

**PROJECT NO. 35392**

**PUC RULEMAKING TO ADDRESS § PUBLIC UTILITY COMMISSION  
INITIAL IMPLEMENTATION OF THE §  
NODAL MARKET § OF TEXAS**

**ORDER ADOPTING AMENDMENTS TO §25.502 AND §25.505  
AS APPROVED AT THE JULY 1, 2010 OPEN MEETING**

The Public Utility Commission of Texas (commission) adopts amendments to §25.502 of this title, relating to Pricing Safeguards in Markets Operated by the Electric Reliability Council of Texas, and §25.505, relating to Resource Adequacy in the Electric Reliability Council of Texas Power Region, with no changes to the proposed text as published in the April 30, 2010 issue of the *Texas Register* (35 TexReg 3372). The amendments permit the Electric Reliability Council of Texas (ERCOT) to define all transmission network congestion constraints as non-competitive constraints during the first 45 days of the nodal market. The amendments also permit ERCOT to impose lower system-wide offer caps than those currently imposed by §25.505 during the first 45 days of the nodal market. The amendments delete subsection (d) of §25.502 because that subsection expired on October 1, 2006 by its own terms. The amendments also delete subsection (h) of §25.502 because the offer caps mentioned in this subsection are no longer effective as a result of the implementation of the system-wide offer caps required in §25.505(g)(6). Furthermore, the amendments delete subsection (i) of §25.502, because this provision is no longer necessary. These rules are competition rules subject to judicial review as specified in Public Utility Regulatory Act §39.001(e). Project Number 35392 is assigned to this proceeding.

The commission received comments from the City of Austin d/b/a Austin Energy and the City Public Service of San Antonio (collectively, Austin Energy/CPS Energy); and the Steering

Committee of Cities Served by Oncor (Oncon Cities). The commission did not receive any reply comments or a request for a public hearing.

The comments from Austin Energy/CPS Energy and Oncon Cities expressed support for the commission's proposal to amend §25.502 and §25.505 and offered no changes to the proposed amendments because they believed these amendments accomplish ERCOT's need to be prepared to address and confront, in a proactive manner, any transitional issues that occur during the nodal market start-up period. Both parties noted the amendments authorize the approach currently being worked on by ERCOT stakeholders and embodied in Nodal Protocol Revision Request 091 (NPRR091). Oncon Cities stated NPRR091 would establish a temporary system-wide offer cap of the higher of \$180 per megawatts per hour (MWh) or 18 times a natural gas index price and would set an offer floor of -\$50 per MWh.

Both groups of commenters expressed their support for the specific portion of the amendment to §25.505(g)(6)(G) that permits ERCOT, through its stakeholder process, to adopt protocols setting the high system-wide offer cap (HCAP) at a level lower than that specified in §25.505(g)(6)(C)-(D), but that prohibits the HCAP being set so low that a resource would be required to offer service to the market below its marginal cost, unless the protocols provide a mechanism allowing the resource to recover such costs. Austin Energy/CPS Energy referenced instances when dual-system generators, typically natural gas generator units which have the capability of running on both natural gas and fuel oil, are called upon by ERCOT for reliability purposes during winter months. Austin Energy/CPS Energy noted that natural gas contracts are not as firm during the winter months as they are during the peak summer months. In the event

the dual-system operators may not be able to obtain the needed natural gas, these operators would have to use fuel oil, which is typically more expensive. Austin Energy/CPS Energy expressed support for the provision in §25.505(g)(6)(G) that would allow them, at a minimum, to recover their marginal costs in these instances when they have to use fuel oil to operate their dual-fueled units when called upon by ERCOT for reliability purposes. Oncor Cities mentioned the stakeholder process allowed by the amendment has fostered a discussion regarding ERCOT protocols that would permit higher heat rate fuel-oil units to recover their marginal costs during the first 45-day period of the nodal implementation. Oncor Cities then expressed support of the amendments in that they allowed the latitude to ERCOT, through the stakeholder process to take into account the views of generators as well as load entities that would also be affected by nodal market startup pricing safeguards, in addressing this matter.

*Commission Response*

**The commission appreciates the comments of Austin Energy/CPS Energy and Oncor Cities, and makes no changes to the amendments as proposed.**

All comments, including any not specifically referred to herein, were fully considered by the commission.

The amendments are adopted under the Public Utility Regulatory Act, Texas Utilities Code Annotated §14.002 (Vernon 2007 and Supp. 2009) (PURA), which provides the commission with the authority to make and enforce rules reasonably required in the exercise of its powers and jurisdiction; and specifically, §35.004, which requires that the commission ensure that ancillary

services necessary to facilitate the transmission of electric energy are available at reasonable prices with terms and conditions that are not unreasonably preferential, prejudicial, discriminatory, predatory, or anticompetitive; §39.001, which establishes the legislative policy to protect the public interest during the transition to and in the establishment of a fully competitive electric power industry; §39.101, which establishes that customers are entitled to safe, reliable, and reasonably priced electricity, and gives the commission the authority to adopt and enforce rules to carry out these provisions; and §39.151, which requires the commission to oversee and review the procedures established by an independent organization, directs market participants to comply with such procedures, and authorizes the commission to enforce such procedures.

Cross Reference to Statutes: PURA §§14.002, 35.004, 39.001, 39.101, and 39.151.

**§25.502. Pricing Safeguards in Markets Operated by the Electric Reliability Council of Texas.**

- (a) **Purpose.** The purpose of this section is to protect the public from harm when wholesale electricity prices in markets operated by the Electric Reliability Council of Texas (ERCOT) in the ERCOT power region are not determined by the normal forces of competition.
- (b) **Applicability.** This section applies to any entity, either acting alone or in cooperation with others, that buys or sells at wholesale energy, capacity, or any other wholesale electric service in a market operated by ERCOT in the ERCOT power region; any agent that represents such an entity in such activities; and ERCOT. This section does not limit the commission's authority to ensure reasonable ancillary energy and capacity service prices and to address market power abuse.
- (c) **Definitions.** The following terms, when used in this section, shall have the following meanings, unless the context indicates otherwise.
- (1) **Competitive constraint** – A transmission element on which prices to relieve congestion are moderated by the normal forces of competition between multiple, unaffiliated resources.
  - (2) **Generation entity** – an entity that owns or controls a generation resource.
  - (3) **Market location** – the location for purposes of financial settlement of a service (*e.g.*, congestion management zone in a zonal market design or a node in a nodal market design).

- (4) **Noncompetitive constraint** – A transmission element on which prices to relieve congestion are not moderated by the normal forces of competition between multiple, unaffiliated resources.
  - (5) **Resource** – a generation resource, or a load capable of complying with ERCOT instructions to reduce or increase the need for electrical energy or to provide an ancillary service (*i.e.*, a “load acting as a resource”).
  - (6) **Resource entity** – an entity that owns or controls a resource.
- (d) **Control of resources.** Each resource entity shall inform ERCOT as to each resource that it controls, and provide proof that is sufficient for ERCOT to verify control. In addition, the resource entity shall notify ERCOT of any change in control of a resource that it controls no later than 14 calendar days prior to the date that the change in control takes effect, or as soon as possible in a situation where the resource entity cannot meet the 14 calendar day notice requirement. For purposes of this section, “control” means ultimate decision-making authority over how a resource is dispatched and priced, either by virtue of ownership or agreement, and a substantial financial stake in the resource’s profitable operation. If a resource is jointly controlled, the resource entities shall inform ERCOT of any right to use an identified portion of the capacity of the resource. Resources under common control shall be considered affiliated.
- (e) **Reliability-must-run resources.** Except for the occurrence of a forced outage, a generation entity shall notify ERCOT in writing no later than 90 calendar days prior to the date on which it intends to cease or suspend operation of a generation resource for a period of greater than 180 calendar days. Unless ERCOT has determined that a

generation entity's generation resource is not required for ERCOT reliability, the generation entity shall not terminate its registration of the generation resource with ERCOT unless it has transferred the generation resource to a generation entity that has a current resource entity agreement with ERCOT and the transferee registers that generation resource with ERCOT at the time of the transfer.

- (1) **Complaint with the commission.** If, after 90 calendar days following ERCOT's receipt of the generation entity's notice, either ERCOT has not informed the generation entity that the generation resource is not needed for ERCOT reliability or both parties have not signed a reliability-must-run (RMR) agreement for the generation resource, then the generation entity may file a complaint with the commission against ERCOT, pursuant to §22.251 of this title (relating to Review of Electric Reliability Council of Texas (ERCOT) conduct).
  - (A) The generation entity shall have the burden of proof.
  - (B) Pursuant to §22.251(d) of this title, absent a showing of good cause to the commission to justify a later deadline, the generation entity's deadline to file the complaint is 35 calendar days after the 90th calendar day following ERCOT's receipt of the notice.
  - (C) The dispute underlying the complaint is not subject to ERCOT's alternative dispute resolution procedures.
  - (D) In its complaint, the generation entity may request interim relief pursuant to §22.125 of this title (relating to Interim Relief), an expedited procedural schedule, and identify any special circumstances pertaining to the generation resource at issue.

- (E) Pursuant to §22.251(f) of this title, ERCOT shall file a response to the generation entity's complaint and shall include as part of the response all existing, non-privileged documents that support ERCOT's position on the issues identified by the generation entity pursuant to §22.251(d)(1)(C) of this title.
  - (F) The scope of the complaint may include the need for the RMR service; the reasonable compensation and other terms for the RMR service; the length of the RMR service, including any appropriate RMR exit options; and any other issue pertaining to the RMR service.
  - (G) Any compensation ordered by the commission shall be effective the 91st calendar day after ERCOT's receipt of the notice. If there is a pre-existing RMR agreement concerning the generation resource, the compensation ordered by the commission shall not become effective until the termination of the pre-existing agreement, unless the commission finds that the pre-existing RMR agreement is not in the public interest.
  - (H) If the generation entity does not file a complaint with the commission, the generation entity shall be deemed to have accepted ERCOT's most recent offer as of the 115th calendar day after ERCOT's receipt of the notice.
- (2) **Out-of-merit-order dispatch.** The generation entity shall maintain the generation resource so that it is available for out-of-merit-order dispatch instruction by ERCOT until:
- (A) ERCOT determines that the generation resource is not required for ERCOT reliability;

- (B) any RMR agreement takes effect;
  - (C) the commission determines that the generation resource is not required for ERCOT reliability; or
  - (D) a commission order requiring the generation entity to provide RMR service takes effect.
- (3) **RMR exit strategy.** Unless otherwise ordered by the commission, the implementation of an RMR exit strategy pursuant to ERCOT Protocols is not affected by the filing of a complaint pursuant to this subsection.
- (f) **Noncompetitive constraints.** ERCOT, through its stakeholder process, shall develop and submit for commission oversight and review protocols to mitigate the price effects of congestion on noncompetitive constraints.
- (1) The protocols shall specify a method by which noncompetitive constraints may be distinguished from competitive constraints.
  - (2) Competitive constraints and noncompetitive constraints shall be designated annually prior to the corresponding auction of annual congestion revenue rights. A constraint may be redesignated on an interim basis.
  - (3) The protocols shall be designed to ensure that a noncompetitive constraint will not be treated as a competitive constraint.
  - (4) The protocols shall not take effect until after the commission has exercised its oversight and review authority over these protocols as part of the implementation of the requirements of §25.501 of this title, (relating to Wholesale Market Design for the Electric Reliability Council of Texas) so that these protocols shall take

effect as part of the wholesale market design required by that section. Any subsequent amendment to these protocols shall also be submitted to the commission for oversight and review, and shall not take effect unless ordered by the commission.

- (5) ERCOT, through its stakeholder process, may adopt protocols that categorize all constraints as noncompetitive constraints. Protocols adopted pursuant to this paragraph shall terminate no later than the 45th day after ERCOT begins to use nodal energy prices for resources pursuant to §25.501(f) of this title. Protocols adopted pursuant to this paragraph need not be submitted to the commission for oversight and review prior to taking effect.

**§25.505. Resource Adequacy in the Electric Reliability Council of Texas Power Region.**

- (a) **General.** The purpose of this section is to prescribe mechanisms that the Electric Reliability Council of Texas (ERCOT) shall establish to provide for resource adequacy in the energy-only market design that applies to the ERCOT power region. The mechanisms are intended to encourage market participants to build and maintain a mix of resources that sustain adequate supply of electric service in the ERCOT power region, and to encourage market participants to take advantage of practices such as hedging, long-term contracting between market participants that supply power and market participants that serve load, and price responsiveness by end-use customers.
- (b) **Definitions.** The following terms, when used in this section, shall have the following meanings, unless the context indicates otherwise:
- (1) **Generation entity** – an entity that owns or controls a generation resource.
  - (2) **Event trigger** – a calculated value for each interval that is equal to 50 times the Houston Ship Channel natural gas price index for each operating day, expressed in dollars per megawatt-hour (MWh) or dollars per megawatt per hour (MW/h). The event trigger shall be applied solely for the purpose of establishing the timing of the publication of certain market data and shall not be construed to establish the legitimacy of any offer, whether such offer is less than, equal to, or higher than the event trigger.

- (3) **Load entity** – an entity that owns or controls a load resource, including, but not limited to, a load acting as a resource (LaaR) or a balancing up load (BUL), as those terms are defined in the ERCOT Protocols.
  - (4) **Resource entity** – an entity that is a generation entity or a load entity.
- (c) **Statement of opportunities (SOO).** ERCOT shall publish a SOO that provides market participants with a projection of the capability of existing and planned electric generation resources, load resources, and transmission facilities to reliably meet ERCOT’s projected needs. A SOO published in even-numbered years shall use a ten-year study horizon and be published by December 31 of those years. A SOO published in odd-numbered years shall use a five-year study horizon and be published on or around October 1 of those years. ERCOT shall prescribe reporting requirements for generation entities and transmission service providers (TSPs) to report to ERCOT their plans for adding new facilities, upgrading existing facilities, and mothballing or retiring existing facilities. ERCOT also shall prescribe reporting requirements for load entities to report to ERCOT their plans for adding new load resources or retiring existing load resources.
- (d) **Projected assessment of system adequacy (PASA).** Beginning no later than October 1, 2006, unless otherwise specified below, ERCOT shall provide market participants with information to assess the adequacy of resources and transmission facilities to meet projected demand in the following two reports:
  - (1) Each month, ERCOT shall publish a Medium-Term PASA for each week of the subsequent three years beginning with the week after the Medium-Term PASA is

published. At a minimum, each Medium-Term PASA shall include the following information:

- (A) Load forecast by ERCOT zone or area;
- (B) Ancillary service requirements;
- (C) Transmission constraints; and
- (D) Aggregated information on the availability of resources, by ERCOT zone or area, including load resources.

(2) Each day, ERCOT shall publish a Short-Term PASA for each hour for the seven days beginning with the day the Short-Term PASA is published.

(A) At a minimum, each Short-Term PASA shall include the following information:

- (i) Load forecast by ERCOT zone or area;
- (ii) Ancillary service requirements;
- (iii) Transmission constraints; and
- (iv) Aggregated information on the availability of resources, by ERCOT zone or area, including load resources.

(B) By October 1, 2006, ERCOT shall file at the commission a plan to incorporate the impact of transmission constraints into its Short-Term PASA at a later date.

(e) **Filing of resource and transmission information with ERCOT.** ERCOT shall prescribe reporting requirements for resource entities and TSPs for the preparation of PASAs. At a minimum, the following information shall be reported to ERCOT:

- (1) TSPs shall provide ERCOT with information on planned and existing transmission outages.
  - (2) Generation entities shall provide ERCOT with information on planned and existing generation outages.
  - (3) Load entities shall provide ERCOT with information on planned and existing availability of LaaRs, specified by type of ancillary service, and BULs.
  - (4) Generation entities shall provide ERCOT with a complete list of generation resource availability and performance capabilities, including, but not limited to:
    - (A) the net dependable capability of generation resources;
    - (B) projected output of non-dispatchable resources such as wind turbines, run-of-the-river hydro, and solar power; and
    - (C) output limitations on generation resources that result from fuel or environmental restrictions.
  - (5) Load serving entities (LSEs) shall provide ERCOT with complete information on load response capabilities that are self-arranged or pursuant to bilateral agreements between LSEs and their customers.
- (f) **Publication of resource and load information in ERCOT markets.** To increase the transparency of the ERCOT-administered markets, ERCOT shall post at a publicly accessible location on its website, beginning no later than October 1, 2006, the information required pursuant to this subsection, unless a different date is specified by a paragraph of this subsection.

- (1) The following information in aggregated form, for each settlement interval and for each area where available, shall be posted two calendar days after the day for which the information is accumulated.
  - (A) Quantities and prices of offers for energy and each type of ancillary capacity service, in the form of supply curves.
  - (B) Self-arranged energy and ancillary capacity services, for each type of service.
  - (C) Actual resource output.
  - (D) Load and resource output for all entities that dynamically schedule their resources.
  - (E) During the operation of the market under a zonal market design, scheduled load and actual load. During the operation of the market under a nodal market design, firm scheduled load, scheduled load with “up to” limits on congestion charges, and actual load.
- (2) During the operation of the market under a nodal market design, the following day-ahead market information in aggregate form shall be posted two calendar days after the day for which the information is accumulated: load bids, including virtual loads, in the form of day-ahead bid curves, and cleared load.
- (3) The following information in entity-specific form, for each settlement interval, shall be posted as specified below.
  - (A) During the operation of the market under a zonal market design:
    - (i) Portfolio offer curves for balancing energy and for each type of ancillary service, for each area where available, shall be posted 60

days after the day for which the information is accumulated beginning September 1, 2007, except that, for the highest-priced offer selected or dispatched by ERCOT for each interval after January 12, 2007, ERCOT shall post the offer price and the name of the entity submitting the offer 48 hours after the day for which the information is accumulated. In the event of interzonal congestion, ERCOT shall post, separately for each zone, the offer price and the name of the entity submitting the highest-priced offer selected or dispatched.

- (ii) If the market clearing price for energy (MCPE) or the market clearing price for capacity (MCPC) exceeds the event trigger during any interval, the portion of every market participant's price-quantity offer pair for balancing energy service and each other ancillary service that is at or above the event trigger for that service and that interval shall be posted seven (7) days after the day for which the offer is submitted. ERCOT shall implement the requirements of this clause by September 1, 2007.
- (iii) Other offer-specific information for each type of service and for each area where available shall be posted 90 days after the day for which the information is accumulated beginning March 1, 2007. Effective March 1, 2008, this information shall be posted 60 days after the day the information was accumulated. The information subject to this disclosure requirement is as follows:

- (I) final energy schedules for each QSE;
  - (II) final ancillary services schedules for each QSE;
  - (III) resource plans for each QSE representing a resource;
  - (IV) actual output from each resource; and
  - (V) all dispatch instructions from ERCOT for balancing energy and ancillary services.
- (iv) The information posted shall include the names of the resources in the portfolio that were committed, the name of the entity submitting the information, the name of the entity controlling each resource in the portfolio.
- (B) Two months after the start of operation of the market under a nodal market design:
- (i) Offer curves (prices and quantities) for each type of ancillary service and for energy at each settlement point in the real time market, shall be posted 60 days after the day for which the information is accumulated except that, for the highest-priced offer selected or dispatched for each interval on an ERCOT-wide basis, ERCOT shall post the offer price and the name of the entity submitting the offer 48 hours after the day for which the information is accumulated.
  - (ii) If the MCPE or the MCPC exceeds the event trigger during any interval, the portion of every market participant's price-quantity offer pairs for balancing energy service and each other ancillary

service that is at or above the event trigger for that service and that interval shall be posted seven (7) days after the day for which the offer is submitted.

(iii) Other resource-specific information, as well as self-arranged energy and ancillary capacity services, and actual resource output, for each type of service and for each resource at each settlement point shall be posted 60 days after the day for which the information is accumulated.

(iv) The posted information shall be linked to the name of the resource (or identified as a virtual offer), the name of the entity submitting the information, and the name of the entity controlling the resource. If there are multiple offers for the resource, ERCOT shall post the specified information for each offer for the resource, including the name of the entity submitting the offer and the name of the entity controlling the resource.

(C) The load and generation resource output for each zone, for each entity that dynamically schedules its resources, shall be posted 90 days after the day for which the information is accumulated beginning March 1, 2007. Effective March 1, 2008, the information required by this subparagraph shall be posted 60 days after the day for which the information is accumulated.

(D) ERCOT shall use §25.502(d) of this title (relating to Pricing Safeguards in Markets Operated by the Electric Reliability Council of Texas) as a basis

for determining the control of a resource and shall include this information in its market operations data system.

(g) **Scarcity pricing mechanism (SPM).** ERCOT shall administer the SPM. The SPM shall take effect on January 1, 2007, unless the commission by order changes this date. The SPM shall operate as follows:

- (1) The SPM shall operate on an annual resource adequacy cycle, starting on January 1 and ending on December 31 of each year.
- (2) For each day of the annual resource adequacy cycle, the peaking operating cost (POC) shall be 10 times the daily Houston Ship Channel gas price index for the previous business day. The POC is calculated in dollars per megawatt-hour (MWh).
- (3) For the purpose of this section, the real-time energy price (RTEP) shall be measured as the price at an ERCOT-calculated ERCOT-wide hub.
- (4) In the annual resource adequacy cycle, the peaker net margin (PNM) shall be calculated as  $\sum((RTEP - POC) * (\text{number of minutes in a settlement interval} / 60 \text{ minutes per hour}))$  for each settlement interval when  $RTEP - POC > 0$ .
- (5) Each day ERCOT shall post at a publicly accessible location on its website the updated value of the PNM, in dollars per megawatt (MW).
- (6) The system-wide offer caps shall be as follows:
  - (A) The low system offer cap (LCAP) shall be set on a daily basis at the higher of:
    - (i) \$500 per MWh and \$500 per MW per hour; or

- (ii) 50 times the daily Houston Ship Channel gas price index of the previous business day, expressed in dollars per MWh and dollars per MW per hour.
- (B) Beginning March 1, 2007, the high system-wide offer cap (HCAP) shall be \$1,500 per MWh and \$1,500 per MW per hour.
- (C) Beginning March 1, 2008, the HCAP shall be \$2,250 per MWh and \$2,250 per MW per hour.
- (D) Beginning two months after the opening of the nodal market, the HCAP shall be \$3,000 per MWh and \$3,000 per MW per hour.
- (E) At the beginning of the annual resource adequacy cycle, the system-wide offer cap shall be set equal to the HCAP and, except for increases authorized in this section, maintained at this level as long as the PNM during an annual resource adequacy cycle is less than or equal to \$175,000 per MW. During an annual resource adequacy cycle, the system-wide offer cap shall be increased in accordance with the schedule authorized in this section unless the PNM has been exceeded by that date. If the PNM exceeds \$175,000 per MW during an annual resource adequacy schedule, the system-wide offer cap shall be reset at the LCAP for the remainder of that annual resource adequacy cycle.
- (F) The Independent Market Monitor, as part of its responsibilities pursuant to Public Utility Regulatory Act §39.1515(h), may conduct an annual review of the effectiveness of the SPM.

- (G) ERCOT, through its stakeholder process, may adopt protocols setting the HCAP at a level below that specified in subparagraphs (C) and (D) of this paragraph. Protocols adopted pursuant to this subparagraph shall terminate no later than the 45th day after ERCOT begins to use nodal energy prices for resources pursuant to §25.501(f) of this title (relating to Wholesale Market Design for the Electric Reliability Council of Texas). Protocols adopted pursuant to this subparagraph shall not set the HCAP so low that a resource would be required to offer service to the market below its marginal cost, unless the protocols provide a mechanism allowing the resource to recover such costs.
- (h) **Development and implementation.** ERCOT shall use a stakeholder process to develop protocols that comply with this section. Nothing in this section prevents the commission from taking actions necessary to protect the public interest, including actions that are otherwise inconsistent with the other provisions in this section.

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 §25.502, relating to Pricing Safeguards in Markets Operated by the Electric Reliability Council of Texas, and §25.505, relating to Resource Adequacy in the Electric Reliability Council of Texas Power Region, are hereby adopted with no changes to the text as proposed.

**SIGNED AT AUSTIN, TEXAS this the 9th day of JULY 2010.**

**PUBLIC UTILITY COMMISSION OF TEXAS**

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**BARRY T. SMITHERMAN, CHAIRMAN**

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**DONNA L. NELSON, COMMISSIONER**

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**KENNETH W. ANDERSON, JR., COMMISSIONER**