PREPARING FOR ELECTRICITY DEREGULATION IN TEXAS

Pat Ennis, TXU Electric and Gas
Michael Argo, Texaco Exploration & Production Inc.

INTRODUCTION

Beginning January 1, 2002 competitive forces will be introduced into the Texas retail electricity market. The march to a competitive market was set in motion in June 1999 by Governor George Bush signing Texas Senate Bill 7 or SB7 into law. SB7 begins a process of unbundling or separating the utilities' functions into three distinct areas - generation, transmission and distribution and REPs (Retail Electric Providers). SB7 will bring profound changes in the way we purchase power at our homes and in our professional lives. Deregulation will bring choice. This choice brings added responsibility, which lies flatly on the shoulders of you the end user.

NEW INDUSTRY STRUCTURE

The utility company model that has existed up to this point has been a vertically integrated one. That is one company was responsible for the generation, transmission/distribution and retail sales of the electricity used by its customers. Under SB 7 rules, this model will be "dis-integrated". The new model will consist of three segments. The first will be an unregulated or competitive generation segment that may sometimes be referred to as the GenCo. Next, a regulated segment will exist to handle the transmission and distribution of the electric power. The nickname for this portion of the new model is the WiresCo. The last segment of the new model is the unregulated Retail Electric Provider or REP. While each segment could be an entirely new, independent entity, many will be subsidiaries or affiliates under a corporate umbrella.

The generation portion will be owned and operated by independent power producers (IPP) and unregulated affiliates of the transmission and distribution businesses. This means that the integrated utilities will have to sell or spin off their generating stations to comply with SB 7.

Likewise, the WiresCo will have to be separated or distanced from the corporate fold. Since transmission and distribution systems will be regulated monopolies, there was significant concern that a WiresCo could abuse its market power by granting preferential access to its affiliates in the generation or REP business. To prevent this, SB 7 required development of a Code of Conduct for the new market segments that is intended to keep affiliates at arms length and provide equal access to market newcomers. The Texas PUC will most likely maintain an even tighter regulatory grip on the Wires Companies than they do at the present. They will monitor system reliability, power quality, and meter reading services. In an exception to the case of the REP being the single contact between the customer and the upstream vendors, large customers may be allowed direct access the WiresCo to facilitate issues such as service restoration.

REPs have been mandated to be the sole source for retail electric power contracts. The relationship with the REP the customer chooses to contract with for power has the potential to be very complicated. The REP will be responsible for procuring a source of power and arranging for the delivery of this power to the customer at a certain aggregated price per kilowatt-hour (kWh). Another responsibility of the REP will be handling most of the communication between the customer and the upstream power system components. The REP will also provide customer services such as equipment financing, energy audit assistance, substation maintenance and repair and power quality assistance. Other issues such as emergency service restoration, line extension and maintenance at the time of this writing are unclear as to their exact disposition. That is, whether these will be a REP responsibility or a WiresCo responsibility.

Because of these responsibilities and the potential for abuse by the REP, SB 7 set down specific requirements to help protect the customer. Some of the certification requirements are disclosure of specific financial, technical and managerial resources in addition to adequate office facilities, description of proposed business practices, related experiences, compliance history and compliance record

While customers are dealing with a new organizational structure, they will also have to deal with a new paperwork structure. The monthly bill that transparently incorporated the costs of generating, transmitting and retailing electricity

will also change. Billing will be more complex. The GenCo will submit a monthly bill for energy generated each month along with any fuel cost adders allowed in the contract. The Wires Company will also submit a monthly bill for the transmission, distribution, transformation and secondary services and meter facilities associated with each load. Unlike many of the terms in the generation and REP contracts, the wires charges will be determined by the PUC based on system costs. Finally, the REP will assess whatever charges are included in their contract. These assorted charges from the generator, Qualified Scheduling Entity (QSE), Wires Company, REP and any other service providers may be handled in one of several ways. The REP may aggregate the charges **so** your bill would show essentially a single payable amount much as it does today. Or the various charges may be broken down as line items on a single bill. Or you may receive individual bills from each of the suppliers.

TARIFFS AND RATES

In the deregulated world all current electrical power tariffs for large oil and gas producers will cease to exist. To date, electrical rates have been designed to reward consumption of large blocks of power. The more energy, kWh, you used, the less expensive each kWh became. Power contracts developed after deregulation will very likely change to reflect a time dependence not seen now. That is, the "when" of a power purchase may become as or more important than the "how much" in determining price. To assure that residential and small commercial customers see the benefits of deregulation, SB 7 mandates a price cut for these customers. SB 7 refers to this new price as the "price to beat". Small commercial consumers are defined as loads with less than 1000 kW at a single point of delivery. The "price to beat" is also established to allow competing REPs, not affiliated with the incumbent utility, to win customers by providing prices lower than the "price to beat". Texas has established the "price to beat" at 6%. This price will be effective January 1, 2002.

LOAD AGGREGATION

Oil and gas customers with numerous accounts with loads less than 1000 kW will need to assess and possibly access the benefits of aggregation. Two types of aggregation are possible. The first type of aggregation is to bring together all the power loads within a specific company and present these individual loads to a REP as one load. These can be loads from numerous utilities. The second form of aggregation is for an oil and gas company to join a purchasing cooperative or combine their loads with loads from other companies. It is recommended that when accessing the benefits of this type aggregation, the customer understands that the aggregator will be joining similar loads together and not loads that have differing time-power profiles or requirements. The most important benefit of this type of aggregation is allowing power customers to go the negotiating table with much larger loads than they would have had if they had gone it alone. Wal-Mart has been able to demand the best prices from its venders because they purchase in large quantities using their buying leverage. This will hold true when buying power. The larger you are, the better prices, terms, conditions and levels of customer service you will command from the REP's.

LOAD PROFILING

Electric power is the ultimate "just in time product". **You** can't store it and you can't pack a transmission line with it. Understanding when and how you use the power you purchase will be essential to take **full** advantage of deregulation. The biggest paradigm change will be moving from "how much you use" to "when do you use it". Unlike cars or widgets which do benefit from "the more you produce the less it costs" scenario, power generation is just the opposite. The price increases as demand increases because generator operators run the most efficient generating units with the least expensive fuel first. **As** the demand for power increases throughout a peak day, operators bring less efficient plants or plants using more expensive fuel online. If demand continues to increase beyond the generators' in-house capacity they then purchase power from the competitive wholesale market at market prices. These different scenarios result in the last megawatt-hour (MWh) sold by the generating company being more expensive than the first MWh sold. **This** circumstance makes it vitally important for the customer to understand and document when and how much power is consumed by a particular operation. This documentation of a customer's load usage can be accomplished by developing a load profile. **A** load profile is a graph or a table of a load's electrical demand in kW over time. The time interval for the kW measurement will usually be **15** or **30** minutes. Since processes can vary not only with the time of day but also the week or month or season, a customer should look at their load data over an extended period of time. It is for **this** reason, that utilities are recommending customers have a minimum of one calendar year of load data available when discussing a new, de-regulated contract.

FUTUREENERGYMANAGEMENT

Many oil and gas companies in the past have not had the need to actively pay much attention to power costs, levels of customer service and other issues dealing with the purchase of electric power. The paradigm shift of being more aware of "when you buy power" will also change the paradigms driving the way an oil and gas customer uses power. Under-

standing their usage profile and process requirements will allow a customer to take full advantage of the available power pricing options. "Peak load" will be more expensive than "base load". "Firm" power will be more expensive than "curtailable" or "interruptible" power. By reducing peaks or shifting load to off-peak periods price reductions will be possible. By identifying loads that can be curtailed upon request or interrupted without notice will also result in price discounts. On the other hand, unknown usage patterns will cost a customer money. Lack of control of curtailable or interruptible loads will also result in higher prices. Reviewing and understanding loads in the field will allow the customer to begin to establish a plan today.Energy management certainly entails the techniques and information just discussed. It also requires the involvement of company personnel. In a regulated environment, the power company representative often reviewed contracts, flagged inefficient operations and suggested improvements. In a deregulated environment how will the oil and gas company perform these operations and manage their power? Several options will be available:

- Provide a full time staff employee. Unless this person is well versed in power delivery, company usage patterns, contract negotiation, market trends and other issues this may be an expensive experiment.
- Find someone outside the company whom you trust to make choices for you which fits your business requirements. This could be a consultant or an aggregator. Remember that a consultant wants to keep you as a client and will provide excellent information but will leave the business decision up to the client without providing a recommendation that could ultimately leave him without a client.
- Outsource all energy acquisition to a third party. This could include combining gas sale/purchase contracts with electric power sale/purchase contracts.

In any event, customers should prepare to dedicate considerably more time and money to understanding and actively participating in these power issues.

DEMAND SIDE MANAGEMENT

During the 1980's and 1990's many utility companies spent millions on various Demand Side Management (DSM) Programs, with less than stellar results. These mandated programs used ***regulatory push*** to encourage the consumer to use energy wisely. Wise use consisted of consumers using less energy or shifting their usage to off-peak periods. Now with rising oil and gas prices and ***market pull*** (i.e. deregulation) interest in conservation and energy management is back. Pulled by choice of supplier, time-of-use pricing and real time price volatility, customers will work to develop power cost reduction strategies. These strategies may include installing simple timers to shift pumping time to off-peak windows, installing high efficiency motors, properly sizing the motor for the load, understanding which loads can be shifted or turn off during peak hours and distributed generation (DG) projects. DG will provide the option of reducing their consumption from the grid during high price intervals by producing power themselves. DG also offers the option of using available field fuel gas to generate power for sale back into the grid when on-site generation exceeds on-site consumption.

CONTRACTS

Sometime the middle of 2001 REP's will begin aggressively selling their product – power. The price you pay and conditions under which you purchase power will be defined under the agreement for electric service, the contract. It is vital that the customer understands what is in the power contract. Contracts up to this time were relatively simple since many details were contained in the utility company tariffs or rates. Details such as the initial term, renewals, minimum charges, power factor requirements and so on were defined and published. With competition, contract terms will probably be much more flexible, more subject to negotiation and individual circumstance than before. Some basic questions to be asked of the contract could be:

- What is the term of the contract?
- **Is** the price fixed or tied to a market price?
- Will the fuel cost to produce the power be variable?
- What will be the "standard" oil and gas load profile price?
- What will an interruptible price entail?
- **Is** my REP purchasing power from a generator who uses hedging practices when buying fuel for generation?
- Will the REP you make a deal with be able to deliver the power you are contracted for?
- What types of settlement devices are used to set my price and settle with the Qualified Scheduling Entity (QSE)? I.e. what profile is used to determine the price **I** am paying for the power?
- Under your contract will your REP be able to to curtail your power use to meet his requirments if he is "short" on his power purchases? If the REP can curtail your power use, will you share in any potential profits?

CONCLUSION

Electric industry restructuring promises both opportunities and challenges. Those companies that develop the best strategies and anticipate market trends and changes will be the big winners. Retail competition is set to begin January 1, 2002. A limited, voluntary Pilot Program designed to test the sales, delivery and payment systems will begin March 1,2001 with implementation June 1, 2001. Begin to prepare now for these profound changes.