The River Bend nuclear generating station has achieved full operating status and is now producing much of the electricity used by the homes and businesses across our service area. Reaching this point was a long and difficult process. There are those who say that GSU should have taken a different course. But the facts presented to us each step along the way were much more complex than these same people would lead you to believe. Had we taken an easier path, we would have jeopardized future supplies of electricity, and the ultimate cost would have been higher, not lower.

As it turned out, we managed to build River Bend three years faster than any contemporary nuclear plant in the country. And we built it better, too.

Both River Bend and GSU have been highly praised by the Nuclear Regulatory Commission for the level of construction quality, attention to safety and overall management of the project from start to finish.

So before you make any judgments about the need for, or value of, River Bend, it might be a good idea to examine the facts and circumstances that led to its completion.

For decades prior to the '70s, GSU had used plentiful, inexpensive natural gas to burn under the boilers at our power plants. And because natural gas was so cheap, the electricity we produced was cheap, too... cheaper than almost anywhere else in America. In fact, the abundant natural resources of this area, together with our cheap electricity, were largely responsible for the phenomenal industrial expansion across this part of the state. That, in turn, led to record-setting population growth rates across our service area — 20% in the '60s and predictions of at least that much in the '70s.

But in 1970, one of our major natural gas suppliers cut off supplies to us without any warning! It was the first major problem we'd had with natural gas reserves. As we scrambled to find replacements, future supplies of natural gas seemed to be in serious question everywhere, and what was available was costing more.

To meet the ever-growing demand for electricity caused by exceptional population and industrial growth, we knew we would have to build new generating facilities. The unexpected natural gas cut, however, made us painfully aware that having "all our eggs in one basket," so to speak, was a bad idea by the Congress of the United States. That, in turn, led to record-setting population growth rates across our service area — 20% in the '60s and predictions of at least that much in the '70s.

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Public Law 95-620, November 9, 1978, Title III, Subtitle A, Section 301(a), (1)

"Natural gas shall not be used as a primary energy source in an existing powerplant on or after January 1, 1990."

The Fuel Use Act of 1978, passed by the Congress of the United States and signed into law by the President, prohibited the construction of any additional gas-fired power plants.
speak, was risky business. The only way to avoid a similar problem in the future would be to diversify our fuel base. Instead of relying on only one fuel, as we had done with natural gas in the past, any new plants would have to use some other fuel to produce electricity.

In 1971 we announced that coal and nuclear plants would be added to the GSU generating system.

The oil embargo of 1973! It was just the beginning of a nationwide energy crisis that not only created long lines at gasoline stations, but also touched off the greatest wave of inflation to rock this country in more than a century. Only now, more than thirteen years later, has that inflation subsided.

During the inflationary years that followed the first embargo, rising costs hit GSU just as hard as they did you and your neighbors. Almost every piece of equipment we use, from transformers and poles to cables and service trucks, jumped dramatically in price, as did much of the natural gas we were burning to produce electricity.

Nothing was left untouched. The construction of our coal plant near Lake Charles and our River Bend nuclear plant near St. Francisville would have been costly projects under normal conditions. But the post-embargo inflation kept driving costs higher and higher.

The continuing energy crisis spawned a number of national programs to help reduce the pressures on our energy supplies: People were driving 55 mph; the country was stockpiling oil; individuals were getting tax credits for energy-efficient buildings; the construction of natural gas and fuel oil power plants was outlawed by Congress!

The Fuel Use Act of 1978 said that natural gas or petroleum shall not be used as a primary energy source in any electric power plant after 1989. In effect, the law said that every kilowatt of electricity generated after 1989 in areas without hydroelectric capabilities had to be produced by using either coal or nuclear fuel. If there were any doubts as to whether we should build River Bend, they were erased by the stroke of President Carter's pen.

To add insult to injury, government policies aimed at curbing inflation pushed interest rates higher. While people were paying 14%, 15%, even 16% interest on loans for homes and cars, we were paying similar rates on the millions we had to borrow to build our new plants.

Then the accident at Three Mile Island occurred.

Even though the average additional radiation exposure to those living around that Pennsylvania nuclear plant equaled only that of a chest X ray, we were extremely concerned about the events at TMI. We wanted to be sure that a similar accident couldn't happen at the plant we were building.

We conducted an exhaustive analysis of our design and the construction techniques we employed. We tried to envision every possible human error and repeatedly reviewed our manual and automatic safety systems, as well as their backups. Nothing was found to indicate that River Bend would be anything other than safe.

Despite all of our precautions following TMI, the Nuclear Regulatory Commission in Washington, D.C. ordered changes and additions for every plant being built in America. In the case of River Bend, the cost of those change orders was more than substantial.

Besides the tremendous impact inflation had on the cost of materials and equipment needed to build the plant, and the abnormally high interest rates we had to pay on money borrowed to finance construction, a study of the 1984 cost estimate showed that the expense of meeting the NRC revisions accounted for
46% of the cost increases that had occurred since construction started in 1979.
Throughout the '70s and into the '80s population growth continued, at times straining our existing generating facilities, as well as our finances. Not only had we incurred tremendous construction expenses to meet future demand, but we paid for upgrading and maintaining existing lines and equipment year after year.
The cost of electricity went up, too, because of the rising price of fuel. In fact, 89% of the increase in nationwide electricity costs since 1971 was the direct result of higher fuel expenses. Yet the price of our electricity remained among the lowest in the country.
In 1982 we completed our coal plant near Lake Charles, which helped us meet the demand for electricity that had grown so rapidly over the previous decades. Work at River Bend, a much larger project, was completed in 1985.
We could have never done all that we did without constant attention to operational efficiency, especially when you consider the adverse economic pressures we'd faced for 15 years. A lot of credit has to go to the men and women who worked for us and with us during that time...linemen, clerks, operators, managers...everyone associated with GSU.
The members of the construction trades who built River Bend also demonstrated an uncompromising commitment to quality and cost efficiency, while meeting a demanding work schedule. As a result, River Bend was completed years ahead of schedule and is considered nationally as a model of construction integrity.
At a public hearing in Washington, D.C.
46% of the excess cost was due to changes in Federal requirements
29% was caused by high inflation and interest rates

From the very first document stating GSU's intent to build a nuclear power plant, to the day-to-day operation of River Bend today, we have been subject to the rules, regulations and authority of the United States Nuclear Regulatory Commission.

At any point in time the NRC could change its regulations regarding construction procedures. The thickness of a concrete wall, the type of valve used on a pipe, the number of gauges in a control room are but a few examples.

During the entire course of constructing River Bend, and especially after the Three Mile Island accident, the NRC continually issued new requirements. While many were aimed at enhancing the ultimate safety of the plant, they all had a dramatic impact on costs.

An analysis of the 1986 River Bend cost estimate showed that 46% of the increases incurred since construction began in 1979 was directly due to changes in Federal requirements with which GSU and other utilities had to comply. Unanticipated inflation and abnormally high interest rates charged by lenders of construction funds accounted for another 29% of the cost increases.

In total, at least $1.7 billion was attributable to factors over which GSU had absolutely no control.

Concerning the operating license for River Bend, several Nuclear Regulatory Commission members and administrators surprised us with their unsolicited comments. Harold Denton, the NRC's director of reactor regulation, said, "... we found GSU to be a very responsive management ... ," adding that "even GSU's board of directors showed an unprecedented level of commitment."

NRC commissioner Frederick Bemthall said, "... GSU represents a new generation of management that is all to the good."

Our responsibility is to always have enough electricity for the thousands of homes, schools, hospitals and job-creating businesses and industries we serve. It's also our responsibility to make sure that our electricity supplies and our customers are protected from uncertainties in the future that might disrupt fuel supplies. To fulfill that responsibility meant undertaking the most massive construction project in GSU's history during the most trying economic period in this half century.

Yes, it was expensive, but only because of events and circumstances over which we had absolutely no control: record inflation, unprecedented interest rates and changes in federal laws and regulations.

The diversity of fuels we now use in our system virtually guarantees the constant availability of electricity. Plus, we won't have to build any more plants for a long, long time to come. And when it's all said and done, the price of electricity will still be in line with the cost of other necessities and, on a value-for-value basis, cheaper than many of the things we all buy and use today.

"... we found GSU to be a very responsive management . . . "
Harold Denton
Nuclear Regulatory Commission

"... we consider GSU to be in the highest performance category in the area of management control . . . a solid performer . . . "
Robert Martin
NRC Region IV Administrator

"... management control and involvement . . . that is one of the hallmarks of GSU's organization."
James Asselstine
NRC Commissioner

"... GSU represents a new generation of management that is all to the good."
Frederick Bemthal
NRC Commissioner

"GSU's performance shows leadership and involvement across the board . . . "
Lando Zeich
NRC Commissioner

Those comments and many more of a similar nature were made at a public hearing held by the Nuclear Regulatory Commission in Washington, D.C. on November 15, 1985.

They were entirely spontaneous and were followed by a unanimous vote granting GSU the NRC license to operate River Bend on a full-power basis.

In September of 1985 a nationally known engineering and management consulting firm concluded an independent analysis of GSU's River Bend project. The 206-page report, prepared by Pickard, Lowe and Garrick, Inc. of Washington, D.C. and Newport Beach, California, contained several notable observations.

"We have found that River Bend is one of the more successful nuclear plant projects undertaken by the domestic power industry in the last two decades," the report said.

The report went on to state that River Bend "experienced significant cost increases as a result of compliance with the growing number of NRC regulations and standards."

It was concluded in the report that GSU's control of the construction was very good, "especially considering the changing regulatory and financial environments."

Subsequent to the report's publication, the consulting firm's vice president and manager, Harold F. Perla, went on record publicly as saying that his company "found the decisions and actions of GSU based on the information available at the time each decision was made, were reasonable."