

PROJECT NO. 30160

PUC RULEMAKING PROCEEDING	§	PUBLIC UTILITY COMMISSION
CONCERNING IMPLEMENTATION	§	
OF A NODAL MARKET DESIGN FOR	§	OF TEXAS
THE ELECTRIC RELIABILITY	§	
COUNCIL OF TEXAS	§	

**ORDER ADOPTING AMENDMENTS TO §25.501
AS APPROVED AT THE OCTOBER 28, 2004 OPEN MEETING**

The Public Utility Commission of Texas (commission) adopts amendments to §25.501, relating to Wholesale Market Design for the Electric Reliability Council of Texas (ERCOT), with changes to the proposed amendments as published in the September 17, 2004 issue of the *Texas Register* (29 TexReg 8982). The amendments modify the requirements for the development and implementation of a nodal market for ERCOT by extending the deadlines for the cost-benefit analysis to December 31, 2004 and the draft protocols and energy load zones to March 18, 2005; requiring that the independent cost-benefit analysis, the draft protocols, and the draft energy load zones be filed for informational purposes rather than for approval; and removing the iterative requirement for the independent cost-benefit analysis. The amendments reflect the commission's current expectations for the process for development and implementation of an improved ERCOT wholesale market design. The amendments are adopted under Project Number 30160.

The commission received comments on the proposed amendments from the DFW Electric Consumer Coalition (DFW), ERCOT, Reliant Energy, Inc. (Reliant), and TXU Portfolio Management, LP (TXU). TXU supported adoption of the proposed amendments. Reliant, DFW, and ERCOT supported adoption of the proposed amendments with modifications.

TXU stated its appreciation for the commission's willingness to provide for the proper process and amount of time to develop a nodal market.

Reliant supported the modified process set forth in the proposed amendments, and stated that the modified process will provide the commission with much-needed flexibility and the opportunity to gather information to achieve the best policy outcome. Reliant also requested that the deadline to file the cost-benefit analysis be extended to December 31, 2004. Reliant stated its support for the existing October 1, 2006 deadline to implement a nodal market. Reliant stated that any delay in implementation of a nodal market would be detrimental to the State of Texas. It listed numerous benefits of a nodal market, and cited the *2003 State of the Market Report for the ERCOT Wholesale Electricity Markets* (August 2004) prepared by the commission's consultant, Potomac Economics, as support for its position.

Commission's response

The deadline to file the cost-benefit analysis is discussed below in response to ERCOT's comments. The deadline to implement a nodal market is discussed below in response to DFW's comments.

DFW commented that the delay to March 1, 2005 for filing protocols for the new market design is appropriate given the volume of work still needed for their preparation. In particular, DFW noted that the delay provides needed time for consideration of the economists' comments on the draft protocols and for consideration of the cost-benefit analysis required by subsection

25.501(m), prior to ERCOT's filing of the draft protocols. DFW also stated that the commission should not be required to approve the cost-benefit analysis, and agreed that the analysis should not be required to show net benefits from ERCOT's nodal market design; such a requirement would undermine the study's credibility. DFW commended the commission for pushing for prompt resolution of noted inefficiencies in the current market design. However, DFW asserted that the current implementation date of October 1, 2006 for the new market design is unrealistic, and consequently market participants are not taking it seriously, thereby undermining the commission's goal of prompt resolution of noted inefficiencies. Consequently, DFW recommended that the implementation deadline be delayed to October 2007.

Commission's response

The commission agrees with DFW that there should be adequate time for thorough consideration of the economists' comments and the cost-benefit analysis, and that the cost-benefit analysis should be truly independent. Nevertheless, at this juncture, the commission sees no reason why the October 1, 2006 implementation date cannot be met.

ERCOT requested that the deadline to file the cost-benefit analysis be extended to December 31, 2004. ERCOT explained that the analysis will not be ready by the current deadline of November 1, 2004, because of modeling problems in the Energy Impact Assessment part of the analysis. ERCOT believes that it is imperative that a quality cost-benefit analysis be produced with adequate time for stakeholder review prior to filing with the commission. ERCOT also requested that the deadline for filing the draft energy load zones be extended to coincide with the

deadline for filing the draft protocols, because design changes resulting from the economists' comments may result in reconsideration of the current load zone philosophy. ERCOT also requested an extension of the deadline to file the draft protocols to March 18, 2005 to allow time for an interim protocol review to focus particularly on the economists' comments. ERCOT stated that it will closely follow the progress of the overall Texas Nodal Team (TNT) process and the review by the commission to make sure that the overall timeline is maintained. If a material impact to the timeline becomes apparent, ERCOT stated that it will promptly notify the commission.

Commission's response

The commission has changed the deadline to file the cost-benefit analysis as requested by ERCOT, to provide sufficient opportunity for the development of a high quality analysis. The commission has required the cost-benefit analysis in order to ensure that the market designs under consideration will be thoroughly analyzed in an unbiased manner. The independent consultants performing the cost-benefit analysis should fully explain the rationale behind their conclusions and should support their conclusions using actual experience in existing markets and empirical analysis to the extent reasonably possible.

The commission has also changed the deadline for filing the energy load zones to coincide with the deadline for filing the draft protocols, to ensure that they are consistent with the market design underlying the protocols. Finally, the commission has extended the deadline for filing the protocols to March 18, 2005, in order for the economists' comments to be fully

considered by TNT. The commission emphasizes the importance of TNT fully considering the economists' comments and reflecting them in the protocols to the extent appropriate.

The amendments are adopted under the Public Utility Regulatory Act, Texas Utilities Code, Title II, §14.002 (Vernon 1998 & Supplement 2005) (PURA), which provides the commission with the authority to make and enforce rules reasonably required in the exercise of its powers and jurisdiction; and PURA §39.151, which grants the commission oversight and review authority over independent organizations like ERCOT.

Cross Reference to Statutes: Public Utility Regulatory Act §§14.002, 35.004(e), 39.001(d), and 39.151.

§25.501. Wholesale Market Design for the Electric Reliability Council of Texas.

- (a) **General.** The protocols and other rules and requirements of the Electric Reliability Council of Texas (ERCOT) that implement this section shall be developed with consideration of microeconomic principles and shall promote economic efficiency in the production and consumption of electricity; support wholesale and retail competition; support the reliability of electric service; and reflect the physical realities of the ERCOT electric system. Except as otherwise directed by the commission, ERCOT shall determine the market clearing prices of energy and other ancillary services that it procures through auctions and the congestion rents that it charges or credits, using economic concepts and principles such as: shadow price of a constraint, marginal cost pricing, and maximizing the sum of consumer and producer surplus.
- (b) **Bilateral markets and default provision of energy and ancillary capacity services.** ERCOT shall permit market participants to self-arrange (self-schedule or bilaterally contract for) energy and ancillary capacity services, except to the extent that doing so would adversely impact ERCOT's ability to maintain reliability. To the extent that a market participant does not self-arrange the energy and ancillary capacity services necessary to meet its obligations or to the extent that ERCOT determines that the market participant's self-arranged ancillary services will not be delivered, ERCOT shall procure energy and ancillary capacity services on behalf of the market participant to cover the shortfall and charge the market participant for the services provided.

- (c) **Day-ahead energy market.** ERCOT shall operate a voluntary day-ahead energy market, either directly or through contract.

- (d) **Adequacy of operational information.** ERCOT shall require resource-specific bid curves for energy and ancillary capacity services that it competitively procures in the day-ahead or operating day, and ERCOT shall use these bid curves or ex-ante mitigated bid curves to address market failure, as appropriate, in its operational decisions and financial settlements.

- (e) **Congestion pricing.**
 - (1) ERCOT shall directly assign all congestion rents to those resources that caused the congestion.
 - (2) ERCOT shall be considered to have complied with paragraph (1) of this subsection if it complies with this paragraph. ERCOT shall settle each resource imbalance at its nodal locational marginal price (LMP) calculated pursuant to subsection (f) of this section; each load imbalance at its zonal price calculated pursuant to subsection (h) of this section; and congestion rents on each scheduled transaction for a resource and load pair at the difference between the nodal LMP at the resource injection location calculated pursuant to subsection (f) of this section and the zonal price at the load withdrawal location calculated pursuant to subsection (h) of this section.

- (f) **Nodal energy prices for resources.** ERCOT shall use nodal energy prices for resources. Nodal energy prices for resources shall be the locational marginal prices, consistent with subsection (e) of this section, resulting from security-constrained, economic dispatch.
- (g) **Energy trading hubs.** ERCOT shall provide information for energy trading hubs by aggregating nodes and calculating an average price for each aggregation, for each financial settlement interval.
- (h) **Zonal energy prices for loads.** ERCOT shall use zonal energy prices for loads that consist of an aggregation of either the individual load node energy prices within each zone or the individual resource node energy prices within each zone. Individual load node or resource node energy prices shall be the locational marginal prices, consistent with subsection (e) of this section, resulting from security-constrained, economic dispatch. ERCOT shall maintain stable zones and shall notify market participants in advance of zonal boundary changes in order that the market participants will have an appropriate amount of time to adjust to the changes.
- (i) **Congestion rights.** ERCOT shall provide congestion revenue rights (CRRs), but shall not provide physical transmission rights. ERCOT shall auction all CRRs, using a simultaneous combinatorial auction, except as otherwise ordered by the commission for any preassigned CRRs approved by the commission. CRRs shall not be subject to "use-it-or-lose-it" or "schedule-it-or-lose-it" restrictions and shall be tradable.

- (j) **Pricing safeguards.** ERCOT shall apply pricing safeguards to protect against market failure, including market power abuse, consistent with direction provided by the commission.

- (k) **Simultaneous optimization of ancillary capacity services.** For ancillary capacity services that it competitively procures in the day-ahead or operating day, ERCOT shall use simultaneous optimization and shall set prices for each service to the corresponding shadow price.

- (l) **Multi-settlement system for procuring energy and ancillary capacity services.** For any energy and ancillary capacity services that it competitively procures in the day-ahead or operating day, ERCOT shall set a separate market clearing price for each procurement of a particular service.

- (m) **Development and implementation.** ERCOT shall use a stakeholder process to develop a wholesale market design that complies with this section. ERCOT shall also contract for an independent cost-benefit analysis of options. These options may include an option, or options, that would involve modification of the existing ERCOT wholesale market design. For each of the options, the cost-benefit analysis shall include the estimated net benefits of the option in comparison to the current market design. The cost-benefit analysis shall be prepared with sufficient detail to provide the stakeholders and the commission with the necessary information to modify or delete specific items or categories of expenses. The cost-benefit analysis shall be filed by ERCOT by December

31, 2004. ERCOT shall also file with the commission draft protocols that implement an option analyzed in the independent cost-benefit analysis and draft energy load zones that comply with subsection (h) of this section by March 18, 2005. ERCOT shall fully implement the requirements of this section by October 1, 2006.

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority. It is therefore ordered by the Public Utility Commission of Texas that §25.501, relating to Wholesale Market Design for the Electric Reliability Council of Texas, is hereby adopted with changes to the text as proposed.

ISSUED IN AUSTIN, TEXAS ON THE _____ DAY OF OCTOBER 2004.

PUBLIC UTILITY COMMISSION OF TEXAS

JULIE PARSLEY, COMMISSIONER

PAUL HUDSON, CHAIRMAN

BARRY T. SMITHERMAN, COMMISSIONER