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STUDIES BACK A NODAL MARKET FOR TEXAS/ERCOT

Numerous independent reports point to the benefits of a nodal market design

Solution to Current Zonal Market Problems

"While the current wholesale market is functioning well in Texas, there are some problems that need to be addressed. There are significant congestion costs, inefficient congestion management, inadequate price signals, limited gaming opportunities and no spot market. Modifying the wholesale market design would involve directly assigning congestion costs to provide for more efficient economic dispatch of generation and address these other problems." *(Senate Committee on Business and Commerce, Interim Report to the 79th Texas Legislature, December 2004, page 12).*

"Well-structured nodal markets would resolve most of the operational and efficiency issues that plague the current markets due to zonal simplifications, the portfolio scheduling and bidding framework, and local congestion management procedures." *("2004 Assessment of the Operation of the ERCOT Wholesale Electricity Markets," Potomac Economics, November 2004, page 26).*

"The most comprehensive solution for all of these issues is to implement nodal electricity markets since properly structured nodal markets would virtually eliminate the need to commit and dispatch resources out of merit. Such markets would substantially improve the efficiency of the management of local congestion, as well as the management of interzonal congestion…Hence, we strongly encourage the continued development and adoption of the Texas Nodal markets that are currently under consideration." *("2003 State of the Market Report for the ERCOT Wholesale Electricity Market," Potomac Economics, August 2004, page 74-75).*

Savings to Consumers

Adoption of a nodal power market design in the Electric Reliability Council of Texas (ERCOT) would reduce the cost of providing electricity by an average of more than $800 million a year. Annual savings would increase to $1.2 billion in 2013 as the new market matures. *("Market Restructuring Cost Benefit Analysis," Tabor Caramanis & Associates and KEMA Consulting Inc., Nov. 30, 2004, table 3-14, page 3-32).*

The cost of serving electric consumers would be reduced in all ERCOT zones, with customers in the Houston and North Zones enjoying the largest savings under a nodal market design in every year. *("Market Restructuring Cost Benefit Analysis," Tabor Caramanis & Associates and KEMA Consulting Inc., Nov. 30, 2004, pages 3-35 – 3-39).*

More Efficient Generation Dispatch

"There appears to be a growing body of evidence that the nodal market design would lead to the most economic dispatch of available generation resources." *(House Committee on Regulated Industries, Interim Report to the 79th Texas Legislature, January 2005, page 43).*

"Without a centralized commitment mechanism, each participant makes independent generator commitment decisions that, taken together, are not likely to be optimal. Hence, the introduction of day-ahead energy and operating reserves markets under the Texas Nodal market design currently being

considered promises substantial efficiency improvements in the commitment of generating resources." *("2003 State of the Market Report for the ERCOT Wholesale Electricity Market," Potomac Economics, August 2004, executive summary, page xvi).*

"The current zonal market framework resulted in close to double the quantity of redispatch during the study period as would have occurred by redispatching individual units to manage the same interzonal congestion. *("2004 Assessment of the Operation of the ERCOT Wholesale Electricity Markets," Potomac Economics, November 2004, page 64).*

Reduced Emissions

". . . transparent and accurate price signals would lead to the displacement of old, inefficient power plants that contribute to the state's air quality problems by new, highly efficient and clean generation units." *(House Committee on Regulated Industries, Interim Report to the 79th Texas Legislature, January 2005, page 43).*

Under the nodal case, some output of steam turbine gas-fired generators is replaced with the output of more efficient combined cycle plants. That results in the reduction of NOx emissions. *("Market Restructuring Cost Benefit Analysis," Tabor Caramanis & Associates and KEMA Consulting Inc., Nov. 30, 2004,page 3-58).*

Enhanced Reliability

"Implementing a broader economic dispatch will assist ERCOT in maintaining system reliability because of a better integration of system reliability and market functions." *(House Committee on Regulated Industries, Interim Report to the 79th Texas Legislature, January 2005, page 37).*

"Qualitative benefits (of the Texas Nodal nodal market design) include ERCOT's improved ability to manage the system with unit-specific bids rather than portfolio bids, and the resulting increased system efficiency and increased transparency of prices at specific locations." *("Market Restructuring Cost Benefit Analysis," Tabor Caramanis & Associates and KEMA Consulting Inc., Nov. 30, 2004, Executive Summary, page xiv).*

Clearer, More Accurate Price Signals

Improved, accurate nodal pricing signals will encourage the construction of new generation in areas such as Dallas-Fort Worth, where it's badly needed. *("Market Restructuring Cost Benefit Analysis," Tabor Caramanis & Associates and KEMA Consulting Inc., Nov. 30, 2004, pages 3-53).*

"Nodal markets … send efficient price signals to generators that reflect all network constraints, virtually eliminating the need for out-of-merit dispatch actions and associated payments. *("2003 State of the Market Report for the ERCOT Wholesale Electricity Market," Potomac Economics, August 2004, executive summary, page xxv).*

"In the long-run, the adoption of the Texas Nodal markets would establish efficient prices that reflect all congestion within ERCOT and improve the allocation of the associated congestion costs. It would also improve participants' ability to hedge these costs since they would no longer be invisible in the market prices and recovered through uplift charges as is currently the case for local congestion. *("2003 State of the Market Report for the ERCOT Wholesale Electricity Market," Potomac Economics, August 2004, executive summary, page xxi).*

Proven in Other Markets

"Enhanced competition has put downward pressure on the price of electricity. Fuel-adjusted electricity prices in PJM, for example, dropped 9.5 percent from 2002-2003. Prices dropped 6 percent during the same period in the New England Market." *(House Committee on Regulated Industries, Interim Report to the 79th Texas Legislature, January 2005, page 39 – Report sourced 2003 State of the Market reports for PJM (March 4, 2004) and New England Independent System Operator (June 29, 2004)).*

Note: The report by the Senate Committee on Business and Commerce can be found at www.senate.state.tx.us. The Report by the House Committee on Regulated Industries can be found at www.house.state.tx.us. All other reports can be found in the "News Room" section of TCPA's Web site, www.competitivepower.com.