

NON UTILITY GENERATION OF ELECTRICITY IN LOUISIANA

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INTRODUCTION

This report is a continuation of a series produced since the late 1980's by the Technology Assessment Division of the Louisiana Department of Natural Resources (DNR). Prior to last year, reports in the series were titled "Cogeneration in Louisiana." Last year, the report title was changed to "Non Utility Generation of Electricity in Louisiana." The change in title reflects the growing potential in Louisiana for non utility generators (NUGs) who operate standalone facilities in which cogenerated steam is used to make additional electricity. These new NUG facilities would produce only electricity and, along with new and existing cogenerating NUGs, may sell power directly to the ultimate consumers.

These non-cogenerating NUGs as well as new and existing industrial cogenerating NUGs are expected to operate in a new and evolving electricity market brought about by recent regulatory rules changes. In such a market, there would be real competition in electric generation accompanied by open, fairly priced, and informed access to transmission services. Clearly, the arrival of such fundamental changes in the electricity marketplace would affect the entire electric industry including non utility generators, electric utilities, and electric customers. Of importance to Louisiana, this new market is likely to affect the natural gas market as well.

Previous reports in this series focused primarily on the presentation of data regarding electricity sales in Louisiana by NUGs who are "Qualified Facilities" (QFs). Qualified facilities are NUGs who qualify under the federal Public Utilities Regulatory Policy Act (PURPA) of 1978 to sell electricity to the public utilities. Only limited information was given on either NUG QFs who sold no electricity to utilities or on NUGs who were not QFs.

Non Utility Generation in Louisiana - Past and Present

The first part of this report provides a brief history of non utility generation in Louisiana, both before and after PURPA. This section then addresses the historical data on both generation and sales by the electric utilities as well as by all NUGs (QFs selling to utilities, QFs not selling to utilities, and NUGs who are not QFs). Some of the topics addressed in the presentation of Louisiana NUG historical data are:

- ◆ Description of the growth of NUGs in Louisiana prior to PURPA.
- ◆ Regulatory and operational bases for the non utility generation marketplace as it currently exists.
- ◆ Presentation of data on Louisiana electric utility electricity generation capacity, actual generation, capacity utilization, and sales to ultimate consumers.
- ◆ Presentation of data on Louisiana non utility electricity generation capacity, estimated generation, estimated capacity utilization, and reported sales to utilities.
- ◆ Comparison of data for both the electric utilities and the NUGs with emphasis on activity in the Industrial sector.
- ◆ Presentation of disaggregate NUG electricity sales data by purchasing utility and individual NUG on a monthly basis for the last decade.

Non Utility Generation in Louisiana - The Future

The next section of this report addresses new and evolving circumstances and issues regarding non utility production, delivery, and sale of electricity. As a consequence of the Energy Policy Act (EPACT) of 1992 and the resulting Federal Energy Regulatory Commission (FERC) final Orders 888 and 889 (April 1996), a new competitive electricity market will evolve and will be different from anything observed in the past. The evolution of this new electricity market will significantly affect the electric utilities, the NUGs, and all electricity consumers as well as all producers of natural gas (see page 44, this report), both in Louisiana and nationally.

Regarding the new electricity marketplace, the following issues and concepts are presented and discussed:

- ◆ The factors and circumstances which created an environment in which non-utilities could successfully compete with existing electric utilities
- ◆ The regulatory basis for the introduction of competition.
- ◆ The operational bases which, in a realistic sense, may affect both the effectiveness and the onset timing of such competition.
- ◆ Things difficult to predict about the future of competition in the electricity market.
- ◆ Proposed further reports by the Technology Assessment Division of DNR addressing the four elements listed above in more detail and on a more current basis, with particular emphasis on effects in the natural gas industry.

Summary

In summary, the following can be said of non utility generation in Louisiana

- ◆ Because the type of process plant historically locating in Louisiana typically required large amounts of both electricity and process steam, these plants often chose to meet their own energy needs internally through cogeneration. The result has been that, for more than half of this century, non utility generation has provided a significant proportion of the electricity generated in this state. Of the 77,974 million KWH generated in Louisiana in 1994, non utility generation accounted for 17,805 million KWH or approximately 22.8% of total electricity produced .
- ◆ In spite of the intent of the Public Utilities Regulatory Policies Act (PURPA) of 1978 to promote sales of cogenerated electricity by non utility generators, sales of non utility generated power are minuscule in Louisiana compared to generation levels of either the state's electric utilities or the state's non utility generators themselves. NUG 1994 sales of electricity generated in Louisiana were 283.3 million KWH. This figure represents 1.59% of estimated NUG generation in the state, 0.47% of electric utility generation in the state, and only 0.36% of the total electricity generated in Louisiana for that year. Reasons for this lack of NUG sales lie in the PURPA

limitation of sales only to the utility serving the NUG and in the purchase price levels for NUG power required by both PURPA and existing Louisiana electric utility regulations.

- ◆ Because of lack of competition, there are two separate systems of electric generation and pricing in Louisiana today. One system, operated by the NUGs, was developed in a competitive market and currently produces electricity at an average unit cost of less than 3.9 cents per KWH. The second system, operated by the electric utilities, was developed under governmental utility regulation and produces electricity at an average unit cost of more than 5.7 cents per KWH. This difference in average electricity cost of almost 2 cents per KWH makes clear the capacity of NUGs to compete in any open market for electricity generation.

The federal Energy Policy Act (EPACT) of 1992 and resulting final Orders 888 and 889 by the Federal Energy Regulatory Commission (FERC) intend the creation of a genuinely competitive market in electric generation as well as fair and open access by all generators to transmission. In the absence of absolute regulatory protection under such competition, the electric utilities are faced with serious adverse financial effects. They will be forced to abandon inefficient generating facilities. The term now used to describe such effects is "stranded cost." As a result, at all governmental levels, there will undoubtedly be a great deal of political and regulatory conflict over both the degree of actual competition allowed as well as the timing of its onset. The utilities will attempt to lock in current regulated prices as well as stretch out the effects of NUG competition, both of which protect utility "stranded costs."

The only certain outcome in this process is that the new market for electricity will affect electric utilities, NUGs, electric consumers, and other parties in ways not experienced in the past. Of particular importance in Louisiana is the likelihood that this new market could have substantial effects on the natural gas industry as well as the electric industry. All interested parties participating in the electricity market: the utilities, industrial, residential, and commercial electricity consumers, as well as generation fuel producers (e.g., natural gas), would be well served by continuing to update their data and information as this new unregulated electricity market evolves.

SECTION I NON UTILITY GENERATION IN LOUISIANA BEFORE 1997

PART A - NON UTILITY GENERATION IN LOUISIANA THROUGH THE END OF THE 1970'S

In Louisiana, non utility generation (NUG) has operated on a scale which is significant when compared to total generation levels of the electric utilities for much of this century. This is entirely different from non utility generation structure in most other states. Process industrial operations in Louisiana were non utility generators (NUGs), meeting their own energy needs through cogeneration (the joint production of both electricity and steam), for nearly 50 years prior to the passage of the federal Public Utilities Regulatory Policy Act (PURPA) in 1978.

There are two reasons for this early growth of cogeneration in Louisiana:

1. The operation of most production processes in plants typical of the state's industrial structure such as refineries, chemical plants, and paper mills requires both electricity and steam in large quantities. And,
2. Joint production of electricity and steam is more energy efficient than the separate production of electricity and steam.

A very large base of NUG generating capacity and electric power production grew during this pre-PURPA phase of non utility generation in Louisiana, almost all of which was cogeneration based.

Initially the electrical generation equipment used by the industrial NUGs in Louisiana was of the same technology as that used by the electric utilities. Generators were steam turbine driven with the needed steam being created by steam generators (boilers). In Louisiana, these boilers were fired almost exclusively by natural gas. But, in the late 1960's that situation changed due to the introduction of more efficient technology. The industrial NUGs began installing generators driven by combustion turbines (literally jet engines) exhausting to waste heat recovery boilers. This system, known as combined cycle combustion turbine (normally shortened to combined cycle) had lower initial costs and used less fuel per unit of electricity generated (refer to Appendix A). Combined cycle technology was installed by the industrial NUGs not only to meet new electricity and steam load but also to replace existing, less efficient, steam turbine systems.

Prior to PURPA, all industrial self generated electricity was consumed in manufacturing activities onsite by each NUG. There were no non utility generation sales of electricity either to the electric utilities or to third parties. Neither was there the possibility of an industrial company transmitting electricity outside its own plantsite even to an adjacent plant.

PART B - NON UTILITY GENERATOR OPERATION FROM PURPA (1978) TO THE PRESENT

The Public Utilities Regulatory Policies Act became law as part of a package of energy legislation enacted by the federal government in 1978. PURPA, as the law is known, along with companion legislation changed the NUG electrical sales situation.

PURPA had as one major purpose, the conservation of energy. Cogeneration was a favored generation methodology under this law because it is energy efficient. Unfortunately, neither PURPA nor its companion legislation made any distinction between the efficiency of different generation processes or cogeneration processes producing the same split of electricity and steam. (e.g. boiler / steam turbine operation vs. combustion turbine operation, see Appendix A, "Prime Movers").

PURPA required the electric utilities to buy power from NUGs meeting certain criteria. NUGs meeting those criteria were designated as "qualified facilities" (QFs). Cogeneration as a favored generation methodology, then, became a major criterion for obtaining QF status. As a result, most Louisiana NUGs receiving qualified facility (QF) status under the 1978 law were existing industrial cogenerators. New QFs coming on line after PURPA were also industrial cogenerators.

PURPA has opened the door to external sales by QF NUGs, but not completely. Louisiana's large base of cogenerating industrial NUGs continues to operate on substantially the same basis after PURPA as before, consuming most of the electricity they produced. Reasons for this include limitations on potential consumers of NUG electricity, a complete lack of NUG access to transmission, low prices available from electric utilities to NUGs in Louisiana, and difficulties in operating standalone (no associated steam host or consumer) cogeneration facilities.

Problem - A Single Buyer (Monopsony) of NUG Electricity

First, under PURPA, sales of electricity are limited to one customer - the electric utility in whose service area the QF is located. Third party or ultimate consumer sales by NUGs are not made possible under this law.

Problem - No NUG Access to Transmission

Even if third party sales could be made by NUGs, delivery of the electricity is not possible. First, there are regulatory difficulties. In Louisiana, were a NUG to deliver electricity to a third party - even across a mutual fence line with that third party, that NUG would become a regulated utility under state law. This legal burden has not been acceptable to the NUGs since their primary product is not electricity. In Louisiana, this legal situation produces some unusual results. Adjacent plants are allowed to move energy in the form of steam across their mutual fence to one another, but are not allowed to move energy in the form of electricity.

Further, transmission of electric power by a NUG over utility lines (wheeling) to any party other than the serving utility, on either a wholesale or retail basis, was and is either legally or operationally impossible in Louisiana. The electric utilities control transmission and are not legally required to transport NUG electricity.

Also precluded under Louisiana regulations are cases of "self wheeling" - transmission of electricity by a company from one of its own facilities to another of its own facilities, nearby, but non-contiguous. Electric utility lines cannot be used for reasons given in the paragraph above. In addition, the potential "self wheeling" company is likely to find it impossible to procure right-of-way (create a single site) to build its own transmission lines. In virtually every case, all possible pathways for transmission between non-contiguous sites would require crossing electric utility right-of-way. Historically, the utilities would not voluntarily allow this crossing and cannot be forced to do so. NUGs lack the power of eminent domain (ability to force sale of private property based on public need).

Problem - Low Prices Paid for NUG Electricity in Louisiana

Low sales to electric utilities by Louisiana QFs were and still are caused by the low price which the utilities offered for such power. PURPA requires that mandated purchases of QF power by the electric utilities be priced at the utility's avoided cost at the time of the sale. That cost is the incremental cost to the utility during that period of time to internally produce one more unit of electricity.

Since the advent of PURPA, Louisiana electric utilities have had a surplus of generating capacity. No new electric utility units are planned in the near future. This means that electric utility avoided cost in Louisiana has no capital component. That component represents the cost of needed new generation capacity which can be avoided by the utility by purchasing power from a QF. For Louisiana QFs, then, price received for electric power is the incremental fuel cost to the utility during each hour of the QF sale to the utility.

Problem - Difficulties of Standalone NUG Operations

A final limitation mitigating against standalone NUG facilities in Louisiana has been the de facto necessity for such facilities to be cogenerators. For a standalone cogenerating NUG, the coproduction of both electricity and steam implies the need to successfully sell both steam and electricity. Accomplishing sales of both is administratively difficult and, if nothing else, is crippled by transport limits on high quality steam. Only one NUG cogeneration operation in Louisiana, Nelson Industrial Steam Company (NISCO), operates as a standalone facility, selling almost all of its electricity and steam production outside of NISCO plant limits. Operation of this facility is, however, a special case. NISCO is jointly owned by Gulf States Utilities (GSU) and three industrial partners.

PART C - LOUISIANA ELECTRIC UTILITY DATA

Data in this report on generator capacity, generation of electricity, consumption of electricity, and pricing of electricity for both the electric utilities and the NUGs in Louisiana came from a number of sources. Among these were: previous editions of this Louisiana Department of Natural Resources report, the Energy Information Agency (EIA) of the U.S. Department of Energy (DOE), the Edison Electric Institute (EEI), and the electric utilities serving Louisiana.

Generation of Electricity by Louisiana Electric Utilities

Tables I-94, I-95, and Figure I present information on the generating capacity, electric generation, and capacity use for all utilities serving Louisiana in 1994 and 1995. The data are presented for the prime mover types used to generate electricity by the state's electric utilities. These include natural gas, petroleum, coal, and nuclear fired steam turbines and natural gas fired combustion turbines.

The data on electric utility combustion turbines may not be compatible with data on NUG combustion turbines (refer to Appendix A, Part I). Electric utility combustion turbine generating systems are typically simple cycle operations; only the "jet engine" section is used to provide power to the generator with waste heat exhausted to the atmosphere rather than to a waste heat recovery boiler. This differs from the combined cycle combustion turbine operation used by most cogenerating NUGs. Electric utilities use simple cycle combustion turbines because they may be started up and placed into service very quickly to provide peaking or emergency power.

For Louisiana electric utilities, the number of generators and electric generating capacity remained unchanged from 1994 to 1995 at 109 generators and 16,873 megawatts (MW). Generation of electricity and, consequently, use of capacity did increase over that period, however. Utility electric generation increased from 60,169 million kilowatt hours (million KWH) in 1994 to 65,555 million KWH in 1995, an increase of about 9%. There was a corresponding increase in generator capacity use from 41% to 44% in the same period. As a basis of comparison, generation capacity use for all electric utilities in the U.S. was 47.2% in 1994 and 48.4% in 1995.

Natural gas fired steam turbine units provided the bulk of Louisiana electric utility generation in both 1994 and 1995 generating 25,897 million KWH (43.04%) and 30,132 million KWH (45.96%), respectively. Coal fired steam turbine units were second, generating 20,125 million KWH (33.45%) in 1994 and 18,954 million KWH (28.91%) in 1995. Nuclear steam turbines were a close third, generating 12,779 million KWH (21.24%) in 1994 and 15,686 million KWH (23.93%) in 1995. Generation from petroleum fired steam turbine and natural gas fired combustion turbine units accounted for less than 3% of the Louisiana electric utility totals for both years.

Ranking of generation capacity use percentages for natural gas, coal, and nuclear steam turbine generators was the reverse of the generation quantity figures. Nuclear was first with 73% in 1994 and 89% in 1995, coal was second with 69% and 65% respectively, and natural gas was

TABLE I - 94
ELECTRIC UTILITY GENERATOR CAPACITY AND ELECTRICITY GENERATION IN LOUISIANA
BY PRIME MOVER - YEAR 1994

	TOTAL ALL TYPES		GAS STEAM TURBINE		PETROLEUM STEAM TURBINE		COAL		TOTAL FOSSIL STEAM		GAS TURBINE / INT COMB		TOTAL FOSSIL		NUCLEAR	
	NUMBER	PERCENT TOTAL	72	66.06%	2	1.83%	6	5.50%	80	73.39%	27	24.77%	107	98.17%	2	1.83%
GENERATORS	109	100.00%														
CAPACITY	MEGAWATTS	PERCENT TOTAL	11,036	65.41%	196	1.16%	3,343	19.81%	14,575	86.38%	292	1.73%	14,867	88.11%	2,006	11.89%
CAPACITY/YEAR	MILLION KWH	PERCENT TOTAL	96,675	65.41%	1,717	1.16%	29,285	19.81%	127,677	86.38%	2,558	1.73%	130,235	88.11%	17,573	11.89%
GENERATION	MILLION KWH	PERCENT TOTAL	25,897	43.04%	679	1.13%	20,125	33.45%	46,701	77.62%	689	1.15%	47,390	78.76%	12,779	21.24%
CAPACITY USE	GENERATION / CAPACITY		27%		40%		69%		37%		27%		36%		73%	

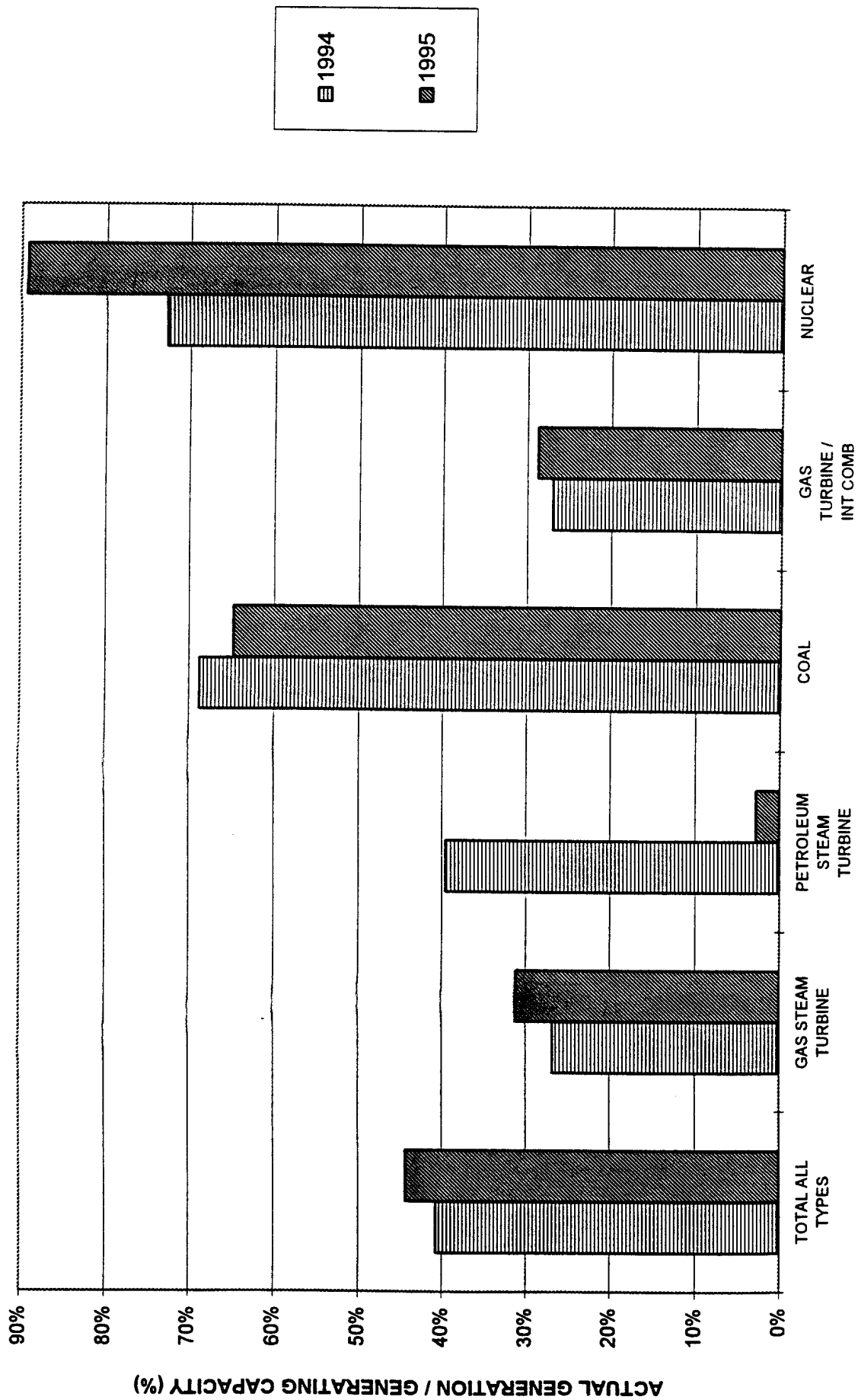
SOURCE: Electric Power Annual - 1994, Energy Information Administration, Vol 1, July 1995

**TABLE I - 95
ELECTRIC UTILITY GENERATOR CAPACITY AND ELECTRICITY GENERATION IN LOUISIANA
BY PRIME MOVER - YEAR 1995**

		TOTAL ALL TYPES	GAS STEAM TURBINE	PETROLEUM STEAM TURBINE	COAL	TOTAL FOSSIL STEAM	GAS TURBINE / INT COMB	TOTAL FOSSIL	NUCLEAR
GENERATORS	NUMBER	109	72	2	6	80	27	107	2
	PERCENT TOTAL	100.00%	66.06%	1.83%	5.50%	73.39%	24.77%	98.17%	1.83%
CAPACITY	MEGAWATTS	16,873	11,036	196	3,343	14,575	292	14,867	2,006
	PERCENT TOTAL	100.00%	65.41%	1.16%	19.81%	86.38%	1.73%	88.11%	11.89%
CAPACITY/YEAR	MILLION KWH	147,807	96,675	1,717	29,285	127,677	2,558	130,235	17,573
	PERCENT TOTAL	100.00%	65.41%	1.16%	19.81%	86.38%	1.73%	88.11%	11.89%
GENERATION	MILLION KWH	65,555	30,132	48	18,954	49,134	735	49,869	15,686
	PERCENT TOTAL	100.00%	45.96%	0.07%	28.91%	74.95%	1.12%	76.07%	23.93%
CAPACITY USE	GENERATION / CAPACITY	44%	31%	3%	65%	38%	29%	38%	89%

SOURCE: Electric Power Annual - 1995, Energy Information Administration, Vol 1, July 1996

FIGURE I
ELECTRIC UTILITY GENERATION OF ELECTRICITY IN LOUISIANA
COMPARISON OF CAPACITY USE LEVELS FOR DIFFERENT PRIME MOVER TYPES



third with 27% and 31%. These use levels correspond to the capabilities of unit types to be taken in and out of service and run at less than capacity.

Nuclear plants require immense effort, both operationally and administratively, in both startup and shutdown. With the exception of refueling, which takes place about every 18 months, or an emergency, nuclear plants are never taken off line. Running any plant at steady output is easier from both an operations and safety standpoint, and since nuclear fuel is the least expensive per BTU of heat input of any utility boiler fuel, there is no incentive to run a nuclear plant at less than capacity. For these reasons, the nuclear steam turbine units come closer to maximum use than any other prime mover type.

Startup and shutdown of a coal fired unit, although hardly in the same class as a nuclear unit, is, nonetheless, difficult. So, coal fired units tend to be run continuously. Coal is the second least expensive fuel. In addition, some coal fired units in Louisiana receive their fuel under "take or pay" contracts which means the price for the fuel will be paid whether it is used or not. These two reasons provide incentive to run coal fired units as close to capacity as possible.

Of the three types of prime movers in predominate use by the electric utilities in Louisiana, the natural gas fired boiler / steam turbine units are the easiest to bring on and take off line. These units, then, are the most likely to not be run continuously. In addition, natural gas fuel is generally more expensive per BTU of heat input than coal or nuclear. For the reasons, above, natural gas fired boilers have only 27% and 31% capacity use factors in 1994 and 1995, respectively.

Electricity Sales to Ultimate Customers in Louisiana by Electric Utilities

Tables II-94 and II-95 present information on the sales of electricity in Louisiana by the electric utilities. Sales totaled 69,920 million KWH in 1994 and 72,385 million KWH in 1995. These figures represent a 3.5% increase in sales over the period. In spite of the increase in sales of electricity, total utility revenues from sales fell from \$4.260 billion in 1994 to \$4.148 billion in 1995. This occurred because average electricity rates for all consumer classes went down almost 6% from 6.0927 cents per KWH in 1994 to 5.7305 cents per KWH in 1995 more than offsetting the effects of the 3.5% increase in consumption of electricity.

Sales of electricity in Louisiana were also higher than the generation of electricity in Louisiana during the same years. In 1994, sales of electricity in the state topped generation in the state by 16.2%. In 1995, similar sales topped similar generation by 10.4%. This phenomenon is probably caused by both the import of electricity by those Louisiana serving utilities having generation facilities in the adjacent state of Texas as well as by the purchase by all Louisiana utilities of electric power from other utilities outside of the state. NUGs in Louisiana and Texas selling power to utilities serving Louisiana (discussed later in this section) can account for only a small fraction of such purchased power.

TABLE II - 94
ELECTRIC UTILITY SALES OF ELECTRICITY IN LOUISIANA - 1994
BY CONSUMER SECTOR

	ALL SECTORS					OTHER ¹
UTILITY SALES	MILLION KWH	69,920	22,715	14,911	29,867	2,427
	PERCENT TOTAL	100.00%	32.49%	21.33%	42.72%	3.47%
ESTIMATED REVENUES	MILLION DOLLARS	\$4,260	\$1,741	\$1,079	\$1,267	\$173
	PERCENT TOTAL	100.00%	40.87%	25.33%	29.74%	4.06%
AVG REVENUE PER KWH	DOLLARS / KWH	\$0.060927	\$0.076645	\$0.072363	\$0.042421	\$0.071281

¹ Includes public street and highway lighting, other sales to public authorities, sales to railroads, and interdepartmental sales

SOURCE: Electric Power Annual - 1994, Energy Information Administration, Vol I, July 1995

TABLE II - 95
ELECTRIC UTILITY SALES OF ELECTRICITY IN LOUISIANA - 1995
BY CONSUMER SECTOR

	ALL SECTORS	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	OTHER ¹
UTILITY SALES	72,385	23,835	15,483	30,685	2,382
MILLION KWH					
PERCENT TOTAL	100.00%	32.93%	21.39%	42.39%	3.29%
ESTIMATED REVENUES	\$4,148	\$1,725	\$1,041	\$1,217	\$165
MILLION DOLLARS					
PERCENT TOTAL	100.00%	41.59%	25.10%	29.34%	3.98%
AVG REVENUE PER KWH	\$0.057305	\$0.072373	\$0.067235	\$0.039661	\$0.069270
DOLLARS / KWH					

¹ Includes public street and highway lighting, other sales to public authorities, sales to railroads, and interdepartmental sales

SOURCE: Electric Power Annual - 1995, Energy Information Administration, Vol I, July 1996

The consuming sectors in Louisiana for 1994 and 1995 purchased the following from the electric utilities:

- ◆ The residential sector consumption increased 4.9% from 22,715 to 23,835 million KWH between 1994 and 1995 or from 32.5% to 32.9% of total utility sales. Revenues for these two years fell 1% from \$1,741 and \$1,725. Residential sales represented 40.87% and 41.59% of utility sales revenues during the years 1994 and 1995 and carried average rates which fell in those successive years from 7.6645 cents per KWH to 7.2373 cents per KWH or about 5.5%.
- ◆ Commercial sector consumption also increased 3.8% from 14,911 to 15,483 million KWH between 1994 and 1995 or from 21.33% to 21.39% of total utility sales. Revenues from these sales fell 3.5% from \$1.079 billion to \$1.041 billion or from 25.33% to 25.10% of total utility sales revenues during those years. Average commercial sector rates fell from 7.2363 cents per KWH in 1994 to 6.7235 cents per KWH in 1995 or about 7.1%.
- ◆ Industrial sector consumption increased 2.7% from 29,867 to 30,685 million KWH between 1994 and 1995 but fell from 42.72% to 42.39% of total utility sales. Revenues from these sales of \$1.267 billion fell 3.9% to \$1.217 billion between 1994 and 1995. As a percentage of total utility revenues, industrial sector revenues fell from 29.74% to 29.34% between those years. The only slight increase in KWH sales and declining dollar value sales occurred in spite of a decrease in industrial rates from 4.2421 cents per KWH in 1994 to 3.9661 cents per KWH in 1995 or about 6.5%.

Sensitivity of Electricity Sales to Electricity Price Changes - Residential and Commercial Sectors

While many or even all of these relatively small changes may be explained by changes in weather patterns, changes in business patterns, or changes in industrial production levels, the overall negative response of decreasing revenues from sales in the face of falling unit product prices in every sector may also be indicative of the current nature of the electricity market in Louisiana. Under current regulatory circumstances, those in the residential sector and virtually all of those in the commercial sector have no choice about the source of their electricity. Further, the ability, or even willingness, of the entire inventory of residential and commercial consumers to adjust consumption over the short term is likely limited to only a few percentage points from one year to the next. This presents the situation in which yearly decreases in prices of more than a few percentage points will produce decreasing electric utility revenues and yearly increases of prices in a like manner will have the effect of increasing utility revenues.

Sensitivity of Electricity Sales to Electricity Price Changes - Industrial Sector

Choices of electricity supplier are available in the Louisiana industrial sector. Currently, many industrial consumers in the state have two choices of electric power supply source: their serving electric utility or themselves. This additional choice, constituting a degree of competition, has

significant effects on the electricity rates paid by these industrial consumers. The current industrial price of electricity in Louisiana is a reflection of the current internal cost to an industrial facility, now on the utility system, to produce its own electricity by building new internal generating facilities.

If an industrial facility constructs new internal generating facilities, the new industrial NUG will leave the utility system. In addition, its "avoided cost" or the price at which it will purchase electricity externally falls to the variable price of its generating fuel. Over the last several years this has ranged from 1.5 to 2.0 cents per KWH.

As a result, not only is industrial electric consumption in Louisiana sensitive to price, the effects of price on utility sales revenues are both discontinuous and nonsymmetric. On the price increase side, if utility rates to many industrial customer exceed, even by a small margin, the cost at which that customer can self-generate, the customer will do so and leave the utility system - forever. At a point slightly above the current price, utility industrial electric sales revenues can react discontinuously to price. With higher prices, sales revenues are not just reduced by some percentage relative to the percentage price increase, they are immediately and irrevocably reduced by a perfect 100%.

Even at the current industrial average rate of 3.97 cents per KWH, Louisiana industrial electricity prices may still be high enough to drive some industrials out of the market. Since July of 1996 the Technology Assessment Division in DNR has been contacted by at least four engineering or consulting firms requesting data and indicating that they are involved in planning NUG cogeneration facilities for plants in Louisiana. Names of the plants were not discussed. It is not known whether these facilities are existing industrial NUGs expanding, non-generators now on a utility's system, or industrial firms new to Louisiana.

The effects electricity rate decreases in Louisiana have on the utility's existing industrial customer base, on the other hand, are not symmetric with the effects of rate increases. Price decreases for the industrial plants who currently buy electricity from the utilities are likely to have sales revenues effects similar to those exhibited by residential and commercial consumers. Electricity consumption is more likely to be affected by production requirements than price. A 6 or 7% decrease in price may increase industrial electricity consumption slightly. However, if the percentage increase in consumption is more than offset by the percentage price reduction, the net effect will be a decrease in utility electricity sales revenues.

Industrial electricity rate decreases can have effects which are similar to, but the reverse of, the effects of industrial rate increases. These effects hold for both the new plants of new industrial entrants into the state and plant expansions by NUGs who may not be on the utility system. In either case, the decision being made by the potential industrial customer is "make or buy." If the utility can offer rates to the potential industrial which are below that customer's cost of self-generating electricity, then sales revenues may be increased incrementally and in greater proportion than the percentage rate decrease. This is particularly true if special lower rates can be applied on an industrial facility by industrial facility basis rather than through a general industrial rate decrease.

The percentage price decrease required to induce non-expanding NUGs to return to the utility system are too large to reasonably expect. Some Louisiana industrial NUGs are still selling power to the electric utilities at prices averaging 1.69 cents per KWH in 1994, 1.77 cents per KWH in 1995, and 2.09 cents per KWH in 1996. These values are representative of these NUG's "avoided cost" threshold. Only at rates below these levels would these industrial NUGs purchase power instead of making it. These NUG threshold price limit levels would represent price decreases 60.1% for 1994 and 55.4% for 1995 against the industrial rates effective in those respective years.

In summary, under the current regulatory system, Louisiana electric utilities have a dilemma with respect to industrial pricing. The utilities are faced with a narrow band of prices which maximize their industrial revenue. Above those prices, they lose industrial customers who leave the system thereby forever cutting their revenues to the utility by an increment of 100%. Below those prices, for existing industrial customers, the utilities lose industrial revenue because industrial consumption of electricity does not increase by the same percentages as the percentage industrial electric price decreases. The only electric rate reduction scenario likely to increase overall income to the utility is the establishment of special industrial electric rates for new facilities which otherwise might become a NUG.

PART D - LOUISIANA NON UTILITY GENERATOR (NUG) DATA

Data in this report on NUG generator type, capacity, and generation came from the Edison Electric Institute (EEI). Data on NUG sales to and prices from electric utilities came from previous editions of this report, the purchasing electric utilities, and some of the selling NUGs. While, under existing time constraints, every effort was made to assure data quality, there are some apparent omissions and anomalies in these data. The effects of such omissions and anomalies on the validity of overall data are believed to be inconsequential. Every effort will be made to identify and correct any errors and omissions which may exist here by the next edition of this report.

Generator Capacity, Type, and Estimated Generation by Louisiana NUGs

Tables III-A and III-B present information on NUG generator type, capacity, and fuel as well as estimated generation. Table III-A groups the data by basic prime mover type; Table III-B groups the data by industry type. Generation estimates for individual NUGs are not given because of confidentiality requirements.

These data, received from EEI, were originally reported to EEI by Louisiana electric utilities. As such, the data represent the assessment and categorization of NUG generating capability by those electric utilities as well as electric utility estimates of generation. It is likely that some Louisiana NUGs who are not QFs do not appear in these tables. In addition, the generation estimates by the utilities for at least some of the NUGs represent simple percentage factors applied across industry groups. On the whole, however, these are the best available data and are valid for the purposes of this report. Enhancement of these data should be completed before the next edition of this report.

According to electric utility industry estimates for 1994, NUGs operating in Louisiana operated 66 generating units having a total capacity of 2798.85 MW or 24,518 million KWH per year. Their estimated generation of electricity was 17,805 million KWH. These figures represent a use factor of 72.6% for Louisiana NUGs.

Table III-A presents a grouping of Louisiana NUG data by prime mover type. Only one NUG in the state, Murray Hydro (Independent Power Producer or IPP), operates using non-thermal energy. This NUG uses low head hydropower, mechanical energy in the form of a 10 to 20 foot elevation difference between the Mississippi and Atchafalaya Rivers, to drive its electric generators.

The data for the other 65 NUG generating units indicate a clear preference for combustion turbine technology. For purposes of comparison here, both those units in the EEI data classified as combined cycle and those classified as gas turbine are combined into a single category, combustion turbines. This is done because none of the reported NUG combustion turbines are of the simple cycle type (exhausting to the atmosphere) as the category "gas turbine" might indicate. Combustion turbines are the prime mover for 1680.7 MW or 64.7% of the NUG thermally driven generator capacity of 2606.85 MW in Louisiana. Similarly, combustion turbines produce an

TABLE III - A
EEl GENERATION DATA FOR LOUISIANA NUGS - 1994
DATA GROUPED BY PRIME MOVER

UTILITY	PROJECT	UNITS	MW CAP	TYPE	QF	SIC CODE	START DATE	PRIME MOVER	ENERGY SOURCE	SERVICE	GENERATION IN MWH	
LPL	MURRAY HYDRO	1	192.00	OTHER	N	IPP	5/1/80	HYDRO	HYDRO	INTERCONNECTED	943,079 MWH	
TOTALS FOR HYDRO POWER												
		1	192.00	MW								943,079 MWH
GSU	AIR LIQUIDE AMERICA CORP	1	38.00	COGEN	Y	D28	1/1/84	COMBINED CYCLE	NAT GAS	INTERCONNECTED	..	
GSU	BASE WYANDOTTE	1	38.00	COGEN	Y	D28	7/1/85	COMBINED CYCLE	NAT GAS	INTERCONNECTED	..	
GSU	EXXON CHEMICAL	1	84.00	COGEN	Y	D28	1/1/78	COMBINED CYCLE	NAT GAS	INTERCONNECTED	..	
NPSI	AIR PRODUCTS - COGENERATION	1	23.00	COGEN	Y	D28	1/1/84	COMBINED CYCLE	NAT GAS	INTERCONNECTED	..	
TOTALS FOR COMBINED CYCLE												
		4	179.00	MW								1,171,237 MWH
GSU	AMOCO	1	0.80	COGEN	Y	D29	2/1/88	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	ARCADIAN	1	21.50	COGEN	Y	D28	10/1/86	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	BORDEN CHEMICAL (MONOCHEM) #1	1	21.50	COGEN	Y	D28	4/1/85	GAS TURBINE	NAT GAS	INTERCONNECTED	..	
GSU	BORDEN CHEMICAL (MONOCHEM) #2	1	35.00	COGEN	Y	D28	10/1/86	GAS TURBINE	NAT GAS	INTERCONNECTED	..	
GSU	BORDEN CHEMICAL (MONOCHEM) #3	1	35.00	COGEN	Y	D28	10/1/86	GAS TURBINE	NAT GAS	INTERCONNECTED	..	
GSU	DOW CHEMICAL (LA)	2	670.00	COGEN	Y	D28	1/1/78	GAS TURBINE	NAT GAS	INTERCONNECTED	..	
GSU	EXXON CRYOGENIC	1	0.90	COGEN	Y	D29	4/1/88	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	EXXON CRYOGENIC	1	46.00	COGEN	Y	D28	3/1/85	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	FORMOSA PLASTICS #1	1	48.00	COGEN	Y	D28	7/1/90	GAS TURBINE	NAT GAS	INTERCONNECTED	..	
GSU	FORMOSA PLASTICS #2	1	13.50	COGEN	Y	D28	1/1/78	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	MONTEL (HIMONT)	1	7.50	COGEN	Y	D29	4/1/90	GAS TURBINE	REF GAS	UTILITY BACKUP	..	
GSU	PLACID	2	176.00	COGEN	Y	D28	1/1/78	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	PPG-B	2	164.00	COGEN	Y	D28	8/1/85	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	PPG-C	2	6.50	COGEN	N	D28	1/1/78	GAS TURBINE	NAT GAS	STAND ALONE	..	
GSU	TEXACO HENRY	2	15.00	COGEN	N	D29	1/1/78	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	VULCAN CHEMICAL	1	108.00	COGEN	Y	D28	12/1/85	GAS TURBINE	NAT GAS	INTERCONNECTED	..	
GSU	TRUNKLINE	1	113.00	COGEN	Y	D28	1/1/78	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
LPL	GRAMERCY - CHEMICAL	1	10.00	COGEN	N	D28	1/1/87	GAS TURBINE	NAT GAS	STAND ALONE	..	
LPL	KAISER ALLUM. & CHEMICAL - HAHNVILLE-A	1	10.00	COGEN	N	D28	1/1/87	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
LPL	UNION CARBIDE CORP. - HAHNVILLE-B	1	10.00	COGEN	N	D28	1/1/87	GAS TURBINE	NAT GAS	UTILITY BACKUP	..	
TOTALS FOR GAS TURBINE												
		24	1501.10	MW								9,940,168 MWH
TOTALS FOR ALL COMBUSTION TURBINES												
		28	1680.7	MW								11,111,405 MWH
CLECO	JEANERETTE SUGAR MILL	1	0.10	COGEN	Y	D20	2/1/85	STEAM TURBINE	BAGASSE	INTERCONNECTED	..	
GSU	AGRIELECTRIC	1	12.50	SPP	Y	A07	7/1/84	STEAM TURBINE	RICE HUSKS	INTERCONNECTED	..	
GSU	CITGO	3	75.00	COGEN	N	D29	1/1/78	STEAM TURBINE	NAT GAS	INTERCONNECTED	..	
GSU	COPOLYMER	1	14.00	COGEN	N	D28	1/1/78	STEAM TURBINE	NAT GAS	STAND ALONE	..	
GSU	FIRESTONE	1	0.30	COGEN	N	D30	1/1/78	STEAM TURBINE	NAT GAS	INTERCONNECTED	..	
GSU	GEORGIA PACIFIC	1	59.00	COGEN	Y	D28	3/1/88	STEAM TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	JAMES RIVER #1	1	12.50	COGEN	Y	D28	1/1/78	STEAM TURBINE	PAPER MFG BYPROD	INTERCONNECTED	..	
GSU	JAMES RIVER #2	1	45.00	COGEN	Y	D28	2/1/86	STEAM TURBINE	PAPER MFG BYPROD	INTERCONNECTED	..	
GSU	NELSON INDUSTRIAL STEAM CO.	2	200.00	COGEN	Y	E496	10/1/88	STEAM TURBINE	NAT GAS	INTERCONNECTED	..	
GSU	OLIN	1	3.00	COGEN	N	D28	1/1/78	STEAM TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	PPG-A	4	15.00	COGEN	N	D28	1/1/78	STEAM TURBINE	NAT GAS	UTILITY BACKUP	..	
GSU	PPG-D	3	125.00	COGEN	N	D20	1/1/78	STEAM TURBINE	NAT GAS	UTILITY BACKUP	..	
LPL	AMSTAR CORP.	1	9.00	COGEN	Y	D28	1/1/78	STEAM TURBINE	REFINERY GAS	INTERCONNECTED	..	
LPL	BP OIL	1	19.15	COGEN	Y	D29	1/1/90	STEAM TURBINE	PETR COKE	INTERCONNECTED	..	
LPL	CALCIER INDUSTRIES - CHALMETTE	1	27.00	COGEN	Y	D33	1/1/74	STEAM TURBINE	NAT GAS	UTILITY BACKUP	..	
LPL	COLONIAL SUGARS, INC.	1	7.80	COGEN	Y	D28	1/1/78	STEAM TURBINE	NAT GAS	UTILITY BACKUP	..	
LPL	COLONIAL SUGARS, INC.	1	37.00	COGEN	Y	D28	1/1/78	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	GAYFORD CONTAINER CORP. #1	1	25.00	COGEN	Y	D28	1/1/78	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	GAYFORD CONTAINER CORP. #2	2	22.00	COGEN	Y	D28	1/1/80	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	IMC-AGRI-CO, UNCLE SAM	1	41.00	COGEN	Y	D28	1/1/80	STEAM TURBINE	SULPHUR	INTERCONNECTED	..	
LPL	INTERNATIONAL PAPER #1	1	22.00	COGEN	Y	D28	1/1/80	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	INTERNATIONAL PAPER #2	1	21.00	COGEN	Y	D28	1/1/80	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	RIVERWOOD INTERNATIONAL CORP. #1	1	15.00	COGEN	Y	D28	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	RIVERWOOD INTERNATIONAL CORP. #2	1	35.00	COGEN	Y	D28	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	RIVERWOOD INTERNATIONAL CORP. #3	1	30.00	COGEN	Y	D28	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	RIVERWOOD INTERNATIONAL CORP. #4	1	7.00	COGEN	Y	D28	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	RIVERWOOD INTERNATIONAL CORP. #5	1	7.00	COGEN	Y	D28	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	RIVERWOOD INTERNATIONAL CORP. #5	1	66.00	COGEN	N	D28	1/1/78	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	..	
LPL	STONE HODGE, INC.	1	10.00	COGEN	N	D28	1/1/87	STEAM TURBINE	NAT GAS	UTILITY BACKUP	..	
LPL	UNION CARBIDE CORP. - HAHNVILLE-C	1	10.00	COGEN	N	D28	1/1/87	STEAM TURBINE	NAT GAS	UTILITY BACKUP	..	
TOTALS FOR ALL STEAM TURBINES												
		37	928.15	MW								6,750,691 MWH
TOTALS - ALL TYPES OF PRIME MOVER												
		66	2798.85	MW								17,803,175 MWH

- INDIVIDUAL FIRM DATA NOT PROVIDED TO PRESERVE CONFIDENTIALITY

estimated 11,111.4 million KWH or 65.9% of the estimated 16,862.1 million KWH of electricity generated by thermally driven NUG units in the state. Of the NUG steam turbine driven generators, the majority are driven by fuels not amenable for use in combustion turbines (e.g. paper manufacturing byproducts, petroleum coke, bagasse, and rice husks). Within the ranks of the 17 boilers fueled by natural gas, at least 10 of these can be identified as having been built before 1945.

Table III-B presents a grouping of Louisiana NUG data by industry group. Only two Louisiana NUGs are not cogenerators affiliated with an industrial manufacturing activity. These are Murray Hydro, an independent power producer (IPP) using hydropower, and Agrielectric, a small power producer (SPP) burning agricultural waste (rice husks). Data for both of these plants can be given since both plants sell their entire electric output to utilities and are not subject to the confidentiality requirements applicable to industrial cogenerators.

According to EEI estimates, Murray Hydro with a generating capacity of 192 MW or 1,682 million KWH per year generated 943.8 million KWH of electricity during 1994 for a capacity use of 56.1%. This facility was limited to this level of operation by the fact that it is a "run of the river" type hydro facility. It can only operate successfully during those periods of time when the water levels of the Mississippi and Atchafalaya River differ by a sufficient amount.

Similarly, according to EEI estimates, Agrielectric with a generating capacity of 12.5 MW or 109.5 million KWH per year generated 64.64 million KWH of electricity during 1994. This represents a capacity use of 59%. Although this facility runs throughout the year, its dependence on agricultural waste limits production to available agricultural waste. It might also be added that actual reported sales figures for this facility during 1994 were 72.86 million KWH, some 12.7% more than the EEI estimates. Based on actual sales of electricity, the Agrielectric facility had a 66.5% use rate in 1994.

Of the cogenerating industrial NUGs in Louisiana, those operating as part of chemical manufacture had both the majority of generating capacity and electric generation. NUG generating capacity among chemical manufacturers in 1994 was estimated by EEI to be 1846.7 MW or 16,177 million KWH per year. Collectively, these NUGs generated an estimated 12,200.5 million KWH of electricity for a 75.4% use factor. These figures represented almost 66% of Louisiana NUG capacity and 68.5% of Louisiana NUG generation during 1994.

Louisiana NUGs operating in 1994 as part of paper and paper products manufacture placed a distant second in terms of both capacity and generation. These cogenerating industrial NUGs had a 1994 capacity of 386.5 MW or 3,385.7 million KWH per year and generated 2,502.7 million KWH of electricity during that year. This represents a 73.9% use factor. Figures for the paper / paper products NUGs represented 13.8% of NUG capacity and 14% of NUG generation in Louisiana during 1994.

The estimated generating capacity of Louisiana NUGs engaging in refining or petroleum products manufacture was 344.45 MW or 3,017.4 million KWH per year in 1994. These NUGs generated an estimated 1,997 million KWH of electricity in that year for a capacity use of 66.2%.

TABLE III - B
EEI GENERATION DATA FOR LOUISIANA NUGS - 1994
DATA COMBINED BY BUSINESS / INDUSTRY CATEGORIES

UTILITY	PROJECT	UNITS	MW	TYPE	OF	9C CODE	START DATE	PRIME MOVER	ENERGY SOURCE	SERVICE	GENERATION IN MWH
LPL	MURRAY HYDRO	1	192.00	OTHER	N	IPP	5/1/90	HYDRO	HYDRO	INTERCONNECTED	843,794 MWH
TOTALS FOR INDEPENDENT POWER PROD.		1	192.00	OTHER	N	IPP	5/1/90	HYDRO	HYDRO	INTERCONNECTED	843,794 MWH
GSU	AGRIELECTRIC	1	12.50	SPP	Y	A07	7/1/84	STEAM TURBINE	RICE HUSKS	INTERCONNECTED	64,640 MWH
TOTALS FOR SMALL POWER PRODUCERS		1	12.50	SPP	Y	A07	7/1/84	STEAM TURBINE	RICE HUSKS	INTERCONNECTED	64,640 MWH
GSU	AIR LIQUIDE AMERICAN CORP	1	36.00	COGEN	Y	D28	1/1/84	COMBINED CYCLE	NAT GAS	INTERCONNECTED	**
NOPS	AIR PRODUCTS - COGENERATION	1	23.00	COGEN	Y	D28	1/1/84	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	ARCADIAN	1	21.50	COGEN	Y	D28	10/1/86	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	BASE-WYANDOTTE	1	36.60	COGEN	Y	D28	7/1/85	COMBINED CYCLE	NAT GAS	INTERCONNECTED	**
GSU	BORDEN CHEMICALS (MONOCHEM) #1	1	21.50	COGEN	Y	D28	4/1/85	GAS TURBINE	NAT GAS	INTERCONNECTED	**
GSU	BORDEN CHEMICALS (MONOCHEM) #2	1	35.00	COGEN	Y	D28	10/1/86	GAS TURBINE	NAT GAS	INTERCONNECTED	**
GSU	BORDEN CHEMICALS (MONOCHEM) #3	1	35.00	COGEN	Y	D28	1/1/86	GAS TURBINE	NAT GAS	INTERCONNECTED	**
GSU	COPOLYMER	1	14.00	COGEN	N	D28	1/1/78	STEAM TURBINE	NAT GAS	STAND ALONE	**
GSU	DOW CHEMICAL (LA)	2	670.00	COGEN	Y	D28	1/1/78	GAS TURBINE	NAT GAS	INTERCONNECTED	**
GSU	EXXON CHEMICALS	1	84.00	COGEN	Y	D29	1/1/78	COMBINED CYCLE	NAT GAS	INTERCONNECTED	**
GSU	EXXON CHEMICALS	1	0.90	COGEN	Y	D28	4/1/88	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	EXXON CRYOGENICS	1	0.30	COGEN	N	D30	1/1/78	STEAM TURBINE	NAT GAS	INTERCONNECTED	**
GSU	FIRESTONE	1	46.00	COGEN	Y	D28	3/1/85	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	FORMOSA PLASTICS #1	1	46.00	COGEN	Y	D28	7/1/80	STEAM TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	FORMOSA PLASTICS #2	1	22.00	COGEN	Y	D28	1/1/88	STEAM TURBINE	NAT GAS	UTILITY BACKUP	**
LPL	IMC-AGRICO, UNCLE SAM	2	113.90	COGEN	Y	D28	1/1/78	GAS TURBINE	SULPHUR	INTERCONNECTED	**
LPL	KAISER ALUM. & CHEMICALS - GRAMERCY	1	13.50	COGEN	N	D28	1/1/78	GAS TURBINE	NAT GAS	STAND ALONE	**
GSU	MONTEL (HIMONT)	1	3.00	COGEN	N	D28	1/1/78	STEAM TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	OLIN	4	15.00	COGEN	N	D28	1/1/78	STEAM TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	PPG-A	2	176.00	COGEN	Y	D28	6/1/85	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	PPG-B	2	164.00	COGEN	Y	D28	1/1/78	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	PPG-C	3	125.00	COGEN	N	D28	1/1/78	STEAM TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	PPG-D	2	6.50	COGEN	N	D28	1/1/78	GAS TURBINE	NAT GAS	STAND ALONE	**
GSU	TEXACO HENRY	1	10.00	COGEN	N	D28	1/1/87	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
LPL	UNION CARBIDE CORP. - HAHNVILLE-A	1	10.00	COGEN	N	D28	1/1/87	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
LPL	UNION CARBIDE CORP. - HAHNVILLE-B	1	10.00	COGEN	N	D28	1/1/87	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
LPL	UNION CARBIDE CORP. - HAHNVILLE-C	1	10.00	COGEN	N	D28	1/1/87	STEAM TURBINE	NAT GAS	UTILITY BACKUP	**
GSU	VULCAN CHEMICAL	1	108.00	COGEN	Y	D28	12/1/85	GAS TURBINE	NAT GAS	INTERCONNECTED	**
TOTALS FOR CHEMICAL RELATED		37	1848.70	COGEN	Y	D28					12,200,515 MWH
LPL	GAYFORD CONTAINER CORP. #1	1	37.00	COGEN	Y	D26	1/1/78	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
LPL	GAYFORD CONTAINER CORP. #2	1	25.00	COGEN	Y	D26	1/1/78	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
GSU	GEORGIA PACIFIC	1	59.00	COGEN	Y	D26	3/1/86	STEAM TURBINE	NAT GAS	UTILITY BACKUP	**
LPL	INTERNATIONAL PAPER #1	1	41.00	COGEN	Y	D26	1/1/80	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
LPL	INTERNATIONAL PAPER #2	1	15.00	COGEN	Y	D26	1/1/80	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
GSU	JAMES RIVER #1	1	12.50	COGEN	Y	D26	2/1/86	STEAM TURBINE	PAPER MFG BYPROD	INTERCONNECTED	**
GSU	JAMES RIVER #2	1	45.00	COGEN	Y	D26	2/1/86	STEAM TURBINE	PAPER MFG BYPROD	INTERCONNECTED	**
LPL	RIVERWOOD INTERNATIONAL CORP. #1	1	35.00	COGEN	Y	D26	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
LPL	RIVERWOOD INTERNATIONAL CORP. #2	1	30.00	COGEN	Y	D26	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
LPL	RIVERWOOD INTERNATIONAL CORP. #3	1	7.00	COGEN	Y	D26	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
LPL	RIVERWOOD INTERNATIONAL CORP. #4	1	7.00	COGEN	Y	D26	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
LPL	RIVERWOOD INTERNATIONAL CORP. #5	1	7.00	COGEN	Y	D26	1/1/77	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
LPL	STONE HODGE, INC.	1	66.00	COGEN	N	D26	1/1/78	STEAM TURBINE	PAPER MFG BYPROD	UTILITY BACKUP	**
TOTALS FOR PAPER RELATED		13	386.50	COGEN	Y	D26					2,562,703 MWH
GSU	AMOCO	1	0.80	COGEN	Y	D29	2/1/88	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
LPL	BP OIL	1	19.15	COGEN	Y	D29	1/1/90	STEAM TURBINE	REFINERY GAS	INTERCONNECTED	**
GSU	CITGO	3	75.00	COGEN	N	D29	1/1/78	STEAM TURBINE	NAT GAS	INTERCONNECTED	**
GSU	PLACID	1	7.50	COGEN	Y	D29	4/1/90	GAS TURBINE	REFINERY GAS	UTILITY BACKUP	**
GSU	TRUNKLINE	2	15.00	COGEN	N	D29	1/1/78	GAS TURBINE	NAT GAS	UTILITY BACKUP	**
LPL	CALCINER INDUSTRIES - CHALMETTE	1	27.00	COGEN	Y	D33	1/1/74	STEAM TURBINE	PETROLEUM COKE	INTERCONNECTED	**
GSU	NELSON INDUSTRIAL STEAM CO.	2	200.00	COGEN	Y	E496	10/1/88	STEAM TURBINE	PETROLEUM COKE	INTERCONNECTED	**
TOTALS FOR REFINING AND PETR PRODUCTS		11	344.45	COGEN	Y	D20					1,997,028 MWH
LPL	AMSTAR CORP.	1	9.00	COGEN	Y	D20	1/1/78	STEAM TURBINE	NAT GAS	UTILITY BACKUP	**
LPL	COLONIAL SUGARS, INC.	1	7.60	COGEN	Y	D20	1/1/78	STEAM TURBINE	NAT GAS	UTILITY BACKUP	**
CLECO	JEANNERETTE SUGAR MILL	3	0.10	COGEN	Y	D20	2/1/85	STEAM TURBINE	BAGASSE	INTERCONNECTED	**
TOTALS FOR SUGAR MILLS		3	16.70	COGEN	Y	D20					97,210 MWH
TOTALS FOR ALL TYPES		66	2798.85	COGEN	Y	D20					17,805,173 MWH
TOTALS FOR ALL TYPES		66	2798.85	COGEN	Y	D20					17,805,173 MWH

** SALES BY AGRIELECTRIC TO GSU AS REPORTED BY GSU WERE 72.86 MILLION KWH OR 12.7% MORE THAN THE VALUE REPORTED BY EEI

** INDIVIDUAL FIRM DATA NOT PROVIDED TO PRESERVE CONFIDENTIALITY

Compared to Louisiana NUG totals for 1994, this grouping represented 12.3% of generating capacity and 11.2% of generation.

The last NUG industry group is engaged in sugar cane milling or sugar refining. In 1994, this NUG industry group had an estimated generating capacity of 16.7 MW or 146.3 million KWH per year. Their estimated generation during that year was 97.2 million KWH representing a 66.4% use factor. Sugar industry NUGs had only 0.6% of statewide NUG generating capacity and 5.4% of statewide generation during 1994.

Sales of Electricity by Louisiana NUGs to Louisiana Electric Utilities

Table IV, Figures IV- A through IV - D, and Tables V through IX with associated Tables in the body of this report as well as all tables in Appendix B present data on purchases of NUG power by Louisiana electric utilities. As shown in Table IV, Louisiana NUGs sold a total of 274.45 million KWH of electricity to Louisiana utilities in 1994, the last year in which data are complete. These utilities paid a total of \$4,842,949 for this power for an average unit cost of 1.76 cents per KWH.

Yearly average unit prices paid by each Louisiana electric utility are shown graphically in Figure IV-A. These prices are strong indicators of the natural gas prices paid by the various utilities for natural gas over the decade which the data span. All utilities except SWEPCO are grouped together rather closely. SWEPCO, however, is universally higher than any other utility. In 1993, its price paid to NUGs was almost triple the value for the utility having the lowest price paid cost in the state, NOPSI. The reason for these high prices was that SWEPCO was locked into a high (more than \$8 per mcf) priced natural gas supply contract with one of its major suppliers. During that year, the Public Utility Commission of Texas (PUCT), which also regulates SWEPCO, investigated this situation. As a result, SWEPCO was able to renegotiate prices on this contract. Renegotiations resulted in the fall of price paid NUGs from 4.81 to 2.59 cents per KWH. The cost of SWEPCO electricity to its customers fell as well.

Figures IV-B through IV-D present graphic data on yearly totals of electricity purchases from NUGs by Louisiana electric utilities. Sums for all Louisiana NUGs are presented as bars; the total activity for all NUGs, both Louisiana and Texas, is presented as a line graph. As can be seen in Figures IV-B and IV-C, the quantity and total cost of electricity purchased from Texas NUGs is significant. Data in Figure IV-D, however, indicates that the yearly average unit prices paid Louisiana NUGs vs. combined Texas and Louisiana NUGs are almost equal.

Starting with Table V through Table IX and Figure IX, yearly summary data are presented by purchasing utility for each NUG selling electricity. Table V provides data on purchases by CLECO from one NUG supplier.

NUG purchase activity by GSU is divided into two sets of tables and figures, one set (Table VI-L and Figure VI-L) for Louisiana NUGs and one set (Table VI-T and Figure VI-T) for Texas NUGs. GSU purchases electricity from nine Louisiana NUG suppliers. The data presented in

TABLE IV
QF PURCHASES OF ELECTRICITY - ALL LOUISIANA UTILITIES
YEARLY POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
PURCHASES FROM ALL QF SUPPLIERS (LA & TX)

SUMMARY DATA

POWER PURCHASED (KWH)

YEAR	CLECO	GSU - LA	LPL	NOPSI	TOTALS - LA QFS ONLY	SWEPCO	GSU - TX	TOTALS - ALL QFS
1985	16,000	153,401,456	99,420,200	3,078,172	255,916,828	7,570,629	27,805,102	291,291,559
1986	106,000	374,503,084	91,280,900	3,370,000	469,259,984	10,331,263	50,970,958	530,562,205
1987	238,000	425,681,860	105,808,050	3,079,000	634,806,910	11,504,501	86,080,106	632,391,517
1988	196,000	274,373,997	97,262,077	1,772,000	373,604,074	15,332,465	126,948,281	515,884,820
1989	156,000	262,212,860	96,469,848	461,000	359,299,708	9,887,053	100,117,683	469,304,444
1990	73,000	303,991,026	144,734,454	147,000	448,945,480	8,662,149	71,422,665	529,030,294
1991	20,530	256,238,617	147,313,535	236,000	403,808,682	2,597,814	36,089,776	442,496,272
1992	1,450	244,130,416	140,037,201	496,000	384,665,067	9,270,742	127,600,698	521,536,507
1993	114,940	185,468,409	143,748,186	58,000	329,389,535	10,844,644	201,238,987	541,473,166
1994	437,400	129,519,067	144,122,869	369,000	274,448,336	8,871,238	229,113,009	512,432,583
1995		172,713,494	140,523,451	346,000	313,582,945		110,239,536	423,822,481
1996ANN ¹		162,709,954	176,840,530	1,141,714	340,692,199		76,403,623	417,095,822
1996ACT ²		94,914,140	103,156,976	666,000	198,737,116		44,568,780	243,305,896
TOTALS ³	1,359,320	2,877,148,426	1,453,877,747	14,078,172	4,346,463,665	94,872,498	1,212,195,581	5,653,531,744

COST OF PURCHASED POWER (CENTS / KWH)

YEAR	CLECO	GSU - LA	LPL	NOPSI	TOTALS - LA QFS ONLY	SWEPCO	GSU - TX	TOTALS - ALL QFS
1985	\$440	\$4,073,527	\$3,187,118	\$89,240	\$7,350,325	\$287,524	\$716,836	\$8,354,685
1986	\$2,430	\$6,297,966	\$1,486,293	\$53,456	\$7,840,145	\$331,817	\$793,721	\$8,965,683
1987	\$4,284	\$6,610,403	\$1,694,835	\$47,946	\$8,357,468	\$310,476	\$1,309,159	\$9,977,103
1988	\$3,548	\$4,803,258	\$1,605,915	\$29,332	\$6,442,053	\$487,018	\$2,257,046	\$9,186,117
1989	\$2,918	\$4,624,988	\$1,663,094	\$7,952	\$6,298,952	\$297,882	\$1,722,246	\$8,319,080
1990	\$1,482	\$5,433,674	\$2,404,978	\$2,733	\$7,842,867	\$296,885	\$1,254,496	\$9,394,248
1991	\$455	\$3,806,975	\$2,210,781	\$3,825	\$6,022,036	\$77,380	\$596,849	\$6,696,265
1992	\$33	\$4,353,919	\$2,057,190	\$6,680	\$6,417,822	\$400,640	\$2,492,401	\$9,310,863
1993	\$2,506	\$3,763,697	\$2,563,930	\$837	\$6,330,970	\$521,765	\$4,011,091	\$10,863,826
1994	\$9,589	\$2,123,488	\$2,704,604	\$5,268	\$4,842,949	\$229,458	\$3,612,974	\$8,685,381
1995		\$3,112,888	\$2,532,286	\$7,024	\$5,652,198		\$1,841,669	\$7,493,867
1996ANN ¹		\$3,613,158	\$3,428,213	\$33,890	\$7,075,261		\$1,629,504	\$8,704,765
1996ACT ²		\$2,107,676	\$1,999,791	\$19,769	\$4,127,236		\$950,544	\$5,077,780
TOTALS ³	\$27,685	\$51,112,459	\$26,110,815	\$274,062	\$77,525,021	\$3,240,845	\$21,559,032	\$102,324,898

AVERAGE COST OF POWER (CENTS/KWH)

YEAR	CLECO	GSU - LA	LPL	NOPSI	TOTALS - LA QFS ONLY	SWEPCO	GSU - TX	TOTALS - ALL QFS
1985	2.75	2.66	3.21	2.90	2.87	3.80	2.58	2.87
1986	2.29	1.68	1.63	1.59	1.67	3.21	1.56	1.69
1987	1.80	1.55	1.60	1.56	1.56	2.70	1.52	1.58
1988	1.81	1.75	1.65	1.66	1.72	3.18	1.78	1.78
1989	1.87	1.76	1.72	1.72	1.75	3.01	1.72	1.77
1990	2.03	1.79	1.66	1.86	1.75	3.43	1.76	1.78
1991	2.22	1.49	1.50	1.62	1.49	2.98	1.65	1.51
1992	2.28	1.78	1.47	1.35	1.67	4.32	1.95	1.79
1993	2.18	2.03	1.78	1.44	1.92	4.81	1.99	2.01
1994	2.19	1.64	1.88	1.43	1.76	2.59	1.58	1.69
1995		1.80	1.80	2.03	1.80		1.67	1.77
1996		2.22	1.94	2.97	2.08		2.13	2.09
OVERALL AVERAGE	2.04	1.78	1.80	1.95	1.78	3.42	1.78	1.81

¹ ANNUALIZED JANUARY THROUGH JULY DATA (7 MONTH SUM * 12/7)

² ACTUAL 1996 DATA - JANUARY THROUGH JULY SUM

³ INCLUDES ONLY ACTUAL 1996 DATA

⁴ 1996 ACTUAL AND 1996 ANNUALIZED PERCENTAGES ARE IDENTICAL

FIGURE IV-A
QF ELECTRICITY PURCHASES BY LOUISIANA ELECTRIC UTILITIES
YEARLY DATA (1985 TO 1996) BY ELECTRIC UTILITY
UTILITY YEARLY AVERAGE PRICE PAID FOR POWER PURCHASED

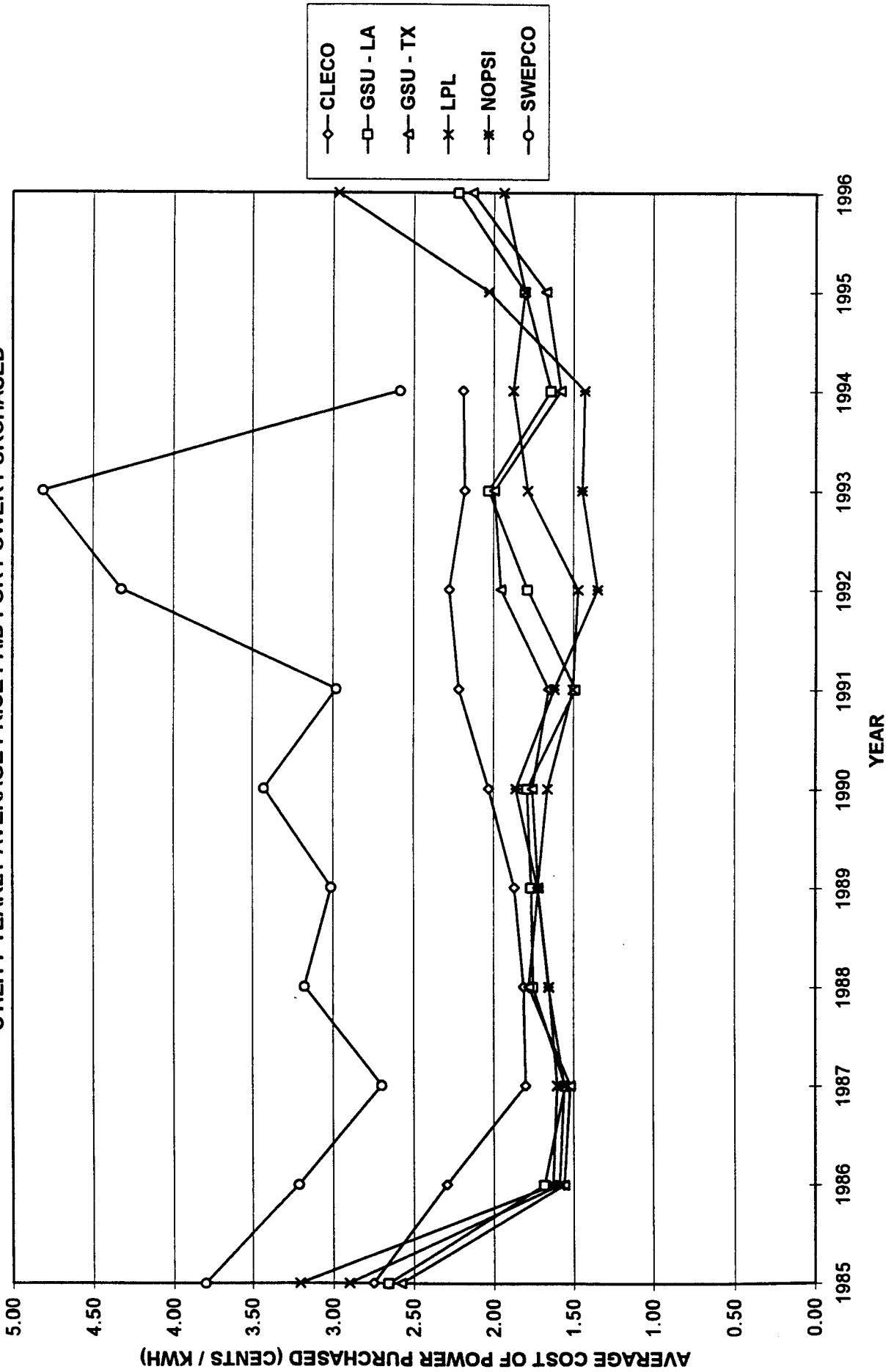


FIGURE IV - B
QF ELECTRICITY PURCHASES BY LOUISIANA ELECTRIC UTILITIES
TOTAL YEARLY PURCHASE DATA FOR ALL UTILITIES
QUANTITY OF POWER PURCHASED TOTALED BY QF GROUPINGS

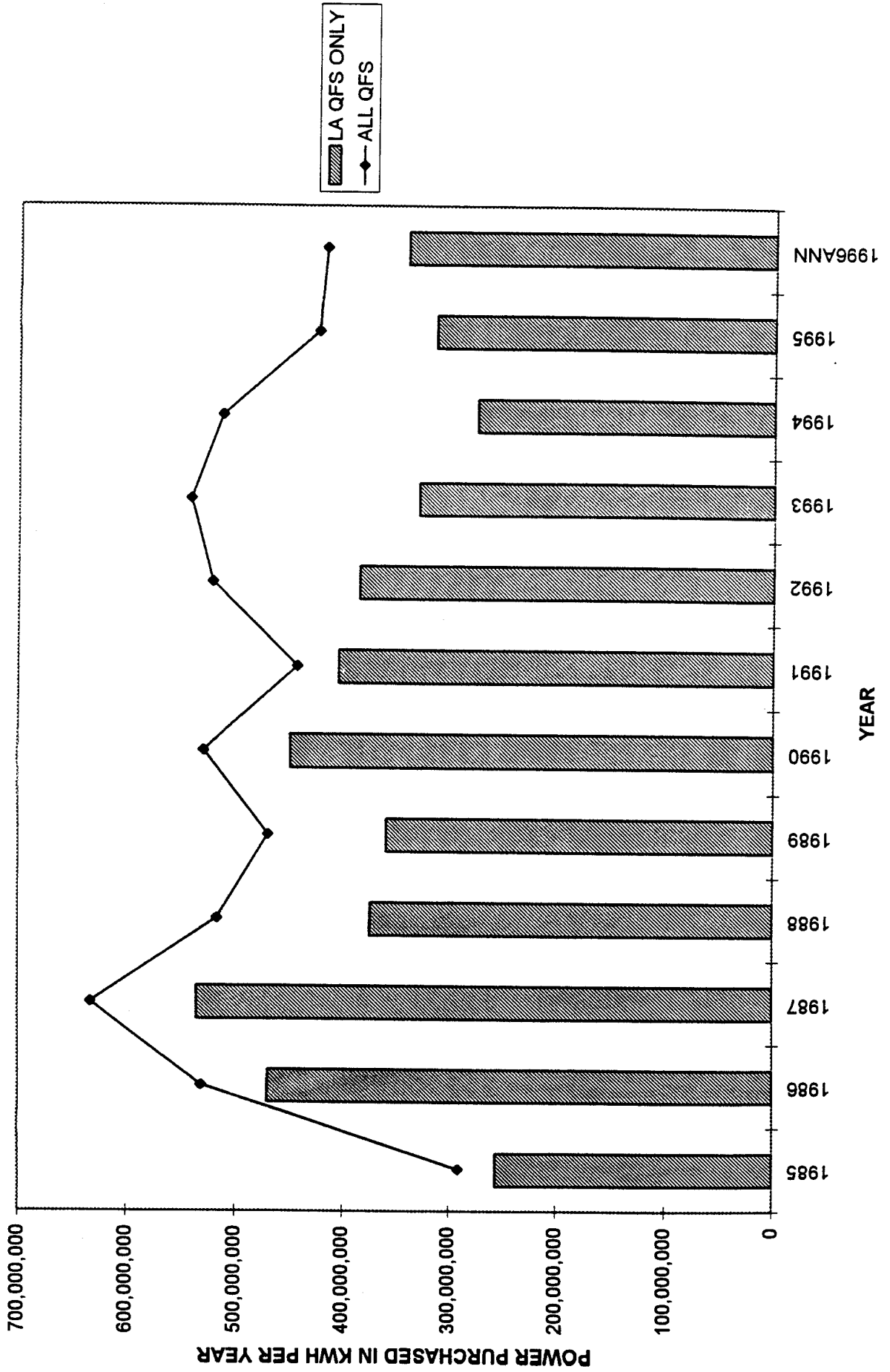


FIGURE IV - C
 QF ELECTRICITY PURCHASES BY LOUISIANA ELECTRIC UTILITIES
 TOTAL YEARLY PURCHASE DATA FOR ALL UTILITIES
 COST OF POWER PURCHASED TOTALED BY QF GROUPINGS

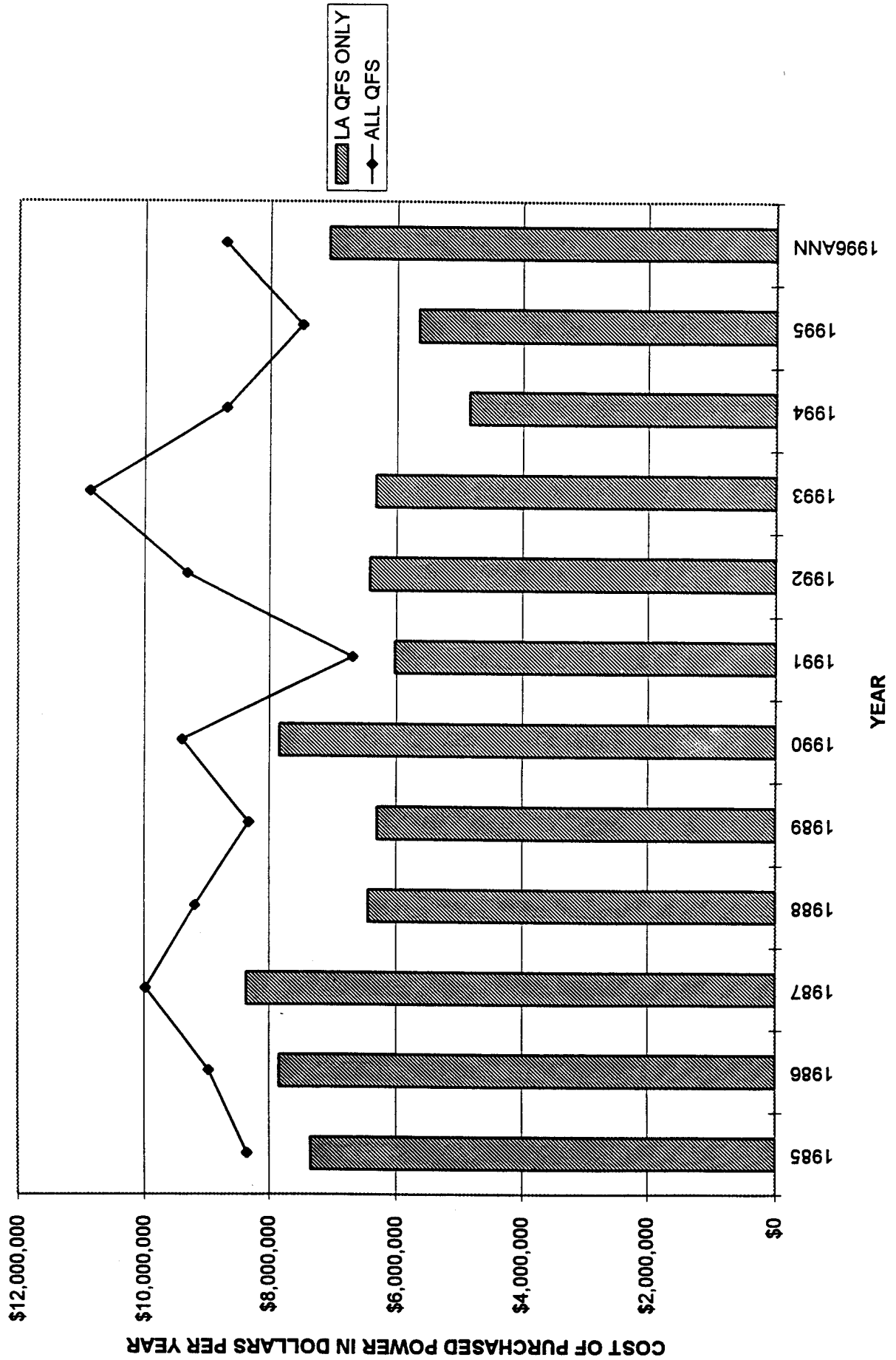


FIGURE IV - D
 QF ELECTRICITY PURCHASES BY LOUISIANA ELECTRIC UTILITIES
 YEARLY AVERAGE UNIT PRICE PAID DATA
 PRICE PAID AVERAGED FOR QF GROUPINGS

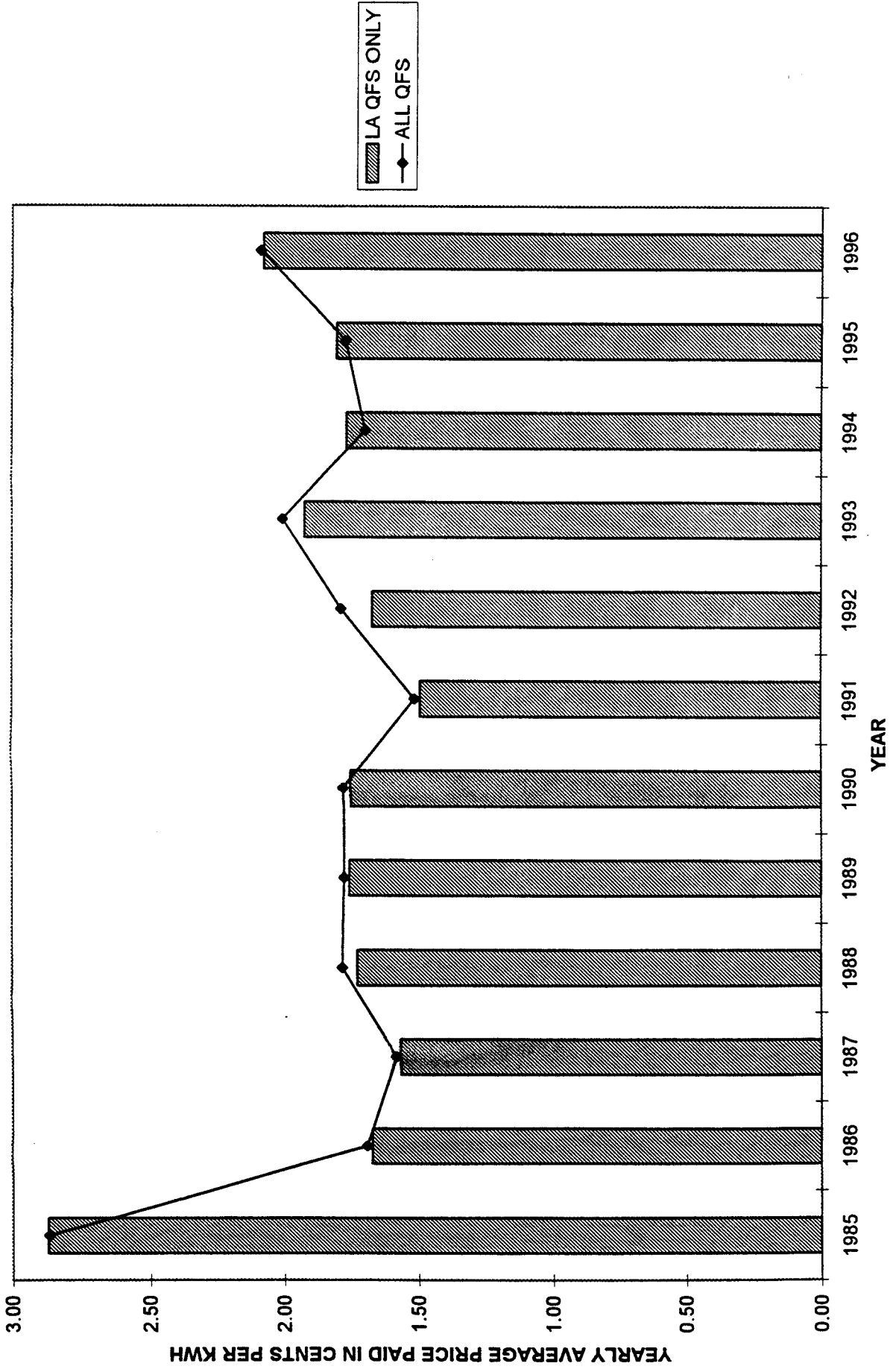


TABLE V
CENTRAL LOUISIANA ELECTRIC COMPANY (CLECO)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST (CENTS / KWH)
YEARLY SUMMARY - ALL QF SUPPLIERS

POWER PURCHASED (KWH)

YEAR	JEANERETTE SUGAR
1985	16,000
1986	106,000
1987	238,000
1988	196,000
1989	156,000
1990	73,000
1991	20,530
1992	1,450
1993	114,940
1994	437,400
1995	
1996	
GRAND TOTAL	1,359,320

COST OF POWER (\$)

YEAR	JEANERETTE SUGAR
1985	\$440
1986	\$2,430
1987	\$4,284
1988	\$3,548
1989	\$2,918
1990	\$1,482
1991	\$455
1992	\$33
1993	\$2,506
1994	\$9,589
1995	
1996	
GRAND TOTAL	\$27,685

AVERAGE COST OF POWER (CENTS / KWH)

YEAR	JEANERETTE SUGAR
1985	2.75
1986	2.29
1987	1.80
1988	1.81
1989	1.87
1990	2.03
1991	2.22
1992	2.28
1993	2.18
1994	2.19
1995	
1996	
GRAND AVERAGE	2.04

Table VI-L provide sums for all nine suppliers and all suppliers except Agrielectric. Agrielectric is a small power producer in Lake Charles burning agricultural waste (rice husks). Because of a special agreement with GSU approved by the Louisiana Public Service Commission, this SPP receives special rates which are roughly 200% of GSU's avoided cost. The Agrielectric data are omitted from Figure VI-L (average yearly unit prices for each supplier) in order to focus on standard average yearly unit prices paid industrial cogenerating QF NUGs. GSU purchases electric power from eight industrial cogenerating QF NUGs in Texas. These data are presented and summarized in Table VI-T. The average yearly unit prices for each of these NUGs are shown graphically in Figure VI-T. A visual examination of both GSU figures indicates similarities in GSU's prices paid NUGs among QFs and between states.

Table VII presents yearly data on power purchased from three industrial cogenerating QF NUGs by LPL. Figure VII shows graphically LPL's yearly average unit price paid each of these suppliers. With the exception of the first year's (1985) data, these data, cluster by year among the suppliers and cluster in a band between 1.40 and 2.10 cents per KWH over the twelve years of data.

NOPSI yearly power purchase activity with one industrial cogenerating QF NUG is presented in Table VIII. Similarly, the yearly average unit price paid for such power from that supplier is shown graphically in Figure VIII. These average unit prices lie within the price range paid by all other Louisiana electric utilities except SWEPCO.

Data on SWEPCO power purchasing activities with its two Texas industrial cogenerating QF NUGs is shown in Table IX. Yearly average unit prices paid by this utility to its NUG suppliers are shown graphically in Figure IX. As mentioned above, SWEPCO prices paid for power from these suppliers, a proxy for SWEPCO's weighted average cost of gas, are substantially higher than those of any other Louisiana electric utility in every year except 1994. The 1994 unit prices, while still higher than those of every other Louisiana utility, are percentage wise much closer.

Disaggregate monthly data for each NUG supplying a Louisiana electric utility from 1985 to the present are shown in tables located in Appendix B. These 28 tables cover all individual NUGs selling to Louisiana and include summary tables for each electric utility having more than one NUG supplier. Data for the Entergy utilities (GSU, LPL, and NOPSI) cover the period from January 1985 through July 1996. Data for CLECO and SWEPCO cover the period from January 1985 through December 1994.

TABLE VI - L
 GULF STATES UTILITIES (GSU)
 PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
 LOUISIANA QF SUPPLIERS
 YEARLY SUMMARY OF ALL LOUISIANA QF SUPPLIERS

YEAR	AGRI ELECTRIC	BASF	BORDEN	DOW	EXXON	FORMOSA	JAMES RIVER	NISCO	VULCAN	ALL LOUISIANA QF'S	ALL QF'S EXCEPT AGRI ELECTRIC	YEAR
1985	64,564,886	26,883,220	40,965,246	117,359,300			23,826,762		\$ 159,536	217,866,342	153,401,456	1985
1986	66,689,393	52,525,840	107,090,029	123,297,324			22,927,726		133,887,912	441,192,477	374,503,084	1986
1987	74,666,060	41,341,726	81,944,613	174,761,875			6,819,512		79,560,504	500,347,920	425,681,860	1987
1988	77,792,352	35,404,645	105,807,252	81,644,613			7,901,917		32,285,068	352,166,349	274,373,997	1988
1989	71,195,845	36,299,690	75,174,451	96,648,275			6,884,572		35,978,626	333,408,705	262,212,860	1989
1990	80,192,798	24,100,593	45,698,455	142,570,565	2,666,336		4,765,068		7,081,181	303,991,026	256,238,617	1990
1991	80,830,716	13,714,028	12,472,302	144,386,237	35,964,495		2,562,351		37,808,632	337,069,333	244,130,416	1991
1992	69,099,298	5,202,610	7,030,669	175,689,362	29,536,408		2,954,977		21,446,480	313,229,714	285,468,109	1992
1993	70,421,944	4,900,216	17,187,338	108,893,725	13,369,825		2,782,362		23,919,467	285,890,353	129,519,067	1993
1994	72,863,885	475,142	9,852,613	59,866,346	29,008,952		3,304,830		21,157,324	202,382,952	172,713,494	1994
1995	73,697,875	3,006,948	2,150,745	121,054,726	9,727,711		2,098,072		6,419,609	246,411,369	172,713,494	1995
1996	28,962,513	2,744,220	6,847,985	74,376,334			2,427,920		6,419,609	123,677,053	94,914,140	1996
TOTALS	830,977,965	245,555,778	430,277,085	1,420,747,682	120,273,727	18,171,972	86,489,279	47,678,709	506,514,294	3,708,126,391	2,877,148,428	

COST OF POWER (\$)

YEAR	AGRI ELECTRIC	BASF	BORDEN	DOW	EXXON	FORMOSA	JAMES RIVER	NISCO	VULCAN	ALL LOUISIANA QF'S	ALL QF'S EXCEPT AGRI ELECTRIC	YEAR
1985	\$1,632,104	\$640,202	\$637,727	\$3,238,949			\$395,769		\$194,376	\$5,705,631	\$4,073,527	1985
1986	\$1,090,217	\$919,812	\$1,651,829	\$2,031,267			\$360,224		\$2,313,391	\$7,388,183	\$6,297,966	1986
1987	\$1,435,383	\$643,394	\$1,865,287	\$2,716,696			\$119,177		\$1,236,260	\$8,045,786	\$6,610,403	1987
1988	\$2,794,300	\$619,619	\$1,331,294	\$1,408,851			\$124,107		\$635,231	\$7,597,558	\$4,803,258	1988
1989	\$2,557,248	\$636,692	\$871,474	\$1,695,444	\$53,589		\$124,107		\$1,299,771	\$7,182,236	\$4,624,988	1989
1990	\$2,890,826	\$445,803	\$226,488	\$2,521,668	\$53,589		\$79,519		\$39,945	\$6,710,730	\$5,433,674	1990
1991	\$2,903,755	\$227,718	\$226,488	\$2,318,803	\$242,750		\$79,519		\$39,945	\$6,807,937	\$3,806,975	1991
1992	\$2,454,018	\$96,829	\$127,524	\$3,152,653	\$492,406		\$51,467		\$6,951	\$6,258,043	\$4,353,919	1992
1993	\$2,494,346	\$104,231	\$342,778	\$2,213,483	\$270,301		\$47,258		\$476,235	\$4,703,688	\$3,763,697	1993
1994	\$2,580,200	\$8,185	\$173,106	\$1,015,408	\$445,155		\$45,851		\$337,882	\$4,703,688	\$2,123,888	1994
1995	\$2,610,382	\$51,348	\$36,237	\$2,215,268	\$171,669		\$62,497		\$24,481	\$5,723,270	\$3,112,888	1995
1996	\$1,009,405	\$78,674	\$153,891	\$1,652,918			\$46,938		\$129,187	\$3,117,081	\$2,107,676	1996
TOTALS	\$26,442,184	\$4,472,507	\$7,417,435	\$26,181,428	\$1,675,870	\$322,184	\$7,469,584	\$874,895	\$8,699,556	\$77,554,643	\$51,112,459	

AVERAGE COST OF POWER (CENTS/KWH)

YEAR	AGRI ELECTRIC	BASF	BORDEN	DOW	EXXON	FORMOSA	JAMES RIVER	NISCO	VULCAN	ALL LOUISIANA QF'S	ALL QF'S EXCEPT AGRI ELECTRIC	YEAR
1985	2.53	2.38	1.56	2.76			1.66		2.12	2.62	2.66	1985
1986	1.63	1.75	1.54	1.65			1.57		1.73	1.87	1.68	1986
1987	1.92	1.56	1.76	1.55			1.57		1.56	1.61	1.55	1987
1988	3.59	1.75	1.77	1.72			1.72	1.86	1.74	2.16	1.75	1988
1989	3.59	1.75	1.91	1.75	2.01		1.72	1.87	1.77	2.15	1.76	1989
1990	3.59	1.85	1.82	1.77			1.80	1.66	1.73	2.16	1.79	1990
1991	3.59	1.66	1.81	1.61	1.59		1.67	1.56	1.58	2.17	1.49	1991
1992	3.55	1.86	1.99	1.79	1.67		1.74	1.42	1.84	2.17	1.78	1992
1993	3.54	2.13	1.76	2.03	2.02		2.11	1.99	1.99	2.45	2.03	1993
1994	3.54	1.72	1.76	1.70	1.76		1.66	1.44	1.57	2.32	1.64	1994
1995	3.54	2.87	2.24	1.83	1.76		1.89	1.57	1.73	2.32	1.80	1995
1996	3.49	1.81	1.72	2.22	1.39		2.24	1.57	2.01	2.52	2.22	1996
GRAND AVERAGE	3.18	1.81	1.72	1.84	1.39	1.77	1.70	1.83	1.72	2.09	1.78	

FIGURE VI - L
 GULF STATES UTILITIES (GSU)
 AVERAGE YEARLY PRICE PER KWH PAID LOUISIANA QF SUPPLIERS

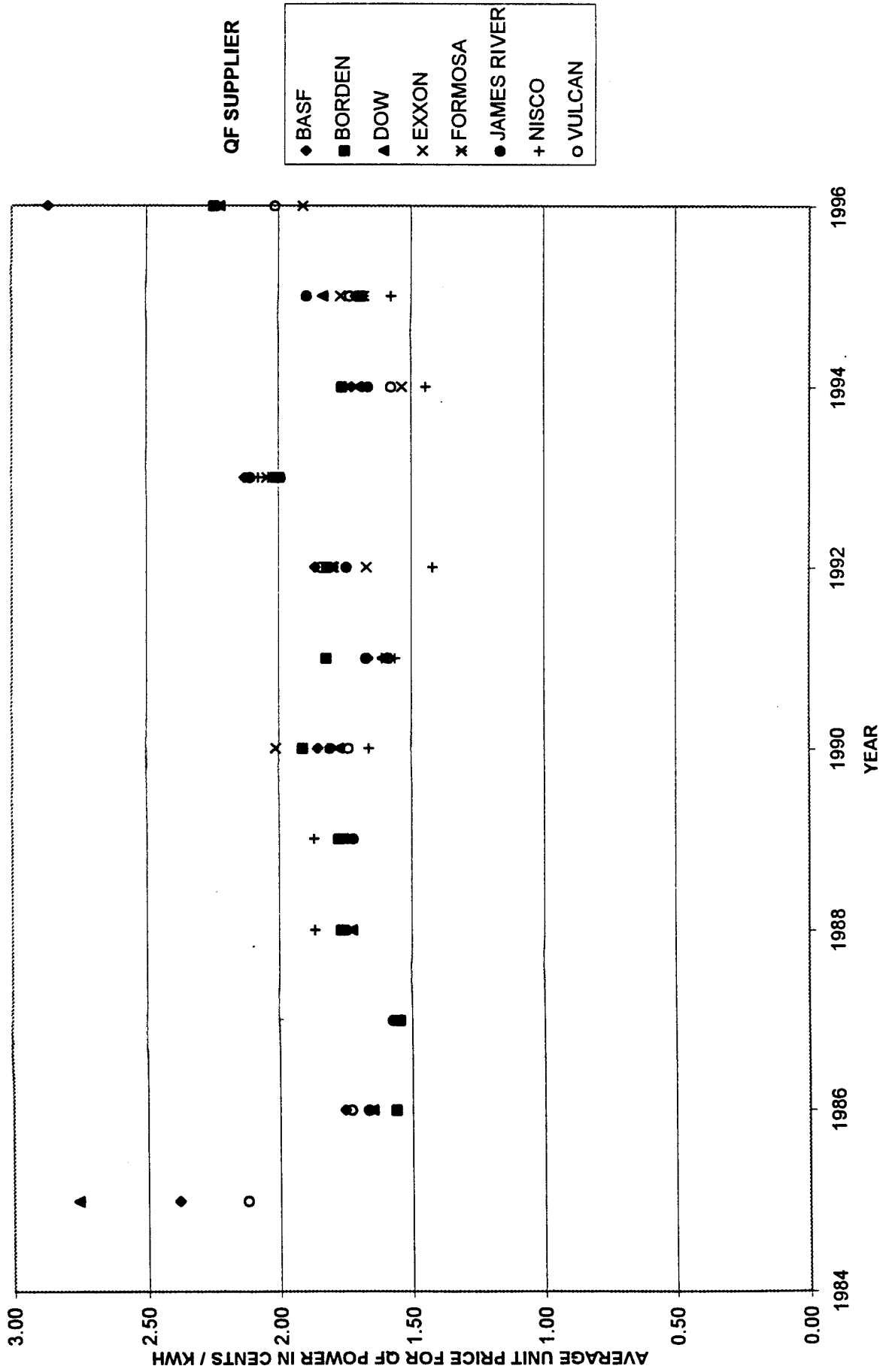


TABLE VI - T
 GULF STATES UTILITIES (GSU)
 PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
 TEXAS QF SUPPLIERS

YEARLY SUMMARY ALL TEXAS QF SUPPLIERS

POWER PURCHASED (KWH)										
YEAR	AIR LIQUIDE	CLARK REFINING	COGEN POWER	DUPONT	FINA	HUNTSMAN CORP.	ENGINEERED CARBONS	STAR ENTERPRISES	ALL QF'S	YEAR
1985			11,602,361				16,202,751		27,805,102	1985
1986			16,508,855				19,108,749	15,353,554	50,970,958	1986
1987			10,954,582	1,823,226			14,791,118	58,511,180	86,080,106	1987
1988			7,161,304	6,801,690			20,369,423	92,615,864	126,948,281	1988
1989			4,983,850	5,715,728	3,268,347		25,065,712	61,094,046	100,117,683	1989
1990			5,773,423	4,413,499	5,424		15,936,881	45,293,438	71,422,665	1990
1991			3,381,712	6,883,671	417,278		10,251,472	15,155,643	36,085,776	1991
1992		10,506,822	2,768,274	934,023	436,044	43,171,465	13,152,931	56,629,339	127,600,698	1992
1993		34,557,963	2,307,862	936,009	765,672	134,511,327	3,606,648	24,554,406	201,238,987	1993
1994	56,750,345	12,548,319	2,823,487	28	115,447,047	44,994,672	13,832,047	28,931,736	229,143,009	1994
1995	16,425,009	3,201,450	1,862,360	1,625,551	264,419	12,233,978	7,705,086	34,168,989	110,239,536	1995
1996	9,296,392	3,053,896	1,157,038	235,675			6,366,047	12,223,754	44,568,780	1996
TOTALS	82,473,746	63,567,350	71,084,308	29,363,972	5,159,212	350,358,489	186,388,865	444,513,949	1,212,195,581	

COST OF POWER (\$)

YEAR	AIR LIQUIDE	CLARK REFINING	COGEN POWER	DUPONT	FINA	HUNTSMAN CORP.	ENGINEERED CARBONS	STAR ENTERPRISES	ALL QF'S	YEAR
1985			\$280,135				\$436,701		\$716,836	1985
1986			\$265,874				\$300,530	\$227,317	\$793,721	1986
1987			\$164,861	\$28,551			\$224,699	\$894,048	\$1,309,159	1987
1988			\$119,705	\$130,781	\$53,052		\$337,851	\$1,668,709	\$2,257,046	1988
1989			\$85,141	\$124,133			\$445,840	\$1,014,080	\$1,722,246	1989
1990			\$96,264	\$79,801			\$268,932	\$909,419	\$1,254,496	1990
1991			\$51,508	\$122,660	\$7,103		\$155,801	\$259,777	\$596,849	1991
1992		\$216,805	\$51,916	\$15,796	\$6,973	\$876,057	\$221,255	\$1,103,599	\$2,492,401	1992
1993	\$848,478	\$870,260	\$46,583	\$17,892	\$13,907	\$2,702,356	\$211,674	\$487,637	\$4,011,091	1993
1994	\$272,979	\$199,310	\$31,832			\$1,826,610	\$211,674	\$485,970	\$3,612,974	1994
1995	\$198,965	\$61,126	\$21,446	\$26,763	\$3,695	\$751,066	\$131,096	\$563,923	\$1,841,669	1995
1996	\$1,320,322	\$1,212,549	\$1,256,385	\$557,400	\$84,830	\$248,184	\$125,753	\$280,325	\$950,544	1996
TOTALS	\$1,320,322	\$1,212,549	\$1,256,385	\$557,400	\$84,830	\$6,104,273	\$2,929,488	\$7,794,804	\$21,559,032	

AVERAGE COST OF POWER (CENTS/KWH)

YEAR	AIR LIQUIDE	CLARK REFINING	COGEN POWER	DUPONT	FINA	HUNTSMAN CORP.	ENGINEERED CARBONS	STAR ENTERPRISES	ALL QF'S	YEAR
1985			2.41				2.70		2.58	1985
1986			1.61				1.57	1.48	1.56	1986
1987			1.50	1.57			1.50	1.53	1.52	1987
1988			1.67	1.92			1.66	1.80	1.78	1988
1989			1.71	2.17	1.62		1.78	1.66	1.72	1989
1990			1.67	1.81	1.62		1.69	1.76	1.71	1990
1991			1.52	1.78	1.64		1.52	1.71	1.65	1991
1992		2.06	1.88	1.69	1.70	2.03	1.68	1.95	1.95	1992
1993		1.94	2.02	1.92	1.82	2.01	2.01	1.99	1.99	1993
1994	1.50	1.58	1.60	1.65	1.40	1.58	1.53	1.68	1.58	1994
1995	1.66	1.91	1.87	1.65	1.40	1.67	1.70	1.65	1.67	1995
1996	2.14	2.16	1.85	1.90	1.64	2.03	1.98	2.29	2.13	1996
GRAND AVERAGE	1.60	1.90	1.77	1.90	1.64	1.83	1.76	1.75	1.78	

FIGURE VI - T
 GULF STATES UTILITIES (GSU)
 AVERAGE YEARLY PRICE PER KWH PAID TEXAS QF SUPPLIERS

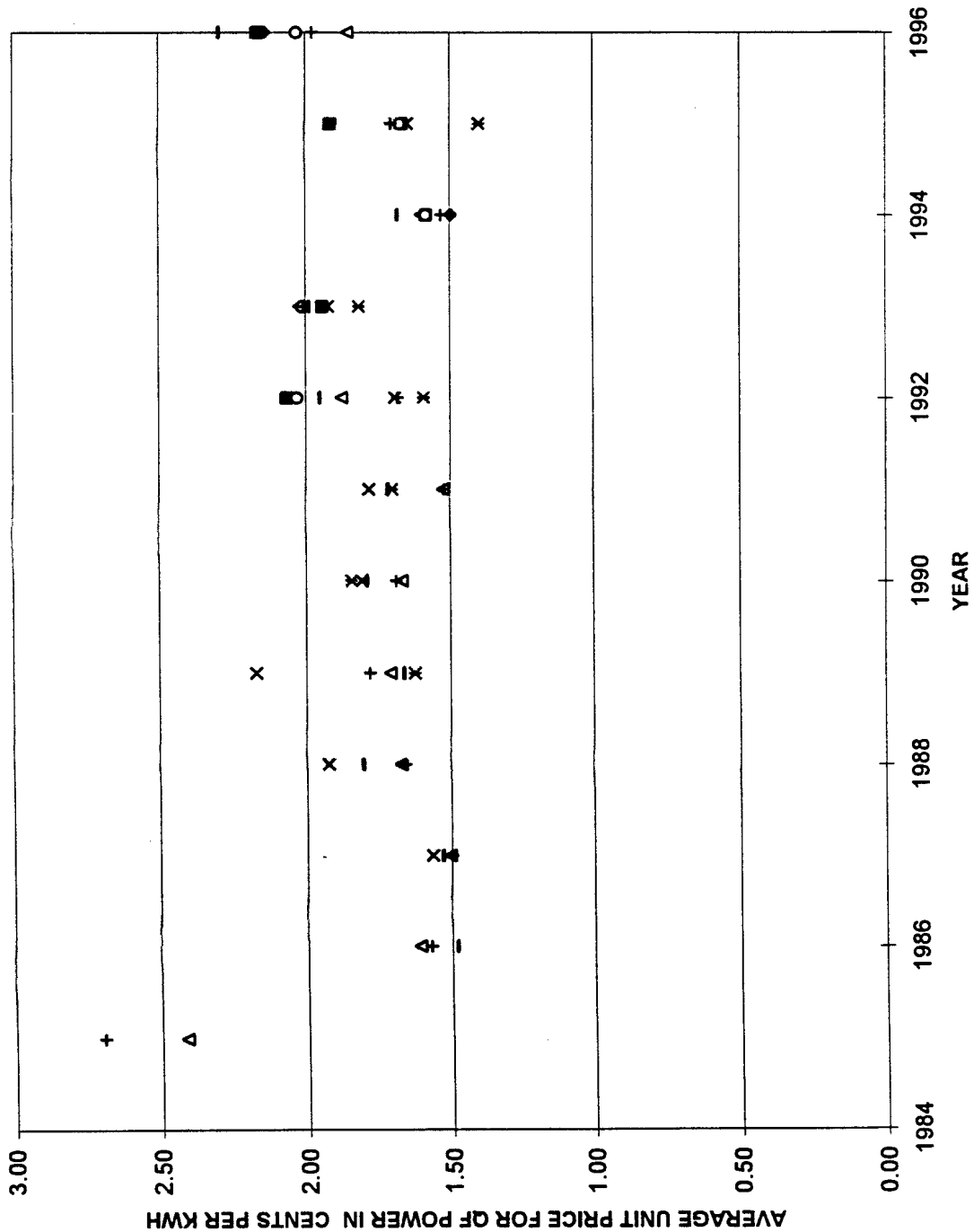


TABLE VII
LOUISIANA POWER AND LIGHT (LPL)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)

YEARLY SUMMARY - ALL QF SUPPLIERS

POWER PURCHASED (KWH)

YEAR	CALICINER INDUSTRIES	IMC AGRICO	B.P. OIL	TOTAL LPL QF'S
1985	99,420,200			99,420,200
1986	91,280,900			91,280,900
1987	105,808,050			105,808,050
1988	95,052,800	2,209,277		97,262,077
1989	90,915,350	5,554,498		96,469,848
1990	101,691,250	4,994,064	38,049,140	144,734,454
1991	105,701,800	3,320,455	38,291,280	147,313,535
1992	100,935,950	4,273,171	34,828,080	140,037,201
1993	109,636,800	2,354,766	31,756,620	143,748,186
1994	101,686,500	2,195,819	40,240,550	144,122,869
1995	107,815,600	5,596,851	27,111,000	140,523,451
1996	76,178,400	6,188,576	20,790,000	103,156,976
TOTALS	1,186,123,600	36,687,477	231,066,670	1,453,877,747

COST OF POWER (\$)

YEAR	CALICINER INDUSTRIES	IMC AGRICO	B.P. OIL	TOTAL LPL QF'S
1985	\$3,187,118			\$3,187,118
1986	\$1,486,293			\$1,486,293
1987	\$1,694,835			\$1,694,835
1988	\$1,569,871	\$36,044		\$1,605,915
1989	\$1,568,799	\$94,295		\$1,663,094
1990	\$1,687,376	\$84,002	\$633,600	\$2,404,978
1991	\$1,584,100	\$49,236	\$577,445	\$2,210,781
1992	\$1,502,882	\$62,869	\$491,439	\$2,057,190
1993	\$2,029,278	\$31,873	\$502,779	\$2,563,930
1994	\$2,001,898	\$35,232	\$667,474	\$2,704,604
1995	\$1,981,266	\$95,943	\$455,077	\$2,532,286
1996	\$1,441,287	\$115,736	\$442,768	\$1,999,791
TOTALS	\$21,735,003	\$605,230	\$3,770,582	\$26,110,815

AVERAGE COST OF POWER (CENTS/KWH)

YEAR	CALICINER INDUSTRIES	IMC AGRICO	B.P. OIL	TOTAL LPL QF'S
1985	3.21			3.21
1986	1.63			1.63
1987	1.60			1.60
1988	1.65	1.63		1.65
1989	1.73	1.70		1.72
1990	1.66	1.68	1.67	1.66
1991	1.50	1.48	1.51	1.50
1992	1.49	1.47	1.41	1.47
1993	1.85	1.35	1.58	1.78
1994	1.97	1.60	1.66	1.88
1995	1.84	1.71	1.68	1.80
1996	1.89	1.87	2.13	1.94
GRAND AVERAGE	1.83	1.65	1.63	1.80

FIGURE VII
LOUISIANA POWER AND LIGHT (LPL)
AVERAGE YEARLY PRICE PER KWH PAID QF SUPPLIERS

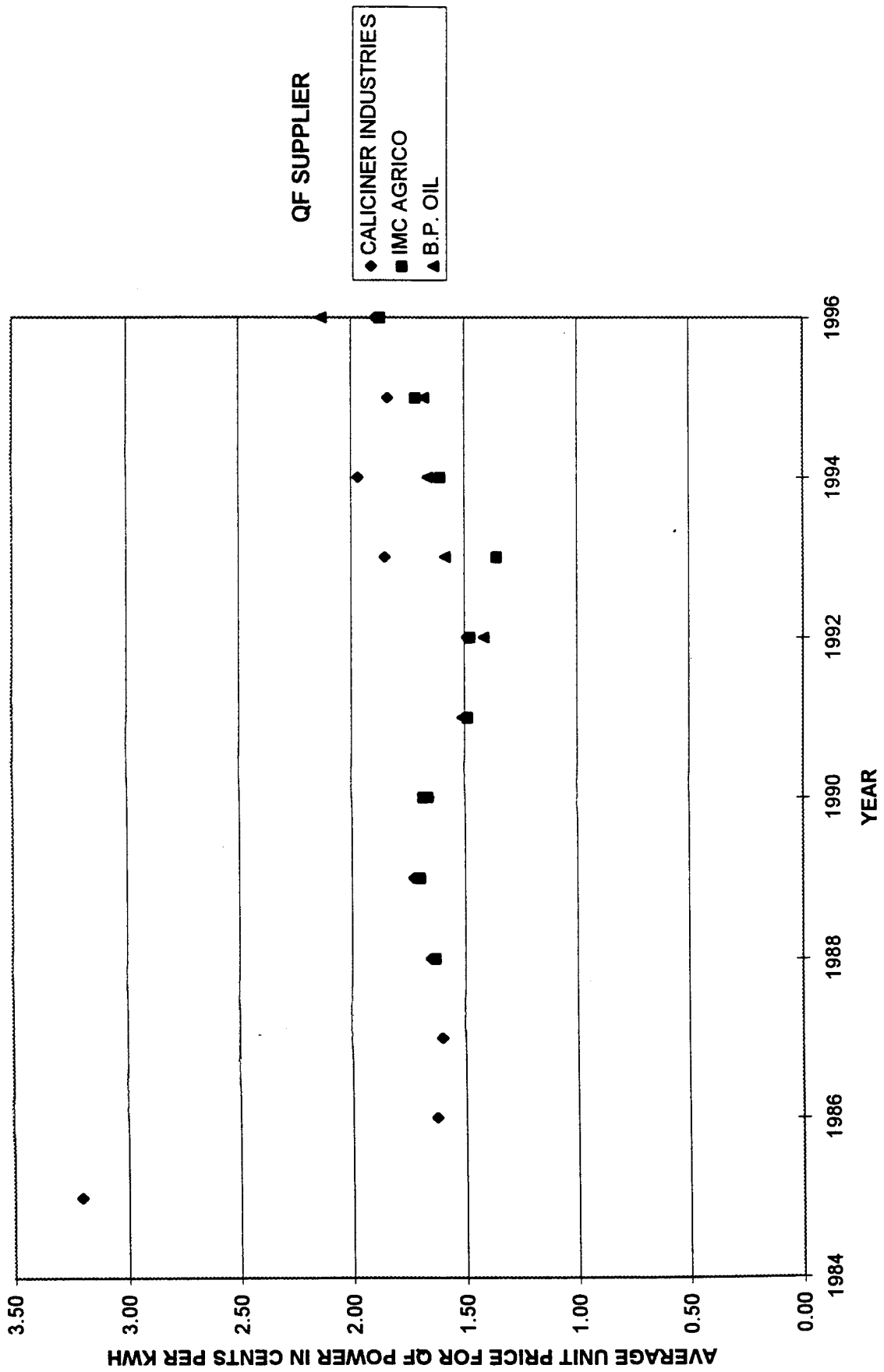


TABLE VIII
NEW ORLEANS PUBLIC SERVICE CO (NOPS)
PURPA QUALIFIED FACILITY (QF) POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST (CENTS PER KWH)

YEARLY SUMMARY OF ALL QF SUPPLIERS

POWER PURCHASED (KWH)

YEAR	AIR PRODUCTS
1985	3,078,172
1986	3,370,000
1987	3,079,000
1988	1,772,000
1989	461,000
1990	147,000
1991	236,000
1992	496,000
1993	58,000
1994	369,000
1995	346,000
1996	666,000
TOTALS	14,078,172

COST OF POWER (\$)

YEAR	AIR PRODUCTS
1985	\$89,240
1986	\$53,456
1987	\$47,946
1988	\$29,332
1989	\$7,952
1990	\$2,733
1991	\$3,825
1992	\$6,680
1993	\$837
1994	\$5,268
1995	\$7,024
1996	\$15,769
TOTALS	\$270,062

AVERAGE COST OF QF POWER (CENTS/KWH)

YEAR	AIR PRODUCTS
1985	2.90
1986	1.59
1987	1.56
1988	1.66
1989	1.72
1990	1.86
1991	1.62
1992	1.35
1993	1.44
1994	1.43
1995	2.03
1996	2.37
GRAND AVERAGE	1.92

FIG VIII
NEW ORLEANS PUBLIC SERVICE COMPANY (NOPS)
AVERAGE YEARLY PRICE PER KWH PAID QF ELECTRICITY SUPPLIERS

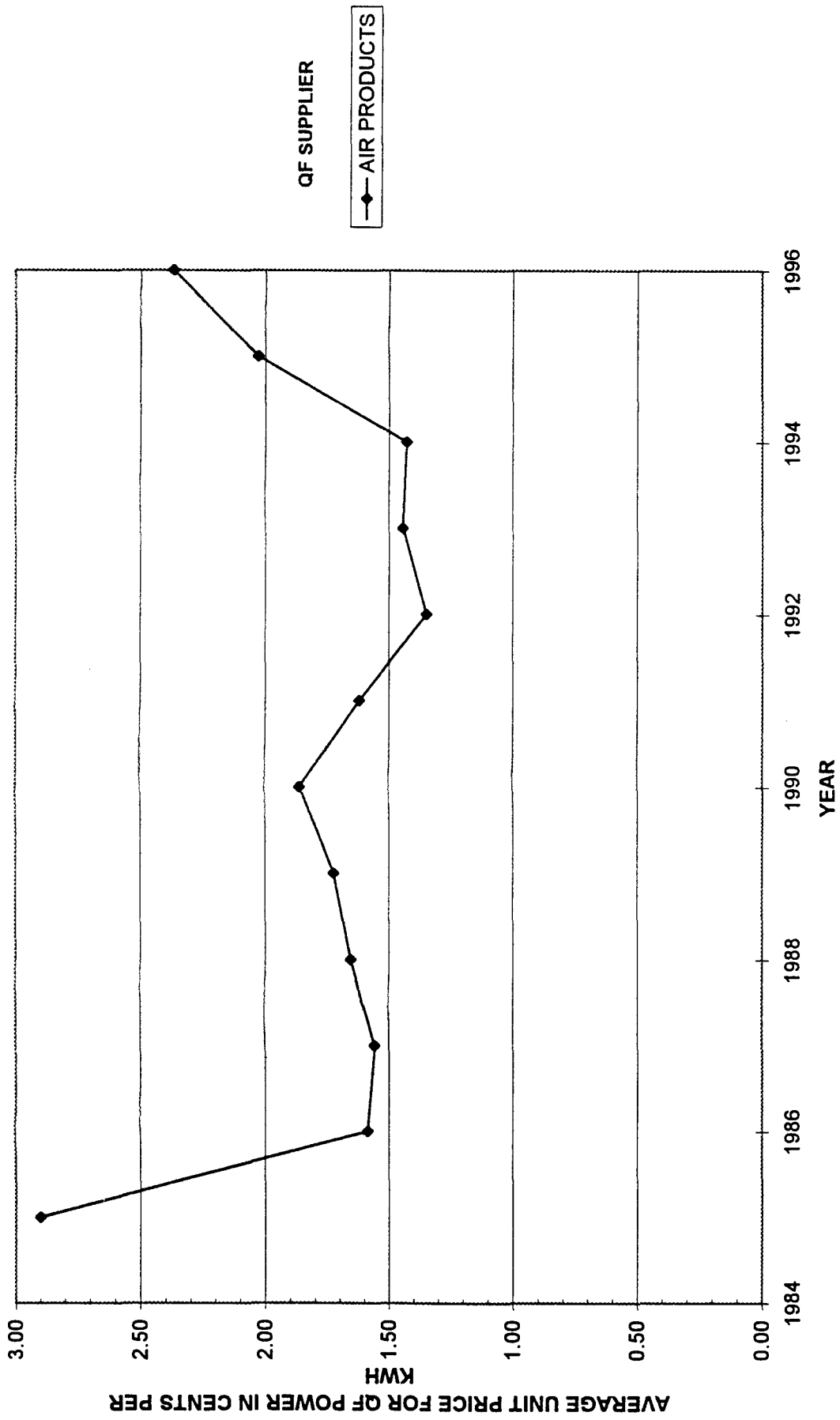


TABLE IX
SOUTHWESTERN ELECTRIC POWER COMPANY (SWEPCO)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
YEARLY SUMMARY - ALL QF SUPPLIERS

POWER PURCHASED (KWH)

YEAR	SNIDER INDUSTRIES	GILMER LUMBER	ALL TX QF'S	YEAR
1985	7,570,629		7,570,629	1985
1986	10,155,670	175,593	10,331,263	1986
1987	10,982,104	522,397	11,504,501	1987
1988	14,603,536	728,929	15,332,465	1988
1989	8,933,373	953,680	9,887,053	1989
1990	8,409,185	252,964	8,662,149	1990
1991	2,512,954	84,860	2,597,814	1991
1992	9,179,982	90,760	9,270,742	1992
1993	10,792,061	52,583	10,844,644	1993
1994	8,736,974	134,264	8,871,238	1994
1995				1995
1996				1996
TOTALS	91,876,468	2,996,030	94,872,498	TOTALS

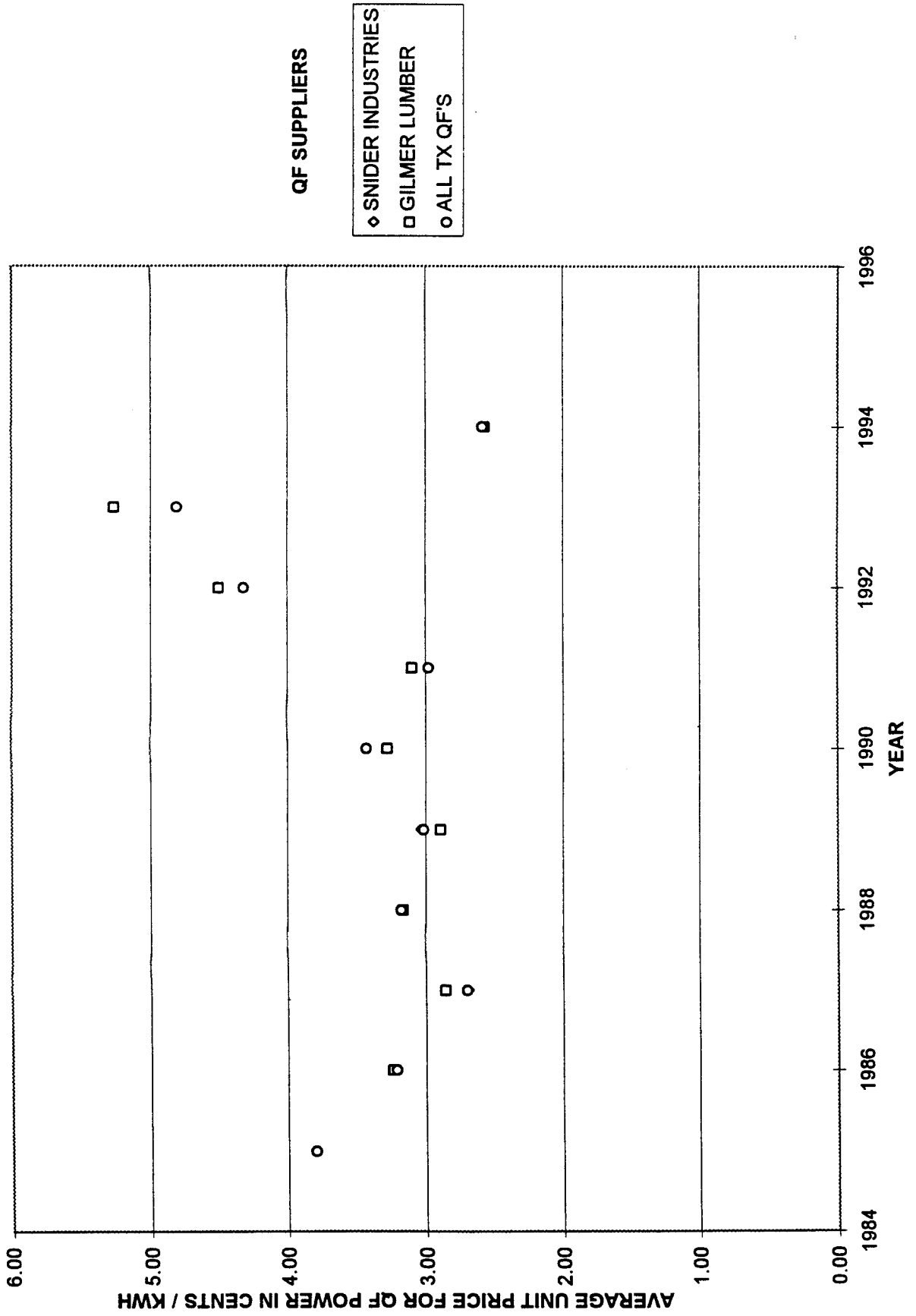
COST OF POWER (\$)

YEAR	SNIDER INDUSTRIES	GILMER LUMBER	ALL TX QF'S	YEAR
1985	\$287,524		\$287,524	1985
1986	\$326,133	\$5,684	\$331,817	1986
1987	\$295,560	\$14,916	\$310,476	1987
1988	\$463,970	\$23,048	\$487,018	1988
1989	\$270,335	\$27,547	\$297,882	1989
1990	\$288,595	\$8,290	\$296,885	1990
1991	\$74,755	\$2,625	\$77,380	1991
1992	\$396,552	\$4,088	\$400,640	1992
1993	\$518,997	\$2,768	\$521,765	1993
1994	\$226,008	\$3,450	\$229,458	1994
1995				1995
1996				1996
TOTALS	\$3,148,429	\$92,416	\$3,240,845	TOTALS

AVERAGE COST OF POWER (CENTS/KWH)

YEAR	SNIDER INDUSTRIES	GILMER LUMBER	ALL TX QF'S	YEAR
1985	3.80		3.80	1985
1986	3.21	3.24	3.21	1986
1987	2.69	2.86	2.70	1987
1988	3.18	3.16	3.18	1988
1989	3.03	2.89	3.01	1989
1990	3.43	3.28	3.43	1990
1991	2.97	3.09	2.98	1991
1992	4.32	4.50	4.32	1992
1993	4.81	5.26	4.81	1993
1994	2.59	2.57	2.59	1994
1995				1995
1996				1996
GRAND AVERAGE	3.43	3.08	3.42	OVERALL AVERAGE

FIGURE IX
SOUTHWESTERN ELECTRIC POWER COMPANY (SWEPCO)
AVERAGE YEARLY PRICE PAID QF ELECTRICITY SUPPLIERS



PART E - A COMPARISON OF ELECTRIC UTILITY AND NUG GENERATING DATA

Louisiana Electric Utility and NUG Generation Capacity and Electric Generation

Table X presents 1994 data on generating capacity, electric generation, and capacity use for Louisiana electric utilities and Louisiana NUGs. As discussed previously in this report, the NUGs in Louisiana, primarily industrial cogenerators, have historically generated a substantial fraction of total power generated in the state. In 1994, the number of generating units in Louisiana was 175. The electric utilities operated 109 (62.29%) of these units while the NUGs operated 66 (37.71%) units. Generating capacity in the state totaled 19,672 MW or 172,326 million KWH per year. Of this capacity the electric utilities held 16,672 MW or 147,807 million KWH per year (85.7%) while the NUGs held 2,799 MW or 24,519 million KWH per year (14.23%). Estimated total generation of electricity totaled 77,974 million KWH in 1994 for a capacity use level of 45.25%. In that year, Louisiana electric utilities generated 60,169 million KWH (77.17%) for a capacity use percentage of 40.71%. During the same period Louisiana NUGs generated 17,805 million KWH (22.83%) producing 72.62% of possible capacity.

Sales, Transfers, and Consumption of Electricity in Louisiana by Electric Utilities and Industrial NUGs

Data comparing 1994 sales, transfers, and consumption of electricity by electric utilities and NUGs in Louisiana are presented in Table XI. As stated in the paragraph above, reported electric utility generation was 77.17% of an estimated 77,974 million KWH state total while EEI estimated NUG generation produced the remaining 22.83%. Electric utility delivery of electricity to ultimate consumers totaled 69,920 million KWH or 79.95% of total Louisiana consumption, 87,450 million KWH. After adjusting utility and NUG generation figures by 274.45 million KWH (0.31% of total consumption) representing sales from NUGs to utilities, the utilities are estimated to have made combined out of state purchases and transfers from Louisiana utility generating facilities in Texas of 9,467.7 million KWH (10.83% of total state consumption). Net internal 1994 consumption of self-generated electric power by industrial NUGs in Louisiana was 17,530.7 million KWH (20.05% of total state consumption). This internally generated industrial consumption figure combined with the 29,867 million KWH (34.15% of total state consumption) delivered to industrials by Louisiana electric utilities implies that 1994 industrial consumption of electricity was over half (54.2%) of total electricity consumed in the state. Of total 1994 Louisiana industrial consumption of electricity, the electric utility / NUG split was 63.01% / 36.99%.

**TABLE X
COMPARISON OF ELECTRIC UTILITY AND NON UTILITY GENERATOR DATA
GENERATION FOR THE YEAR 1994**

	GENERATING UNITS		CAPACITY IN MW		MAX YEARLY CAPACITY IN MWH		ACTUAL / ESTIMATED GENERATION IN MWH		PERCENT USE OF CAPACITY
	NUMBER	% STATE TOTAL	AMOUNT	% STATE TOTAL	AMOUNT	% STATE TOTAL	AMOUNT	% STATE TOTAL	
LOUISIANA NON UTILITY GENERATORS	66	37.71%	2,799	14.23%	24,519,240	14.23%	17,805,175	22.83%	72.62%
LOUISIANA ELECTRIC UTILITIES	109	62.29%	16,873	85.77%	147,807,480	85.77%	60,169,000	77.17%	40.71%
TOTAL	175	100.00%	19,672	100.00%	172,326,720	100.00%	77,974,175	100.00%	45.25%

**TABLE XI
COMPARISON OF ELECTRIC UTILITY AND NON UTILITY GENERATION AND SALES DATA
GENERATION AND SALES / CONSUMPTION OF ELECTRICITY FOR THE YEAR 1994**

DELIVERY OF ELECTRIC POWER TO CONSUMERS	GENERATION (MWH)	% TOTAL LA GENERATION	PURCHASES AND SALES (MWH)	% TOTAL LA CONSUMPTION	CONSUMER RECEIPTS (MWH)	% TOTAL LA CONSUMPTION	INDUSTRIAL SECTOR CONSUMPTION (MWH)	% TOTAL LA CONSUMPTION	% TOTAL LA INDUSTRIAL CONSUMPTION
BY UTILITIES TO ALL CONSUMER SECTORS	60,169,000	77.17%							
LA UTILITY GENERATION									
UTILITY PURCHASES FROM LA NUGS			274,448	0.31%					
APPARENT UTILITY PURCHASES FROM OTHER SOURCES			9,467,661	10.83%					
SALES REPORTED BY UTILITIES					69,920,000	79.95%			
SALES BY UTILITIES TO INDUSTRIAL CUSTOMERS							29,867,000	34.15%	63.01%
BY NUGS TO THEMSELVES (INDUSTRIAL)	17,805,175	22.83%							
EETI ESTIMATE OF LA NUG GENERATION									
LESS: REPORTED LA NUG SALES TO ELECTRIC UTILITIES			-274,448	-0.31%					
NET INTERNAL CONSUMPTION OF ELECTRICITY BY NUGS					17,530,727	20.05%	17,530,727	20.05%	36.99%
INDUSTRIAL CONSUMPTION OF NUG GENERATION									
TOTALS	77,974,175	100.00%			87,450,727	100.00%	47,397,727	54.20%	100.00%

SECTION II - LOUISIANA NON UTILITY GENERATION IN THE FUTURE - REALITIES AND POSSIBILITIES

The Economic Basis for Competition in Electricity Generation

Today, in Louisiana, there are two parallel systems of electric generation. One system, representing one fifth of the state's generation, is owned and operated by industrial NUGs. The other system, representing four fifths of the state's generation, is owned and operated by the regulated electric utilities. The industrial NUG system, which grew in a competitive environment, can produce electricity at less than 4 cents per KWH. The electric utility system, which grew limited by a regulatory environment, produces electricity at an average of 5.7 cents per KWH. Similar situations exist in other states. Reasons for how and why these systems exist simultaneously are discussed in Appendix A.

These price data suggest that electricity prices for all consumers could be reduced by the introduction of competition into the electricity market. This concept has created a move to deregulate the electricity generation system and provide all future electricity generators, NUG or utility, with equal access to electric transmission systems.

Reaping the benefits of such competition, however, will not be without cost. Non utility generators through use of newer, more efficient generation technology have the capacity in a competitive generation market to capture substantial market share from the utilities. The resulting financial risk to the electric utilities is now well recognized. The terminology used to describe this risk is "stranded cost." This term represents the value of utility invested capital at risk of being lost as a result of competition or in other terms, non-competitive capital. Suggested total values for this capital at risk across the U.S. often exceed \$200 billion.

The Regulatory Basis for the Introduction of Competition in Electricity Markets

The federal Energy Policy Act (EPACT) of 1992 has as its intent, not only the conservation of energy, but also the encouragement of competition in the marketplace for electricity. In response to EPACT, on April 24, 1996, the Federal Energy Regulatory Commission (FERC) issued Final Rules, Orders No. 888 and 889, designed to promote real competition in the generation and sale of electricity.

The first order, Rule 888, orders the electric utility owners of the electric transmission grid to provide non-discriminatory open access to others. This is intended to make the same transmission services available to electric utilities available to NUGs as well. The second order, Rule 889, mandates the creation of a real-time information system to assure that transmission owners or their affiliates do not have an unfair competitive advantage in using transmission to sell electric power. The overall effect of these Rules is intended to be the "unbundling" or separation of electric power generation and transmission and the potential creation of genuine competition in the generation sector of the electricity industry.

Operational Factors Affecting the Onset Timing and Effectiveness of Competition in Electricity Markets

This deregulation of electric generation and open access to transmission will have significant effects on the electric utilities, the NUGs, all electricity consumers, and the natural gas industry as well. NUG ability to compete with significant success seems assured. They have the ability to introduce generation technology which is more efficient, less capital costly, and more environmentally friendly than the vast majority of the electric utility generation capacity inventory.

However, the degree to which such competition is invariably effective in an operational sense is based on a kaleidoscope of factors, many of which are still controlled by governmental and regulatory processes. The equally critical factor of time to actual institution of real competition is similarly controlled. Some (but certainly not all) major factors affecting the degree and timing of real electricity market competition are:

- ◆ FERC's Rule 888 explicitly includes decision making by the state electric regulatory commissions. This is certainly appropriate. However, it will almost certainly create a system which, operationally, will vary from state to state, thus being more fragmented, less simple, and, in some cases, more protectionist of the status quo.
- ◆ The electric utilities are faced with the loss of income on investment, known as "stranded cost," amounting to \$200 billion dollars or more. These utilities have millions of stockholders. Electric utility stock occupies a prominent position in the portfolio of almost every pension fund in the nation. This presents a powerful political constituency favoring and lobbying for a "go slow and limit utility economic effects" process in any transition to competition.
- ◆ Other interest groups who are financially dependent on the operation of electric utilities under the "status quo" will add further weight to the pressure and lobbying described above. This includes producers of fuels which may be adversely affected as well as legislative and regulatory delegations from energy producing states in which such fuels are produced.

Even if all other factors, technical or economic, are excluded from consideration, those listed above are likely to present a formidable obstacle to quick or one sided decisions regarding competition in the electricity market. Many hybrid systems of operation have been proposed. The final degree to which competition will exist is not and cannot be known at this time. Predicting the timing of the onset of any competition is equally impossible.

In the competitive circumstances in which new NUGs would enter such an electricity market, degree of competition and timing of onset are critical financial factors. Any NUG attempting early entry into such a market takes a serious risk. Failure to accurately predict either the competitive situation or the moment of its arrival could create fatal financial consequences.

Potential Effects of the New Electricity Market on the Natural Gas Industry

Combined cycle generation is the likely tool of any NUG entering the proposed new competitive electricity market. Natural gas is the fuel of choice for such generating plants. It is important,

then, to understand which electric utility plants are at risk from combined cycle operations and how they are fueled.

To place this in perspective, the replacement values for various utility steam turbine fuels are considered in terms of natural gas potentially burned in combined cycle operations at 6.25 ft³ per KWH of electricity generated. The resulting values are an upper limit since they assume full and unlimited competition. The following values are calculated with 1995 data:

- Nuclear generation in Louisiana was 15.686 billion KWH. If replaced by combined cycle generation, this represents a potential increase in natural gas consumption of 98 billion ft³ / year.
- Coal fired generation in Louisiana was 18.954 billion KWH. If replaced by combined cycle generation, this represents a potential increase in natural gas consumption of 118.5 billion ft³ / year.
- Natural gas fired steam turbine generation in Louisiana was 30.132 billion KWH and used 313.4 billion ft³ of natural gas. If replaced by combined cycle generation, this represents a potential loss in natural gas consumption of 125.1 billion ft³ / year because of the higher thermal efficiency of combined cycle plants (See discussion in Appendix A, Part I.).
- Nuclear generation in the U.S. was 673.4 billion KWH. If 20% can be replaced by combined cycle generation, this represents a potential increase in natural gas consumption of 841.8 billion ft³ / year.
- Coal fired generation in the U.S. was 1,652.9 billion KWH. If 20% can be replaced by combined cycle generation, this represents a potential increase in natural gas consumption of 2,066.2 billion ft³ / year.
- Natural gas fired steam turbine generation in the U.S. was 267.7 billion KWH and used 2,772.9 billion ft³ of natural gas. If completely replaced by combined cycle generation, this represents a potential decrease in natural gas consumption of 1,100 billion ft³ due to the higher thermal efficiency of combined cycle generation.

The threshold limit which will be used for comparing combined cycle operations with electric utility units is the total cost to install and operate such a plant as well as an amount needed for profit. Under total competition, successful competition against an electric utility plant means that plant is shut down. The threshold number against which electric utility plants may be measured is the sum of total operations and maintenance (O&M) costs plus any percentage of "fixed overhead" which disappear with the closing of the plant. Any electric utility plant for which this number is significantly above the threshold number for a nearby combined cycle plant is at risk.

An important key to measuring potential effects of natural gas fired combined cycle plants against electric utility plants is having threshold numbers calculated for both. Such data are not currently available. Every attempt will be made to calculate these numbers, on a plant by plant basis, before the next release in this series on non utility generation.

APPENDIX A
BACKGROUND ON TECHNICAL AND ECONOMIC ISSUES
AFFECTING BOTH THE PAST AND FUTURE OF LOUISIANA NON
UTILITY GENERATORS

PART I - "PRIME MOVERS," THE EQUIPMENT DRIVING THE ELECTRIC GENERATORS

All practical processes in commercial use today for generating electricity have as their final stage the need for mechanical energy to rotate the moveable part of an electric generator - a machine is needed to drive the generating machine. Other than hydroelectric power which uses the mechanical energy of falling water to turn the generator, the "front end" of all commercial generation processes is some type of system converting thermal (heat) energy into the necessary mechanical energy at the generator. The process providing mechanical energy to the generator is known as the "prime mover."

Focusing on systems which convert thermal or heat energy, there are two different pathways, the boiler / steam turbine system and the combustion turbine system. A hybrid system known as combined cycle combustion turbine is included with combustion turbines in this discussion.

Steam Turbine Generating Systems

The boiler / steam turbine system is the older of the two having been invented in the nineteenth century. In the initial part of this process, a heat source is used to increase the thermal energy level of water by converting high pressure water at a lower temperature to steam at a higher temperature. Typical heat sources may be fuel (e.g., natural gas, petroleum products, coal, biomass, etc.) burned in a boiler, a nuclear reactor, or direct heat (geothermal, heat producing industrial processes, etc.)

This high energy (high temperature and pressure) steam is then passed through a (steam) turbine extracting energy and producing lower energy steam (lower pressure and temperature). The resulting expansion and cooling of the high energy steam rotates the turbine converting what was originally thermal energy into the necessary mechanical energy.

The overall energy efficiency (heat rate) of the steam turbine generation (or any other) process is expressed as useful energy output divided by total energy input. For steam turbine generating systems in the U.S., efficiency is measured as British Thermal Units (BTU) of the net electrical energy out divided by BTU of the heat source in. The average heat rate in 1995 for electric utilities in Louisiana for natural gas fired steam turbine generation was 10,828 BTU heat input per KWH electricity output. During the same year, the average heat rate for coal fired steam turbine generation was 11,073 BTU per KWH. One KWH of electricity equals 3413 BTU. Louisiana gas fired steam turbine generation operated at an efficiency of 31.5% in 1995; coal fired steam turbine generation operated at an efficiency of 30.8%.

Capital costs, operating / maintenance (O&M) costs, and emission of pollutants are dependent on the type of heat source used to create steam. Capital costs may vary from \$1,000 to over \$3,000 per kilowatt (KW) of generating capacity.

Combustion Turbine Generating Systems

Combustion turbine systems are the second basic method for providing mechanical energy to electric generators. These highly efficient systems evolved in the latter half of the twentieth century and were initially based on aircraft jet engines. Energy input into combustion turbines is thermal, typically coming from combustion of a gaseous or liquid fossil fuel (e.g., natural gas, coal gasses, petroleum distillates, etc.). Research has been conducted into the use of pulverized solid fuels (e.g., coal, petroleum coke, etc.) but, to date, has produced few practical results.

In combustion turbine systems, air compressed by an axial compressor (front section) is mixed with fuel and burned in a combustion chamber (middle section). The resulting hot gasses then expand and cool while passing through a turbine in the rear section. What was initially thermal energy is converted to mechanical energy rotating the turbine. The rotating rear turbine not only runs the axial compressor in the front section but also provides efficient mechanical (rotational) energy which can be directed to the electric generator. The exhaust from a combustion turbine can range in temperature between 600 and 1000 degrees Fahrenheit and contains substantial thermal energy. What is and is not done with this exhaust energy source determines how the combustion turbine system is used. There are two general types of combustion turbine generating systems in commercial use today. These are simple cycle and combined cycle.

A simple cycle combustion turbine system is one in which the exhaust from the gas turbine is vented to the atmosphere and its energy lost. Such a system is not particularly efficient (Louisiana utilities, 1995: 13,449 BTU per KWH or 25.3% efficiency). They are, however, inexpensive to purchase, compact, and simple to operate. Further, simple cycle combustion turbines can be started up and placed in service more rapidly than any system involving a steam turbine. Simple cycle systems are used by the electric utilities as a source of peaking, backup, or emergency power. Conversely, NUGs do not use simple cycle because they are fuel inefficient and produce no steam. NUGs are seldom faced with the problem of peaking power.

Typical NUGs in Louisiana operating in industrial electrical generation settings capture the energy content of the hot exhaust gasses of the gas turbine. This exhaust stream is directed through a waste heat boiler to produce steam. The resulting steam may be used in process units for heating, in a steam turbine for generating electricity, or both (see Cogeneration, below).

A combustion turbine driving an electric generator and exhausting to a waste heat boiler / steam turbine electric generator arrangement is known as a "combined cycle combustion turbine" system (usually shortened to combined cycle). Such systems have exceptional energy efficiencies. Some large scale combined cycle generation systems now require only 6500 BTU energy input per KWH of electricity output. This equates to an efficiency of more than 52%. This is double the

efficiency of steam turbine electrical generation systems or, in other terms, half the fuel per unit of electricity.

Capital costs, O&M costs, and emissions of pollutants for combined cycle generation of electricity are low relative to the same costs for boiler / steam turbine prime movers. Capital costs are typically less than \$1,000 per KW of generating capacity.

PART II - COGENERATION

Cogeneration, by definition, requires the production and use of steam or hot water in addition to the generation of electricity. This system is efficient because the thermal energy of the steam or hot water taken off of the generating system can be used down to lower temperatures than would be possible in the generation process.

Some confusion has developed between the terms "cogeneration" and "combined cycle." The term cogeneration is not specific to either combined cycle combustion turbine generation or steam turbine generation. Either type of prime mover can be used to "cogenerate." Many of the NUGs who were in operation in Louisiana before the 1970's cogenerated using steam turbine generation which also produced process steam.

Combined cycle combustion turbine generation can be thought of as a special case of cogeneration. In this system, the co-production of steam in a waste heat recovery boiler is also used to generate electricity.

PART III - THE CURRENT SYSTEM UNDER WHICH ELECTRIC UTILITIES OPERATE

This part provides information intended for understanding the current system under which electric utilities operate. Such an understanding is essential in resolving an entire spectrum of issues in making the new unregulated, competitive market for electricity work.

The System in Effect for Regulating and Compensating Electric Utilities

Starting in the 1930's, during the Great Depression, electric utilities started becoming regulated. Electric utility operations were thought to be "natural monopolies" in both generation and transmission activities by economists of the day. Natural monopoly is a term describing the situation in which consumers are better off being served by one business entity (a monopoly) than by more than one. Having more than one set of power lines and more than one set of generating plants was thought to be redundant and more expensive than having just one. So having electric utilities with only one set of facilities in a service area was believed to allow for lower electricity prices to the consumers.

Such lower prices would occur if, of course, the monopoly owner of the single set of facilities was regulated in such a way that monopoly prices could not be charged. But, this immediately raised the question of what prices should be charged. Since there was no competition, there were no competitive prices against which to judge electricity prices. It was decided that prices charged by regulated utilities should be limited to provide a "fair" return on investments. Further, a fair return was allowed only on those investments which were "used and useful."

Another problem with respect to "fair" pricing also occurred. To promote the highest level of economic development in as many areas as possible in the nation, electric utility regulation from the 1930s until the present either strongly encouraged or required regulated electric utilities to serve virtually all customers in their service area. This requirement held even in many areas where a company operating on a truly competitive basis would have found constructing and operating electric systems not profitable. The "fair return" on investments, again, served to protect regulated electric utilities from financial harm in return for serving such "unprofitable" areas.

Regulatory bodies were created at both the state and federal levels to make decisions under this system regarding utility operations and the pricing of electricity to the consumer. A system by which electricity prices are established was set in place and operates today. Under the currently operative system, electricity prices or electric rates have long been established using the following general procedure:

- ◆ The electric utilities estimate, for a year period in the future, their electricity sales and their expenses based both on historical data as well as on "known and measurable" factors which are expected to exist in that future year.

- ◆ The utility then forecasts a level of capital to be in service during this forward year period based both on existing facilities in service and on new facilities expected to be brought into service.
- ◆ The utility then proposes a rate of return on this capital in service which is believed to be fair to both the utility and its customers.
- ◆ The dollar amount of forecast capital in service multiplied by the proposed rate of return on capital plus forecast expenses are then added together to determine a total revenue level needed for electric utility operations during that future year. In other words, a specific dollar quantity of required revenue is determined by two forecasts and a proposed rate of return.
- ◆ This specific dollar quantity is then divided by the forecast quantity of electricity (KWH) to be delivered to the utility's customers. This establishes an average unit electric rate in cents per KWH which will produce the utility's needed revenue stream in the future year.
- ◆ Adjustments are then made for customer classes such as residential, commercial, and industrial.
- ◆ These forecast expenses, capital in service, electricity sales and proposed rate of return along with all supporting documentation are then presented to the state regulatory body as part of a "rate case." The rate case is assigned a docket number and the utility submissions along with all analyses, new proposals, proposed revisions, etc. by regulatory body staff, electric customer groups, and other affected parties become part of a legal process presented in hearings held before commissioners of the state regulatory body.
- ◆ After these hearings are completed, the commissioners of the state regulatory body decide upon rates which are "fair and equitable" to the utility and its customers. Then, the terms and conditions of these rates are published as "electric tariffs."
- ◆ The electricity rates established by this process are in effect until new rates are established in a new rate case before the utility regulatory body. As a result, rates are typically in effect for periods of three or more years.

Effects of the Current Electric Utility Regulatory System on Utility Electricity Rates

This system under which regulated electric utilities operate worked very well from the 1930s through the 1960s. During that period, regional capital costs for possible electric generating technologies did not vary greatly. Steam turbine generation was the only alternative available. Wide swings in operating costs did not occur. Price and availability of all fuels were stable and nearly constant.

After about 1970, however, both the capital cost and operating expense environment changed. There were alternatives in generation technology, steam turbine or combustion turbine, with differing capital and operating costs. At that time, there also began a series of great swings in both the real and perceived prices and availability of fuels. Under such conditions of change, components of the regulatory system have had some very specific consequences affecting the way in which electric utilities operated and on where their focus has been placed. Some of these are:

- ◆ The current system forces the utilities to focus on invested capital which is usefully in service. Under the system, such capital is their sole source of income. There are two immediate consequences of this circumstance:

First, there is a powerful tendency to pursue strategies which are capital intensive. Given that any argument can be made in favor of lower operating costs for a generating technology with higher initial costs, that technology will be preferred over a generating technology which has lower initial costs. Further, should the passing of time show such a capital decision to be poor, more problems arise because of a second consequence.

For regulated electric utilities, once a capital decision is put in place, it tends to be irrevocable. Once a generating plant is in service, there is no way under the current regulatory system that the utility can replace it with newer, more efficient technology. Invested capital or sunk costs are everything; removing an operative plant from service irreplaceably reduces the sole basis on which the utility earns net income. This is precisely the reverse of the situation facing competitive industry. There, "sunk costs don't count." With revenues based on product cost not on capital invested, competitive industry replaces technologically inefficient plant and equipment on an immediate basis.

- ◆ The current system removes focus from operating expenses since their level is irrelevant to net income. The immediate consequence of this is a tendency for such expenses to exceed levels considered normal in competitive industry. Further, once the expenses are "locked in," they are difficult to reduce. The example of SWEPCO shown in the "Sales of Electricity to Utilities by NUGs" part in the body of this report illustrates this situation.

SWEPCO negotiated a natural gas supply contract with a supplier of natural gas prior to 1985. This contract had a significant effect on SWEPCO's weighted average cost of gas (WACOG). Whether or not the initial pricing of natural gas under this contract was "high" is not known. The terms of the contract, however, caused SWEPCO's WACOG to be significantly higher than that of other electric utilities in Louisiana from 1985 through 1993. No renegotiation of the contract occurred until regulatory intervention in 1993. Lower gas prices were reached after this process.

- ◆ The current system produces electric rates which are not only based on forecasts but are relatively long lasting. Consequences of this circumstance are electricity rates which are slow to react to economic changes. Because of this inability of prices to react to such changes, at any given point in time, electricity rates are likely to be more or less favorable to either consumers or utilities than was intended by regulators.

PART IV - DIVERGENT PATHWAYS BETWEEN ELECTRICITY GENERATORS IN REGULATED VS. COMPETITIVE ENVIRONMENTS

Until the late 1960s, parties wishing to generate electricity had, essentially, one basic technology as a choice - a steam turbine driven generator. The only differentiating choices lay in the thermal sources (i.e., fuels) by which the steam was generated. In fact, the electric utilities, during the latter two decades of this period, actually became more competitive because their larger boiler / steam turbine systems had economy of scale advantages over the smaller systems of potential NUGs.

With the successful development of combustion turbine systems for driving electric generators, however, the generation prime mover pathways of competitive industry and non-competitive electric utilities diverged. Competitive industry took note of the overwhelming fuel efficiencies of combustion turbine based prime movers as well as the low capital cost of such systems. In spite of looming natural gas supply shortages, industrial NUGs chose combustion turbine based generation wherever possible to minimize the cost of electricity imbedded in their product cost. The key here is reliable low cost electricity. Only in low cost electricity could these industrial NUGs remain competitive marketing the products they manufactured. High fuel efficiency and low capital costs were apparent and persuasive arguments in these firms making correct decisions to use combustion turbine technology.

For the electric utilities, however, choices were made according to different criteria. Neither at that time nor even today, do electric utilities make money by producing least expensive electricity. They make money by investing capital. This is a direct consequence of the regulatory system, discussed above, by which these utilities are compensated.

Having higher capital costs, steam turbine driven generation was favored in the system under which electric utilities operated. If there were concerns over the availability of natural gas at reasonable rates, even in regions such as Louisiana which traditionally used natural gas fired boilers, such problems could be circumvented by the use of coal fired boilers or nuclear reactors. As even greater incentive, coal fired boiler / steam turbine systems allowed greater investment in capital than did natural gas based systems and nuclear reactor systems allowed even greater investment opportunities than did coal fired systems. Long before the advent of the legal limitations initiated in 1978 by PURPA and the Powerplant and Industrial Fuel Use Act, industrial NUGs in Louisiana took one generation path and the electric utilities driven by regulatory law and incentives took another.

Adherence to these respective pathways was cemented in place in 1978 by the effects of legislation designed to "fix" the so-called energy crises. The Powerplant and Industrial Fuel Use Act (FUA) of that year forbade use of natural gas as a boiler fuel by 1990. Before 1978, the electric utilities had increasingly pursued the coal or nuclear steam turbine routes to powering generation as a result of powerful regulatory incentives. After 1978, those incentives became legal requirements.

The FUA, together with the Public Utilities Regulatory Policies Act (PURPA) of 1978, also set incentives, based in law, for the cogenerating industrial NUGs in Louisiana to continue the combined cycle route toward generating electricity. Incentives that had existed before 1978 still existed. These NUGs were cogenerators and combined cycle was the most efficient way to cogenerate. These incentives continued to exist because, under the FUA, cogenerators were exempt from the ban on using natural gas. Under PURPA, there were additional incentives in the form of potential sales to electric utilities. PURPA mandated that the electric utilities buy electricity from cogenerators at the utilities avoided cost.

This divergence continued even after the repeal of FUA limitations on use of natural gas by the utilities. In Louisiana, new electric capacity was not needed. Any construction of combined cycle facilities by electric utilities would, therefore, replace existing investment. Under existing utility regulation, the utilities lacked the economic and financial capacity to replace operating investment. So no utility transition to combined cycle generation was possible.

The net result of this divergence of generation methodology by NUGs in a competitive environment and electric utilities in a regulated environment has been the creation of two distinct systems of generation in Louisiana. The one created in a competitive environment by the industrial NUGs is based on combined cycle generation technology. This system can produce electricity at less than 3.97 cents per KWH, the current average industrial electricity rate in Louisiana. The other system created under regulatory constraints by the electric utilities is based on steam turbine technology. This system produces electricity at an average rate of 5.7 cents per KWH.

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APPENDIX B - TABLES
PURPA QUALIFIED FACILITY (QF) POWER PURCHASES BY UTILITIES
POWER PURCHASED, COST, AND AVERAGE COST

MONTHLY BY UTILITY AND QF
FOR 1985 - 1996

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**APPENDIX B - TABLE I
CENTRAL LOUISIANA ELECTRIC COMPANY (CLECO)
PURPA QUALIFIED FACILITY (QF) POWER PURCHASES (KWH) AND COST**

SINGLE SUPPLIER - JEANERETTE SUGAR MILL

POWER PURCHASED (KWH)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985													12,000	16,000	1985
1986			4,000								10,000	46,000	50,000	106,000	1986
1987											34,000	56,000	148,000	238,000	1987
1988											28,000	126,000	42,000	196,000	1988
1989											27,000	74,000	55,000	156,000	1989
1990											20,530	62,000	11,000	73,000	1990
1991													1,450	20,530	1991
1992											12,740	55,410	46,790	114,940	1992
1993											80,250	216,470	140,680	437,400	1993
1994															1994
1995															1995
1996															1996
TOTALS			4,000								212,520	635,880	506,920	1,359,320	

COST OF POWER		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985													\$316	\$440	1985
1986			\$124								\$230	\$1,058	\$1,142	\$2,430	1986
1987											\$612	\$1,008	\$2,664	\$4,284	1987
1988											\$507	\$2,281	\$760	\$3,548	1988
1989											\$505	\$1,384	\$1,029	\$2,918	1989
1990												\$1,259	\$223	\$1,482	1990
1991											\$455			\$455	1991
1992													\$33	\$33	1992
1993											\$278	\$1,208	\$1,020	\$2,506	1993
1994											\$1,757	\$4,751	\$3,081	\$9,589	1994
1995															1995
1996															1996
TOTALS			\$124								\$4,344	\$12,949	\$10,268	\$27,685	

AVG CENTS/KWH		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR AVG	YEAR
1985													2.63	2.75	1985
1986			3.10								2.30	2.30	2.28	2.29	1986
1987											1.80	1.80	1.80	1.80	1987
1988											1.81	1.81	1.81	1.81	1988
1989											1.87	1.87	1.87	1.87	1989
1990												2.03	2.03	2.03	1990
1991														2.22	1991
1992													2.28	2.28	1992
1993													2.18	2.18	1993
1994													2.19	2.19	1994
1995															1995
1996															1996
GRAND AVERAGE			3.10								2.04	2.04	2.03	2.04	

APPENDIX B - TABLE II - A
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS

TOTAL OF ALL GSU LOUISIANA QF SUPPLIERS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	22,874,000	8,986,000	11,831,000	17,880,000	10,537,000	14,426,000	13,250,762	24,709,522	20,987,843	24,244,862	21,947,173	26,282,180	217,966,342	1985
1986	40,076,868	31,460,259	30,677,494	27,063,125	33,298,730	23,630,801	26,321,758	21,837,610	27,047,255	33,265,923	68,378,111	72,234,543	441,192,477	1986
1987	58,436,144	43,927,150	40,016,187	52,808,280	45,506,872	33,447,058	25,755,441	24,573,052	26,856,604	45,551,470	49,232,703	54,236,959	500,347,920	1987
1988	52,262,640	30,140,781	42,906,849	31,347,111	32,317,259	19,871,429	14,294,585	16,972,174	17,802,463	26,399,693	30,304,502	37,746,853	352,166,349	1988
1989	34,109,005	36,678,115	29,481,092	28,387,661	31,963,932	18,831,588	11,690,596	13,886,406	21,975,858	31,308,051	28,552,449	46,534,952	333,408,705	1989
1990	36,634,906	34,128,367	48,422,188	44,572,948	38,462,742	20,140,385	13,166,429	16,688,042	15,297,161	36,240,796	36,305,782	44,124,078	384,183,824	1990
1991	57,488,801	23,286,388	28,062,155	37,828,415	33,331,281	18,688,631	18,467,091	21,112,833	18,867,572	26,747,664	30,915,599	22,272,903	337,089,333	1991
1992	35,712,312	27,319,432	42,738,836	19,137,036	8,999,379	11,075,959	17,544,476	43,790,999	19,777,800	21,108,397	36,495,918	29,529,170	313,229,714	1992
1993	23,420,897	28,112,039	17,921,139	21,317,563	18,125,310	12,677,838	13,107,363	10,491,511	28,004,270	28,445,739	30,649,805	23,616,879	255,890,353	1993
1994	35,405,953	28,018,504	33,101,170	10,825,061	7,838,280	12,695,838	13,889,173	10,800,978	8,227,817	10,370,193	10,239,251	20,970,734	202,382,952	1994
1995	20,813,623	23,650,833	20,101,592	19,055,059	25,461,558	14,097,223	19,433,847	15,749,423	24,332,665	11,751,289	31,386,028	20,578,229	246,411,369	1995
1996	16,714,550	29,887,187	49,098,955	6,582,392	6,387,612	6,533,053	6,673,324						123,877,053	1996
TOTALS	433,949,639	345,596,035	394,368,657	316,804,651	292,229,955	207,816,803	193,594,955	226,612,550	229,177,308	295,432,077	374,407,321	396,137,480	3,708,126,391	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$916,558	\$222,706	\$281,508	\$455,013	\$257,613	\$400,261	\$343,471	\$633,522	\$536,951	\$581,330	\$521,255	\$555,650	\$5,705,631	1985
1986	\$812,241	\$659,240	\$582,863	\$478,243	\$528,616	\$343,891	\$408,447	\$433,706	\$417,703	\$521,669	\$1,077,256	\$1,124,291	\$7,388,183	1986
1987	\$910,773	\$707,628	\$650,207	\$802,218	\$699,960	\$520,000	\$385,532	\$348,159	\$382,357	\$649,788	\$908,053	\$1,081,111	\$8,045,786	1987
1988	\$1,093,007	\$677,059	\$849,353	\$617,861	\$615,879	\$437,172	\$294,547	\$440,534	\$566,651	\$692,333	\$867,001	\$867,001	\$7,597,558	1988
1989	\$811,109	\$740,419	\$618,607	\$593,573	\$677,004	\$448,394	\$273,423	\$258,105	\$485,261	\$613,080	\$631,532	\$1,031,729	\$7,182,236	1989
1990	\$920,218	\$754,210	\$884,986	\$628,742	\$738,202	\$448,496	\$300,591	\$402,625	\$372,319	\$770,445	\$872,094	\$1,021,571	\$8,314,500	1990
1991	\$1,033,909	\$493,137	\$495,788	\$646,285	\$497,320	\$416,171	\$400,567	\$451,357	\$428,730	\$615,253	\$685,290	\$546,923	\$6,710,730	1991
1992	\$771,453	\$482,047	\$733,807	\$414,648	\$238,306	\$271,117	\$410,533	\$940,307	\$490,689	\$573,740	\$860,628	\$620,662	\$6,807,937	1992
1993	\$448,786	\$496,441	\$480,039	\$543,279	\$496,993	\$356,772	\$380,823	\$330,294	\$702,375	\$683,096	\$757,021	\$562,055	\$6,268,043	1993
1994	\$765,647	\$533,417	\$658,829	\$256,653	\$194,473	\$356,772	\$308,823	\$291,562	\$249,016	\$306,311	\$296,871	\$485,314	\$4,703,688	1994
1995	\$471,526	\$473,766	\$465,359	\$446,717	\$563,759	\$334,269	\$504,477	\$481,335	\$517,272	\$300,790	\$696,119	\$467,881	\$5,723,270	1995
1996	\$445,897	\$770,475	\$1,082,127	\$180,533	\$208,558	\$214,141	\$215,348						\$3,117,091	1996
TOTALS	\$9,401,124	\$7,010,545	\$7,783,493	\$6,263,766	\$5,716,474	\$4,547,456	\$4,226,551	\$4,997,133	\$5,023,207	\$6,202,153	\$7,988,452	\$8,384,189	\$77,554,643	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	4.01	2.48	2.38	2.54	2.44	2.77	2.59	2.56	2.56	2.40	2.38	2.11	2.62	1985
1986	2.03	2.10	1.90	1.77	1.59	1.46	1.55	1.56	1.54	1.57	1.58	1.56	1.67	1986
1987	1.56	1.61	1.62	1.52	1.54	1.55	1.50	1.42	1.42	1.43	1.43	1.59	1.61	1987
1988	2.09	2.25	1.98	1.97	1.91	2.22	2.06	2.51	2.47	2.22	2.28	2.30	2.16	1988
1989	2.38	2.02	2.10	2.09	2.12	2.38	2.34	1.86	2.21	1.96	2.20	2.22	2.15	1989
1990	2.51	2.21	1.83	1.86	1.92	2.23	2.28	2.41	2.43	2.13	2.40	2.32	2.16	1990
1991	1.80	2.12	1.77	1.71	1.49	2.23	2.17	2.14	2.27	2.30	2.22	2.46	1.99	1991
1992	2.16	1.76	1.72	2.17	2.65	2.45	2.34	2.15	2.48	2.72	2.20	2.10	2.17	1992
1993	1.92	1.77	2.68	2.55	2.74	2.81	2.91	3.15	2.51	2.40	2.47	2.46	2.45	1993
1994	2.16	1.90	1.99	2.37	2.48	2.81	2.22	2.70	3.03	2.95	2.90	2.31	2.32	1994
1995	2.27	2.00	2.32	2.34	2.21	2.37	2.60	3.06	2.13	2.56	2.22	2.27	2.32	1995
1996	2.67	2.58	2.20	2.74	3.27	2.51	3.23						2.52	1996
GRAND AVERAGE	2.17	2.03	1.97	1.98	1.96	2.19	2.18	2.21	2.19	2.10	2.14	2.11	2.09	

**APPENDIX TABLE II - B
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS
AGRIELECTRIC, LAKE CHARLES, LA**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	6,082,000	4,589,000	4,632,000	6,165,000	2,642,000	5,067,132	5,965,632	5,856,108	6,656,337	6,363,675	6,363,675	5,731,002	64,564,886	1985
1986	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	66,689,393	1986
1987	5,967,496	5,606,394	6,898,068	3,690,912	6,422,292	6,391,050	6,469,198	6,051,546	7,019,268	5,655,606	7,224,252	7,269,978	74,666,060	1987
1988	7,223,474	6,662,721	5,899,737	6,885,068	6,913,368	6,830,403	3,291,684	7,462,513	6,926,194	6,599,168	6,322,434	6,775,588	77,792,352	1988
1989	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	71,196,845	1989
1990	7,332,510	5,938,346	6,405,333	7,177,379	6,896,718	6,299,718	4,543,598	7,413,011	6,842,840	7,428,328	6,598,182	7,376,835	80,192,798	1990
1991	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	6,898,208	7,017,616	80,830,716	1991
1992	6,685,326	6,359,474	6,911,398	6,129,654	4,727,214	4,249,192	6,584,614	5,887,234	6,393,607	7,068,262	6,675,913	1,447,410	69,099,298	1992
1993	42	1,508,538	7,506,370	6,813,918	7,411,929	6,735,951	7,435,198	7,361,636	7,012,958	7,344,862	7,179,278	4,111,264	70,421,944	1993
1994	6,500,947	5,471,324	6,144,383	4,930,460	3,790,680	6,753,951	5,257,070	6,069,228	6,094,671	7,483,408	7,283,221	7,084,532	72,863,885	1994
1995	6,510,033	6,078,033	7,456,380	7,316,952	6,971,520	4,955,840	6,585,840	6,139,867	6,260,485	5,757,640	6,248,165	3,417,120	73,697,875	1995
1996	2,962,792	3,404,464	5,356,352	3,304,714	5,456,072	3,892,688	4,595,831						28,962,913	1996
TOTALS	66,823,944	62,369,760	75,359,805	69,733,560	70,511,117	68,382,403	67,348,463	67,513,393	72,177,028	74,685,284	74,557,532	61,615,686	830,977,965	

COST OF POWER (\$)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$176,467	\$117,154	\$111,271	\$159,191	\$118,537	\$79,945	\$131,804	\$152,460	\$152,088	\$160,941	\$150,773	\$121,473	\$1,632,104	1985
1986	\$64,261	\$75,191	\$84,284	\$79,546	\$98,666	\$94,818	\$98,660	\$99,861	\$92,072	\$109,529	\$101,209	\$92,120	\$1,090,217	1986
1987	\$93,240	\$90,940	\$111,385	\$57,075	\$99,172	\$99,199	\$97,495	\$85,813	\$99,532	\$80,899	\$259,495	\$261,138	\$1,436,383	1987
1988	\$259,467	\$239,325	\$211,919	\$247,311	\$248,328	\$245,348	\$118,237	\$268,053	\$248,789	\$237,042	\$227,102	\$243,379	\$2,794,300	1988
1989	\$272,192	\$230,559	\$253,857	\$231,387	\$221,555	\$215,375	\$138,854	\$56,897	\$249,779	\$231,819	\$262,840	\$192,734	\$2,667,248	1989
1990	\$263,384	\$213,305	\$230,080	\$257,811	\$245,875	\$226,286	\$163,206	\$266,275	\$245,795	\$266,826	\$237,007	\$264,976	\$2,800,826	1990
1991	\$243,770	\$237,751	\$238,288	\$229,580	\$170,733	\$256,448	\$260,958	\$257,741	\$248,311	\$260,319	\$247,784	\$252,072	\$2,963,755	1991
1992	\$240,137	\$228,432	\$244,802	\$217,112	\$167,438	\$150,506	\$232,518	\$208,526	\$226,461	\$250,358	\$236,461	\$51,267	\$2,454,018	1992
1993	\$2	\$53,432	\$265,876	\$241,349	\$262,531	\$238,587	\$263,355	\$260,749	\$248,399	\$260,155	\$254,290	\$145,621	\$2,494,346	1993
1994	\$230,264	\$193,794	\$217,634	\$174,637	\$134,266	\$238,587	\$186,205	\$214,972	\$215,873	\$265,062	\$257,972	\$250,934	\$2,580,200	1994
1995	\$230,586	\$215,290	\$264,104	\$259,166	\$246,934	\$175,535	\$233,270	\$217,473	\$221,746	\$203,935	\$221,309	\$121,034	\$2,610,382	1995
1996	\$104,942	\$120,586	\$169,721	\$117,052	\$193,254	\$137,878	\$165,972						\$1,009,405	1996
TOTALS	\$2,178,712	\$2,015,759	\$2,403,021	\$2,271,217	\$2,207,289	\$2,158,512	\$2,090,534	\$2,088,820	\$2,248,845	\$2,326,685	\$2,456,042	\$1,996,748	\$26,442,184	

AVERAGE COST OF POWER (CENTS/KWH)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	2.90	2.55	2.40	2.58	2.46	3.03	2.60	2.56	2.60	2.42	2.37	2.12	2.63	1985
1986	2.01	2.02	1.89	1.77	1.58	1.46	1.54	1.56	1.56	1.57	1.57	1.56	1.63	1986
1987	1.56	1.62	1.61	1.55	1.54	1.55	1.51	1.42	1.42	1.43	3.59	3.59	1.92	1987
1988	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	1988
1989	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	1989
1990	3.59	3.59	3.59	3.59	3.60	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.59	1990
1991	3.59	3.59	3.59	3.59	3.59	3.59	3.59	3.60	3.59	3.59	3.59	3.59	3.59	1991
1992	3.59	3.59	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.55	1992
1993	3.60	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	1993
1994	3.54	3.54	3.54	3.54	3.54	3.53	3.54	3.54	3.54	3.54	3.54	3.54	3.54	1994
1995	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	3.54	1995
1996	3.54	3.54	3.17	3.54	3.54	3.54	3.62	3.54	3.54	3.54	3.54	3.54	3.49	1996
GRAND AVERAGE	3.26	3.23	3.19	3.26	3.13	3.16	3.10	3.09	3.12	3.12	3.29	3.25	3.18	

APPENDIX B - TABLE II - C
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS

BASF CORP (WYANDOTTE), GEISMAR, LA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	5,739,340	4,451,440	6,644,240	6,134,400	4,578,840	2,214,740	1,396,680	3,863,040	4,419,360	5,239,600	5,751,740	6,213,800	26,883,220	1985
1986	3,284,760	4,102,360	4,760,480	4,797,000	2,575,480	2,575,600	3,503,840	2,663,520	3,833,140	5,109,580	3,652,480	4,000,280	52,525,840	1986
1987	5,751,721	4,866,864	4,146,848	2,871,692	3,126,114	3,870,284	1,562,540	1,852,494	2,381,460	4,453,806	4,077,966	4,917,780	41,341,726	1987
1988	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	35,404,645	1988
1989	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	36,299,690	1989
1990	2,896,465	1,360,977	1,137,668	4,245,272	802,124	196,720	104,088	94,782	330,244	73,932	28,288	1,149,012	24,100,693	1990
1991	1,259,182	2,152	9,384	775,740	3,376,240	567,940	32,832	714,336	1,780	22,452	57,248	92,784	13,711,028	1991
1992	6,140	21,320	90,580	90,380	155,532	155,532	94,910	797,320	1,119,300	351,240	511,580	16,280	5,202,610	1992
1993	35,120	1,920,280	99,280	23,600	340	48,860	8,660	10,333,652	15,380,980	22,558,466	24,802,162	30,092,822	4,900,216	1993
1994	675,460	28,897,824	24,883,345	25,677,917	23,289,250	21,801,042	10,478,964	8,499,354	10,333,652	15,380,980	22,558,466	24,802,162	475,142	1994
1995													3,006,848	1995
1996													2,744,220	1996
TOTALS	28,897,824	24,883,345	25,677,917	23,289,250	21,801,042	10,478,964	8,499,354	10,333,652	15,380,980	22,558,466	24,802,162	30,092,822	246,595,778	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$115,787	\$110,131	\$125,974	\$108,609	\$71,813	\$32,270	\$37,046	\$97,368	\$112,170	\$125,453	\$136,712	\$131,453	\$640,202	1985
1986	\$51,225	\$67,208	\$77,375	\$72,591	\$39,504	\$32,743	\$55,436	\$41,028	\$59,289	\$80,141	\$57,146	\$62,188	\$919,912	1986
1987	\$106,422	\$89,643	\$71,656	\$43,631	\$45,201	\$57,529	\$23,438	\$26,093	\$33,666	\$63,692	\$62,849	\$86,010	\$643,394	1987
1988	\$68,868	\$74,535	\$51,783	\$34,236	\$51,560	\$8,970	\$10,733	\$7,414	\$73,973	\$9,081	\$79,716	\$89,644	\$619,619	1988
1989	\$131,514	\$71,601	\$53,556	\$32,619	\$57,366	\$6,103	\$3,470	\$668	\$8,167	\$14,528	\$19,974	\$46,237	\$636,692	1989
1990	\$52,418	\$24,084	\$16,358	\$64,268	\$11,473	\$2,392	\$11,410	\$1,406	\$5,839	\$22,113	\$25,957	\$22,113	\$445,603	1990
1991	\$23,367	\$370	\$31,212	\$1,787	\$12,692	\$9,923	\$698	\$13,755	\$34	\$1,861	\$601	\$1,227	\$227,718	1991
1992	\$42	\$156	\$7,604	\$15,823	\$73,173	\$2,922	\$698	\$1,522	\$12,289	\$18,355	\$6,447	\$10,799	\$96,829	1992
1993	\$137	\$318	\$1,441	\$1,545	\$351	\$2,922	\$698	\$1,522	\$300	\$462	\$1,232	\$2,119	\$104,231	1993
1994	\$522	\$451	\$2,045	\$351	\$89	\$676	\$698	\$1,522	\$12,289	\$18,355	\$6,447	\$10,799	\$8,185	1994
1995	\$16,954	\$59,078	\$1,958	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$8	\$51,348	1995
1996	\$567,256	\$497,575	\$440,962	\$375,468	\$362,891	\$161,058	\$147,833	\$198,203	\$278,346	\$393,385	\$467,974	\$581,556	\$78,674	1996
TOTALS	\$567,256	\$497,575	\$440,962	\$375,468	\$362,891	\$161,058	\$147,833	\$198,203	\$278,346	\$393,385	\$467,974	\$581,556	\$4,472,507	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	2.02	2.47	1.90	1.77	1.57	1.46	2.65	2.52	2.54	2.39	2.38	2.12	2.38	1985
1986	1.56	1.64	1.63	1.51	1.53	1.54	1.58	1.54	1.55	1.57	1.56	1.55	1.75	1986
1987	1.85	1.84	1.73	1.52	1.45	1.49	1.50	1.41	1.41	1.43	1.54	1.75	1.56	1987
1988	2.03	1.71	1.63	1.64	1.78	1.78	1.68	1.63	1.55	1.52	1.74	2.02	1.75	1988
1989	2.25	1.92	1.56	1.52	1.57	1.58	1.56	1.40	1.43	1.76	2.14	2.03	1.85	1989
1990	1.81	1.77	1.44	1.51	1.43	1.22	1.22	1.93	1.48	1.77	1.86	1.92	1.66	1990
1991	1.86	1.26	1.98	1.48	1.65	1.75	1.75	1.93	1.91	2.52	2.12	2.09	1.86	1991
1992	1.95	1.66	2.02	2.04	2.17	1.88	2.13	1.60	1.54	2.06	2.15	2.28	2.13	1992
1993	2.23	1.49	1.59	1.71	1.88	1.88	1.88	1.60	1.54	1.64	1.84	1.84	1.72	1993
1994	1.49	1.44	1.55	1.49	1.72	1.38	1.38	1.60	1.54	1.64	1.84	2.11	1.71	1994
1995	2.51	3.08	1.97	2.35	2.35	1.61	1.61	1.81	1.81	1.74	1.89	1.93	2.87	1995
1996	1.96	2.00	1.72	1.61	1.66	1.54	1.74	1.92	1.81	1.74	1.89	1.93	1.81	1996
GRAND AVERAGE														

APPENDIX B - TABLE II - D
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS

BORDEN CHEMICALS, GEISMAR, LA (MONOCHEM BEFORE 1992)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1986	17,660,697	12,619,985	2,310,363	8,940,285	9,792,908	10,561,320	6,170,057	4,726,915	5,393,678	10,095,290	17,068,665	23,896,561	40,965,246	1986
1987	17,824,871	10,522,835	10,522,133	6,961,331	9,598,753	4,482,548	5,938,073	4,805,500	5,340,405	7,918,976	10,494,027	11,397,800	107,090,029	1987
1988	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	106,807,262	1988
1989	12,021,452	11,819,907	6,121,417	2,814,705	3,643,241	69,999	163,111	130,120	426,689	3,443,098	4,396,824	647,892	75,174,451	1989
1990	4,128,625	1,587,932	121,490	886,094	37,166	78,398				1,262,141	1,625,297	2,745,159	45,698,455	1990
1991	1,549,009	518,532	571,841	224,466	299,561	490,179	433,830	938,148	102,381	73,932	1,527,168	404,003	12,472,302	1991
1992	2,003,567	3,699,970	2,287,059	651,551	2,461,973	426,364	658,547	39,171	1,473,351	314,147	1,250,290	3,331,489	7,030,669	1992
1993	1,485,065	2,951,094	165,918			426,364	152,151			36,480			17,187,338	1993
1994	310,416	230,802	450,240	12,183			85,183		459,991	199,426	10,406	392,098	2,160,745	1994
1995													6,847,985	1995
1996													6,847,985	1996
TOTALS	69,230,366	51,878,194	31,659,156	26,114,555	29,588,254	21,598,397	14,689,374	14,873,419	18,491,835	29,597,194	62,739,833	69,816,508	430,277,085	

COST OF POWER (\$)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1986	\$275,507	\$199,016	\$39,041	\$135,852	\$149,774	\$163,837	\$91,780	\$66,575	\$75,929	\$144,262	\$266,613	\$371,114	\$637,727	1986
1987	\$329,809	\$198,824	\$182,833	\$106,418	\$139,137	\$66,177	\$93,136	\$79,624	\$92,839	\$141,374	\$204,456	\$230,660	\$1,861,829	1987
1988	\$188,872	\$109,091	\$111,074	\$92,730	\$65,830	\$91,159	\$18,579	\$68,759	\$82,686	\$95,000	\$129,758	\$277,756	\$1,865,287	1988
1989	\$270,636	\$226,486	\$95,116	\$42,910	\$56,792	\$1,100	\$2,546	\$1,747	\$6,516	\$60,347	\$94,220	\$13,058	\$1,331,294	1989
1990	\$75,575	\$29,246	\$1,720	\$12,394	\$562	\$1,098				\$22,452	\$30,899	\$52,542	\$871,474	1990
1991	\$28,745	\$6,527	\$7,644	\$3,397	\$4,897	\$8,833	\$6,936	\$17,993	\$1,861	\$1,861	\$32,269	\$8,422	\$226,488	1991
1992	\$38,727	\$61,388	\$46,634	\$13,269	\$51,736	\$8,060	\$13,451	\$6,241	\$1,953	\$6,241	\$26,779	\$74,540	\$127,524	1992
1993	\$31,735	\$46,341	\$2,834			\$8,060	\$2,288	\$656	\$23,891	\$646	\$1,678	\$54,977	\$342,778	1993
1994	\$5,133	\$3,500	\$6,825	\$163		\$8,060	\$1,332		\$7,141	\$3,415			\$173,106	1994
1995	\$69,384	\$34,895	\$49,412										\$36,237	1995
1996													\$153,691	1996
TOTALS	\$1,314,123	\$916,314	\$543,133	\$407,133	\$468,728	\$348,324	\$230,048	\$235,354	\$290,955	\$475,598	\$920,811	\$1,267,914	\$7,417,435	

AVERAGE COST OF POWER (CENTS/KWH)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1986	1.56	1.58	1.69	1.52	1.53	1.55	1.49	1.41	1.41	1.43	1.56	1.55	1.56	1986
1987	1.85	1.89	1.74	1.53	1.45	1.48	1.57	1.66	1.74	1.79	1.95	1.74	1.54	1987
1988	2.03	1.71	1.64	1.65	1.75	1.80	1.71	1.62	1.56	1.52	1.72	2.00	1.76	1988
1989	2.25	1.92	1.55	1.52	1.56	1.57	1.56	1.34	1.53	1.75	2.14	2.02	1.77	1989
1990	1.83	1.84	1.42	1.40	1.51	1.40	1.60	1.92	1.78	1.91	1.90	1.91	1.91	1990
1991	1.86	1.26	1.34	1.51	1.63	1.89	2.04	1.67	1.91	2.52	2.11	2.08	1.82	1991
1992	1.93	1.66	2.04	2.04	2.10	1.89	2.04	1.67	1.91	1.99	2.14	2.24	1.81	1992
1993	2.17	1.57	1.71	1.34		1.89	1.50	1.67	1.62	1.77	1.09	1.84	1.76	1993
1994	1.65	1.52	1.52	1.34		1.56	1.56	1.55	1.55	1.71	2.35	2.16	1.68	1994
1995	2.33	2.26	2.13	1.56	1.58	1.61	1.57	1.68	1.57	1.61	1.75	1.82	1.68	1995
1996	1.90	1.76	1.72	1.56	1.58	1.61	1.57	1.68	1.57	1.61	1.75	1.82	1.72	1996
GRAND AVERAGE	1.90	1.76	1.72	1.56	1.58	1.61	1.57	1.68	1.57	1.61	1.75	1.82	1.72	

APPENDIX B - TABLE II - E
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS

DOW CHEMICAL, PLAQUEMINE, LA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	16,792,000	4,397,000	7,199,000	11,715,000	5,722,000	11,784,000	6,786,950	14,880,850	10,712,375	12,349,925	9,677,150	5,342,050	117,358,300	1985
1986	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	123,297,324	1986
1987	13,569,850	8,104,550	13,400,050	25,095,825	17,351,050	7,186,425	7,532,900	9,020,400	7,755,400	18,811,700	21,283,000	25,650,725	174,761,875	1987
1988	15,526,250	3,593,100	19,522,850	12,215,360	8,953,700	1,722,500	1,846,000	1,235,800	2,142,920	4,928,375	1,607,600	8,550,158	81,844,613	1988
1989	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	10,886,400	6,437,400	14,567,500	96,648,275	1989
1990	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	15,418,450	21,512,800	142,570,565	1990
1991	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	144,386,237	1991
1992	13,619,900	7,383,025	30,737,850	10,987,250	2,250,800	4,163,150	8,483,400	31,461,400	11,805,300	8,164,400	23,718,535	22,934,352	175,689,362	1992
1993	12,871,290	15,826,830	3,241,250	9,350,500	2,944,880	3,914,395	3,283,300	2,590,650	12,413,600	14,458,330	16,917,150	11,081,550	108,893,725	1993
1994	20,644,605	3,224,832	16,740,040	582,528	2,455,680	3,914,395	1,346,000	2,404,128	384	1,299,360	1,202,554	6,051,840	59,866,346	1994
1995	3,012,880	12,027,835	6,768,899	9,197,344	16,049,184	1,002,336	12,729,368	9,121,680	15,188,504	2,704,608	20,826,336	12,425,752	121,054,726	1995
1996	9,115,488	20,532,308	40,294,248	1,927,152	760,034	1,182,816	584,288						74,376,334	1996
TOTALS	147,220,487	108,526,255	176,257,767	133,846,984	111,874,003	57,071,902	68,583,731	102,121,803	86,763,794	120,096,948	157,025,471	161,268,637	1,420,747,682	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$740,091	\$105,552	\$170,237	\$295,822	\$138,869	\$320,316	\$174,621	\$383,694	\$272,693	\$294,936	\$230,079	\$112,039	\$3,238,949	1985
1986	\$141,473	\$176,362	\$114,083	\$110,078	\$220,722	\$73,759	\$106,491	\$166,471	\$162,200	\$180,300	\$348,921	\$229,407	\$2,031,267	1986
1987	\$209,794	\$132,861	\$217,061	\$382,500	\$266,822	\$112,361	\$111,946	\$127,058	\$111,487	\$267,752	\$328,909	\$448,145	\$2,716,696	1987
1988	\$287,418	\$66,651	\$334,230	\$183,876	\$129,223	\$26,669	\$31,315	\$21,083	\$37,911	\$86,867	\$32,546	\$171,062	\$1,408,851	1988
1989	\$149,003	\$265,323	\$111,949	\$183,761	\$112,599	\$63,758	\$63,710	\$98,615	\$68,107	\$169,096	\$112,071	\$297,452	\$1,695,444	1989
1990	\$178,414	\$63,725	\$246,104	\$270,701	\$325,081	\$88,733	\$104,894	\$47,266	\$49,470	\$369,238	\$330,216	\$447,826	\$2,521,668	1990
1991	\$353,652	\$110,482	\$139,075	\$258,719	\$310,970	\$112,285	\$110,883	\$159,453	\$128,432	\$253,172	\$319,148	\$162,532	\$2,318,803	1991
1992	\$249,044	\$89,837	\$410,491	\$167,104	\$37,279	\$74,341	\$137,536	\$607,185	\$233,080	\$187,902	\$496,302	\$462,552	\$3,152,653	1992
1993	\$247,076	\$264,208	\$66,370	\$195,053	\$67,377	\$78,733	\$68,138	\$57,226	\$269,047	\$290,362	\$363,918	\$245,975	\$2,213,483	1993
1994	\$379,516	\$54,764	\$268,016	\$9,623	\$34,975	\$78,733	\$20,095	\$38,205	\$6	\$18,322	\$15,285	\$97,868	\$1,015,408	1994
1995	\$53,044	\$176,264	\$107,828	\$146,105	\$274,642	\$17,732	\$268,824	\$246,291	\$250,175	\$44,059	\$388,926	\$241,398	\$1,652,918	1995
1996	\$228,616	\$507,347	\$837,263	\$35,473	\$12,379	\$18,179	\$13,661						\$2,215,288	1996
TOTALS	\$3,217,141	\$2,013,376	\$3,022,707	\$2,238,815	\$1,830,388	\$1,065,599	\$1,212,114	\$1,952,547	\$1,582,608	\$2,162,006	\$2,967,321	\$2,916,256	\$26,181,428	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	4.41	2.40	2.36	2.53	2.43	2.72	2.57	2.58	2.55	2.39	2.38	2.10	2.76	1985
1986	2.01	2.05	1.91	1.47	1.60	1.56	1.56	1.56	1.53	1.57	1.57	1.55	1.65	1986
1987	1.55	1.64	1.62	1.52	1.54	1.56	1.49	1.41	1.44	1.42	1.55	1.75	1.55	1987
1988	1.85	1.85	1.71	1.51	1.44	1.55	1.70	1.71	1.77	1.76	2.02	2.00	1.72	1988
1989	2.05	1.70	1.62	1.65	1.79	1.82	1.72	1.64	1.58	1.55	2.04	2.08	1.77	1989
1990	2.22	1.90	1.56	1.52	1.55	1.58	1.60	1.47	1.53	1.75	2.14	2.08	1.77	1990
1991	1.80	1.84	1.44	1.46	1.47	1.39	1.24	1.38	1.50	1.82	1.81	1.94	1.61	1991
1992	1.83	1.22	1.34	1.52	1.66	1.79	1.62	1.93	1.97	2.01	2.09	2.02	1.61	1992
1993	1.92	1.67	2.05	2.09	2.29	2.01	2.08	2.21	2.17	2.01	2.15	2.22	2.03	1993
1994	1.84	1.70	1.60	1.65	1.42	2.01	1.49	1.59	1.56	1.41	1.27	1.62	1.70	1994
1995	1.76	1.47	1.59	1.59	1.71	1.77	2.11	2.70	1.65	1.63	1.87	1.94	1.83	1995
1996	2.51	2.47	2.08	1.84	1.63	1.54	2.42	1.91	1.82	1.80	1.89	1.93	2.22	1996
GRAND AVERAGE	2.19	1.85	1.71	1.67	1.64	1.87	1.77	1.91	1.82	1.80	1.89	1.93	1.84	

APPENDIX B - TABLE II - F
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS

EXXON CHEMICAL, BATON ROUGE, LA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	35,871,564	33,698,834	16,989,943	6,612,337	6,742,081	179,224	0	31,208	542,130	4,401,050	6,101,991	9,402,765	120,273,727	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	\$525,856	\$438,352	\$227,043	\$41,362	\$10,030	\$2,469	\$0	\$565	\$10,047	\$93,740	\$125,584	\$200,802	\$1,675,870	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
GRAND AVERAGE	1.47	1.30	1.34	0.63	0.15	1.38		1.87	1.85	2.13	2.06	2.14	1.39	

Data enclosed in this manner have a high probability of being in error

APPENDIX B - TABLE II - G
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS

FORMOSA PLASTICS, BATON ROUGE, LA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	1,168,714	172,160	1,778,964	2,199,920	2,496,180	4,394,070	828,780	881,910	1,121,160	1,491,030	679,014	1,059,970	18,171,872	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	\$20,716	\$2,397	\$32,321	\$40,254	\$33,608	\$71,029	\$15,219	\$16,789	\$17,875	\$26,830	\$11,883	\$20,562	\$322,184	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
GRAND AVERAGE	1.77	1.39	1.82	1.83	1.59	1.75	1.96	1.90	1.59	1.80	2.00	1.94	1.77	

APPENDIX B - TABLE II - H
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS

JAMES RIVER CORP., ST. FRANCISVILLE, LA (CROWN ZELLERBACH BEFORE MAY 1991)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	665,280	1,949,259	2,702,810	803,087	984,996	1,359,081	939,465	770,994	995,833	1,561,966	1,427,546	9,646,335	23,826,762	1985
1986	4,557,213	1,252,709	2,068,218	2,197,746	1,529,334	2,194,839	1,642,742	672,993	1,060,042	1,989,612	2,140,542	1,621,736	22,927,726	1986
1987	785,212	480,888	776,986	653,540	795,492	387,810	248,436	437,860	190,010	435,518	525,582	1,102,178	6,819,512	1987
1988	724,608	757,566	761,708	746,086	783,370	393,394	373,568	401,524	663,858	479,421	641,466	1,175,328	7,901,917	1988
1989	704,360	361,208	597,998	1,164,828	526,347	47,052	102,488	289,206	610,605	515,890	1,299,790	664,800	6,884,572	1989
1990	800,328	446,560	195,302	480,360	110,771	156,156	288,531	769,592	225,012	429,678	340,786	521,992	4,765,068	1990
1991	515,890	235,574	541,000	155,304	471,444	69,858	58,178	197,028	205,919	173,574	229,834	159,552	2,954,977	1991
1992	35,938	134,866	238,996	444,791	58,178	118,766	32,526	130,338	31,402	232,560	313,700	471,420	2,243,481	1992
1993	727,749	223,692	524,769	272,097	28,460	118,766	2,772	222,222	37,716	191,226	396,098	18,785	2,762,362	1993
1994	395,577	456,771	162,561	564,745	225,814	296,037	12,096	142,716	39,186	104,498	378,042	526,787	3,304,830	1994
1995	617,170	416,349	172,137	281,106	121,176	189,939	294,735						2,098,072	1995
1996	10,529,325	6,715,462	8,742,585	7,763,700	5,635,382	5,331,158	3,937,359	4,034,473	4,059,583	6,133,943	7,693,386	15,908,923	85,489,279	1996
TOTALS														

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$13,824	\$39,997	\$51,983	\$12,560	\$16,187	\$20,156	\$14,139	\$12,317	\$15,759	\$25,204	\$22,196	\$151,447	\$395,769	1985
1986	\$71,344	\$21,260	\$33,949	\$33,710	\$24,175	\$34,559	\$25,317	\$10,016	\$15,298	\$28,609	\$33,385	\$28,602	\$360,224	1986
1987	\$14,486	\$8,877	\$13,625	\$9,699	\$11,750	\$5,850	\$4,188	\$7,334	\$3,361	\$7,907	\$9,851	\$22,239	\$119,177	1987
1988	\$14,656	\$7,906	\$12,790	\$12,457	\$13,985	\$7,372	\$6,698	\$6,698	\$10,747	\$7,264	\$11,330	\$23,894	\$135,777	1988
1989	\$15,489	\$6,928	\$9,295	\$17,689	\$8,277	\$7,91	\$1,618	\$4,390	\$8,898	\$8,975	\$28,035	\$13,722	\$124,107	1989
1990	\$14,614	\$8,032	\$2,832	\$2,167	\$2,194	\$2,194	\$3,622	\$11,277	\$3,435	\$7,883	\$6,219	\$10,135	\$79,519	1990
1991	\$9,478	\$2,879	\$7,321	\$2,314	\$7,957	\$1,202	\$665	\$3,756	\$4,034	\$4,152	\$4,979	\$3,395	\$51,467	1991
1992	\$693	\$2,257	\$4,909	\$9,261	\$1,267	\$2,285	\$42	\$2,974	\$708	\$4,691	\$6,840	\$10,708	\$47,258	1992
1993	\$12,699	\$2,952	\$9,954	\$5,167	\$448	\$2,285	\$42	\$2,998	\$508	\$2,772	\$5,702	\$324	\$46,851	1993
1994	\$7,079	\$6,825	\$2,663	\$8,934	\$3,999	\$5,709	\$190	\$5,409	\$646	\$1,817	\$7,951	\$11,275	\$62,497	1994
1995	\$16,462	\$10,490	\$4,007	\$5,641	\$1,960	\$3,572	\$4,806						\$46,938	1995
1996	\$190,835	\$118,404	\$153,328	\$124,541	\$92,151	\$85,975	\$61,285	\$67,169	\$63,394	\$99,274	\$136,488	\$276,742	\$1,468,594	1996
TOTALS														

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	2.08	2.05	1.92	1.56	1.84	1.48	1.51	1.60	1.58	1.59	1.55	1.57	1.66	1985
1986	1.57	1.70	1.64	1.53	1.58	1.57	1.54	1.49	1.44	1.44	1.56	1.76	1.57	1986
1987	1.85	1.85	1.75	1.48	1.48	1.51	1.69	1.67	1.77	1.82	1.87	2.02	1.75	1987
1988	2.02	1.04	1.68	1.67	1.78	1.87	1.79	1.67	1.62	1.52	1.77	2.03	1.72	1988
1989	2.20	1.92	1.55	1.52	1.57	1.68	1.58	1.52	1.46	1.74	2.16	2.06	1.80	1989
1990	1.83	1.80	1.45	1.48	1.96	1.41	1.26	1.47	1.53	1.83	1.82	1.94	1.67	1990
1991	1.84	1.22	1.35	1.49	1.69	1.41	1.91	1.91	1.96	2.39	2.17	2.13	1.74	1991
1992	1.93	1.67	2.05	2.08	2.18	1.92	2.04	2.28	2.25	2.02	2.18	2.27	2.11	1992
1993	1.74	1.32	1.90	1.90	1.69	1.92	1.52	1.35	1.35	1.45	1.44	1.72	1.66	1993
1994	1.79	1.49	1.64	1.58	1.77	1.93	1.57	3.79	1.65	1.74	2.10	2.14	1.89	1994
1995	2.67	2.52	2.33	2.01	1.54	1.89	1.63						2.24	1995
1996	1.81	1.76	1.75	1.60	1.63	1.61	1.56	1.66	1.56	1.82	1.77	1.73	1.70	1996
GRAND AVERAGE														

APPENDIX B - TABLE II - I
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS

NELSON INDUSTRIAL STEAM CO. (NISCO), WESTLAKE, LA (JOINT PROJECT CONDEA VISTA, CONOCO, AND GSU)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	6,811,175	3,963,838	3,584,455	780,788	1,034,080	263,809	75,684	2,492,419	10,746,587	6,735,118	6,831,336	5,359,380	47,678,709	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	\$131,085	\$61,849	\$54,249	\$12,412	\$16,541	\$3,737	\$1,260	\$37,110	\$211,863	\$119,826	\$113,680	\$111,283	\$874,935	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
GRAND AVERAGE	1.92	1.56	1.51	1.59	1.60	1.42	1.66	1.49	1.97	1.78	1.95	2.08	1.83	

APPENDIX B - TABLE II - J
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST (\$), AND AVERAGE COST (CENTS/KWH)
LOUISIANA SUPPLIERS

VULCAN CHEMICAL CO., GEISMAR, LA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1986	23,422,869	12,742,080	10,899,155	9,452,304	7,666,672	8,438,976	8,637,216	7,343,760	5,692,992	8,108,880	154,608	9,005,328	9,159,336	1986
1987	13,396,128	12,241,152	10,579,008	8,086,512	7,835,808	4,537,824	2,378,004	2,248,704	3,246,756	4,545,456	17,473,888	13,989,120	133,887,912	1986
1988	5,151,112	4,014,373	2,038,295	1,760,120	2,929,832	2,377,864	2,026,560	2,492,981	2,765,783	1,458,432	3,549,812	1,719,884	79,560,504	1987
1989	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	32,286,068	1988
1990	2,534,600	8,918,624	15,322,944	13,322,552	2,749,296	7,720,500	1,573,472	3,141,002	2,847,798	2,647,958	5,702,666	9,039,330	36,978,626	1989
1991	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	74,989,324	1990
1992	2,181,456	1,567,200	1,751,042	998,852	465,104	1,517,020	2,031,282	3,697,344	1,345,884	2,246,032	726,880	2,918,384	37,808,832	1991
1993	2,396,048	4,618,456	1,886,209	1,854,576	1,114,948	180,560	1,626,290	376,332	462,368	3,510,616	4,765,418	1,127,646	21,446,480	1992
1994	2,331,502	210,440	1,098,060	1,863,040	624,880	180,560	6,923,200	1,968,720	235,360	1,053,420	1,148,912	3,519,210	23,919,467	1993
1995	8,188,767	2,501,321	1,596,810	1,860,374	2,209,880	7,829,360	21,360	342,880	350,880	1,374,520	1,771,580	2,253,680	30,301,412	1994
1996	360,000	2,036,080	299,319	975,280	28,680	1,890,160	830,090						6,419,609	1995
TOTALS	67,596,300	63,288,197	54,618,025	46,462,957	42,543,816	40,115,876	29,532,110	24,330,273	19,904,211	29,733,044	45,076,696	63,712,889	606,914,294	1996

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1986	\$476,896	\$257,559	\$206,559	\$167,450	\$121,225	\$122,888	\$133,721	\$114,029	\$88,383	\$126,495	\$3,691	\$190,685	\$194,376	1985
1987	\$209,663	\$196,343	\$171,396	\$120,490	\$120,513	\$70,301	\$35,556	\$32,604	\$46,445	\$64,574	\$280,171	\$218,015	\$2,313,391	1986
1988	\$95,395	\$73,739	\$35,090	\$26,926	\$42,240	\$35,599	\$33,051	\$41,122	\$50,227	\$25,663	\$86,778	\$35,009	\$1,238,260	1987
1989	\$36,149	\$13,701	\$57,146	\$30,796	\$208,689	\$80,865	\$33,589	\$19,446	\$23,369	\$35,189	\$34,863	\$79,429	\$562,839	1988
1990	\$57,467	\$172,165	\$239,346	\$204,539	\$42,783	\$125,371	\$24,857	\$46,229	\$35,105	\$46,470	\$121,897	\$183,542	\$635,231	1989
1991	\$104,953	\$59,698	\$81,824	\$66,650	\$72,304	\$29,094	\$20,828	\$21,286	\$30,012	\$44,934	\$35,198	\$32,257	\$1,289,938	1990
1992	\$39,463	\$20,528	\$23,866	\$15,056	\$7,797	\$26,006	\$33,033	\$71,979	\$26,583	\$53,902	\$15,217	\$60,819	\$394,249	1991
1993	\$46,385	\$76,192	\$37,901	\$39,387	\$23,879	\$3,467	\$33,766	\$8,576	\$9,719	\$71,221	\$100,393	\$25,349	\$394,249	1992
1994	\$43,206	\$3,130	\$21,622	\$29,307	\$10,183	\$3,467	\$97,645	\$33,157	\$3,550	\$14,429	\$15,553	\$57,633	\$476,236	1993
1995	\$134,285	\$37,251	\$24,514	\$30,725	\$38,095	\$135,042	\$861	\$12,128	\$5,881	\$21,933	\$33,687	\$49,734	\$332,882	1994
1996	\$9,539	\$37,251	\$7,465	\$21,237	\$589	\$32,654	\$20,450						\$524,097	1995
TOTALS	\$1,255,401	\$947,519	\$906,729	\$762,564	\$688,298	\$644,754	\$467,357	\$400,556	\$319,274	\$504,810	\$798,969	\$1,013,326	\$8,699,556	1996

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	2.04	2.02	1.90	1.77	1.58	1.46	1.55	1.55	1.55	1.56	2.39	2.12	2.12	1985
1986	1.57	1.60	1.62	1.49	1.54	1.55	1.50	1.45	1.45	1.42	1.60	1.56	1.73	1986
1987	1.85	1.84	1.72	1.53	1.44	1.50	1.63	1.65	1.82	1.76	1.94	2.04	1.56	1987
1988	2.07	1.70	1.63	1.65	1.75	1.84	1.73	1.63	1.58	1.52	1.75	2.07	1.74	1988
1989	2.27	1.93	1.56	1.54	1.58	1.62	1.75	1.47	1.52	1.76	2.14	2.03	1.77	1989
1990	1.81	1.64	1.48	1.51	1.44	1.37	1.26	1.40	1.50	1.82	1.79	2.03	1.73	1990
1991	1.81	1.31	1.36	1.51	1.68	1.71	1.63	1.95	1.98	2.40	2.09	2.08	1.68	1991
1992	1.94	1.65	2.01	2.12	2.14	1.92	2.08	2.28	2.10	2.03	2.11	2.25	1.84	1992
1993	1.85	1.49	1.97	1.57	1.63	1.92	1.41	1.68	1.51	1.37	1.35	1.64	1.99	1993
1994	1.64	1.49	1.54	1.65	1.72	1.72	1.40	1.57	1.51	1.60	1.90	2.21	1.73	1994
1995	2.65	1.83	2.49	2.18	2.05	1.73	2.46	3.54	1.68	1.70	1.77	1.89	1.73	1995
GRAND AVERAGE	1.86	1.78	1.66	1.62	1.62	1.61	1.68	1.65	1.60	1.70	1.77	1.89	2.01	1995

APPENDIX B - TABLE III - A
 GULF STATES UTILITIES (GSU)
 PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
 TEXAS SUPPLIERS

TOTAL OF ALL GSU TEXAS QF SUPPLIERS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	1,286,000	239,000	428,000	265,000	1,345,000	1,423,000	2,295,850	5,266,967	4,782,155	3,954,444	3,758,234	2,760,452	27,805,102	1985
1986	1,860,917	1,217,328	1,893,823	4,376,694	2,330,989	3,793,816	3,024,513	4,194,735	7,419,252	6,533,888	6,331,839	7,993,164	50,970,958	1986
1987	4,788,130	12,926,325	4,192,455	3,340,995	10,004,432	5,221,059	1,570,580	3,723,995	1,899,911	9,317,225	14,994,418	14,100,581	86,080,106	1987
1988	18,651,095	19,124,464	16,198,285	9,796,242	6,547,166	8,369,266	7,792,466	7,076,500	6,004,300	9,561,525	9,817,537	8,009,435	126,948,281	1988
1989	5,105,723	17,470,513	12,704,558	5,492,028	6,152,814	5,359,639	4,503,696	5,112,979	11,610,604	5,517,025	5,436,188	15,651,916	100,117,683	1989
1990	9,663,929	6,053,078	11,173,678	9,307,716	3,358,488	1,795,580	1,620,024	2,060,263	2,135,086	9,820,798	6,297,603	8,136,422	71,422,665	1990
1991	4,623,833	2,414,704	5,025,789	2,618,774	1,426,837	1,460,457	566,419	250,343	1,220,655	4,542,354	7,036,577	4,903,034	36,089,776	1991
1992	7,900,922	2,766,320	6,657,912	2,866,684	1,806,264	1,283,888	2,392,087	9,787,588	18,205,608	28,793,082	24,707,211	20,433,132	127,600,698	1992
1993	18,359,969	21,965,935	23,948,506	18,797,793	10,225,520	10,838,077	10,965,824	10,192,451	10,409,456	15,804,358	23,278,101	26,452,997	201,238,987	1993
1994	29,366,012	26,866,482	44,355,573	28,400,157	18,263,672	10,818,077	7,434,975	2,269,100	8,276,903	14,689,623	13,531,073	24,861,352	229,133,009	1994
1995	25,983,621	24,314,834	15,053,297	9,776,748	4,650,573	3,303,626	1,514,886	2,221,901	2,072,546	5,402,777	5,097,378	10,847,349	110,239,536	1995
1996	12,604,944	11,771,170	7,402,861	4,745,163	2,750,780	2,203,571	3,090,291						44,568,780	1996
TOTALS	140,195,095	147,130,163	149,034,737	95,783,994	68,863,635	55,870,056	46,771,611	52,156,822	74,036,476	113,937,059	120,286,159	144,149,834	1,212,215,581	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$34,767	\$5,536	\$10,234	\$6,355	\$32,890	\$35,778	\$56,776	\$177,982	\$121,273	\$92,290	\$86,677	\$36,258	\$716,836	1985
1986	\$37,120	\$23,653	\$34,584	\$74,767	\$35,545	\$53,025	\$45,749	\$62,992	\$114,034	\$97,036	\$94,238	\$120,978	\$793,721	1986
1987	\$72,604	\$203,400	\$65,703	\$50,230	\$149,246	\$78,359	\$22,894	\$48,884	\$25,870	\$128,782	\$224,222	\$238,965	\$1,309,159	1987
1988	\$335,487	\$343,054	\$272,360	\$144,186	\$192,235	\$121,567	\$119,026	\$112,583	\$101,375	\$169,358	\$186,118	\$159,697	\$2,257,046	1988
1989	\$101,352	\$292,015	\$201,747	\$88,568	\$106,914	\$84,311	\$74,979	\$91,661	\$187,489	\$72,380	\$92,669	\$318,161	\$1,722,246	1989
1990	\$213,345	\$113,297	\$187,734	\$137,559	\$50,995	\$28,052	\$24,632	\$28,952	\$31,373	\$168,253	\$130,883	\$159,421	\$1,254,496	1990
1991	\$80,501	\$39,404	\$71,154	\$37,520	\$19,778	\$19,607	\$6,807	\$3,378	\$18,085	\$80,409	\$128,178	\$92,028	\$596,849	1991
1992	\$140,116	\$32,887	\$86,343	\$42,050	\$29,508	\$22,523	\$37,524	\$184,532	\$349,620	\$655,915	\$505,201	\$406,182	\$2,492,401	1992
1993	\$339,306	\$352,768	\$474,783	\$381,113	\$212,609	\$207,002	\$221,339	\$222,742	\$223,034	\$310,978	\$489,608	\$575,809	\$4,011,091	1993
1994	\$526,574	\$379,859	\$720,859	\$429,670	\$287,738	\$207,002	\$116,052	\$33,709	\$117,032	\$199,391	\$180,885	\$414,203	\$3,612,974	1994
1995	\$429,050	\$350,077	\$254,634	\$151,451	\$80,185	\$60,253	\$29,122	\$54,531	\$32,344	\$87,766	\$90,052	\$222,204	\$1,841,569	1995
1996	\$280,457	\$294,476	\$148,837	\$87,449	\$40,912	\$32,579	\$65,833						\$950,544	1996
TOTALS	\$2,590,700	\$2,430,426	\$2,508,972	\$1,630,918	\$1,238,555	\$980,058	\$820,733	\$1,021,946	\$1,321,529	\$2,062,558	\$2,208,731	\$2,763,906	\$21,559,033	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	2.71	2.32	2.39	2.40	2.44	2.51	2.47	3.38	2.54	2.33	2.31	2.04	2.58	1985
1986	1.99	1.94	1.83	1.71	1.52	1.40	1.51	1.50	1.54	1.49	1.49	1.51	1.56	1986
1987	1.52	1.57	1.57	1.50	1.49	1.50	1.46	1.31	1.36	1.38	1.38	1.51	1.52	1987
1988	1.80	1.79	1.68	1.47	2.94	1.45	1.53	1.59	1.69	1.77	1.90	1.99	1.78	1988
1989	1.99	1.67	1.59	1.61	1.74	1.66	1.66	1.76	1.61	1.71	1.70	2.03	1.72	1989
1990	2.21	1.87	1.50	1.48	1.52	1.56	1.52	1.41	1.47	1.71	2.08	1.96	1.76	1990
1991	1.74	1.63	1.42	1.43	1.39	1.34	1.20	1.35	1.48	1.77	1.82	1.88	1.65	1991
1992	1.77	1.19	1.30	1.47	1.63	1.75	1.57	1.89	1.92	2.28	2.10	1.99	1.95	1992
1993	1.85	1.61	1.98	2.03	2.08	1.91	2.02	2.19	2.14	1.97	2.10	2.18	1.99	1993
1994	1.79	1.41	1.63	1.51	1.58	1.91	1.56	1.49	1.41	1.36	1.34	1.67	1.58	1994
1995	1.65	1.44	1.69	1.55	1.72	1.82	1.92	2.45	1.56	1.62	1.77	2.05	1.67	1995
1996	2.22	2.50	2.01	1.84	1.49	1.48	2.13	1.96	1.78	1.81	1.84	1.92	2.13	1996
GRAND AVERAGE	1.85	1.65	1.68	1.63	1.80	1.72	1.75	1.96	1.78	1.81	1.84	1.92	1.78	

APPENDIX B - TABLE III - B
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
TEXAS SUPPLIERS

AIR LIQUIDE, PORT NECHES, TEXAS

POWER PURCHASED (KWH)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985															1985
1986															1986
1987															1987
1988															1988
1989															1989
1990															1990
1991															1991
1992															1992
1993															1993
1994															1994
1995															1995
1996															1996
TOTALS															
		891,090	7,604,572	20,944,373	13,299,591	4,412,151		936,346	973,005	995,179	1,287,534	1,639,531	2,766,973	55,750,345	1993
		3,011,182	2,640,740	2,906,482	1,595,447	912,514	435,963	288,100	418,072	740,453	687,902	1,152,851	1,635,303	16,425,009	1995
		2,139,133	2,499,860	2,359,629	1,095,429	491,998	524,977	187,366						9,296,392	1996
		6,041,405	12,745,172	26,210,484	15,990,467	6,816,663	960,940	1,411,812	1,391,077	1,735,632	1,975,436	2,792,382	4,402,276	81,473,746	1996

COST OF POWER (\$)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985															1985
1986															1986
1987															1987
1988															1988
1989															1989
1990															1990
1991															1991
1992															1992
1993															1993
1994															1994
1995															1995
1996															1996
TOTALS															
		\$14,746	\$100,865	\$340,148	\$197,008	\$68,222		\$14,125	\$14,451	\$14,157	\$17,200	\$21,286	\$46,270	\$848,478	1993
		\$49,649	\$37,983	\$44,852	\$24,527	\$15,207	\$7,597	\$5,003	\$10,598	\$11,512	\$11,090	\$20,786	\$34,173	\$272,979	1994
		\$49,739	\$61,325	\$49,590	\$19,724	\$7,123	\$7,595	\$3,769						\$198,865	1995
		\$114,134	\$200,173	\$434,590	\$241,259	\$90,552	\$15,193	\$22,897	\$25,049	\$25,669	\$28,290	\$42,072	\$80,443	\$1,320,322	1996

AVERAGE COST OF POWER (CENTS/KWH)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985															1985
1986															1986
1987															1987
1988															1988
1989															1989
1990															1990
1991															1991
1992															1992
1993															1993
1994															1994
1995															1995
1996															1996
GRAND AVERAGE															
		1.65	1.33	1.62	1.48	1.55	1.74	1.51	1.49	1.42	1.34	1.30	1.67	1.52	1993
		1.65	1.44	1.54	1.54	1.67	1.74	1.74	2.53	1.55	1.61	1.80	2.09	1.66	1994
		2.33	2.45	2.10	1.80	1.45	1.45	2.01						2.14	1995
		1.89	1.57	1.66	1.51	1.56	1.58	1.62	1.80	1.48	1.43	1.51	1.83	1.62	1996

APPENDIX B - TABLE III - C
 GULF STATES UTILITIES (GSU)
 PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
 TEXAS SUPPLIERS

CLARK REFINING, PORT ARTHUR, TX (CHEVRON BEFORE 1993)

POWER PURCHASED (KWH)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985															1985
1986															1986
1987															1987
1988															1988
1989															1989
1990															1990
1991															1991
1992										509,662	3,021,099	3,135,604	3,840,257	10,506,622	1992
1993		4,847,617	6,693,010	4,815,663	4,336,399	1,032,894	2,44,109	1,761,969	1,317,708	87,322	2,029,289	3,198,000	4,193,083	34,557,063	1993
1994		2,528,747	2,153,414	4,904,527	38,117	141,677	224,109	6,119	48,767	528,895	1,143,639		827,308	12,548,319	1994
1995		375,723	688	1,781,816	112,871	11,459	706	17,541	712,991	79,188	108,467			3,201,450	1995
1996		1,300,133	18,353	393,780	430,487	321,313	589,830							3,053,896	1996
TOTALS		9,053,220	8,865,465	11,502,006	4,882,167	1,616,517	790,237	2,375,459	2,080,466	1,205,067	6,302,494	6,333,604	8,960,648	63,967,350	

COST OF POWER (\$)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985															1985
1986															1986
1987															1987
1988															1988
1989															1989
1990															1990
1991															1991
1992										\$9,595	\$67,017	\$64,022	\$76,171	\$216,805	1992
1993		\$89,711	\$107,310	\$95,911	\$87,840	\$21,316	\$4,277	\$35,211	\$28,800	\$1,835	\$39,988	\$67,596	\$90,465	\$670,260	1993
1994		\$45,465	\$31,517	\$77,794	\$628	\$2,084	\$4,277	\$95	\$759	\$6,819	\$14,638		\$14,244	\$198,310	1994
1995		\$6,209	\$10	\$27,477	\$1,725	\$187	\$12	\$834	\$21,836	\$1,145	\$1,690			\$61,126	1995
1996		\$30,972	\$1,638	\$7,204	\$7,204	\$6,823	\$4,955	\$13,457						\$65,048	1996
TOTALS		\$172,348	\$140,475	\$201,182	\$97,997	\$30,410	\$13,521	\$49,597	\$51,395	\$19,394	\$123,333	\$131,618	\$180,880	\$1,211,549	

AVERAGE COST OF POWER (CENTS/KWH)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985															1985
1986															1986
1987															1987
1988															1988
1989															1989
1990															1990
1991															1991
1992										1.88	2.22	2.04	1.98	2.06	1992
1993		1.85	1.60	1.99	2.03	2.06	1.75	2.00	2.19	2.10	1.97	2.11	2.16	1.94	1993
1994		1.80	1.46	1.59	1.61	1.47	1.91	1.55	1.53	1.29	1.28	1.28	1.72	1.58	1994
1995		1.65	1.51	1.54	1.76	1.63	1.76	3.06	3.06	1.45	1.56			1.91	1995
1996		2.38	8.92	1.83	1.83	1.58	1.54	2.28						2.13	1996
GRAND AVERAGE		1.90	1.58	1.75	1.99	1.88	1.71	2.09	2.47	1.61	1.96	2.08	2.04	1.90	

APPENDIX B - TABLE III - D
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
TEXAS SUPPLIERS

COGEN POWER, L.P. (DESTEC)

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	1,286,000	239,000	428,000	265,000	1,346,000	1,423,000	377,850	1,480,503	1,422,843	1,286,154	572,460	1,475,541	11,602,351	1985
1986	1,679,910	1,217,328	1,082,666	1,721,439	1,529,727	1,245,198	1,408,368	1,175,031	1,332,462	1,563,909	1,239,001	1,313,616	16,508,655	1986
1987	1,124,383	1,429,626	1,100,853	808,656	1,741,004	604,869	61,578	99,579	694,720	1,357,080	981,666	950,568	10,954,582	1987
1988	1,268,526	558,286	566,102	420,552	716,028	533,868	543,342	632,316	176,667	811,581	560,458	373,578	7,161,304	1988
1989	576,987	447,366	499,962	466,404	83,412	256,418	334,724	271,293	171,722	633,171	526,120	716,271	4,983,850	1989
1990	145,182	501,656	662,122	361,168	525,903	471,530	588,984	551,032	551,106	745,426	457,254	573,228	5,773,423	1990
1991	217,397	67,721	188,530	361,606	284,144	136,892	403,586	98,742	346,836	547,014	251,204	478,478	3,381,712	1991
1992	433,098	33,408	14,226	3,606	21,024	230,238	368,780	211,176	436,010	233,976	400,792	381,940	2,768,274	1992
1993	308,934	197,840	89,874	352,582	222,400	128,834	41,234	185,959	145,472	22,912	57,338	554,483	2,307,862	1993
1994	522,553	396,684	256,831	131	3,165	128,834	227,294	301,744	227,990	177,861	67,237	313,163	2,623,487	1994
1995	586,513	303,270	107,384	206,928	41,291	14,500	31,638	655	112	735	266,700	303,634	1,862,360	1995
1996	373,379	133,809	209,846	225,159	150,476	58,817	5,552						1,167,038	1996
TOTALS	8,522,862	5,525,994	5,206,396	4,831,625	5,664,574	5,232,998	4,392,930	5,009,030	5,505,940	7,379,819	5,379,230	7,434,500	71,084,898	

COST OF POWER (\$)

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$34,787	\$5,536	\$10,234	\$6,355	\$32,890	\$35,778	\$8,845	\$36,581	\$35,949	\$29,884	\$13,169	\$30,127	\$280,135	1985
1986	\$32,597	\$23,653	\$19,760	\$29,361	\$23,195	\$17,361	\$21,161	\$17,439	\$19,937	\$23,368	\$18,509	\$19,533	\$265,874	1986
1987	\$16,952	\$22,273	\$17,339	\$12,181	\$25,972	\$9,085	\$904	\$1,316	\$9,527	\$18,753	\$14,656	\$16,003	\$164,861	1987
1988	\$22,768	\$9,935	\$9,458	\$6,249	\$10,064	\$7,740	\$8,337	\$10,072	\$2,973	\$14,212	\$10,585	\$7,312	\$119,705	1988
1989	\$11,440	\$7,369	\$7,847	\$7,514	\$1,460	\$4,530	\$5,551	\$4,351	\$2,709	\$9,334	\$9,016	\$14,020	\$85,141	1989
1990	\$3,110	\$9,391	\$10,046	\$7,514	\$8,004	\$7,405	\$8,929	\$7,844	\$8,044	\$12,751	\$9,457	\$11,283	\$96,264	1990
1991	\$2,819	\$1,171	\$2,588	\$5,164	\$3,579	\$1,792	\$4,862	\$1,326	\$5,133	\$9,715	\$4,376	\$8,983	\$51,508	1991
1992	\$7,719	\$386	\$175	\$53	\$333	\$3,794	\$5,735	\$3,963	\$8,418	\$5,524	\$8,246	\$7,570	\$51,916	1992
1993	\$5,678	\$3,152	\$1,756	\$7,124	\$4,594	\$2,510	\$819	\$4,133	\$3,166	\$437	\$1,192	\$12,022	\$46,583	1993
1994	\$9,429	\$5,650	\$4,215	\$2	\$59	\$2,510	\$3,293	\$4,587	\$3,516	\$2,415	\$988	\$5,268	\$41,932	1994
1995	\$9,683	\$4,344	\$1,619	\$3,202	\$683	\$242	\$441	\$11	\$3	\$13	\$4,542	\$6,238	\$31,020	1995
1996	\$6,286	\$3,687	\$3,956	\$4,159	\$2,362	\$889	\$107						\$21,446	1996
TOTALS	\$163,168	\$96,548	\$88,992	\$81,364	\$113,195	\$93,636	\$68,984	\$91,623	\$99,375	\$126,406	\$94,736	\$138,359	\$1,256,385	

AVERAGE COST OF POWER (CENTS/KWH)

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	2.71	2.32	2.39	2.40	2.44	2.51	2.34	2.47	2.53	2.32	2.30	2.04	2.41	1985
1986	1.94	1.94	1.83	1.71	1.52	1.39	1.50	1.48	1.50	1.49	1.49	1.49	1.61	1986
1987	1.50	1.56	1.58	1.51	1.49	1.50	1.47	1.32	1.37	1.38	1.49	1.68	1.50	1987
1988	1.79	1.78	1.67	1.49	1.41	1.45	1.53	1.59	1.68	1.75	1.89	1.96	1.67	1988
1989	1.98	1.65	1.57	1.61	1.75	1.77	1.66	1.60	1.58	1.47	1.71	1.96	1.67	1989
1990	2.14	1.87	1.52	1.52	1.52	1.57	1.52	1.42	1.46	1.71	2.07	1.97	1.67	1990
1991	1.30	1.73	1.37	1.43	1.26	1.31	1.20	1.34	1.48	1.78	1.74	1.88	1.52	1991
1992	1.78	1.16	1.23	1.47	1.58	1.65	1.56	1.88	1.93	2.36	2.06	1.98	1.88	1992
1993	1.84	1.59	1.95	2.02	2.07	1.95	1.99	2.22	2.18	1.91	2.08	2.17	2.02	1993
1994	1.80	1.42	1.64	1.53	1.96	1.95	1.45	1.52	1.54	1.36	1.47	1.68	1.60	1994
1995	1.65	1.43	1.51	1.55	1.65	1.67	1.39	1.64	2.28	1.81	1.71	2.05	1.67	1995
1996	1.68	2.76	1.88	1.85	1.57	1.51	1.93	1.83	1.80	1.71	1.76	1.86	1.85	1996
GRAND AVERAGE	1.91	1.76	1.71	1.68	1.70	1.79	1.57	1.83	1.80	1.71	1.76	1.86	1.77	

APPENDIX B - TABLE III - E
GULF STATES UTILITIES (GSU)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
TEXAS SUPPLIERS

E. I. DUPONT, ORANGE, TEXAS

YEAR/MONTH	POWER PURCHASED (KWH)												TOTAL	YEAR			
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC					
1985																	
1986																	
1987																	
1988																	
1989																	
1990																	
1991																	
1992																	
1993																	
1994																	
1995																	
1996																	
TOTALS	1,531,614	1,544,484	1,553,965	883,844	1,396,542	128,225	22,700	83,996	61,792	5,174,585	6,677,627	10,309,738	25,369,072				

YEAR/MONTH	COST OF POWER (\$)												TOTAL	YEAR			
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC					
1985																	
1986																	
1987																	
1988																	
1989																	
1990																	
1991																	
1992																	
1993																	
1994																	
1995																	
1996																	
TOTALS	\$28,278	\$31,283	\$26,655	\$14,094	\$22,872	\$1,972	\$356	\$861	\$1,008	\$91,403	\$123,135	\$215,483	\$557,400				

YEAR/MONTH	AVERAGE COST OF POWER (CENTS/KWH)												YEAR AVG	YEAR			
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC					
1985																	
1986																	
1987																	
1988																	
1989																	
1990																	
1991																	
1992																	
1993																	
1994																	
1995																	
1996																	
GRAND AVERAGE	1.85	2.03	1.72	1.59	1.64	1.54	1.57	1.03	1.63	1.77	1.84	2.09	1.90				

APPENDIX B - TABLE III - F
 GULF STATES UTILITIES (GSU)
 PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
 TEXAS SUPPLIERS

FINA OIL AND CHEMICAL, PORT ARTHUR, TEXAS

POWER PURCHASED (KWH)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985															1985
1986															1986
1987															1987
1988															1988
1989		185,608	1,004	1,423,539				7,49,266	5,908	683,494		206,140	3,388	3,268,347	1989
1990		406,036		5,368							14	56		6,424	1990
1991		308,124	129,920		10,864	364								417,278	1991
1992		625,372	134,372											438,044	1992
1993			28										5,928	765,672	1993
1994			264,419											28	1994
1995														264,419	1995
1996															1996
TOTALS		1,535,140	529,743	1,428,907	10,864	364		7,49,266	5,908	683,494	14	206,196	9,316	5,159,212	

COST OF POWER (\$)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985															1985
1986															1986
1987															1987
1988															1988
1989		\$3,957	\$17	\$22,765				\$12,390	\$101	\$10,250		\$3,490	\$82	\$53,052	1989
1990				\$79								\$1		\$1	1990
1991		\$6,941			\$157	\$5								\$7,103	1991
1992		\$5,518	\$1,455											\$6,973	1992
1993		\$11,607	\$2,158										\$142	\$13,907	1993
1994															1994
1995			\$3,695											\$3,695	1995
1996															1996
TOTALS		\$28,023	\$7,325	\$22,844	\$157	\$5		\$12,390	\$101	\$10,250		\$3,491	\$224	\$84,731	

AVERAGE COST OF POWER (CENTS/KWH)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985															1985
1986															1986
1987															1987
1988															1988
1989		2.02	1.69	1.60				1.65	1.71	1.50		1.69	2.42	1.62	1989
1990				1.47								1.79			1990
1991		1.71			1.45	1.37					0.00				1991
1992		1.79	1.12												1992
1993		1.86	1.61										2.40		1993
1994			0.00												1994
1995			1.40												1995
1996															1996
GRAND AVERAGE		1.83	1.38	1.60	1.45	1.37		1.65	1.71	1.50		1.69	2.40	1.64	

APPENDIX B - TABLE III - G
 GULF STATES UTILITIES (GSU)
 PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
 TEXAS SUPPLIERS

HUNTSMAN CORP., PORT NECHES, TEXAS (TEXACO CHEMICAL BEFORE 1993)

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	41,573,184	37,357,220	32,319,808	32,619,186	22,515,662	24,123,558	15,355,579	11,582,520	20,008,268	29,263,612	41,142,033	42,297,859	350,358,489	

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	\$730,710	\$585,981	\$592,605	\$560,965	\$401,806	\$454,944	\$287,539	\$244,335	\$389,368	\$537,719	\$777,463	\$840,818	\$6,404,273	

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992													2.03	1992
1993													2.01	1993
1994													1.58	1994
1995													1.67	1995
1996													2.03	1996
GRAND AVERAGE	1.75	1.57	1.83	1.72	1.78	1.89	1.87	2.09	1.95	1.84	1.89	1.99	1.83	

APPENDIX B - TABLE III - H
 GULF STATES UTILITIES (GSU)
 PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
 TEXAS SUPPLIERS

ENGINEERED CARBONS, ORANGE, TX (J. M. HUBER, 1987-95; PHILLIPS CHEMICAL BEFORE 1987)

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														
1986	181,007	1,357,461	811,157	2,655,255	801,262	2,319,953	1,918,000	3,786,464	3,359,312	2,668,290	3,165,774	1,284,911	16,202,761	1985
1987	1,250,505	1,199,454	1,743,960	1,800,246	547,377	1,941,453	1,394,838	2,648,274	4,126,794	2,202,293	1,280,705	687,211	19,108,749	1986
1988	2,135,733	2,019,022	1,770,721	2,356,738	1,982,486	2,307,246	1,261,322	800,036	936,191	1,078,351	865,131	1,209,085	14,791,118	1987
1989	858,348	829,570	1,608,124	2,219,528	2,051,122	2,181,961	2,684,530	1,509,938	1,591,292	1,875,770	2,357,459	1,754,561	20,369,423	1988
1990	662,905	1,434,069	1,542,603	978,118	1,215,045	1,020,133	1,028,570	1,432,465	1,022,494	1,488,366	1,876,114	1,339,124	26,085,712	1989
1991	180,279	1,692,529	1,457,506	967,655	1,695,261	480,686	1,537,311	1,348,910	873,705	1,420,820	492,252	121,580	16,936,861	1990
1992	621,198	188,179	567,488	250,144	44,352	32,863	1,375,482	832,860	1,332,070	155,718	1,464,642	199,635	13,152,931	1991
1993	1,182,130	1,779,567	1,593,128	775,368	2,039,719	32,863	1,375,482	832,860	1,332,070	155,718	1,464,642	199,635	3,606,618	1992
1994	1,622,594	243,656	12,565	1,508,348	757,221	583,141	501,751	470,389	474,012	929,169	595,891	6,349	7,706,066	1993
1995	1,593,621	989,235	1,161,122	797,447	516,641	1,307,981	1,307,981	470,389	474,012	929,169	595,891	6,349	7,706,066	1994
1996	11,003,035	11,732,742	13,988,095	15,387,541	12,742,515	12,223,864	14,246,484	14,553,926	16,103,453	17,101,690	16,913,011	10,412,579	166,388,835	1995
TOTALS														1996

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														
1986	\$4,523	\$21,210	\$14,824	\$45,406	\$12,950	\$32,447	\$47,931	\$141,401	\$85,324	\$62,406	\$73,508	\$26,131	\$436,701	1985
1987	\$18,929	\$21,444	\$27,189	\$26,643	\$8,260	\$28,997	\$21,330	\$40,119	\$64,547	\$32,939	\$19,104	\$12,941	\$300,530	1986
1988	\$12,480	\$21,444	\$28,765	\$34,381	\$28,811	\$33,516	\$16,459	\$24,033	\$25,941	\$14,896	\$12,947	\$20,494	\$221,699	1987
1989	\$42,485	\$33,693	\$28,120	\$17,028	\$35,703	\$39,600	\$44,828	\$34,125	\$34,700	\$32,933	\$44,750	\$34,338	\$337,851	1988
1990	\$19,106	\$15,486	\$24,049	\$32,693	\$18,493	\$15,963	\$15,681	\$20,169	\$14,989	\$25,389	\$39,188	\$27,726	\$445,840	1989
1991	\$11,607	\$21,783	\$21,917	\$14,240	\$15,535	\$17,815	\$1,911	\$2,029	\$12,950	\$25,131	\$8,617	\$2,266	\$288,932	1990
1992	\$3,138	\$19,175	\$18,726	\$14,268	\$27,920	\$9,080	\$24,189	\$25,440	\$16,500	\$30,778	\$10,875	\$21,166	\$155,801	1991
1993	\$11,469	\$3,008	\$11,325	\$5,008	\$912	\$626	\$21,586	\$1,844	\$1	\$3,048	\$30,776	\$4,339	\$221,256	1992
1994	\$21,943	\$25,243	\$25,364	\$11,441	\$33,146	\$626	\$21,586	\$12,471	\$19,878	\$18,776	\$11,176	\$10,024	\$211,674	1993
1995	\$27,091	\$3,465	\$192	\$23,391	\$13,125	\$10,425	\$7,177	\$11,923	\$8,404	\$15,332	\$10,452	\$118	\$211,674	1994
1996	\$34,256	\$18,738	\$21,585	\$14,727	\$8,917	\$27,530	\$27,530	\$11,923	\$8,404	\$15,332	\$10,452	\$118	\$131,096	1995
TOTALS	\$207,027	\$183,246	\$222,057	\$239,226	\$203,172	\$188,095	\$247,056	\$324,461	\$236,027	\$299,823	\$318,257	\$201,042	\$2,929,488	1996

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985														
1986	2.50	1.83	1.63	1.71	1.54	1.40	2.50	3.73	2.54	2.34	2.31	2.03	2.70	1985
1987	1.51	1.56	1.48	1.48	1.51	1.49	1.53	1.51	1.56	1.50	1.49	1.88	1.57	1986
1988	1.74	1.79	1.67	1.46	1.45	1.45	1.46	1.36	1.37	1.38	1.50	1.70	1.50	1987
1989	1.99	1.67	1.59	1.61	1.74	1.77	1.67	1.61	1.69	1.76	1.90	1.96	1.66	1988
1990	2.23	1.87	1.50	1.61	1.52	1.56	1.52	2.26	2.18	1.48	1.70	1.78	1.78	1989
1991	1.75	1.52	1.42	1.46	1.42	1.35	1.20	1.35	1.48	1.77	2.09	2.07	1.69	1990
1992	1.74	1.13	1.28	1.47	1.65	1.89	1.57	1.89	1.93	1.77	1.75	1.86	1.52	1991
1993	1.85	1.60	2.00	2.00	2.06	1.90	2.24	2.24	1.96	1.96	2.04	2.00	1.68	1992
1994	1.86	1.42	1.59	1.48	1.63	1.90	1.57	1.50	1.49	1.96	2.10	2.17	2.01	1993
1995	1.67	1.42	1.53	1.55	1.73	1.79	1.43	2.53	1.77	1.39	1.21	1.64	1.53	1994
1996	2.15	1.89	1.86	1.85	1.73	1.54	2.10	2.23	1.65	1.65	1.75	1.86	1.70	1995
GRAND AVERAGE	1.88	1.56	1.59	1.56	1.59	1.54	1.73	2.23	1.84	1.75	1.88	1.93	1.76	1996

APPENDIX B - TABLE III - I
 GULF STATES UTILITIES (GSU)
 PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
 TEXAS SUPPLIERS

STAR ENTERPRISES, PORT ARTHUR, TEXAS (TEXACO REFINING BEFORE MID-1989)

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986	2,413,242	10,139,238	1,347,642	63,318	7,334,376	2,598,108	221,307	371,430	1,959,996	2,767,686	3,812,133	5,992,337	16,353,554	1986
1987	16,207,896	17,148,428	13,126,116	7,018,952	3,848,652	5,528,152	247,680	2,824,380	269,000	6,778,128	13,034,622	11,461,446	58,511,180	1987
1988	2,178,456	14,623,890	8,993,086	3,966,930	4,018,280	2,918,280	735,176	3,323,340	4,285,424	6,586,224	4,769,630	3,045,896	92,615,864	1988
1989	8,400,534	4,721,852	8,898,064	7,027,420	1,529,188	303,917	1,470	67,545	561,486	5,112,212	3,692,930	4,976,820	61,084,046	1989
1990	3,196,368	603,200	3,288,835	1,266,404	44,800	572,964	3,036	1,572	8,036,652	17,477,916	8,436,801	1,971,396	45,293,438	1990
1991	6,327,696	784,290	5,186,180	1,848,748	82,284	4,852,996	485,996	5,418,416	1,630,800	2,280,460	1,950,176	4,191,668	16,155,643	1991
1992	332,120	3,321,448	6,591,578	3,433,596	455,108	64,852	35,404	267,196	1,530,800	2,800,460	1,950,176	4,191,668	56,629,339	1992
1993	9,141,956	41,888	1,792,865	6,876	557,946	121,500	307,782	176,904	617,165	323,405	3,888	6,336,829	24,554,406	1993
1994	7,937,543	12,406,123	5,349,946	349,254	230,650	121,500	307,782	176,904	617,165	323,405	3,888	6,336,829	34,160,989	1994
1995	4,698,824	5,038,976	2,250,774	216,802	9,414	8,964							12,223,754	1995
1996	60,834,635	68,829,373	56,825,066	25,198,300	18,110,598	12,410,234	8,217,381	17,350,899	28,732,800	46,739,549	40,842,076	60,422,918	444,513,949	1996
TOTALS														

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986	\$36,823	\$159,917	\$21,175	\$968	\$109,212	\$3,217	\$3,258	\$5,434	\$29,550	\$40,729	\$56,625	\$88,504	\$227,317	1986
1987	\$291,907	\$307,671	\$220,580	\$103,488	\$153,360	\$80,311	\$93,874	\$36,661	\$3,556	\$93,709	\$194,895	\$194,462	\$894,048	1987
1988	\$43,083	\$244,781	\$142,747	\$64,026	\$69,751	\$51,131	\$12,210	\$53,046	\$72,280	\$115,704	\$90,150	\$61,729	\$1,668,709	1988
1989	\$185,457	\$88,420	\$133,560	\$104,003	\$23,166	\$4,684	\$22	\$939	\$139,003	\$24,851	\$23,150	\$146,301	\$1,014,080	1989
1990	\$56,654	\$11,899	\$46,570	\$17,929	\$584	\$9,649	\$34	\$23	\$8,340	\$87,533	\$76,878	\$96,417	\$808,419	1990
1991	\$112,334	\$10,444	\$67,442	\$27,053	\$1,133	\$1,261	\$734	\$6,020	\$153,682	\$400,971	\$171,851	\$39,592	\$1,103,599	1991
1992	\$6,295	\$53,702	\$131,157	\$69,107	\$8,874	\$1,261	\$377	\$3,216	\$33,863	\$44,301	\$41,320	\$93,003	\$487,837	1992
1993	\$178,976	\$745	\$27,922	\$115	\$8,567	\$1,963	\$10,249	\$2,492	\$31,216	\$37,284	\$23,057	\$176,447	\$485,970	1993
1994	\$132,812	\$179,602	\$83,965	\$5,529	\$3,726	\$1,963	\$10,249	\$2,492	\$8,952	\$5,143	\$68	\$129,424	\$563,923	1994
1995	\$102,672	\$128,215	\$44,928	\$4,239	\$170	\$101							\$280,325	1995
1996	\$1,147,013	\$1,185,396	\$920,046	\$396,457	\$376,543	\$192,698	\$131,914	\$284,121	\$480,438	\$855,584	\$717,938	\$1,106,658	\$7,794,804	1996
TOTALS														

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985														1985
1986	1.53	1.58	1.57	1.53	1.49	1.41	1.47	1.46	1.51	1.47	1.49	1.48	1.48	1986
1987	1.80	1.79	1.68	1.47	1.48	1.51	1.44	1.30	1.32	1.38	1.50	1.70	1.53	1987
1988	1.98	1.67	1.59	1.61	1.74	1.45	1.53	1.58	1.69	1.76	1.89	2.03	1.80	1988
1989	2.21	1.87	1.50	1.48	1.51	1.54	1.50	1.39	1.49	1.08	2.08	1.94	1.66	1989
1990	1.77	1.97	1.42	1.42	1.30	1.54	1.50	1.46	1.75	1.71	1.87	1.88	1.79	1990
1991	1.78	1.33	1.30	1.46	1.38	1.68	1.56	1.46	1.91	2.29	2.04	2.01	1.71	1991
1992	1.90	1.62	1.99	2.01	1.51	1.94	2.07	2.25	2.08	1.94	2.12	2.22	1.99	1992
1993	1.96	1.78	1.56	1.67	1.54	1.94	1.30	2.08	1.38	1.33	1.40	1.67	1.68	1993
1994	1.67	1.45	1.57	1.58	1.62	1.62	3.33	1.41	1.45	1.59	1.74	2.04	1.65	1994
1995	2.19	2.54	2.00	1.96	1.80	1.13	1.61	1.64	1.67	1.83	1.76	1.83	1.68	1995
1996	1.89	1.72	1.62	1.57	2.08	1.55	1.61	1.64	1.67	1.83	1.76	1.83	1.75	1996
GRAND AVERAGE														

**APPENDIX TABLE IV - A
LOUISIANA POWER AND LIGHT (LPL)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS**

TOTALS - ALL LPL QF SUPPLIERS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS	YEAR
1985	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	8,719,850	9,485,600	3,913,100	99,420,200	1985
1986	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	91,280,900	1986
1987	7,863,850	10,617,950	9,634,950	10,159,000	5,401,900	8,319,000	10,146,800	9,655,500	8,988,950	8,662,450	8,044,600	8,313,600	105,808,050	1987
1988	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	97,262,077	1988
1989	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	11,471,975	10,749,641	8,994,909	96,469,848	1989
1990	8,598,784	12,026,644	11,799,656	10,414,027	4,962,387	14,678,826	17,446,699	14,824,218	10,304,474	10,436,940	13,428,275	15,813,524	144,734,454	1990
1991	11,273,553	13,262,057	16,253,889	18,241,522	15,717,730	13,928,165	9,825,916	4,214,393	14,336,957	6,208,757	13,621,566	10,429,030	147,313,535	1991
1992	12,086,165	11,784,485	5,648,408	14,821,829	13,448,489	15,254,754	11,288,122	13,068,689	10,732,600	9,664,680	10,549,868	11,689,112	140,037,201	1992
1993	13,269,408	11,644,578	9,535,508	8,256,243	7,473,926	15,113,737	12,908,276	11,371,179	12,406,330	10,854,560	15,267,871	15,646,570	143,748,186	1993
1994	13,590,141	9,148,613	7,151,069	10,472,847	14,165,350	14,583,846	12,583,974	12,247,553	12,579,548	9,638,712	14,597,339	13,364,177	144,123,169	1994
1995	13,512,693	13,399,528	13,020,554	14,412,746	13,072,181	11,199,950	8,105,243	6,335,805	8,330,585	10,923,534	13,056,042	15,154,590	140,523,451	1995
1996	16,270,004	16,182,350	14,147,566	14,451,570	13,488,886	14,667,722	13,948,878	8,497,846	12,843,276				124,498,098	1996
TOTALS	133,753,668	132,597,771	120,883,130	132,423,195	111,503,756	147,240,650	125,857,589	109,086,268	120,937,972	101,786,684	122,477,333	116,665,253	1,475,219,169	

COST OF POWER (\$)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTALS	YEAR
1985	\$325,803	\$308,034	\$286,630	\$276,033	\$97,475	\$324,849	\$302,916	\$318,305	\$230,271	\$309,588	\$310,255	\$96,959	\$3,187,118	1985
1986	\$156,604	\$122,835	\$115,773	\$183,146	\$89,558	\$153,164	\$165,955	\$132,786	\$80,178	\$110,034	\$108,788	\$66,472	\$1,486,293	1986
1987	\$132,380	\$173,752	\$152,695	\$168,934	\$88,067	\$137,796	\$146,388	\$160,823	\$148,003	\$138,443	\$120,323	\$127,231	\$1,694,836	1987
1988	\$137,101	\$163,180	\$146,352	\$37,393	\$112,575	\$160,127	\$142,553	\$146,211	\$152,358	\$142,100	\$118,723	\$147,242	\$1,605,915	1988
1989	\$146,089	\$137,767	\$153,718	\$171,085	\$168,525	\$203,369	\$5,330	\$1,182	\$163,699	\$189,162	\$172,838	\$150,350	\$1,663,094	1989
1990	\$159,011	\$206,823	\$196,619	\$153,519	\$75,684	\$232,339	\$292,404	\$244,032	\$181,702	\$176,470	\$214,792	\$271,583	\$2,404,978	1990
1991	\$187,253	\$214,430	\$251,500	\$248,072	\$211,143	\$232,437	\$158,136	\$67,589	\$222,164	\$98,076	\$179,447	\$140,534	\$2,210,781	1991
1992	\$152,401	\$167,302	\$63,735	\$219,460	\$203,408	\$200,489	\$154,732	\$202,295	\$169,678	\$150,127	\$180,664	\$192,899	\$2,057,190	1992
1993	\$213,698	\$203,968	\$173,632	\$143,504	\$121,767	\$265,170	\$231,425	\$207,216	\$230,939	\$201,154	\$280,267	\$291,091	\$2,563,831	1993
1994	\$253,650	\$176,905	\$131,901	\$205,480	\$261,867	\$269,804	\$240,586	\$229,649	\$234,513	\$176,597	\$271,813	\$251,839	\$2,704,604	1994
1995	\$258,361	\$228,286	\$211,554	\$239,157	\$245,896	\$213,454	\$154,387	\$119,229	\$168,037	\$207,143	\$222,875	\$263,907	\$2,532,286	1995
1996	\$298,193	\$318,235	\$282,683	\$280,838	\$278,946	\$276,613	\$264,283	\$179,531	\$249,672				\$2,428,994	1996
TOTALS	\$2,420,544	\$2,421,517	\$2,166,792	\$2,326,601	\$1,954,911	\$2,669,611	\$2,259,095	\$2,008,848	\$2,231,214	\$1,898,894	\$2,181,785	\$2,000,107	\$26,539,919	

AVERAGE COST OF POWER (CENTS/KWH)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	2.99	3.34	3.36	3.35	3.21	3.15	3.05	3.23	3.16	3.55	3.27	2.48	3.21	1985
1986	1.79	1.65	1.55	1.72	1.76	1.64	1.65	1.40	1.43	1.59	1.72	1.63	1.63	1986
1987	1.68	1.64	1.58	1.66	1.63	1.66	1.44	1.67	1.65	1.60	1.50	1.53	1.60	1987
1988	1.69	1.70	1.70	1.64	1.61	1.63	1.54	1.55	1.85	1.71	1.63	1.59	1.65	1988
1989	1.53	1.67	1.70	1.70	1.94	2.03	1.79	1.68	1.76	1.65	1.61	1.67	1.72	1989
1990	1.85	1.72	1.67	1.47	1.53	1.58	1.68	1.65	1.76	1.69	1.60	1.72	1.66	1990
1991	1.66	1.62	1.55	1.36	1.34	1.67	1.61	1.60	1.55	1.58	1.32	1.35	1.50	1991
1992	1.26	1.42	1.13	1.48	1.51	1.31	1.37	1.55	1.58	1.55	1.71	1.65	1.47	1992
1993	1.61	1.75	1.82	1.74	1.63	1.75	1.79	1.82	1.86	1.85	1.84	1.86	1.78	1993
1994	1.87	1.93	1.84	1.96	1.85	1.85	1.91	1.88	1.86	1.83	1.86	1.88	1.88	1994
1995	1.91	1.70	1.60	1.66	1.88	1.91	1.90	1.88	2.02	1.90	1.71	1.74	1.80	1995
1996	1.83	1.97	1.92	1.94	2.07	1.89	1.89	2.11	1.94	1.87	1.78	1.71	1.95	1996
GRAND AVERAGE	1.81	1.83	1.79	1.76	1.75	1.81	1.79	1.84	1.84	1.87	1.78	1.71	1.80	

**APPENDIX TABLE IV - B
LOUISIANA POWER AND LIGHT (LPL)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS**

CALICINER INDUSTRIES, INC. (KAISER BEFORE 1990), CHALMETTE, LA

POWER PURCHASED (KWH)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	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	8,719,850	9,485,600	3,913,100	99,420,200	1985
1986	6,734,700	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	91,280,900	1986
1987	7,863,850	10,617,950	9,634,950	10,159,000	5,401,900	8,319,000	10,146,800	9,655,000	8,998,950	8,662,450	8,044,600	8,313,600	105,908,050	1987
1988	8,037,350	9,480,000	8,594,000	2,108,100	8,820,100	9,407,700	9,211,000	9,350,900	8,223,650	8,146,650	7,033,500	8,639,850	95,052,800	1988
1989	8,896,300	7,706,700	8,649,500	9,725,700	8,547,650	9,580,000	20,350	8,910,350	8,910,350	11,072,100	9,951,200	7,875,500	90,915,350	1989
1990	7,679,000	11,283,700	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	101,691,250	1990
1991	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	105,701,800	1991
1992	8,193,350	8,709,800	2,981,450	9,885,450	9,540,900	8,544,500	6,353,000	9,586,200	9,138,200	7,985,350	9,911,650	10,106,100	100,935,950	1992
1993	10,593,000	9,025,000	8,000,350	6,105,400	4,928,250	12,319,400	10,959,000	10,167,400	10,135,250	8,782,000	9,683,000	8,938,750	109,636,800	1993
1994	8,893,950	2,484,250	4,551,950	9,622,750	9,494,600	9,514,850	9,615,750	9,343,400	9,733,250	6,731,600	11,337,950	10,362,500	101,686,800	1994
1995	10,519,750	10,427,850	9,756,150	10,383,600	10,942,300	9,372,950	5,715,100	4,455,700	6,610,650	9,050,250	10,477,750	10,103,750	107,815,600	1995
1996	10,330,400	11,330,450	10,577,250	11,345,050	10,361,450	11,319,250	10,914,550	4,703,150	9,863,700	87,663,100	100,639,850	90,359,150	1,200,590,750	1996
TOTALS	109,067,050	106,283,400	96,499,850	109,311,150	89,336,250	119,441,100	102,107,500	85,583,750	104,338,600	87,663,100	100,639,850	90,359,150	1,200,590,750	

COST OF POWER (\$)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$325,803	\$308,034	\$286,630	\$276,033	\$97,475	\$324,849	\$302,916	\$318,305	\$230,271	\$309,588	\$310,255	\$96,959	\$3,187,118	1985
1986	\$156,604	\$122,835	\$115,773	\$183,146	\$89,558	\$153,164	\$165,955	\$132,786	\$80,178	\$110,034	\$109,788	\$66,472	\$1,486,293	1986
1987	\$132,380	\$173,752	\$152,695	\$168,934	\$88,067	\$137,796	\$146,388	\$160,823	\$148,003	\$138,443	\$120,323	\$127,231	\$1,694,835	1987
1988	\$135,743	\$160,951	\$145,961	\$34,436	\$110,042	\$153,026	\$141,389	\$144,845	\$152,212	\$139,438	\$114,351	\$137,477	\$1,569,871	1988
1989	\$136,131	\$128,478	\$148,568	\$165,726	\$165,782	\$194,364	\$440	\$152,212	\$157,312	\$182,568	\$159,856	\$131,576	\$1,568,799	1989
1990	\$142,223	\$194,150	\$139,299	\$139,042	\$67,473	\$178,053	\$189,732	\$120,042	\$128,391	\$121,415	\$122,275	\$145,281	\$1,687,376	1990
1991	\$140,109	\$138,842	\$145,814	\$159,886	\$143,535	\$170,836	\$125,109	\$25,339	\$194,284	\$70,305	\$141,029	\$129,012	\$1,584,100	1991
1992	\$103,408	\$118,924	\$32,960	\$146,255	\$144,583	\$112,557	\$86,649	\$148,442	\$144,155	\$124,124	\$168,737	\$172,088	\$1,502,882	1992
1993	\$180,361	\$172,364	\$153,055	\$116,467	\$90,442	\$226,043	\$201,078	\$186,652	\$186,600	\$161,122	\$184,930	\$170,625	\$2,029,179	1993
1994	\$169,738	\$49,221	\$90,374	\$191,006	\$186,774	\$187,191	\$189,087	\$183,574	\$191,406	\$132,399	\$225,282	\$205,646	\$2,001,898	1994
1995	\$208,895	\$179,069	\$164,342	\$178,171	\$212,887	\$182,242	\$111,147	\$86,645	\$128,578	\$176,039	\$179,974	\$173,277	\$1,981,266	1995
1996	\$177,100	\$210,841	\$196,741	\$210,838	\$205,219	\$224,204	\$216,344	\$93,452	\$195,405	\$1,665,475	\$1,836,800	\$1,555,844	\$1,730,144	1996
TOTALS	\$2,008,495	\$1,957,461	\$1,770,210	\$1,969,940	\$1,601,837	\$2,244,325	\$1,876,234	\$1,600,905	\$1,936,235	\$1,665,475	\$1,836,800	\$1,555,844	\$22,023,761	

AVERAGE COST OF POWER (CENTS/KWH)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985	2.99	3.34	3.36	3.35	3.21	3.15	3.05	3.23	3.16	3.55	3.27	2.48	3.21	1985
1986	1.79	1.65	1.55	1.72	1.76	1.64	1.65	1.40	1.43	1.59	1.72	1.63	1.63	1986
1987	1.66	1.64	1.58	1.66	1.63	1.66	1.44	1.67	1.65	1.60	1.50	1.53	1.60	1987
1988	1.69	1.70	1.70	1.63	1.61	1.63	1.54	1.55	1.85	1.71	1.63	1.59	1.65	1988
1989	1.53	1.67	1.69	1.70	1.94	2.03	2.16	1.64	1.77	1.65	1.61	1.67	1.73	1989
1990	1.85	1.72	1.66	1.48	1.52	1.57	1.67	1.64	1.77	1.70	1.60	1.72	1.66	1990
1991	1.66	1.62	1.56	1.37	1.34	1.69	1.61	1.55	1.55	1.57	1.31	1.35	1.50	1991
1992	1.26	1.37	1.11	1.48	1.52	1.32	1.36	1.55	1.58	1.70	1.70	1.70	1.49	1992
1993	1.70	1.91	1.91	1.91	1.84	1.83	1.83	1.84	1.84	1.83	1.91	1.91	1.85	1993
1994	1.91	1.98	1.99	1.98	1.97	1.97	1.97	1.96	1.97	1.97	1.99	1.99	1.97	1994
1995	1.99	1.72	1.68	1.72	1.95	1.94	1.94	1.94	1.95	1.95	1.72	1.71	1.84	1995
1996	1.71	1.86	1.86	1.86	1.98	1.98	1.98	1.99	1.98	1.90	1.82	1.72	1.83	1996
GRAND AVERAGE	1.84	1.84	1.83	1.80	1.79	1.88	1.84	1.87	1.86	1.90	1.82	1.72	1.83	

APPENDIX TABLE IV - C
LOUISIANA POWER AND LIGHT (LPL)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS

IMC - AGRICO (FREEPORT MCMORAN BEFORE 1993), UNCLE SAM, LA

POWER PURCHASED (KWH)														
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988	82,110	134,501	21,860	173,319	156,401	436,940	70,021	83,358	9,819	154,426	268,531	617,991	2,209,277	1988
1989	646,810	560,865	416,670	319,242	132,156	447,960	278,010	70,177	364,883	399,875	798,441	1,119,409	5,554,498	1989
1990	919,784	62,624	698,206	869,577	468,477	788,398	75,369	34,228	79,644	409,720	318,285	269,754	4,994,064	1990
1991	223,883	36,827	72,789	155,082	374,980	485,695	256,216	258,633	1,247	129,567	597,506	728,030	3,320,455	1991
1992	835,635	481,955	288,148	516,999	352,499	201,024	317,642	345,719	123,350	188,680	421,148	200,372	4,273,171	1992
1993	292,418	384,338	17,628	209,393	281,806	740,607	367,556	19,939			41,081		2,354,766	1993
1994	107,901	115,303	145,269	136,967	269,220	172,636	12,614	14,203	176,848	269,162	363,419	410,277	2,195,819	1994
1995	486,943	563,878	716,404	543,146	337,881		535,143	46,105	256,935	200,284	933,292	976,840	5,696,851	1995
1996	1,088,604	539,900	826,316	1,286,520	656,436	1,059,472	731,328	630,696	522,576				7,341,848	1996
TOTALS	4,684,068	2,880,191	3,203,290	4,212,245	3,029,856	4,332,730	2,643,899	1,503,058	1,535,302	1,751,714	3,741,703	4,322,673	37,840,749	

COST OF POWER (\$)														
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988	\$1,358	\$2,229	\$391	\$2,957	\$2,533	\$7,101	\$1,164	\$1,366	\$146	\$2,662	\$4,372	\$9,765	\$36,044	1988
1989	\$9,958	\$9,289	\$7,152	\$5,339	\$2,743	\$9,005	\$4,890	\$1,182	\$6,387	\$6,594	\$12,982	\$18,774	\$94,295	1989
1990	\$16,788	\$1,099	\$12,113	\$12,676	\$7,471	\$12,802	\$580	\$580	\$1,572	\$7,225	\$5,650	\$4,739	\$84,002	1990
1991	\$3,473	\$635	\$1,195	\$2,333	\$4,988	\$7,829	\$4,268	\$4,384	\$19	\$2,175	\$7,956	\$9,981	\$49,236	1991
1992	\$10,904	\$6,736	\$3,485	\$8,183	\$5,410	\$2,739	\$4,593	\$5,431	\$2,060	\$2,969	\$7,750	\$2,609	\$62,869	1992
1993	\$3,640	\$4,605	\$221	\$2,518	\$3,790	\$10,089	\$5,922	\$372			\$716		\$31,873	1993
1994	\$1,892	\$2,276	\$2,057	\$2,172	\$4,391	\$2,886	\$225	\$261	\$3,076	\$4,415	\$5,869	\$5,712	\$36,232	1994
1995	\$8,040	\$9,411	\$10,371	\$8,466	\$5,246	\$16,951	\$10,081	\$906	\$6,794	\$3,370	\$15,344	\$17,914	\$95,943	1995
1996	\$21,784	\$11,621	\$17,145	\$24,369	\$11,775	\$16,951	\$12,091	\$14,111	\$9,589				\$139,435	1996
TOTALS	\$77,837	\$47,901	\$54,130	\$69,013	\$48,347	\$69,402	\$44,521	\$28,593	\$29,643	\$29,410	\$60,639	\$69,494	\$628,929	

AVERAGE COST OF POWER (CENTS/KWH)														
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985														1985
1986														1986
1987														1987
1988	1.65	1.66	1.79	1.71	1.62	1.63	1.66	1.64	1.49	1.72	1.63	1.58	1.63	1988
1989	1.54	1.66	1.72	1.67	2.08	2.01	1.76	1.68	1.75	1.65	1.63	1.68	1.70	1989
1990	1.83	1.75	1.73	1.46	1.59	1.62	1.71	1.69	1.97	1.76	1.78	1.76	1.68	1990
1991	1.55	1.72	1.64	1.50	1.33	1.61	1.67	1.70	1.52	1.68	1.33	1.37	1.48	1991
1992	1.30	1.40	1.21	1.58	1.53	1.36	1.45	1.57	1.67	1.57	1.84	1.30	1.47	1992
1993	1.24	1.20	1.25	1.20	1.34	1.36	1.61	1.87	1.74	1.74	1.74	1.39	1.35	1993
1994	1.75	1.97	1.42	1.56	1.63	1.67	1.78	1.84	1.74	1.64	1.61	1.39	1.60	1994
1995	1.65	1.67	1.45	1.56	1.55	1.88	1.97	1.97	2.64	1.68	1.64	1.83	1.71	1995
1996	2.00	2.15	2.07	1.89	1.79	1.60	1.65	1.92	1.83	1.68	1.62	1.61	1.90	1996
GRAND AVERAGE	1.66	1.66	1.69	1.64	1.60	1.60	1.68	1.90	1.93	1.68	1.62	1.61	1.66	

**APPENDIX TABLE IV - D
LOUISIANA POWER AND LIGHT (LPL)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
LOUISIANA SUPPLIERS**

B.P. OIL, ALLIANCE, LA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	20,002,430	23,434,180	21,185,990	18,899,800	19,137,650	23,466,820	21,106,190	21,999,460	15,064,070	12,371,870	18,035,780	21,983,430	236,687,670	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
TOTALS	\$334,212	\$416,155	\$342,462	\$287,648	\$304,727	\$355,884	\$336,340	\$379,350	\$265,336	\$204,009	\$284,346	\$374,769	\$3,887,228	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR AVG	YEAR
1985														1985
1986														1986
1987														1987
1988														1988
1989														1989
1990														1990
1991														1991
1992														1992
1993														1993
1994														1994
1995														1995
1996														1996
GRAND AVERAGE	1.67	1.78	1.62	1.52	1.59	1.52	1.60	1.72	1.82	1.65	1.58	1.70	1.64	

APPENDIX B - TABLE V
 NEW ORLEANS PUBLIC SERVICE CO (NOPSI)
 PURPA QUALIFIED FACILITY (QF) POWER PURCHASES (KWH), COST (\$), AND AVERAGE UNIT COST (CENTS PER KWH)
 AIR PRODUCTS, NEW ORLEANS, LA

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	1,108,338	397,698	93,828	1,206,870	144,438	3,000	13,000	1,000	34,000	10,000	21,000	58,000	3,078,172	1985
1986	88,000	1,263,000	224,000	16,000	50,000	38,000	188,000	221,000	13,000	369,000	845,000	820,000	3,370,000	1986
1987	386,000	85,000	66,000	48,000	602,000	29,000	188,000	221,000	520,000	369,000	363,000	222,000	3,079,000	1987
1988	383,000	232,000	106,000	165,000	187,000	53,000	108,000	2,000	34,000	24,000	67,000	284,000	1,772,000	1988
1989	102,000	112,000	5,000	59,000	1,000	112,000	112,000	2,000	3,000	11,000	85,000	61,000	461,000	1989
1991	28,000	17,000	17,000	19,000	92,000	17,000	9,000	1,000	3,000	11,000	24,000	18,000	147,000	1991
1992	23,000	6,000	222,000	2,000	152,000	26,000	2,000	1,000	3,000	1,000	4,000	59,000	496,000	1992
1993	2,000	1,000	9,000	2,000	9,000	5,000	2,000	1,000	1,000	1,000	1,000	35,000	58,000	1993
1994	33,000	23,000	2,000	2,000	3,000	21,000	33,000	17,000	17,000	68,000	196,000	48,000	369,000	1994
1995	144,000	222,000	21,000	103,000	154,000	5,000	17,000	243,000	608,000	653,000	1,710,000	128,000	346,000	1995
1996	2,278,338	2,340,698	766,828	1,617,870	840,438	798,000	482,000	243,000	608,000	653,000	1,710,000	1,740,000	665,000	1996
TOTALS														

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$32,995	\$11,939	\$2,659	\$35,144	\$4,293	\$56	\$181	\$15	\$546	\$160	\$357	\$1,076	\$89,240	1985
1986	\$1,482	\$19,426	\$4,005	\$261	\$819	\$680	\$3,187	\$3,784	\$211	\$5,377	\$13,095	\$13,296	\$53,456	1986
1987	\$5,821	\$1,334	\$1,178	\$463	\$744	\$9,035	\$1,873	\$3,784	\$7,773	\$2,396	\$5,494	\$3,756	\$47,946	1987
1988	\$7,053	\$3,872	\$1,665	\$2,655	\$3,016	\$775	\$1,873	\$35	\$615	\$2,396	\$1,058	\$4,354	\$29,332	1988
1989	\$1,693	\$1,914	\$83	\$1,257	\$19	\$265	\$2,148	\$35	\$68	\$377	\$1,573	\$1,001	\$7,952	1989
1991	\$475	\$253	\$265	\$265	\$1,653	\$299	\$148	\$16	\$58	\$156	\$326	\$174	\$3,825	1991
1992	\$338	\$63	\$3,196	\$27	\$1,903	\$403	\$31	\$30	\$16	\$11	\$67	\$644	\$6,680	1992
1993	\$23	\$23	\$45	\$26	\$112	\$84	\$481	\$30	\$16	\$856	\$2,643	\$842	\$837	1993
1994	\$20	\$368	\$45	\$26	\$50	\$488	\$481	\$1,086	\$16	\$278	\$1,583	\$2,588	\$5,268	1994
1995	\$548	\$6,485	\$467	\$2,162	\$2,720	\$410	\$406	\$1,086	\$16	\$278	\$1,583	\$2,588	\$7,024	1995
1996	\$3,468	\$5,914	\$13,704	\$42,585	\$15,329	\$63	\$8,455	\$4,966	\$9,287	\$9,611	\$26,213	\$28,324	\$15,769	1996
TOTALS														

YEAR/MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YR AVG	YEAR
1985	2.98	3.00	2.83	2.91	2.97	1.87	1.39	1.50	1.61	1.60	1.70	1.86	2.90	1985
1986	1.68	1.54	1.78	1.63	1.64	1.79	1.39	1.50	1.62	1.46	1.55	1.62	1.59	1986
1987	1.59	1.57	1.78	1.60	1.55	1.50	1.70	1.71	1.49	1.46	1.51	1.69	1.56	1987
1988	1.84	1.67	1.57	1.61	1.61	1.46	1.73	1.75	1.81	1.57	1.58	1.53	1.66	1988
1989	1.66	1.71	1.66	2.13	1.90					1.57	1.66	1.64	1.72	1989
1991	1.70	1.53	1.49	1.71	1.80	1.76	1.92	1.60	2.27	1.42	1.36	1.65	1.86	1991
1992	1.47	1.05	1.44	1.35	1.25	1.55	1.64	1.60	1.93	1.10	1.70	1.09	1.62	1992
1993	1.15	1.60	2.25	1.30	1.24	1.68	1.55	3.00	1.60	1.10	1.68	1.41	1.35	1993
1994	2.00	1.60	2.25	1.30	1.68	1.67	1.46	6.39	1.68	1.26	1.35	1.72	1.43	1994
1995	1.66	2.41	2.22	2.10	1.77	1.26	2.39		1.68	1.64	1.68	2.02	2.03	1995
1996	2.37	1.94	1.79	2.63	1.82	1.54	1.75	2.04	1.53	1.47	1.53	1.63	2.37	1996
GRAND AVERAGE													1.92	

APPENDIX B - TABLE VI - A
SOUTHWESTERN ELECTRIC POWER COMPANY (SWEPCO)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
TEXAS QF SUPPLIERS

ALL TEXAS QF SUPPLIERS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	639,562	726,890	668,428	684,687	925,298	637,087	617,868	479,873	695,239	433,643	482,889	579,165	7,570,629	1985
1986	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	10,331,263	1986
1987	1,118,214	1,108,233	942,728	1,101,022	983,786	1,016,260	989,727	823,792	803,009	738,745	998,761	880,224	11,504,501	1987
1988	956,211	1,531,884	1,146,185	1,745,397	1,446,434	1,283,552	1,898,526	989,380	1,263,290	1,007,884	920,722	1,153,000	15,332,465	1988
1989	1,298,130	1,417,012	950,263	996,821	772,104	498,827	462,131	462,537	452,108	417,025	1,100,230	1,059,865	9,887,053	1989
1990	1,197,663	760,188	935,427	964,692	900,683	777,949	504,496	547,497	547,497	545,242	488,521	291,756	8,662,149	1990
1991	274,526	44,124	314,694	355,970	140,280	141,078	161,286	188,285	195,843	201,968	163,575	416,185	2,597,814	1991
1992	398,505	1,004,024	615,747	726,025	345,016	1,450,823	1,074,622	591,937	933,804	568,778	780,976	760,485	9,270,742	1992
1993	732,470	1,045,619	1,130,115	1,615,399	1,012,895	965,358	667,806	533,067	1,016,199	706,108	727,044	692,564	10,844,644	1993
1994	665,867	773,311	595,823	1,011,066	561,306	727,358	846,711	873,312	1,010,987	620,901	708,512	476,084	8,871,238	1994
1995														1995
1996														1996
TOTALS	7,604,717	9,019,847	8,115,169	10,191,725	7,866,953	8,512,110	8,429,112	6,553,827	7,915,140	6,242,348	7,329,192	7,092,358	94,872,498	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$28,264	\$30,845	\$26,407	\$33,915	\$32,531	\$23,446	\$21,024	\$21,573	\$22,443	\$13,841	\$14,519	\$18,716	\$287,524	1985
1986	\$9,950	\$17,625	\$25,000	\$34,887	\$31,174	\$36,007	\$26,159	\$29,315	\$27,372	\$31,870	\$34,709	\$27,749	\$331,817	1986
1987	\$22,410	\$28,082	\$43,018	\$30,441	\$18,807	\$24,055	\$15,920	\$17,953	\$16,263	\$21,148	\$38,166	\$34,213	\$310,476	1987
1988	\$33,748	\$61,948	\$37,897	\$59,882	\$39,378	\$34,795	\$37,587	\$21,875	\$18,339	\$30,102	\$55,387	\$56,080	\$487,018	1988
1989	\$37,426	\$79,647	\$52,368	\$11,053	\$11,053	\$11,808	\$11,676	\$11,190	\$10,197	\$12,549	\$23,507	\$18,098	\$297,882	1989
1990	\$30,201	\$40,598	\$49,951	\$51,467	\$16,857	\$24,830	\$26,149	\$2,103	\$12,509	\$18,577	\$11,501	\$12,142	\$296,885	1990
1991	\$10,619	\$1,974	\$6,681	\$13,847	\$4,534	\$3,223	\$4,692	\$4,239	\$4,123	\$5,843	\$4,559	\$13,046	\$77,380	1991
1992	\$26,538	\$52,489	\$48,580	\$58,653	\$10,026	\$35,841	\$27,497	\$12,616	\$18,018	\$23,352	\$45,909	\$41,121	\$400,640	1992
1993	\$34,627	\$43,646	\$61,528	\$197,754	\$44,269	\$15,288	\$21,535	\$15,705	\$28,355	\$19,409	\$20,107	\$19,542	\$521,765	1993
1994	\$20,420	\$27,448	\$21,283	\$30,318	\$13,558	\$18,133	\$23,431	\$18,957	\$17,132	\$12,490	\$14,515	\$11,773	\$229,458	1994
1995														1995
1996														1996
TOTALS	\$254,203	\$384,302	\$372,713	\$529,627	\$222,187	\$227,426	\$215,670	\$155,526	\$174,751	\$189,181	\$262,879	\$252,480	\$3,240,845	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	4.42	4.24	3.95	4.95	3.52	3.68	3.40	4.50	3.23	3.19	3.01	3.23	3.80	1985
1986	3.08	2.90	3.06	3.52	4.00	3.45	2.78	2.65	2.74	3.25	3.62	3.54	3.21	1986
1987	2.00	2.53	4.56	2.76	1.91	2.37	1.61	2.18	2.03	2.86	3.82	3.89	2.70	1987
1988	3.53	4.04	3.31	3.43	2.72	2.71	1.99	2.21	2.99	2.21	6.02	4.86	3.18	1988
1989	2.88	5.62	5.51	1.84	1.43	2.37	2.53	2.42	2.26	3.01	2.14	1.71	3.01	1989
1990	2.52	5.34	5.34	5.34	1.87	3.32	3.36	2.28	2.28	3.41	2.35	4.16	3.43	1990
1991	3.87	4.47	2.12	3.89	3.23	2.28	2.91	2.25	2.11	3.97	5.88	5.41	2.98	1991
1992	6.66	5.23	7.89	8.08	2.91	2.47	2.56	1.93	1.93	3.97	2.77	2.82	4.32	1992
1993	4.73	4.17	5.44	12.24	4.37	1.58	3.22	2.95	2.79	2.75	2.05	2.47	4.81	1993
1994	3.07	3.55	3.57	3.00	2.42	2.49	2.77	2.17	1.69	2.01	2.05	2.47	2.59	1994
1995														1995
1996														1996
GRAND AVERAGE	3.34	4.26	4.59	5.20	2.82	2.67	2.56	2.37	2.21	3.03	3.59	3.56	3.42	

APPENDIX B - TABLE VI - B
SOUTHWESTERN ELECTRIC POWER COMPANY (SWEPCO)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
TEXAS QF SUPPLIERS

SNIDER INDUSTRIES, MARSHALL, TX

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	639,562	726,890	668,428	684,687	925,298	637,087	617,868	479,873	695,239	433,643	482,889	579,165	7,570,629	1985
1986	323,569	608,562	815,759	871,688	771,471	1,025,745	921,151	1,088,626	981,464	955,702	931,141	754,774	10,155,670	1986
1987	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	10,982,104	1987
1988	899,453	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	14,603,536	1988
1989	1,180,881	1,386,102	862,332	904,491	669,123	384,882	410,788	410,663	373,233	345,945	1,023,471	981,462	8,933,373	1989
1990	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	8,409,185	1990
1991	260,475	38,073	307,170	347,871	132,231	134,841	153,762	183,299	191,523	195,921	156,903	410,885	2,612,954	1991
1992	384,614	999,509	610,494	719,226	338,145	1,443,370	1,068,956	585,737	926,225	576,934	771,555	755,217	9,179,982	1992
1993	722,216	1,042,749	1,123,758	1,607,618	1,005,356	960,644	663,821	533,067	1,012,621	703,369	726,181	690,661	10,792,061	1993
1994	658,491	764,795	583,033	994,690	538,556	715,510	835,977	865,979	1,000,859	615,535	701,765	461,784	8,736,974	1994
1995														1995
1996														1996
TOTALS	7,285,834	8,888,502	7,886,452	9,939,173	7,595,765	8,249,240	8,250,281	6,370,277	7,666,961	6,947,876	7,036,990	6,759,128	91,876,468	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	\$28,264	\$30,845	\$26,407	\$33,915	\$32,531	\$23,446	\$21,024	\$21,573	\$22,443	\$13,841	\$14,519	\$18,716	\$287,524	1985
1986	\$9,950	\$17,625	\$30,848	\$34,488	\$30,845	\$35,248	\$25,540	\$28,960	\$26,947	\$31,034	\$33,728	\$26,768	\$326,133	1986
1987	\$21,828	\$27,561	\$41,354	\$29,408	\$18,100	\$23,185	\$15,394	\$17,255	\$15,321	\$19,144	\$35,179	\$31,831	\$295,560	1987
1988	\$31,746	\$60,807	\$36,225	\$57,763	\$37,853	\$33,523	\$36,575	\$20,847	\$16,833	\$27,429	\$52,209	\$52,160	\$463,970	1988
1989	\$32,374	\$78,898	\$48,744	\$14,560	\$8,865	\$9,139	\$10,357	\$10,026	\$8,258	\$10,481	\$22,006	\$16,606	\$270,335	1989
1990	\$28,298	\$38,300	\$49,193	\$50,838	\$16,347	\$24,375	\$25,945	\$1,819	\$12,090	\$18,312	\$11,186	\$11,892	\$268,695	1990
1991	\$10,075	\$1,703	\$6,428	\$13,509	\$4,413	\$4,403	\$4,403	\$4,172	\$4,080	\$5,670	\$4,380	\$12,830	\$74,765	1991
1992	\$25,776	\$52,314	\$48,150	\$58,256	\$9,819	\$35,339	\$27,232	\$12,490	\$17,781	\$22,940	\$45,457	\$40,988	\$396,552	1992
1993	\$34,097	\$43,442	\$60,986	\$197,630	\$43,420	\$15,154	\$21,403	\$15,705	\$28,255	\$19,333	\$20,085	\$19,487	\$618,997	1993
1994	\$20,184	\$27,153	\$20,845	\$29,822	\$12,943	\$17,837	\$23,138	\$18,852	\$16,877	\$12,422	\$14,434	\$11,501	\$226,008	1994
1995														1995
1996														1996
TOTALS	\$242,592	\$378,649	\$363,332	\$520,189	\$215,156	\$220,338	\$211,011	\$151,699	\$168,885	\$180,606	\$253,183	\$242,789	\$3,148,429	

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985	4.42	4.24	3.95	4.95	3.52	3.68	3.40	4.50	3.23	3.19	3.01	3.23	3.80	1985
1986	3.08	2.90	3.06	3.53	4.00	3.44	2.77	2.66	2.75	3.25	3.62	3.55	3.21	1986
1987	1.99	2.54	4.61	2.75	1.91	2.37	1.60	2.02	2.02	2.86	3.88	3.90	2.69	1987
1988	3.53	4.00	3.30	3.44	2.72	2.72	1.98	2.22	1.41	2.99	6.09	5.09	3.18	1988
1989	2.74	5.69	5.65	1.61	1.33	2.37	2.52	2.47	2.21	3.03	2.15	1.69	3.18	1989
1990	2.53	5.34	5.34	5.33	1.87	3.32	3.38	0.37	3.43	3.43	2.15	4.20	3.43	1990
1991	3.87	4.47	2.09	3.88	3.34	2.29	2.86	2.28	2.13	2.89	2.79	3.12	2.97	1991
1992	6.70	5.23	7.89	8.10	2.90	2.45	2.55	2.13	1.92	3.98	5.89	5.43	4.32	1992
1993	4.72	4.17	5.43	12.29	4.32	1.58	3.22	2.95	2.79	2.75	2.77	2.82	4.81	1993
1994	3.07	3.55	3.58	3.00	2.40	2.49	2.77	2.18	1.69	2.02	2.06	2.49	2.59	1994
1995														1995
1996														1996
GRAND AVERAGE	3.33	4.26	4.61	5.23	2.83	2.67	2.56	2.38	2.20	3.04	3.60	3.59	3.43	

**APPENDIX B - TABLE VI - C
SOUTHWESTERN ELECTRIC POWER COMPANY (SWEPCO)
PURPA QUALIFIED FACILITY (QF) - POWER PURCHASES (KWH), COST(\$), AND AVERAGE COST(CENTS/KWH)
TEXAS QF SUPPLIERS**

DEAN LUMBER, GILMER, TX

POWER PURCHASED (KWH)															
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR	
1985														1985	
1986	21,839	22,860	46,340	12,960	7,680	17,987	21,335	18,522	15,680	26,352	26,821	28,256	175,593	1986	
1987	56,758	12,568	48,320	30,066	35,796	36,934	27,850	31,297	44,342	70,306	91,407	63,340	522,397	1987	
1988	117,249	30,910	87,931	66,372	52,280	50,285	39,871	48,442	72,580	89,902	63,560	127,991	728,929	1988	
1989	77,465	43,035	14,202	92,330	102,981	113,945	51,343	51,874	78,875	71,080	76,759	78,403	953,680	1989	
1990	14,051	6,051	7,524	11,769	27,252	13,467	10,523	14,896	11,097	10,837	9,952	8,469	252,964	1990	
1991	13,891	4,515	5,253	8,099	8,049	6,237	7,524	4,986	4,320	6,047	6,672	5,300	84,860	1991	
1992	10,254	2,870	6,357	6,799	6,871	7,453	5,666	6,200	7,579	11,844	9,421	5,268	90,760	1992	
1993	7,378	8,516	12,790	16,376	7,781	4,714	3,985	3,578	3,578	2,739	863	1,903	52,583	1993	
1994					22,750	11,848	10,734	7,333	10,128	5,366	6,747	14,300	134,264	1994	
1995															1995
1996															1996
TOTALS	318,863	131,345	228,717	252,552	271,198	262,870	178,831	183,550	248,179	294,473	292,202	333,230	2,996,030		

COST OF POWER (\$)														
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986	\$562	\$521	\$1,664	\$399	\$329	\$759	\$619	\$355	\$425	\$836	\$981	\$981	\$5,684	1986
1987	\$2,002	\$1,141	\$1,672	\$1,033	\$707	\$870	\$526	\$698	\$942	\$2,004	\$2,987	\$2,382	\$14,916	1987
1988	\$5,052	\$748	\$3,624	\$3,803	\$2,168	\$2,669	\$1,319	\$1,028	\$1,506	\$2,673	\$3,178	\$3,920	\$23,048	1988
1989	\$1,903	\$2,298	\$758	\$629	\$510	\$455	\$204	\$1,164	\$1,939	\$2,068	\$1,501	\$1,492	\$27,547	1989
1990	\$544	\$271	\$253	\$338	\$121	\$131	\$289	\$67	\$43	\$265	\$315	\$250	\$8,290	1990
1991	\$762	\$175	\$430	\$397	\$207	\$502	\$265	\$126	\$237	\$412	\$452	\$123	\$2,625	1991
1992	\$530	\$204	\$542	\$124	\$849	\$134	\$132	\$105	\$100	\$76	\$22	\$55	\$4,088	1992
1993													\$2,768	1993
1994													\$3,450	1994
1995														1995
1996														1996
TOTALS	\$11,611	\$5,653	\$9,381	\$9,338	\$7,031	\$7,088	\$4,659	\$3,827	\$5,866	\$8,575	\$9,696	\$9,691	\$92,416	

AVERAGE COST OF POWER (CENTS/KWH)														
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1985														1985
1986	2.66	2.28	3.59	3.44	1.98	2.36	1.89	2.23	2.12	3.17	3.66	3.47	3.24	1986
1987	3.53	9.08	3.46	3.19	2.92	2.53	2.54	2.12	2.07	2.97	3.27	3.76	2.86	1987
1988	4.31	2.42	4.12	4.12	2.11	2.34	2.57	2.24	2.46	2.91	1.96	1.90	3.16	1988
1989	2.46	5.34	5.34	5.34	1.87	3.38	1.94	1.91	3.78	2.45	3.17	2.95	2.89	1989
1990	3.87	4.48	3.36	4.17	1.50	2.10	3.84	1.34	1.00	2.86	2.68	4.08	3.28	1990
1991	5.49	3.88	8.19	5.84	3.01	6.74	4.68	2.03	3.13	3.48	4.80	2.33	3.09	1991
1992	5.17	7.11	8.53	1.59	11.26	2.84	3.31	2.79	2.79	2.77	2.55	2.89	4.50	1992
1993	3.20	3.46	3.42	3.03	2.70	2.50	2.73	1.43	2.52	1.27	1.20	1.90	5.26	1993
1994													2.57	1994
1995														1995
1996														1996
TOTALS	3.64	4.30	4.10	3.70	2.59	2.70	2.61	2.08	2.36	2.91	3.32	2.91	3.08	

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