

SECTION 2: SYSTEM OPERATIONS

**[PRR307: Revise Section 6.1.3 as follows when system change implemented.]**  
*As provided by a QSE to ERCOT: The provision of Resource capacity to ERCOT so that ERCOT can deploy power for the purpose of controlling frequency by continuously balancing generation and Load within the ERCOT System.*

The ERCOT Control Area Authority shall purchase sufficient Regulation resources to provide satisfactory control performance for ERCOT. ERCOT shall determine the satisfactory amount of Regulation Service required by statistical analysis of possible unit outages and load forecast error to expect operation 95% of hours without deploying Responsive Reserve Service.

#### **2.2.4 Automatic Voltage Regulators And Power System Stabilizers**

**REFERENCE: PROTOCOLS SECTION 6.5.7**

*(9) A QSE's Generation Resource shall operate with the unit's Automatic Voltage Regulator (AVR) in use unless specifically directed to operate in manual mode by ERCOT, or unless the QSE determines a need to operate in manual in Emergency Conditions. When the QSE changes the mode, the QSE shall promptly inform ERCOT. Any QSE-controlled power system stabilizers will be kept in service whenever possible. QSEs' control centers will monitor the status of their regulators and stabilizers.*

Generator Automatic Voltage Regulators (AVR) and power system stabilizers (PSS) will be kept in service whenever possible. Generation Resources (GR) shall notify their Qualified Scheduling Entity (QSE) who in turn will promptly notify the ERCOT Control Area Authority when a voltage regulator or stabilizer is taken out of service due to equipment maintenance or failure and when it is returned to normal operation. ERCOT is responsible for notifying the appropriate TO of such AVR and PSS status changes. QSEs shall supply AVR and PSS status logs to ERCOT upon request.

Performance tests shall be conducted on Automatic Voltage Regulators every five years or if equipment characteristics are knowingly modified. The test reports should include the minimum and maximum excitation limiters, volts/hertz settings, gain and time constants, type of voltage regulator control function, date tested, and voltage regulator control setting.

Excitation systems, including power system stabilizers, shall also be tested every five (5) years.

#### **2.2.5 Turbine Speed Governors**

All governors must be placed in-service.

Governor performance tests should be conducted at least every two years and results used in analysis as described in Section 6.2.1, Turbine Governor Speed Regulation Tests. A sample of such tests may be found in Section 6.2.1.2, Example of a Turbine Governor Speed Regulation Test for Mechanical Hydraulic Governor. Every effort should be made to maintain governors with a five percent (5%) droop characteristic.

## SECTION 2: SYSTEM OPERATIONS

There are other elements that can contribute to poor governor response. These include:

- Governor dead band. Maximum intentional dead band:  $\pm 0.036$  Hz.
- Valve position limits
- Blocked governor operation
- Control mode
- Adjustable rates or limits
- Boiler/turbine coordinated control or set point control action
- Automated "reset" or similar control action of the turbine's MW set point.

Every attempt should be made to minimize the effects of these elements on the governor operation for the duration of all frequency deviations. Each QSE should monitor its units to verify that these elements do not contribute to a governor droop characteristic greater than five percent (5%).

### 2.2.6 Performance/Disturbance/Compliance Analysis

Performance/Disturbance/Compliance analysis shall be performed by the ERCOT Control Area Authority for the purpose of ensuring conformance to published control criteria of ERCOT.

The Control Area Authority shall make a regular report on selected system disturbances, documenting the response of individual Qualified Scheduling Entities together with an ERCOT summary. In addition, Power Generation Companies, Qualified Scheduling Entities and individual members of the ERCOT Performance Disturbance Compliance Working Group (PDCWG) are encouraged to work within their respective companies to enhance the performance of individual generating units and control systems through application of the results of the Working Group studies.

ERCOT Compliance communicates with the Market Participants as appropriate to ensure compliance and improve performance.

As necessary, a Contingency Reserve Adjustment (CRA) will be calculated by the PDCWG and submitted to the Reliability and Operations Subcommittee for review and approval. ERCOT will include the CRA in the daily Ancillary Service plan.

### 2.2.7 Time Error And Time Synchronization

#### 2.2.7.1 Time Error

Sustained frequency deviations from scheduled frequency result in time error. Time error will be monitored and controlled in ERCOT as follows:

#### *Time Error Monitoring*

ERCOT will monitor accumulated time error and initiate time corrections. The instantaneous time error is available to all ERCOT QSEs in the Market Information System (MIS). When time error is equal to or greater than  $\pm 3$  seconds, ERCOT may initiate a time correction. The correction will be terminated when the error is less than  $\pm 0.5$  seconds. The time correction may be postponed if it is determined that load patterns in the immediate future will result in the desired time correction; however, at no time should the accumulated time error be allowed to exceed five (5) seconds.

## CHAPTER 25. SUBSTANTIVE RULES APPLICABLE TO ELECTRIC SERVICE PROVIDERS

### Subchapter S. WHOLESALE MARKETS.

#### §25.503. Oversight of Wholesale Market Participants.

- (a) **Purpose.** The purpose of this section is to establish the standards that the commission will apply in monitoring the activities of entities participating in the wholesale electricity markets, including markets administered by the Electric Reliability Council of Texas (ERCOT), and enforcing the Public Utility Regulatory Act (PURA) and ERCOT procedures relating to wholesale markets. The standards contained in this rule are necessary to:
- (1) protect customers from unfair, misleading, and deceptive practices in the wholesale markets, including ERCOT-administered markets;
  - (2) ensure that ancillary services necessary to facilitate the reliable transmission of electric energy are available at reasonable prices;
  - (3) afford customers safe, reliable, and reasonably priced electricity;
  - (4) ensure that all wholesale market participants observe all scheduling, operating, reliability, and settlement policies, rules, guidelines, and procedures established in the ERCOT procedures;
  - (5) clarify prohibited activities in the wholesale markets, including ERCOT-administered markets;
  - (6) monitor and mitigate market power as authorized by the Public Utility Regulatory Act (PURA) §39.157(a) and prevent market power abuses;
  - (7) clarify the standards and criteria the commission will use when reviewing wholesale market activities;
  - (8) clarify the remedies for non-compliance with the Protocols relating to wholesale markets; and
  - (9) prescribe ERCOT's role in enforcing ERCOT procedures relating to the reliability of the regional electric network and accounting for the production and delivery among generators and all other market participants, and monitoring and obtaining compliance with operating standards within the ERCOT regional network.
- (b) **Application.** This section applies to all market entities, as defined in subsection (c) of this section.
- (c) **Definitions.** The following words and terms when used in this section shall have the following meaning, unless the context indicates otherwise:
- (1) **Artificial congestion** — Congestion created when multiple foreseeable options exist for scheduling, dispatching, or operating a resource, and a market participant chooses an option that is not the most economical, that foreseeably creates or exacerbates transmission congestion, and that results in the market participant being paid to relieve the congestion it caused.
  - (2) **Efficient operation of the market** — Operation of the markets administered by ERCOT, consistent with reliability standards, that is characterized by the fullest use of competitive auctions to procure ancillary services, minimal cost socialization, and the most economical utilization of resources, subject to necessary operational and other constraints.
  - (3) **ERCOT procedures** — Documents that contain the scheduling, operating, planning, reliability, and settlement procedures, standards, and criteria that are public and in effect in the ERCOT power region, including the ERCOT Protocols and ERCOT Operating Guides as amended from time to time but excluding ERCOT's internal administrative procedures. The Protocols generally govern when there are inconsistencies between the Protocols and the Operating Guides, except when ERCOT staff, consistent with subsection (i) of this section, determines that a provision contained in the Operating Guides is technically superior for the efficient and reliable operation of the electric network.
  - (4) **Market entity** — Any person or entity participating in the ERCOT-administered wholesale market, including, but not limited to, a load serving entity (including a municipally owned utility and an electric cooperative,) a power marketer, a transmission and distribution utility, a power generation company, a qualifying facility, an exempt wholesale generator, ERCOT,

## CHAPTER 25. SUBSTANTIVE RULES APPLICABLE TO ELECTRIC SERVICE PROVIDERS

### Subchapter S. WHOLESALE MARKETS.

#### §25.503(c)(4) continued

and any entity conducting planning, scheduling, or operating activities on behalf of, or controlling the activities of, such market entities.

- (5) **Market participant** – A market entity other than ERCOT.
- (6) **Resource** — Facilities capable of providing electrical energy or load capable of reducing or increasing the need for electrical energy or providing short-term reserves into the ERCOT system. This includes generation resources and loads acting as resources (LaaRs).
- (d) **Standards and criteria for enforcement of ERCOT procedures and PURA.** The commission will monitor the activities of market entities to determine if such activities are consistent with ERCOT procedures; whether they constitute market power abuses or are unfair, misleading, or deceptive practices affecting customers; and whether they are consistent with the proper accounting for the production and delivery of electricity among generators and other market participants. When reviewing the activities of a market entity, the commission will consider whether the activity was conducted in a manner that:
  - (1) adversely affected customers in a material way through the use of unfair, misleading, or deceptive practices;
  - (2) materially reduced the competitiveness of the market, including whether the activity unfairly impacted other market participants in a way that restricts competition;
  - (3) disregarded its effect on the reliability of the ERCOT electric system; or
  - (4) interfered with the efficient operation of the market.
- (e) **Guiding ethical standards.** Each market participant is expected to:
  - (1) observe all applicable laws and rules;
  - (2) schedule, bid, and operate its resources in a manner consistent with ERCOT procedures to support the efficient and reliable operation of the ERCOT electric system; and
  - (3) not engage in activities and transactions that create artificial congestion or artificial supply shortages, artificially inflate revenues or volumes, or manipulate the market or market prices in any way.
- (f) **Duties of market entities.**
  - (1) Each market participant shall be knowledgeable about ERCOT procedures.
  - (2) A market participant shall comply with ERCOT procedures and any official interpretation of the Protocols issued by ERCOT or the commission.
    - (A) If a market participant disagrees with any provision of the Protocols or any official interpretation of the Protocols, it may seek an amendment of the Protocols as provided for in the Protocols, appeal an ERCOT official interpretation to the commission, or both.
    - (B) A market participant appealing an official interpretation of the Protocols or seeking an amendment to the Protocols shall comply with the Protocols unless and until the interpretation is officially changed or the amendment is officially adopted.
    - (C) A market participant may be excused from compliance with ERCOT instructions or Protocol requirements only if such non-compliance is due to communication or equipment failure beyond the reasonable control of the market participant; if compliance would jeopardize public health and safety or the reliability of the ERCOT transmission grid, or create risk of bodily harm or damage to the equipment; if compliance would be inconsistent with facility licensing, environmental, or legal requirements; if required by applicable law; or for other good cause. A market participant is excused under this subparagraph only for so long as the condition continues.

## CHAPTER 25. SUBSTANTIVE RULES APPLICABLE TO ELECTRIC SERVICE PROVIDERS

### Subchapter S. WHOLESALE MARKETS.

#### §25.503(f) continued

- (3) Whenever the Protocols require that a market participant make its "best effort" or a "good faith effort" to meet a requirement, or similar language, the market participant shall act in accordance with the requirement unless:
  - (A) it is not technically possible to do so;
  - (B) doing so would jeopardize public health and safety or the reliability of the ERCOT transmission grid, or would create a risk of bodily harm or damage to the equipment;
  - (C) doing so would be inconsistent with facility licensing, environmental, or legal requirements; or
  - (D) other good cause exists for excusing the requirement.
- (4) When a market participant is not able to comply with a Protocol requirement or official interpretation of a requirement, or honor a formal commitment to ERCOT, the market participant has an obligation to notify ERCOT immediately upon learning of such constraints and to notify ERCOT when the problem ceases. A market participant who does not comply with a Protocol requirement or official interpretation of a requirement, or honor a formal commitment to ERCOT, has the burden to demonstrate, in any commission proceeding in which the failure to comply is raised, why it cannot comply with the Protocol requirement or official interpretation of the requirement, or honor the commitment.
- (5) The commission staff may request information from a market participant concerning a notification of failure to comply with a Protocol requirement or official interpretation of a requirement, or honor a formal commitment to ERCOT. The market participant shall provide a response that is detailed and reasonably complete, explaining the circumstances surrounding the alleged failure, and shall provide documents and other materials relating to such alleged failure to comply. The response shall be submitted to the commission staff within five business days of a written request for information, unless commission staff agrees to an extension.
- (6) A market participant's bids of energy and ancillary services shall be from resources that are available and capable of performing, and shall be feasible within the limits of the operating characteristics indicated in the resource plan, as defined in the Protocols, and consistent with the applicable ramp rate, as specified in the Protocols.
- (7) All statements, data and information provided by a market participant to market publications and publishers of surveys and market indices for the computation of an industry price index shall be true, accurate, reasonably complete, and shall be consistent with the market participant's activities, subject to generally accepted standards of confidentiality and industry standards. Market participants shall exercise due diligence to prevent the release of materially inaccurate or misleading information.
- (8) A market entity has an obligation to provide accurate and factual information and shall not submit false or misleading information, or omit material information, in any communication with ERCOT or with the commission. Market entities shall exercise due diligence to ensure adherence to this provision throughout the entity.
- (9) A market participant shall comply with all reporting requirements governing the availability and maintenance of a generating unit or transmission facility, including outage scheduling reporting requirements. A market participant shall immediately notify ERCOT when capacity changes or resource limitations occur that materially affect the availability of a unit or facility, the anticipated operation of its resources, or the ability to comply with ERCOT dispatch instructions.
- (10) A market participant shall comply with requests for information or data by ERCOT as specified by the Protocols or ERCOT instructions within the time specified by ERCOT instructions, or such other time agreed to by ERCOT and the market participant.
- (11) When a Protocol provision or its applicability is unclear, or when a situation arises that is not contemplated under the Protocols, a market entity seeking clarification of the Protocols shall

## CHAPTER 25. SUBSTANTIVE RULES APPLICABLE TO ELECTRIC SERVICE PROVIDERS

### Subchapter S. WHOLESALE MARKETS.

#### §25.503(f)(11) continued

use the Protocol Revision Request (PRR) process provided in the Protocols. If the PRR process is impractical or inappropriate under the circumstances, the market entity may use the process for requesting formal Protocol clarifications or interpretations described in subsection (i) of this section. This provision is not intended to discourage day to day informal communication between market participants and ERCOT staff.

- (12) A market participant operating in the ERCOT markets or a member of the ERCOT staff who identifies a provision in the ERCOT procedures that produces an outcome inconsistent with the efficient and reliable operation of the ERCOT-administered markets shall call the provision to the attention of the appropriate ERCOT subcommittee. All market participants shall cooperate with the ERCOT subcommittees, ERCOT staff, and the commission staff to develop Protocols that are clear and consistent.
  - (13) A market participant shall establish and document internal procedures that instruct its affected personnel on how to implement ERCOT procedures according to the standards delineated in this section. Each market participant shall establish clear lines of accountability for its market practices.
- (g) **Prohibited activities.** Any act or practice of a market participant that materially and adversely affects the reliability of the regional electric network or the proper accounting for the production and delivery of electricity among market participants is considered a "prohibited activity." The term "prohibited activity" in this subsection excludes acts or practices expressly allowed by the Protocols or by official interpretations of the Protocols and acts or practices conducted in compliance with express directions from ERCOT or commission rule or order or other legal authority. The term "prohibited activity" includes, but is not limited to, the following acts and practices that have been found to cause prices that are not reflective of competitive market forces or to adversely affect the reliability of the electric network:
- (1) A market participant shall not schedule, operate, or dispatch its generating units in a way that creates artificial congestion.
  - (2) A market participant shall not execute pre-arranged offsetting trades of the same product among the same parties, or through third party arrangements, which involve no economic risk and no material net change in beneficial ownership.
  - (3) A market participant shall not offer reliability products to the market that cannot or will not be provided if selected.
  - (4) A market participant shall not conduct trades that result in a misrepresentation of the financial condition of the organization.
  - (5) A market participant shall not engage in fraudulent behavior related to its participation in the wholesale market.
  - (6) A market participant shall not collude with other market participants to manipulate the price or supply of power, allocate territories, customers or products, or otherwise unlawfully restrain competition. This provision should be interpreted in accordance with federal and state antitrust statutes and judicially-developed standards under such statutes regarding collusion.
  - (7) A market participant shall not engage in market power abuse. Withholding of production, whether economic withholding or physical withholding, by a market participant who has market power, constitutes an abuse of market power.
- (h) **Defenses.** The term "prohibited activity" in subsection (g) of this section excludes acts or practices that would otherwise be included, if the market entity establishes that its conduct served a legitimate business purpose consistent with prices set by competitive market forces; and that it did not know, and could not reasonably anticipate, that its actions would inflate prices, adversely affect the reliability of the regional electric network, or adversely affect the proper accounting for the production and delivery

## CHAPTER 25. SUBSTANTIVE RULES APPLICABLE TO ELECTRIC SERVICE PROVIDERS

### Subchapter S. WHOLESALE MARKETS.

#### §25.503(h) continued

of electricity; or, if applicable, that it exercised due diligence to prevent the excluded act or practice. The defenses established in this subsection may also be asserted in instances in which a market participant is alleged to have violated subsection (f) of this section. A market entity claiming an exclusion or defense under this subsection, or any other type of affirmative defense, has the burden of proof to establish all of the elements of such exclusion or defense.

- (i) **Official interpretations and clarifications regarding the Protocols.** A market entity seeking an interpretation or clarification of the Protocols shall use the PRR process contained in the Protocols whenever possible. If an interpretation or clarification is needed to address an unforeseen situation and there is not sufficient time to submit the issue to the PRR process, a market entity may seek an official Protocol interpretation or clarification from ERCOT in accordance with this subsection.
- (1) ERCOT shall develop a process for formally addressing requests for clarification of the Protocols submitted by market participants or issuing official interpretations regarding the application of Protocol provisions and requirements. ERCOT shall respond to the requestor within ten business days of ERCOT's receipt of the request for interpretation or clarification with either an official Protocol interpretation or a recommendation that the requestor take the request through the PRR process.
  - (2) ERCOT shall designate one or more ERCOT officials who will be authorized to receive requests for clarification from, and issue responses to market participants, and to issue official interpretations on behalf of ERCOT regarding the application of Protocol provisions and requirements.
  - (3) The designated ERCOT official shall provide a copy of the clarification request to commission staff upon receipt. The ERCOT official shall consult with ERCOT operational or legal staff as appropriate and with commission staff before issuing an official Protocol clarification or interpretation.
  - (4) The designated ERCOT official may decide, in consultation with the commission staff, that the language for which a clarification is requested is ambiguous or for other reason beyond ERCOT's ability to clarify, in which case the ERCOT official shall inform the requestor, who may take the request through the PRR process provided for in the Protocols.
  - (5) All official Protocol clarifications or interpretations that ERCOT issues in response to a market participant's formal request or upon ERCOT's own initiative shall be sent out in a market bulletin with the appropriate effective date specified to inform all market participants, and a copy of the clarification or interpretation shall be maintained in a manner that is accessible to market participants. Such response shall not contain information that would identify the requesting market participant.
  - (6) A market participant may freely communicate informally with ERCOT employees, however, the opinion of an individual ERCOT staff member not issued as an official interpretation of ERCOT pursuant to this subsection may not be relied upon as an affirmative defense by a market participant.
- (j) **Role of ERCOT in enforcing operating standards.** ERCOT shall develop and submit for commission approval a process to monitor material occurrences of non-compliance with ERCOT procedures, which shall mean occurrences that have the potential to impede ERCOT operations, or represent a risk to system reliability. Non-compliance indicators monitored by ERCOT shall include, but shall not be limited to, material occurrences of schedule control error, failing resource plan performance measures as established by ERCOT, failure to follow dispatch instructions within the required time, failure to meet ancillary services obligations, failure to submit mandatory bids or offers that may apply, and other instances of non-compliance of a similar magnitude.

## CHAPTER 25. SUBSTANTIVE RULES APPLICABLE TO ELECTRIC SERVICE PROVIDERS

### Subchapter S. WHOLESALE MARKETS.

#### §25.503(i) continued

- (1) ERCOT shall keep a record of all such material occurrences of non-compliance with ERCOT procedures and shall develop a system for tracking recurrence of such material occurrences of non-compliance.
  - (2) ERCOT shall promptly provide information to and respond to questions from market participants to allow the market participant to understand and respond to alleged material occurrences of non-compliance with ERCOT procedures. However, this requirement does not relieve the market participant's operator from responding to the ERCOT operator's instruction in a timely manner and should not be interpreted as allowing the market participant's operator to argue with the ERCOT operator as to the need for compliance.
  - (3) ERCOT shall keep a record of the resolution of such material occurrences of non-compliance and of remedial actions taken by the market participant in each instance.
  - (4) ERCOT shall inform the commission staff immediately if the material occurrence of non-compliance is not resolved after the system operator has orally informed the market participant of the problem. The occurrence is not resolved if:
    - (A) the same instance of non-compliance is repeated more than once in a six-month period; or
    - (B) the occurrence continues after ERCOT has first orally notified the operator of the market participant, and subsequently notified, orally or in writing, the supervisor of the operator of the market participant.
- (k) **Standards for record keeping.**
- (1) A market participant who schedules through a qualified scheduling entity (QSE) that submits schedules to ERCOT on behalf of more than one market participants shall maintain records to show scheduling and bidding information for all schedules and bids that its QSE has submitted to ERCOT on its behalf, by interval.
  - (2) All market participants and ERCOT shall maintain records relative to market participants' activities in the ERCOT-administered markets to show:
    - (A) information on transactions, as defined in §25.93(c)(3) of this title (relating to Quarterly Wholesale Electricity Transaction Reports), including the date, type of transaction, amount of transaction, and entities involved;
    - (B) information and documentation of all planned and forced generation and transmission outages including all documentation necessary to document the reason for the outage;
    - (C) information described under this subsection including transaction information, information on pricing, settlement information, and other information that would be relevant to an investigation under this section, and that has been disclosed to market publications and publishers of surveys and price indices, including the date, information disclosed, and the name of the employees involved in providing the information as well as the publisher to whom it was provided; and
    - (D) reports of the market participant's financial information given to external parties, including the date, financial results reported, and the party to whom financial information was reported, if applicable.
  - (3) After the effective date of this section, all records referred to in this subsection except verbally dispatch instructions (VDIs) shall be kept for a minimum of three years from the date of the event. ERCOT shall keep VDI records for a minimum of two years. All records shall be made available to the commission for inspection upon request.
  - (4) A market participant shall, upon request from the commission, provide the information referred to in this subsection to the commission, and may, if applicable, provide it under a confidentiality agreement or protective order pursuant to §22.71(d) of this title (relating to Filing of Pleadings, Documents, and Other Material).



## CHAPTER 25. SUBSTANTIVE RULES APPLICABLE TO ELECTRIC SERVICE PROVIDERS

### Subchapter S. WHOLESALE MARKETS.

#### §25.503 continued

- (l) **Investigation.** The commission staff may initiate an informal fact-finding review based on a complaint or upon its own initiative to obtain information regarding facts, conditions, practices, or matters that it may find necessary or proper to ascertain in order to evaluate whether any market entity has violated any provision of this section.
- (1) The commission staff will contact the market entity whose activities are in question to provide the market entity an opportunity to explain its activities. The commission staff may require the market entity to provide information reasonably necessary for the purposes described in this subsection.
  - (2) If the market entity asserts that the information requested by commission staff is confidential, the information shall be provided to commission staff as confidential information related to settlement negotiations or other asserted bases for confidentiality pursuant to §22.71(d)(4) of this title.
  - (3) If after conducting its fact-finding review, the commission staff determines that a market entity may have violated this section, the commission staff may request that the commission initiate a formal investigation against the market entity pursuant to §22.241 of this title (relating to Investigations).
  - (4) If, as a result of its investigation, commission staff determines that there is evidence of a violation of this section by a market entity, the commission staff may request that the commission initiate appropriate enforcement action against the market entity. A notice of violation requesting administrative penalties shall comply with the requirements of §22.246 of this title (relating to Administrative Penalties). Additionally, for alleged violations that have been reviewed in the informal procedure established by this subsection, the commission staff shall include as part of its prima facie case:
    - (A) a statement either that –
      - (i) the commission staff has conducted the investigation allowed by this section; or
      - (ii) the market participant has failed to comply with the requirements of paragraph (5) of this subsection;
    - (B) a summary of the evidence indicating to the commission staff that the market participant has violated one of the provisions of this section;
    - (C) a summary of any evidence indicating to the commission staff that the market participant benefited from the alleged violation or materially harmed the market; and
    - (D) a statement that the staff has concluded that the market participant failed to demonstrate, in the course of the investigation, the applicability of an exclusion or affirmative defense under subsection (h) of this section.
  - (5) A market entity subject to an informal fact-finding review or a formal investigation by the commission has an obligation to fully cooperate with the investigation, to make its company representatives available within a reasonable period of time to discuss the subject of the investigation with the commission staff, and to respond to the commission staff's requests for information within a reasonable time frame as requested by the commission staff.
  - (6) The procedure for informal fact-finding review established in this subsection does not prevent any person or commission staff from filing a formal complaint with the commission pursuant to §22.242 of this title (relating to Complaints) or pursuing other relief available by law.
- (m) **Remedies.** If the commission finds that a market entity is in violation of this section, the commission may seek or impose any legal remedy it determines appropriate for the violation involved.

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P.U.C. DOCKET NO. 34738

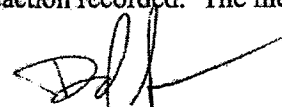
NOTICE OF VIOLATION OF §  
INTERNATIONAL POWER AMERICA, §  
INC., HAYS ENERGY LIMITED §  
PARTNERSHIP, MIDLOTHIAN ENERGY §  
LIMITED PARTNERSHIP, AND ANP § BEFORE THE STATE OFFICE OF  
FUNDING I, LLC OF PURA §36.151(j) §  
AND PUC SUBST. R. §25.503(f) AND (g), § ADMINISTRATIVE HEARINGS  
RELATING TO FAILURE TO ADHERE §  
TO ERCOT PROTOCOLS §5.8.1.1, AND §  
6.5.1.1(1)(e) CONCERNING GOVERNOR §  
IN SERVICE REQUIREMENTS AND §  
FREQUENCY BIAS REQUIREMENTS §  
AND OF PUC SUBST. R. 25.503(f)(10), §  
RELATING TO FAILURE TO COMPLY §  
WITH REQUESTS FOR INFORMATION §  
BY ERCOT WITHIN THE TIME §  
SPECIFIED BY ERCOT INSTRUCTIONS §

CUSTODIAN OF RECORDS AFFIDAVIT

Before me, the undersigned authority, personally appears DAVID MUSSELMAN, who, being by me duly sworn, deposed as follows:

"My name is DAVID MUSSELMAN. I am of sound mind, capable of making this affidavit, and personally acquainted with the facts herein stated. I am employed by International Power America, Inc. (IPA) and my title is Vice President, General Counsel and Secretary. I am a custodian of records for IPA. IPA's business address is 62 Forest Street, Suite 102, Marlborough, MA 01752.

Attached hereto are 18 pages of records from IPA. These said pages are in my custody or subject to my control, supervision or direction. I am able to identify these records as the originals or true and correct copies of the originals. These records were kept in the regular course of business of IPA and it was in the regular course of business of IPA for a person with knowledge of the acts, events, conditions, opinion, or diagnoses, recorded to make the record or to transmit information thereof to be included in such record. The entries on these records were made at or shortly after the time of the transaction recorded. The method of preparation of these records is trustworthy."



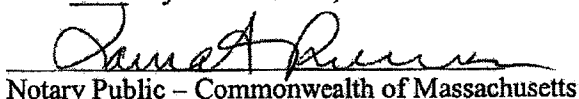
WITNESS (Custodian of Records)

COMMONWEALTH OF MASSACHUSETTS  
SWORN TO AND SUBSCRIBED before me this 18<sup>th</sup> day of November, 2008.

personally appeared before me, the undersigned notary public, and proved to me his/her identity through satisfactory evidence, which were personal knowledge to be the person whose name is signed on the preceding or attached document in my presence on this 18<sup>th</sup> day of November, 2008.



LAURA A. PRENSNER, Notary Public  
My Commission Expires July 23, 2015

  
Notary Public - Commonwealth of Massachusetts



November 11, 2004

ANP FUNDING I LLC  
Ms. Tina Bennett  
62 Forest Street, Suite 102  
Marlborough, MA 01752

Subject: August 18, 2004 Disturbance Investigation

Ms. Bennett:

On Wednesday, August 18<sup>th</sup> at 09:59:28 ERCOT experienced a generation loss of approximately 1115 MW from two separate plants which resulted in a frequency drop from 60.04 Hz to 59.77 Hz. Frequency was not restored until 10:16:46 after a total elapsed time of 17 minutes and 18 seconds. NERC Policy 1B, Disturbance Control Standard, as applied to ERCOT defines a reportable event as a single contingency loss of 1000 to 1250 MW of generation. Failure to restore frequency within 15 minutes can result in a significant Responsive Reserve Service requirement increase for ERCOT.

Your QSE's performance during this event has been identified as a potential contributor to ERCOT's failure to meet NERC Policy 1B requirements. Data for your QSE's performance during this disturbance is attached for your review. We realize there may be extenuating circumstances that may have hampered your QSE's ability to respond to this event. Any impediments that prohibited your QSE from meeting its obligations should be documented in your response.

We require your written comments back to ERCOT Compliance via email at [ct@ercot.com](mailto:ct@ercot.com) no later than close of business on Wednesday, November, 24, 2004.

Mark R. Henry, P.E.  
ERCOT Compliance  
(512)-225-7021

Attachment: ANP's Performance During August 18<sup>th</sup>, 2004 Disturbance

TRE 002483

Cc: Bob Helton - ANP  
Fiona Bell - ANP  
Danielle Jaussaud - Market Oversight, Public Utility Commission of Texas  
Larry Grimm - ERCOT Director of Compliance  
Lane Robinson - ERCOT Compliance  
Pat Moast - ERCOT Wholesale Client Services  
Dwayne Preston - ERCOT Wholesale Client Services

TRE 002484

HIGHLY SENSITIVE PROTECTED MATERIALS PROVIDED PURSUANT TO PROTECTIVE ORDER ISSUED IN DOCKET NO. 34738

000111



International Power  
America

ANP Funding I, LLC  
No. 1000 Street, Suite 400  
Marlborough  
Massachusetts 01752  
USA  
Tel: +1 978 382 9521  
Fax: +1 978 382 9520

November 23, 2004

Mark R. Henry, P.E.  
ERCOT Compliance  
Electric Reliability of Texas  
Address  
Austin, Texas Zip  
VIA e-mail: [ct@ercot.com](mailto:ct@ercot.com)

RE: August 18, 2004 Disturbance Investigation

Dear Mr. Henry:

ANP Funding I, LLC (ANP) is providing this letter in response to ERCOT's letter dated November 11, 2004 requesting comment on its performance as a QSE during the August 18<sup>th</sup> disturbance. Specifically, ERCOT has asked ANP to address its SCE at 10:11:50 and 10:14:20. For interval ending 10:00, ANP had a scheduled energy of 664 MWs and 0 MWs ERCOT deployments. For interval ending 10:15, ANP had a scheduled energy decrease of 9 MWs (to 655 MWs) and down balancing deployment of 205 MWs. Per ERCOT data, its total obligation was 487.9 MWs and 541.47 MWs for times 10:11:50 and 10:14:20, respectively. Per ERCOT data, its SCE was 13.9 MWs or 2.84% error and 14.47 MWs or 2.67% for times 10:11:50 and 10:14:20, respectively.

During the interval in question, ANP's units ramped by 30.9% of schedule in response to ERCOT's down balancing deployment. ANP uses an ERCOT approved ramping algorithm to establish unit set points between intervals. The ramping algorithm produced set points of 485.88 MWs and 536.79 MWs for time 10:11:50 and 10:14:20, respectively (see Attachment 1). This contributed approximately 2.02 MWs or .4% error and 4.68 MWs or .9% error to the SCE. Two of its three units on line at the time were on automatic generation control and ANP's internal data indicates that all three ANP units were generating in-line with the set points (see Attachment 2). Although the set point difference described above explains only a small portion ANP's SCE for the times in question, ANP is unable to provide further explanation of its SCE at this time. ANP will continue to monitor its QSE performance in this area.

As always, ANP strives to comply with all ERCOT Protocols, instructions and regulatory requirements in the operation of its plants. In all respects, ANP believes that it acted as a prudent steward of its assets and complied with the applicable market rules and regulatory obligations. If you have any further questions, please contact me at 508 382-9521.

Regards,

Tina M. Bennett  
VP Risk Management

Attachments

Bob Helton - ANP  
Fiona Bell - ANP

TRE 002491



February 7, 2005

ANP Funding I, LLC  
Ms. Tina Bennett  
62 Forest Street, Suite 102  
Marlborough, MA 01752

Subject: August 18, 2004 Disturbance Investigation – Follow-up to Initial Response

Ms. Bennett:

ERCOT Compliance is continuing its investigation into the August 18, 2004 DCS Event. After reviewing data supplied by ANP and from discussions with various ERCOT working groups, several questions arise.

First, ANP's original response letter indicated that it was unable to provide further explanation of its SCE at the time the response letter was written. Has ANP discovered any new information since the November response letter?

Second, though ANP's contribution to the DCS was marginal, ERCOT Compliance would like to expand its knowledge of QSE operations during major frequency events. What is ANP's procedure to follow ERCOT system frequency and control SCE? What sort of thresholds does ANP use to maintain unit set points?

Finally, we encourage all QSEs to participate in meetings of the Performance Disturbance Compliance Working Group (PDCWG). The PDCWG analyses data from frequency disturbances and determines how best ERCOT can respond to future frequency events, such as the August 18, 2004 DCS event. The PDCWG meeting schedule is posted on the ERCOT calendar.

ERCOT will not be required to carry additional reserves per the recent NERC Resources Subcommittee's decision. Though ERCOT is pleased with NERC's decision, the investigation into QSEs with questionable performance will continue.

We appreciate your assistance in our on-going investigation. Written comments must be sent back to ERCOT Compliance via email at [ct@ercot.com](mailto:ct@ercot.com) no later than close of business on Tuesday, February 22 2005.

Mark R. Henry, P.E.  
ERCOT Compliance  
(512)-225-7021

TRE 002650

Cc: Bob Helton – ANP  
Fiona Bell - ANP  
Danielle Jaussaud – Market Oversight, Public Utility Commission of Texas  
Larry Grimm – ERCOT Director of Compliance  
Lane Robinson – ERCOT Compliance  
Pat Moast – ERCOT Wholesale Client Services  
Dwayne Preston – ERCOT Wholesale Client Services

TRE 002651

HIGHLY SENSITIVE PROTECTED MATERIALS PROVIDED PURSUANT TO PROTECTIVE ORDER ISSUED IN DOCKET NO. 34738

000114

**From:** Bennett, Tina <TBennett@anpower.com>  
**Sent:** Tuesday, February 22, 2005 12:28 PM  
**To:** 1 ERCOT Compliance Team <ct@ercot.com>  
**Cc:** Bell, Fiona <FBell@anpower.com>; Helton, Bob <BHELTON@anpower.com>; Tyus, Bill <btyus@anpower.com>; Shaw, Billy <BShaw@anpower.com>; Mansfield, Jeff <JMansfield@anpower.com>  
**Subject:** ANP Response to ERCOT Disturbance

---

Mark -

Per our conversation earlier today, ANP Funding I, LLC (ANP) requests an extension of time to respond to ERCOT's follow-up request dated February 7<sup>th</sup>, 2005. At this time, ANP has not discovered any new information since its November response that conclusively explains its SCE during the period of the disturbance. As noted in its original response, ANP's internal data shows that at the time of the disturbance all three units generating were in-line with their set points. ANP is continuing to review the data for accuracy. If it is able to determine the cause of the SCE, ANP will provide a formal response to ERCOT.

As always, ANP strives to comply with all ERCOT Protocols, instructions and regulatory requirements in the operation of its plants. In all respects, ANP believes that it acted as a prudent steward of its assets and complied with the applicable market rules and regulatory obligations. If you have any further questions, please contact me at 508 382-9521.

Regards,  
Tina Bennett

TRE 002400

HIGHLY SENSITIVE PROTECTED MATERIALS PROVIDED PURSUANT TO PROTECTIVE ORDER ISSUED IN DOCKET NO. 34738

000115



---

**From:** Staples, Robert [mailto:rstaples@ercot.com]  
**Sent:** Friday, September 09, 2005 11:33 AM  
**To:** Bennett, Tina  
**Cc:** Grimm, Larry; Preston, Dwayne; Bell, Fiona; Helton, Bob  
**Subject:** ANP Action Required based on PDCWG Disturbance Review  
**Importance:** High

Tina,

On August 8<sup>th</sup> & 9<sup>th</sup>, 2005 the Performance Disturbance Compliance Working Group (PDCWG) and ERCOT staff reviewed the high-frequency event that occurred on July 18<sup>th</sup>, 2005 around 2:00 am where frequency went above 60.2 Hz.

In the process of reviewing this event, the PDCWG determined that ANP did not provide governor response during this event. The Protocols Section 5.8.1.1, Governor in Service, states the following:

"At all times a Generation Resource is on line, its turbine governor shall remain in service and be allowed to respond to all changes in system frequency. Generation Entities shall not reduce governor response on individual Resources during abnormal conditions without ERCOT's consent (conveyed by way of the Generation Entity's QSE) unless equipment damage is imminent."

Assuming 5% droop on your units, ANP's response to this high frequency event should have been 15 MWs down. However, our data indicates that your units did not perform as expected during this high frequency event.

Data indicating your QSE's performance is provided in the attached documents. Please explain what happened during this event and identify actions to correct ANP's inadequate governor response along with a timeframe for implementation.

If you need additional data or have questions, feel free to contact me.

Please respond directly to me via email no later than Friday, September 23<sup>rd</sup>, 2005.

Robert W. Staples, III.  
Associate Reliability Analyst  
NERC Compliance Group  
Electric Reliability Council of Texas  
Office: 512-225-7036



International Power  
America

~~CONFIDENTIAL~~

American National Power, Inc.  
62 Forest Street, Suite 102  
Marlborough  
Massachusetts 01752  
U.S.A.  
Tel +1 508 382 9300  
Fax +1 508 382 9400  
www.ipplc.com

January 31, 2006

Mark Henry  
ERCOT Compliance  
Electric Reliability of Texas  
7620 Metro Center Drive  
Austin, Texas 78744

RE: ERCOT's Request for Information on Generator Governor Response during an event on July 19, 2005

Dear Mr. Henry

Below, please find ANP Funding I, LLC's (ANP) response to information requested by ERCOT regarding ANP portfolio's governor response during an event on July 19, 2005.

I. The ERCOT Protocols and ERCOT Operating Guides regarding frequency response do not directly apply to ANP's technology.

The ERCOT Frequency response requirements outlined in Section 5.8 of the ERCOT Protocols and Section 2.2.5 of the ERCOT Operating Guides appear to be specifically written for conventional steam turbine technology. ANP's CCGT's are state of the art Alstom GT24 series units. This technology does not primarily use turbine speed governor valves as described in the above referenced documents, but controls the load through very accurate control of the fuel and air being fed into the gas turbine by using gas control valves and air inlet guide vanes. ERCOT recognized this during the commissioning of the units and accepted the manufacturer's tests since the ERCOT prescribed tests did not apply.

II. ANP's technology and CCGT's in general needs to be specifically designed to operate in a frequency responsive mode.

CCGT units in general do not physically respond as required to changes in system frequency. Frequency regulation capability has to be built into the burner firing control logic. The ANP GT24 technology is capable of responding to changes in system frequency by signals which change the gas turbine firing temperatures. This method can provide an immediate and rapid response to frequency deviations however by definition it also creates severe temperature gradients within the gas turbine combustion chambers causing excessive wear and tear on the equipment.

Because ERCOT originally accepted ANP's technology recognizing that the ERCOT Frequency response requirements did not apply, ANP did not believe it had an obligation under this section of the Protocols or any other section to provide frequency response. To avoid the operational issues

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January 31, 2006  
Page 2 of 2

described above, ANP disabled the frequency regulation control, which is why the plant did not respond on July 19<sup>th</sup> 2005.

III. Providing Frequency Response in the Future.

ANP recognizes the important role frequency response plays in providing stability to the ERCOT system. ANP believes that a set of requirements could be developed specific to its technology that would provide ERCOT the frequency response it desires for system stability while minimizing negative impacts on CCGT units. As such, ANP would like to work with the ERCOT staff to determine if there is a reasonable method of operation that would provide the response that ERCOT is seeking. ANP's engineering staff is in the process of evaluating the response characteristics of these units and would like to set a plan and timeframe in which we could work with ERCOT staff to resolve the frequency response issue.

Please give me a call at your earliest convenience to discuss who ANP should work with at ERCOT to develop and test appropriate frequency response criteria that can be applied to CCGT technology.

Sincerely,

A handwritten signature in cursive script, appearing to read "Tina M. Bennett".

Tina M. Bennett  
VP Risk Management

Cc: Bruce Levy - ANP President  
Bob Helton - ANP Regulatory Affairs  
Robert Staples - ERCOT Compliance  
Jeff Healy - ERCOT Operations  
Dwayne Preston - ERCOT Client Representative

DJ 2-15

000289

000118



March 13, 2006

*VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED AND FACSIMILE*

ANP FUNDING I LLC  
Ms. Tina Bennett  
62 Forest Street, Suite 102  
Marlborough, MA 01752

Subject: ANP's Response to ERCOT's Request for Information on Generator Governor Response during an event on July 19, 2005

Dear Ms. Bennett:

The Electric Reliability Council of Texas, Inc.'s Compliance Department (ERCOT Compliance) has reviewed your response and provides the following comments.

I. Providing Frequency Response in the Future

As was discussed on the telephone on January 31, 2006, ERCOT Compliance highly recommends that ANP have a representative participate in all Performance Disturbance Compliance Working Group (PDCWG) meetings to take advantage of the technical expertise available from the members of this group. The confidentiality of the PDCWG will allow ANP to gain insight on how other QSEs tune their AGC system. In order to join the PDCWG email distribution list, ANP's designated representative will need to request access to this list by going to <http://lists.ercot.com/cgi-bin/majordomo>. ANP's designated representative will be required to sign an ERCOT Confidentiality Agreement prior to attending any meetings or receiving material.

Participation in the PDCWG would ensure ANP's interests are adequately represented. A representative from ERCOT Operations and ERCOT Compliance always attends the PDCWG meetings as well as many QSE representatives.

II. ERCOT Protocols and ERCOT Operating Guides regarding frequency response apply to all Generation Resources.

Protocol 5.8.1.1, Governor in Service, states that "At all times a Generation Resource is on line, its turbine governor shall remain in service and be allowed to respond to all changes in system frequency." These requirements and related requirements became effective in the Protocols on June 1, 2004 (PRR468) and in the Operating Guides on April 1, 2005 (OGRR159).

*What are the ERCOT-prescribed tests that ANP is referring to in their letter dated January 31, 2006?*

However, the expectation for units to provide frequency response has been in place for a long time, especially regarding QSEs that provide Responsive Reserve Service, as can be found in Protocol 6.5.4 (1). It has been a recommendation in NERC Standards for years to hold specific droop settings and to report blocked response.

III. ANP's technology concern regarding frequency responsive mode

*When ANP disabled the frequency regulation control, was ERCOT informed of this?* Protocol 5.8.1.2, Reporting, clearly states that the QSE must inform ERCOT. Please see the language below.

"When the governor of a Generation Resource is blocked while the Resource is operating, the QSE shall promptly inform ERCOT. The QSE shall also supply governor status logs to ERCOT upon request."

*When running these units in frequency regulation control, has ANP reviewed its governor dead band to help prevent unnecessary wear and tear on the units?* The maximum intentional dead band allowed as stated in ERCOT Operating Guide 2.2.5 is +/- 0.036 Hz.

*Furthermore, please provide documentation which shows that ERCOT recognized that the ERCOT Frequency response requirements did not apply for ANP's technology.*

A response from ANP addressing the three areas discussed in this letter is requested by Monday, March 27, 2006.

If you have any questions or concerns, please contact me directly.

Mark Henry, P.E.  
Compliance Manager  
ERCOT Compliance  
512-225-7021

CC:  
ERCOT Compliance Team  
Jeff Healy – ERCOT Operations  
Dwayne Preston – ERCOT Client Representative  
Bob Helton – ANP Funding I LLC  
Bruce Levy – ANP Funding I LLC  
Fiona Bell – ANP Funding I LLC

**From:** Staples, Robert  
**Sent:** Wednesday, March 22, 2006 1:58 PM  
**To:** Bennett, Tina <TBennett@anpower.com>  
**Cc:** Preston, Dwayne <dpreston@ercot.com>; Grimm, Larry <lgrimm@ercot.com>; Healy, Jeff <jhealy@ercot.com>; Helton, Bob <bhelton@anpower.com>; 'btyus@anpower.com'; 'blomoe@anpower.com'  
**Subject:** ERCOT Request for Information on Generator Governor Response  
**Attach:** Protocols\_Guides\_Excerpts\_Gov\_Resp.doc; Governor Response Terms.doc; 2006\_Q1\_ANP\_Event\_Summary.xls

---

Tina,

ERCOT Compliance has reviewed five Measurable Events, as defined in Protocol Section 5.8, which occurred in January 2006. ERCOT's governor response at the B+30 point has fallen below the required 420 MW / 0.1 Hz, which has prompted ERCOT to review individual QSE performance.

In the process of this review, it has been determined that the governor response from your generators was inadequate. Excerpts from the Protocols and Operating Guides detailing the expectations regarding governor response from generators are attached.

According to data put together by ERCOT Compliance, the governor response from all generators in your QSE was not adequate to meet a five percent (5%) droop characteristic based on the capacity necessary to cover your RRS obligation.

Data indicating your QSE's performance is provided in the attached documents. Please provide an explanation of what prevented your QSE from providing adequate governor response. We also require a mitigation plan detailing what actions you will undertake to correct your governor's performance along with a timeframe for implementation.

One possible explanation for your inadequate governor response is that ANP does not telemeter a real-time frequency bias to ERCOT. Please detail how this will be corrected in your mitigation plan.

If you need additional data or have questions, feel free to contact me.

Please respond directly to me via email no later than Friday, April 7<sup>th</sup>, 2006.

Regards,  
Robert W. Staples, III.  
Associate Reliability Analyst  
NERC Compliance Group  
Electric Reliability Council of Texas  
Office: 512-225-7036

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TRE 002238

HIGHLY SENSITIVE PROTECTED MATERIALS PROVIDED PURSUANT TO PROTECTIVE ORDER ISSUED IN DOCKET NO. 34738

000121



International Power  
America

ANP Funding I, LLC  
60 Forest Street, Suite 100  
Marlborough, Massachusetts 01752  
U.S.A.  
Tel: +1 508 382 9300  
Fax: +1 508 382 9400  
www.ipk.com

April 7, 2006

Mark Henry, P.E.  
ERCOT Compliance  
Electric Reliability of Texas  
7320 Metro Center Drive  
Austin, TX 78744

RE: ERCOT's request for information on Generator Governor Response during an event on July 19, 2006 and several events in January 2006

Dear Mark,

This letter is in response to your letter dated the 13<sup>th</sup> March 2006 and the also the Robert Staples (ERCOT compliance) e-mail dated the 22<sup>nd</sup> March 2006.

Further to your recommendation I can now confirm that ANP has nominated Dr. Nikolay Moutafchiev to participate in future Performance Disturbance Compliance working groups. Dr. Moutafchiev works for our internal engineering group and he has already signed the ERCOT confidentiality agreement.

In response to the specific questions you raised. The 10 ANP Funding I, LLC (ANP) units in Texas (located at Midlothian and Hays) were commissioned in 2000 through 2002, and most of the people who were involved in the plant construction and commissioning have now left to work on other projects, however having looked back into the past documentation, there was a brief exchange of correspondence in June 2000 (attached) relating to the "turbine governor speed regulation tests". This correspondence detailed the technical differences in the generation technology that ANP owns and postulated that the standard ERCOT "turbine governor speed regulation test" (as detailed in Appendix I. A.1 c) was not applicable for this kind of technology. ERCOT via a Mr. J Adams accepted this position.

From this because the technology was different from that described in ERCOT's test procedures, it was incorrectly assumed that the units did not have an obligation to participate in the provision of frequency response. As far as I can establish, frequency sensitive operation was "turned off" in the control system at this time.

Going forward we have now set up an internal working group looking at what we need to do to bring all our units into full compliance and understand what we need to do this while ensuring operational stability and reliability of our units. We have established a draft plan to detail what we need to do to work towards full compliance. The key steps of the plan are;

- Evaluate the capability of our "different technology units" (dual combustion gas turbines, with HRSG's operating in sliding pressure control and operating as a single shaft combined cycle unit) to provide frequency response under different system conditions.



- Obtain a thorough understanding on the design of the control system, and what if any modifications will be necessary to deliver full compliance while maintaining operational stability and reliability. This may involve discussions and a work program with the Original Equipment Manufacturer.
- Review all the historical commissioning data and the frequency response data from the simulated frequency response tests that were carried out in 2000 and 2001.
- Understand the static and dynamic dead band characteristics of the governor.
- Carry out some initial tests on one unit to understand its dynamic response and stability to differing system conditions. We currently have Midlothian Unit 1 set and running with a 5% droop and a  $\pm 0.036$  Hz dead band as the first step in this evaluation.
- Carry out any control system and/or hardware modifications across all 10 units to enable the units to be fully compliant
- Test these changes across all 10 units.

We anticipate it will take about 4 months to work through our plan, although some of the DCS and hardware modifications can only be carried out with the units off line, so this may extend this program particularly as we go into the summer and only expect to have limited opportunities to shut down a unit.

In addition to the above we have initiated a discussion with our QSE to provide a bias on the SCE signal. It will take them a number of days to amend their algorithm, but this part should be completed by the middle of April

I would be happy to keep you apprised of our design review and it will be good to discuss our final solution with you before we implement it to ensure you are satisfied that all the issues have been addressed.

Sincerely,

  
Tina Bennett  
Vice President, Risk Management

cc: Jeff Healy - ERCOT Operations  
Dwayne Preston - ERCOT Client Relations  
Robert Staples - ERCOT Compliance  
Bob Helton - ANP Funding I, LLC  
Bruce Levy - ANP Funding I, LLC  
Keith Ulyett - ANP Funding I, LLC

1 enclosure





May 17, 2006

ANP Funding I LLC  
Ms. Tina Bennett  
62 Forest Street, Suite 102  
Marlborough, MA 01752

Subject: Notice of Non-Compliance with ERCOT Protocols for Lack of Frequency Bias

Ms. Bennett:

During review of system disturbances starting in the summer of 2005 and extending through the first quarter of 2006, ERCOT Compliance contacted ANP QSE for information involving frequency response of its portfolio. In the ensuing correspondence, it became apparent that ANP QSE had not been providing a valid frequency bias signal to ERCOT. Protocol 6.5.1.1(1)(c) requires each QSE to provide this quantity for its portfolio. Operating Guides 2.2.3.1 further specifies:

In the Schedule Control Error equation, QSEs shall have bias settings that approximate the measured frequency response characteristic of their On-line Resources. This bias setting should be changed when significant On-line generating capability changes or when their Resources' frequency response characteristics change.

ANP's letter of April 7, 2006 indicated that QSE personnel believed that they did not have to supply a frequency bias, or provide frequency response, due to communications with ERCOT Operations. However, the email submitted by ANP to justify this indicates that ERCOT Operations directed ANP to include a 5% governor droop value. Your letter also indicates that governors were not in service and that adjustments were not known to be in compliance with other applicable Operating Guides requirements. Our data indicates possible issues but the data do not clearly indicate a lack of governor action. In this situation, we request that ANP complete all of the items listed in its mitigation plan described in the letter of April 7 and report to ERCOT when the work is completed.

ERCOT Compliance will post this finding unless ANP provides further written information within 10 calendar days indicating why this lack of frequency bias was not a violation of the above Protocols and Operating Guides requirements. A violation notice will be posted on the ERCOT Public Web Sites. The name of the QSE will be included in monthly Compliance Reports to the ERCOT Board. Additionally, this information will be provided in the next quarterly reports to the NERC Board with subsequent posting by NERC. A copy of this notice will be sent to the designated Public Utility Commission of Texas (PUCT) Staff.

Please provide a response to ERCOT Compliance by Friday, May 31, 2006. I request that ANP confirm its progress on action items listed in the April 7 letter to ERCOT, as well as address the issue of non-compliance with the frequency bias requirement cited above.

Mark R. Henry, P.E.  
ERCOT Compliance  
(512) 225-7021

Cc: Larry Grimm – ERCOT Compliance  
Danielle Jaussaud – PUCT WMO  
Tom Hunter – PUCT WMO  
Lane Lanford – PUCT WMO  
Jess Totten – PUCT WMO  
Adib Parviz- PUCT WMO



November 9, 2006

Tina Bennett  
ANP Marketing Company  
62 Forest Street, Suite 102  
Marlborough, Ma. 1752

Dear Mrs. Bennett:

I wish to start this letter by telling you that the ERCOT Compliance Team appreciates the time and effort that you and your group put into the audit process. The preparation done by your employees helped to facilitate the audit. We also appreciate the fact that you were receptive to accommodating our two half day sessions to get the audit done considering the travel time involved.

While it appears that in most areas of operations, ANP has the capability to perform to the expectations of ERCOT, and in compliance with the requirements of the Operating Guides, Protocols and applicable NERC standards. There are some issues that we need to discuss and follow up on in the future before we can conclude our compliance assessment:

- 1) It appears that ANP has outages planned for units through next spring. These do not appear to have been entered in the outage scheduler at ERCOT. The twelve month rolling outage requirements in ERCOT Protocol 8.1.3.2 state that outages should be entered 12 months ahead of scheduled outage date and updated if changes occur.
- 2) There is a question about the APX ability to provide functional services if there is a loss of their primary control center. The San Jose Center needs to have a rudimentary plan to manage and restore functionality following a catastrophe. There is also some concern about a single RTU in Dallas.
- 3) The Operators are required to have 40 hours of emergency training each year. We will need to check back at the end of the year to see if this has been accomplished and documented.

There are several recommendations that ERCOT Compliance has to offer. We feel that this will help ANP not only to remain compliant, but enhance their operation.

- 1) While ANP has mostly hands on training, they should try to document training objectives and keep documentation on all operator participation. This could include classes that are conducted by Helton and tests that are given to Operators after a training period as well as the 40 hour mandatory training that should be documented.

- 2) ERCOT Compliance recommends that the authority from the QSE Operators to the plants that they deal with be documented so that all parties are aware of the authority of QSE Operators to direct the actions of the plants up to and including tripping of units if required.
- 3) ERCOT Compliance recommends that the authority granted by management to the QSE Operators be stated in the job description and posted in the control room area, signed by management to grant the authority of Operators to take what ever steps are necessary to preserve the integrity of the system.
- 4) ERCOT Compliance recommends that ANP at ERCOT "Flat Frequency" procedures to their operator procedure manual for reference when needed.
- 5) We recommend that ANP provide training to Operators on the new performance measures since ANP has fallen short on several trial scores during the spring season. This measurement becomes effective on October 1, 2006. It is also useful to review momentary effects of RRS step down deployments on SCE and consider shadow scoring of RRS performance.
- 6) We suggest that Operators be provided with training on how the step deployment of NSRS affects SCE.
- 7) While it is apparent that Plant Operators work closely with QSE Operators, we recommend that test results, voltage profiles, unit reactive limits and ERCOT dispatch instructions be reviewed with QSE Operators and their relation to current voltage and MVAR output be displayed on SCADA.
- 8) ERCOT's voltage control process should also be reviewed; a section in the procedural manual on this topic (including reactive capabilities and URL) is recommended.
- 9) We suggest that Operators receive more training on the importance of plant and QSE coordination of PSS to help reinforce the need for plant operators to keep the PSS in service, logged when issues arise, and promptly report to ERCOT Operations.

Again, we appreciate the time that you spent with us. We would like to have any comments that you have back to ERCOT Compliance by November 22, 2006

Sincerely,

Robert Potts



Sr. Reliability Analyst  
ERCOT Compliance  
512-225-7022

CC:  
1 ERCOT Compliance Team  
Pat Coon

12

SOAH DOCKET NO. 473-08-1153  
P.U.C. DOCKET NO. 34738

NOTICE OF VIOLATION OF §  
INTERNATIONAL POWER AMERICA, §  
INC., HAYS ENERGY LIMITED §  
PARTNERSHIP, MIDLOTHIAN ENERGY §  
LIMITED PARTNERSHIP, AND ANP §  
FUNDING I, LLC OF PURA §36.151(j) §  
AND PUC SUBST. R. §25.503(f) AND (g), §  
RELATING TO FAILURE TO ADHERE §  
TO ERCOT PROTOCOLS §5.8.1.1, AND §  
6.5.1.1(1)(c) CONCERNING GOVERNOR §  
IN SERVICE REQUIREMENTS AND §  
FREQUENCY BIAS REQUIREMENTS §  
AND OF PUC SUBST. R. 25.503(f)(10), §  
RELATING TO FAILURE TO COMPLY §  
WITH REQUESTS FOR INFORMATION §  
BY ERCOT WITHIN THE TIME §  
SPECIFIED BY ERCOT INSTRUCTIONS §

BEFORE THE STATE OFFICE OF  
ADMINISTRATIVE HEARINGS

CUSTODIAN OF RECORDS AFFIDAVIT

Before me, the undersigned authority, personally appears Chad V. Seely, who, being by me duly sworn, deposed as follows:

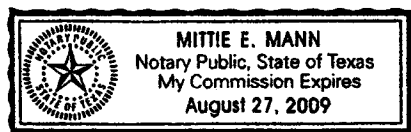
"My name is Chad V. Seely, I am of sound mind, capable of making this affidavit, and personally acquainted with the facts herein stated. I am employed by Electric Reliability Council of Texas, Inc. (ERCOT) and my title is Corporate Counsel. I am a custodian of records for ERCOT. ERCOT's business address is 7620 Metro Center Drive, Austin, Texas 78744.

Attached hereto are 31 pages of records obtained from ERCOT's website (www.ercot.com). These said pages are in my custody or subject to my control, supervision or direction. I am able to identify these records as the originals or true and correct copies of the originals from ERCOT's website. These records were kept in the regular course of business of ERCOT and it was in the regular course of business of ERCOT to post such records on ERCOT's website. The entries on these records were made at or shortly after the time of the transaction recorded. The method of preparation of these records is trustworthy."

Chad V. Seely  
WITNESS (Custodian of Records)

SWORN TO AND SUBSCRIBED before me this 18<sup>th</sup> day of November, 2008.

Mittie E. Mann  
Notary Public - State of Texas



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APPROVED - 11/03/05  
**MINUTES OF THE ERCOT TECHNICAL ADVISORY COMMITTEE (TAC) MEETING**  
**ERCOT Met Center - Austin**  
**7620 Metro Center Drive**  
**Austin, Texas 78744**  
**October 6, 2005; 9:30AM - 4:00PM**

TAC Chair Read Comstock called the meeting to order on October 6, 2005 at 9:35 a.m.

**Attendance:**

Gross, Blake	AEP	Member Representative (for R. Ross)
Helton, Bob	ANP	Member
Dreyfus, Mark	Austin Energy	TAC Vice Chair
Holligan, Jeff	BP Energy	Member
Hancock, Tom	BTU	Member Representative (for D. Wilkerson)
Jones, Randy	Calpine Corporation	Member
Daniels, Howard	CenterPoint Energy	Guest
Houston, John	CenterPoint Energy	Member
Dillard, Jesse	City of Dallas	Member Representative (for N. Fehrenbach)
Waters, Garry	Competitive Assets	Guest
Greer, Clayton	Constellation Energy	Member
Brown, Jeff	Coral Power	Member
Barrow, Les	CPS Energy	Member
Mays, Sharon	Denton Municipal	Member
Adams, John	ERCOT	Staff
Boren, Ann	ERCOT	Staff
Grimm, Larry	ERCOT	Staff
Gruber, Richard	ERCOT	Staff
Hinsley, Ron	ERCOT	Staff
Jones, Sam	ERCOT	Staff
Zake, Diana	ERCOT	Staff
Ashley, Kristy	Exelon	Member Representative (for M. Cunningham)
Trenary, Michelle	First Choice Power	Member
Piland, Dudley	LCRA	Member
Sims, John L.	Nueces Electric Cooperative	Member
Ogelman, Kenan	OPUC	Member Representative (for L. Pappas)
Lozano, Rafael	PSEG Texgen I	Member
Adib, Parviz	PUCT	Guest
Gresham, Kevin	Reliant Energy	PRS Chair
Keetch, Rick	Reliant Energy	ROS Chair
McClendon, Shannon	Residential Consumer	Member
Zlotnik, Marcie	StarTex Power	Member
Comstock, Read	Strategic Energy	TAC Chair
Seymour, Cesar	Suez Energy	Member
Downey, Martin	Tri Eagle Energy	Member
Weathersbee, Tommy	TXU Electric Delivery	RMS Chair
Flowers, BJ	TXU Energy	COPS Chair
Jones, Brad	TXU Energy	Member
Vadie, Henry	Utility Choice Electric	Member
Dalton, Andrew	Valero	Member
Hendrix, Chris	Wal-Mart Stores	Member

FINAL - 10/06/05

The following Alternative Representatives were present:

Blake Gross for Richard Ross  
Kenan Ogelman for Laurie Pappas  
Jesse Dillard for Nick Fehrenbach  
Kristy Ashley for Mike Cunningham

The following Proxies were given:

Hugh Lenox to Dudley Piland  
Shannon McClendon to Kenan Ogelman (after 3:00PM)  
Read Comstock to Marcie Zlotnik (after 3:00PM)  
Jeff Holligan to Jeff Brown (after 3:00PM)

Antitrust Admonition

Read Comstock noted the need to comply with the ERCOT Antitrust Guidelines. A copy of the antitrust guidelines was available for review.

Approval of the Draft September 7<sup>th</sup> Special TAC and Draft September 8<sup>th</sup> TAC Meeting Minutes (see attachments)

The draft September 7<sup>th</sup> Special TAC and draft September 8<sup>th</sup> TAC meeting minutes were presented for approval. Dudley Piland made a motion to approve the September 7<sup>th</sup> Special TAC and September 8<sup>th</sup> TAC meeting minutes. Bob Helton seconded the motion. The motion was approved by unanimous voice vote. All segments were represented.

ERCOT Board Update

Read Comstock reported on the recent activities of the Board. The Board met on September 20, 2005. The Board approved the following PRRs that were recommended for approval by TAC:

- PRR 600 – Align BES Bids with Resource Plan Capability and Resource Schedule
- PRR 603 – Defaulting QSEs Cost Obligation in Second AS Market
- PRR 604 – Replacement Reserve Service Bid Cap
- PRR 606 – User Security Administrators and Digital Certificates

The Board did not approve PRR 599 – Notification for Mismatched Inter-QSE Energy Schedules and PRR 601 – 15 Minute Ramping for BES and Base Power Schedule. Comstock stated that if there is a PRR with an associated project that requires any amount of money to implement, the Board would like to see a fully developed cost benefit analysis. PRR 599 and PRR 601 were remanded to TAC for further development of a cost benefit analysis. The Board asked TAC to consider what the market needs to accomplish during the transition period before the January 1, 2009 implementation date. The Board also asked that TAC review the current PRR queue and project list to determine if there is any need or desire to change rankings or prioritizations of the projects. Kevin Gresham stated that PRS would be reviewing this process at a Special PRS meeting scheduled for October 7, 2005. Comstock stated that the Board

FINAL - 10/06/05

approved the 2006 CSCs and Congestion Zones. The Board also approved the suspension of annual validation profiles with the time requirements that the non-residential validation should begin no later than October 31, 2005 and the residential validation should begin no later than the end of 2005. John Houston added that at least one Board member suggested that TAC review all existing and approved PRRs and use a cost benefit analysis to judge whether or not they should move forward.

For details, the Board Meeting Minutes are posted on the ERCOT Website. The next Board Meeting is scheduled for October 18, 2005.

Protocol Revisions Subcommittee (PRS) Report (see attachments)

Kevin Gresham reported on the recent activities of the PRS. The PRS met on September 29, 2005 and held a special meeting on September 30, 2005 to discuss the project prioritization and cost benefit analysis process. Gresham discussed the 2005/2006 system project status stating that the revised PPL is available on the ERCOT website and that the priority classifications have been modified. The new priority categories 1.0a and 1.0b denote projects that will carry over from 2005 into 2006. 1.1a and 1.0b denote projects that are above and below the cutline for 2006, respectively. Gresham reviewed a breakdown of the 2005/2006 system project status showing approximately \$5.3 Million for Carryover projects, \$2.6 Million for PUCT projects, \$5.3 Million for Market projects, and \$12.4 Million for ERCOT projects. The projected 2006 Cutline is \$25.6 Million. Gresham reviewed the total benefits and costs of the priority 1.1a projects in each project category based upon CBA results. The list of projects immediately above the projected 2006 cut-line were shown. Gresham stated that these projects were considered "bumpable" if other projects were reprioritized above the cutline. Gresham discussed the CBA process and stated that the PRR submission form was being changed to reflect the existence of nodal protocols and to include a greater emphasis on the Cost Benefit Analysis. The PRR sponsor must fill out all portions of the form otherwise ERCOT will reject the PRR submission. Gresham stated that once the PRR is submitted, the market will be able to comment on the PRR and the CBA. PRS will discuss the comments received and adjust the CBA estimate as needed. Shannon McClendon was concerned that if mandatory fields for specific disadvantages were not included in the new PRR submission form, they would not receive the transparency that is needed. Bob Helton stressed that the market needed to realize that money is not the only driver of a project and that there are many intangible benefits that add to the overall efficiency of the market. He encouraged market participants to note this when completing the new PRR submission form.

Gresham discussed the following PRRs recommended for TAC approval by the PRS.

- PRR567 - Block Bidding of Ancillary Services. Proposed effective date: upon system implementation. Budgetary impact - \$1 to 3 million; minimal impact to ERCOT staffing; impact to Ancillary Service (AS) Clearing Engine to provide three-part bidding, Market Operations System (MOS), Market Operator Interface (MOI), and Market User Interface (MUI); minimal impact to ERCOT business functions; no impact to grid operations. This PRR creates a three part bidding structure for AS. The three parts are (1) Startup cost; (2) per megawatt capacity offer; and (3) minimum operating cost. ERCOT posted this PRR on 1/19/05. PRS reviewed the PRR during its February meeting. The sponsor requested deferral until the March PRS meeting. PRS discussed additional information submitted by the sponsor and voted to refer PRR567 to a PRS task force for further development. On 5/2/05, PRS discussed comments submitted by the task force and the



FINAL - 10/06/05

sponsor agreed to call another meeting to address ERCOT staff's questions and other outstanding issues. On 5/19/05, PRS considered comments submitted by the task force and decided to defer action to its June meeting. On 6/23/05, PRS voted (54.3% in favor, 45.7% opposed) to recommend approval of PRR567. On 7/21/05, PRS unanimously voted to defer consideration of the Impact Analysis for PRR567 until the August meeting; all segments were present for the vote. On 8/24/05, PRS voted to assign a priority of 3.3 with six opposing votes from the Municipal, IOU, Independent Generator (2), and IPM (2) segments. On 9/8/05 TAC voted unanimously to remand PRR567 to PRS for the development of a cost benefit analysis (CBA). All segments were present for the vote. On 9/29/05 PRS reviewed a CBA for PRR567. ERCOT credit staff and the CWG have reviewed PRR567 and do not believe that it requires changes to credit monitoring activity or the calculation of liability.

- PRR611 - Reporting of Operation Reserve Capability Under Severe Gas Curtailments. Proposed effective date December 1, 2005. No budgetary impact; minor impact to ERCOT staffing; no impact to ERCOT computer systems; added ERCOT business function to gather, compile and incorporate data into planning analysis; no impact to grid operations. This PRR adds a requirement that Resources provide additional data describing their alternative fuel capability during the winter months and adds that information to the list of items considered Protected Information in Section 1.3.1.1. ERCOT posted this PRR on 6/14/05. On 6/16/05, PRS did not approve the submitter's request for urgency via email vote. The submitter requested reconsideration of urgent status during the 6/23/05 PRS meeting. PRS did not approve the motion to reconsider; therefore, the PRR is on a normal timeline. On 7/21/05, PRS unanimously voted to refer PRR611 to ROS to harmonize the PRR with OGRR169, Reporting of Reserve Capability Under Severe Gas Curtailments; all segments were present for the vote. On 8/24/05, PRS discussed the results from ROS and unanimously voted to recommend approval of PRR611 as amended by ERCOT. All segments were present for the vote. On 9/29/05 PRS noted that PRR611 does not impact ERCOT systems and does not require a project priority. ERCOT credit staff and the CWG have reviewed PRR611 and do not believe that it requires changes to credit monitoring activity or the calculation of liability.
- PRR613 - Replacement Reserve Under Scheduled Capacity Delineation - URGENT. Proposed effective date: upon Board approval. Budgetary impact less than \$100,000; additional workload to ERCOT Settlements to manually account for mismatch schedules when calculating the Replacement Reserve Service under schedule charge, no impact to ERCOT staffing upon system implementation; minor change to the EMMS to Lodestar interface to resolve the Inter-QSE Trade mismatch; impact to Market Operations business process to identify and provide to Settlements the appropriate mismatch amounts for each QSE at time of procurement, no impact to ERCOT business process upon system implementation; no impact to grid operations. PRR613 updates the Replacement Reserve Under Scheduled Capacity section of the Protocols to PRR613 updates the Replacement Reserve Section of the Protocols to reflect the calculation for Replacement Reserve Service Obligation for under scheduled capacity, including how mismatched schedules are processed. ERCOT posted this PRR on 6/27/05. On 7/21/05, PRS unanimously voted to grant urgent status because of the imminent implementation of EMMS Release 4 and referred PRR613 to a PRS task force; all segments were present for the vote. On 8/24/05, PRS unanimously voted to defer action until the September meeting. On 9/29/05 PRS unanimously voted to recommend approval of PRR613 as amended by comments from ERCOT staff. Noting that PRRs 548 (Settlement for Mismatched Inter-QSE Energy Schedules), 599 (Notification for Mismatched Inter-QSE Energy Schedules) and 613 are linked and should be implemented together, PRS unanimously voted to assign PRR613 the rank of 0.87 and a

FINAL - 10/06/05

priority of 1.0, the same as PRR548 and PRR599. All segments were present for the votes. PRS modified the CBA for PRR599 to include PRR613 so as to avoid duplicating of benefits of the three PRRs. ERCOT credit staff and the CWG have reviewed PRR613 and do not believe that it requires changes to credit monitoring activity or the calculation of liability.

- **PRR617 – IDR Optional Removal Threshold – Modification.** Proposed effective date December 1, 2005. No budgetary impact; no impact to ERCOT staffing; no impact to ERCOT computer systems; no impact to ERCOT business functions; no impact to grid operations. This PRR alleviates conflicting language and provides clarity on the original intent of Sections 18.6.1(2), Interval Data Recorders (IDR) Installation and Use in Settlement and 18.6.7, IDR Optional Removal Threshold, as these sections relate to the process for an optional IDR removal and re-installation. This PRR also makes non-substantive changes to Sections 18.6.1 and 18.6.7. ERCOT posted this PRR on 7/28/05. On 8/24/05, PRS voted unanimously to recommend approval of PRR617 as submitted. On 9/29/05 PRS noted that PRR617 does not impact ERCOT systems and does not require a project priority. ERCOT credit staff and the CWG have reviewed PRR617 and do not believe that it requires changes to credit monitoring activity or the calculation of liability.
- **PRR618 - Balancing Energy Up from a Specific LAAR Resource.** Proposed effective date December 1, 2005. No budgetary impact; no impact to ERCOT staffing; no impact to ERCOT computer systems; no impact to ERCOT business functions; no impact to grid operations. PRR618 provides an equation that describes how a QSE representing a Load Acting as Resource (LaaR) receives compensation when a LaaR it represents provides Balancing Energy Up, and clarifies that only Generation Resources will be paid for Balancing Energy Down to resolve Local Congestion. ERCOT posted this PRR on 7/28/05. On 8/24/05, PRS voted to recommend approval of PRR618 as amended by PRS with four abstentions from the Independent Generator (2), IPM and Consumer segments. On 9/29/05 PRS noted that PRR618 does not impact ERCOT systems and does not require a project priority. ERCOT credit staff and the CWG have reviewed PRR618 and do not believe that it requires changes to credit monitoring activity or the calculation of liability.

PRR 567 was raised for discussion. Clayton Greer stated that a study to examine the savings associated with the implementation of this PRR was completed. It involved looking at how a steam unit would be modeled and bid and what the impact to the bid stack would be. In this case, they looked at one (1) day in January 2005, involving one (1) unit. The cost benefit estimate over 4 years was approximately \$39 million. Questions were raised regarding the assumptions made when developing this study and cost benefit analysis. Greer clarified that for the CBA, 5% of the actual benefit that came out of the analysis was used. The assumption was made that the percentage in the shoulder months would be much higher and in the summer would be lower. Greer stated that he believed the assumption of 5% was conservative and that it should be higher. Mark Dreyfus stated that in any CBA, the challenging part was getting the benefits correct. If TAC is going to endorse a PRR and its associated CBA, all the assumptions and work papers that support the benefit numbers need to be provided. He stated that as part of the PRR process, the CBA and its underlying documentation should be provided to the voting committee. Randy Jones pointed out that TAC is responsible for understanding the magnitude of the costs however, there needs to be reason and feasibility behind what documentation is required. For example, R. Jones pointed out that econometric computer runs are not feasible for everyone to have access to. Clayton Greer made a motion that TAC recommend approval of PRR 567. Brad Jones seconded the motion. The motion was approved with one (1) opposition (Muni) and two (2) abstentions (Consumers). All segments were represented. Clayton Greer made a motion to recommend assigning PRR 567 a 1.1b priority

**FINAL - 10/06/05**

**and a rank of 19.5. Cesar Seymour seconded the motion.** It was stated that PRR 567 currently has a rank of 3.3. Read Comstock commented that the Board could see inconsistencies in the large benefit and low rank of PRR 567. Marty Downey stated that he had a concern with TAC trying to change the priority that was assigned by PRS since PRS had an extensive, in depth discussion of PRR 567 and TAC only has superficial knowledge of the PRR. Kenan Ogelman pointed out the consequences of purely looking at CBAs when prioritizing projects because there are projects that have benefits that are difficult to quantify that this particular PRR could bump below the line. Dreyfus agreed with Ogelman pointing out that benefits are often intangible and hard to characterize. There is some difficulty in relying strictly on numbers to set priorities. Brad Jones stated that PRR 567 will give the market approximately ten times the benefit than the cost. He did not understand putting this project below the line. B. Jones stated that it would be appropriate for a project with such a significant benefit to the market to be voted through with a reasonable priority. **Kenan Ogelman offered a friendly amendment to begin tracking and validating the benefit analysis upon implementation of PRR 567. The amendment was accepted by Greer and B. Jones. The motion failed with seventeen (17) in favor; five (5) against; and three (3) abstentions. All Segments were represented.** Henry Vadie expressed a concern that TAC was not following due process. He pointed out that the current PPL list was not ranked according to Cost Benefit Analysis and that this decision may set precedence that the sponsors of future PRRs could try to change their rankings via CBA. He stated that if the market was ranking by CBAs now, it should be done for the entire list. **Kenan Ogelman made a motion that TAC recommend assigning PRR 567 a 1.2 priority and a rank of 54.5. Randy Jones seconded the motion. The motion was approved with twenty (20) in favor; four (4) opposed (2 Coops; 2 REPs); and three (3) abstentions (2 consumers; 1 REP). All Segments were represented.**

PRR 613 was raised for discussion. Kevin Gresham stated that PRR 613 updates the calculation of RPRS obligation for under-scheduled capacity, including mismatched schedules. This PRR clarifies RPRS cost assignment. BJ Flowers stated that the Cost Benefit Analysis for PRR 613 includes PRR 599 – Notification for Mismatched Inter-QSE Energy Schedules which provides a record of the amount of the mismatch to both parties involved in the mismatch. It was stated that only QSEs would be using this extract however, it would benefit the entire market in that it would create transparency into the mismatch. **Michelle Trenary made a motion to approve PRR 613 and the associated Cost Benefit Analysis which includes PRR 599. John Houston seconded the motion. The motion was approved by unanimous voice vote. A motion was made to take PRR 599 to the Board for approval. John Houston seconded the motion. The motion was approved by unanimous voice vote. All Segments were represented.**

PRR 611, PRR 617 and PRR 618 were raised for discussion. **Randy Jones moved that TAC recommend approval of PRR 611, PRR 617, and PRR 618. The motion was seconded by Marty Downey. The motion was approved by unanimous voice vote. All Segments were represented.**

Gresham stated that PRS is holding a special meeting on October 7, 2005 to initiate the review of outstanding PRRs awaiting system implementation. The goal of the meeting will be to develop criteria to apply to the current market design system change proposals for appropriate prioritization and to apply the criteria to existing protocols on the project list and determine if priority is appropriate.

For details, the PRS Meeting Minutes are posted on the ERCOT Website. The next PRS Meeting is scheduled for October 20, 2005.

FINAL - 10/06/05

Reliability and Operations Subcommittee Report (see attachments)

Rick Keetch updated the TAC on the recent activities of the ROS. The ROS met on September 15, 2005. OGRR 154 – Generator Protection Requirements which describes the operating conditions under which generators should stay connected to the system was approved unanimously by the ROS. This OGRR would comply with the NERC Planning Standard 111CM7. Brad Jones proposed language to clarify that this OGRR was relative to a transmission system fault and not a generator bus fault. **John Houston made a motion to approve the amended OGRR 154 with the proposed language. Marty Downey seconded the motion. The motion was approved by unanimous voice vote. All Segments were represented.**

Keetch updated the TAC on possible voting items for the November TAC meeting. He stated that OGRR 175 – Emergency Drill Participation was on an urgent timeline to be considered by the ROS at their October 13<sup>th</sup> meeting. An ERCOT wide Emergency Drill is schedule for November 9, 2005. This OGRR will make participation mandatory for Transmission Operators and QSE operators that provide Ancillary Services. The recommended effective date of this OGRR is November 3, 2005. ROS is also reviewing OGRR 171 – Testing of Quick Start Units in Balancing Energy Market which sets the testing parameters as required by PRR 588. Keetch gave a brief update on PRR 586 – SCE Performance and Regulation Cost Re-allocation. ROS has submitted a list of prioritized actions to PRS that addresses frequency issues and defines the frequency boundary where reliability concerns occur. ROS also discussed the coordination of 345 kV Voltage Set points for nuclear plants and recommended that the North and South Regional Planning Groups evaluate the voltage requirements for nuclear power plants. Bob Helton asked Rick Keetch that based on the ROS presentation his understanding was that only generators supplying responsive and regulation are required to be in the frequency response mode of operation. Rick Keetch stated that ROS agrees that only generators supplying responsive and regulation reserve are required to provide frequency response.

Mark Dreyfus asked if ROS was considering and evaluating planning, performance, etc in relation to Hurricane Rita. Keetch stated that the ROS anticipated a report from ERCOT at the October ROS meeting and will discuss communication issues, transmission issues, and lessons learned. Dreyfus encouraged ROS to look closely at the Hurricane Rita event and report their findings back to TAC.

For details, the ROS Meeting Minutes are posted on the ERCOT Website. The next ROS Meeting is scheduled for October 13, 2005.

Wholesale Market Subcommittee Report (see attachments)

Bob Helton updated the TAC on the recent activities of the WMS. The WMS met on September 21<sup>st</sup>. Helton reviewed the definitions of CREs and Boundary Generators and stated that WMS recommended approval of both as submitted by ERCOT. **Bob Helton made a motion that TAC approve the CREs and boundary generation as submitted by ERCOT. Randy Jones seconded the motion. The motion was approved by unanimous voice vote. All Segments were represented.**

For details, the WMS Meeting Minutes are posted on the ERCOT Website. The next WMS Meeting is scheduled for October 19, 2005.

**FINAL - 10/06/05**

**Commercial Operation Subcommittee Report (see attachments)**

BJ Flowers updated the TAC on the recent activities of COPS. Flowers stated that COPS reviewed the issue where ESI IDs (7 identified) are active at the TDSP and REP but retired at ERCOT. DEWG and COPS approved a draft version of PRR 634 that would allow ERCOT to reinstate the ESI IDs. COPS also reviewed and approved a draft PRR to change initial settlement invoice due date from 16 calendar days to 5 business days. Flowers reported that ERCOT requested COPS to review the True-Up Settlement rule requiring 99% ERCOT wide and 90% MRE IDR reads prior to True-Up Settlement running. There are currently situations where one (1) missed read is close to delaying True-Up Settlement.

Betty Day presented "PRR 568 – Settlement Timeline August 31-day Analysis". Day gave a review of the analysis including data loading/availability and aggregation results. Day stated that there were minor generation differences from Channel 0 to Channel 1. The average load differences for QSEs and LSEs were also reviewed. UFE results were discussed including the % UFE Comparison from August 1 through 31 and the % UFE Change. Betty Day stated that from a load perspective, ERCOT does not see any significant issues from the analysis. She asked that market participants review any internal implications of PRR 568.

For details, the COPS Meeting Minutes are posted on the ERCOT Website. The next COPS Meeting is scheduled for October 25, 2005.

**Retail Market Subcommittee Report (see attachments)**

Tommy Weathersbee gave an update on the recent activities of the RMS. The RMS met on September 14, 2005. Weathersbee presented the following for approval:

- RMGRR 027 – Standard Historical Usage Request – allows a customer to designate a Standard Letter of Authorization (LOA) to have an unlimited term
- RMGRR 028 – IDR Optional Removal Process – clearly identify the roles and responsibilities of each market participant in processing request for an IDR removal
- LPGRR 005 – Remove 1000kW References

**Shannon McClendon made a motion to approve RMGRR 027, RMGRR 028, and LPGRR 005 as presented. Henry Vadie seconded the motion. The motion was approved by unanimous voice vote. All Segments were represented.**

Weathersbee updated the TAC on the 2005 Annual Validation for Profiles of Residential ESI IDs. He stated that there were two initiatives underway to evaluate the accuracy of the existing recommended profile changes. Weathersbee stated that the non-residential annual validation will start after October 31, 2005 and that the residential annual validation will start after December 31, 2005. Recommendations for the new algorithm are being developed and will be applied to 2006 validation as appropriate. Weathersbee gave a brief review of SCR 745 – Retail Market Outage and Evaluation and its projected benefit and cost. He showed the single points of failure of the ERCOT Retail System Architecture. Weathersbee stated that there were 86 total outages/system failures from January 2004 – April 2005 and 83% were due to single points of failure. The project cost of the project was approximately \$2.2 million and the financial benefit was approximately \$24.1 million. **Marcie Zlotnik made a motion that TAC recommend SCR 745 be given urgent status. Shannon McClendon seconded the motion. The**

FINAL - 10/06/05

motion was approved by voice vote with one (1) abstention (Ind. PM). All Segments were represented.

For details, the RMS Meeting Minutes are posted on the ERCOT Website. The next COPS Meeting is scheduled for October 12, 2005.

TNT Transition Plan Outline

Ron Hinsley presented "ERCOT Comments - TNT Transition Plan". He emphasized that ERCOT wanted interaction with Market Participants on development of requirements, conceptual design, detail design testing, and readiness criteria throughout the nodal transition process. Hinsley stated that ERCOT did not want to move forward in a vacuum and that it was especially important to have market participant involvement. ERCOT recognizes the need to accurately implement the Protocols and will be looking to the market participants' expertise and understanding of the Protocols to accomplish this. Hinsley stated that ERCOT assumes that a taskforce with segment voting is necessary to approve requirements documents and other decisions that require a formal vote. ERCOT suggested forming Market Coordination Teams (MCT) consisting of key market participant business and technical experts to work with during design and testing. Each MCT would review and comment on conceptual and detail designs, develop Readiness Criteria, MP Test scenarios, and certify market readiness. Hinsley proposed to use the MCT for all design phases and co-location during critical design activities. He reemphasized that ERCOT wanted full stakeholder participation throughout the transition process. Clayton Greer stated that a similar process as described in ERCOT's proposal was used at market open and was not sufficient.

There was a point team to resolve issues and change protocols, however the systems that were developed were not in line with the Protocols. Greer stated that the Transition Plan Outline was TNT's attempt to provide a more open forum for the market to understand the recommended solutions. There were numerous instances at market open where market participants did not understand why things were being done in the way that they were. Greer stated that the market open process was an example of something that did not work and it looks as if ERCOT wants to replicate it. Ron Hinsley stated that ERCOT's primary concern with the original TNT Outline Transition Plan was in reference to the time constraints. ERCOT will be tied to a certain implementation date and would like to work with market participants to eliminate as much formal voting as possible in order to expedite the process. Hinsley stated that ERCOT did not believe the Transition Plan Task Force proposed by the TNT would address issues quickly enough. Randy Jones pointed out that TNT had incorporated a failsafe pertaining to the concerns of timeliness in that ERCOT has the final say if stakeholders can't come to a decision. Hinsley stated that it was ERCOT's recommendation that the Market Coordination Teams be used for all design phases and expect co-location during critical design activities. ERCOT would also like to do some joint application or rapid application development. Bob Helton stated that he had concerns about the implementation process proposed by ERCOT and their commitment to stakeholder involvement. He pointed out that the transition plan that ERCOT was presenting did not involve stakeholder input. Helton also stated that the ERCOT transition plan did not include references to the 2005 Energy Act or FERC and NERC reliability requirements. He emphasized that it was imperative that grid operations personnel be involved with this transition so that the reliability aspect could be addressed. Helton reminded the group that at market open, minimal input from the market was solicited because of the accelerated timeline and it created situations where the market was not aware of what was being developed. He did not want to see errors repeated from the last market implementation. Helton stated that full stakeholder involvement needed to occur and that implementation needed to be done right instead of fast. Sharon Mays was concerned with the MCT concept presented by ERCOT. She stated that the concept would

**FINAL - 10/06/05**

encourage selecting a small group of the market who would get information before the rest of the market thereby giving them an advantage and more input into the details of the implementation. She pointed out that smaller entities did not have the resources to commit to participate in such a select, dedicated group.

Trip Doggett stated that the MCT concept comes from the Texas SET environment and that the intent is that it be open to all market participants who want to participate. In the retail space, the market participants themselves select the members that participate on the MCT. Shannon McClendon stated that she was in agreement with most of the comments that had been made. She stated that ERCOT is owned by the market participants and instead of having the processes dictated by ERCOT, the market participants need to dictate the process to ERCOT. Clayton Greer pointed out that Texas SET is a very technical group and is not familiar with policy or market decisions. TAC needs to recognize that there is a major difference between Texas SET and the nodal implementation process. There was some discussion regarding the ERCOT readiness plan that ERCOT had presented to the Board. Some market participants expressed interest in having involvement with the development of this plan. Helton pointed out that going straight to the Board with a readiness plan was going around the stakeholder process. Hinsley clarified that the readiness plan was an internal effort to prepare the internal ERCOT organization for market redesign. Mark Dreyfus agreed with all the comments that had been made by TAC members and reiterated that Texas SET was not a policy issue deciding group and therefore not analogous to the situation at hand. Dreyfus stated that he was willing to cooperate on the transition plan proposed by ERCOT with the understanding that the market has been through this process before and if transparency is not provided and the situation results similar to that of market open, ERCOT will be held responsible. Shannon McClendon made a motion that TAC reject the TNT Nodal Transition Plan Outline with proposed changes from ERCOT, Calpine, and the PUCT. Cesar Seymour seconded the motion. Sharon Mays proposed a friendly amendment that instead of rejecting the TNT Nodal Transition Plan Outline with proposed changes, a special TAC meeting be held on October 11<sup>th</sup> to consider the original TNT Transition Plan Outline. The amendment was accepted. The motion passed by unanimous voice vote. All Segments were represented. Parviz Adib asked that cost base offers be considered as part of the transition plan specifically from October 2008 to December 2008.

**Market Participant Default – Joint RMS/WMS Taskforce Update (see attachments)**

Kristi Hobbs gave a presentation on the Market Participant Default Joint Taskforce Update and reported on Recent Customer Transition Activity. Hobbs reviewed the taskforce purpose and background. For the RMS Taskforce, the short-term recommendations approved by TAC are currently being incorporated into the Retail Market Guide. RMGRR 029 – Mass Transition Process is being reviewed at RMS. For the WMS Taskforce, two PRRs have been submitted including PRR 624 – Clarification of Market Participant Default Language that proposes changes to strengthen or clarify Protocol language addressing default situations and PRR 625 – Clarification of Emergency QSE Language that proposes changes to strengthen or clarify Protocol language addressing when and how Emergency QSEs may be used. These PRRs will be addressed at the September PRS meeting.

Hobbs reviewed recent customer transition activity. She stated that on August 29, 2005 a REP in the ERCOT Region made the business decision to exit the market. The REP represented approximately 600 ESI IDs and 40 MWh of load per day. As of September 20, 2005, all ESI IDs had transitioned away from the exiting REP. Hobbs stated that on September 9, 2005, ERCOT initiated the Mass Transition process for the ESI IDs represented by USAVE Energy Services, a QSE and REP in the ERCOT Region. USAVE represented approximately 550 ESI IDs and 60 MWh of load per day. As of October 3, 2005, 99% of ESI IDs have transitioned away from the defaulting REP.

**FINAL - 10/06/05**

Operations Update (see attachments)

Kent Saathoff gave an update on the impacts of Hurricane Rita. He reviewed the ERCOT Preparation steps, ERCOT Customer Outages and ERCOT Transmission and Generation Outages. Saathoff stated that the ERCOT system remained stable throughout the storm. No significant communications problems occurred with market participants and the ERCOT market systems functioned normally. Saathoff stated that in the four days following the storm, ERCOT experienced record September peak temperatures without operational problems. Entergy was hit very hard by Hurricane Rita. 82% of their system was affected with transmission outages. Saathoff stated that East Texas was generation deficient since it was isolated from the rest of the Entergy system. On September 26<sup>th</sup>, the State Emergency Operations Center created a team to determine how service can be restored to East Texas as soon as possible.

Betty Day updated TAC on the commercial impact of Hurricane Rita. Day reviewed the BLT Settlements stating that the estimated aggregate load is 100 to 150 MW. For settlement purposes, the BLTs are treated as non-competitive wholesale load. Other commercial impacts included the following:

- Initial settlement has only about 40% of meter reads available
- Final & True-up settlement have over 99% of meter reads available
- Mass evacuation impacted UFE even before hurricane struck

Due to the commercial impacts, Mark Dreyfus asked that COPS review the effects of Hurricane Rita on UFE and determine if there should be any changes or adjustment in the load profiles. COPS should consult with the Load Profiling Group on this issue. COPS will come back with a recommendation at the November TAC meeting.

John Adams presented the "2006 ERCOT Methodologies for Determining Ancillary Service Requirements". He stated that the most significant change in the document was to allow ERCOT to include historic deployments of responsive reserve in regulation evaluation in order to eliminate truncation. Adams reviewed the additional changes to the document including minor language changes to non-spinning reserve requirements and regulation reserve requirement details. Randy Jones made a motion that TAC endorse the 2006 ERCOT Methodologies for Determining Ancillary Service Requirements". Bob Helton seconded the motion. The motion was approved by unanimous voice vote. All Segments were represented.

Potomac Recommendations Monthly Update (see attachments)

Nieves Lopez stated that nine (9) of the fourteen (14) recommendations had been addressed. Recommendations 5 and 12 have been delayed pending further discussion.

Other Business

Diana Zake stated that ERCOT Staff has a proposal for the revision request process of the market guides. This is part of ERCOT's standardization effort for the revision process. Zake stated that this would be brought to TAC for approval in the near future.

Future TAC Meetings



**FINAL - 10/06/05**

**The next regular TAC Meeting is scheduled for November 3, 2005 from 9:30 a.m. to 4:00 p.m. to be held at the ERCOT Austin facilities. Additional TAC Meetings are scheduled for December 1, 2005.**

**There being no further business, Mark Dreyfus adjourned the meeting at 4:12PM on October 6, 2005.**

APPROVED 03/16/04

APPROVED – 03/16/04

**MINUTES OF THE ERCOT RELIABILITY AND OPERATIONS SUBCOMMITTEE (ROS)**

**MEETING**

**ERCOT Austin Office**

**Austin, Texas**

**February 10, 2004**

Chair Rick Keetch called the meeting to order on February 10, 2004 at 9:35 a.m.

Attendance:

Kunkel, Dennis	AEP	Member
Armke, James	Austin Energy	Member
Ryno, Randy	Brazos Electric Cooperative	Member
Sanz, Ramon	Brownsville PUB	Member Representative (for McCann)
Dahnke, Jack	CenterPoint Energy	SPWG Chair
Rocha, Paul	CenterPoint Energy	Member
Melendez, Israel	Constellation Power Source	Member
Darnell, David A.	CPS	Member
Garrett, Mark	Direct Energy	Member
Wheeler, Ron	Dynegy	Member Representative (for R. Jones)
Schmuck, John	Equistar Chemicals	Member
Adams, John	ERCOT	Staff
Caylor, Lee	ERCOT	Staff
Donohoo, Ken	ERCOT	Staff
Gerber, Jeff	ERCOT	Staff
Grimm, Larry	ERCOT	Staff
Henry, Mark	ERCOT	Staff
Myers, Steve	ERCOT	Staff
Patterson, Mark	ERCOT	Staff
Potts, Robert	ERCOT	Staff
Seybold, Lacy	ERCOT	Staff
Williams, Carl	Exelon	Member
Knower, Bridget	Flint Hills Resources	Member
Villar, Juan	FPL Energy	Member
Sherman, Fred	Garland	Member Representative (for Breitzman)
Bao, Tom	LCRA	DWG Chair
Crews, Curtis	LCRA	NDSWG Chair
Nelson, Stuart	LCRA	Member
Thormahlen, Jack	LCRA	Guest
Gallaga, Loreta	MVEC	Member
Payton, Tom	Occidental Chemical	Guest
Rankin, Ellis	Oncor	Member
Westbrook, Lee	Oncor	Guest
Lozano, Rafael	PSEG Texgen I	Member
Marciano, Tony	PUCT	Guest
Keetch, Rick	Reliant Resources	Member/ROS Chair/OWG Chair

**APPROVED 03/16/04**

Allen, Cory	STEC	Member Representative (for Wood)
Rodriguez, Larry	TECO Energy	Member
Helyer, Scott	Tenaska	Member
Niemeyer, Sydney	Texas Genco	PDCWG Chair
McDaniel, Rex	TNMP	Member
Peterson, Tom	TXU	Guest

**Antitrust Admonition**

Rick Keetch read the ERCOT Antitrust Admonition and noted the need to comply with the ERCOT Antitrust Guidelines.

**Approval of January 15, 2004 Meeting Minutes**

A motion was made by Stuart Nelson and seconded by Randy Ryno to approve the draft January 15, 2004 ROS Meeting Minutes as presented for the meeting. The motion was approved by a unanimous voice vote.

**TAC Report**

Rick Keetch reported on the activities of the TAC. The TAC met on February 5<sup>th</sup>. The TAC confirmed subcommittee chair and vice chair nominations. The TAC approved the following PRRs that are of interest to the ROS:

- PRR 425 – Section 8 Outage Coordination
- PRR 473 – Reactive Standards
- PRR 482 – Responsibility for ERCOT Administration Fee.

Keetch noted that the ROS needed to focus on PRR 461 – Confidentiality, related to the mechanics of how the application of confidentiality agreements will work.

The TAC also discussed a draft scope and process for Regional Operations Group(s). The first meeting has been tentatively scheduled on March 5<sup>th</sup>. General topics will be discussed at the first meeting which will likely require follow-up.

For details, the TAC Meeting Minutes are posted on the ERCOT Web Site. The next TAC Meeting is scheduled for March 4, 2004.

**ERCOT Subcommittee Chair/Vice Chair Meeting**

Rick Keetch provided a brief update on the meeting held on February 3<sup>rd</sup> with the chairs and vice chairs of the four TAC Subcommittees. The goal of the meeting was to provide a forum for the chairs and vice chairs and ERCOT Staff to discuss various ERCOT activities and plans for 2004 and beyond and to

**APPROVED 03/16/04**

answer any questions that a new chair and vice chair might have. It was noted that Antitrust needs to be taken very seriously because of very stiff penalties (fines and incarceration).

**Dynamics Working Group (DWG) Report**

Tom Bao reported on the activities of the DWG. The DWG met on January 27<sup>th</sup>-28<sup>th</sup>. The DWG identified and resolved 2004 Flat Start issues, discussed and proposed wording changes to clarify ERCOT Operating Guides Sections 1.5 and 2.5.2.3 that deal with load shedding, and discussed and developed work plans to incorporate wind models into load-flow cases and the dynamic database, for the development of Phase II of TVD criteria, and for inclusion of LaaRs into the dynamic database.

Bao noted that the SPWG has provided feedback on the proposed Operating Guides changes to Sections 1.5 and 2.5.2.3. The DWG was directed to provide its recommendation to the ROS on whether intentional time delay could be used for under-frequency load shedding and, if so, how much time delay was recommended. **The DWG and SPWG have differing opinions and these two working groups were directed by Keetch to work through the differences and bring a recommendation to the ROS, making every attempt to keep it as simple as possible.** The ROS discussed the separate under-frequency relay technologies, electromechanical and electronic. It was pointed out that the two technologies behave and perform differently.

Steve Myers discussed the NERC Questionnaires and Audits as a result of the August 14<sup>th</sup> Northeast Blackout. The ERCOT Control Area will respond to the questionnaires and be involved in future audits. Myers noted that one of the questions was related to Power System Stabilizer (PSS) testing and how a Control Area will ensure that they are in service. Ken Donohoo noted that ERCOT is currently contacting each generation owner and getting information related to PSS status and settings. Myers noted that ERCOT Operations has not received any notices about PSSs being turned off so it is assumed they are all on. **ERCOT Operations and Planning will work together to resolve any questions.**

**Operations Working Group (OWG) Report (see Attachment)**

Rick Keetch reported on the activities of the OWG. The OWG has not met since the last ROS Meeting. The OWG recommends that the ROS approve the following OGRR:

- **OGRR 142 – DOE and NERC Reporting:** Clarifies the Operating Guide's DOE/NERC reporting requirements. Adds QSE reporting requirement. Changes the reporting processes by having TDSPs and QSEs provide required disturbance data for DOE/NERC reportable events to the ERCOT Control Area Authority, who will distribute the report to the DOE and NERC.

**A motion was made by Ellis Rankin and seconded by Ron Wheeler that the ROS approve OGRR 142 as recommended by the OWG. The motion was approved by a unanimous voice vote.**

The Black Start Task Force (BSTF) met on January 21<sup>st</sup>. The BSTF is recommending that ERCOT include the Black Start Backup Communications Standard in the 2005 Black Start RFP. The Regional Black Start Training is proceeding as scheduled. The next BSTF meeting is scheduled for March 5<sup>th</sup>.

**APPROVED 03/16/04**

The Communications Task Force (CTF) met on February 5<sup>th</sup>. The CTF is working to resolve the access problems during the System Security Response Group (SSRG) conference calls and reviewing the ERCOT System Security Procedures.

The Operating Guide Revision Task Force (OGRTF) has not met since the last ROS Meeting. The next OGRTF Meeting is scheduled for February 17<sup>th</sup>.

The next OWG Meeting is scheduled for February 18<sup>th</sup>.

**Network Data Support Working Group (NDSWG) Report**

Curtis Crews reported that the NDSWG has not met since the last ROS meeting. At the last ROS Meeting, ERCOT was asked to flag and provide the differences between database versions however ERCOT Staff was not sure it could be done. Concern was expressed that the TDSPs do not know which submitted data and system changes are included in a particular database. It was suggested that ERCOT provide verification on what changes have been made and when they have been placed into production. The NDSWG plans to discuss and develop the best approach to provide data differences between ERCOT production models at its next meeting. Lee Caylor briefly discussed a handout reviewing what the ERCOT Modeling Group is currently doing and available options to further describe what has been added to the model. **The NDSWG was asked to give a presentation describing SCR 723 and report on the status of the project at the March ROS Meeting.**

The next NDSWG Meeting is scheduled for February 26<sup>th</sup>.

**Steady State Working Group (SSWG) Report**

The SSWG has not met since the last ROS Meeting.

**Performance Disturbance Compliance Working Group (PDCWG) Report (see Attachments)**

Sydney Niemeyer reported on the activities of the PDCWG. The PDCWG has not met since the last ROS Meeting. ERCOT has continued to collect data for frequency events. The PDCWG Disturbance Analysis Report has been modified to include changes that were recommended by the Frequency Control Task Force and for changes recommended to PRR 468. Niemeyer reported that the PRS favorably received a presentation given to the PRS related to governor response. There were twelve events during the reporting period, two events indicate low ERCOT governor performance at the "B point" and five events indicate low ERCOT governor performance at the "B plus 30 second point". On nine of these events the "B plus 30 second point" performance was lower than the "B point" performance. This indicates that Resources are recalling Primary Frequency Control during the first minute of these events. Details of the October 7, 2003 disturbance were discussed. Niemeyer emphasized that all generators need to have their governors in service and respond to disturbances, not just the generators providing Responsive Reserve Service. The ROS discussed the deployment of Responsive Reserve and what is expected. Some units are responding to the initial spike but are recalling the response too soon. Niemeyer expressed concern if ERCOT were to experience a second event during frequency recovery,

**APPROVED 03/16/04**

these resources would be moving in the wrong direction. Niemeyer noted that PRR 468 would address this problem and provide ERCOT a tool to enforce compliance. **ERCOT Compliance was asked to draft a letter to Market Participants, especially QSEs and Generator Owners, explaining what their obligations are in the ERCOT Protocols and Operating Guides related to responding to frequency excursions. The ROS asked that the letter be drafted for review at the March ROS Meeting.**

The next PDCWG Meeting will be scheduled in March.

System Protection Working Group (SPWG) Report (see Attachment)

Jack Dahnke reported on the activities of the SPWG. The SPWG has not met since the last ROS Meeting. Future year short circuit cases for 2003 (04 - 07) were posted January 20<sup>th</sup>. All SPWG member companies have submitted current year (2004) short circuit data.

At the January ROS Meeting, the ROS discussed a specific issue related to transmission line distance relaying settings (Zone 2 and Zone 3). The SPWG was directed to review distance relay setting philosophies in ERCOT in light of the August 14, 2003 blackout and report back to the ROS on whether any changes in relay setting practices in ERCOT are recommended. SPWG Representatives are reviewing the Zone 3 relay setting philosophy at their company. The SPWG plans to discuss, at its next meeting, NPCC's system protection maintenance plan that includes additional expectations.

An ad hoc group comprised of individuals representing the SPWG and the OGRTF will be formed to review proposed changes to the automatic under-frequency firm load shedding requirements in Section 2.9.1 of the Operating Guides. The SPWG continues to collect under-frequency firm load shedding relay information.

The ROS discussed whether the ERCOT annual short-circuit base cases are still needed. It was generally agreed that they are still used and needed.

The next SPWG Meeting is scheduled for February 26<sup>th</sup>-27<sup>th</sup>.

Document Revisions to Purge the PARWG (see Attachments)

David Darnell discussed revisions made to the ROS Procedures and ERCOT Operating Guides Documents to eliminate references to the PARWG and document the re-assignment of those responsibilities to other ERCOT Entities. **The ROS agreed that Darnell should proceed with developing an OGRR.**

ERCOT Security Operations Report (see Attachment)

Steve Myers discussed OGRR 134. Myers noted that there were over 2,000 ratings recently changed which had significant changes. When these changes are all implemented (facility ratings decreased) they will have a major Market impact on congestion management. ERCOT Operations is currently

**APPROVED 03/16/04**

confirming these ratings with the applicable Transmission Operator (TO). TOs were asked to inform ERCOT of any rating changes, particularly if the facility has a dynamic rating, so that ERCOT is using the same rating as the TO. ERCOT is also making plans to implement PRR 425.

John Adams discussed the ERCOT System Operations Report to the ROS. Adams reported on the following issues for January 2004:

- Frequency Control Issues (high & low frequency excursions)
- Congestion Management locations/relative activity and occurrences
- New Procedures/Forms/Operations Bulletins
- Security threat alert level – lowered to yellow on January 9<sup>th</sup>
- OCNs, Alerts, and Advisories issued
- Significant communication problems
- Major computer systems problems
- Blackout/Load shed incidents
- January Peak Load in ERCOT – 42,288 MW (unofficial)
- Maximum LaaR threshold for RRS remained 50%

At the January ROS Meeting, the ROS requested that Responsive Reserve deployments be added to the monthly Operations Report. Adams reported that this has not yet been done. Adams stated that he hopes that it will not be necessary to add this to the report. He further clarified the reason for this is that Responsive Reserve is automatically deployed by the EMMS when frequency falls to 59.91 Hz. or lower. Any other deployments of Responsive Reserve such as by Verbal Dispatch Instructions are very rare.

Adams discussed QSE data related to the average and standard deviation for the top ten QSEs and histograms for the top three QSEs in each interval (0545-0615 and 2145-2215). The ROS continued to discuss tracking SCE, particularly because of numerous occurrences of large SCE around 0600 and 2200.

**Ron Wheeler asked that Portal and communications issues be addressed. These issues have a major impact on the Market. The OWG will discuss and determine if the Communications Task Force should address.**

**ERCOT Compliance Report (see Attachment)**

Mark Henry provided an ERCOT Compliance Update. ERCOT Compliance is continuing to work with QSEs to review responses to letters of non-Compliance for the Regulation Measure to identify and correct factors affecting the scores. The ERCOT-wide CPS 1 monthly one-minute average frequency score decreased to 133% in January from 140% in December. Compliance is working with Operations to review data for all QSE's SCE performance during 0600 and 2200 periods.

As a result of the August 14, 2003 Northeast blackout, all Control Areas (CAs) and Reliability Coordinators (RAs) have been asked to complete lengthy self-assessments. Many of the CAs and RAs will be audited with FERC personnel participating. These audits will occur prior to June 30, 2004. ERCOT is not in the first group to be audited since ERCOT's Control Area was recently audited.

**APPROVED 03/16/04**

Compliance continues to work on measurement processes for enforcing compliance with certain aspects of the Protocols and Operating Guides, including posting of non-compliant entities. Henry also reported that Compliance is conducting a real-time data review and is working with the ERCOT IT Operations Group to identify missing or suspect data points.

Henry noted that it has now been six months since the August 7<sup>th</sup> event in the Rio Grande Valley. There was still interest among ROS Representatives to have a presentation on the event, particularly related to load that was tripped. Henry advised that there is a lack of high speed data available from the event. **A presentation will be developed on the August 7<sup>th</sup> event and made at the March ROS Meeting.** Representatives from the TO and generators involved will be asked to attend and respond to questions.

Henry discussed the status of the recommendations from the May 15, 2003 loss of load/generation event.

- The SPWG will complete its survey of relay types and accuracies. The survey should also identify situations where over-current relays supervise under-frequency relays and that some assessment be made of non-UFLS industrial load frequency sensitivity. *The SPWG has not yet addressed.*
- The ROS suggested that ERCOT Operations look at the need for geographic dispersal of LaaRs. Tom Payton noted that this is an issue that should be addressed for all resources (both generation and LaaR). *Mark Patterson intends to conduct studies and further address the issue.*

**ERCOT System Planning Report**

Ken Donohoo reported on ERCOT System Planning activities. A South Texas Regional Planning Meeting is scheduled for February 19<sup>th</sup>. ERCOT is currently tracking 37 generation interconnection requests totaling 12,000 MW. Donohoo reported on the status of various transmission projects.

Donohoo noted that ERCOT had completed its review of the Oncor Northeast Congestion Management Proposal. ERCOT sent a letter to Oncor stating its approval of the proposal contingent on Oncor meeting a number of specific requirements.

System Planning has started work on a draft data coordination process. **A study of  $P_{max}$  has been completed and Donohoo will distribute a recommendation.** The  $P_{max}$  values vary widely. Donohoo recommended that the  $P_{max}$  values from the TDSPs should not be used.

**Generator Reactive Test Scheduling Procedures**

Paul Rocha discussed proposed Generator Reactive Testing Procedures that includes the Purpose and Considerations involved in Generator Reactive Testing and Generator Reactive Test Scheduling Procedures. **The proposed Generator Reactive Testing Procedures will be distributed to the ROS. The ROS will be asked to consider the proposal at the March ROS Meeting.**

**Dynamics Ratings Task Force (DRTF) Report (see Attachment)**



**APPROVED 03/16/04**

Scott Helyer reported on the activities of the DRTF. The DRTF has not met since the last ROS Meeting. A meeting is scheduled for February 19<sup>th</sup> (conference call) to review the status of the Pilot Project that started on January 26<sup>th</sup>. In addition, the DRTF will continue discussing recommendations for a permanent dynamic ratings project for ERCOT and plans to review a "strawman" proposal from ERCOT. John Adams reported that the Pilot Project is working well. It was suggested that ERCOT compare inter-zonal capacity before and after dynamic ratings implementation. A proposed process for dealing with changes or additions to facilities included in the Pilot Project is also being developed.

**NERC Reports**

Steve Myers briefly reported that as a result of the August 14<sup>th</sup> blackout, the NERC Board has directed that the NERC Policies be revised March.

**Future ROS Meetings**

**The next ROS Meeting is scheduled for March 16, 2004 from 9:30 a.m. to 4:00 p.m. to be held at the Hilton Austin Airport Hotel. Additional ROS Meetings are scheduled for April 13<sup>th</sup> and May 11<sup>th</sup>.**

There being no further business, Rick Keetch adjourned the ROS Meeting at 3:00 p.m. on February 10, 2004.

## ERCOT Board Action

<b>PRR Number</b>	468PRR	<b>PRR Title</b>	Frequency Response Requirements and Monitoring
<b>Protocol Section(s) Requiring Revision</b> (Include Section No. and Title)	Section 5.8, Frequency Response Requirements and Compliance Monitoring [New]		
<b>Effective Date</b>	June 1, 2004		
<b>Priority &amp; Rank Assigned</b>	N/A		
<b>Summary of Impact Analysis</b>	No impact to ERCOT computer systems; minor staffing impacts (0.25 FTE for Compliance to design and administer appropriate performance monitoring and scoring methods); minor impacts to business functions and grid operations/practices.		
<b>Revision Description</b>	Adds Section 5.8, establishing requirements for Generation Resource governor response, and establishing performance monitoring and reporting criteria.		
<b>Benefit</b>	To ensure that the expected state of the system will be secure in the face of unexpected events, Generation Resource governor response, proportional to the frequency error, applied dynamically in seconds without Dispatch Instruction from ERCOT, is essential. Although mentioned in the ERCOT Operating Guides, existing Protocols are silent as to the obligation to maintain governors in service, and to respond to frequency excursions. This PRR is needed to ensure such response continues to be available to the system, limiting frequency error, and maintaining reliability.		
<b>PRS Recommendation</b>	PRS recommends approval of PRR468 as revised by ROS-WMS Task Force comments dated 01/22/04, ERCOT comments dated 02/16/04, and PRS.		
<b>TAC Recommendation</b>	After voting to declare PRR468 urgent, TAC recommends approval of PRR468 as revised by TAC.		
<b>Board Action</b>	Board approved PRR468 as recommended by TAC.		

Sponsor	
<b>Name</b>	Fred Sherman (on behalf of the Reliability and Operations Subcommittee)
<b>E-mail Address</b>	fsherman@ci.garland.tx.us
<b>Company</b>	Garland Power & Light
<b>Company Address</b>	
<b>Phone Number</b>	
<b>Fax Number</b>	