 192 MW by IPPs. A further breakdown by class of ownership and fuel mix is shown in Table 4.

In 1991 Louisiana's total net generation to the statewide power grid was 58,283 million KWH consisting of 57,136 million KWH generated by the utilities, 482 million KWH by cogenerators, and 665 million KWH by IPPs. A more detailed account of generation statistics by fuel type and type of operator is presented in Table 5. Although Louisiana cogenerators have almost 8% of the total statewide generating capacity, the power they sold to the utilities was less than 1% of the statewide total indicating that most of their generating capacity was used internally and not fed into the grid.

The primary fuel sources for almost 99% of the power produced by the Louisiana electric power industry are gas, coal, lignite and nuclear. Slightly more than 1% is generated by a hydroelectric plant owned by an IPP. Renewables, industrial by-products, and waste heat fuel a minute portion of cogenerated power. During the 1970's fuel oil was a significant source of electricity generation because of high gas prices and insecure availability caused by some unusual market dislocations including several severe winter cold snaps, poor deliverability, and gas curtailments to Louisiana industrial users ordered by the Federal Energy Regulatory Commission (FERC). In addition, the enactment of the Power Plant and Industrial Fuel Use Act of 1978 restricted the use of both oil and gas for power generation and large scale industrial boilers. Although these restrictions were eventually repealed, by 1981 both oil and

gas began to be displaced by coal and then by lignite and nuclear starting in 1985 to the point where today fuel oil use is negligible. A tabulation of the utilities' net generation by fuel type from 1960-1991 is shown in Table 3 and plotted in Figure 4 from 1973-1991.

Cogenerated power is purchased exclusively by the five investor-owned electric utilities that serve the state. They are Central Louisiana Electric Co. (CLECO), Gulf States Utilities (GSU), Louisiana Power & Light Co. (LP&L), New Orleans Public Service Co. (NOPSI), and Southwestern Electric Power Co. (SWEPCO). All are based in Louisiana except GSU, which is based in Beaumont, Texas. They had a combined Louisiana generating capability of 12,324 MW in 1991. Company addresses, 1991 generating capability, fuel mix, contacts and telephone numbers are shown in Table 6.

A total of 21 cogenerators sold electricity to Louisiana utilities in 1991, fourteen located in Louisiana and seven in Texas. The total installed capability was 1,421 MW for Louisiana cogenerators as previously stated and 291 MW for Texas cogenerators that sell power to Louisiana utilities for a total of 1,712 MW. Louisiana cogenerators accounted for almost 93% of the total power sold at nearly 482 million KWH while Texas cogenerators sold over 38 million KWH for a total of about 520 million KWH. Exact figures may be obtained from Table 1. Company addresses, contacts, telephone numbers, generating capacity, unit type, energy source, year of initial operation, and purchasing utility are listed in Table 7.

Both GSU and SWEPCO purchase cogenerated power from Texas cogenerators since the service area of both utilities includes portions of both states. In 1991, of the 370 million KWH of cogenerated power purchased by GSU, 334 million KWH, or about 90%, was purchased from Louisiana cogenerators and 36 million KWH from Texas cogenerators (See Tables 8A and 8B). All of SWEPCO's purchases were from Texas cogenerators because there are none in its Arkansas and Louisiana service territory (See Table 12).

By far, GSU is the largest purchaser of cogenerated power. In 1991 the company purchased over 71% of all cogenerated power purchased by Louisiana utilities. LP&L is next with slightly more than 28%. The other three utilities combined account for less than 1% (See Figure 5). The 1991 average purchase price the utilities paid for that power ranged from a low of 1.50 cents/KWH paid by LP&L to a high of 2.98 cents/KWH paid by SWEPCO. This and additional detailed data on cogeneration power purchases by all five utilities for the period 1985-1991 can be found in Tables 8A & B and Tables 9 thru 12.

In 1991 Dow Chemical sold the most cogenerated power at 144 million KWH. The purchasing utility was GSU, and the average purchase price was 1.61 cents/KWH. Average prices received by individual cogenerators for the power they sold in 1991 ranged from a low of 0.74 cents/KWH by Exxon Chemical to a high of 3.59 cents/KWH by Agrielectric. Since purchase contracts were not examined for this report, it is not known why there is such a wide range of prices. Annual cogeneration power sales and average sales prices for each cogenerator from 1985-1991 are tabulated in Tables 1 and 2 respectively.

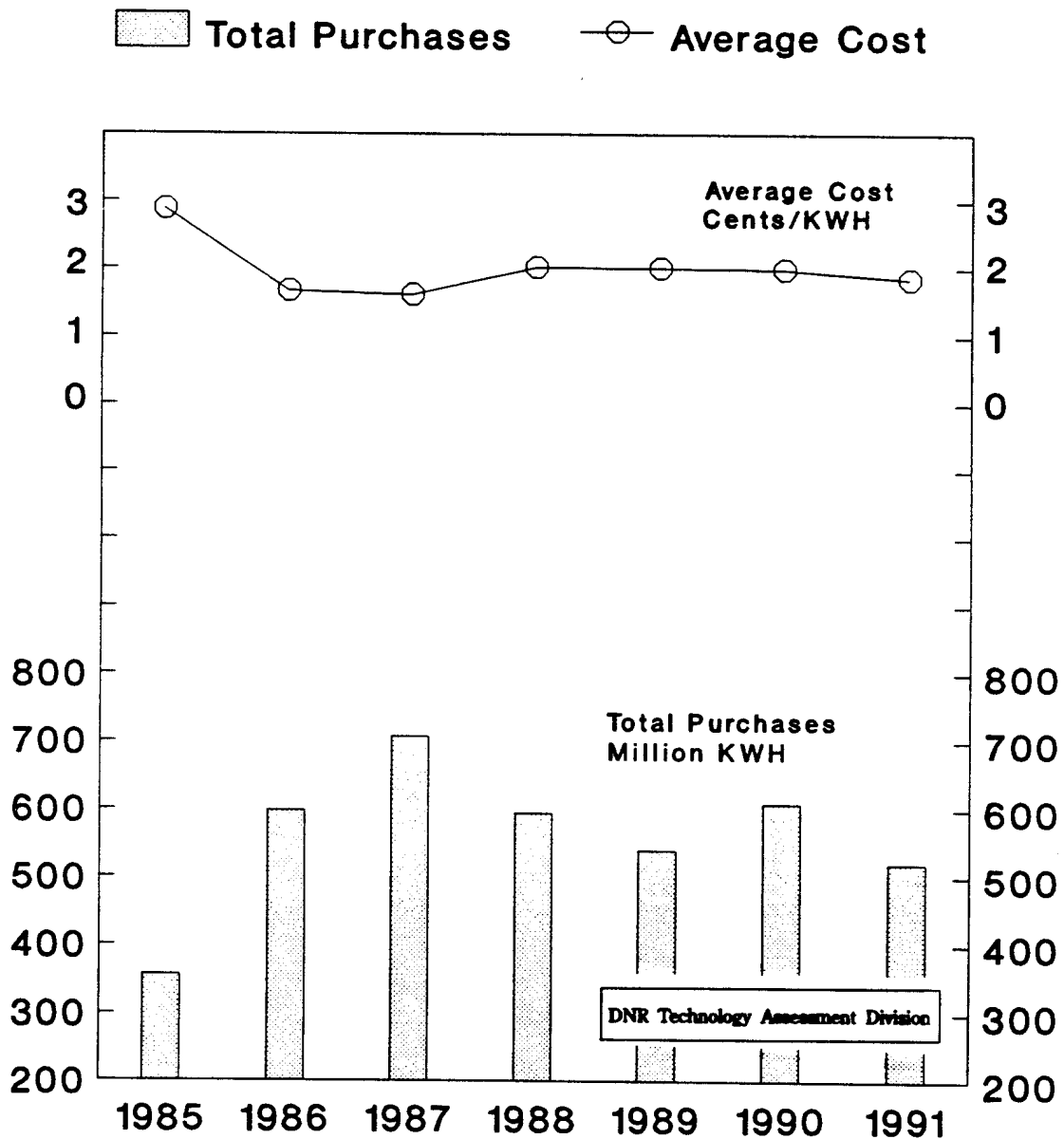
Given the present weak state of the Louisiana economy there is little incentive to invest in new cogeneration facilities intended to sell power off site to electric utilities. Louisiana utilities have ample generating capacity and do not project additional needs until the end of the decade. The decline of the purchase price also discourages additional cogeneration capacity. Moreover, the utilities are trying hard to keep their industrial load by offering lower industrial incentive rates to potential cogenerators. These rates appear to be low enough to render new cogeneration projects uneconomical. The Louisiana Public Service Commission (LPSC) has been receptive to this approach as a way to keep utilities' operating costs down and thereby forestall rate increase requests. From a potential cogenerator's perspective, in such an environment the most feasible cogeneration situation would be if the cogenerator had a year-round use for steam and could use all the power generated too.

In other parts of the country, but not Louisiana, significant portions of new capacity are being supplied by NUGs. According to the latest edition of the Utility Data Institute's "Directory of New Electric Power Plants", almost half of the 104,584 MW of new electrical capacity under construction or planned to enter service between 1990 and 2000 will be provided by IPPs. Many investor-owned utilities, stung by regulatory agencies' disallowances in their rate base of the costs of new generating facilities brought on-line in the 1980's, are unwilling to risk new capital for additional capacity and are opting for contracting for it with IPPs.

Louisiana's lone IPP is the 192 MW Sidney Murray Hydroelectric Station on the Mississippi River 70 miles below Vidalia on the control structure that regulates flow into the Atchafalaya River. It has a capacity of 192 MW and generated 665 million KWH in 1991. The facility is owned by Catalyst Old River Hydroelectric Limited Partnership and has been on-line since May of 1990. According to the LPSC, 94% of the power generated by the plant is purchased by LP&L with the remainder going to the town of Vidalia. The purchase price started at 6.5 cents/KWH escalating on a fixed schedule that peaks at 20.5 cents/KWH in 2010, and then drops over the next seven years to 15 cents/KWH, where it remains until 2031. While these prices appear to be very high compared to cogeneration prices, the purchase contract provides for rates from 3.00 cents/KWH to as low as zero for electricity that exceeds certain predetermined amounts during specific time periods. So far, operating rates have been significantly below these thresholds.

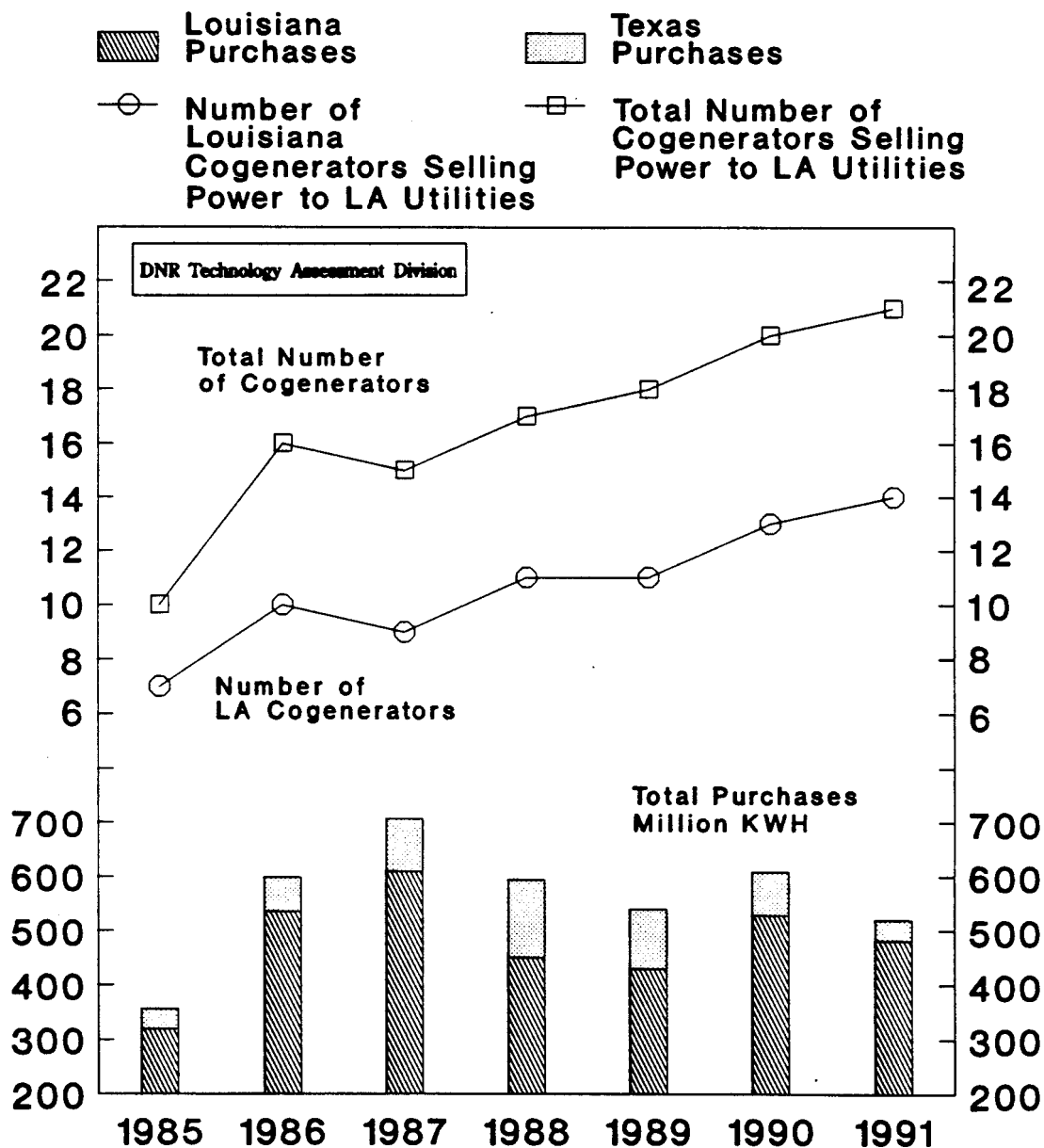
In conclusion, the combination of Louisiana's lackluster economy, flat electrical demand, generating overcapacity, low fuel prices, and low cogeneration purchase prices does not create an investment climate that is favorable to the development of additional cogeneration and IPP capacity in the near term. Unless the state's economic fortunes take a decided turn for the better, it could very well be the 21st century before new projects can be justified.

**FIGURE 1  
LOUISIANA UTILITIES COGENERATION  
PURCHASES AND AVERAGE COST**



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

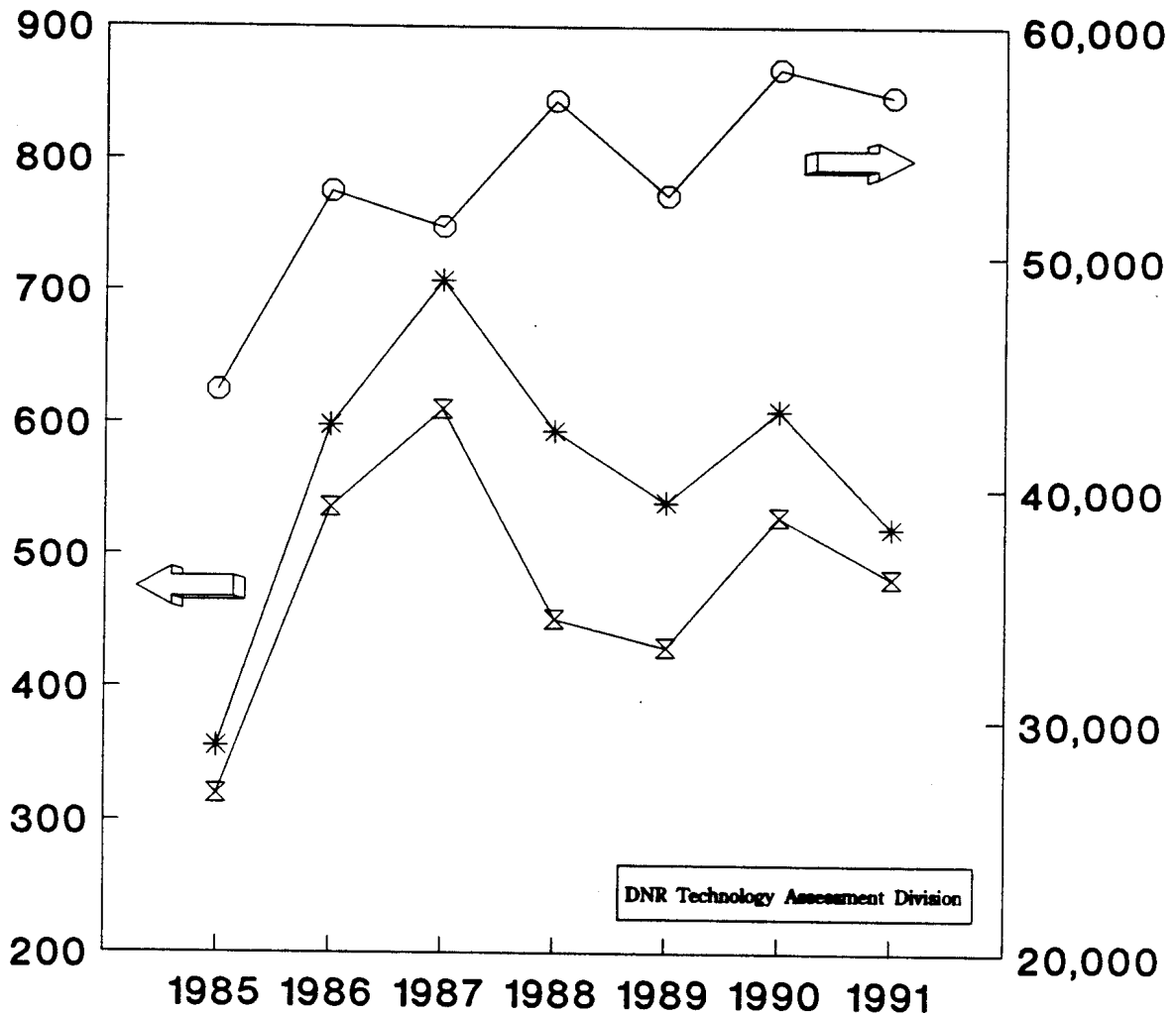
**FIGURE 2**  
**LOUISIANA UTILITIES COGENERATION**  
**PURCHASES AND NUMBER OF COGENERATORS**



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

# FIGURE 3 LOUISIANA UTILITIES NET GENERATION AND COGENERATION PURCHASES

(Million KWH)

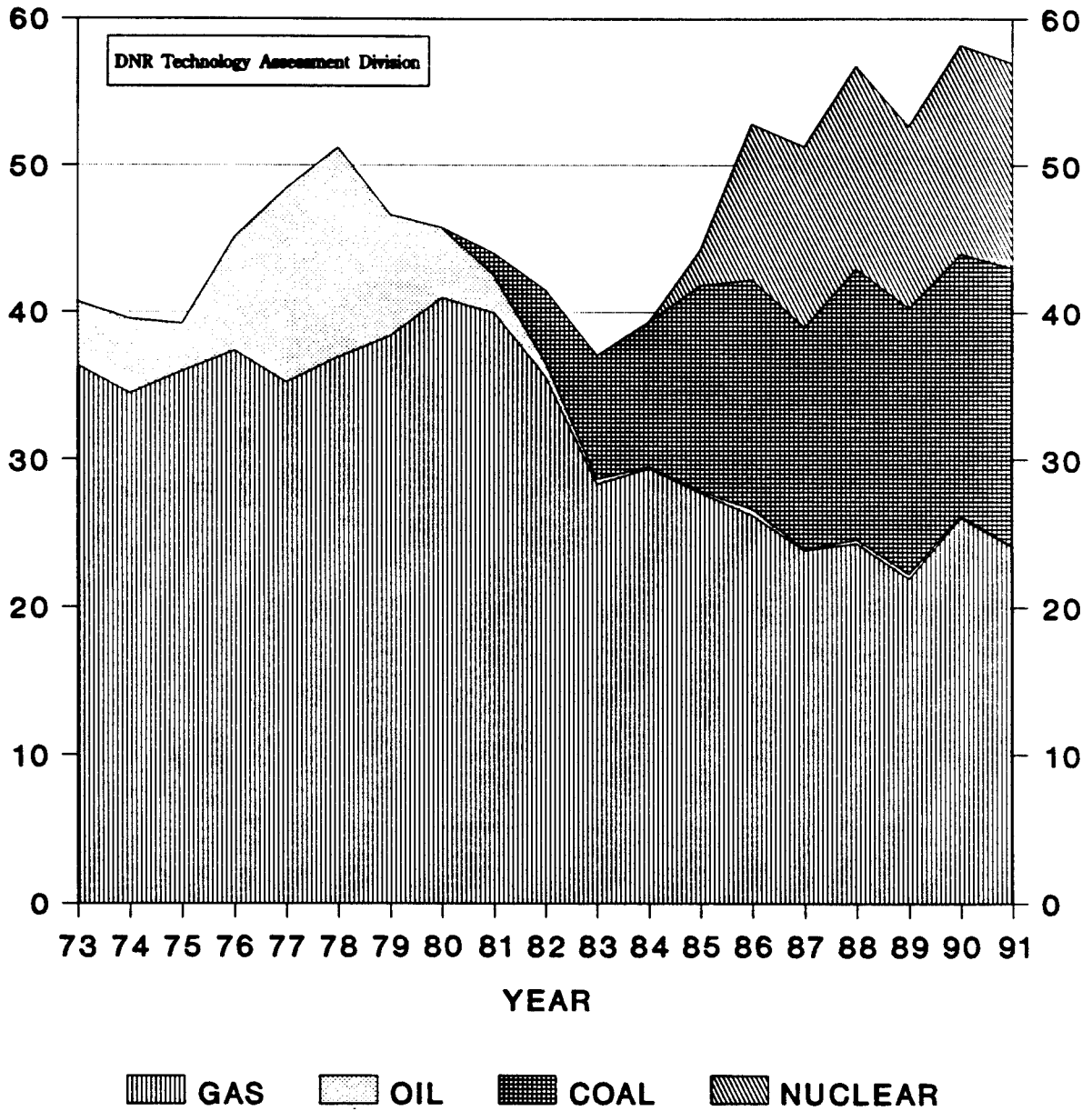


\*— Total Cogeneration Purchases      ○— Net Generation  
X— Louisiana Cogeneration Purchases

Source: DNR, DOE/EIA, Edison Electric Institute, LPSC



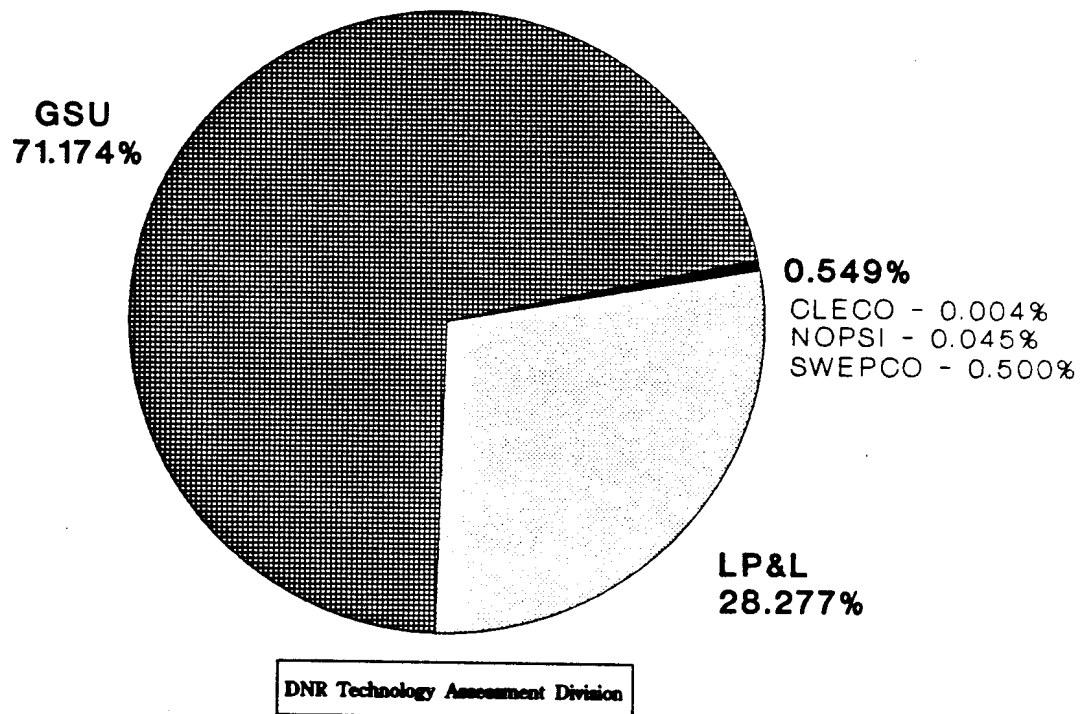
**FIGURE 4**  
**LOUISIANA ELECTRIC UTILITIES NET GENERATION**  
**BY FUEL TYPE**  
 (Billions of KWH)



Source: DNR, DOE/EIA, Edison Electric Institute, LPSC

**FIGURE 5  
LOUISIANA ELECTRIC UTILITIES PERCENT SHARE  
OF 1991 COGENERATION POWER PURCHASES**

**% SHARE OF TOTAL PURCHASES  
(LOUISIANA AND TEXAS COGENERATORS)**



Source: Louisiana Public Service Commission

TABLE 1

**COGENERATION ANNUAL POWER SALES TO LOUISIANA ELECTRIC UTILITIES  
BY COGENERATOR AND STATE - KWH**

<b>LOUISIANA COGENERATORS</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>
Agrielectric Lake Charles, LA	64,564,886	66,689,393	74,666,060	77,792,332	71,195,845	80,192,798	80,830,716
Air Products New Orleans, LA	3,078,172	3,370,000	3,079,000	1,772,000	461,000	147,000	236,000
BASF Wyandotte Geismar, LA	26,883,220	52,525,840	41,341,726	35,404,645	36,299,690	24,100,593	13,711,028
B.P. Oil, Inc. Alliance, LA	-	-	-	-	-	38,049,140	38,311,280
Calcliner Industries, Inc.* Chalmette, LA	99,417,200	91,280,900	105,808,050	95,052,800	90,915,350	101,691,250	105,701,800
Dow Chemical Plaquemine, LA	117,358,300	123,297,324	174,761,875	81,844,613	96,661,275	142,570,565	144,386,237
Exxon Chemical Baton Rouge, LA	-	-	-	-	-	2,666,336	32,964,495
Formosa Plastics Baton Rouge, LA	-	-	-	-	-	-	4,568,504
Freeport - McMoran Uncle Sam, LA	-	-	-	2,209,277	5,554,598	4,994,064	3,320,455
James River Corp.** St. Francisville, LA	-	23,826,762	23,027,726	6,819,512	7,601,917	6,884,572	4,765,068
Jeanerette Sugar Mill Jeanerette, LA	16,000	106,000	238,000	196,000	156,000	73,000	20,530
Monochem*** Geismar, LA	-	40,965,246	107,090,029	105,807,252	75,174,451	45,698,455	12,472,302
Nelson Ind. Steam Co. Westlake, LA	-	-	-	12,212,907	10,209,901	7,081,181	2,562,351
Union Texas Petroleum Lafayette, LA	-	133,673	-	-	-	-	-
Vulcan Chemicals Geismar, LA	9,159,936	133,887,939	79,560,504	32,285,068	35,978,626	74,989,324	37,808,632
<b>LOUISIANA COGENERATION TOTAL SALES</b>	<b>320,477,714</b>	<b>536,083,077</b>	<b>609,572,970</b>	<b>451,396,406</b>	<b>430,208,653</b>	<b>529,138,278</b>	<b>481,659,398</b>

\*Previous name was Kaiser

\*\*Previous name was Crown Zellerbach

\*\*\*Name changed to Borden Chemicals & Plastics Operating Limited Partnership 12/1/91

TABLE 1 (Continued)

**COGENERATION ANNUAL POWER SALES TO LOUISIANA ELECTRIC UTILITIES  
BY COGENERATOR AND STATE - KWH**

<b>TEXAS COGENERATORS</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>
Cogen Power (PSE) Port Arthur, TX	11,602,351	16,508,655	10,954,582	7,161,304	4,983,850	5,773,423	3,381,692
Dean Lumber Gilmer, TX	-	175,593	522,397	728,929	953,680	252,991	84,860
E. I. Dupont Orange, TX	-	-	1,823,226	6,901,690	5,715,728	4,406,499	6,883,671
Fina Oil & Chemical Port Arthur, TX	-	-	-	-	3,268,347	5,424	417,278
J.M. Huber Orange, TX	-	15,508,538	14,791,208	20,369,423	25,065,712	15,936,901	10,251,472
Phillips Chemical Orange, TX	16,202,751	3780211	-	-	-	-	-
Snider Industries Marshall, TX	7,570,629	10,155,670	10,982,104	14,603,536	8,933,363	8,409,185	2,512,954
Star Enterprise*** Port Arthur, TX	-	15,353,564	58,511,180	92,615,864	61,114,046	45,293,438	15,155,643
<b>TEXAS COGENERATION TOTAL SALES</b>	<b>35,375,731</b>	<b>61,482,231</b>	<b>97,584,697</b>	<b>142,380,746</b>	<b>110,034,726</b>	<b>80,077,861</b>	<b>38,687,570</b>
<b>ALL COGENERATION TOTAL SALES</b>	<b>355,853,445</b>	<b>597,565,308</b>	<b>707,157,667</b>	<b>593,777,152</b>	<b>540,243,379</b>	<b>609,216,139</b>	<b>520,346,968</b>

\*Previous names were Texaco Inc. and Star/Texaco

TABLE 2

**COGENERATION POWER ANNUAL AVERAGE SALES PRICE  
BY COGENERATOR AND STATE - Cents/KWH**

LOUISIANA COGENERATORS	1985	1986	1987	1988	1989	1990	1991
Agrielectric Lake Charles, LA	2.53	1.63	1.92	3.59	3.59	3.59	3.59
Air Products New Orleans, LA	2.90	1.59	1.56	1.66	1.72	1.86	1.62
BASF Wyandotte Geismar, LA	2.38	1.75	1.56	1.75	1.75	1.85	1.66
B.P. Oil, Inc. Alliance, LA	-	-	-	-	-	1.67	1.51
Calciner Industries, Inc.* Chalmette, LA	3.21	1.63	1.60	1.65	1.73	1.66	1.50
Dow Chemical Plaquemine, LA	2.76	1.65	1.55	1.72	1.75	1.77	1.61
Exxon Chemical Baton Rouge, LA	-	-	-	-	-	2.01	0.74
Formosa Plastics Baton Rouge, LA	-	-	-	-	-	-	1.59
Freeport - McMoran Uncle Sam, LA	-	-	-	1.63	1.70	1.68	1.48
James River Corp.** St. Francisville, LA	-	1.05	1.56	1.75	1.79	1.80	1.67
Jeanerette Sugar Mill Jeanerette, LA	2.75	2.29	1.80	1.81	1.87	2.03	2.22
Monochem*** Geismar, LA	-	1.56	1.54	1.76	1.77	1.91	1.82
Nelson Ind. Steam Co. Westlake, LA	-	-	-	1.86	1.87	1.66	1.56
Union Texas Petroleum Lafayette, LA	-	1.98	-	-	-	-	-
Vulcan Chemicals Geismar, LA	2.12	1.73	1.56	1.74	1.77	1.73	1.58
<b>WEIGHTED AVERAGE PRICE LOUISIANA COGENERATORS</b>	<b>2.80</b>	<b>1.64</b>	<b>1.61</b>	<b>2.05</b>	<b>2.06</b>	<b>2.03</b>	<b>1.85</b>

\*Previous name was Kaiser

\*\*Previous name was Crown Zellerbach

\*\*\*Name changed to Borden Chemicals & Plastics Operating Limited Partnership 12/1/91

TABLE 2 (Continued)

**COGENERATION POWER ANNUAL AVERAGE SALES PRICE  
BY COGENERATOR AND STATE - Cents/KWH**

<b>TEXAS</b>							
<b>COGENERATORS</b>	<b>1985</b>	<b>1986</b>	<b>1987</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>
Cogen Power (PSE) Port Arthur, TX	2.41	1.61	1.50	1.67	1.71	1.67	1.52
Dean Lumber Gilmer, TX	-	3.24	2.86	3.16	2.89	1.83	3.09
E. I. Dupont Orange, TX	-	-	1.57	1.89	2.17	1.81	1.78
Fina Oil & Chemical Port Arthur, TX	-	-	-	-	1.62	1.47	1.85
J.M. Huber Orange, TX	-	1.49	1.50	1.66	1.70	1.69	1.52
Phillips Chemical Orange, TX	4.15	1.77	-	-	-	-	-
Snider Industries Marshall, TX	3.80	3.21	2.69	3.18	3.03	1.85	2.97
Star Enterprise* Port Arthur, TX	-	1.48	1.53	1.80	1.68	1.79	1.71
<b>WEIGHTED AVERAGE PRICE TEXAS COGENERATORS</b>	<b>3.50</b>	<b>1.83</b>	<b>1.66</b>	<b>1.93</b>	<b>1.83</b>	<b>1.77</b>	<b>1.74</b>
<b>WEIGHTED AVERAGE PRICE ALL COGENERATORS</b>	<b>2.87</b>	<b>1.66</b>	<b>1.61</b>	<b>2.02</b>	<b>2.01</b>	<b>1.99</b>	<b>1.85</b>

\*Previous names were Texaco Inc. and Star/Texaco

TABLE 3

**LOUISIANA ELECTRIC UTILITIES NET ELECTRICITY GENERATION  
BY FUEL TYPE, 1960-1991  
(Million KWH)**

YEAR	TOTAL	COAL*	OIL	GAS	NUCLEAR
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	57,136	18,912	45	24,222	13,956

\*Includes lignite

Sources: 1960-1988 - Louisiana Energy Statistics 1909-1989, Dept. of Natural Resources, Technology Assessment Division, 1991.

1989-1990 - Statistical Yearbook of the Electric Utility Industry, Edison Electric Institute, Table 23.

1991 - U.S. Dept. of Energy/Energy Information Administration, Electric Power Monthly, April 1992, Table 64

**TABLE 4**  
**1990 LOUISIANA GENERATING CAPABILITY BY PRIMARY FUEL TYPE**  
**BY CLASS OF OWNERSHIP**  
**October 1992 DNR Technology Assessment Division Report**

OWNERSHIP CLASS	LA. GENERATING CAPABILITY		% GENERATING CAPABILITY BY PRIMARY FUEL TYPE						
	Megawatts	% of LA. Total	Gas	Coal	Lignite	Nuclear	Oil	Hydro	Other
Investor Owned Electric Utilities	13,232	72.9	76.1	5.8	4.9	13.1	0.1	0	0
LA. Publicly Owned Electric Utilities	1270	7.0	71.2	28.8	0	0	0	0	0
TX. Publicly Owned Electric Utilities*	165	0.9	0	100	0	0	0	0	0
Cajun Electric Coop.	1884	10.4	11.2	73.9	0	14.9	0	0	0
LA. Cogenerators	1421	7.8	94.3	0	0	0	0	0	5.7**
Independent Power Producers	192	1.1	0	0	0	0	0	100	0
<b>1990 LOUISIANA TOTALS</b>	<b>18,164</b>	<b>***</b>	<b>69.9</b>	<b>14.8</b>	<b>3.6</b>	<b>11.1</b>	<b>0.1</b>	<b>1.1</b>	<b>0.5</b>

\* Some Texas utilities own a portion of generating facilities located in Louisiana and operated by a Louisiana utility. Sam Rayburn G & T, Inc., owns 10% (55 MW) and Sam Rayburn Municipal Power Agency owns 20% (110 MW) of the R.S. Nelson #6 generating plant. GSU operates the plant and owns the remaining 70% (385 MW).

\*\*Rice hulls, Off-process gas, Petroleum coke, Bagasse, Wood waste, Waste heat, Black liquor.

\*\*\* Individual percentage components may not total 100% because of independent rounding.

Source: For Investor and Publicly Owned Utilities and Cajun Electric Coop, source is DOE/EIA 0095(90) "Inventory of Power Plants in the United States 1990", Tables 20 and C1. Supplier generating capability of jointly-owned Louisiana power plants is prorated according to percent ownership specified in Table C1.

For Cogenerators and Independent Power Producers source is Louisiana Public Service Commission and the Investor owned utilities that purchase the power produced by cogenerators.



**TABLE 5**  
**1991 LOUISIANA NET GENERATION BY FUEL TYPE**  
**BY TYPE OF OPERATOR**  
**October 1992 DNR Technology Assessment Division Report**

OPERATOR TYPE	NET GENERATION		% GENERATION BY FUEL TYPE					
	Million KWH	% of LA. Total	Gas	Coal & Lignite	Nuclear	Oil	Hydro	Other
Investor Owned Electric Utilities	48,180	82.7	48.0	23.0	29.0	0.0	0.0	0.0
Municipally Owned Electric Utilities	649	1.1	100.0	0.0	0.0	0.0	0.0	0.0
Cajun Electric Coop.	8,307	14.3	5.6	94.1	0.0	0.3	0.0	0.0
LA. Cogenerators*	482	0.8	94.3	0.0	0.0	0.0	0.0	**5.7
Independent Power Producers	665	1.1	0.0	0.0	0.0	0.0	100.0	0.0
<b>1991 LOUISIANA TOTALS</b>	<b>58,283</b>	<b>***</b>	<b>42.3</b>	<b>32.5</b>	<b>24.0</b>	<b>0.1</b>	<b>1.1</b>	<b>0.1</b>

\* Percent generation by fuel type not verifiable by historical operating records. Percentages shown assume same fuel percentages as specified in Table 4.

\*\*Rice hulls, Off-process gas, Petroleum coke, Bagasse, Wood waste, Waste heat, Black liquor.

\*\*\* Individual percentage components may not total 100% because of independent rounding.

Source: For Investor and Municipally Owned Utilities and Cajun Electric Coop, source is DOE/EIA-0226(92/04) "Electric Power Monthly", April 1992, Table 64.

For Cogenerators and Independent Power Producers source is Louisiana Public Service Commission and the Investor owned utilities that purchase the power produced by cogenerators.

**TABLE 6**  
**LOUISIANA ELECTRIC UTILITIES THAT PURCHASE COGENERATED POWER**  
**LOCATION, 1991 GENERATING CAPABILITY, FUEL MIX & CONTACT LIST**  
**October 1992 DNR Technology Assessment Division Report**

UTILITY/ PRINCIPAL ADDRESS	MAILING ADDRESS	L.A. GENERATING CAPABILITY*		FUEL MIX**					STANDBY FUELS	COGENERATION CONTACT/ TELEPHONE
		Megawatts	% of LA. Total	PRIMARY FUELS			Oil			
				% Generating Capability	Coal	Lignite		Nuclear		
Central Louisiana Electric Co, Inc. 2030 Donahue Ferry Road Pineville, Louisiana	P.O. Box 5000 Pineville, Louisiana 71361-5000	1686	13.7	71.4	9.3	19.3	0	0	Oil	Ron Blankenship (318) 484-7645
Gulf States Utilities Company 350 Pine Street Beaumont, Texas	P.O. Box 2951 Beaumont, Texas 77704	4102	33.3	69.1	14.9	0	16.0	0	Oil	Don Hamilton (713) 839-5763
Louisiana Power & Light Co. 317 Baronne Street New Orleans, Louisiana	P.O. Box 60340 New Orleans, Louisiana 70160	5064	41.1	78.8	0	0	21.2	0	Oil	W.E. Bond (504) 595-2630
New Orleans Public Service Co. 317 Baronne Street New Orleans, Louisiana	P.O. Box 60340 New Orleans, Louisiana 70160	821	6.7	98.0	0	0	0	2.0	None	W. E. Bond (504) 595-2630
Southwestern Electric Power Co. 428 Travis Street Shreveport, Louisiana	P.O. Box 21106 Shreveport, Louisiana 71156	651	5.3	59.8	0	40.2	0	0	Oil	Tom Norton (318) 222-2141
<b>1991 LOUISIANA TOTALS</b>		<b>12,324</b>	<b>***</b>	<b>74.8</b>	<b>6.2</b>	<b>4.8</b>	<b>14.0</b>	<b>0.1</b>		

Source: \* Company 1991 Form 10-K, U.S. Securities and Exchange Commission.  
 \*\*DOE/EIA-0095(90) "Inventory of Power Plants in the United States 1990", Table 20.  
 \*\*\*Weighted average percentages do not total 100% because of independent rounding.

**TABLE 7**  
**1991 COGENERATION SUPPLIERS TO LOUISIANA ELECTRIC UTILITIES**  
**BY STATE**

October 1992 DNR Technology Assessment Division Report

LOUISIANA COGENERATORS/ PHYSICAL LOCATION (City, Parish)	MAILING ADDRESS	CONTACT/ TELEPHONE	GENERATING CAPABILITY (Megawatts)	UNIT TYPE	ENERGY SOURCE (Primary/ Alternate)	YEAR OF INITIAL OPERATION	PURCHASING UTILITY
<b>Agrielectric Power Partners</b> Lake Charles, Calcasieu Parish	P. O. Drawer P Lake Charles, LA 70602	Mary Stampley (318) 433-6355	12.50	Steam Turbine - Boiler	Rice Hulls	1984	GSU
<b>Air Products &amp; Chemicals, Inc.</b> New Orleans, Orleans Parish	P. O. Box 2606 Lehigh Valley, PA 18001-2606	Bill Greer (504) 254-6203	23.00	Combined Cycle Combustion Turbine	Natural Gas	1984	NOPSI
<b>BASF Wyandotte</b> Geismar, Ascension Parish	P. O. Box 457 Geismar, LA 70734	Bill Truse (504) 387-5101	36.60	Combined Cycle Combustion Turbine	Natural Gas	1985	GSU
<b>B. P. Oil, Inc.</b> Belle Chasse, Plaquemines Parish	P. O. Box 395 Belle Chasse, LA 70037	Mike Tarjan (504) 656-7711	19.20	Condensing Steam Turbine	Off-Process Gas/Natural Gas	1989	LP & L
<b>Calcliner Industries, Inc.</b> Chalmette, St. Bernard Parish	P. O. Box 1306 Chalmette, LA 70044	Bob Conti (504) 278-1092	27.00	Steam Turbine - Boiler	Petroleum Coke	1985	LP & L
<b>Dow Chemical USA</b> Plaquemine, Iberville Parish	P. O. Box 150 Plaquemine, LA 70765	Jim Landry (504) 389-8022	650.00	Combustion and Steam Turbine	Natural Gas/ Synthetic Natural Gas	1984	GSU
<b>Exxon Chemical</b> Baton Rouge, East Baton Rouge	P. O. Box 241 Baton Rouge, LA 70821	David Cheshire (504) 359-5762	84.00	Combined Cycle Combustion Turbine	Natural Gas	1990	GSU

**TABLE 7 (Continued)**  
**1991 COGENERATION SUPPLIERS TO LOUISIANA ELECTRIC UTILITIES**  
 BY STATE

October 1992 DNR Technology Assessment Division Report

LOUISIANA COGENERATORS/ PHYSICAL LOCATION (City, Parish)	MAILING ADDRESS	CONTACT/ TELEPHONE	GENERATING CAPABILITY (Megawatts)	UNIT TYPE	ENERGY SOURCE (Primary/ Alternate)	YEAR OF INITIAL OPERATION	PURCHASING UTILITY
<b>Formosa Plastics</b> Baton Rouge, East Baton Rouge	P. O. Box 271 Baton Rouge, LA 70821	Don Bradford (504) 356-8610	90.00	Combustion and Steam Turbine	Natural Gas	1990	GSU
<b>Freeport-McMoran Resource Partners Limited Partnership</b> Uncle Sam, St. James Parish	P.O. Box 61119 New Orleans, LA 70161	Jim Chandler (504) 582-3501	22.00	Steam Turbine - Boiler	Off-Process Gas	1987	LP&L
<b>James River Corp.</b> St. Francisville, W. Feliciana Parish	P. O. Box 218 St. Francisville, LA 70775	Charles Risler (504) 336-2810	57.00	Combustion and Steam Turbine	Natural Gas/ Black Liquor	1986	GSU
<b>Jeanerette Sugar Cooperative</b> Jeanerette, Iberia Parish	2302 W. Main St. Jeanerette, LA 70544	J. R. Roane (318) 276-4238	<0.10	Steam Turbine - Boiler	Bagasse	1985	CLECO
<b>Monochem, Inc.*</b> Geismar, Ascension Parish	P. O. Box 427 Geismar, LA 70734	Joe Variani (504) 387-5101	91.50	Combine Cycle Combustion Turbine	Natural Gas	1986	GSU
<b>Nelson Industrial Steam Co.</b> Westlake, Calcasieu Parish	P. O. Box 429 Westlake, LA 70669	Max Casada (318) 439-1111	200.00	Steam Turbine - Boiler	Natural Gas	1988	GSU
<b>Vulcan Chemicals</b> Geismar, Ascension Parish	P. O. Box 227 Geismar, LA 70734	Rodney Gremillion (504) 473-5000	108.00	Combustion and Steam Turbine	Natural Gas	1985	GSU
<b>LOUISIANA</b>			<b>1420.80</b>				
<b>TOTAL CAPACITY</b>			<b>1420.80</b>				

\*Effective Dec. 1, 1991, contract name was changed to Borden Chemicals & Plastics Operating Limited Partnership

**TABLE 7 (Continued)**  
**1991 COGENERATION SUPPLIERS TO LOUISIANA ELECTRIC UTILITIES**  
 BY STATE

October 1992 DNR Technology Assessment Division Report

TEXAS COGENERATORS/ PHYSICAL LOCATION (City, County)	MAILING ADDRESS	CONTACT/ TELEPHONE	GENERATING CAPABILITY (Megawatts)	UNIT TYPE	ENERGY SOURCE (Primary/ Alternate)	YEAR OF INITIAL OPERATION	PURCHASING UTILITY
<b>Cogen Power, Inc.</b> Port Arthur, Jefferson County	P. O. Box 4411 Houston, TX 77210-4411	W. Paul Ruwe (713) 974-8200	7.00	Steam Turbine-- Boiler	Waste Heat	1984	GSU
<b>Dean Lumber Co.</b> Gilmer, Upshur County	P. O. Box 610 Gilmer, TX 75644	Steve Dean (903) 843-5538	0.56	Steam Turbine-- Boiler	Wood Waste	1986	SWEPCO
<b>E. I. Dupont de Nemours</b> Orange, Orange County	P. O. Box 1089 Orange, TX 77631-1089	Joe Woods (409) 886-6114	88.50	Combined Cycle Combustion Turbine	Natural Gas	1987	GSU
<b>Fina Oil &amp; Chemical</b> Port Arthur, Jefferson County	P. O. Box 849 Port Arthur, TX 77641	James D. Norton (409) 963-6909	37.00	Combustion and Steam Turbine	Natural Gas	1988	GSU
<b>J. M. Huber</b> Orange, Orange County	P. O. Box 1268 Orange, TX 77630	Randy McWilliams (409) 863-9966	10.00	Steam Turbine-- Boiler	Waste Heat	1985	GSU
<b>Snider Industries, Inc.</b> Marshall, Harrison County	P. O. Box 668 Marshall, TX 75670	Ronnie Snider (903) 938-9221	5.00	Steam Turbine-- Boiler	Wood Waste	1983	SWEPCO
<b>Star Enterprise</b> Port Arthur, Jefferson County	P. O. Box 712 Port Arthur, TX 77641	Michael Andrews (409) 989-7060	143.00	Steam Turbine-- Boiler	Natural Gas	1986	GSU

<b>TEXAS</b>	<b>291.06</b>
<b>TOTAL CAPACITY</b>	<b>291.06</b>

<b>TOTAL CAPACITY</b>	<b>1711.86</b>
<b>ALL SUPPLIERS</b>	<b>1711.86</b>

DNR Technology Assessment Division

**TABLE 8A (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**LOUISIANA COGENERATION POWER PURCHASES (KWH) AND COST**  
**1986**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric	3,195,105	3,713,880	4,454,189	4,483,374	6,245,172	6,495,804	6,417,687	6,412,536	5,904,240	6,996,297	6,452,412	5,918,997
Lake Charles, LA	\$64,261	\$75,190	\$84,284	\$79,546	\$98,666	\$94,816	\$98,660	\$99,861	\$92,072	\$109,529	\$101,209	\$92,120
BASF Wyandotte Geismar, LA	5,739,340	4,451,440	6,644,240	6,134,400	4,578,840	2,214,740	3,503,840	2,663,520	3,833,140	5,109,580	3,652,480	4,000,280
	\$115,787	\$110,131	\$125,974	\$108,609	\$71,813	\$32,270	\$55,436	\$41,028	\$59,289	\$80,141	\$57,146	\$82,188
Crown Zellerbach St. Francisville, LA	665,280	1,949,259	2,702,910	803,097	984,996	1,359,081	939,465	770,994	995,833	1,581,968	1,427,546	9,646,335
	\$13,824	\$39,997	\$51,983	\$14,560	\$16,187	\$20,156	\$14,139	\$12,317	\$15,759	\$25,204	\$22,196	\$2,894
Dow Chemical Plaquemine, LA	7,054,274	8,603,600	5,977,000	6,189,950	13,803,050	5,022,200	6,823,550	10,646,800	10,621,050	11,469,200	22,303,100	14,783,550
	\$141,473	\$176,362	\$114,083	\$110,078	\$220,722	\$73,759	\$106,491	\$166,471	\$162,200	\$180,300	\$349,921	\$229,407
Monochem Geismar, LA	-	-	-	-	-	-	-	-	-	-	17,068,685	23,896,561
	-	-	-	-	-	-	-	-	-	-	\$266,613	\$371,114
Union Texas Petroleum Lafayette, LA	596	59,096	73,981	0	0	0	0	0	0	0	0	0
	\$13	\$1,225	\$1,403	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Vulcan Chemicals Geismar, LA	23,422,896	12,742,060	10,899,155	9,452,304	7,696,672	8,438,976	8,637,216	7,343,760	5,692,982	6,108,880	17,473,888	13,989,120
	\$476,896	\$257,559	\$206,559	\$167,450	\$121,225	\$122,888	\$133,721	\$114,029	\$86,383	\$126,495	\$280,171	\$218,015
<b>Monthly Totals</b>	<b>40,077,491</b>	<b>31,519,355</b>	<b>30,751,475</b>	<b>27,063,125</b>	<b>33,298,790</b>	<b>23,530,801</b>	<b>26,321,758</b>	<b>27,837,610</b>	<b>27,047,255</b>	<b>33,265,923</b>	<b>68,378,111</b>	<b>72,234,543</b>
<b>Cost</b>	<b>\$812,254</b>	<b>\$660,464</b>	<b>\$584,286</b>	<b>\$480,243</b>	<b>\$528,613</b>	<b>\$343,889</b>	<b>\$408,447</b>	<b>\$433,706</b>	<b>\$417,703</b>	<b>\$521,669</b>	<b>\$1,077,256</b>	<b>\$975,738</b>
<b>Average Cents/KWH</b>	<b>2.03</b>	<b>2.10</b>	<b>1.90</b>	<b>1.77</b>	<b>1.59</b>	<b>1.46</b>	<b>1.55</b>	<b>1.56</b>	<b>1.54</b>	<b>1.57</b>	<b>1.58</b>	<b>1.35</b>
<b>Annual Totals</b>												
<b>KWH</b>	<b>441,326,177</b>											
<b>Cost</b>	<b>\$7,244,268</b>											
<b>Average Cents/KWH</b>	<b>1.64</b>											

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Sources: Utility Monthly Cost-of-Fuel Adjustment Reports, Billing Invoices, and personal communication with utility representatives.

**TABLE 8A (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**LOUISIANA COGENERATION POWER PURCHASES (KWH) AND COST**  
**1987**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrilelectric Lake Charles, LA	5,967,496 \$93,240	5,606,394 \$90,940	6,898,068 \$111,385	3,690,912 \$57,075	6,422,292 \$99,172	6,391,050 \$99,199	6,469,198 \$97,495	6,051,546 \$85,813	7,019,268 \$99,532	5,655,606 \$80,899	7,224,252 \$259,495	7,269,978 \$261,136
BASF Wyandotte Geismar, LA	3,264,760 \$51,225	4,102,360 \$67,208	4,760,480 \$77,375	4,797,000 \$72,591	2,575,480 \$39,504	2,575,600 \$39,743	1,582,540 \$23,438	1,852,494 \$26,093	2,381,480 \$33,688	4,453,806 \$63,692	4,077,966 \$62,849	4,917,780 \$66,010
Crown Zellerbach St. Francisville, LA	4,557,213 \$71,344	1,352,709 \$21,260	2,068,218 \$33,949	2,197,746 \$33,710	1,529,334 \$24,175	2,194,839 \$34,559	1,642,742 \$25,317	672,993 \$10,016	1,060,042 \$15,298	1,969,612 \$28,609	2,140,542 \$33,385	1,621,736 \$28,062
Dow Chemical Plaquemine, LA	13,569,850 \$209,794	8,104,550 \$132,861	13,400,050 \$217,061	25,095,825 \$382,500	17,351,050 \$266,822	7,186,425 \$112,361	7,532,900 \$111,946	9,020,400 \$127,058	7,755,400 \$111,487	18,811,700 \$267,752	21,283,000 \$328,909	25,650,725 \$448,145
Monochem Geismar, LA	17,660,697 \$275,507	12,619,985 \$199,016	2,310,363 \$39,041	8,940,285 \$135,852	9,792,908 \$149,774	10,561,320 \$163,837	6,170,057 \$91,780	4,726,915 \$66,575	5,393,876 \$75,929	10,095,290 \$144,262	6,078,399 \$133,894	10,140,132 \$176,362
Vulcan Chemicals Geismar, LA	13,396,128 \$209,663	12,241,152 \$196,343	10,579,008 \$171,396	8,066,512 \$120,490	7,835,808 \$120,513	4,537,824 \$70,301	2,378,004 \$35,566	2,248,704 \$32,604	3,248,756 \$46,445	4,545,456 \$64,574	5,828,544 \$89,521	4,636,608 \$60,854
<b>Monthly Totals</b>	<b>58,436,144 \$910,773</b>	<b>44,027,150 \$707,628</b>	<b>40,016,187 \$650,207</b>	<b>52,808,280 \$802,218</b>	<b>45,506,872 \$699,960</b>	<b>33,447,058 \$520,000</b>	<b>25,755,441 \$385,542</b>	<b>24,573,052 \$348,159</b>	<b>26,856,804 \$382,357</b>	<b>45,551,470 \$649,788</b>	<b>49,232,703 \$908,053</b>	<b>54,236,959 \$1,080,571</b>
<b>Average Cents/KWH</b>	<b>1.56</b>	<b>1.61</b>	<b>1.62</b>	<b>1.52</b>	<b>1.54</b>	<b>1.55</b>	<b>1.50</b>	<b>1.42</b>	<b>1.42</b>	<b>1.43</b>	<b>1.84</b>	<b>1.99</b>
										<b>Annual KWH</b>		<b>500,447,920</b>
										<b>Annual Cost</b>		<b>\$8,045,256</b>
										<b>Average Cents/KWH</b>		<b>1.61</b>

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Sources: Utility Monthly Cost - of - Fuel Adjustment Reports, Billing Invoices, and personal communication with utility representatives.

**TABLE 8A (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**LOUISIANA COGENERATION POWER PURCHASES (KWH) AND COST**  
**1988**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric	7,223,474	6,662,721	5,899,737	6,885,048	6,913,368	6,830,403	3,291,684	7,462,513	6,926,194	6,599,168	6,322,434	6,775,588
Lake Charles, LA	\$259,467	\$239,325	\$211,919	\$247,311	\$248,328	\$245,348	\$118,237	\$268,053	\$248,789	\$237,042	\$227,102	\$243,379
BASF Wyandotte Geismar, LA	5,751,721 \$106,422	4,866,864 \$89,643	4,146,848 \$71,656	2,871,692 \$43,631	3,126,114 \$45,201	3,870,284 \$57,759	943,842 \$14,620	537,520 \$8,945	206,840 \$3,531	532,296 \$9,081	4,117,896 \$79,716	4,432,728 \$89,644
Crown Zellerbach St. Francisville, LA	785,212 \$14,496	480,888 \$8,877	776,986 \$13,625	653,540 \$9,699	795,492 \$11,750	387,810 \$5,850	248,436 \$4,188	437,860 \$7,334	190,010 \$3,361	435,518 \$7,907	525,582 \$9,851	1,102,178 \$22,239
Dow Chemical Plaquemine, LA	15,526,250 \$287,418	3,593,100 \$66,651	19,522,850 \$334,230	12,215,360 \$183,876	8,953,700 \$129,223	1,722,500 \$26,669	1,846,000 \$31,315	1,235,800 \$21,083	2,142,920 \$37,911	4,928,375 \$86,867	1,607,600 \$32,546	8,550,158 \$171,062
Monochem Geismar, LA	17,824,871 \$329,809	10,522,895 \$193,824	10,522,133 \$182,833	6,961,331 \$106,418	9,598,753 \$139,137	4,482,548 \$66,177	5,938,073 \$93,136	4,805,500 \$79,624	5,340,405 \$92,839	7,918,976 \$141,374	10,494,027 \$204,456	11,397,800 \$230,660
Nelson Ind. Steam Co. Westlake, LA	-	-	-	-	-	-	-	-	230,311 \$3,876	4,526,928 \$78,717	3,887,151 \$69,884	3,768,517 \$75,008
Vulcan Chemicals Geismar, LA	5,151,112 \$95,395	4,014,373 \$73,739	2,038,295 \$35,090	1,760,120 \$26,926	2,929,832 \$42,240	2,377,884 \$35,599	2,026,560 \$33,051	2,492,981 \$41,122	2,765,783 \$50,227	1,458,432 \$25,663	3,549,812 \$68,778	1,719,884 \$35,009
<b>Monthly Totals</b>	<b>52,262,640</b> <b>\$1,093,007</b>	<b>30,140,781</b> <b>\$672,059</b>	<b>42,906,849</b> <b>\$849,353</b>	<b>31,347,091</b> <b>\$617,861</b>	<b>32,317,259</b> <b>\$615,879</b>	<b>19,671,429</b> <b>\$437,402</b>	<b>14,294,595</b> <b>\$294,547</b>	<b>16,972,174</b> <b>\$426,161</b>	<b>17,802,483</b> <b>\$440,534</b>	<b>26,399,693</b> <b>\$586,651</b>	<b>30,304,502</b> <b>\$692,333</b>	<b>37,746,853</b> <b>\$867,001</b>
<b>Average Cents/KWH</b>	<b>2.09</b>	<b>2.23</b>	<b>1.96</b>	<b>1.97</b>	<b>1.91</b>	<b>2.22</b>	<b>2.06</b>	<b>2.51</b>	<b>2.47</b>	<b>2.22</b>	<b>2.28</b>	<b>2.30</b>
<b>Annual Totals</b>												
<b>KWH</b>	<b>352,166,329</b>											
<b>Cost</b>	<b>\$7,592,788</b>											
<b>Average Cents/KWH</b>	<b>2.16</b>											

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Sources: Utility Monthly Cost-of-Fuel Adjustment Reports, Billing Invoices, and personal communication with utility representatives.



**TABLE 8A (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**LOUISIANA COGENERATION POWER PURCHASES (KWH) AND COST**  
**1989**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric	7,577,733	6,418,668	7,061,728	6,444,712	6,168,016	5,995,970	3,865,632	1,583,987	6,953,769	6,448,194	7,311,792	5,365,644
Lake Charles, LA	\$272,192	\$230,559	\$253,657	\$231,387	\$221,555	\$215,375	\$138,854	\$56,897	\$249,779	\$231,619	\$262,640	\$192,734
BASF Wyandotte	3,391,242	4,359,786	3,176,120	2,081,540	2,901,240	503,988	640,720	455,912	3,074,088	4,854,250	4,437,324	6,423,480
Geismar, LA	\$68,868	\$74,535	\$51,783	\$34,236	\$51,580	\$8,970	\$10,733	\$7,414	\$47,784	\$73,973	\$77,340	\$129,466
Crown Zellerbach	724,608	457,586	761,708	746,086	783,370	393,394	373,588	401,524	663,858	479,421	641,466	1,175,328
St. Francisville, LA	\$14,656	\$7,906	\$12,790	\$12,457	\$13,965	\$7,372	\$6,698	\$6,698	\$10,747	\$7,264	\$11,330	\$23,894
Dow Chemical	7,261,450	15,592,700	6,923,450	11,113,750	6,302,200	3,512,035	3,709,470	5,998,070	4,323,650	10,699,400	6,437,400	14,567,500
Flaquemine, LA	\$149,003	\$265,323	\$111,949	\$183,761	\$112,599	\$63,758	\$63,710	\$98,615	\$68,107	\$169,096	\$112,071	\$297,452
Monochem	9,283,024	6,386,151	6,785,336	5,623,940	3,754,652	5,063,225	1,088,422	4,233,565	5,295,340	6,253,704	7,534,435	13,872,657
Geismar, LA	\$188,872	\$109,091	\$111,074	\$92,730	\$65,830	\$91,159	\$18,579	\$68,759	\$82,686	\$95,000	\$129,758	\$277,756
Nelson Ind. Steam Co.	4,006,500	2,360,272	1,274,134	511,841	161,046	50,440	75,684	17,072	164,249	64,114	202,680	1,301,869
Westlake, LA	\$79,369	\$39,304	\$20,208	\$8,206	\$2,786	\$895	\$1,260	\$276	\$2,779	\$939	\$3,530	\$30,998
Vulcan Chemicals	1,844,448	803,952	3,508,616	1,865,792	11,993,408	3,312,536	1,937,100	1,196,276	1,490,704	2,319,968	1,967,352	3,826,474
Geismar, LA	\$38,149	\$13,701	\$57,146	\$30,796	\$208,698	\$60,865	\$33,589	\$19,448	\$23,369	\$35,189	\$34,863	\$79,429
<b>Monthly Totals</b>	<b>34,109,005</b>	<b>36,379,115</b>	<b>29,491,092</b>	<b>28,387,661</b>	<b>31,963,932</b>	<b>18,831,588</b>	<b>11,690,596</b>	<b>13,886,406</b>	<b>21,975,858</b>	<b>31,319,051</b>	<b>28,552,449</b>	<b>46,534,952</b>
<b>KWH</b>	<b>\$811,109</b>	<b>\$740,419</b>	<b>\$616,607</b>	<b>\$593,573</b>	<b>\$677,013</b>	<b>\$448,394</b>	<b>\$273,423</b>	<b>\$258,105</b>	<b>\$485,261</b>	<b>\$613,060</b>	<b>\$631,532</b>	<b>\$1,031,729</b>
<b>Cost</b>	<b>2.36</b>	<b>2.04</b>	<b>2.10</b>	<b>2.09</b>	<b>2.12</b>	<b>2.36</b>	<b>2.34</b>	<b>1.86</b>	<b>2.21</b>	<b>1.96</b>	<b>2.21</b>	<b>2.22</b>
<b>Average Cents/KWH</b>												
<b>Annual Totals</b>												
<b>KWH</b>												
<b>Cost</b>												
<b>Average Cents/KWH</b>												
<b>333,121,705</b>												
<b>\$7,182,245</b>												
<b>2.16</b>												

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Sources: Utility Monthly Cost-of-Fuel Adjustment Reports, Billing Invoices, and personal communication with utility representatives.

**TABLE 8A (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**LOUISIANA COGENERATION POWER PURCHASES (KWH) AND COST**  
**1990**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric	7,332,510	5,938,346	6,405,333	7,177,379	6,836,718	6,299,718	4,543,598	7,413,011	6,842,840	7,426,328	6,598,182	7,376,835
Lake Charles, LA	\$263,364	\$213,305	\$230,080	\$257,811	\$245,575	\$226,286	\$163,206	\$266,275	\$245,795	\$266,826	\$237,007	\$264,976
BASF Wyandotte	5,856,232	3,730,132	3,436,517	2,148,870	3,665,508	386,488	222,180	47,832	572,210	824,006	934,304	2,276,314
Geismar, LA	\$131,514	\$71,601	\$53,556	\$32,619	\$57,366	\$6,103	\$3,470	\$668	\$8,167	\$14,528	\$19,974	\$46,237
Crown Zellerbach	704,360	361,208	597,998	1,164,828	526,347	47,052	102,488	289,208	610,605	515,890	1,299,790	664,800
St. Francisville, LA	\$15,489	\$6,928	\$9,295	\$17,689	\$8,277	\$791	\$1,618	\$4,390	\$8,898	\$8,975	\$28,035	\$13,722
Dow Chemical	8,036,750	3,360,150	15,776,560	17,773,125	20,908,375	5,609,500	6,561,580	3,225,200	3,242,175	21,144,900	15,419,450	21,512,800
Plaquemine, LA	\$178,414	\$63,725	\$246,104	\$270,701	\$325,081	\$88,733	\$104,894	\$47,266	\$49,470	\$369,238	\$330,216	\$447,826
Exxon Chemical	-	-	-	-	-	-	-	-	-	-	186,558	2,479,778
Baton Rouge, LA	-	-	-	-	-	-	-	-	-	-	\$3,993	\$49,596
Monochem	12,021,452	11,819,907	6,121,417	2,814,705	3,643,241	69,999	163,111	130,120	428,689	3,443,098	4,398,824	647,892
Geismar, LA	\$270,636	\$226,486	\$95,116	\$42,910	\$56,792	\$1,100	\$2,546	\$1,747	\$6,516	\$60,347	\$94,220	\$13,058
Nelson Ind. Steam Co.	149,002	0	761,419	171,489	133,257	7,128	0	2,441,671	1,286,102	236,776	1,768,006	126,329
Westlake, LA	\$3,314	\$0	\$11,489	\$2,473	\$2,029	\$112	\$0	\$36,050	\$18,368	\$4,061	\$36,752	\$2,614
Vulcan Chemicals	2,534,600	8,918,624	15,322,944	13,322,552	2,749,296	7,720,500	1,573,472	3,141,002	2,316,540	2,647,798	5,702,666	9,039,330
Geismar, LA	\$57,467	\$172,165	\$239,346	\$204,539	\$42,783	\$125,371	\$24,857	\$46,229	\$35,105	\$46,470	\$121,897	\$183,542
KWH	29,302,396	28,190,021	42,016,855	37,395,569	31,626,024	13,840,667	8,622,831	9,275,031	8,454,321	28,812,468	29,707,600	36,747,243
Monthly Cost	\$656,834	\$540,905	\$654,906	\$570,931	\$492,328	\$222,210	\$137,385	\$136,350	\$126,524	\$503,619	\$635,087	\$756,595
Average Cents/KWH	2.24	1.92	1.56	1.53	1.56	1.61	1.59	1.47	1.50	1.75	2.14	2.06
Monthly Totals												KWH
												Annual Cost
												Average Cents/KWH
											Annual Totals	303,991,026
												\$5,433,674
												1.79

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Sources: Utility Monthly Cost-of-Fuel Adjustment Reports, Billing Invoices, and personal communication with utility representatives.

**TABLE 8A (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**LOUISIANA COGENERATION POWER PURCHASES (KWH) AND COST**  
**1991**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric	6,786,486	6,618,908	6,633,857	6,391,417	4,753,136	7,139,836	7,264,979	7,166,203	6,912,888	7,247,182	6,998,208	7,017,616
Lake Charles, LA	\$243,770	\$237,751	\$238,288	\$229,580	\$170,733	\$256,448	\$260,958	\$257,741	\$248,311	\$260,319	\$247,784	\$252,072
BASF Wyandotte	2,896,465	1,360,977	1,137,668	4,245,272	802,124	0	196,720	104,088	94,782	330,244	1,393,676	1,149,012
Geismar, LA	\$52,418	\$24,084	\$16,358	\$64,268	\$11,473	\$0	\$2,392	\$1,410	\$1,406	\$5,839	\$25,957	\$22,113
Dow Chemical	19,695,750	6,000,325	9,676,570	17,699,200	14,373,050	8,058,150	8,916,925	11,536,825	8,548,236	13,879,750	17,633,196	8,368,260
Plaquemine, LA	\$353,652	\$110,482	\$139,075	\$258,719	\$210,970	\$112,285	\$110,883	\$159,453	\$128,432	\$253,172	\$319,148	\$162,532
Exxon Chemical	16,925,656	3,439,682	4,471,485	3,692,590	3,490,040	179,224	0	0	49,893	0	715,915	0
Baton Rouge, LA	\$181,122	\$20,871	\$11,703	\$7,427	\$4,519	\$2,469	\$0	\$0	\$832	\$0	\$13,807	\$0
Formosa Plastics	-	-	-	-	1,242,630	740,130	152,400	12,730	741,110	653,220	264,884	761,400
Baton Rouge, LA	-	-	-	-	\$17,612	\$9,853	\$1,884	\$175	\$11,797	\$11,959	\$4,805	\$14,629
James River Corp.*	800,328	446,560	195,302	480,360	110,771	156,156	288,531	769,592	225,012	429,678	340,786	521,992
St. Francisville, LA	\$14,614	\$8,032	\$2,832	\$7,109	\$2,167	\$2,194	\$3,622	\$11,277	\$3,435	\$7,883	\$6,219	\$10,135
Monochem**	4,128,625	1,587,932	121,490	886,094	37,166	78,398	0	0	0	1,262,141	1,625,297	2,745,159
Geismar, LA	\$75,575	\$29,246	\$1,720	\$12,934	\$562	\$1,098	\$0	\$0	\$0	\$22,452	\$30,899	\$52,542
Nelson Ind. Steam Co.	466,121	197,475	287,236	9,927	517,056	206,241	0	1,121	288,707	477,527	76,701	34,239
Westlake, LA	\$7,805	\$2,973	\$3,988	\$138	\$6,980	\$2,730	\$0	\$15	\$4,505	\$8,695	\$1,473	\$643
Vulcan Chemicals	5,789,370	3,634,519	5,538,547	4,423,555	5,005,308	2,130,496	1,647,536	1,522,274	2,006,944	2,467,922	1,966,936	1,675,225
Geismar, LA	\$104,953	\$59,698	\$81,824	\$66,650	\$72,304	\$29,094	\$20,828	\$21,286	\$30,012	\$44,934	\$35,198	\$32,257
Monthly Totals	57,488,801	23,286,388	28,062,155	37,828,415	30,331,281	18,688,631	18,467,091	21,112,833	18,867,572	26,747,664	30,915,599	22,272,903
KWH	\$1,033,909	\$493,137	\$495,788	\$646,825	\$497,320	\$416,171	\$400,567	\$451,357	\$428,730	\$615,253	\$685,290	\$546,923
Cost	1.80	2.12	1.77	1.71	1.64	2.23	2.17	2.14	2.27	2.30	2.22	2.46
Average Cents/KWH				KWH			Annual			Average Cents/KWH		
				Cost			Totals					
				2.27			394,069,333			2.01		
				2.46			\$6,711,270					

\*Was Crown Zellerbach through April 1991.

\*\*Effective 12/1/91 contract name was changed to Borden Chemicals & Plastics Operating Limited Partnership

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Sources: Utility Monthly Cost-of-Fuel Adjustment Reports, Billing Invoices, and personal communication with utility representatives.

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**TABLE 8B**  
**GULF STATES UTILITIES COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1985**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric Lake Charles, LA	6,082,000 \$176,467	4,589,000 \$117,154	4,632,000 \$111,271	6,165,000 \$159,191	4,815,000 \$118,537	2,642,000 \$79,945	5,067,132 \$131,804	5,965,632 \$152,460	5,856,108 \$152,088	6,656,337 \$160,941	6,363,675 \$150,773	5,731,002 \$121,473
BASF Wyandotte Geismar, LA	- -	- -	- -	- -	- -	- -	1,396,680 \$37,046	3,963,040 \$97,368	4,419,360 \$112,170	5,238,800 \$125,453	5,751,740 \$136,712	6,213,800 \$131,453
Cogen Power (PSE) Port Arthur, TX	1,286,000 \$34,787	239,000 \$5,536	428,000 \$10,234	265,000 \$6,355	1,346,000 \$32,890	1,423,000 \$35,778	377,850 \$8,845	1,480,503 \$36,581	1,422,843 \$35,949	1,286,154 \$29,884	572,480 \$13,169	1,475,541 \$30,127
Dow Chemical Plaquemine, LA	16,792,000 \$740,091	4,397,000 \$105,552	7,199,000 \$170,237	11,715,000 \$295,822	5,722,000 \$138,896	11,784,000 \$320,316	6,786,950 \$174,621	14,880,850 \$383,694	10,712,375 \$272,693	12,349,925 \$294,936	9,677,150 \$230,079	5,342,050 \$112,039
Phillips Chemical Orange, TX	- -	- -	- -	- -	- -	- -	1,918,000 \$47,931	3,786,464 \$141,401	3,359,312 \$85,424	2,668,290 \$62,406	3,185,774 \$73,508	1,284,911 \$261,131
Vulcan Chemicals Geismar, LA	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	154,608 \$3,691	9,005,328 \$190,685
<b>Monthly Totals</b>	<b>24,160,000 \$951,345</b>	<b>9,225,000 \$228,242</b>	<b>12,259,000 \$291,742</b>	<b>18,145,000 \$461,368</b>	<b>11,883,000 \$290,323</b>	<b>15,849,000 \$436,039</b>	<b>15,546,612 \$400,247</b>	<b>29,976,489 \$811,504</b>	<b>25,769,998 \$658,324</b>	<b>28,199,908 \$673,620</b>	<b>25,705,407 \$607,932</b>	<b>29,052,632 \$846,908</b>
<b>Average Cents/KWH</b>	<b>3.94</b>	<b>2.47</b>	<b>2.38</b>	<b>2.54</b>	<b>2.44</b>	<b>2.75</b>	<b>2.57</b>	<b>2.71</b>	<b>2.39</b>	<b>2.36</b>	<b>2.36</b>	<b>2.92</b>
									<b>Annual Totals</b>	<b>KWH</b>	<b>Cost</b>	<b>Average Cents/KWH</b>
										<b>245,771,444</b>	<b>\$8,657,594</b>	<b>2.71</b>

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Source: Louisiana Public Service Commission

**TABLE 8B (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1986**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric	3,195,105	3,713,880	4,454,189	4,483,374	6,245,172	6,495,804	6,417,687	6,412,536	5,904,240	6,996,297	6,452,412	5,918,697
Lake Charles, LA	\$64,261	\$75,190	\$84,284	\$79,546	\$98,666	\$94,816	\$98,660	\$99,861	\$92,072	\$109,529	\$101,209	\$92,120
BASF Wyandotte Geismar, LA	5,799,940 \$115,787	4,451,440 \$110,131	6,644,240 \$125,974	6,134,400 \$108,609	4,578,840 \$71,813	2,214,740 \$32,270	3,503,840 \$55,436	2,663,520 \$41,028	3,833,140 \$59,289	5,109,580 \$80,141	3,652,480 \$57,146	4,000,280 \$62,188
Cogen Power (PSE) Port Arthur, TX	1,679,910 \$32,597	1,217,328 \$23,653	1,082,666 \$19,760	1,721,439 \$29,361	1,529,727 \$23,195	1,245,198 \$17,361	1,408,368 \$21,161	1,175,031 \$17,439	1,332,462 \$19,937	1,563,909 \$23,388	1,239,001 \$18,509	1,313,616 \$19,533
Crown Zellerbach St. Francisville, LA	665,260 \$13,824	1,949,259 \$39,997	2,702,910 \$51,983	803,097 \$14,560	984,996 \$16,187	1,359,081 \$20,156	939,465 \$14,139	770,994 \$12,317	995,833 \$15,759	1,581,968 \$25,204	1,427,548 \$22,196	9,646,335 \$2,894
Dow Chemical Plaquemine, LA	7,054,274 \$141,473	8,603,800 \$176,362	5,977,000 \$114,083	6,189,950 \$110,078	13,803,050 \$220,722	5,022,200 \$73,759	6,823,550 \$106,491	10,646,800 \$166,471	10,621,050 \$162,200	11,469,200 \$180,300	22,303,100 \$349,921	14,783,550 \$229,407
J.M. Huber Orange, TX	-	-	-	-	668,470 \$10,365	2,319,953 \$32,447	1,394,838 \$21,330	2,648,274 \$40,119	4,126,794 \$61,547	2,202,293 \$32,939	1,280,705 \$19,104	867,211 \$12,941
Monochem Geismar, LA	-	-	-	-	-	-	-	-	-	-	17,068,685 \$266,613	23,896,561 \$371,114
Phillips Chemical Orange, TX	181,007 \$4,523	0 \$0	811,157 \$14,824	2,655,255 \$45,406	132,792 \$1,985	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
Texaco USA Port Arthur, TX	-	-	-	-	-	228,665 \$3,217	221,307 \$3,258	371,430 \$5,434	1,959,996 \$29,550	2,767,686 \$40,729	3,812,133 \$56,625	5,992,347 \$88,504
Union Texas Petroleum Lafayette, LA	596 \$13	59,096 \$1,225	73,981 \$1,403	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0
Vulcan Chemicals Geismar, LA	23,422,696 \$476,896	12,742,080 \$257,559	10,899,155 \$206,559	9,452,304 \$167,450	7,686,672 \$121,225	8,438,976 \$122,888	8,637,216 \$133,721	7,343,780 \$114,029	5,692,992 \$88,383	8,108,880 \$126,495	17,473,888 \$280,171	13,969,120 \$218,015
<b>Monthly Totals</b>	<b>41,938,408</b> <b>\$849,374</b>	<b>32,736,683</b> <b>\$684,117</b>	<b>32,645,298</b> <b>\$618,870</b>	<b>31,439,819</b> <b>\$555,010</b>	<b>35,629,719</b> <b>\$564,158</b>	<b>27,324,617</b> <b>\$396,914</b>	<b>29,346,271</b> <b>\$454,196</b>	<b>32,032,345</b> <b>\$496,698</b>	<b>34,466,507</b> <b>\$528,737</b>	<b>39,799,811</b> <b>\$618,725</b>	<b>74,709,950</b> <b>\$1,171,494</b>	<b>80,407,717</b> <b>\$1,096,716</b>
<b>Average</b>	<b>2.03</b>	<b>2.09</b>	<b>1.90</b>	<b>1.77</b>	<b>1.58</b>	<b>1.45</b>	<b>1.55</b>	<b>1.55</b>	<b>1.53</b>	<b>1.55</b>	<b>1.57</b>	<b>1.36</b>
<b>Cents/KWH</b>												
<b>KWH</b>												<b>492,477,145</b>
<b>Cost</b>												<b>\$8,035,009</b>
<b>Average</b>												<b>1.63</b>
<b>Cents/KWH</b>												

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Source: Louisiana Public Service Commission

**TABLE 8B (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1987**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric Lake Charles, LA	5,967,496 \$93,240	5,606,394 \$90,940	6,898,068 \$111,385	3,690,912 \$57,075	6,422,292 \$99,172	6,391,050 \$99,199	6,469,198 \$97,495	6,051,546 \$85,813	7,019,268 \$99,532	5,655,606 \$80,899	7,224,252 \$259,495	7,269,978 \$261,138
BASF Wyandotte Geismar, LA	3,284,760 \$51,225	4,102,360 \$67,208	4,760,480 \$77,375	4,797,000 \$72,591	2,575,480 \$39,504	2,575,600 \$39,743	1,562,540 \$23,438	1,852,494 \$26,093	2,361,460 \$33,666	4,453,606 \$63,692	4,077,966 \$62,849	4,917,780 \$86,010
Cogen Power (PSE) Port Arthur, TX	1,124,383 \$16,852	1,429,626 \$22,273	1,100,853 \$17,339	808,656 \$12,181	1,741,004 \$25,972	604,869 \$9,085	61,578 \$904	99,579 \$1,316	694,720 \$9,527	1,357,060 \$18,753	981,666 \$14,656	950,568 \$16,003
Crown Zellerbach, St. Francisville, LA	4,557,213 \$71,344	1,352,709 \$21,260	2,088,218 \$33,949	2,197,746 \$33,710	1,529,334 \$24,175	2,194,839 \$34,559	1,642,742 \$25,317	672,993 \$10,016	1,060,042 \$15,298	1,969,612 \$28,609	2,140,542 \$33,385	1,621,736 \$28,062
Dow Chemical Plaquemine, LA	13,569,850 \$209,794	8,104,550 \$132,861	13,400,050 \$217,061	25,095,825 \$382,500	17,351,050 \$266,822	7,186,425 \$112,361	7,532,900 \$111,946	9,020,400 \$127,058	7,755,400 \$111,487	18,811,700 \$267,752	21,283,000 \$328,909	25,650,725 \$448,145
E. I. Dupont Orange, TX	- -	- -	- -	668,775 \$10,438	381,675 \$5,802	76,629 \$1,157	0 \$0	0 \$0	0 \$0	103,666 \$1,424	112,999 \$1,724	479,482 \$8,006
J.M. Huber Orange, TX	1,250,505 \$18,929	1,357,461 \$21,210	1,743,960 \$27,189	1,800,246 \$26,643	547,377 \$8,260	1,941,543 \$28,997	1,261,322 \$18,434	800,036 \$10,907	898,191 \$12,793	1,078,351 \$14,896	865,131 \$12,947	1,209,065 \$20,494
Monochem Geismar, LA	17,660,897 \$275,507	12,619,965 \$199,016	2,310,363 \$39,041	8,940,285 \$135,852	9,792,906 \$149,774	10,561,320 \$163,837	6,170,057 \$91,780	4,726,915 \$66,575	5,393,678 \$75,929	10,095,290 \$144,262	8,678,399 \$133,894	10,140,132 \$176,362
Texaco USA Port Arthur, TX	2,413,242 \$36,823	10,139,238 \$159,917	1,347,642 \$21,175	63,318 \$968	7,334,376 \$109,212	2,598,108 \$39,120	247,680 \$3,556	2,824,360 \$38,661	269,000 \$3,550	6,778,128 \$93,709	13,034,622 \$194,895	11,461,446 \$194,462
Vulcan Chemicals Geismar, LA	13,386,128 \$209,663	12,241,152 \$196,343	10,579,008 \$171,396	8,086,512 \$120,490	7,895,608 \$120,513	4,537,824 \$70,301	2,378,004 \$35,566	2,248,704 \$32,604	3,246,756 \$46,445	4,545,456 \$64,574	5,828,544 \$89,521	4,636,008 \$80,854
<b>Monthly Totals</b>	<b>63,224,274 \$983,377</b>	<b>56,953,475 \$911,028</b>	<b>44,208,642 \$715,910</b>	<b>56,149,275 \$852,448</b>	<b>55,511,304 \$849,206</b>	<b>38,668,207 \$598,359</b>	<b>27,326,021 \$408,436</b>	<b>28,297,047 \$399,043</b>	<b>28,756,515 \$408,227</b>	<b>54,868,695 \$778,570</b>	<b>64,227,121 \$1,132,275</b>	<b>68,337,540 \$1,319,536</b>
<b>Average Cents/KWH</b>	<b>1.56</b>	<b>1.60</b>	<b>1.62</b>	<b>1.52</b>	<b>1.53</b>	<b>1.55</b>	<b>1.49</b>	<b>1.41</b>	<b>1.42</b>	<b>1.42</b>	<b>1.76</b>	<b>1.93</b>
<b>KWH</b>	<b>586,528,116</b>											
<b>Cost</b>	<b>\$9,356,415</b>											
<b>Average Cents/KWH</b>	<b>1.60</b>											

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Source: Louisiana Public Service Commission

DNR Technology Assessment Division

**TABLE 8B (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1988**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric Lake Charles, LA	7,223,474 \$259,467	6,662,721 \$239,325	5,899,737 \$211,919	6,913,368 \$247,311	6,913,368 \$246,328	6,830,403 \$245,348	3,291,684 \$118,237	7,462,513 \$268,053	6,926,194 \$248,789	6,599,168 \$237,042	6,322,434 \$227,102	6,775,588 \$243,379
BASF Wyandotte Geismar, LA	5,751,721 \$106,422	4,866,864 \$89,643	4,146,848 \$71,656	2,871,692 \$43,631	3,126,114 \$45,201	3,870,284 \$57,759	943,842 \$14,620	537,520 \$8,945	206,840 \$3,531	532,296 \$9,081	4,117,896 \$79,716	4,432,728 \$89,644
Cogen Power (PSE) Port Arthur, TX	1,268,526 \$22,768	558,286 \$9,935	566,102 \$9,458	420,552 \$6,249	716,028 \$10,064	533,868 \$7,740	543,342 \$8,337	632,316 \$10,072	176,667 \$2,973	811,581 \$14,212	560,458 \$10,585	373,578 \$7,312
Crown Zellerbach St. Francisville, LA	785,212 \$14,496	480,888 \$8,877	776,986 \$13,625	653,540 \$9,699	795,492 \$11,750	387,810 \$5,850	248,436 \$4,188	437,860 \$7,334	190,010 \$3,361	435,518 \$7,907	525,582 \$9,851	1,102,178 \$22,239
Dow Chemical Plaquemine, LA	15,526,250 \$287,418	3,593,100 \$66,651	19,522,850 \$334,230	12,215,360 \$183,876	8,953,700 \$129,223	1,722,500 \$26,669	1,846,000 \$31,315	1,235,800 \$21,083	2,142,920 \$37,911	4,928,375 \$86,867	1,607,600 \$32,546	8,550,158 \$171,062
E.I. DuPont Orange, TX	457,958 \$8,332	218,296 \$4,004	786,346 \$13,557	0 \$68	0 \$0	0 \$0	22,700 \$356	52,050 \$823	11,000 \$181	387,950 \$6,509	2,129,990 \$40,633	2,835,400 \$56,318
J.M. Huber Orange, TX	716,715 \$12,640	1,199,454 \$21,444	1,719,721 \$28,765	2,356,738 \$34,381	1,982,486 \$27,811	2,307,246 \$33,516	1,075,902 \$16,459	1,492,182 \$24,033	1,531,209 \$25,941	1,875,770 \$32,933	2,357,459 \$44,750	1,754,561 \$34,338
Monochem Geismar, LA	17,824,871 \$329,809	10,522,835 \$193,824	10,522,133 \$182,833	6,961,331 \$106,418	9,598,753 \$139,137	4,482,548 \$66,177	5,938,073 \$93,136	4,805,500 \$79,624	5,340,405 \$92,839	7,918,976 \$141,374	10,494,027 \$204,456	11,397,800 \$230,660
Nelson Ind. Steam Co. Westlake, LA	-	-	-	-	-	-	-	-	230,311 \$3,876	4,526,928 \$78,717	3,687,151 \$69,884	3,768,517 \$75,008
Texaco USA Port Arthur, TX	16,207,896 \$291,907	17,148,428 \$307,671	13,126,116 \$220,580	7,018,952 \$103,488	3,848,652 \$153,360	5,528,152 \$80,311	6,150,522 \$93,874	4,899,972 \$77,655	4,285,424 \$72,280	6,586,224 \$115,704	4,769,630 \$90,150	3,045,896 \$61,729
Vulcan Chemicals Geismar, LA	5,151,112 \$95,395	4,014,373 \$73,739	2,038,295 \$35,090	1,760,120 \$26,926	2,929,832 \$42,240	2,377,884 \$35,599	2,026,560 \$33,051	2,492,981 \$41,122	2,765,783 \$50,227	1,458,432 \$25,663	3,549,812 \$68,778	1,719,884 \$35,009
<b>Monthly Totals</b>	<b>70,913,735</b> <b>\$1,428,854</b>	<b>49,265,245</b> <b>\$1,015,113</b>	<b>59,105,194</b> <b>\$1,121,713</b>	<b>41,143,333</b> <b>\$762,047</b>	<b>38,864,425</b> <b>\$807,114</b>	<b>28,040,695</b> <b>\$558,969</b>	<b>22,087,061</b> <b>\$413,573</b>	<b>24,048,674</b> <b>\$538,744</b>	<b>23,806,763</b> <b>\$541,909</b>	<b>36,061,218</b> <b>\$756,009</b>	<b>40,122,039</b> <b>\$878,451</b>	<b>45,756,288</b> <b>\$1,026,698</b>
<b>Average</b>	<b>2.01</b>	<b>2.06</b>	<b>1.90</b>	<b>1.85</b>	<b>2.08</b>	<b>1.99</b>	<b>1.87</b>	<b>2.24</b>	<b>2.28</b>	<b>2.10</b>	<b>2.19</b>	<b>2.24</b>
<b>Centis/KWH</b>												
<b>KWH</b>												
<b>Cost</b>												
<b>Annual Totals</b>												
<b>DNR Technology Assessment Division</b>												
<b>Annual Totals</b>												
<b>Cost</b>												
<b>Average Centis/KWH</b>												

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Source: Louisiana Public Service Commission



**TABLE 8B (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1989**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric	7,577,733	6,418,668	7,061,728	6,444,712	6,168,016	5,995,970	3,865,632	1,583,987	6,953,769	6,448,194	7,311,792	5,365,644
Lake Charles, LA	\$272,192	\$230,559	\$253,657	\$231,387	\$221,555	\$215,375	\$138,854	\$56,897	\$249,779	\$231,619	\$262,640	\$192,734
BASF Wyandotte	3,391,242	4,359,786	3,176,120	2,081,540	2,901,240	503,988	640,720	455,912	3,074,088	4,854,250	4,437,324	6,423,480
Geismar, LA	\$68,868	\$74,535	\$51,783	\$34,236	\$51,580	\$8,970	\$10,733	\$7,414	\$47,794	\$73,973	\$77,340	\$129,466
Cogen Power (PSE)	576,987	447,366	499,962	466,404	83,412	256,418	334,724	271,293	171,722	633,171	526,120	716,271
Port Arthur, TX	\$11,440	\$7,369	\$7,847	\$7,514	\$1,460	\$4,530	\$5,551	\$4,351	\$2,709	\$9,334	\$9,016	\$14,020
Crown Zellerbach	724,608	457,586	761,708	746,086	783,370	393,394	373,568	401,524	663,858	479,421	641,466	1,175,328
St. Francisville, LA	\$14,656	\$7,906	\$12,790	\$12,457	\$13,965	\$7,372	\$6,698	\$6,698	\$10,747	\$7,264	\$11,330	\$23,894
Dow Chemical	7,281,450	15,592,700	6,923,450	11,113,750	6,302,200	3,512,035	3,709,470	5,998,070	4,323,850	10,899,400	6,437,400	14,567,500
Plaquemine, LA	\$149,003	\$265,323	\$111,949	\$183,761	\$112,599	\$63,758	\$63,710	\$98,615	\$68,107	\$169,096	\$112,071	\$297,452
E.I. Dupont	18,939	379,171	17,250	0	0	3,000	0	2,500	50,792	0	9,350	5,234,726
Orange, TX	\$387	\$6,155	\$268	\$0	\$0	\$50	\$0	\$38	\$827	\$0	\$149	\$116,259
Fina Oil & Chemical	195,608	1,004	1,423,539	0	0	0	749,266	5,908	683,494	0	206,140	3,388
Port Arthur, TX	\$3,957	\$17	\$22,765	\$0	\$0	\$0	\$12,390	\$101	\$10,250	\$0	\$3,490	\$82
J.M. Huber	2,135,733	2,019,022	1,770,721	1,058,694	2,051,122	2,181,961	2,684,530	1,509,998	1,591,292	2,585,266	3,338,130	2,139,303
Orange, TX	\$42,485	\$33,693	\$28,120	\$17,028	\$35,703	\$38,600	\$44,828	\$24,125	\$24,700	\$38,195	\$56,864	\$41,499
Monochem	9,283,024	6,386,151	6,785,336	5,623,940	3,754,652	5,063,225	1,088,422	4,233,565	5,295,340	6,253,704	7,534,435	13,872,657
Geismar, LA	\$188,872	\$109,091	\$111,074	\$92,730	\$65,830	\$91,159	\$18,579	\$68,759	\$82,686	\$95,000	\$129,758	\$277,756
Nelson Ind. Steam Co.	4,008,500	2,360,272	1,274,134	511,841	161,048	50,440	75,684	17,072	184,249	64,114	202,680	1,301,669
Westlake, LA	\$79,369	\$39,304	\$20,208	\$8,206	\$2,786	\$895	\$1,260	\$276	\$2,779	\$939	\$3,530	\$30,998
Star/Texaco	2,178,456	14,623,950	8,993,066	3,966,930	4,018,280	2,918,260	735,176	3,323,340	9,113,304	2,298,588	1,356,448	7,588,228
Port Arthur, TX	\$43,083	\$244,781	\$142,747	\$64,026	\$69,751	\$51,131	\$12,210	\$53,046	\$139,003	\$34,581	\$23,150	\$146,301
Vulcan Chemicals	1,844,448	803,952	3,508,616	1,865,792	11,893,408	3,312,536	1,937,100	1,196,276	1,480,704	2,319,968	1,987,352	3,828,474
Geismar, LA	\$38,149	\$13,701	\$57,146	\$30,796	\$208,698	\$60,865	\$33,589	\$19,446	\$23,369	\$35,189	\$34,863	\$79,429
<b>Monthly</b>	<b>39,214,728</b>	<b>53,849,628</b>	<b>42,195,650</b>	<b>33,879,689</b>	<b>38,116,746</b>	<b>24,191,227</b>	<b>16,194,292</b>	<b>18,999,385</b>	<b>33,586,462</b>	<b>36,836,076</b>	<b>33,988,637</b>	<b>62,216,868</b>
<b>Cost</b>	<b>\$912,461</b>	<b>\$1,032,434</b>	<b>\$820,354</b>	<b>\$682,141</b>	<b>\$783,927</b>	<b>\$542,705</b>	<b>\$348,402</b>	<b>\$339,766</b>	<b>\$662,750</b>	<b>\$695,190</b>	<b>\$724,201</b>	<b>\$1,349,890</b>
<b>Average</b>	<b>2.33</b>	<b>1.92</b>	<b>1.94</b>	<b>2.01</b>	<b>2.06</b>	<b>2.24</b>	<b>2.15</b>	<b>1.79</b>	<b>1.97</b>	<b>1.89</b>	<b>2.13</b>	<b>2.17</b>
<b>Cents/KWH</b>												
<b>Annual</b>												
<b>Totals</b>												
<b>KWH</b>												
<b>Cost</b>												
<b>Average</b>												
<b>Cents/KWH</b>												

Note: The GSU system service area includes both Louisiana and Texas cogenerators.

Source: Louisiana Public Service Commission

DNR Technology Assessment Division

**TABLE 8B (Continued)**  
**GULF STATES UTILITIES COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1990**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Agrielectric Lake Charles, LA	7,332,510 \$263,384	5,938,346 \$213,305	6,405,333 \$230,080	7,177,379 \$257,811	6,836,718 \$245,575	6,299,718 \$226,286	4,543,598 \$163,206	7,413,011 \$266,275	6,842,840 \$245,795	7,428,328 \$266,826	6,598,182 \$237,007	7,376,835 \$264,976
BASF Wyandotte Geismar, LA	5,856,232 \$131,514	3,730,132 \$71,601	3,436,517 \$53,556	2,148,870 \$32,619	3,665,508 \$57,366	386,488 \$6,103	222,180 \$3,470	47,832 \$668	572,210 \$8,167	824,006 \$14,528	934,304 \$19,974	2,276,314 \$46,237
Cogen Power (PSE) Port Arthur, TX	145,182 \$3,110	501,656 \$9,391	662,122 \$10,046	0 \$0	525,903 \$8,004	471,530 \$7,405	588,984 \$8,929	551,032 \$7,844	551,106 \$8,044	745,426 \$12,751	457,254 \$9,457	573,228 \$11,283
Crown Zellerbach St. Francisville, LA	704,360 \$15,489	361,208 \$6,928	597,998 \$9,295	1,164,828 \$17,689	526,347 \$8,277	47,052 \$791	102,488 \$1,618	289,206 \$4,390	610,605 \$8,898	515,890 \$8,975	1,299,790 \$28,035	664,800 \$13,722
Dow Chemical Plaquemine, LA	8,036,750 \$178,414	3,360,150 \$63,725	15,776,560 \$246,104	17,773,125 \$270,701	20,908,375 \$325,081	5,609,500 \$88,733	6,561,580 \$104,894	3,225,200 \$47,266	3,242,175 \$49,470	21,144,900 \$369,238	15,419,450 \$330,216	21,512,800 \$447,826
E.I. Dupont Orange, TX	261,865 \$5,672	0 \$0	0 \$0	60,768 \$863	88,352 \$1,332	0 \$0	0 \$0	9,221 \$118	0 \$0	2,467,794 \$42,580	271,249 \$5,359	1,247,250 \$23,995
Exxon Chemical Baton Rouge, LA	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	186,558 \$3,993	2,479,778 \$49,596
Fina Oil & Chemical Port Arthur, TX	0 \$0	0 \$0	5,368 \$79	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	56 \$1	0 \$0
J.M. Huber Orange, TX	856,348 \$19,106	829,570 \$15,486	1,608,124 \$24,049	2,219,528 \$32,693	1,215,045 \$18,493	1,020,133 \$15,963	1,029,570 \$15,681	1,432,465 \$20,169	1,022,494 \$14,989	1,488,386 \$25,389	1,876,114 \$39,188	1,339,124 \$27,726
Monochem Geismar, LA	12,021,452 \$270,636	11,819,907 \$226,486	6,121,417 \$95,116	2,814,705 \$42,910	3,643,241 \$56,792	69,999 \$1,100	163,111 \$2,546	190,120 \$1,747	426,689 \$6,516	3,443,098 \$60,347	4,396,824 \$94,220	647,892 \$13,058
Nelson Ind. Steam Co. Westlake, LA	149,002 \$3,314	0 \$0	761,419 \$11,489	171,489 \$2,473	133,257 \$2,029	7,128 \$112	0 \$0	2,441,671 \$36,050	1,286,102 \$18,368	236,776 \$4,061	1,768,008 \$36,752	126,329 \$2,614
Star Enterprise Port Arthur, TX	8,400,534 \$185,457	4,721,852 \$88,420	8,898,064 \$133,560	7,027,420 \$104,003	1,529,188 \$23,166	303,917 \$4,684	1470 \$22	67,545 \$939	561,486 \$8,340	5,112,212 \$87,533	3,692,930 \$76,878	4,976,820 \$96,417
Vulcan Chemicals Geismar, LA	2,534,600 \$57,467	8,918,624 \$172,165	15,322,944 \$239,346	13,322,552 \$204,539	2,749,296 \$42,783	7,720,500 \$125,371	1,573,472 \$24,857	3,141,002 \$46,229	2,316,540 \$35,105	2,647,798 \$46,470	5,702,666 \$121,897	9,039,330 \$183,542
<b>Monthly Totals</b>	<b>46,298,835 \$1,133,563</b>	<b>40,181,445 \$867,507</b>	<b>59,595,866 \$1,052,720</b>	<b>53,880,664 \$966,301</b>	<b>41,821,230 \$788,898</b>	<b>21,935,965 \$476,548</b>	<b>14,786,453 \$325,223</b>	<b>18,748,305 \$431,695</b>	<b>17,432,247 \$403,692</b>	<b>46,054,614 \$938,698</b>	<b>42,603,385 \$1,002,977</b>	<b>52,260,500 \$1,180,992</b>
<b>Average</b>	<b>2.45</b>	<b>2.16</b>	<b>1.77</b>	<b>1.79</b>	<b>1.89</b>	<b>2.17</b>	<b>2.20</b>	<b>2.30</b>	<b>2.32</b>	<b>2.04</b>	<b>2.35</b>	<b>2.26</b>
<b>Cents/KWH</b>												
<b>Annual Totals</b>	<b>DNR Technology Assessment Division</b>											
<b>KWH</b>												<b>455,599,509</b>
<b>Cost</b>												<b>\$9,568,814</b>
<b>Average</b>												<b>2.10</b>

Note: The GCU system service area includes both Louisiana and Texas cogenerators.

Source: Louisiana Public Service Commission



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**TABLE 9  
CENTRAL LOUISIANA ELECTRIC COMPANY, INC.  
COGENERATION POWER PURCHASES (KWH) AND COST  
1985**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Jeanerette Sugar Mill	0	4,000	0	0	0	0	0	0	0	0	0	12,000
Jeanerette, LA	\$0	\$124	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$316
Average Cents/KWH	0.00	3.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63
<b>Annual Totals</b>												
	<b>KWH</b>											
	<b>Cost</b>											
	<b>Average Cents/KWH</b>											
	<b>16,000</b>											
	<b>\$440</b>											
	<b>2.75</b>											

**1986**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Jeanerette Sugar Mill	0	0	0	0	0	0	0	0	0	10,000	46,000	50,000
Jeanerette, LA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$230	\$1,058	\$1,142
Average Cents/KWH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30	2.30	2.28
<b>Annual Totals</b>												
	<b>KWH</b>											
	<b>Cost</b>											
	<b>Average Cents/KWH</b>											
	<b>106,000</b>											
	<b>\$2,430</b>											
	<b>2.29</b>											

**1987**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Jeanerette Sugar Mill	0	0	0	0	0	0	0	0	0	34,000	56,000	148,000
Jeanerette, LA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$612	\$1,008	\$2,664
Average Cents/KWH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.80	1.80	1.80
<b>Annual Totals</b>												
	<b>KWH</b>											
	<b>Cost</b>											
	<b>Average Cents/KWH</b>											
	<b>238,000</b>											
	<b>\$4,284</b>											
	<b>1.80</b>											

**1988**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Jeanerette Sugar Mill	0	0	0	0	0	0	0	0	0	28,000	126,000	42,000
Jeanerette, LA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$507	\$2,281	\$760
Average Cents/KWH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81	1.81	1.81
<b>Annual Totals</b>												
	<b>KWH</b>											
	<b>Cost</b>											
	<b>Average Cents/KWH</b>											
	<b>196,000</b>											
	<b>\$3,548</b>											
	<b>1.81</b>											

Source: Louisiana Public Service Commission

**TABLE 9 (Continued)**  
**CENTRAL LOUISIANA ELECTRIC COMPANY, INC.**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1989**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Jeanerette Sugar Mill	0	0	0	0	0	0	0	0	0	27,000	74,000	55,000
Jeanerette, LA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$505	\$1,384	\$1,029
Average Cents/KWH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	1.87	1.87
<b>Annual Totals</b>												
												<b>KWH</b>
												<b>Cost</b>
												<b>Average Cents/KWH</b>
												156,000
												\$2,918
												1.87

**1990**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Jeanerette Sugar Mill	0	0	0	0	0	0	0	0	0	0	62,000	11,000
Jeanerette, LA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,259.00	\$223
Average Cents/KWH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.03	2.03
<b>Annual Totals</b>												
												<b>KWH</b>
												<b>Cost</b>
												<b>Average Cents/KWH</b>
												73,000
												\$1,482
												2.03

**1991**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Jeanerette Sugar Mill	0	0	0	0	0	0	0	0	0	20,530	0	0
Jeanerette, LA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$455	\$0	\$0
Average Cents/KWH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.22	0.00	0.00
<b>Annual Totals</b>												
												<b>KWH</b>
												<b>Cost</b>
												<b>Average Cents/KWH</b>
												20,530
												\$455
												2.22

Source: Louisiana Public Service Commission

**TABLE 10**  
**LOUISIANA POWER AND LIGHT COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1985**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Kaiser	10,891,700	9,219,800	8,529,400	8,236,350	3,039,350	10,304,500	9,945,050	9,849,150	7,286,350	8,716,850	9,485,600	3,913,100
Chalmette, LA	\$325,803	\$308,034	\$286,630	\$276,033	\$97,475	\$324,849	\$302,916	\$318,305	\$230,271	\$309,588	\$310,255	\$96,959
Average Cents/KWH	2.99	3.34	3.36	3.35	3.21	3.15	3.05	3.23	3.16	3.55	3.27	2.48
	Annual Totals											
	KWH											
	Cost											
	Average Cents/KWH											
	99,417,200											
	\$3,187,118											
	3.21											

**1986**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Kaiser	8,734,700	7,429,700	7,486,100	10,630,700	5,077,250	9,337,550	10,079,250	9,518,000	5,620,200	6,904,150	6,374,500	4,088,800
Chalmette, LA	\$156,604	\$122,835	\$115,773	\$183,146	\$89,558	\$153,164	\$165,955	\$132,786	\$80,178	\$110,034	\$109,788	\$66,472
Average Cents/KWH	1.79	1.65	1.55	1.72	1.76	1.64	1.65	1.40	1.43	1.59	1.72	1.63
	Annual Totals											
	KWH											
	Cost											
	Average Cents/KWH											
	91,280,900											
	\$1,486,293											
	1.63											

**1987**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Kaiser	7,863,850	10,617,950	9,634,950	10,159,000	5,401,900	8,319,000	10,146,800	9,655,000	6,988,950	8,662,450	8,044,600	8,313,600
Chalmette, LA	\$132,380	\$173,752	\$152,695	\$168,934	\$88,067	\$137,796	\$146,388	\$160,823	\$148,003	\$138,443	\$120,323	\$127,231
Average Cents/KWH	1.68	1.64	1.58	1.66	1.63	1.66	1.44	1.67	1.65	1.60	1.50	1.53
	Annual Totals											
	KWH											
	Cost											
	Average Cents/KWH											
	105,808,050											
	\$1,694,835											
	1.60											

**TABLE 10 (Continued)**  
**LOUISIANA POWER AND LIGHT COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1988**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Freeport - McMoran	82,110	134,501	21,860	173,319	156,401	436,940	70,021	83,358	9,819	154,426	268,531	617,991	
Uncle Sam, LA	\$1,358	\$2,229	\$391	\$2,957	\$2,533	\$7,101	\$1,164	\$1,366	\$146	\$2,662	\$4,372	\$9,765	
Kaiser	8,037,350	9,480,000	8,594,000	2,108,100	6,820,100	9,407,700	9,211,000	9,350,900	8,223,650	8,146,650	7,033,500	8,639,850	
Chalmette, LA	\$135,743	\$160,951	\$145,961	\$34,436	\$110,042	\$153,026	\$141,389	\$144,845	\$152,212	\$139,438	\$114,351	\$137,477	
KWH	8,119,460	9,614,501	8,615,860	2,281,419	6,976,501	9,844,640	9,281,021	9,434,258	8,233,469	8,301,076	7,302,031	9,257,841	
Cost	\$137,101	\$163,180	\$146,352	\$37,393	\$112,575	\$160,127	\$142,553	\$146,211	\$152,358	\$142,100	\$118,723	\$147,242	
Average Cents/KWH	1.69	1.70	1.70	1.64	1.61	1.63	1.54	1.55	1.85	1.71	1.63	1.59	
Monthly Totals												KWH	97,262,077
												Annual Cost	\$1,605,915
												Average Cents/KWH	1.65

**1989**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Freeport - McMoran	646,810	560,865	416,670	319,242	132,156	447,960	278,010	70,177	364,883	399,975	798,441	1,119,409	
Uncle Sam, LA	\$9,958	\$9,289	\$7,152	\$5,339	\$2,743	\$9,005	\$4,890	\$1,182	\$6,387	\$6,594	\$12,982	\$18,744	
Kaiser	8,898,300	7,706,700	8,649,500	9,725,700	8,547,650	9,560,000	20,350	0	8,910,350	11,072,100	9,951,200	7,875,500	
Chalmette, LA	\$136,131	\$128,478	\$146,566	\$165,726	\$165,782	\$194,364	\$440	\$0	\$157,312	\$182,568	\$159,856	\$131,576	
KWH	9,543,110	8,267,565	9,066,170	10,044,942	8,679,806	10,007,960	298,360	70,177	9,275,233	11,472,075	10,749,641	8,994,909	
Cost	\$146,089	\$137,767	\$153,718	\$171,065	\$168,525	\$203,369	\$5,330	\$1,182	\$163,699	\$189,162	\$172,838	\$150,320	
Average Cents/KWH	1.53	1.67	1.70	1.70	1.94	2.03	1.79	1.68	1.76	1.65	1.61	1.67	
Monthly Totals												KWH	98,489,948
												Annual Cost	\$1,663,064
												Average Cents/KWH	1.72



**TABLE 10 (Continued)**  
**LOUISIANA POWER AND LIGHT COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1990**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
B.P. Oil, Inc.	-	670,320	2,720,550	123,000	44,660	2,580,480	6,009,430	7,471,240	2,961,280	2,897,720	5,463,990	7,106,470						
Alliance, LA	-	\$11,574	\$45,207	\$1,801	\$740	\$41,484	\$101,385	\$123,410	\$51,739	\$47,830	\$86,867	\$121,563						
Calcliner Industries, Inc.	7,679,000	11,293,700	8,380,900	9,421,450	4,449,250	11,309,950	11,361,900	7,318,750	7,263,550	7,129,500	7,646,000	8,437,300						
Chalmette, LA	\$142,223	\$194,150	\$139,299	\$139,042	\$67,473	\$178,053	\$189,732	\$120,042	\$128,391	\$121,415	\$122,275	\$145,281						
Freeport-McMoran	919,784	62,624	698,206	869,577	468,477	788,396	75,369	34,228	79,644	409,720	318,285	269,754						
Uncle Sam, LA	\$16,788	\$1,099	\$12,113	\$12,676	\$7,471	\$12,802	\$1,287	\$580	\$1,572	\$7,225	\$5,650	\$4,739						
<b>KWH</b>	8,598,784	12,026,644	11,799,656	10,414,027	4,962,987	14,678,826	17,446,699	14,824,218	10,304,474	10,436,940	13,428,275	15,813,524						
<b>Cost</b>	\$159,011	\$206,823	\$196,619	\$153,519	\$75,684	\$232,339	\$292,404	\$244,032	\$181,702	\$176,470	\$214,792	\$271,583						
<b>Average Cents/KWH</b>	1.85	1.72	1.67	1.47	1.53	1.58	1.68	1.65	1.76	1.69	1.60	1.72						
<b>Annual Totals</b>	<table border="1"> <tr> <td><b>KWH</b></td> <td>144,734,454</td> </tr> <tr> <td><b>Cost</b></td> <td>\$2,404,978</td> </tr> <tr> <td><b>Average Cents/KWH</b></td> <td>1.66</td> </tr> </table>												<b>KWH</b>	144,734,454	<b>Cost</b>	\$2,404,978	<b>Average Cents/KWH</b>	1.66
<b>KWH</b>	144,734,454																	
<b>Cost</b>	\$2,404,978																	
<b>Average Cents/KWH</b>	1.66																	

\*Formerly Kaiser

**1991**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER						
B.P. Oil, Inc.	2,615,970	4,666,830	6,823,250	6,398,840	4,609,500	3,331,020	1,783,950	2,319,660	1,771,210	1,599,990	2,269,960	121,100						
Alliance, LA	\$43,671	\$74,953	\$104,491	\$85,853	\$62,620	\$53,772	\$28,759	\$37,868	\$27,871	\$25,596	\$30,462	\$1,541						
Calcliner Industries, Inc.	8,433,700	8,558,400	9,357,850	11,687,600	10,733,250	10,131,450	7,785,750	1,636,100	12,564,500	4,479,200	10,754,100	9,579,900						
Chalmette, LA	\$140,109	\$138,842	\$145,814	\$159,886	\$143,535	\$170,836	\$125,109	\$25,339	\$194,284	\$70,305	\$141,029	\$129,012						
Freeport-McMoran	223,893	36,827	72,789	155,082	374,980	485,695	256,216	258,633	1,247	129,567	597,506	728,030						
Uncle Sam, LA	\$3,473	\$635	\$1,195	\$2,333	\$4,968	\$7,829	\$4,268	\$4,384	\$19	\$2,175	\$7,956	\$9,981						
<b>KWH</b>	11,273,553	13,262,057	16,253,889	18,241,522	15,717,730	13,948,165	9,825,916	4,214,393	14,336,957	6,208,757	13,621,568	10,429,030						
<b>Cost</b>	\$187,253	\$214,430	\$251,500	\$248,072	\$211,143	\$232,437	\$158,136	\$67,589	\$222,174	\$98,076	\$179,447	\$140,534						
<b>Average Cents/KWH</b>	1.66	1.62	1.55	1.36	1.34	1.67	1.61	1.60	1.55	1.58	1.32	1.35						
<b>Annual Totals</b>	<table border="1"> <tr> <td><b>KWH</b></td> <td>147,339,535</td> </tr> <tr> <td><b>Cost</b></td> <td>\$2,210,791</td> </tr> <tr> <td><b>Average Cents/KWH</b></td> <td>1.50</td> </tr> </table>												<b>KWH</b>	147,339,535	<b>Cost</b>	\$2,210,791	<b>Average Cents/KWH</b>	1.50
<b>KWH</b>	147,339,535																	
<b>Cost</b>	\$2,210,791																	
<b>Average Cents/KWH</b>	1.50																	

Source: Louisiana Public Service Commission

DNR Technology Assessment Division

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**TABLE 11  
NEW ORLEANS PUBLIC SERVICE INC.  
COGENERATION POWER PURCHASES (KWH) AND COST  
1985**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Air Products	1,108,338	397,698	93,828	1,206,870	144,438	3,000	0	1,000	34,000	10,000	21,000	58,000
New Orleans, LA	\$32,995	\$11,939	\$2,659	\$35,144	\$4,293	\$56	\$0	\$15	\$546	\$160	\$357	\$1,076
Average Cents/KWH	2.98	3.00	2.83	2.91	2.97	1.87	0.00	1.50	1.61	1.60	1.70	1.86
												KWH
												3,076,172
												Cost
												\$69,240
												Average Cents/KWH
												2.90

**1986**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Air Products	88,000	1,263,000	224,000	16,000	50,000	38,000	13,000	0	13,000	0	945,000	820,000
New Orleans, LA	\$1,482	\$19,426	\$4,005	\$261	\$819	\$680	\$181	\$0	\$211	\$0	\$13,095	\$13,298
Average Cents/KWH	1.68	1.54	1.79	1.63	1.64	1.79	1.39	0.00	1.62	0.00	1.55	1.62
												KWH
												3,370,000
												Cost
												\$53,456
												Average Cents/KWH
												1.59

**1987**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Air Products	366,000	85,000	66,000	29,000	48,000	602,000	188,000	221,000	520,000	369,000	363,000	222,000
New Orleans, LA	\$5,821	\$1,334	\$1,178	\$463	\$744	\$9,035	\$3,187	\$3,784	\$7,773	\$5,377	\$5,494	\$3,756
Average Cents/KWH	1.59	1.57	1.78	1.60	1.55	1.50	1.70	1.71	1.49	1.46	1.51	1.69
												KWH
												3,079,000
												Cost
												\$47,946
												Average Cents/KWH
												1.56

**1988**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Air Products	383,000	232,000	106,000	165,000	187,000	53,000	108,000	0	34,000	153,000	67,000	284,000
New Orleans, LA	\$7,053	\$3,872	\$1,665	\$2,655	\$3,016	\$775	\$1,873	\$0	\$615	\$2,396	\$1,058	\$4,354
Average Cents/KWH	1.84	1.67	1.57	1.61	1.61	1.46	1.73	0.00	1.81	1.57	1.58	1.53
												KWH
												1,772,000
												Cost
												\$29,332
												Average Cents/KWH
												1.66

DNR Technology Assessment Division

Source: Louisiana Public Service Commission

**TABLE 11 (Continued)  
NEW ORLEANS PUBLIC SERVICE INC.  
COGENERATION POWER PURCHASES (KWH) AND COST  
1989**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER								
Air Products	102,000	112,000	5,000	59,000	1,000	0	0	2,000	0	24,000	95,000	61,000								
New Orleans, LA	\$1,693	\$1,914	\$83	\$1,257	\$19	\$0	\$0	\$35	\$0	\$377	\$1,573	\$1,001								
Average Cents/KWH	1.66	1.71	1.66	2.13	1.90	0.00	0.00	1.75	0.00	1.57	1.66	1.64								
	<table border="1"> <thead> <tr> <th>Annual Totals</th> <th>KWH</th> </tr> </thead> <tbody> <tr> <td></td> <td>461,000</td> </tr> <tr> <th>Cost</th> <td>\$7,952</td> </tr> <tr> <th>Average Cents/KWH</th> <td>1.72</td> </tr> </tbody> </table>												Annual Totals	KWH		461,000	Cost	\$7,952	Average Cents/KWH	1.72
Annual Totals	KWH																			
	461,000																			
Cost	\$7,952																			
Average Cents/KWH	1.72																			

**1990**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER								
Air Products	0	0	10,000	16,000	0	0	112,000	0	3,000	0	0	6,000								
New Orleans, LA	\$0	\$0	\$153	\$265	\$0	\$0	\$2,148	\$0	\$68	\$0	\$0.00	\$99								
Average Cents/KWH	0.00	0.00	1.53	1.66	0.00	0.00	1.92	0.00	2.27	0.00	0.00	1.65								
	<table border="1"> <thead> <tr> <th>Annual Totals</th> <th>KWH</th> </tr> </thead> <tbody> <tr> <td></td> <td>147,000</td> </tr> <tr> <th>Cost</th> <td>\$2,733</td> </tr> <tr> <th>Average Cents/KWH</th> <td>1.86</td> </tr> </tbody> </table>												Annual Totals	KWH		147,000	Cost	\$2,733	Average Cents/KWH	1.86
Annual Totals	KWH																			
	147,000																			
Cost	\$2,733																			
Average Cents/KWH	1.86																			

**1991**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER								
Air Products	28,000	0	17,000	19,000	92,000	17,000	9,000	1,000	0	11,000	24,000	18,000								
New Orleans, LA	\$475	\$0	\$253	\$325	\$1,653	\$299	\$148	\$16	\$0	\$156	\$326	\$174								
Average Cents/KWH	1.70	0.00	1.49	1.71	1.80	1.76	1.64	1.60	0.00	1.42	1.36	0.97								
	<table border="1"> <thead> <tr> <th>Annual Totals</th> <th>KWH</th> </tr> </thead> <tbody> <tr> <td></td> <td>236,000</td> </tr> <tr> <th>Cost</th> <td>\$3,825</td> </tr> <tr> <th>Average Cents/KWH</th> <td>1.62</td> </tr> </tbody> </table>												Annual Totals	KWH		236,000	Cost	\$3,825	Average Cents/KWH	1.62
Annual Totals	KWH																			
	236,000																			
Cost	\$3,825																			
Average Cents/KWH	1.62																			

Source: Louisiana Public Service Commission

**TABLE 12**  
**SOUTHWESTERN ELECTRIC POWER COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1985**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Snider Industries	639,562	726,890	668,428	684,667	925,296	637,067	617,868	479,873	695,239	433,643	482,889	579,165
Marshall, TX	\$28,264	\$30,845	\$26,407	\$33,915	\$32,531	\$23,446	\$21,024	\$21,573	\$22,443	\$13,841	\$14,519	\$18,716
Average Cents/KWH	4.42	4.24	3.95	4.95	3.52	3.68	3.40	4.50	3.23	3.19	3.01	3.23
	<b>Annual Totals</b>											
												<b>KWH</b>
												<b>Cost</b>
												<b>Average Cents/KWH</b>
												<b>7,570,629</b>
												<b>\$287,524</b>
												<b>3.60</b>

**1986**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Dean Lumber	-	-	-	12,960	7,660	17,987	21,335	18,522	15,660	26,352	26,821	28,256
Gilmer, TX	-	-	-	\$399	\$329	\$759	\$619	\$355	\$425	\$836	\$981	\$981
Snider Industries	323,569	608,562	815,759	977,686	771,471	1,025,745	921,151	1,068,626	981,484	955,702	931,141	754,774
Marshall, TX	\$9,950	\$17,625	\$25,000	\$34,488	\$30,845	\$35,248	\$25,540	\$28,960	\$26,947	\$31,034	\$33,728	\$26,768
KWH	323,569	608,562	815,759	990,646	779,151	1,043,732	942,486	1,107,148	997,164	982,054	957,962	783,030
Cost	\$9,950	\$17,625	\$25,000	\$34,867	\$31,174	\$36,007	\$26,159	\$29,315	\$27,372	\$31,870	\$34,709	\$27,749
Average Cents/KWH	3.08	2.90	3.06	3.52	4.00	3.45	2.78	2.65	2.74	3.25	3.62	3.54
	<b>Annual Totals</b>											
												<b>KWH</b>
												<b>Cost</b>
												<b>Average Cents/KWH</b>
												<b>10,331,263</b>
												<b>\$331,817</b>
												<b>3.21</b>

**TABLE 12 (Continued)  
SOUTHWESTERN ELECTRIC POWER COMPANY  
COGENERATION POWER PURCHASES (KWH) AND COST  
1987**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Dean Lumber	21,839	22,880	46,340	30,066	35,796	36,934	27,850	31,297	44,342	70,306	91,407	63,340	
Gilmer, TX	\$582	\$521	\$1,664	\$1,033	\$707	\$870	\$526	\$698	\$942	\$2,004	\$2,967	\$2,382	
Snider Industries	1,096,375	1,085,353	896,388	1,070,956	947,990	979,326	961,877	792,495	758,667	668,439	907,354	816,884	
Marshall, TX	\$21,828	\$27,561	\$41,354	\$29,408	\$18,100	\$23,185	\$15,394	\$17,255	\$15,321	\$19,144	\$35,179	\$31,831	
<b>KWH</b>	1,118,214	1,106,233	942,728	1,101,022	963,766	1,016,260	969,727	823,792	803,009	738,745	998,761	880,224	
<b>Cost</b>	\$22,410	\$28,082	\$43,018	\$30,441	\$18,807	\$24,055	\$15,920	\$17,953	\$16,263	\$21,148	\$38,166	\$34,213	
<b>Average Cents/KWH</b>	2.00	2.53	4.56	2.76	1.91	2.37	1.61	2.18	2.03	2.86	3.82	3.89	
<b>Annual Totals</b>												<b>KWH</b>	11,504,501
												<b>Cost</b>	\$310,476
												<b>Average Cents/KWH</b>	2.70

**1988**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	
Dean Lumber	56,758	12,568	48,320	66,372	52,280	50,285	39,871	48,442	72,580	89,902	63,560	127,991	
Gilmer, TX	\$2,002	\$1,141	\$1,672	\$2,119	\$1,525	\$1,272	\$1,012	\$1,028	\$1,506	\$2,673	\$3,178	\$3,920	
Snider Industries	898,453	1,519,316	1,097,865	1,679,025	1,394,154	1,233,267	1,848,655	940,938	1,190,710	917,982	857,162	1,025,009	
Marshall, TX	\$31,746	\$60,807	\$36,225	\$57,763	\$37,853	\$33,523	\$36,575	\$20,847	\$16,833	\$27,429	\$52,209	\$52,160	
<b>KWH</b>	956,211	1,531,884	1,146,185	1,745,397	1,446,434	1,283,552	1,888,526	989,380	1,263,290	1,007,884	920,722	1,153,000	
<b>Cost</b>	\$33,748	\$61,948	\$37,997	\$59,892	\$39,378	\$34,795	\$37,587	\$21,875	\$18,339	\$30,102	\$55,387	\$56,080	
<b>Average Cents/KWH</b>	3.53	4.04	3.31	3.43	2.72	2.71	1.99	2.21	1.45	2.99	6.02	4.86	
<b>Annual Totals</b>												<b>KWH</b>	15,332,465
												<b>Cost</b>	\$487,018
												<b>Average Cents/KWH</b>	3.18

**TABLE 12 (Continued)**  
**SOUTHWESTERN ELECTRIC POWER COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1989**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Dean Lumber	117,249	30,910	87,931	92,330	102,981	113,945	51,343	51,874	78,875	71,080	76,759	78,403
Gilmer, TX	\$5,052	\$748	\$3,624	\$3,803	\$2,168	\$2,669	\$1,319	\$1,164	\$1,939	\$2,068	\$1,501	\$1,492
Snider Industries	1,180,881	1,386,102	862,322	904,491	689,123	384,882	410,788	410,863	373,233	345,945	1,023,471	981,462
Marshall, TX	\$32,374	\$78,899	\$48,744	\$14,560	\$8,885	\$9,139	\$10,357	\$10,026	\$8,258	\$10,481	\$22,008	\$16,608
<b>KWH</b>	1,298,130	1,417,012	950,253	996,821	772,104	498,827	462,131	462,537	452,106	417,025	1,100,230	1,059,865
<b>Cost</b>	\$37,426	\$79,647	\$52,368	\$18,363	\$11,053	\$11,808	\$11,676	\$11,190	\$10,197	\$12,549	\$23,507	\$18,098
<b>Average Cents/KWH</b>	2.88	5.62	5.51	1.84	1.43	2.37	2.53	2.42	2.28	3.01	2.14	1.71
<b>Monthly Totals</b>									<b>Annual Totals</b>	<b>KWH</b>		<b>9,887,043</b>
										<b>Cost</b>		<b>\$297,892</b>
										<b>Average Cents/KWH</b>		<b>3.01</b>

**1990**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Dean Lumber	77,465	43,035	14,202	11,796	27,252	13,467	10,523	14,896	11,097	10,837	9,952	8,469
Gilmer, TX	\$1,903	\$22	\$4	\$3	\$510	\$455	\$204	\$284	\$419	\$265	\$315	\$250
Snider Industries	1,120,198	717,153	921,225	952,923	873,431	734,568	767,426	489,600	536,400	534,405	478,569	283,287
Marshall, TX	\$28,298	\$4,359	\$404	\$253	\$16,347	\$24,375	\$25,945	\$1,819	\$12,090	\$18,312	\$11,186	\$11,892
<b>KWH</b>	1,197,663	760,188	935,427	964,719	900,683	748,035	777,949	504,498	547,497	545,242	488,521	291,756
<b>Cost</b>	\$30,201	\$4,381	\$408	\$256	\$16,857	\$24,830	\$26,149	\$2,103	\$12,509	\$18,577	\$11,501	\$12,142
<b>Average Cents/KWH</b>	2.52	0.58	0.04	0.03	1.87	3.32	3.36	0.42	2.28	3.41	2.35	4.16
<b>Monthly Totals</b>									<b>Annual Totals</b>	<b>KWH</b>		<b>8,862,176</b>
										<b>Cost</b>		<b>\$159,914</b>
										<b>Average Cents/KWH</b>		<b>1.85</b>

**TABLE 12 (Continued)**  
**SOUTHWESTERN ELECTRIC POWER COMPANY**  
**COGENERATION POWER PURCHASES (KWH) AND COST**  
**1991**

COGENERATOR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
Dean Lumber Gilmer, TX	14,051 \$544	6,051 \$271	7,524 \$253	8,099 \$338	8,049 \$121	6,237 \$131	7,524 \$289	4,986 \$67	4,320 \$43	6,047 \$173	6,672 \$179	5,300 \$216
Snider Industries Marshall, TX	260,475 \$10,075	38,073 \$1,703	307,170 \$6,428	347,871 \$13,509	132,231 \$4,413	134,841 \$3,092	153,762 \$4,403	183,299 \$4,172	191,523 \$4,080	195,921 \$5,670	156,903 \$4,380	410,885 \$12,830
<b>Monthly Totals</b>	274,526 \$10,619	44,124 \$1,974	314,694 \$6,681	355,970 \$13,847	140,280 \$4,534	141,078 \$3,223	161,286 \$4,692	188,285 \$4,239	195,843 \$4,123	201,968 \$5,843	163,575 \$4,559	416,185 \$13,046
<b>Average Cents/KWH</b>	3.87	4.47	2.12	3.89	3.23	2.28	2.91	2.25	2.11	2.89	2.79	3.13
				<b>Annual Totals</b>						<b>KWH</b>		
												2,597,814
												\$77,380
												2.98

Source: Louisiana Public Service Commission

DNR Technology Assessment Division



## **ABBREVIATIONS AND ACRONYMS**

<b>CLECO</b>	Central Louisiana Electric Company, Inc.
<b>DNR</b>	Louisiana Department of Natural Resources
<b>DOE/EIA</b>	U.S. Department of Energy / Energy Information Administration
<b>FERC</b>	Federal Energy Regulatory Commission
<b>GSU</b>	Gulf States Utilities Company
<b>IPP</b>	Independent Power Producer
<b>KWH</b>	Kilowatthour (1 thousand watthours)
<b>LP&amp;L</b>	Louisiana Power & Light Co.
<b>LPSC</b>	Louisiana Public Service Commission
<b>MW</b>	Megawatt (1 million watts)
<b>NOPSI</b>	New Orleans Public Service Co.
<b>NUG</b>	Non-Utility generator
<b>PURPA</b>	Public Utility Regulatory Policies Act of 1978
<b>QF</b>	Qualifying Facility as defined by PURPA

## GLOSSARY

**Avoided Cost** - The incremental cost an electric utility avoids incurring by purchasing an equivalent amount of power from a qualifying facility (QF) instead of generating the power itself. This is the price electric utilities pay for a QF's output.

**Capability** - The maximum load that a generating unit, generating station, or other electrical apparatus can carry under specified conditions for a given period of time without exceeding approved limits of temperature and stress. In the context of this report the terms "Capability" and "Net Summer Capability" are interchangeable.

**Capacity** - The full-load continuous rating of a generator, prime mover, or other electric equipment under specified conditions as designated by the manufacturer. This report uses net summer capability as its statistic for measuring electric generator capacity. Therefore, all discussion of electric generator capacity in this report is based on the use of net summer capability data.

**Cogeneration** - The sequential production of electrical energy and useful thermal energy from the same fuel source.

**Cogenerator** - A cogeneration facility designated as a qualifying facility (QF) under PURPA. Only those Louisiana and Texas cogenerators that sell power to the five Louisiana investor-owned utilities listed in Table 6 are discussed in this report.

**Electric Power Industry** - The public, private, and cooperative electric utility systems of the United States taken as a whole. This includes all electric systems serving the public: regulated investor-owned electric utility companies; Federal power projects; State, municipal, and other government-owned systems, including electric public utility districts; electric cooperatives, including Generation and Transmission entities ("G and T's"); jointly owned electric utility facilities, and electric utility facilities owned by a lessor and leased to an electric utility. Excluded for this list are the special purpose electric facilities or systems that do not offer service to the public.

**Electric Utility** - An enterprise that is engaged in the generation, transmission, or distribution of electric energy primarily for use by the public and that is the major power supplier within a designated service area. Electric utilities include investor-owned, publicly-owned, cooperatively-owned, and government-owned (municipals, Federal agencies, State projects, and public power districts) systems. An entity that solely operates qualifying facilities under the Public Utility Regulatory Policies Act of 1978 (PURPA) is not considered an electric utility.

**Fuel** - Any substance that can be burned to produce heat; also, materials that can be fissioned in a chain reaction to produce heat.

**Grid** - The layout of an electrical distribution system.

**Gross Generation** - The total amount of electric energy produced by the generating units at a generating station or stations, measured at generator terminals.

**Hydroelectric Plant** - A plant in which the turbine generators are driven by falling water.

**Independent Power Producer (IPP)** - A class of non-utility generator that builds power plants mainly to supply and sell power to electric utilities.

**Investor-Owned Electric Utility** - A class of utility ownership that is privately owned and organized as a tax paying business, usually financed by the sale of securities in the capital market.

**Kilowatt (KW)** - One thousand watts.

**Kilowatthour (KWH)** - One thousand watthours.

**Load (Electric)** - The amount of electric power delivered or required at any specific point or points on a system. The requirement originates at the energy-consuming equipment of the customers.

**Megawatt (MW)** - One million watts.

**Megawatthour (MWH)** - One million watthours

**Net Generation** - Gross generation less the electric energy consumed at the generating station for station use.

**Net Summer Capability** The steady hourly output which generating equipment is expected to supply to system load exclusive of auxiliary power, as demonstrated by tests at the time of summer peak demand.

**Non-Utility Generator (NUG)** - Cogenerators, small power producers, and other non-utility companies that produce power for their own use and for sale to electric utilities. They do not have a designated franchised service area and do not file forms listed in the Code of Federal Regulations, Title 18, Part 141.

**Operable** - A generating unit is operable when it is available to provide power to the grid. For a nuclear unit, this is when it receives its full power amendment to its operating license from the Nuclear Regulatory Commission.

**Power** - The rate at which energy is transferred. Electrical energy is usually measured in watts. The term is also used for a measurement of capacity.

**Privately Owned Electric Utility** - Same as investor-owned electric utility.

**Public Utility Regulatory Policies Act of 1978 (PURPA)** - One part of the National Energy Act, PURPA contains measures designed to encourage the conservation of energy, more efficient use of resources, and equitable rates. Principal among these were suggested retail rate reforms and new incentives for production of electricity by cogenerators and users of renewable resources.

**Publicly-Owned Electric Utility** - A class of ownership found in the electric power industry that includes those utilities operated by municipalities, and State and Federal power agencies.

**Qualifying Facility (QF)** - This is a cogenerator, small power producer, or non-utility generator that meets certain ownership, operating and efficiency criteria established by the Federal Energy Regulatory Commission (FERC) pursuant to PURPA, and has filed with the FERC for QF status or has self-certified. QF's are guaranteed that electric utilities will purchase their output at the utility's avoided cost. For additional information, see the Code of Federal Regulation, Title 18, Part 292.

**Renewable Energy Source** - An energy source that is regenerative or virtually inexhaustible. Typical examples are wind, biomass, geothermal and water power.

**Small Power Producer** - According to PURPA a facility limited to a capacity of 80 MW and generating electricity using renewable energy as a primary source. In 1990 the capacity limit was removed for certain specific energy sources.

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