

PUC DOCKET NO. 37827

**BUFFALO GAP WIND FARM,
L.L.C., BUFFALO GAP WIND
FARM 2, L.L.C., AND BUFFALO
GAP WIND FARM 3, L.L.C.'S
APPEAL AND COMPLAINT OF
ERCOT'S DECISION AND ACTION
REGARDING PRR 830
AND MOTION FOR SUSPENSION
OF ACTION**

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**BEFORE THE
PUBLIC UTILITY COMMISSION
OF TEXAS**

**BUFFALO GAP WIND FARM, L.L.C., BUFFALO GAP WIND FARM 2, L.L.C.,
AND BUFFALO GAP WIND FARM 3, L.L.C.'S
APPEAL AND COMPLAINT OF
ERCOT'S DECISION AND ACTION REGARDING PRR 830
AND MOTION FOR SUSPENSION OF ACTION**

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**BUFFALO GAP WIND FARM, L.L.C.'S § BEFORE THE
APPEAL AND COMPLAINT OF ERCOT'S §
DECISION AND ACTION REGARDING § PUBLIC UTILITY COMMISSION
PRR 830 AND MOTION FOR §
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**BUFFALO GAP WIND FARM, L.L.C., BUFFALO GAP WIND FARM 2, L.L.C., AND
BUFFALO GAP WIND FARM 3, L.L.C.'S
APPEAL AND COMPLAINT OF
ERCOT'S DECISION AND ACTION REGARDING PRR 830
AND MOTION FOR SUSPENSION OF ACTION**

I. Introduction

Buffalo Gap Wind Farm, L.L.C., Buffalo Gap Wind Farm 2, L.L.C., and Buffalo Gap Wind Farm 3, collectively called BG1, BG2, and BG3, (hereinafter "Buffalo Gap" or "Appellant") files this Appeal and Complaint¹ of the Electric Reliability Council of Texas' ("ERCOT's") Decision and Action Regarding Protocol Revision Request ("PRR") 830, and Buffalo Gap files its Motion for Suspension of PRR 830, pursuant to P.U.C. PROC. R. § 22.251.

BG1, BG2, and BG3 are connected at the same Point of Interconnection ("POI"). In *toto*, Buffalo Gap consists of 523.3 MW of wind-powered generation.

Buffalo Gap respectfully requests the Public Utility Commission of Texas ("Commission" or "PUC") to:

- 1) reverse ERCOT's action regarding its approval of PRR 830, and
- 2) suspend the implementation of such decision while this complaint is pending, unless all entities against whom the complainant seeks relief agree to the suspension.

¹ The terms "appeal" and "complaint" are used interchangeably, as is done in P.U.C. PROC. R. § 22.251.

II. General Procedural and Factual Background

On November 17, 2009, ERCOT's Board approved PRR 830 which significantly alters the reactive power capacity requirement for existing Wind-powered Generation Resources ("WGRs"). Buffalo Gap is an existing WGR adversely affected by ERCOT's approval of PRR 830.

The Buffalo Gap wind project currently conforms to the 0.95 lead/lag (aka "Cone") reactive power capability. This requirement is similar to the FERC 661A requirement for the interconnection of wind generators under FREC jurisdiction in other parts of the United States. To the knowledge of Buffalo Gap there have been no operational or reliability problems associated with reactive support or voltage regulation at or in the vicinity of the Buffalo Gap project since it commenced operation in 2005. ERCOT has not provided a study, analysis, or any report that indicates the need for additional reactive capability at the Buffalo Gap project. In fact the Interconnection Studies performed by Buffalo Gap's Transmission Service Provider (AEP) and specific to the Buffalo Gap projects indicate that the original ERCOT 0.95 lead/lag (Cone) reactive requirement exceeds the reactive support required for the project and was not necessary.

Full compliance to the new reactive requirements of ERCOT PRR 830 (aka Rectangle) will require Buffalo Gap to install additional equipment costing millions of dollars. Prior Interconnection Studies and operational experience over the last 4+ years indicate that this additional equipment is not necessary and will not be utilized.

ERCOT's approval of PRR 830 results in unjustified costs arbitrarily assigned to lawfully operating WGRs. There is no demonstrated operational, technical, legal or policy justification for drastically altering the reactive power capacity requirement for existing WGRs or for imposing on existing WGRs the excessive cost such alterations would require. This unlawful and discriminatory practice not only harms existing WGRs, but has serious negative market consequences as well. Buffalo Gap requests that the

Commission: 1) reverse ERCOT's action and decision approving PRR 830, and 2) suspend PRR 830 and the implications thereof. Buffalo Gap's complaints fall within the scope of complaints heard by the Commission. Furthermore, Buffalo Gap will show that ERCOT's approval of PRR 830 violates laws over which this Commission has jurisdiction.

III. Appeal Timely Filed

P.U.C. PROC. R. § 22.251(d) requires that a formal complaint be filed with Commission within 35 days of ERCOT's action. As stated above, ERCOT approved PRR 830 on November 17, 2009. Therefore, this appeal is timely.

IV. Buffalo Gap's Authorized Representatives

Buffalo Gap is the only complainant in this appeal. Its authorized representatives are:

Mr. Qing Fang
Vice President
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Buffalo Gap Wind Farm 2, LLC
Buffalo Gap Wind Farm 3, LLC
10718 FM 89
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shannonk@mcclendonlaw.net
rfox@mcclendonlaw.net

All correspondences, requests for information, responses to requests for information, documents, and any and all communications should be sent to the above-named counsel for Buffalo Gap.

V. Respondents

P.U.C. PROC. R. § 22.251(d)(1)(A) requires Buffalo Gap to include a complete list of entities against whom it seeks relief, to wit, ERCOT is the only entity against whom Buffalo Gap seeks relief. ERCOT can be served at 7620 Metro Center Drive, Austin, Texas 78744. ERCOT's Fax number is (512) 255-7079. ERCOT's General Counsel is Mr. Michael G. Grable and his email address is mgrable@ercot.com.

VI. Request for Extension of Page Limit

P.U.C. PROC. R. § 22.72(f) requires that this pleading not exceed 50 (fifty) pages in length; however, the presiding officer may establish a larger page limit. Buffalo Gap respectfully requests the Commission to permit the entirety of this appeal for good cause. Specifically, although this pleading, in and of itself, is far less than the page limit, once the necessary appendices are attached, the appeal exceeds 50 pages.

VII. Commission has Jurisdiction

The Commission has jurisdiction over this Appeal under PURA² §§ 14.001, 39.001, 39.003, and 39.151.

VIII. Statement of the Case

P.U.C. PROC. R. § 22.251 outlines the necessary elements to effectuate an appeal of an ERCOT Board action, including the approval of a PRR, before the Commission. The remainder of those elements are provided below:

² Public Utility Regulatory Act ("PURA"), TEX. UTIL. CODE §§ 11.001-64.158 (West 2007 & Supp. 2009) ("PURA").

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A. Identify of Directly Affected Entities or Classes³

The Commission's decision to grant Buffalo Gap's Appeal and Motion to Suspend would most probably affect all existing WGRs.

B. Concise Description of Conduct from Which Relief is Sought⁴

Buffalo Gap seeks the Commission's review of the reasonableness of ERCOT's adoption of PRR 830, the reversal of PRR 830, and the suspension of the implementation of the adoption of PRR 830 while this appeal is pending.

C. Statement of Applicable ERCOT Procedures and Protocols⁵

The Appendix to this Appeal includes, *inter alia*, the ERCOT Board Action Report which contains a subset of applicable ERCOT Procedures and Protocols. Buffalo Gap has not included in its appendix any irrefutable laws, which are not required to be attached.

The sections of the ERCOT Protocols relevant to this Appeal as contained in that ERCOT Board Action Report are:

- 2.1 (Definitions),
- 2.2 (Acronyms),
- 6.5.7 (voltage Support Service),
- 6.5.7.1 (Generation Resources Required to Provide VSS Installed Reactive Capability)
- 6.5.7.1 (Installed Reactive Power Capability Requirement for Generation Resources Required to Provide VSS)
- 6.5.7.2 (QSE Responsibilities), and
- 6.7.6 (Deployment of Voltage Support Service).

³ P.U.C. PROC. R. § 22.251(d)(1)(B)(ii).

⁴ *Id. at* 22.251(d)(1)(B)(iii).

⁵ *Id. at* 22.251(d)(1)(B)(iii).

D. ADR is not required for this appeal⁶

P.U.C. PROC. R. 22.25(c) and (d) clarify that Alternative Dispute Resolution ("ADR") is not a prerequisite to an appeal of ERCOT's adoption of a PRR. For instance, P.U.C. PROC. R. 22.251(c) uses the term "or":

An entity must use Section 20 of the ERCOT Protocols (Alternative Dispute Resolution Procedures, or ADR), *or* Section 21 of the Protocols (Process for Protocol Revision), or other Applicable ERCOT Procedures, before presenting a complaint to the commission. For the purpose of this section, the term "Applicable ERCOT Procedures" refers to Sections 20 and 21 of the ERCOT Protocols and other applicable sections of the ERCOT protocols that are available to challenge or modify ERCOT conduct, including participation in the protocol revision process [emphasis added].⁷

Furthermore, the Protocols do not require ADR before appealing the adoption of a PRR⁸.

E. Buffalo Gap seeks a suspension⁹

Buffalo Gap seeks a suspension of ERCOT's approval of PRR 830. Note below, Section IX., *Motion for Suspension*, of this Appeal.

F. Sworn Record¹⁰

As required by the Commission rules, an affidavit is attached to this Appeal attesting to the accuracy of the Appendix consisting of eleven (11) attachments.

⁶ *Id.* at 22.251(d)(1)(B)(iv).

⁷ *See also*, P.U.C. SUBST. R. 25.362(c)(2).

⁸ *See* ERCOT Protocol §§ 21.1, 21.4.11, and 21.4.11.3.

⁹ *Id.* at 22.251(d)(1)(B)(v).

¹⁰ *Id.* at 22.251(d)(1)(H).

G. Affidavit of Facts contained herein¹¹

As required by the Commission rules, an affidavit is attached to this Appeal verifying all factual statements contained in the Appeal. Facts specific to Buffalo Gap's operations will be filed under seal subject to a Protective Order.

H. Service to ERCOT and OPC¹²

As required by the Commission rules, this Appeal is being serviced on ERCOT and the Office of Public Utility Counsel, and is also reflected in the attached Certificate of Service. ERCOT and the Office of Public Utility Counsel have agreed to be served by electronic media instead of by paper.

I. Basis for Commission Jurisdiction¹³

The Commission has jurisdiction over this Appeal under PURA §§ 14.001, 39.001, 39.003, and 39.151.

IX. Statement of the Issues¹⁴

The issue in this case is whether the ERCOT Board properly approved PRR 830 and whether this PRR complies with applicable laws and regulations of this Commission.

X. Statement of Facts and Arguments

Although ERCOT's PRR 830 requires reactive power capability substantially in excess of a 0.95 factor leading/lagging at generation levels below 100% (recently referred to as a "Rectangle" by ERCOT staff and ERCOT Board members), Buffalo Gap was originally built with a reactive power capability with a factor of 0.95 leading and lagging at all generation levels (recently referred to as a "Cone" by ERCOT staff and ERCOT Board members).

¹¹ *Id. at 22.251(d)(3).*

¹² *Id. at 22.251(d)(4).*

¹³ *Id. at 22.251(d)(4).*

¹⁴ *Id. at 22.251(d)(1)(C).*

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ERCOT has not demonstrated need for the retrofit for Buffalo Gap or that the retrofit of additional reactive support required under PRR 830 will be utilized. In other words, based on Interconnection Studies specific to Buffalo Gap and the last four (4) years of operating experience, even if Buffalo Gap were to go to the expense of retrofitting its equipment to comply with 830, those required retrofit would not actually be used. Until such time as ERCOT demonstrates the need for these additional reactive requirements, specifically for the Buffalo Gap Wind Projects and other existing WGR's, Buffalo Gap seeks suspension of PRR 830.

Although ERCOT's PRR 830 requires "Rectangle" Reactive Power capacity, Buffalo Gap was originally built as a "Cone" Reactive Power capacity. ERCOT has not demonstrated need for the retrofit based on the interconnection studies specific for Buffalo Gap and that the retrofit or reactive support required under PRR 830 will not be utilized by Buffalo Gap. In other words, even if Buffalo Gap were to go to the expense of retrofitting its equipment to comply with 830, those required retrofit would not actually be used. Until such time as ERCOT demonstrates the need for these additional reactive requirements, specifically for the Buffalo Gap Wind Projects and other existing WGR's, Buffalo Gap seeks suspension of PRR 830.

XI. QUESTIONS REQUIRING AN EVIDENTIARY HEARING

ERCOT claims that PRR 830 only clarifies existing reactive power capability requirements; however, ERCOT actually deletes prior requirements and creates new requirements for WGRs. To require Buffalo Gap to meet the new requirements of PRR 830 would create a burden that vastly outweighs the benefit ERCOT is seeking in PRR 830.

Further, PRR 830 actually conflicts with other ERCOT Protocol requirements. For example, before ERCOT can require additional reactive power, ERCOT Regional

Planning Groups (or Transmission Planning) must first show that there is a need for such additional reactive power.¹⁵

In addition, PRR 830 is inconsistent with ERCOT's previous actions, such as providing written notice to Market Participants¹⁶, making reports to the ERCOT Compliance Office¹⁷ or expressing concerns at ERCOT committee meetings.

Finally, PRR 830 discriminates against WGRs in favor of conventional power generation. The PUC and ERCOT are prohibited from engaging in such discriminatory practices¹⁸; however, ERCOT has now claimed the ability to disconnect WGRs if they operate below 10% of nameplate capacity. ERCOT does not apply this same restriction to conventional power generation. Further, WGRs are required to provide three Real Time Supervisory Control and Data Acquisition ("SCADA") points, a requirement which does not apply to conventional power generation.

XII. MOTION FOR SUSPENSION

P.U.C. PROC. R. 22.251(i) authorizes the Commission to suspend the conduct of ERCOT – including implementation of a Protocol – while a complaint appealing the conduct is pending at the Commission.¹⁹ The standard is good cause.²⁰ Four factors are considered:

The good cause determination required by this subsection shall be based on an assessment of the harm that is likely to result to the complainant if a suspension is not ordered, the harm that is likely to result to others if a suspension is ordered, the likelihood of the complainant's success on the

¹⁵ Protocol § 5.2.1(6).

¹⁶ Protocol § 6.5.7.3(4).

¹⁷ Protocol § 6.10.9.

¹⁸ *See, e.g.*, PURA §§ 31.002(9), 35.004(e), 39.001(c), and 39.157.

¹⁹ *See* P.U.C. PROC. R. 22.251(b) and (i); *see also* PURA §§ 39.151(d) and 39.151(d-1).

²⁰ P.U.C. PROC. R. 22.251(i).

merits of the complaint, and any other relevant factors as determined by the commission or the presiding officer.²¹

Pursuant to P.U.C. PROC. R. § 22.251(d)(2), Buffalo Gap moves for the suspension of ERCOT's approval of PRR 830 and the implementation of the decision, if necessary. More specifically, as briefly stated above, in this appeal Buffalo Gap seeks relief from only ERCOT. Counsel for Buffalo Gap has been in contact with ERCOT's General Counsel to request that ERCOT agree to a suspension, but given time restraints, Counsel for Buffalo Gap cannot represent at this time that ERCOT will agree to a suspension.

The effective date of PRR 830 is December 1, 2009. The PRR remains in effect until and unless the presiding officer or Commission issues and order suspending the ERCOT action approving the PRR. P.U.C. PROC. R. § 22.251(i).

Good cause exists for suspending PRR 830. Not only will harm likely result to Buffalo Gap if a suspension is not ordered, harm is likely to result to most, if not all, other WGRs. Harm includes, but is not limited to,

- Potential sanctions for failure to comply with the PRR which could include
 - administrative penalties (up to \$25,000 per day),
 - revocation or suspension of the Commission registration to operate, affecting the commercial value of Buffalo Gap's commercial value of its existing generation
- Potential disconnection from the ERCOT system as stated in the new ERCOT Protocol 6.5.7.1(1), and
- Economic loss in having to place an order for the newly required devices (which cannot be ordered conditionally)

²¹ P.U.C. PROC. R. 22.251(i).

Furthermore, given the likelihood of Buffalo Gap's success on the merits of this complaint, good cause exists for suspending the PRR. For these reasons there is ample good cause to suspend PRR 830 while this Appeal is pending at the Commission.

XIII. CONCLUSION AND PRAYER

WHEREFORE, PREMISES CONSIDERED, Buffalo Gap Wind Farm respectfully request the Commission reverse PRR 830, and expeditiously suspend the implementation of ERCOT's decision regarding its approval of PRR 830. In addition to suffering the deprivation of its ability to obtain meaningful or timely relief, Buffalo Gap would suffer irreparable harm, both financially and in meeting its contractual obligations, were PRR 830 to remain in effect pending the resolution of these matters. Buffalo Gap further requests any and all other relief, legal and equitable, to which it is so entitled.

Respectfully submitted,

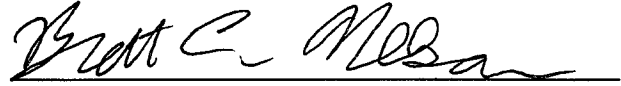


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**ATTORNEYS FOR BUFFALO GAP WIND
FARM, L.L.C., BUFFALO GAP WIND FARM
2, L.L.C., AND BUFFALO GAP WIND FARM
3, L.L.C.**

CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing was served on ERCOT and the Office of Public Utility Counsel via electronic mail or via facsimile on this 22nd day of December, 2009.

A handwritten signature in cursive script, reading "Brett C. Nelson", is written over a horizontal line.

Brett C. Nelson

Appendix

Protocol Revision Request 830, *Reactive Power Capability Requirement*

ERCOT Board Action Report regarding PRR 830

ERCOT Board of Directors November meeting transcript regarding PRR 830

Letter from ERCOT General Counsel Grable Dated November 10, 2009 to the ERCOT Board of Directors regarding Packet Materials for the November Board meeting [materials regarding PRR 830, incorporated by reference]

ERCOT Technical Advisory Committee ("TAC") November 2009 meeting minutes regarding PRR 830

ERCOT Protocol Revision Subcommittee ("PRS") October 2009 meeting minutes regarding PRR 830

ERCOT Reliability and Operations Subcommittee ("ROS") October 2009 meeting minutes regarding PRR 830

Resource Asset Registration Guide

Affidavit of Mr. Brett Nelson regarding genuineness of attachments

Affidavit of Mr. Robert Sims, AES Wind Generation, Inc. attesting to facts asserted herein

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Protocol Revision Request 830,
Reactive Power Capability Requirement

Approved November 17, 2009

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Protocol Revision Request

PRR Number	830	PRR Title	Reactive Power Capability Requirement
Date Posted	September 8, 2009		

Protocol Section(s) Requiring Revision	<p>2.1, Definitions 2.2, Acronyms 6.5.7, Voltage Support Service 6.5.7.1, Generation Resources Required to Provide VSS Installed Reactive Capability 6.7.6, Deployment of Voltage Support Service</p>
Requested Resolution	<p>Urgent. On November 13, 2008, ERCOT Legal issued a Protocol Interpretation, which was subsequently withdrawn on procedural grounds, regarding the Reactive Power capability requirements in Sections 6.5.7.1 and Section 6.7.6. This Protocol Interpretation resulted in a complaint filed against ERCOT by certain Wind-powered Generation Entities at the Public Utility Commission of Texas (<u>see</u> PUCT Docket No. 36482, Appeal of Competitive Wind Generators Regarding the Electric Reliability Council of Texas' Interpretation of the Reactive Power Protocols). One of the reasons ERCOT sought to abate and then dismiss that docket is that this issue is better suited to an informal and forward-looking resolution. Therefore, ERCOT files this Protocol Revision Request (PRR) to seek a prospective outcome that maintains reliability while attempting to lessen the costs and burdens of compliance with respect to the Reactive Power capability requirements in the ERCOT Protocols, and that offers a path to compliance for certain Wind-powered Generation Resources (WGRs) that are presently not able to meet 0.95 lead/lag requirement at the Point of Interconnection based solely on the unit's Reactive Power capability.</p>
Revision Description	<p>This PRR clarifies the Reactive Power capability requirement for all Generation Resources, including existing WGRs who are not able to meet the 0.95 lead/lag requirement with the Generation Resource's Unit Reactive Limit (URL).</p> <p>WGRs that commenced operation on or after February 17, 2004, and have a signed Standard Generation Interconnection Agreement (SGIA) on or before November 1, 2009 may meet the Reactive Power requirements through a combination of the WGR's URL and/or automatically switchable static VAR capable devices and/or dynamic VAR capable devices.</p>
Reason for Revision	<p>Clarification of Reactive Power capability requirements on a going-forward basis and path to compliance for certain WGRs that are not able to meet the 0.95 lead/lag requirement at the Point of Interconnection based on Generation Resource's URL.</p>

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Protocol Revision Request

Sponsor	
Name	John Dumas
E-mail Address	jdumas@ercot.com
Company	ERCOT
Phone Number	(512) 248-3195
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Market Segment	N/A

Market Rules Staff Contact	
Name	Sandra Tindall
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Phone Number	512-248-3867

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Protocol Revision Request

interconnection POI to the TDSP. The Reactive Power requirements shall be available at all MW output levels and may be met through a combination of the Generation Resource's Unit Reactive Limit (URL), which is the generating unit's dynamic leading and lagging operating capability, and/or dynamic VAR capable devices. For Wind-powered Generation Resources (WGRs), the Reactive Power requirements shall be available at all MW output levels at or above 10% of the WGR's nameplate capacity. When a WGR is operating below 10% of its nameplate capacity and is unable to support voltage at the POI, ERCOT may require a WGR to disconnect from the ERCOT System. The Reactive Power requirements of this paragraph shall apply to all Generation Resources except as otherwise provided in paragraphs (2) through (4) below.

- (2) WGRs that commenced operation on or after February 17, 2004, and have a signed Standard Generation Interconnection Agreement (SGIA) on or before November 1, 2009, must be capable of producing a defined quantity of Reactive Power to maintain a Voltage Profile established by ERCOT in accordance with the Reactive Power requirements established in paragraph (1) above. However, the Reactive Power requirements may be met through a combination of the WGR's URL and/or automatically switchable static VAR capable devices and/or dynamic VAR capable devices. WGRs shall comply with the Reactive Power requirements of this paragraph by no later than December 31, 2010, unless it is known by July 31, 2010, that related retrofits are required by the Voltage Ride-Through study conducted in accordance with Operation Guide Section 3.1.4.6.1, Protective Relaying Requirement and Voltage Ride-Through Requirement for Wind-powered Generation Resources, in which event ERCOT may in its discretion modify the deadline for an affected WGR. ERCOT, in its sole discretion, also may grant an extension of time for other reasons.
- (3) Qualified renewable Generation Resources (as described in Section 14, State of Texas Renewable Energy Credit Trading Program) in operation before February 17, 2004, required to provide VSS and all other Generation Resources required to provide VSS that were in operation prior to September 1, 1999, whose current design does not allow them to meet the URL as stated above Reactive Power requirements established in paragraph (1) above, will be required to maintain a URL Reactive Power requirement as defined by the qualified renewable Generation Resource's URL that was submitted to ERCOT and established per the is limited to the quantity of Reactive Power that the Generation Resource can produce at its rated capability (MW) as determined using procedures and criteria as described in the Operating Guides.
- (4) New generating units connected before May 17, 2005, whose owners demonstrate to ERCOT's satisfaction that design and/or equipment procurement decisions were made prior to February 17, 2004, based upon previous standards, whose design does not allow them to meet the URL as stated above Reactive Power requirements established in paragraph (1) above, will be required to maintain a URL Reactive Power requirement as defined by the Generation Resource's URL that was submitted to ERCOT and established per the is limited to the quantity of Reactive Power that the Generation Resource can produce at its rated capability (MW) as determined using procedures and criteria described in the Operating Guides.

Protocol Revision Request

into the ERCOT Transmission Grid. WGRs must also provide two other Real Time SCADA points that communicate to ERCOT the following:

- (a) The number of wind turbines that are not able to communicate and whose status is unknown; and
- (b) The number of wind turbines out of service and not available for operation. WGRs must comply with these requirements by no later than six months after the effective date of this paragraph.
- (11) For the purpose of complying with the Reactive Power requirements under this Section, Reactive Power losses that occur on privately-owned transmission lines behind the POI may be compensated by automatically switchable static VAR capable devices.

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6.7.6 *Deployment of Voltage Support Service*

- (1) ERCOT, or Transmission Service Providers (TSPs) designated by ERCOT, will instruct Generation Resources required to provide Voltage Support Service (VSS) to make adjustments for voltage support within the Unit Reactive Limit (URL) capacity limits provided by the QSE to ERCOT. Generation Resources providing VSS will not be requested to reduce megawatt output so as to provide additional Megavolt-Amperes Reactive (MVAR), nor will they be requested to operate on a voltage schedule outside the Unit Reactive Limits (URL) specified by the QSE without a Dispatch Instruction requesting unit-specific Dispatch or an OOME instruction.
- (2) ERCOT and Transmission and/or Distribution Service Providers (TDSPs) shall develop operating procedures specifying Voltage Profiles of transmission controlled reactive Resources to minimize the dependence on generation-supplied reactive Resources. For Generation Resources required to provide VSS, step-up transformer tap settings will be managed to maximize the use of the ERCOT System for all Market Participants while maintaining adequate reliability.
- (3) The TSP, under ERCOT direction, is responsible for monitoring and ensuring that all Generation Resources required to provide VSS dynamic reactive sources in a local area are deployed in approximate proportion to their respective installed Reactive Power capability requirements.
- (4) All Generation Resources required to provide VSS shall maintain support the transmission voltage at the point of interconnection POI to the ERCOT Transmission Grid, or at the transmission bus in accordance with paragraph (5) of Section 6.5.7.1, Generation Resources Required to Provide VSS Installed Reactive Capability, as directed by ERCOT within the operating Reactive Power capability of the unit(s).
- ~~(5) At all times a Generation Resource unit required to provide VSS is On-line, the URL must be available for utilization at the generating unit's continuous rated active power output, and Reactive Power up to the unit's operating capability must be available for utilization at lower active power output levels. In no event shall the Reactive Power~~

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ERCOT Board Action Report regarding
PRR 830

November 17, 2009

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Board Action Report

PRR Number	830	PRR Title	Reactive Power Capability Requirement
Timeline	Urgent	Action	Approved
Date of Decision	November 17, 2009		
Effective Date	December 1, 2009		
Priority and Rank Assigned	Not applicable.		
Protocol Section(s) Requiring Revision	2.1, Definitions 2.2, Acronyms 6.5.7, Voltage Support Service 6.5.7.1, Generation Resources Required to Provide VSS Installed Reactive Capability 6.7.6, Deployment of Voltage Support Service		
Revision Description	This Protocol Revision Request (PRR) clarifies the Reactive Power capability requirement for all Generation Resources, including existing Wind-powered Generation Resources (WGRs) who are not able to meet the 0.95 lead/lag requirement with the Generation Resource's Unit Reactive Limit (URL). WGRs that commenced operation on or after February 17, 2004, and have a signed Standard Generation Interconnection Agreement (SGIA) on or before December 1, 2009 may meet the Reactive Power requirements through a combination of the WGR's URL and/or automatically switchable static VAR capable devices and/or dynamic VAR capable devices.		
Reason for Revision	Clarification of Reactive Power capability requirements on a going-forward basis and path to compliance for certain WGRs that are not able to meet the 0.95 lead/lag requirement at the Point of Interconnection (POI) based on the Generation Resource's URL.		
Overall Market Benefit	Provides additional clarity to the reactive requirements for wind generation.		
Overall Market Impact	Unknown.		
Consumer Impact	None.		
Credit Impacts	ERCOT Credit Staff and the Credit Work Group (Credit WG) have reviewed PRR830 and do not believe that it requires changes to credit monitoring activity or the calculation of liability.		
Relevance to Nodal Market	Yes. The Reactive Power capability requirements exist in Nodal as well.		

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Board Action Report

	<p>posted.</p> <ul style="list-style-type: none"> ➤ On 11/17/09, RES America Developments comments were posted. ➤ On 11/17/09, a second set of AES comments were posted. ➤ On 11/17/09, the ERCOT Board considered PRR830. ➤ On 11/20/09, the NextEra Energy Resources ERCOT Board presentation was posted.
PRS Decision	<p>On 9/17/09, PRS unanimously voted to table PRR830 for one month and to encourage ROS to provide comments on PRR830. All Market Segments were present for the vote.</p> <p>On 10/22/09, PRS voted to recommend approval of PRR830 as endorsed by ROS. The motion passed via roll call vote. All Market Segments were present for the vote.</p>
Summary of PRS Discussion	<p>On 9/17/09, there was discussion regarding the appeal currently at the Public Utility Commission of Texas (PUCT) which stemmed from an ERCOT interpretation of the current Protocols regarding Reactive Power. It was debated whether or not the proposed content of PRR830 was being addressed in the contested case.</p> <p>On 10/22/09, ERCOT Staff explained that PRR830 is not intended to change the philosophy of the Protocols. ERCOT Staff also provided clarification of the proposed change to the WGR definition, and noted that dynamic devices will be required going forward, but that existing WGRs can meet the requirement with static devices. There was also discussion regarding the use of the "cone" versus the "rectangle" for Reactive Power capability and that having differing requirements makes planning difficult and may pose fairness and grid stability issues. Some Market Participants expressed concerns that requirements of PRR830 would impose costs to retrofit existing units and that studies should be performed to demonstrate need.</p>
TAC Decision	<p>On 11/5/09, TAC voted to recommend approval of PRR830 as recommended by PRS in the 10/22/09 PRS Recommendation Report and as amended by the 10/29/09 ERCOT comments. All Market Segments were present for the vote.</p>
Summary of TAC Discussion	<p>On 11/5/09, TAC reviewed PRR830 comments. A Market Participant proposed including language that allowed a hybrid solution to meet Reactive Power capability requirements. ERCOT Staff explained that paragraph (6) of Section 6.5.7.1 allows Market Participants to submit alternative proposals to ERCOT for meeting the requirement, which could include a hybrid solution.</p> <p>Some Market Participants opined that changing the definition of WGR would have repercussions not only where "WGR" is used in the Protocols or market guides, but could also create complications in instances where the terms "generator," "Resource," or "unit" are</p>

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Board Action Report

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Sponsor	
Name	John Dumas
E-mail Address	jdumas@ercot.com
Company	ERCOT
Phone Number	(512) 248-3195
Cell Number	
Market Segment	N/A

Market Rules Staff Contact	
Name	Sandra Tindall
E-Mail Address	stindall@ercot.com
Phone Number	512-248-3867

Comments Received	
Comment Author	Comment Summary
Horizon Wind Energy LLC 091509	Recommended that PRR830 be rejected as submitted.
Calpine 092809	Supported approval of PRR830.
Iberdrola Renewables 100709	Suggested existing Protocol language is clear. Proposed additional revisions only as an alternative to the ERCOT proposed changes.
Horizon Wind Energy LLC 100809	Opined that PRR830 is contrary to existing Protocols, and is proposed without demonstration of need. Commented that PRR830 re-defines Reactive Power capability requirements for Generation Resources interconnected with the ERCOT Transmission Grid, imposing new requirements on WGRs and requiring retrofits to the majority of operating WGRs.
LCRA 100809	Proposed clarifying language which would allow Resources to start at lower voltage levels. Also proposed changes related to establishing Reactive Power requirements.
ROS 101909	Endorsed PRR830 as submitted.
Wind Coalition 102109	Provided alternative language to the definition of a WGR and the subsequent changes that are intended to improve the modeling of wind-powered generation reactive capabilities.
Vestas 102209	Stated that if PRR830 is adopted as proposed, it may unnecessarily increase the costs of WGRs in Texas with no improvements in reliability. Suggested that hybrid systems that have the effective

Board Action Report

	Suggested the NextEra proposed language would require TSPs to submit reactive element upgrades and opined that related costs should be borne by those causing the costs.
AES 111009	Suggested PRR830 should not be implemented as recommended by TAC because: 1) PRR830 requires voltage and power factor capabilities higher than the Federal Energy Regulatory Commission (FERC) 661A requirements for which ERCOT has not demonstrated the need; 2) PRR830 is a piecemeal approach and ERCOT should take a comprehensive approach along with the Low Voltage Ride Through study; and 3) PRR830 retroactively changes the interconnection requirements for operating wind projects with no documented need.
Horizon Wind Energy LLC 111009	Suggested PRR830 does not clarify existing Protocols and will create hardships on a sub-segment of generation. Provided documents to support position.
Oncor 111009	Noted support for PRR830 and described principles needed for the bulk power system to operate reliably. Provided documents to support position.
TAC Advocate 111009	Explained the TAC position on PRR830 highlighting the discussion and vote tallies at various stakeholder meetings. Noted support was due to reliability concerns for the grid as well as desire that all generators be treated equitably. Highlighted need to ensure that the system is operated in manner in which it was planned and built and suggested further study is not needed as generators have a fixed reactive capability requirement.
ERCOT 111009	Requested rejection of the NextEra appeal and approval of PRR830 as recommended by TAC to preserve important reliability requirements, to maintain parity among Generation Resources, and to reduce uplift of costs to Load.
Wind Coalition 111009	Supported creating aggregations of actual wind-powered turbines of the same type for modeling purposes but argued the redefinition of WGRs will make WGRs "units" for all purposes in the Protocol and market guides.
TAC Advocate 111109	Provided a supporting document to review PRR830 procedural history, to note Reactive Power requirements and the applicability to existing Generation Resources, and to counter the argument for additional studies to determine need.
RES America Developments Inc. 111709	Requested that the ERCOT Board not approve PRR830 because it will force some existing Generation Resources to retrofit equipment which would impose additional costs on the Generation Resource which would more efficiently be realized by TSPs. Suggested a technical study should be performed to determine whether Reactive Power response via the triangle is inadequate to maintain reliability.
AES 111709	Provided chronological summary and list of parties participating in the proceedings related to FERC Order 661A.
NextEra Energy	Opined that reinterpreting existing Protocols and applying them

Board Action Report

hundredths (0.95) or less and an under-excited (leading) power factor capability of ninety-five hundredths (0.95) or less, both determined at the generating unit's maximum net power to be supplied to the ERCOT Transmission Grid and at the transmission system Voltage Profile established by ERCOT, and both measured at the point of interconnection POI to the TDSP. The Reactive Power requirements shall be available at all MW output levels and may be met through a combination of the Generation Resource's Unit Reactive Limit (URL), which is the generating unit's dynamic leading and lagging operating capability, and/or dynamic VAR capable devices. For Wind-powered Generation Resources (WGRs), the Reactive Power requirements shall be available at all MW output levels at or above 10 percent (10%) of the WGR's nameplate capacity. When a WGR is operating below 10% of its nameplate capacity and is unable to support voltage at the POI, ERCOT may require a WGR to disconnect from the ERCOT System. The Reactive Power requirements of this paragraph shall apply to all Generation Resources except as otherwise provided in paragraphs (2) through (4) below.

- (2) WGRs that commenced operation on or after February 17, 2004, and have a signed Standard Generation Interconnection Agreement (SGIA) on or before November/December 1, 2009, must be capable of producing a defined quantity of Reactive Power to maintain a Voltage Profile established by ERCOT in accordance with the Reactive Power requirements established in paragraph (1) above. However, the Reactive Power requirements may be met through a combination of the WGR's URL and/or automatically switchable static VAR capable devices and/or dynamic VAR capable devices. WGRs shall comply with the Reactive Power requirements of this paragraph by no later than December 31, 2010, unless it is known by July 31, 2010, that related retrofits are required by the Voltage Ride-Through study conducted in accordance with Operation Guide Section 3.1.4.6.1, Protective Relaying Requirement and Voltage Ride-Through Requirement for Wind-powered Generation Resources, in which event ERCOT may in its discretion modify the deadline for an affected WGR. ERCOT, in its sole discretion, also may grant an extension of time for other reasons.
- (3) Qualified renewable Generation Resources (as described in Section 14, State of Texas Renewable Energy Credit Trading Program) in operation before February 17, 2004, required to provide VSS and all other Generation Resources required to provide VSS that were in operation prior to September 1, 1999, whose current design does not allow them to meet the URL as stated above/Reactive Power requirements established in paragraph (1) above, will be required to maintain a URL-Reactive Power requirement as defined by the qualified renewable Generation Resource's URL that was submitted to ERCOT and established per the is limited to the quantity of Reactive Power that the Generation Resource can produce at its rated capability (MW) as determined using procedures and criteria as described in the Operating Guides.
- (4) New generating units connected before May 17, 2005, whose owners demonstrate to ERCOT's satisfaction that design and/or equipment procurement decisions were made prior to February 17, 2004, based upon previous standards, whose design does not allow them to meet the URL as stated above/Reactive Power requirements established in paragraph (1) above, will be required to maintain a URL-Reactive Power requirement as defined by the Generation Resource's URL that was submitted to ERCOT and

Board Action Report

- (9) Generation Resources required to provide VSS shall not reduce high reactive loading on individual units during abnormal conditions without the consent of ERCOT (conveyed by way of their QSE) unless equipment damage is imminent.
- (10) WGRs must provide a Real Time Supervisory Control and Data Acquisition (SCADA) point that communicates to ERCOT the number of wind turbines that are available for real power and/or Reactive Power injection into the ERCOT Transmission Grid. WGRs must also provide two (2) other Real Time SCADA points that communicate to ERCOT the following:
- (a) The number of wind turbines that are not able to communicate and whose status is unknown; and
- (b) The number of wind turbines out of service and not available for operation.
- WGRs must comply with these requirements of paragraph (10) by no later than six (6) months after the effective date of this paragraph June 1, 2010.
- (11) For the purpose of complying with the Reactive Power requirements under this Section, Reactive Power losses that occur on privately-owned transmission lines behind the POI may be compensated by automatically switchable static VAR capable devices.

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6.7.6 Deployment of Voltage Support Service

- (1) ERCOT, or Transmission and/or Distribution Service Providers (TDSPs) designated by ERCOT, will instruct Generation Resources required to provide Voltage Support Service (VSS) to make adjustments for voltage support within the Unit Reactive Limit (URL) capacity limits provided by the QSE to ERCOT. Generation Resources providing VSS will not be requested to reduce megawatt output so as to provide additional Megawatt-Amperes Reactive (MVAR), nor will they be requested to operate on a voltage schedule outside the Unit Reactive Limits (URL) specified by the QSE without a Dispatch Instruction requesting unit-specific Dispatch or an OOME instruction.
- (2) ERCOT and Transmission and/or Distribution Service Providers (TDSPs) shall develop operating procedures specifying Voltage Profiles of transmission controlled reactive Resources to minimize the dependence on generation-supplied reactive Resources. For Generation Resources required to provide VSS, step-up G_{SU} transformer tap settings will be managed to maximize the use of the ERCOT System for all Market Participants while maintaining adequate reliability.
- (3) The TDSP, under ERCOT direction, is responsible for monitoring and ensuring that all Generation Resources required to provide VSS dynamic reactive sources in a local area are deployed in approximate proportion to their respective installed Reactive Power capability requirements.
- (4) All Generation Resources required to provide VSS shall maintain support the transmission voltage at the point of interconnection POI to the ERCOT Transmission Grid, or at the

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ERCOT Board of Directors November meeting transcript regarding PRR 830

November 17, 2009

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TRANSCRIPT OF PROCEEDINGS
BEFORE THE
ELECTRIC RELIABILITY COUNCIL OF TEXAS
AUSTIN, TEXAS

BOARD OF DIRECTORS MEETING
TUESDAY, NOVEMBER 17, 2009

BE IT REMEMBERED THAT at 10:06 a.m, on
Tuesday, the 17th day of November 2009, the above-
entitled matter came on for hearing at the Electric
Reliability Council of Texas, 7620 Metro Center Drive,
Austin, Texas, before JAN NEWTON, Chairman, and MARK
G. ARMENTROUT, DANNY BIVENS, BRAD COX, ANDREW J.
DALTON, MIGUEL ESPINOSA, NICK FEHRENBACH, BOB HELTON,
CHARLES JENKINS, TRIP DOGGETT, CLIFTON KARNEI, ALTON
D. "DEE" PATTON, BARRY T. SMITHERMAN, ROBERT THOMAS
and DAN WILKERSON, Members of the Board, and the
following proceedings were reported by Lou Ray and Kim
Pence, Certified Shorthand Reporters of:

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1 P R O C E E D I N G S
2 TUESDAY, NOVEMBER 17, 2009
3 (10:06 a.m.)
4 1. CALL OPEN SESSION TO ORDER
5 CHAIRMAN NEWTON: Okay. I'd like to go
6 ahead and convene the November ERCOT Board of
7 Directors meeting.
8 First of all, we have the evacuation
9 plan up on the board. I think we will, in a moment,
10 have the anti-trust admonition, which we -- Okay.
11 It's at the top. Thank you, Mike. I don't have my

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12 glasses on. So I would remind the Board members about
13 these standing items for our agenda.

14 I would also remind everyone that we are
15 webcasting our board meeting, as well it's being
16 transcribed. So I have had a discussion -- I told
17 them that one of these days maybe we'll get this down
18 with these new procedures, but with the folks helping
19 transcribe our meetings, there may be a need to stop
20 throughout the day to give them ability to kind of
21 stretch their hands a moment. So if I do that, I hope
22 you'll bear with me as we work through this process.

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1 2. CONSENT AGENDA ITEMS

2 3. APPROVAL OF MINUTES

3 CHAIRMAN NEWTON: Okay. With that let's
4 move on to the consent agenda. Today we have the
5 minutes from last month's meeting. We also have the
6 minutes for the Joint Nominating Committee from
7 October 19th. And we have PRR 836. Those three items
8 are on our consent agenda. Do I have any comments
9 relative to those, or questions?

10 Seeing none, may I have a motion for
11 approval?

12 Motion by Miguel Espinosa. Second by
13 Clifton Karnei.

14 All in favor?

15 (All those in favor of the motion so
16 responded)

17 CHAIRMAN NEWTON: All opposed?
18 Abstentions?
19 One abstention from Bob Thomas --
20 MR. THOMAS: Just on the Nominating
21 Committee.
22 CHAIRMAN NEWTON: Okay. Just on the
23 nominating committee. Okay. The consent agenda
24 passes with that one abstention from Bob Thomas for
25 the nominating committee.

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1 I'm going to turn it over to Chair
2 Smitherman.

3 CHAIRMAN SMITHERMAN: Thank you,
4 Chairwoman Newton. We don't have a quorum today at
5 the Commission, and I wanted to explain why. My
6 colleagues, Commissioners Nelson and Anderson, are at
7 the NARUC National Convention in Chicago. This is
8 unusual that we don't have at least two here. It's
9 incredibly appropriate that they should be there,
10 particularly given that both of them are relatively
11 new. So I'll be operating today without a quorum.
12 Thank you.

13 4. CEO UPDATE

14 CHAIRMAN NEWTON: Okay. Thank you. The
15 next item on the agenda is the update from our interim
16 CEO, Trip Doggett.

17 Welcome, Trip.

18 MR. DOGGETT: Thank you. Good morning,
19 I think Vickie is going to pull my slides up for you.
20 We're going to do something a little different this

21 morning from what you're accustomed to.

22 I'm a very transparent person, if you
23 don't know me. And I wanted to give you a little
24 deeper view into ERCOT and some of the things that
25 have been accomplished at ERCOT over the last month.

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1 I've implemented something at my staff meeting where
2 we weekly report on successes and disappointments.
3 And my plan is to aggregate that information that I
4 receive weekly and bring it to you each month in the
5 form of a slide deck to just highlight some of the
6 major accomplishments and some of the major challenges
7 that we have.

8 If you look at what's occurred over the
9 last month, I tried to assemble several bullets for
10 you to let you know in some key areas, like nodal, for
11 instance, that we did successfully complete our first
12 Operational Day Test on schedule. That's an
13 end-to-end test, which I'm sure Mike talked to the
14 Nodal Subcommittee about yesterday. This is a great
15 success.

16 We also started the 2.1 market trials on
17 time, which was another great success.

18 We continue to work with market
19 participants on debugging the Single Entry Model
20 processes. An example of one of the success in this
21 area is we were able to address the owner-operator
22 challenge, if you're on the -- if you're a user of the
23 Single Entry Model.

24 Over in grid operations, one of our
25 great successes is that we set our all-time

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1 instantaneous wind generation record last month. The
2 28th we had over 6200 megawatts of wind that day. We
3 successfully incorporated that wind.

4 Clifton, you want to go ahead and ask
5 your question?

6 MR. KARNEI: Yes. It's my understanding
7 we have over 8,000 megawatts of wind capacity, 4,000
8 megawatts of transmission capacity. So how did we --
9 how were we able to generate 6200 megawatts of wind?

10 MR. DOGGETT: Normally we have a little
11 over 4,000 megawatts of transmission capacity. On
12 this day we had several unique situations. You might
13 remember we had a large generation resource that built
14 a transmission line to take their wind instead of to
15 the west zone over to the south zone, and that freed
16 up and allowed us to increase the transfer capacity.

17 we also had a couple of line outages at
18 the time that also increased that transfer capability.
19 So 6223, at that time our load was in the 35,000
20 megawatt range. At one point during the day we were
21 serving around 25 percent of our load with wind.

22 So again, my hat's off to the operators.
23 There were nervous times there obviously.

24 Clifton?

25 MR. KARNEI: So do you think this is a

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1 non-typical event? I mean, is it an unusual event or
2 can we expect this to reoccur periodically?

3 MR. DOGGETT: I think it's unusual that
4 it would be this high, but I think we will see
5 situations where we're in the high fours, low fives on
6 high wind days.

7 CHAIRMAN SMITHERMAN: Trip --

8 MR. DOGGETT: Yes.

9 CHAIRMAN SMITHERMAN: If I may, I see
10 Mark Bruce down there.

11 Mark, at -- maybe today or maybe in the
12 future, when appropriate, I think you're affiliated
13 with the company that Trip referenced. Can we get an
14 update on this, because I think this is really a
15 significant development, this private line going from
16 the west zone to the south zone. I think -- I think
17 this company has discussed this in some of their
18 earnings calls or quarterly reports, but I don't want
19 to be presumptuous.

20 MR. BRUCE: It has been discussed
21 publicly. When you say "we" do you mean the
22 Commission or the Board?

23 CHAIRMAN SMITHERMAN: Someone from the
24 company, I think, perhaps could give us an update
25 formally.

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1 MR. BRUCE: Okay. I will certainly make
2 that request.

3 CHAIRMAN SMITHERMAN: Okay.

4 MR. DOGGETT: Again, my hat's off to the
5 operators. I will tell you it's a very nervous
6 situation when they're operating in this mode. So
7 we're definitely staying on top of the situation and

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8 attempting to do everything we can to make their life
9 a little easier, including our wind ramp rate
10 forecaster, which we anticipate going live later this
11 month will be another tool in their tool chest.

12 Andrew?

13 MR. DALTON: And, Trip, why are we
14 nervous when we're getting up to 6,000 megawatts of
15 wind?

16 MR. DOGGETT: Well, it's similar to
17 having the potential for several large conventional
18 generators to trip offline. It's the timing of the
19 front that was causing this high wind that makes us
20 nervous. And so we always need to stay ahead of where
21 that front is moving so that we don't find the wind
22 dropping off unexpectedly without enough reserves
23 capable to accommodate that.

24 MR. DALTON: How was our AWS True Wind
25 forecasting on those days?

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1 MR. DOGGETT: Kent, do you know?

2 MR. SAATHOFF: I will have to look in my
3 presentation.

4 MR. DOGGETT: Could we let Kent look and
5 comment during his presentation?

6 MR. DALTON: That would be fine.

7 MR. DOGGETT: Okay. Good deal.

8 We've also been working with the IT area
9 over in grid ops and have seen a significant
10 improvement in our energy management system, what I
11 call skip cycles where we were having situations where

12 we would miss 4 to 5 scans for EMS in an hour. We've
13 got that down to about one event per day. So there's
14 been significant improvement, which helps us with our
15 load forecast error -- I'm sorry, with our load
16 frequency control and our CTS scores.

17 Over in the market operations side,
18 you'll hear more from Betty today about advanced
19 metering. You remember with our power outage that
20 corrupted some of our databases, we split that project
21 into two implementations. Implementation 1 has been
22 delayed by one week to November 21st. Because of the
23 delays associated with the corrupted data, we are
24 asking for a slight increase in our contingency a
25 little later in the meeting.

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1 As you heard this morning if you were in
2 F&A, we did have an unqualified opinion on SAS 70,
3 which is great news. We did have two exceptions,
4 which we discussed back in August. I think Sean used
5 the term "we can't relax." We won't. We'll make sure
6 we stay on top of SAS 70 for the coming year and shoot
7 for unqualified with zero exceptions next year.

8 We were able to decommission what we
9 refer to as the data archive. This is part of our
10 Information Life Cycle Management Project, which is
11 attempting to look at data that is stored in multiple
12 locations in an attempt to reduce our storage
13 requirements.

14 Some other IT projects, we were able to
15 expedite the recovery of those environments that we
16 lost during the power outage of October 7th, and that

ERCOT Board Meeting 11-17-09

17 is why we were able to limit the delay on advanced
18 metering to one week. We were able to successfully
19 implement PRR 803, which is the 14-minute ramp PRR.

20 We completed our TCC-1 data center
21 expansion. So Mike Cleary was able to take kind of a
22 sigh of relief that that's a very significant
23 accomplishment as far as nodal is concerned for having
24 adequate data center capacity for nodal go-live.

25 One of our disappointments, the Identity

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1 and Access Management Project, which you've heard
2 about in the past, has been delayed again from 11/14
3 to 12/5. This was due to some defects that we found
4 late in the testing cycle.

5 And another slight disappointment, we
6 obviously are glad to see the rain, but we did
7 experience several rain days at our data center
8 construction sites that impacted our schedule there,
9 although we are on schedule and on budget overall,
10 which you'll hear from Nancy later.

11 You'll hear from Chuck later about
12 compliance in our NERC audit. We had a very
13 successful NERC audit based on the preliminary report
14 that we received from NERC. In that report NERC
15 actually highlighted our culture of compliance, so
16 that's great news.

17 We do have a continued challenge though
18 because there are pieces of the audit that were
19 delayed related to the transmission operator function,
20 and we will be continuing that effort along with

21 several other of the transmission companies within
22 ERCOT that have control centers.

23 And I'll conclude with a couple of legal
24 comments. This is one that I was excited about. We
25 were invited by Senator Fraser's office to what they

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1 call Energy Thursdays down at the Capitol.
2 Mike Grable was able to present an overview of ERCOT
3 to this group of staffers.

4 Mike, I think we had 35 to 50 staffers?

5 MR. GRABLE: We did. We had a very good
6 turnout. Thanks, Trip. And they appreciated your
7 being there as ERCOT CEO as well. We also had our
8 entire Sunset staff team in attendance. So they got a
9 second look at the info presentation.

10 MR. DOGGETT: And this week they will
11 see a nodal overview from Mike Cleary and Joel Mickey.
12 Again, I'm a very transparent person. I think the
13 more we can educate folks on our role at ERCOT, the
14 more successful we'll all be.

15 We were able to successfully challenge
16 some tax valuation issues up in Williamson County that
17 we had. And I'll conclude with -- from my view the
18 Sunset Commission interaction has been very positive.
19 They've been complimentary of our openness and our
20 willingness to communicate, posting documents out
21 publicly for their view, and have received a number of
22 comments.

23 CHAIRMAN NEWTON: Mark?

24 MR. ARMENTROUT: This is Mark
25 Armentrout, independent director.

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1 Richard, you must have had quite a
2 number of people working 60- or 80-hour weeks to
3 recover the data center -- recover all the disk losses
4 that you had. Is that correct?

5 MR. MORGAN: Yes, sir, that is correct.
6 We had a number of people in the organization that
7 worked, basically, around the clock for a couple of
8 weeks to get the priority databases up and running.

9 MR. ARMENTROUT: Would you please give
10 them our heartfelt thanks from the Board of Directors,
11 that we really recognize that and appreciate it?

12 MR. MORGAN: Yes, sir.

13 MR. ARMENTROUT: Thank you.

14 MR. DOGGETT: I would also note that
15 Richard's folks have done an excellent job of looking
16 back at what we could do differently to avoid the
17 magnitude of this in the future. So they've done an
18 excellent job there.

19 That's all I have, Jan.

20 CHAIRMAN NEWTON: Okay. Thank you,
21 Trip. I appreciate your comments, too. You know,
22 here at the Board we go through the meetings and we
23 deal with issues a lot of times. A lot of times
24 they're challenging. We have some of those later
25 today. But I think you reminding us of the successes

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1 that your staff bring along the way is very helpful
2 for the Board and also allows us, as Mark said, to

3 thank the team for continuing to do what we hope
4 they're doing every day and pointing out to us the
5 things that are done right. So thank you very much.

6 MR. DOGGETT: Thank you.

7 CHAIRMAN NEWTON: Before I move on to
8 the operating reports, I did want to just take a
9 moment. We have one of our board members who will be
10 leaving shortly, Don Ballard, representing Office of
11 Public Counsel. And, Don, on behalf of the Board, we
12 just want to thank you for your service. I think it's
13 been almost two years, hasn't it --

14 MR. BALLARD: Yes.

15 CHAIRMAN NEWTON: -- that you've been on
16 the Board. Would you like to share anything with us
17 about where you're going and what you're going to be
18 doing?

19 MR. BALLARD: I'd be glad to say a few
20 words. First of all, I just want to tell you how much
21 I have learned and enjoyed this process the last two
22 years. We have an amazing market in Texas, and I
23 think we're getting better and better and tweaking it
24 every day.

25 I'm encouraged for end users. I think

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1 this Board has become more and more attuned to those
2 users and understanding that the market does involve
3 all the different players.

4 And I respect this Board immensely, and
5 it is with some regret that I step down at this time.
6 I have just received an opportunity that I wanted to
7 take in the area of workforce development and training

8 with a company here in town. And it's a -- going to
9 be an exciting challenge. I think workforce
10 challenges are a huge issue, both in this industry and
11 throughout our state.

12 I just want to say a personal thanks to
13 each and every one of you for teaching me what you
14 have. It's been a wonderful experience, and I thank
15 you.

16 CHAIRMAN NEWTON: Well, thank you, Don.
17 And we appreciate your contributions and we want to
18 wish you luck as you move forward.

19 MR. BALLARD: Thank you. Unfortunately
20 I won't be able to stay the rest of the day, but if
21 you want to know how I'd vote on 830, I'll let you
22 know now.

23 (Laughter)

24 MR. BALLARD: Danny is here, and he can
25 take care of that.

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1 CHAIRMAN NEWTON: Okay.

2 MR. BALLARD: All right. Thank you.

3 CHAIRMAN NEWTON: Thank you, Don.

4 5. FINANCIAL SUMMARY REPORT

5 CHAIRMAN NEWTON: Okay. With that the
6 next item on our agenda is the Financial Summary
7 Report. Again, as usual, I will just open it for
8 questions on the financial summary reports and see if
9 there are any questions that any of the Board members
10 have?

11 I had one. And I apologize, I know many

12 of you are in the F&A Committee, but I'm not. So on
13 Page 4 -- I mean, I did notice -- and it's good
14 news -- that your expected year-to-date -- looks like
15 we may be coming in on budget at this point is the
16 projection, which is very positive. But when I look
17 at Page 4, it looks like two of the significant
18 positives are interest payments and then revenue
19 funded project expenditures if I'm reading this
20 correctly.

21 And my question is on the interest
22 payments it looks like it's about 50 percent almost
23 reduction, and I just wanted a brief explanation of
24 what resulted in that.

25 MR. BOWMAN: We have actually been

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1 experiencing less borrowing this year than prior and
2 actually what we anticipated in the budget, and the
3 actual interest rates have improved.

4 CHAIRMAN NEWTON: Okay. That's good
5 news.

6 MR. BOWMAN: Yes.

7 CHAIRMAN NEWTON: And the second with
8 regard to the revenue funded project expenditures, is
9 that a timing issue that will correct prior to the end
10 of the year or are you expecting to have this
11 significant of a favorable variance?

12 MR. BOWMAN: It's a favorable variance
13 because we do have an underfunding at the last quarter
14 of this year that we will make up in first quarter of
15 next year.

16 MR. DOGGETT: We're going to talk about
Page 16

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17 that in detail a little bit later this afternoon.

18 CHAIRMAN NEWTON: Okay. Okay. Sorry.

19 Any other questions on the financial

20 summary report?

21 6. MARKET OPERATIONS REPORT

22 CHAIRMAN NEWTON: Okay. Seeing none, do

23 we have any questions for the market operations

24 report?

25 Dr. Patton?

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1 MR. PATTON: Yes. A.D. Patton

2 speaking.

3 Betty, I'm looking at Page 9, and my --

4 well, my question is that this additional contingency

5 funds being requested to cover the risk of more

6 defects and so forth gives me a little bit of pause.

7 And so can you give me some assurance that the train

8 is still on the track here?

9 MS. DAY: Sure. Happy to do so. This

10 is Betty Day with ERCOT.

11 We believe that we're going to be able

12 to come in within budget for this project. However,

13 there is a not-to-exceed amount that's been set by the

14 Board. And if there is a significant defect that is

15 found -- remember, we have two releases. One is

16 coming up this weekend. We believe we're good to go

17 for that one. We have one last fix that's going in

18 today. We expect to have sign-off on that fix today.

19 So we should be good to go.

20 This contingency is to cover any issues

21 that may come up for the next release. Like I said,
22 we don't expect to have it, but because we have a
23 not-to-exceed amount, we feel like we need to make
24 sure that we don't halt progress on this project and
25 continue to get it implemented. But we're very

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1 confident within ERCOT that this is going to proceed
2 as planned.

3 MR. PATTON: Well, thank you. Of
4 course, you know, given our difficulty with nodal, of
5 course, which is a far bigger project, that-- and
6 arbitrary deadlines, you know, that are set not by you
7 but by somebody else, and that always makes me
8 nervous. So ...

9 MS. DAY: We have targeted these
10 implementation dates to fit with our migration
11 windows. The required date for this project is
12 actually January 31st per PUC rule. But we want to
13 get all the changes in by December.

14 MR. PATTON: Thank you.

15 CHAIRMAN NEWTON: Trip?

16 MR. DOGGETT: I was just going to add --
17 I guess it's part of my style, but I'd rather us be a
18 little overly cautious as well. Betty said that she
19 felt that they would be in under budget, and we talked
20 about it as a staff and said we need to be very open
21 and make it clear that there is a risk and we'd rather
22 come in and ask for that increase in contingency as
23 opposed to come back and ask forgiveness next month.
24 So you'll probably see us doing more of that in the
25 future.

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1 CHAIRMAN NEWTON: Okay. Any other
2 questions on the market operations report?

3 7. IT SERVICE AVAILABILITY METRICS REPORT

4 CHAIRMAN NEWTON: Seeing none, IT
5 service availability metrics reports.

6 Yes, Bob.

7 MR. THOMAS: I'd just like from the
8 retail segment to offer my congratulations to IT.
9 It's the first time in my two years on the Board we've
10 had 100 percent in all three retail categories. So I
11 want to acknowledge that and indicate my appreciation
12 for that performance.

13 CHAIRMAN NEWTON: Thank you, Bob. Very
14 good results.

15 Dr. Patton, did you have --

16 MR. PATTON: Yes. I had a couple of
17 questions. And I already talked to Richard about
18 them, told him that I -- you know, what I was going to
19 ask so he's ready.

20 On Page 4 we're talking about frequency
21 control outage. A frequency control outage is -- you
22 know, is not a good thing, to say the least. So --
23 and I read here that ERCOT is currently developing an
24 enhanced backup strategy that would avoid the problems
25 that occurred. And so I just asked Richard to comment

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1 upon that.

2 MR. MORGAN: Yes, sir, Dr. Patton. We

3 are really doing two things backup-wise. Number one,
4 we found some data that we capture -- it's dated so
5 that we do not -- in other words, what we've done is
6 we have decreased the volume of data that we're
7 backing up because we've previously captured that data
8 and it does not change.

9 The other thing that we're doing is
10 we've moved some of our backups to the passive system
11 versus the active system to take the load off of the
12 active system. And this will be implemented sometime
13 this month.

14 MR. PATTON: Okay.

15 CHAIRMAN NEWTON: Mike?

16 MR. GENT: Richard, on the same subject,
17 could you describe what the nature of the outage is.
18 As Dr. Patton said, this is really serious stuff, and
19 I'm wondering what has caused this and what you've
20 done to prevent that from happening.

21 MR. MORGAN: Yes. The nature of the
22 problem that we experienced here was we made a change
23 to a backup -- our backup system, which increased the
24 load on the processing system. And the backup system
25 operates on a server that's different and there's a

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1 client that operates on the active server. When we
2 increased the capacity, it forced -- or allowed more
3 load for backups on the client's side of the system,
4 which did not then provide enough capacity to run the
5 EMMS system, which then caused us to have the
6 failures. So that's the reason that we've changed the
7 backup system and backup scheme on the system and

8 resolved this issue.

9 MR. GENT: Did you say that by trying to
10 enhance the backup system we caused the failure of the
11 primary system?

12 MR. MORGAN: Yes, sir. That's -- yes,
13 sir.

14 CHAIRMAN NEWTON: Dr. Patton?

15 MR. PATTON: I have a further question
16 on Page 5 with regard to this -- this outage that
17 resulted in some corruption of the database. And in
18 the last sentence there it says the final iTest
19 rebuild is scheduled to be on 11-11. And my question
20 was: was it?

21 MR. MORGAN: The answer is no on all
22 completions; however, all priority completions where
23 there was any testing that was scheduled to be done
24 was all finished by November the 4th. We have one
25 remaining database which will be restored tomorrow

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1 or -- by the end of the day tomorrow, which will
2 complete everything but the -- all of the testing --
3 we did all of our restores based upon a priority
4 scheme, and the testing that is going to be -- for
5 this system would be utilized is in the future. So we
6 were able to meet everyone's needs relative to
7 testing.

8 Does that answer your question,
9 Dr. Patton?

10 MR. PATTON: Yes. I'm looking at Mike
11 Cleary and so --

12 MR. CLEARY: I noticed. And from our
13 perspective, it impacted us by about two or three
14 days. But to be honest with you, in the overall scale
15 of things, we had much bigger issues trying to get to
16 the 2.1 connectivity out to the market than we did
17 with this impact. So from a -- you know, from our
18 point of view, yes, it impacted us. But it was small
19 in relation to the overall impact that we had. The
20 four weeks that we've fallen behind in relation to the
21 nodal implementation, this was a very minor issue for
22 us. We don't want it to happen again, but it was
23 minor.

24 MR. PATTON: So everything is cool now?

25 MR. CLEARY: Yes.

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1 MR. PATTON: Okay. Thank you.

2 MR. CLEARY: As long as we can keep
3 those environments healthy.

4 CHAIRMAN NEWTON: Okay. Any other
5 questions, Dr. Patton, in IT?

6 MR. PATTON: Yes. Actually I --
7 apparently you can see my stickies from where you
8 were.

9 CHAIRMAN NEWTON: And it's not the end
10 of them I noticed, so --

11 MR. PATTON: Actually it isn't. On Page
12 13 there's a -- speaking about realtime balancing
13 market availability survey, the overall metric was
14 good. But there was this one matter that, you know,
15 created a little bit of a problem, I guess. And so,
16 Richard, could you speak to that?