

ELECTRIC ENERGY "CRISIS" FROM UTAH'S PERSPECTIVE

There has been much discussion about the looming electric utility energy crisis in the media. Reports indicate that wholesale electricity prices in California have increased as much as a hundredfold, while some residential and other retail customers have seen price increases of threefold or more. Many are concerned that similar price increases may occur in Utah and want our state government to prevent it. This is a brief explanation of problems confronting the electric utility industry in the West and the possible effects on Utah.

BACKGROUND

First unfortunately, some of the horror stories coming out of California are true. California was on the brink of blackouts this past summer and has actually had them this winter. Electricity prices in the California wholesale market have been, if only briefly, 100 times higher than they were just last year. Two of its major utilities are nearly bankrupt. To understand the cause of these problems, one must understand the nature of the electricity market. Electricity is a unique commodity. It has no real substitutes, it cannot be stored, the supply and demand varies by hour and season, and immediate price signals from supplier to final customers do not exist. Given these characteristics, the wholesale electricity market can be extremely volatile with dramatic price fluctuations.

About 18 months ago, electricity (generation) in the Western wholesale market sold for about \$16 to \$35 per MegaWatt-hour, (MWH). This translates into a cost of about 1.6 to 3.5 cents per kiloWatt-hour (kWh). A kiloWatt-hour will power a 100 Watt light bulb for 10 hours. In the last six months, Western wholesale prices have risen to \$250 per MWH or 25 cents per kWh and have peaked at \$2000 per MWH for brief periods of time. Utah Power residential ratepayers currently pay about 6.3 cents per kWh. About 3 cents of this are attributed to the actual generation of electricity. The transmission, distribution and general administration and overhead costs to deliver power to households and businesses make up the rest.

CALIFORNIA AND THE WESTERN MARKETS

There are a number of reasons for the tremendous jump in wholesale electricity prices. It should be understood that the entire western electricity grid is interconnected and power can flow virtually anywhere, except when there are transmission constraints. At many times, the West is a single market, so high prices in California can affect the entire region. Over the last 15 years and until recently, there has been a vast surplus of generation capacity and wholesale prices have been low. Utilities came to depend on the wholesale market for power to supply new customers because it was a cheaper source of supply than building new plants. Unfortunately, most utilities in the West adopted a similar strategy of depending on the wholesale market. The result is that very few new plants were built by regulated utilities and almost none were built in California. To make the problem worse, the California economy has recovered from its recession in the 1990s and the demand for electricity surged beyond expectations.

Weather has also been a factor. The past few years have seen above normal amounts of precipitation with more water available for the hydroelectric plants in the region. This year's precipitation levels are slightly below normal. Last summer, California and the West experienced extended heat waves that increased the demand for electricity as people used their air conditioners more. This winter has been colder than normal, reversing a trend of three abnormally warm winters, affecting both the natural gas and the electricity markets. So, what was once a vast surplus of power has quickly disappeared with times of actual shortage.

Rising wholesale electricity prices are also a direct result of the increasing cost of natural gas. Gas prices have increased from \$2.50 per decatherm to around \$10 per decatherm. California has seen prices in the \$20 to \$40 range. This has an adverse impact on electricity prices because new generating resources are designed to use natural gas. Roughly speaking, one can convert \$1 per decatherm into 1 cent per kWh. So \$10 per decatherm translates into electric power that costs 10 cents per kiloWatt-hour to produce. A large portion of California's electric generation as well as the surplus power uses natural gas as its fuel.

In addition, the industry has been in transition with many states changing the way utilities operate. Before this restructuring of the industry, most states regulated their electric utilities. Under cost-of-service regulation, a utility is given an exclusive territory in which to sell power; in return it gives up its right to unilaterally set prices. Instead the utility must submit prices to state regulatory commissions for approval. Regulated prices are based on a utility's costs.

Utilities with higher costs have higher rates. Utah Power, fortunately, has relatively low costs and attendant low rates. The average price for all Utah customers is around 5.16 cents per kWh. California under regulation was the highest cost state in the West with average prices of just over 9 cents per kWh.⁽¹⁾

As a result of its high prices, California restructured its electric utility industry to introduce competition with the hope that lower prices for California customers would result. The California legislature passed a restructuring law that abandoned cost-of-service regulation and encouraged the utilities to sell a portion of their generation to other suppliers. The sale of generation occurred to a greater extent than anticipated. The law requires all producers of power in California to sell power through a bidding process to a central authority called the California Power Exchange which in turn sells the power back to the utilities. The law does not apply to municipally owned utilities. The California bidding process was designed to develop a competitive generation market and take advantage of a surplus of power. Unfortunately, this bidding system produces extremely high prices when generation resources are in short supply.

There are three major investor-owned utilities in California. Two of them operate under a price freeze and cannot pass the higher costs of wholesale market purchases on to their customers. These two utilities are close to bankruptcy. The third utility is not subject to the price freeze and has passed some of these higher costs of wholesale purchases on to customers. The rising rates have caused a public outcry. California's regulatory agencies and legislature are contemplating policies to correct the problems.

UTAH'S POSITION

Utah's major investor-owned utility, PacifiCorp, doing business here as Utah Power, is based in Portland, Oregon. PacifiCorp is a wholly-owned subsidiary of Scottish Power. The Company's Utah operations are regulated by the Utah Public Service Commission under cost-of-service regulation. Prices are approved by the Commission and are set to allow the Company the opportunity to recover Utah's share of the costs of producing electricity including a reasonable return on investment. Until recently, the Company had more generation than it needed. The excess was sold on the wholesale market. This year with strong growth in demand and the sale of a power plant, the Company must rely more heavily on the wholesale market to purchase power to meet its obligations. A failure in November of one of PacifiCorp's generators has resulted in the need for even more purchases of electricity in the wholesale market. In years past, wholesale power was cheap. This year, it is expensive. Reliance on wholesale power will result in higher costs for the Company. Assuming that these purchases are legitimate and reasonable, they will result in higher rates. The Company has requested a rate increase to cover the higher costs.

Nonetheless, Utah is in a far better position than California and other states that have deregulated since such states must depend more on the wholesale market to purchase power. PacifiCorp's generation costs are relatively low; its generation comes mostly from coal-fired and hydroelectric plants. To the extent that the Company can avoid wholesale market purchases, Utah Power customers benefit from an efficient, low-cost generation system. No matter how the Company decides to meet its growing need for supply, the Commission will require the Company to find the least-cost alternative to provide power. Unfortunately, the lead-time before a power plant can be built and operated is long and wholesale market prices may stay high indefinitely.

Some of Utah's cities and towns have their own municipal power companies and may be in a precarious or advantageous position depending on their sources of power and whether they must buy from or can sell into the wholesale market. Most of these municipal power companies have access to Colorado River Storage Project power. This hydroelectric power is inexpensive, but it cannot supply all the cities' needs. Cities, like Springville, which rely on the wholesale market to meet their power needs have seen large price increases. Long-term contracts, building new power plants or energy conservation could ease the problem.

CONCLUSION

Utah electricity consumers, compared to those in other states in the West, are in a relatively good position, particularly when compared to states in which electric utilities depend more on the wholesale market for power. With cost-of-service pricing, Utah Power's rates should not rise as much as in those states, even though rate increases must be anticipated. The Utah Public Service Commission will analyze any rate increase request to make sure that it is in the public interest before a change is made.

¹These are 1998 figures taken from the Energy Information Administration's report, "The Changing Structure of the Electric Power Industry 2000: an Update@