
The Impact Of Retail Wheeling On Municipal Electric Utilities In Kansas

- EXECUTIVE SUMMARY -

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Several developments create a movement for deregulation of the electric industry in the United States. These trends include technological advances in generating cheaper power and delivering it to customers over an interconnected power grid, a political environment favoring a reduction in government intervention in markets, and deregulation in industries such as telecommunications, transportation, and natural gas. Furthermore, federal regulation of electric power promotes "wholesale wheeling," or the ability of various energy suppliers to reach wholesale customers over another utility's electric-transmission lines. Currently, federal law prohibits the Federal Energy Regulatory Commission (FERC) from ordering "retail wheeling," but Congress may change the law and allow retail customers to select from among competing electricity suppliers.

The State of Kansas faces pressure to examine existing policies regarding the provision of electricity to consumers. Strict regulation of privately owned utilities contrasts with very limited state involvement in the affairs of municipal electric utilities. In Kansas, however, a few investor-owned utilities dominate the electric power industry. Still, significant numbers of customers receive electricity from many small, rural electric cooperatives and municipal electric utilities. Of the 121 municipal electric utilities in Kansas, 63 are vertically integrated utility systems that can generate, transmit, and distribute electric power locally. These 63 "generator" cities compare with 58 "distributor" cities that only distribute purchased power.

The full report examines the development of municipal electric utilities in Kansas, specifies state policy choices for handling retail competition, and analyzes possible implications of competition for Kansas municipal electric utilities and their customers. This executive summary is organized around the questions covered by the comprehensive report.

What Are the Policy Implications and the Alternatives Available to the State for Dealing with Municipal Electric Utilities in a Retail Wheeling Environment?

State Policy of Local Control

- For more than one hundred years Kansas lawmakers have embraced a state policy of municipal control of municipally owned electric utilities. This state policy has been challenged and reaffirmed at critical stages in state history. Furthermore, municipal electric utilities have, with few exceptions, been exempted from all state regulation, and state lawmakers have espoused municipal exemption from state regulation repeatedly for 85 years.

- State lawmakers have authorized, and municipal electric utilities in Kansas have formed a municipal joint-action agency in order to respond to changes in the economics of electricity and advances in the technology of electricity. As a result, municipal electric utilities in Kansas have achieved, through interlocal cooperation, economies in the purchase of electricity and enhanced reliability of service through municipal interconnection.

- A state policy of local control requires that locally elected officials be held accountable for the operation of municipal electric utilities. As a consequence, local customers of electricity, taxpayers, and voters are provided with extensive opportunities to seek remedy for any grievances with the electric utility, including the right to vote local officials out of office.

- For state or national lawmakers to take actions that undermine local control of municipal institutions without compelling justification would be contrary to basic principles of U.S. federalism. Moreover, reversing a long-standing feature of local self-government, such as local control of municipal electric utilities, would call for compensation of the full range of losses incurred. Overwhelmingly broader interests are at stake.

National and Regional Context

- States with rates for electricity significantly above national averages are moving quickly to provide customers with access to competitive suppliers. In comparison, Kansas municipal utilities and investor-owned utilities, on average, have rates at or below national averages.

- Electric rates in Kansas are slightly higher on average than those in Colorado and Missouri and significantly higher than those in Nebraska and Oklahoma. State policymakers in these surrounding states are considering the issue of retail wheeling but have not initiated retail competition in electric service as of the date of this report.

- State associations of municipal electrical utilities in states surrounding Kansas generally oppose immediate action on retail wheeling and support more careful study of the impact of retail competition on consumers and state economies in general.

State Policy Choices

- With respect to municipal electric utilities, three state policy choices--the municipal-island option, the municipal-emasculatation option, and the municipal-choice option--emerge from actions taken to date by state lawmakers in the four states that have enacted legislation implementing retail competition and from legislative proposals in Kansas.

- The municipal-island option prohibits the intrusion of other electric suppliers into a municipality but does not make the municipal utility completely immune from the influence of retail competition in electric service.

- The municipal-emasculatation option eliminates local control of municipally owned electric utilities and establishes state control of the implementation of retail wheeling and of all electric transmission, distribution, and sales in the state.

- The municipal-choice option allows municipal electric utilities to open their service territories to access from outside suppliers but preserves the state policy of municipal exemption from regulation and allows municipal utilities to choose whether to participate in retail competition and to determine terms of that participation.

What Are the Fiscal Impacts of Retail Wheeling on a Municipality and Its Electric Utility?

Municipal Values

- A city that owns and operates an electric utility forgoes the taxes it could have collected from an investor-owned utility and therefore may compensate city services for this loss by 1) charging an in-lieu-of-tax amount similar to the amount a private firm would owe; 2) imposing a charge similar to a franchise tax; 3) reimbursing the general fund for overhead costs; 4) providing electric service to community facilities without billing; 5) paying utility employees to work on nonutility public services; and/or 6) transferring a percentage of utility income each year to the city's general fund.

- Kansas municipal electric utilities provide, on average, transfers of \$48 per capita to achieve municipal purposes other than electrical service. By adding the value of free electric service and the use of utility employees for nonutility activities, the amount of transfer increases to an average of \$87 per capita. The average city would have to levy an additional 26.295 mills in property taxes to offset the value lost by these utility transfers. The total value of reported utility support for nonutility city activities is \$37.3 million.

- Municipal values take shape in the mix of taxes and customer charges supporting public services. Citizens, who ultimately own the municipal electric utility, should be able to receive any dividends forthcoming from the operation of the utility, including the use of utility transfers to reduce local reliance on property taxes. Using the local utility to reduce property taxes helps fulfill a long-standing commitment by state lawmakers to reduce governmental reliance on the property tax.

- The values underpinning municipal ownership and operation of an electric utility require public understanding and support. A municipality may, in the view of local policymakers, receive a reasonable return on the municipal investment in an electric utility; however, the type and amount of this return on investment should be well-defined and fiscally sound to ensure the continued financial viability of the municipal electric utility. Furthermore, municipal values associated with the municipal electric utility should be easily identifiable, open to public scrutiny, and periodically subject to public discussion.

- Municipal values will be at risk if state action on retail wheeling forces a change in the locally preferred mixture of taxes and utility charges, forces the loss of utility transfers for nonutility services, and/or forces the reduction of local control over electrical service.

Municipal Vulnerability

- Competitive market pricing will lead customers of electricity to seek the lowest-price provider, thereby challenging higher-cost municipal utilities to reduce their costs, to use taxes or other revenues to cover electric service costs, or to abandon the business.

- Many municipal generating facilities are smaller, older units that may not be as cost-effective in a competitive market

as cheaper power using newer technology.

- Sampled Kansas cities with generating capacity have an average unit cost of 2.54 cents per kilowatt-hour for purchased energy, compared with a cost of 7.19 cents for generated electricity.

- Sampled Kansas cities without generation capacity have an average cost of 5.09 cents per kilowatt-hour for purchased electricity, compared with 2.54 cents for the average generator city.

- In 1995, electric rates of municipal utilities in Kansas exceeded those charged by the lowest-cost investor-owned utility in Kansas by nearly one-sixth. Specifically, the adjusted average revenues of 6.04 cents per kilowatt-hour for municipal electric utilities exceeded by 15.9 percent the comparable 5.21 cents per kilowatt-hour by the lowest-cost private utility in Kansas.

- If the existing cost patterns persist, Kansas municipal electric utilities will face enormous pressure in a competitive market for electricity. Based on a sample, Kansas municipal electric utilities may be covering their total costs today, but their profit margins are so small that they will likely be unable to maintain existing cost structures in a competitive environment.

What Is the Extent of Stranded Costs for Kansas Municipal Electric Utilities?

Stranded Commitments

- Stranded costs represent commitments reasonably incurred to serve power customers. These costs may go unrecovered if those customers can take advantage of open access and get service from another supplier. These stranded costs will not disappear. Someone will pay.

- Stranded commitments include potentially uneconomical multi-year power purchase contracts, long-term debt obligations, lost utility revenues used to support community services, and diminished municipal values.

Stranded Debt

- Kansas municipal utilities have \$302.3 million in public debt outstanding, or an average of \$1,331 per customer. Distributors have little of this debt, only about \$16 per customer; therefore, most of the debt is held by generator utilities.

- A narrow interpretation of stranded costs includes only debt directly related to generating capacity since this is the most significant asset likely to become economically unproductive under a competitive environment. By this definition there are \$204 million of principal due and a total debt service of \$424.8 million that extends through the year 2035. After excluding the debt of the Kansas City municipal utility, there are \$102.6 million of principal due and a total debt service of \$188.0 million through the year 2035.

- If the goal is to repay all generating capacity debt (principal only) in one year with a surcharge based on the kilowatt-hour used, then based upon 1995 figures all customers of the 29 municipal utilities with generating debt would pay an average surcharge of 5.82 cents per kilowatt-hour. By delaying the burden of a surcharge until the year 2005, customers in only 11 cities would face an average one-year surcharge of 4.10 cents per kilowatt-hour.

- Accelerating the payoff of outstanding debt incurred by municipal electric utilities imposes a large financial liability on current ratepayers (citizens), thus suggesting the need for a longer transition period such as ten years to coincide with the typical call option embedded in utility bonds.

- A city, unlike an investor-owned utility, cannot take a tax-law write-off of uneconomical assets. Any attempt to shift the burden to shareholders for stranded costs will not work for a municipal utility, since city taxpayers are the owners of a municipal utility.

Stranded Revenues

- Lost revenues are the difference in revenues induced by a price change, assuming the same volume of service as before the change.

- A loss of revenue due to mandated deregulation is the amount that would not be available for the utility to use for locally defined purposes. Revenue losses require a reduction of cost. These reductions jeopardize not only secondary costs (such as fund transfers, unbilled power for public services, and shared expenses) but also operational costs. Further, these reductions could translate into job reductions in the city, either in the utility or in other public services.

- At a competitive market rate defined as that rate of the lowest-cost Kansas private producer, municipal generators and distributors alike would face revenue losses. Generator cities face large losses, with only one city having a resale rate below the assumed market price. Also, only one distributor city does not lose revenue under this scenario. Therefore, under a price-competitive environment, nearly every municipal utility would have to institute budget cuts or substitute revenues from other sources. To compensate for lost revenues, the mean generator city would face a 25.780 mill increase and the mean distributor city would face a 63.655 mill increase.

- If cities with municipal electric utilities have to offset revenue losses with increased property taxes, then the negative effect of this shift to higher property taxes will not only affect that community's economic prospects but will also extend to Kansas taxpayers, through lower local contributions to the state's school finance formula.

What Are the Economic Impacts of Retail Wheeling on the Customers of Municipal Electric Utilities?

Electric Customers

- As customers shop for the best price in a competitive market, some electric utilities--public and private alike--will be net gainers while others will be net losers. Low-cost producers may experience a net gain of customers; high-cost producers face a net loss of customers and a reduction in the diversity of customer types, possibly to the point of having to cease operations.

- A model of price sensitivity for a sample of Kansas municipal electric utilities reveals that a 1-percent decrease in the price of electricity will increase overall residential megawatt-hour demand by 0.679 percent, a 1-percent decrease in the price will increase commercial demand by 3.855 percent, and a 1-percent decrease in price will increase industrial demand by 1.910 percent.

- Although most municipal electric utility customers as taxpayers of the municipality may face higher property taxes to offset a decline in utility revenues now used to support local general services, a counterbalancing element is the lower utility prices available to consumers in a competitive market. However, this process is likely to evolve over time.

Price Competition

The distributional-impact model assesses the impact of changes in prices on various customer characteristics, but does not include any offsetting assessments to cover stranded utility debt, the replacement of utility revenue now transferred to other local services, or transition and interconnect expenses.

The market price used in modeling a price-competitive electric market in Kansas is that of the lowest-cost Kansas private producer in 1995 compared with the adjusted average for all Kansas municipal electric utilities. This aggregate analysis, therefore, does not reflect the actual effects on customers of a particular municipal electric utility.

Residential Impact

- Although residential electric consumption tends to be directly related to household income, the proportion of expenditures going toward electricity is inversely related to income. Therefore, higher-income households will experience a larger absolute dollar savings from lower electricity prices, but lower-income households will experience a larger relative saving as a proportion of income.

- On a per-household basis, the residential customers who would experience the largest decreases in electric bills under the modeled price-competitive environment are residents of rural cities, homeowners, households earning \$75,000 or more, householders between the ages of 45 and 54, and households with six or more members.

- On a group basis, the residential customer groups that would experience the largest decreases in electric bills under the modeled price-competitive environment are residents of urban cities, homeowners, households earning between \$35,000 and \$50,000, householders between the ages of 35 and 44, and two-member households.

Business Impact

- The commercial customer groups that would experience the largest decreases in electric bills under the modeled price-competitive environment are offices, mercantile and service establishments, warehouse and storage facilities, and educational facilities. On a per-customer basis, health care facilities, lodging establishments, offices, food sales establishments, and education facilities would experience the largest decreases in electric expenditures.

- The industrial customer groups that would experience the largest declines in electric expenditures under the modeled price-competitive environment are producers of chemicals and allied products, primary metal industries, and producers of food and kindred products, transportation equipment, and paper and allied products. On a per-customer basis, primary metal industries, petroleum and coal producers, producers of chemicals and allied products, and producers of paper and allied products face the largest decreases in electric expenditures.

- Commercial and industrial customers may manifest their price sensitivity by locating to a lower-cost jurisdiction if

prevailing rates in the area are judged to be too high. The perception of high rates is also likely to have negative consequences for a community attempting to attract new residents and businesses.

Price and Non-Price Impacts

- Based on current consumption of electricity at the modeled Kansas market rates, the average reduction in primary electricity expenditures per customer would be 11.7 percent for residential, 22.8 percent for commercial, and 4.2 percent for industrial customers. These figures, however, are averages across all municipal electric customers in each customer grouping and do not take into account the non-price effects of higher taxes to offset the loss of utility transfers, reductions in public services to avoid tax increases, transition charges to cover utility stranded costs, and the loss of local control over electric service; therefore, the net change for any particular consumer after accounting for these various costs and benefits will vary by location and will depend on rates presently charged by the municipal electric utility. Any benefits of lower primary production costs may be offset in whole or in part by these other charges or taxes.

- Industrial customers are likely to be the major beneficiaries of a price-competitive marketplace because of the electricity-intensive nature of their operations, followed by commercial customers and residential customers who are likely to benefit to a lesser degree. Major industrial customers are likely to be the first targets of competitive electric utilities because they represent low-cost, high-volume customers. Commercial customers are also likely to be the targets of competing utilities because of their high price-sensitivity and the ability to change the location of some of their business to obtain lower rates. On the other hand, residential customers will probably be the last group of customers targeted, because they are typically high-cost, low-volume customers.

PROJECT DESIGN

The Kansas Municipal Energy Agency and Kansas Municipal Utilities, Inc., contracted with the Kansas Public Finance Center in November 1996 to conduct an analysis of the impact of retail wheeling on Kansas municipal electric utilities as of December 31, 1996. Therefore, this project examines the development of municipal electric utilities in Kansas, specifies state policy choices for handling retail competition, and analyzes possible implications of this competition for municipal electric utilities and their customers. First, a profile of the Kansas electric industry highlights the significant activities of municipal electric utilities. The study then shows that local control of municipal electricity service has been the policy position of this state for over one hundred years. In response, municipal electric utilities have tailored their particular services to meet needs, as revealed by their functions and costs.

To advance competition requires changes in state law. Thus, it helps to know what other states are doing about electric deregulation, in general, and the role of municipal electric utilities, in particular. Based on developments in other states, the State of Kansas faces three fundamental state policy choices: create exemptions for municipal utilities; lose independent status as a municipal utility and assume the same future as privately owned utilities have; or give these municipalities a choice, so each may tailor its own path in a competitive environment.

Retail wheeling will have implications for municipal electric utilities, and this study projects these effects. There are operational issues that deserve attention, including the physical capacity of the transmission grid to hold the many new buyer/seller transactions and the incentives for suppliers to use the most cost-efficient electric-energy-generation equipment. Moreover, competition raises questions about the existing state of equipment in use by Kansas municipal electric utilities.

If a customer is allowed to change suppliers without moving from a utility's territory, that customer may effectively bypass any costs incurred by the utility to meet electrical-energy demands. As a result, municipal utilities may face a loss of customers and revenues, and potentially incur stranded costs. Several measures of such stranded costs are calculated for Kansas municipal electric utilities, and implications are drawn.

To assess the overall impact of competition on the municipal electric utility market in Kansas requires models of the consumption of electricity by ultimate customers and the rates charged by the municipal electric utilities. This work

quantifies the responsiveness of consumption and rates to key factors of the utility market.

The impact of retail wheeling will not be uniform across all customers of municipal electric utilities in Kansas. An examination using proxy Kansas market prices permits an assessment of the distributional impact of prices on various customer characteristics. Because municipal electric utilities are so intertwined with the provision of many local public services, any price changes for electric service will have non-price effects revealed through higher taxes, reductions in general city services, and the loss of local control over electric service.

Municipal electric utilities, and the elected officials accountable for their operations, face a range of issues in a competitive retail electricity market. The report concludes with a call for each municipal electric utility to assess its competitive position as it seeks to inform public debate on the topic of retail wheeling.