

APPELLANTS' APPEAL AND § BEFORE THE
COMPLAINT CONCERNING §
ERCOT'S DENIAL OF EXEMPTION § PUBLIC UTILITY COMMISSION
REQUESTS UNDER PROTOCOL §
5.9.1.3 AND REQUESTS FOR § OF TEXAS
RELATED RELIEF §

ORIGINAL APPEAL AND COMPLAINT CONCERNING ERCOT'S DENIAL OF
REQUESTS FOR WAIVER OF PRIMARY FREQUENCY RESPONSE
REQUIREMENTS PURSUANT TO PRR833, REQUEST FOR WAIVER OF ADR
REQUIREMENTS, EXPEDITED ACTION, WAIVER OF PAGE LIMITATIONS, AND
REQUEST FOR COMMISSION HEARING

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COMES NOW Horizon Wind Energy LLC Post Oak Wind LLC and Mesquite Wind LLC (collectively “Horizon”), Sweetwater Wind 1 LLC, Sweetwater Wind 2 LLC, Sweetwater Wind 3 LLC, Sweetwater Wind 4 LLC, and Sweetwater Wind 5 LLC (collectively “Sweetwater Wind”), and Pattern Gulf Wind LLC (“PGW”) (Horizon, Sweetwater Wind, and PGW are collectively referred to as “Appellants” in this pleading) and respectfully file this complaint and appeal of the unreasonable and arbitrary denial of all requests for exemption submitted pursuant to ERCOT Protocol 5.9.1.3¹ by the Electric Reliability Council of Texas, Inc. (“ERCOT”). Such action constitutes an abuse of discretion and violates provisions of the Texas Constitution, statutory provisions, administrative regulations, and the ERCOT Protocols, including ERCOT’s obligation to exercise its sole discretion in a reasonable and non-discriminatory manner, ERCOT’s obligation to employ Good Utility Practice, and ERCOT’s failure to perform consistent with its duty of good faith and fair dealing with stakeholders. Appellants respectfully request the Public Utility Commission of Texas (“PUCT” or “Commission”) to waive Alternative Dispute Resolution (“ADR”) requirements, if applicable, to suspend the deadline for compliance in ERCOT Protocol 5.9.1.3 until after this matter is resolved, to find ERCOT’s denial of exemptions in violation of the above provisions, to require ERCOT to grant exemptions as reasonable and appropriate where the technology to meet the PRR833 standards does not exist, to hold an evidentiary hearing, and to provide expedited relief on this matter. Appellants respectfully show as follows:

I. INTRODUCTION

On May 18, 2010, the ERCOT Board approved Protocol Revision Request 833 (“PRR833”), which retroactively changed the existing ERCOT Protocol Primary Frequency Response² requirements for Wind-powered Generation Resources (“WGRs”), including Appellants, that executed Standard Generation Interconnection Agreements (“SGIAs”) on or

¹ This provision, along with other Zonal Protocol provisions, was subsequently incorporated or “synchronized” with the Nodal Protocols and is now found at Nodal Protocol 8.5.1.3. Because Appellants’ requests were submitted in response to this provision of the ERCOT Zonal Protocols and the Nodal Protocols were not yet effective when such requests were made, Appellants will refer to the Zonal Protocol provisions throughout this appeal and complaint. However, any reference to a Zonal Protocol provision is also applicable to the replacement Nodal Protocol provision, and Appellants’ requested relief applies to both the Zonal Protocols and the related Nodal Protocols.

² All capitalized terms that are not defined herein have the meaning attributed to them by the ERCOT Protocols.

before January 1, 2010. The adoption of PRR833 established new Protocol 5.9.1.3, which requires WGRs with SGIAs executed on or before January 1, 2010 to provide Primary Frequency Response. Protocol 5.9.1.3 includes a procedure by which WGRs that cannot be retrofitted to provide Primary Frequency Response are required to submit an attestation of “technical infeasibility” with ERCOT that their wind projects cannot be retrofitted to meet the new standard, and those assets would be exempted from the requirement. The exemption included in Protocol 5.9.1.3 reflects compromise language developed in the PRR833 adoption process and which language was in response to concerns by WGRs that the technology does not exist to retrofit some turbines to provide Primary Frequency Response as required by PRR833. Without an exemption, Appellants would also be required to comply with Operating Guide Revision Request 238 (“OGRR238”). OGRR238 was not final when PRR833 was adopted,³ but it contemplated additional Primary Frequency Response requirements which Appellants’ facilities are incapable of providing, as raised in attestations to ERCOT. Although Appellants each participated in the PRR833 process, or were represented by the Wind Coalition, the primary reason they did not appeal its adoption was because they relied on the exemptions provided in the adopted Protocol.

As required by Protocol 5.9.1.3, each of the Appellants submitted an attestation to ERCOT. However, rather than accepting the attestations, ERCOT denied every requested permanent exemption, citing a technical feasibility standard ERCOT had advocated in comments to PRR833. Appellants did not appeal the adoption of PRR833 in part also because PRR833 never included the technical feasibility standard that ERCOT Staff is now seeking to enforce. ERCOT Staff’s technical feasibility standard was not made a part of Protocol 5.9.1.3 as adopted pursuant to PRR833, and this standard was not approved by the ERCOT Board.

Appellants appeal ERCOT’s blanket denial of these exemptions pursuant to P.U.C. PROC. R. 22.251 as ERCOT’s conduct violates applicable law and adversely affects both Appellants

³ OGRR238 was later adopted on June 3, 2010 and revised Operating Guide 2.2.5 with additional Primary Frequency Response requirements in forms found at Operating Guide 6.2.1.7. The Operating Guides have also been “synchronized” with the Nodal Operating Guides. The changes adopted in OGRR 238 were later added to the Nodal Operating Guides by the adoption of Nodal Operating Guide Revision Request (“NOGRR”) 051 on August 17, 2010. Because the Nodal Operating Guides were not yet effective when Appellants’ requests for exemption were made, Appellants will refer to the Zonal Operating Guide provisions throughout this appeal and complaint. However, any reference to a Zonal Operating Guide provision is also applicable to the replacement Nodal Operating Guide provision, and Appellants’ requested relief applies to both the Zonal Operating Guides and the related Nodal Operating Guides.

and the ERCOT market. ERCOT's blanket denial of the exemptions is arbitrary and capricious and subjects Appellants, and other similarly-situated wind generators, to unreasonable discrimination in a manner that is unlawful and inconsistent with ERCOT's duties under the Public Utility Regulatory Act ("PURA")⁴, the Commission's rules, and precedent of the Commission, the Federal Energy Regulatory Commission ("FERC") and the North American Electric Reliability Council ("NERC").

Appellants are adversely affected by ERCOT's unlawful conduct because, if not remedied, Appellants will be required to spend millions of dollars to retrofit existing, operating wind generation units despite evidence that the technology to do so is not available. Moreover, ERCOT is requiring these unproven, experimental retrofits despite the absence of any evidence that ERCOT's proposed "fix" would actually result in compliance with Protocol 5.9.1.3, Protocol 2.1 (the definition of "Primary Frequency Response") or Operating Guide 2.2.5 (OGRR238 as adopted)⁵. Such retroactive requirements are detrimental to Appellants and they also undermine the regulatory certainty provided by the Protocols, interfere with the investment-backed expectations of developers based upon Protocol language, and lessen the investment incentives for wind generation and other location-constrained renewable generation in Texas. If Appellants do not make the investment in such ineffective retrofits, they face the prospect of disconnection from the ERCOT grid, and if they do invest in the retrofits, the retrofits cannot technically meet the various Primary Frequency Response requirements, creating the risk of non-compliance. Such action not only affects Appellants but also chills the potential for future generation investment in Texas due to the uncertainty created by the prospect of other arbitrary and unnecessary standards being imposed retroactively after funding resources have been committed to a project. In addition to Appellants, both the Texas economy and Texas consumers will be adversely affected if such uncertainty reduces existing generation, or delays the construction of new renewable resources in Texas.

For the above-stated reasons, Appellants request that the Commission expeditiously act to reverse ERCOT's actions and require the granting of the permanent exemptions contemplated by Protocol 5.9.1.3 and suspend the application of the retrofit obligation to Appellants during the

⁴ TEX. UTIL. CODE ANN. §§11.001 – 66.017 (Vernon 2007 & Supp. 2010)

⁵ Now found at Nodal Operating Guide 2.2.7 and related forms found at Nodal Operating Guide 8C.

course of this proceeding to enable the Commission to consider the important legal and policy issues raised by this appeal.

II. STATEMENT OF THE CASE

PRR833 created Protocol 5.9.1.3, which was adopted by the ERCOT Board of Directors on May 18, 2010.⁶ As demonstrated by the PRS roll call for PRR 833 on October 22, 2009, Horizon participated directly in the PRR833 process.⁷ Horizon filed comments calling for the rejection of PRR833 on December 2, 2009 and May 11, 2010. As adopted by the ERCOT Board of Directors, Protocol 5.9.1.3 provides as follows:

5.9.1.3 Wind-powered Generation Resource (WGR) Primary Frequency Response

Wind-powered Generation Resources (WGRs) with Standard Generation Interconnection Agreements (SGIAs) signed after January 1, 2010 shall provide Primary Frequency Response to frequency deviations from 60.000 Hz. The WGR automatic control system design shall have an adjustable dead band that can be set as specified in the ERCOT Operating Guides. The Primary Frequency Response shall be similar to the droop characteristic of five-percent (5%) used by conventional steam generators. For WGRs with SGIAs executed on or prior to January 1, 2010, those not already equipped with Primary Frequency Response shall by December 1, 2011 acquire that capability. Those WGRs that cannot technically be retrofitted with Primary Frequency Response capability shall submit an attestation to ERCOT by June 1, 2010 explaining the technical infeasibility. At ERCOT's sole discretion, those WGRs for which Primary Frequency Response is technically infeasible may be granted a permanent exemption from the requirement. ERCOT shall make a determination within one hundred eighty (180) days of receipt of the attestation. If ERCOT does not grant an exemption, the WGR shall acquire the capability to provide Primary Frequency Response within twenty-four (24) months of being notified of that determination. If ERCOT grants the exemption, then ERCOT may require the WGR to install alternate measures, such as over-frequency relays, that are technically feasible and would approximate Primary Frequency Response to Measurable Events.

⁶ Substantially equivalent language was added to the Nodal protocols pursuant to Nodal Protocol Revision Request ("NPRR") 258 pursuant to the decision of the ERCOT Board of Directors at its November 16, 2010 Board Meeting.

⁷ http://www.ercot.com/content/mktrules/issues/prr/825-849/833/keydocs/833PRR-06_PRR_Roll_Call_Vote_102209.xls. PWG and other wind generators participated through the Wind Coalition, which is not a voting member of PRS.

In accordance with Protocol 5.9.1.3, Appellants timely submitted attestations to ERCOT indicating that it was technically infeasible to retrofit certain WGRs with the requisite Primary Frequency Response capability (the attestations Appellants submitted to ERCOT are attached hereto as Appendix A). ERCOT responded to each of Appellants' attestations with a request for confirmation from the WGRs' manufacturers. Although such manufacturer confirmation is not required by Protocol 5.9.1.3, Appellants each complied with ERCOT's request and provided documentation to ERCOT from the manufacturer demonstrating that the manufacturer did not have a retrofit that would provide Primary Frequency Response capability as required by the Protocols (the supporting documentation Appellants submitted to ERCOT is attached hereto as Appendix B).

ERCOT responded to Appellants' attestations by denying an exemption for each and every one of Appellants' affected WGRs, and such response did not address any of the reasons Appellants gave demonstrating that compliance was infeasible (ERCOT's rejections of the requests for exemption are attached hereto as Appendix C). ERCOT's denials of the exemption requests simply refer to ERCOT's April 1, 2010 comments submitted in the PRR833 adoption process but not incorporated into PRR833 and which differ from the Protocol requirements and the Operating Guide requirements relating to frequency response, and assert that the subject WGRs did not provide adequate documentation to prove an infeasibility claim.

III. APPELLANTS' AUTHORIZED REPRESENTATIVE

Appellants request that all correspondence in regard to this matter be sent to their authorized representatives and counsel of record:

For Horizon and Sweetwater:

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IV. RESPONDENT

Respondent, ERCOT, manages the regional power grid located wholly within Texas covering roughly 85% of the geographic area of Texas. ERCOT's legal representative is:

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V. AFFECTED PARTIES

ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 affects Appellants because it presents Appellants with a Hobson's choice between retrofitting existing generation facilities with blade-pitch mechanisms that Appellants have attested are not feasible or being forced to shut down their facilities. Horizon's and Sweetwater's attestations also assert that the retrofits would not establish compliance with the actual Primary Frequency Responserequirements established by Protocol 2.1 (the definition of "Primary Frequency Response"), Protocol 5.9.1.3 (PRR833), and Operating Guide 2.2.5 (OGRR38). Protocol 5.9.1.3 solely impacts wind generation resources. ERCOT's refusal to provide exemptions also affects other wind generation resources that were interconnected before January 1, 2010 and that timely submitted attestations explaining that retrofitting to meet the Protocol 5.9.13 standard was technically infeasible. ERCOT's denial of the exemptions affects any WGR that installs blade-pitch capability, has limited blade pitch capability, or that pays additional costs to purchase new

turbines with this capability to satisfy ERCOT Staff's interpretation based on its unadopted comments in the PRR process and as set forth in the rejection notices. WGRs retrofitted to meet the ERCOT Staff comments will still be unable to reliably provide Primary Frequency Response as required by the adopted ERCOT Protocols and Operating Guides, and may have other compliance issues once NERC Project 2007-12 is finalized. Furthermore, even if a solution is found in the future, WGRs that retrofit their facilities to comply with ERCOT Staff's new blade-pitch requirement⁸ risk voiding manufacturer warranties for their existing turbines.

VI. JURISDICTION AND REQUEST FOR WAIVER OF ADR

The Commission has jurisdiction over this matter under Public Utility Regulatory Act ("PURA")⁹ §39.151, P.U.C. SUBST. R. 25.362, and P.U.C. PROC. R. 22.251.

Procedural Rule 22.251(c)(1)(C) allows an entity to present a formal complaint to the Commission without first using Section 20 of the ERCOT protocols where, as herein described, the applicability of the ERCOT Procedures would inhibit the ability of the affected entities to provide continuous and adequate service.

If Procedural Rule 22.251(c)(1)(C) is deemed not to apply, then Procedural Rule 22.251(c) requires that an entity must use Section 20 of the ERCOT Protocols, concerning ADR procedures, before it may file a formal complaint with the Commission. Appellants have not participated in the ADR procedures, but respectfully request a good cause waiver of the requirement pursuant to P.U.C. PROC. R. 22.251(c)(2).

The ADR requirement should be waived in this case for a number of reasons. First, ADR with ERCOT's General Counsel, as required by the Protocols, would be fruitless because ERCOT's blanket issuance of uniform notices of rejection to every WGR that applied for exemption indicates that ERCOT has taken a "line in the sand" approach to requiring the ERCOT Staff's "blade-pitch" standard across the board, despite the technical infeasibility issues and the fact that such measures do not actually meet the Primary Frequency Response standards established by Protocol 2.1, Protocol 5.9.1.3, and Operating Guide 2.2.5. Furthermore,

⁸ References to ERCOT Staff's blade pitch requirement, blade pitch technology, blade pitch retrofits, blade pitch infeasibility standard and the like as used herein include the requirement of using an existing proven technology to control the pitch of the turbine blades in response to frequency deviation signals.

⁹ TEX. UTIL. CODE ANN. §§11.001 – 66.017 (Vernon 2009)

Appellants are concerned that submitting to the ADR process will consume significant time and prejudice Appellants' ability to pursue its procedural rights. Protocol 5.9.1.3 requires compliance within 24 months following notice of rejection. If Appellants waste months negotiating with ERCOT in good faith, but without convincing ERCOT that their technology is both infeasible and impractical, and must wait to obtain relief on appeal to the Commission, Appellants will have an impractically short window in which they can attempt to force manufacturers to design, install, and test retrofits for their various Wind Turbine Generator (WTG) makes and models to provide Primary Frequency Response as contemplated by Protocol 5.9.1.3, Protocol 2.1, and Operating Guide 2.2.5. The short time frame for compliance acts as a disincentive to pursuing procedural rights, because doing so increases the likelihood that if no relief is granted, the appellant will have insufficient time remaining to attempt any sort of measures to avoid shutting down their facilities. A direct appeal to the Commission with the Commission's approval of Appellants' request for suspension of enforcement of Protocol 5.9.1.3 (provided later herein), would allow Appellants to fully pursue their procedural rights without prejudicing their ability to attempt to adopt feasible measures the Commission may require in the short 24-month window.

Additionally, Appellants submitted their attestations by the June 1, 2010 deadline specified in Protocol 5.9.1.3 and filed follow-up information requested by ERCOT. Such submissions clearly stated the basis for Appellants' claims of technical infeasibility. ERCOT had 180 days within which to review and discuss any issues or objections that it had with Appellants' attestations. However, rather than attempting to negotiate a mutually acceptable resolution, ERCOT merely issued the blanket denials 182 days after the attestations were filed. Since ERCOT chose to ignore the obvious difference of opinion on this issue for over 180 days, Appellants question what benefit would be provided by requiring the affected wind generators to participate in ADR for an additional 120 + days with ERCOT, which has thus far refused to negotiate on the matters raised in the attestations.

Rather than delay action on the important issues raised by this Appeal, Appellants request that the Commission waive any requirement for engaging in further ADR procedures related to ERCOT's denial of the exemptions provided by Protocol 5.9.1.3. If the Commission does not believe that there is sufficient good cause to warrant waiver of the ADR requirements, Appellants respectfully ask the Commission to grant Appellants' motion for suspension of the 24

month deadline in Protocol 5.9.1.3 on a day for day basis, pending full and final resolution of the dispute, so that Appellants may participate in ADR and this Appeal without sacrificing the 24 month period specified in Protocol 5.9.1.3.

VII. ISSUES PRESENTED FOR REVIEW

1. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates the requirement in ERCOT Protocol 1.2 that ERCOT must, in exercising ERCOT's sole discretion, be reasonable and not discriminatory.
2. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates ERCOT's obligation to operate the ERCOT System in compliance with Good Utility Practice pursuant to ERCOT Protocol 5.2.2.
3. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates the requirements of PURA §39.904(1) by requiring Primary Frequency Response that is not feasible and by failing to consider the effect on system reliability before imposing such requirements on wind generators.
4. Whether ERCOT's basis for refusing to grant exemptions to Protocol 5.9.1.3 was arbitrary, capricious and discriminatory because ERCOT failed to consider the requisite feasibility issues raised by Protocol 5.9.1.3 and OGRR238 that were attested to by Appellants.
5. Whether ERCOT's basis for refusing to grant exemptions to Protocol 5.9.1.3 violates P.U.C. SUBST. 25.501(a) by failing to reflect the physical realities of the ERCOT system.
6. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates ERCOT's obligation of good faith and fair dealing in its contractual relationship with Market Participants.
7. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates the requirements of PURA §39.001(c) by discriminating against wind generators as market participants in the competitive market.
8. Whether ERCOT's basis for refusing to grant exemptions to Protocol 5.9.1.3 violates ERCOT's obligations pursuant to PURA §39.151(c) and ERCOT Protocol 5.2.2 to

operate the ERCOT System in compliance with NERC standards, policies, guidelines, and operating procedures.

9. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates the requirements of PURA §39.001(d) because ERCOT's denial is neither practical nor limited and results in a significant impact on competition.
10. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates the United States and Texas Constitutions by confiscating wind generators' property without compensation through a regulatory taking.
11. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates its duty under PURA §39.151(a)(1) to ensure access to the transmission and distribution system for all buyers and sellers of electricity on nondiscriminatory terms.
12. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates its duty under PURA §39.151(a)(2) and (4) to ensure the reliability and adequacy of the regional electrical network and to ensure accurate accounting among generators and wholesale buyers and sellers of electricity.
13. Whether ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 is consistent with Texas policy goals of encouraging the development of renewable energy resources and other generation resources.

VIII. FACTUAL ANALYSIS

In its notices to Appellants that their requests for exemption were denied, ERCOT stated that it had previously identified the documentation that would be necessary to demonstrate technical infeasibility in comments that it filed on April 1, 2010 during the stakeholder review process for PRR 833. However, ERCOT's April 1, 2010 comments were never adopted as a part of PRR833 and such comments are not part of the current Protocols. ERCOT in its comments stated it would apply the following standard to determinations of whether the requirements were technically feasible:

Any wind turbine that is not capable of pitching its blades will be considered "technically infeasible" of retrofitting with Primary Frequency Response

capability. However, in order for ERCOT to consider a permanent exemption, ERCOT will require the WGR to provide documentation, with the attestation, from the turbine manufacture that specifically states the reason why these wind turbines are incapable of receiving control signals to the blade pitch mechanism and therefore immediately changing the pitch of the blade. ERCOT will not consider cost of retrofitting wind turbines in making its determination.

ERCOT's rejections of Appellants' requests for exemption do not provide any specific explanation of how the submitted attestation and supporting documentation fail to establish that compliance with Protocol 5.9.1.3 is infeasible. Appellants each received the same form e-mail from ERCOT with no review of the attestations each Appellant provided. Although ERCOT has "sole discretion" over whether to grant exemptions pursuant to Protocol 5.9.1.3, Protocol 1.2¹⁰ clearly requires that when ERCOT exercises its sole discretion under the Protocols, it must do so in a reasonable, nondiscriminatory manner. ERCOT's blanket rejections violate Protocol 1.2 because they unreasonably disregard Appellants' infeasibility claims, and do so without analysis or explanation, making clarification or correction impossible. Moreover the "blade-pitch" solution ERCOT appears to seek does not meet the technical standards embodied in the definition of "Primary Frequency Response",¹¹ Protocol 5.9.1.3, or Operating Guide 2.2.5. Furthermore, ERCOT's reference to its comments in PRR833 as the "technical feasibility" standard applies a standard that is not contained in any Protocol or other binding document approved by the ERCOT Board.

ERCOT's blanket rejections violate its obligation to operate the ERCOT system in compliance with Good Utility Practice pursuant to Protocol 5.2.2.¹² The control area's common automatic generation control scheme must "maintain the frequency of the electric power system(s) within reasonable limits in accordance with good utility practice" [emphasis added] pursuant to PUCT SUBST. R. 25.5(19)(C).

Both PUCT SUBST. R. 25.5(56) and Protocol 2.1¹³ define Good Utility Practice as follows:

¹⁰ This same provision is now found in Nodal Protocol 1.2(5).

¹¹ Protocol 2.1.

¹² This same provision is now found in Nodal Protocol 6.5.2.

¹³ This same provision is now found in Nodal Protocol 2.1.

Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods, and acts that, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good utility practice is not intended to be limited to the optimum practice, method, or act, to the exclusion of all others, but rather is intended to include acceptable practices, methods, and acts generally accepted in the region.

As provided above, Good Utility Practice requires the exercise of reasonable judgment in light of the facts known at the time. Appellants assert that ERCOT's rejection of the requests for exemption based on infeasibility was unreasonable in light of the facts disclosed by Appellants in their attestations of technical infeasibility. Furthermore, Good Utility Practice must be expected to accomplish the desired result *at a reasonable cost*. ERCOT's comments in PRR833 (*supra*) specifically stipulate that "ERCOT will not consider [the] cost of retrofitting wind turbines in making its determination [of whether to grant an exemption for technical infeasibility]." ERCOT insists on blade-pitch capability without considering whether it achieves the desired result (Primary Frequency Response capability as defined by the Protocols) or whether the cost was reasonable, which violates ERCOT's obligations under Protocol 5.2.2 to operate the ERCOT system in compliance with Good Utility Practice.

The "blade-pitch adjustment capability" standard for "technical infeasibility" described in ERCOT's April 1, 2010 comments in PRR833 and referenced in its letters of rejection is not a reasonable standard for determining the feasibility of providing Primary Frequency Response. Primary Frequency Response is defined in ERCOT Protocol 2.1¹⁴ as follows:

The instantaneous proportional increase or decrease in real power output provided by a Generation Resource and the natural real power dampening response provided by load in response to system frequency deviations. This response is in the direction that stabilizes frequency.

The above Protocol definition requires "instantaneous" proportional increases or decreases of real power output in response to system frequency deviations. Appellants' attestations and any supplemental responses to ERCOT stated that their facilities were incapable of instantaneous response, and the manufacturers of the facilities have not developed a solution to provide any

¹⁴ This same provision is now found in Nodal Protocol 2.1.

retrofit. Even if retrofits were available that would “immediately ...[change] the pitch of the blade,” as ERCOT’s PRR833 comments state, though notably Protocol 5.9.1.3 does not contain this requirement, immediate changes to blade pitch do not produce instantaneous increases or decreases in real power output that are proportional to system frequency deviations. Blade-pitch adjustments only create gradual adjustments to output, and may only provide frequency response under certain operating conditions. The reduction in power output resulting from “immediately changing the pitch of a blade” depends on the wind speed and the WTG power curve. Also, at low levels of output, around 10% of a WGR’s name plate capacity, control systems have difficulty precisely controlling output. Further, the actual reduction in output would be gradual as the blade pitch slowed the blades’ rotation. Instantly changing the blade pitch to create an increase in real power output is possible only if the blades were already pitched to reduce output, and could be “unpitched” to increase output. If the blades are already aligned to maximize output, the WGR could only increase output if the wind speed happens to increase.¹⁵ An increase in real power output from “unpitching” the blades would likewise be gradual as the blades’ rotation accelerated, rather than “instantaneous” as contemplated by ERCOT Protocol 2.1. Finally, action taken to adjust WGR output can be affected by wind gusts. These gusts could completely negate the result of the control system to respond to high frequency, again, preventing an instantaneous response.

Horizon’s and Sweetwater’s attestations also stated that Operating Guide Revision Request (“OGRR”) 238 would further define response-time expectations and may impose additional infeasibility issues. As subsequently approved on June 3, 2010, OGRR 238 revised Operating Guide 2.2.5 such that a frequency response Governor must be in-service whenever the Generation Resource is providing energy to the bulk power system. As explained previously, WGRs are incapable of complying with this requirement while operating at or below 10% of their nameplate capacity, and a WGR cannot increase real power output to provide frequency response when it is already producing at maximum output based on available wind resources and

¹⁵ Wind turbines are operated at their maximum optimal generation converting all of the available wind energy to power during any wind condition, therefore, any automatic increase in frequency (load) cannot be attained at any time. In addition, if the turbines are already operating at their maximum rating, then operating at loads above the maximum rating of the turbine, would jeopardize the reliability of the turbine and the balance of equipment and collection system.

optimum blade position. PGW noted that OGRR 238 applies only to generating plants having Primary Frequency Response capability.

Even if ERCOT's Primary Frequency Response requirements could be met with retrofits of Appellant's facilities, which they cannot, WGRs face the risk that North American Electric Reliability Corporation ("NERC") standards currently under development will soon impose different requirements that might require retrofits that are different from, and possibly in conflict with, the PRR833 retrofits. NERC Project 2007-12 Frequency Response¹⁶ is currently investigating the cause of reductions in frequency response and how much additional frequency response is needed, and NERC has been instructed to submit a modification to Reliability Standard BAL-003-0, which addresses frequency response and bias.¹⁷ Pursuant to ERCOT Protocol 5.2.2, ERCOT is required to operate the ERCOT System in compliance with NERC standards, so even if Appellants could retrofit their facilities to be compliant with new Protocol 5.9.1.3 within the next twenty-four months, the compliance timetable for retrofitting, there is a significant risk that ERCOT will need to create a new frequency response standard consistent with the NERC requirements that will call for different retrofits.

Without a showing that imposing these retroactive requirements will benefit system reliability, it cannot be reasonably argued that the additional costs should be imposed on a single class of generation resources – WGRs – without the built in exemptions for infeasibility. To date, ERCOT has not provided any measure of the benefits of these retroactive requirements, although the costs to WGRs are certain to be substantial (either through designing new retrofit solutions or ceasing operations). Even if one were to assume that retrofitting operating WGRs provides sufficient reliability benefits, it is patently unreasonable to conclude that renewable resources for which retrofits are not feasible should be removed from the Texas renewable energy asset portfolio and forced to sit idle without any evidence that their continued operation

¹⁶ http://www.nerc.com/filez/standards/Frequency_Response.html.

¹⁷ FERC Docket No. RM06-16-010, Order Setting Deadline for Compliance (Mar. 18, 2010) ordered NERC to submit a modification to BAL-003-0 within six months of the date of issuance of the order. However, several parties appealed the order, and FERC issued Order Granting Rehearing for Further Consideration and Scheduling Technical Conference (May 13, 2010), which deferred the six month deadline and ordered NERC to submit a proposed schedule within 30 days of a technical conference held on September 23, 2010. A copy of NERC Project 2007-12's schedule is available under the "Project Schedule" link on the following webpage: http://www.nerc.com/filez/standards/Frequency_Response-RF.html.

presents a material risk to reliability. ERCOT's arbitrary rejection of requests for exemption promotes economic waste, and results in a government taking without due process.

ERCOT's conduct reflects ERCOT's position that no exemptions are permissible, regardless of whether or not retrofitting is technically feasible, regardless of the fact that pitching blades does not provide consistent or sufficient Primary Frequency Response capability as currently defined in Protocol 2.1, Protocol 5.9.1.3, and Operating Guide 2.2.5; and heedless of pending frequency response requirements from NERC Project 2007-12. ERCOT's position is incompatible with the portion of Protocol 5.9.1.3 that provides that ERCOT will grant exemptions for facilities that cannot retrofit in a manner that is not arbitrary or discriminatory, consistent with the limits on ERCOT's "sole discretion" built into the Protocols. Effectively, ERCOT has rendered the "technical infeasibility" exemption portion of Protocol 5.9.1.3 meaningless. If PRR833 had not included a procedure for exempting facilities incapable of retrofitting in Protocol 5.9.1.3, Appellants would have appealed the adoption of PRR833. The language allowing exemption was included, but ERCOT has enforced the Protocol as though all requests for exemption could be rejected without basis. ERCOT's position is incompatible with the plain language of Protocol 5.9.1.3, incompatible with the limitations on ERCOT's exercise of its sole discretion, and with the standard for Good Utility Practice, and Appellants respectfully ask the Commission to require ERCOT to grant the exemptions.

IX. APPLICATION OF LAW

A. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates ERCOT Protocol 1.2

ERCOT Protocol 5.9.1.3 provides that WGRs with SGIAs signed prior to January 1, 2010 can be exempted from the Primary Frequency Response requirements due to technical infeasibility. It further provides ERCOT 180 days to determine whether such exemptions should be granted. The lengthy period ERCOT is given to make a determination imposes on ERCOT a responsibility to make such determination based on analysis and reason, rather than capriciously, unilaterally rejecting all applicants without explanation or cause. Protocol 5.9.1.3 provides that WGRs for which Primary Frequency Response is technically infeasible may be granted a permanent exemption "[a]t ERCOT's sole discretion," but ERCOT Protocol 1.2 clarifies that

“[i]n the exercise of its sole discretion under these Protocols, ERCOT shall act in a reasonable, nondiscriminatory manner.” Such language is mandatory and ERCOT failed to act in a reasonable and nondiscriminatory manner.

ERCOT’s rejections of the requests for exemption do not address the technical infeasibility issues raised by Appellants in their attestations. Instead, the rejections unreasonably focus solely on whether or not the WGRs’ blades could be pitched, without addressing that: (1) the speed at which the blades could be pitched and real power output increased or decreased is a legitimate compliance and feasibility issue, or (2) an existing proven technology that will allow changes in blade pitch in response to frequency deviation signals is lacking. ERCOT’s rejections also unreasonably disregarded Appellants’ claims that compliance is not feasible because even instantaneous blade-pitch would not result in an increase or decrease in real power output under certain conditions, for example, when no wind is blowing. Simply put, ERCOT is unreasonably imposing requirements that are patently incompatible with the technical capability of WGRs and that do not result ultimately in the provision of Primary Frequency Response as contemplated by Protocol 2.1, Protocol 5.9.1.3, and Operating Guide 2.2.5; and WGRs have demonstrated that conforming solutions do not exist either at the WGR or the turbine manufacturers.

ERCOT’s refusal to grant the technical infeasibility exemptions is unreasonable given that Appellants have provided valid attestations explaining why compliance is not feasible and Protocol 5.9.1.3 contemplates the granting of exceptions for precisely this reason. There is no demonstrated system reliability need that would require ERCOT to demand all WGRs to comply without exception, and such action violates ERCOT’s requirement to exercise its discretion reasonably. Retroactively imposing requirements on a specific class of Market Participants where such requirements are technically infeasible is both unreasonable and discriminatory. Finally, ERCOT’s “blade-pitching capability” feasibility standard is itself unreasonable, because, even if possible, it would not provide instantaneous frequency response, or any frequency response under certain conditions. ERCOT has failed to exercise its sole discretion in a reasonable, nondiscriminatory manner as required by Protocol 2.1.

B. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates ERCOT's obligation pursuant to Protocol 5.2.2 to operate the ERCOT System in compliance with Good Utility Practice

ERCOT is obligated to operate the ERCOT System in compliance with Good Utility Practice pursuant to ERCOT Protocol 5.2.2, which provides as follows:

5.2.2 *Operating Standards*

ERCOT and TDSPs shall operate the ERCOT System in compliance with Good Utility Practice and NERC and ERCOT standards, policies, guidelines and operating procedures. These Protocols shall control to the extent of any inconsistency between the Protocols and any of the following documents:

- (1) Any reliability guides applicable to ERCOT, including the Operating Guides;
- (2) The NERC Operating Manual and ERCOT procedures manual, supplied by NERC and ERCOT, respectively, as references for dispatchers to use during normal and emergency operations of the ERCOT Transmission Grid;
- (3) Specific operating procedures, submitted to ERCOT by individual transmission Facility owners or operators to address operating problems on their respective grids that could affect operation of the interconnected ERCOT Transmission Grid; and
- (4) Guidelines established by the ERCOT Board, which may be more stringent than those established by NERC for the secure operation of the ERCOT System.¹⁸

Furthermore, PUCT SUBST. R. 25.5(19)(C) establishes that a control area must "maintain the frequency of the electric power system(s) within reasonable limits in accordance with good utility practice." Accordingly, ERCOT is obligated to operate the ERCOT System and the frequency of its electric power systems in accordance with Good Utility Practice.

ERCOT Protocol 2.1 and PUCT SUBST. R. 25.5(56) each define Good Utility Practice as follows:

Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the

¹⁸ Note that there is nothing in Protocol 5.2.2 that states that ERCOT Staff decisions control over the explicit requirements of the Protocols.

practices, methods, and acts that, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good utility practice is not intended to be limited to the optimum practice, method, or act, to the exclusion of all others, but rather is intended to include acceptable practices, methods, and acts generally accepted in the region.

ERCOT's obligation to operate the ERCOT System and maintain frequency in compliance with Good Utility Practice thereby obligates ERCOT to employ practices: (1) that a significant portion of the electric industry during the relevant time period engaged in or approved; or (2) that in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result *at a reasonable cost* consistent with good business practices, reliability, safety, and expedition.

ERCOT's practice of insisting on blade-pitch capability without exception fails the first standard for Good Utility Practice. ERCOT's requirement that all currently operating WGRs be retrofitted with blade-pitch capability is not a practice that a significant portion of the electric industry has engaged in or approved (and this solution does not even exist for Appellants' facilities identified in the exemption requests).

ERCOT's action also fails the second standard for Good Utility Practice. ERCOT did not exercise reasonable judgment when it disregarded Appellants' claims of infeasibility and ignored whether the practice achieved the results required by the ERCOT Protocols and Operating Guides at a reasonable cost. Appellants' requests for exemption explained that no control system upgrade was available to add Primary Frequency Response functionality, that it was infeasible for the facilities to provide Primary Frequency Response as required by the Protocols. Horizon and other wind generators also explained that OGRR238 might (and did, when later approved) introduce additional infeasibility issues.

ERCOT rejected the requests for exemption and dismissed the infeasibility concerns without any explanation other than reference to its arbitrary "blade-pitch" infeasibility standard not adopted in Protocol 5.9.1.3. ERCOT's denial of Appellants' requests for exemption effectively dismissed the valid infeasibility issues raised by Appellants, and exhibited unreasonable judgment in light of the facts known and existing at the time the decision was made. ERCOT's insistence on blade-pitch capability also violated Good Utility Practice because

blade-pitch capability cannot be expected to accomplish the desired result at a reasonable cost. Blade-pitch technology does not accomplish the desired result (instantaneous frequency response), and therefore imposing the cost of retrofitting is unreasonable. Even if the retrofits were possible, ERCOT failed to use Good Utility Practice by not weighing whether the cost was reasonable; ERCOT's comments in PRR833 specifically stated it "will not consider the cost of retrofitting wind turbines" when deciding whether or not to grant an exemption.

By summarily announcing that it would not consider costs in deciding whether to grant an exception, ERCOT Staff effectively attempted to amend the Protocols and the Commission's Rules by removing the cost consideration that both Protocol 5.2.2 and PUCT SUBST. R. 25.5(19)(C) require given the definition of Good Utility Practice provided by Protocol 2.1 and PUCT SUBST. R. 25.5(56).

For the foregoing reasons, ERCOT's decision to reject all WGR requests for exemption from 5.9.1.3 due to infeasibility fails both standards to comply with Good Utility Practice, and violates the Protocol 5.2.2 and PUCT SUBST. R. 25.5(19)(C) requirements that ERCOT operate the ERCOT System and maintain frequency in compliance with Good Utility Practice.

C. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates PURA §39.904(l) by requiring Primary Frequency Response that is not feasible and by failing to consider the effect on system reliability before imposing such requirements on wind generators.

In 2005, the Texas Legislature passed Senate Bill 20, which set goals for renewable energy capacity in Texas and gave the Commission authority to take action necessary to encourage development to meet those goals. As part of that legislation, PURA §39.904(l) was enacted, directing the Commission to "adopt rules requiring renewable power facilities to have reactive power control capabilities or any *other feasible technology designed to reduce the facilities' effects on system reliability.*" (Emphasis added.) The Legislature clearly required that the Commission's actions to reduce renewable power facilities' effects on system reliability must be technically feasible. In order to meet this statutory requirement, the Commission must ensure that through this Appeal and its authority over ERCOT in PURA 39.151, ERCOT also cannot impose requirements patently inconsistent with PURA.

ERCOT's position appears to be that regardless of whether a wind turbine can be retrofitted to pitch its blades in response to frequency deviation signals, and without regard to cost or whether the retrofit actually meets the Protocol and Operating Guide standards, it is "technically feasible" for that turbine to provide Primary Frequency Response consistent with the Protocols' requirements. However, as Appellants have pointed out to ERCOT to no avail, some turbines cannot be retrofitted to respond to frequency deviation signals, and even if they could, pitching a WGR's blades does not provide instantaneous increases or decreases in real power output, but rather provides gradual increases or decreases. Furthermore, in some wind conditions, pitching the blades would not increase or decrease real power output and would not provide any frequency response at all. If the wind is not blowing sufficient to operate above 10% of nameplate capacity, output cannot be increased regardless of blade pitch. In stronger wind conditions, output cannot be increased if the blades are already positioned to provide maximize output. ERCOT deems Appellants capable of installing blade-pitch retrofits, even though the blade-pitch retrofits do not exist for certain turbine types and, even if possible: (1) would not provide sufficient Primary Frequency Response as defined in the ERCOT Protocols; (2) would not provide any frequency response under certain operating conditions; and (3) may not comply with the requirements still under development in NERC Project 2007-12. Appellants are caught in a regulatory trap where they are being required to show they cannot install a blade-pitch upgrade that does not exist in order to be exempt from a standard that the upgrade does not address.

Even if blade-pitch retrofits are feasible, there is no finding that pitching the blades will "reduce the facilities' effects on system reliability" as required by PURA §39.904(1), given that: (1) Primary Frequency Response is the system reliability issue being addressed, and as Appellants have explained, pitching the blades does not provide Primary Frequency Response; and (2) there is no showing that Appellants' WGRs' inability to provide Primary Frequency Response is having any negative effect on system reliability. PURA §39.904(1) does not allow requiring the installation of feasible technology to reduce "general" effects on system reliability; it is limited to the specific effects of the facilities themselves.

ERCOT has violated the §39.904(1) requirement that the Commission, and its delegate ERCOT, can only require the implementation of feasible technology to reduce the facilities' effects on system reliability because: (1) ERCOT's denial of the exemptions provided by

Protocol 5.9.1.3 requires Appellants to install infeasible technology; (2) there is no showing the technology demanded by ERCOT will reduce effects on system reliability given that it does not provide Primary Frequency Response capability; and (3) there is no showing that Appellants' WGRs' inability to provide Primary Frequency Response is having any negative effect on system reliability. Appellants ask the Commission to reverse ERCOT's denials of exemption and require that it issue exemptions for each of Appellants' relevant facilities, consistent with PURA §39.904(1).

D. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 is arbitrary, capricious and discriminatory.

Appellants directly participating in the PRR 833 process did not appeal PRR833 because Appellants relied upon compromise language in the PRR833 drafting process of Protocol 5.9.1.3, which provided that ERCOT could grant exemptions in light of technical infeasibility. ERCOT Staff has interpreted Protocol 5.9.1.3 such that valid claims of infeasibility are simply ignored, and all requests for exemption denied. By insisting that all existing WGRs obtain blade-pitch capability, even though such capability is not required by the Protocols and would not provide Primary Frequency Response capability instantaneously or at all under certain operating conditions, ERCOT's interpretation was arbitrary, capricious and discriminatory. Additionally, NERC's frequency response reliability standard is still under development, so even if all operating WGRs could come into compliance with Protocol 5.9.1.3, it is entirely possible that the WGRs will need to retrofit again to comply with these new standards. ERCOT's arbitrary rejection of the requests for exemption thus fails to comply with the procedural standards established by P.U.C. PROC. R. 22.251(1).

In reviewing the authority of administrative agencies, the courts have held that administrative action is arbitrary and capricious when the agency fails to follow the clear, unambiguous language of its own regulations.¹⁹ Further, an agency decision is arbitrary and capricious if it is based upon legally irrelevant factors or if legally relevant factors were not considered.²⁰ Under these standards, ERCOT's actions are clearly arbitrary and capricious. By failing to consider the costs of required upgrades, ERCOT has failed to consider a legally

¹⁹ *Bexar Metro Water Dist. v. Texas CEQ*, 185 S.W.3d 546, 550 (Tex.App. – Austin 2006, pet. denied).

²⁰ *City of El Paso v. Public Util. Comm'n*, 883 S.W.2d 179, 184 (Tex. 1994).

relevant factor required by Protocol 5.2.2 and has also violated Protocol 5.2.2, a part of its own unambiguous “rules.” By applying its “blade-pitch” infeasibility standard, ERCOT has based its decision on a factor that is not contained in Protocol 5.9.1.3 or elsewhere in the Protocols and is, therefore, legally irrelevant. ERCOT’s arbitrary and capricious actions must be overturned.

In Docket No. 23220, the Commission stated its intent to ensure fairness in the ERCOT market by retaining the ability to subject the following matters to a greater level of scrutiny:²¹

1. Matters that have major impacts on the fundamental design and competitiveness of markets;
2. Matters that have disparate impacts on particular types of market participants;
3. Matters that may unnecessarily create barriers to entry; and
4. Matters that may conflict with legislative or Commission policies.

This proceeding involves issues that merit greater scrutiny by the Commission for all of the above reasons. ERCOT’s interpretation of Protocol 5.9.1.3 denies exemptions for WGRs with SGIAs executed on or prior to January 1, 2010. Imposition of the retrofit requirement of Protocol 5.9.1.3 has a disparate impact on wind generators, as opposed to conventional generators, because it only applies to WGRs. ERCOT’s rejection impacts the competitiveness of the market by essentially denying access to the market to existing wind generation to the detriment of both wind generators and retail customers, who will face increased costs of electricity. The uncertainty created by ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 also creates a barrier to entry by chilling the prospects for future investment in Texas. Finally, ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 conflicts with legislative policies encouraging the development of renewable energy and the legislative instruction to avoid conflicts with federal policies. For the above reasons, ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 must be rejected as being arbitrary, capricious and discriminatory.

²¹ *Petition of the Electric Reliability Council of Texas for Approval of ERCOT Protocols*, Docket No. 23220, Order on Rehearing (Jun. 1, 2001).

E. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates P.U.C. SUBST. R. 25.501(a) because it fails to reflect the physical realities of the ERCOT system.

P.U.C. SUBST. R. 25.501(a) establishes the principals that govern the ERCOT Protocols. Included within these principles is the requirement that the Protocols "reflect the physical realities of the ERCOT electric system." As discussed previously, ERCOT's refusal to grant exemptions for Protocol 5.9.1.3 fails to account for the important technical differences between wind generation and conventional generation concerning frequency response capability. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 fails to consider these elemental and dispositive factors that demonstrate the unique character of existing wind generation. ERCOT's insistence that WGRs provide blade-pitch capability ignores the physical reality that this capability would not provide reliable Primary Frequency Control. The Protocols cannot override basic physics and require existing wind generation units to provide frequency response in the same manner as conventional generation units. By failing to consider these technical differences between dissimilar generation units, ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 has violated the standards imposed by P.U.C. SUBST. R. 25.501(a) and must be reversed.

F. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates ERCOT's obligation of good faith and fair dealing in its contractual relationship with Market Participants.

Pursuant to Section 11(A) of the Standard Form Market Participant Agreement, Protocol 22(L), the Market Participant Agreement is "governed by and construed and interpreted in accordance with the laws of the State of Texas that apply to contracts executed in and performed entirely within the State of Texas." Under Texas law, a covenant of good faith and fair dealing may arise from the express language of a contract, or from the nature of the relationship between the parties, where it entails unequal bargaining power and the nature of the business is such that one party can easily take advantage of the other. (*Arnold v. National County Mut. Fire Ins. Co.*, 725 S.W.2d 165 (Tex. 1987)). For example, in *Arnold v. National County*, the court found a special relationship exists between insurer and insured, because:

...without such a cause of action, insurers can arbitrarily deny coverage and delay payment of a claim with no more penalty than interest on the amount owed. An

insurance company has exclusive control over the evaluation, processing, and denial of claims.

The facts are analogous here. ERCOT has the authority to deny requests for exemption, and has exclusive control over the evaluation, processing, and denial of such requests. Although one could argue that an insurance company profits from denying claims, whereas ERCOT does not profit from denying requests for exemption, ERCOT has “profited” from denying Appellants’ claims in the sense that it avoided conducting a meaningful analysis of the attestations, and thereby avoided having to acknowledge that its unvetted “blade pitch” standard is infeasible and insufficient to provide Primary Frequency Response capability. In any event, ERCOT and a given Market Participant have completely unequal bargaining power, as demonstrated by ERCOT’s ability to arbitrarily deny an exemption and thereby impose requirements such as Protocol 5.9.1.3 that require WGRs to install infeasible technology or shut down. This unequal bargaining power justifies a finding that the contract between ERCOT and a Market Participant includes an implied duty of good faith.

Pursuant to ERCOT’s own Code of Conduct & Ethics Corporate Standard, ERCOT Representatives must conduct themselves with fairness, courtesy and in good faith during all stakeholder interactions.²² The Texas and Business Commerce Code defines good faith as “honesty in fact and the observance of reasonable commercial standards of fair dealing.”²³ In this case, ERCOT is not observing reasonable commercial standards of fair dealing in its demand that WGRs install retrofits that: (1) are not available, (2) would have no demonstrated effect on reliability, and (3) do not comply with the Protocols’ Primary Frequency Response requirements. Appellants have good cause to assert that ERCOT has breached its duty of good faith and fair dealing. As stated in *Arnold v. National County*, 725 S.W.2d at 167:

A cause of action for breach of the duty of good faith and fair dealing is stated when it is alleged that there is no reasonable basis for denial of a claim or delay in payment or a failure on the part of the insurer to determine whether there is any reasonable basis for the denial or delay.

²²<http://www.ercot.com/content/about/governance/legal/CS1%207%20Code%20of%20Conduct%20and%20Ethics%20Corporate%20Standard.doc>.

²³ TEX. BUS. & COMM. CODE §1.201(20).

Here, ERCOT has breached its duty of good faith and fair dealing by denying Appellants' requests for exemption without a reasonable basis, and by failing to determine whether any reasonable basis exists. ERCOT's unreasonable and discriminatory behavior, as described previously and further herein, violates its duty of good faith and fair dealing, and should be reversed.

G. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates the requirements of PURA §39.001(c) because it discriminates against wind generators as participants in the competitive market.

PURA Chapter 39 establishes the Commission's authority and responsibilities in "protecting the public interest in the transition to and in the establishment of a fully competitive electric power industry."²⁴ Section 39.001(c) specifically requires that regulatory authorities such as the Commission and independent organizations like ERCOT to whom it has delegated authority:²⁵

... may not make rules or issue orders regulating competitive electric services, prices, or competitors or restricting or conditioning competition except as authorized in this title and may not discriminate against any participant or type of participant during the transition to a competitive market and in the competitive market.

Protocol 5.9.1.3 regulates wind generators who are competitors in the wholesale electricity market in ERCOT. As explained previously, the effect of ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 is to discriminate against wind generators by applying frequency response requirements that may be appropriate for conventional generation but which fail to account for the technical differences between dissimilar types of generation, such as WGR's inability to provide instantaneous frequency response or any frequency response when the wind is not blowing. By enforcing Protocol 5.9.1.3 without exemption where compliance is impossible based on the technology ERCOT is requiring WGRs to install and the design of the currently-interconnected WGR facilities, ERCOT has discriminated against a particular type of

²⁴ PURA §39.001(a).

²⁵ Pursuant to PURA §39.151(d) the Commission may delegate authority to ERCOT to adopt rules relating to reliability and the accounting of charges for production and delivery of electricity, but such authority is limited by the requirements of PURA. Additionally, the Commission may not delegate a duty to ERCOT that is outside the scope of the Commission's authority under PURA.

market participant, in violation of PURA §39.001(c). Accordingly, ERCOT's refusal of exemptions must be reversed, and exemptions must be provided to Appellants.

H. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 may violate ERCOT's obligation pursuant to ERCOT Protocol 5.2.2 and PURA 39.151(c) to operate the ERCOT System in compliance with NERC standards, policies, guidelines, and operating procedures.

ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 may be inconsistent with national standards for frequency response that are currently being developed by NERC. ERCOT Protocol 5.2.2 specifically requires that ERCOT operate the ERCOT System in compliance with NERC Standards, policies, guidelines, and operating procedures. The Texas Legislature has indicated that it values consistency with federal standards. PURA §39.151(c) specifically requires that, in exercising its authority to oversee and review ERCOT's actions, the Commission "shall apply the provisions of this section and Sections 39.1511, 39.1512, and 39.1515 so as to avoid conflict with a ruling of a federal regulatory body." Additionally, PURA §35.006(a)(2) directs that Commission rules related to wholesale transmission service, rates and access "may not be contrary to federal law, including any applicable decision, rule, or policy statement of a federal regulatory agency having jurisdiction."

NERC Project 2007-12 Frequency Response²⁶ is currently investigating the cause of reductions in frequency response and how much additional frequency response is needed, and has been instructed by FERC to submit a modification to Reliability Standard BAL-003-0, which addresses frequency response and bias.²⁷ It is unreasonable for ERCOT to demand retrofits where exemptions should be permitted, particularly when NERC has not yet identified how to rectify declines in Frequency Response and anticipates filing requirements that may conflict with or even obviate ERCOT's vague retrofit "solution" that is not compatible with WGRs.

²⁶ http://www.nerc.com/filez/standards/Frequency_Response.html.

²⁷ FERC Docket No. RM06-16-010, Order Setting Deadline for Compliance (Mar. 18, 2010) ordered NERC to submit a modification to BAL-003-0 within six months of the date of issuance of the order. However, several parties appealed the order, and FERC issued Order Granting Rehearing for Further Consideration and Scheduling Technical Conference (May 13, 2010), which deferred the six month deadline and ordered NERC to submit a proposed schedule within 30 days of a technical conference held on September 23, 2010. A copy of NERC Project 2007-12's schedule is available [here](#), which indicates the standard will be complete in 2012.

NERC currently defines Frequency Response as follows:²⁸

(Equipment) The ability of a system or elements of the system to react or respond to a change in system frequency.

(System) The sum of the change in demand, plus the change in generation, divided by the change in frequency, expressed in megawatts per 0.1 Hertz (MW/0.1 Hz).

Pursuant to the above definition, NERC's current definition of Frequency Response does not contemplate "instantaneous" response.²⁹ NERC's requirements may impose more or less stringent requirements for Frequency Response that would clarify whether or not WGR facilities are capable of retrofit compliance. It is unreasonable for ERCOT to insist that WGRs can comply with ERCOT's frequency response standards when blade-pitch capability does not provide ERCOT's "instantaneous" response requirement, and NERC has not clarified exactly what response-time is needed or how best to design frequency response requirements. Furthermore, neither NERC nor ERCOT has clarified how frequency response can be consistently provided by WGRs, whose ability to generate power up or down is entirely dependent on how fast the wind is blowing.

Appellants are not aware of any evidence that demonstrates that imposing these new requirements on operating wind generation units without exception is necessary to address reliability concerns. As the Federal Energy Regulatory Commission ("FERC") stated recently, "frequency response largely depends on the types of generation and the dispatch levels of the generation chosen by the balancing authorities."³⁰ Frequency response is essentially a need to counterbalance sudden differences in the balance between available generation and load demand. By contrast, large-scale conventional generation can remove an entire GW of generation from the grid with the push of a button, creating a sudden and steep imbalance between load and generation. As NERC recently stated, frequency response issues "have been evolving for some

²⁸ Glossary of Terms Used in NERC Reliability Standards at 20 (Apr. 20, 2010).

²⁹ However, the Project 2007-12 Frequency Response webpage describes Frequency Response as "a measure of an Interconnection's ability to stabilize frequency response immediately following the sudden loss of generation or load," but this description is not part of the official reliability standards and there are no formal requirements yet.

³⁰ FERC Docket No. RM06-16-010, Order Setting Deadline for Compliance at 3, 130 FERC ¶ 61,218 (Mar. 18, 2010).

time and are not the direct result of the emergence of renewable resources such as wind and solar.”³¹

ERCOT’s decision to deny any exemptions for WGRs as contemplated by Protocol 5.9.1.3 is arbitrary and capricious, and subjects Appellants, and other similarly-situated wind generators, to unreasonable discrimination in a manner that is unlawful and inconsistent with ERCOT’s duties under PURA, the PUCT rules, and precedent and decisions of regulatory bodies, including the Commission, NERC, and FERC. ERCOT is holding WGRs accountable to requirements that are tailored for conventional generation, while simultaneously requiring that WGRs install retrofits that do not even comply with the current requirements, let alone the new requirements to be established by NERC.

I. ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 violates the requirements of PURA §39.001(d).

PURA §39.001(d) provides in relevant part that regulatory authorities, like the Commission and its delegee ERCOT, “shall adopt rules and issue orders that are both practical and limited so as to impose the least impact on competition.” ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 meets neither criterion. Requiring existing wind generation to provide frequency response at all times without exception is not only impractical, it requires the suspension of physics. Wind can only provide frequency response during times when the source of fuel (wind) is available at that location. If a wind generator wants to increase real power output for frequency response, it cannot obtain additional fuel by simply burning more fuel as a conventional generator would, and it cannot reduce real power output when operating below its Low-Sustainable Limit. A wind generator cannot *instantly* provide frequency response, as adjusting blade pitch would only affect the ramp rate *gradually*. Because ERCOT ignores these basic facts concerning WGRs, ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 must be viewed as unreasonable.

ERCOT’s interpretation of Protocol 5.9.1.3 is not limited in application despite requests by wind generators to provide exemptions due to infeasibility. By refusing exemptions for facilities incapable of being retrofitted to provide frequency response under certain conditions,

³¹ FERC Docket Nos. RM06-16-010 and RM06-16-011, Comments of the North American Electric Reliability Corporation Following September 23 Frequency Response Technical Conference at 3 (Oct. 14, 2010).

ERCOT's "one-size-fits-all" standard is not limited to account for wind conditions when a WGR cannot provide frequency response.

Rather than having "the least impact on competition," ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 will have unnecessary, significant negative impacts upon competition. The cost of researching and designing the extensive retrofitting required by Protocol 5.9.1.3, if such custom retrofits are even possible, will increase costs to wind generators without ensuring that "blade-pitch" adjustments will bring the WGRs into compliance with the Protocols' and Operating Guide's Primary Frequency Response requirements, let alone NERC's related reliability requirements that are under development. Requiring retrofits of existing facilities may void manufacturer warranties for those facilities, and operation of the retrofit devices may physically stress the facilities, shortening their operational life. ERCOT's refusal to grant exemptions is unreasonable, overbroad, and discriminatory, and reduces the level of competition in conflict with PURA §39.001(d), and must be reversed by the Commission.

J. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates the United States and Texas Constitutions by confiscating wind generators' property without compensation through a regulatory taking.

Both the United States Constitution³² and the Texas Constitution³³ provide that private property may not be taken for public use without the payment of just and adequate compensation. The courts have recognized that a "taking" of property may occur as the result of a regulatory action, even if the action does not completely destroy the property's value.³⁴ It is sufficient if the action unreasonably interferes with the owner's rights to use and enjoy his property.³⁵ In order to determine if a regulatory taking has occurred, the courts will review the following factors:³⁶

(1) "the economic impact of the regulation on the claimant"; (2) "the extent to which the regulation has interfered with the distinct investment-backed expectations"; and (3) "the character of the governmental action."

³² U.S. Const. Amend. V.

³³ Tex. Const. Art. I. § 17.

³⁴ *Hallco Texas, Inc. v. McMullen County*, 221 S.W.3d 50 (Tex. 2006), at 56.

³⁵ *Id.*

³⁶ *Id.*, citing *Sheffield Devel. Co. v. City of Glenn Heights*, 140 S.W. 3d 660, 670-672 (Tex. 2004).

Applying these factors, it is clear that ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 results in a regulatory taking. Despite the fact that Appellants' WGRs were constructed to conform to ERCOT's requirements, ERCOT is now unreasonably applying new 'blade pitch' standards that do not exist in the Protocols and refusing to grant the technical infeasibility exemptions that are expressly set forth in the ERCOT Protocols. Because the facilities in question are unable to be retrofit to conform to these new standards, ERCOT is effectively requiring that the facilities be shut down, thereby unreasonably interfering with Appellants' rights to use and enjoy their property.

Appellants' "investment-backed expectations"³⁷ at the time the units were constructed were that they were compliant with the Protocols' requirements. Appellants entered into lease agreements and power sales agreements based upon the economic impact of those requirements. Changing those requirements and enforcing them so as to read out the exemptions such that compliance is impossible, without reasonable explanation or basis, clearly interferes with the investment-backed expectations that underlie the existing wind generation agreements. Since requiring "blade-pitch" capability does not resolve compliance with current or pending frequency response requirements, ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 is unreasonable, arbitrary, and capricious. ERCOT's unreasonable denial of exemptions must be reversed to prevent the unconstitutional confiscation of private property through a regulatory taking.

K. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates its duty under PURA §39.151(a)(1) to ensure access to the transmission and distribution system for all buyers and sellers of electricity on nondiscriminatory terms.

PURA §39.151 establishes the duties of an "independent organization" like ERCOT and specifies that it is required to "ensure access to the transmission and distribution systems for all buyers and sellers of electricity on a nondiscriminatory basis." ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates this requirement by discriminating against wind generators and by imposing standards that would effectively prevent them from gaining

³⁷ The Dallas Court of Appeals has recently emphasized the importance of this factor, stating: "The second factor – the investment-backed expectations of the property owner – *is critical* in evaluating the reasonableness of the government's interference." *City of Dallas v. VRC LLC*, 260 S.W.3d 60, 65 (Tex. App – Dallas 2008). (Emphasis added.)

access to the ERCOT transmission system to deliver electricity to buyers of electricity. Enforcing Protocol 5.9.1.3 without granting the technical infeasibility exemption requires wind generators to provide frequency response even though, because of differences in technology, most existing, installed wind generation units cannot meet this requirement, and no retrofit can achieve the ERCOT standard. This is tantamount to a requirement to disconnect from the ERCOT transmission system. As a result, these units are denied access to the ERCOT transmission system and their owners are unable to sell their power in the ERCOT market. ERCOT's refusal to grant any exemptions for Protocol 5.9.1.3 to Appellants therefore violates PURA §39.151(a)(1) by preventing Appellants from gaining access to the transmission and distributions system on a non-discriminatory basis.

L. ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 violates its duty under PURA §39.151(a)(2) and (4) to ensure the reliability and adequacy of the regional electrical network and to ensure accurate accounting among generators and wholesale buyers and sellers of electricity.

PURA §39.151(a)(2) requires that ERCOT "ensure the reliability and adequacy of the regional electrical network." ERCOT has not established that enforcing Protocol 5.9.1.3 without exemption, and arbitrarily requiring blade-pitch capability, is necessary to ensure the reliability and adequacy of the network. Unless ERCOT can establish a reliability need for blade-pitch capability and frequency-response capability without exemption, the effect of ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 is to require wind generators to install costly equipment that is not necessary for reliability, or if such retrofitting is infeasible, the WGRs may be forced to shut down. If these WGRs shut down, reliability will be negatively affected due to the reduction in available capacity and the corresponding negative impact on the reserve margin. Accordingly, ERCOT's denial of the exemptions is in violation of PURA §39.151(a)(2).

PURA §39.151(a)(4) requires that ERCOT "ensure that electricity production and delivery are accurately accounted for among the generators and wholesale buyers and sellers in the region." Because there is no justification for the imposition of the unnecessary, added costs associated with "blade pitch" retrofits or with requiring currently operating WGRs to provide Primary Frequency Response capability, ERCOT's denial of the exemptions provided by Protocol 5.9.1.3 arbitrarily shifts the costs of providing Primary Frequency Response to wind generators. If ERCOT shifts operational costs to a single market segment without adequate

justification it prevents ERCOT from “accurately account[ing] for [costs] among the generators and wholesale buyers and sellers in the region,” as required by PURA. Accordingly, ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 violates PURA §39.151(a)(4).

M. ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 is inconsistent with Texas public policy goals.

ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 contravenes important public policy goals established by the Texas Legislature. PURA §31.001(c) establishes the goal of creating “a more competitive marketplace” and a marketplace “that allows for increased participation by ... certain nonutilities.” PURA §39.904 establishes a legislative policy encouraging the development of renewable energy resources in Texas. Wind generation will play an important part in the ability of the state to meet and exceed these goals. Certainly the Commission has been very active and responsive in working to meet these public policy goals and Appellants appreciate and laud the Commission for its efforts. However, ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 threatens to thwart the ability of the Texas market to meet these legislative goals, despite the Commission’s efforts.

ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 requires that all existing WGRs that have attested to infeasibility come into compliance with the new frequency response requirements within two years. If not in compliance by that date, the generation units will have to disconnect from ERCOT or face enforcement penalties. If these units are forced to disconnect from the ERCOT system, the amount of renewable generation in Texas will significantly decline rather than increase as the Legislature intends. Further, the removal of many wind units may change the demand calculations that the Commission relied upon in approving the construction of about \$5.0 billion in CREZ transmission, resulting in a potentially stranded CREZ investment.

X. MOTION FOR SUSPENSION OF PROTOCOL 5.9.1.3

Pursuant to P.U.C. PROC. R. 22.251(d)(2) and (i), Appellants request that the requirements of Protocol 5.9.1.3 be suspended until the Commission issues a final order in this proceeding. Appellants believe that ERCOT is not willing to agree to such a suspension, so this request is included as part of this appeal.

There is good cause for suspension of Protocol 5.9.1.3 because of the significant impact its implementation will have on both Appellants' existing operations in Texas and on the public interest. Although the retrofit obligations of Protocol 5.9.1.3 will not be effective until twenty-four months from ERCOT's notification that no exemption would be allowed, Appellants and other wind generators need at least that 24-month period to investigate methods to customize retrofits for their various WGR makes and models, since such retrofits have yet to be invented, and have them installed and tested.

Unless the application of Protocol 5.9.1.3 is suspended day for day from December 1, 2010, until the Commission examines the blanket rejection of exemptions by ERCOT, Appellants and other wind generators will be required to incur significant costs in retrofitting existing, operational wind generation units to meet the new, frequency response requirements imposed by Protocol 5.9.1.3 (and soon to be re-defined by NERC Project 2007-12) to the extent such technology can even be designed in that time period. Given that Appellants have not been able to identify any method for retrofitting their facilities to comply with ERCOT's blade-pitch requirement, let alone the actual Primary Frequency Response requirements, Appellants have not yet been able to determine the amount of money retrofitting their wind plants would require, but it is presumed to be in the millions of dollars given the complexity, the number of facilities, the various makes and models of the facilities, and the physical requirements of the materials. These direct costs do not include the additional cost of lost revenue for the time period that the wind generation units are shut down in order to install the retrofits if even a possibility. Before requiring wind generators to spend aggregated amounts that could exceed many millions of dollars, the Commission should assure that such investment (1) is needed; (2) will actually address reliability concerns; (3) will comport with ERCOT's requirements that are currently being revised; (4) is consistent with PURA, the Protocols, and the Commission's rules; and (5) will comport with NERC's reliability requirements once they are finalized. Otherwise such investment is simply economic waste that puts WGRs at a competitive disadvantage and increase prices to consumers.

ERCOT has not produced a single study demonstrating that Primary Frequency Response is needed from all wind generation resources without providing for a single exemption, or that its "pitch the blade" requirement that is not contained within the body of the Protocol will provide consistent or reliable frequency response capability. To the contrary exemptions are anticipated

by Protocol 5.9.1.3. The failure to follow the Protocols which provide for exemptions without some indication of a need, which is lacking in this case, is simply an improper intrusion on the competitiveness of the market rather than the solution to a reliability problem and violates the Commission's rules, PURA and the Standard Market Participant Agreements executed with Appellants.

Suspension is also necessary because the proposed implementation date of December 1, 2012 or two years from the date of notice of the denial of the infeasibility attestation is not reasonable, given that no retrofit solutions are available in the market. Furthermore, requiring Appellants to invest in compliance efforts that may not be possible while Appellants simultaneously seek relief from those same compliance requirements will result in economic waste if the Commission finds in favor of Appellants.

A suspension of Protocol 5.9.1.3 during this proceeding would enable the Commission to fully develop the record and reach a decision in this proceeding while avoiding the significant harm that will result from maintaining the deadline and Appellants' non-exempt status. If no suspension is granted, then Appellants will need to aggressively pursue creating a retrofit solution in conjunction with wind turbine manufacturers while simultaneously seeking relief from this obligation. If Appellants wait until the end of the hearing process to determine whether ERCOT's "blade-pitch" requirement without exception is upheld, enough of the 24-month period will have elapsed to make creating, testing, and installing the customized retrofits most likely impossible.

For the reasons set forth above, whether or not the Commission grants Appellants a good-cause waiver of the ADR requirements, as discussed previously in section VI on jurisdiction herein, Appellants respectfully request that Protocol 5.9.1.3 be suspended until this appeal has been fully resolved. Appellants are willing to engage in ADR procedures with ERCOT and other similarly situated wind developers provided Protocol 5.9.1.3 is suspended so that Appellants will retain the full 24-month compliance period to implement any agreed, technically feasible resolution. Accordingly, if the Commission determines that Appellants must pursue ADR before hearing Appellants' appeal, Appellants request that the Commission abate this proceeding and suspend Protocol 5.9.1.3 until ADR procedures are complete and this appeal is either withdrawn or a non-appealed final order is issued.

XI. EVIDENTIARY HEARING

Appellants hereby request that the Commission schedule this matter for an evidentiary hearing to resolve the factual disputes between the parties. Pursuant to P.U.C. PROC. R. 22.251(l), the Commission is required to resolve these factual determinations on a *de novo* basis, without any deference to the action taken by the ERCOT. Because this proceeding involves important policy issues for the Commission, the Commissioners have discretion to hear this matter themselves rather than referring the case to the State Office of Administrative Hearings and Appellants request that the Commission hear the case. Even though it is requesting an evidentiary hearing at this point, Appellants are willing to attempt to negotiate an agreed stipulation of facts with ERCOT so that this matter can be resolved without the need for an evidentiary hearing, though the prospects of reaching such an agreement appear remote.

In addition to the facts necessary for suspension of Protocol 5.9.1.3, an evidentiary hearing is needed to address at least the following issues:

1. Did Appellants timely submit the required attestations of technical infeasibility pursuant to Protocol 5.9.1.3?
2. Is it technically feasible, in accordance with Good Utility Practice, to retrofit Appellants' WGRs to comply with ERCOT Protocol 5.9.1.3 and the other Primary Frequency Response requirements it makes applicable to Appellants?
 - a. If not, for each type of WGR, what is the compliance method that can be used and has that method been approved by a significant portion of the electric industry?
 - b. For each type of WGR, what is the cost of implementing the compliance method?
3. What information and documentation did ERCOT review before rejecting the attestations?
4. Did ERCOT perform a study to identify the reliability issues, if any, associated with currently-installed wind generation being permanently exempted from the Protocol 5.9.1.3 Primary Frequency Response requirements?

5. Did ERCOT perform a study to identify the reliability issues, if any, associated with currently-installed wind generation shutting down because they cannot be retrofitted with blade-pitch capability or provide Primary Frequency Response capability?
6. What Protocol, or other binding document, provision requires WGRs to provide “blade pitch” capability in order to address the Primary Frequency Response requirements of Protocol 5.9.1.3 as interpreted by ERCOT Staff?
7. Does blade pitch capability allow Appellants’ WGRs to fully comply with the Primary Frequency Response requirements of Protocol 5.9.1.3?
8. Is it technically feasible, in accordance with Good Utility Practice, to retrofit Appellants’ WGRs to provide blade pitch capability in order to comply with ERCOT Protocol 5.9.1.3?
 - a. If so, for each type of WGR , what is the compliance method that can be used and has that method been approved by a significant portion of the electric industry?
 - b. For each type of WGR, what is the cost of implementing the compliance method?
9. What harm would existing generators and the ERCOT market face from continuing ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3?
10. What harm, if any, would ERCOT market be subject to if ERCOT’s denial of the exemptions provided by Protocol 5.9.1.3 were reversed, and exemptions allowing WGR’s to continue operating with exemptions for projects where retrofits are technically infeasible?

**XII. REQUEST FOR GOOD CAUSE WAIVER OF PAGE LIMITATIONS FOR FILING
PURSUANT TO P.U.C. PROC. R. 22.72(F)**

Appellants respectfully request a waiver of the fifty page limitation for filing as set forth in P.U.C. PROC. R. 22.72(f). P.U.C. PROC. R. 22.251(d)(1)(H) requires that a sworn record be filed consisting of the evidence complained of which may also contain other items pertinent to the issues or points presented for review along with affidavits or other evidence on which Appellants rely. Given the number of Appellants’ individual WGRs that filed for exemptions,

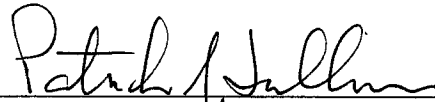
this filing and the attestations, supporting documentation, and e-mails from ERCOT rejecting the requests for exemption that are attached to this filing together exceed the fifty page limitation. In order to meet the standard set forth in P.U.C. Proc. R. 22.251(d)(1)(H), Appellants request a good cause waiver of P.U.C. Proc. R. 22.72(f).

XIII. RELIEF REQUESTED

Appellants respectfully request that the Commission waive the ADR requirement for good cause; suspend ERCOT Zonal Protocol 5.9.1.3 and Nodal Protocol 8.5.1.3 as applied to Appellants; overrule ERCOT's denial of exemptions, grant exemptions where reasonable and appropriate, waive the 50-page limitation; and hold an evidentiary hearing on this matter.

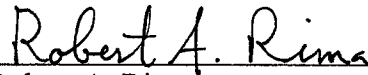
WHEREFORE, PREMISES CONSIDERED, Appellants respectfully request that the Commission issue an order granting the relief sought in this Appeal, and that Appellants be awarded all other and further relief to which they are entitled.

Respectfully Submitted,



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ATTORNEYS FOR HORIZON AND
SWEETWATER WIND



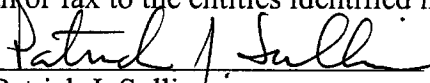
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*w/permission
PJS*

ATTORNEY FOR
PGW

Certificate of Service

I hereby certify that on the 4th day of January, 2011, a true and correct copy of the above and foregoing was delivered by first-class mail or fax to the entities identified in this pleading.


Patrick J. Sullivan

PUC DOCKET NO. _____

APPELLANTS' APPEAL AND	§	BEFORE THE
COMPLAINT CONCERNING	§	
ERCOT'S DENIAL OF EXEMPTION	§	PUBLIC UTILITY COMMISSION
REQUESTS UNDER PROTOCOL	§	
5.9.1.3 AND REQUESTS FOR	§	OF TEXAS
RELATED RELIEF	§	

APPENDIX A: ATTESTATIONS



299 FM 604
Abilene, Texas 79601

325.548.9463 phone
325.548.9377 fax

June 1, 2010

Electric Reliability Council of Texas, Inc. (ERCOT)
Attn: ERCOT Legal Department
7620 Metro Center Drive
Austin, Texas 78744

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 will become effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by **June 1, 2010**, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from Primary Frequency Response capability requirement.

As such, I, Brian Hayes, the Authorized Representative for Post Oak Wind, LLC ("Post Oak Wind"), a registered Resource Entity owning and operating a WGR in the ERCOT Region, hereby attest, to the best of my information, knowledge, and belief, that Post Oak Wind cannot technically be retrofitted with Primary Frequency Response capability for the following reasons:

PRR 833 requires that certain Wind-powered Generation Resources ("WGRs") "shall provide Primary Frequency Response to frequency deviations from 60.000 Hz." The ERCOT Protocols define Primary Frequency Response as "the instantaneous proportional increase or decrease in real power output provided by a Generation Resource and the natural real power dampening response provided by load in response to system frequency deviations." It is not technically feasible for Post Oak Wind to provide such an instantaneous response. Post Oak Wind is aware that ERCOT is in the process of establishing Operating Guides that would establish testing procedures for Primary Frequency Response that would

set response time expectations, but that Operating Guide Revision (OGRR 238) has not yet been adopted. Until those standards are adopted neither Post Oak Wind nor its turbine suppliers can determine whether it will be technically feasible to meet such alternate standards. The latest available information from the turbine manufacturer is that the functionality to provide Primary Frequency Response is not available from Post Oak Wind as designed and constructed, and that no control system upgrade is available to add this functionality. No information has been provided about the potential impact of a retrofit on equipment life. Post Oak Wind continues to work with the turbine manufacturer to determine if technically feasible retrofit can be developed once the expected response time for Primary Frequency Response is determined.

Recent comments propose amending OGRR 238 to require WGRs to provide primary frequency response whenever they are synchronized to the grid. There is no technically feasible way to comply with that requirement when a WGR is operating at or below its low sustainable limit. Without clarification of expected WGR performance provided by OGRR 238 or a similar process, Post Oak Wind can only attest that it is technically infeasible to provide Primary Frequency Response as required by Protocol Section 5.9.1.3. Post Oak Wind is filing this attestation to preserve its ability to seek a permanent exemption and reserves the right to file an amended attestation following the adoption of necessary timing requirements and a sufficient time for review of those requirements with its turbine vendors.

I certify that I have authority from my company to attest to the statements contained herein. I further certify that the statements in this attestation and any information contained within attached documents to this attestation and provided to ERCOT are accurate, complete, and current as of this date.

10 
Signature of Authorized Representative or Officer

6/10/2010
Date





299 FM 604
Abilene, Texas 79601

325.548.9463 phone
325.548.9377 fax

June 1, 2010

Electric Reliability Council of Texas, Inc. (ERCOT)
Attn: ERCOT Legal Department
7620 Metro Center Drive
Austin, Texas 78744

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 will become effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by **June 1, 2010**, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from Primary Frequency Response capability requirement.

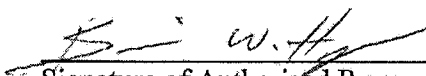
As such, I, Brian Hayes, the Authorized Representative for Mesquite Wind, LLC ("Mesquite Wind"), a registered Resource Entity owning and operating a WGR in the ERCOT Region, hereby attest, to the best of my information, knowledge, and belief, that Mesquite Wind cannot technically be retrofitted with Primary Frequency Response capability for the following reasons:

PRR 833 requires that certain Wind-powered Generation Resources ("WGRs") "shall provide Primary Frequency Response to frequency deviations from 60.000 Hz." The ERCOT Protocols define Primary Frequency Response as "the instantaneous proportional increase or decrease in real power output provided by a Generation Resource and the natural real power dampening response provided by load in response to system frequency deviations." It is not technically feasible for Mesquite Wind to provide such an instantaneous response. Mesquite Wind is aware that ERCOT is in the process of establishing

Operating Guides that would establish testing procedures for Primary Frequency Response that would set response time expectations, but that Operating Guide Revision (OGRR 238) has not yet been adopted. Until those standards are adopted neither Mesquite Wind nor its turbine suppliers can determine whether it will be technically feasible to meet such alternate standards. The latest available information from the turbine manufacturer is that the functionality to provide Primary Frequency Response is not available from Mesquite Wind as designed and constructed, and that no control system upgrade is available to add this functionality. No information has been provided about the potential impact of a retrofit on equipment life. Mesquite Wind continues to work with the turbine manufacturer to determine if technically feasible retrofit can be developed once the expected response time for Primary Frequency Response is determined.

Recent comments propose amending OGRR 238 to require WGRs to provide primary frequency response whenever they are synchronized to the grid. There is no technically feasible way to comply with that requirement when a WGR is operating at or below its low sustainable limit. Without clarification of expected WGR performance provided by OGRR 238 or a similar process, Mesquite Wind can only attest that it is technically infeasible to provide Primary Frequency Response as required by Protocol Section 5.9.1.3. Mesquite Wind is filing this attestation to preserve its ability to seek a permanent exemption and reserves the right to file an amended attestation following the adoption of necessary timing requirements and a sufficient time for review of those requirements with its turbine vendors.

I certify that I have authority from my company to attest to the statements contained herein. I further certify that the statements in this attestation and any information contained within attached documents to this attestation and provided to ERCOT are accurate, complete, and current as of this date.



Signature of Authorized Representative or Officer

6/11/2010
Date



Sullivan, Patrick

From: Lane Robinson [Lane.Robinson@bluarcgroup.com]
Sent: Tuesday, June 01, 2010 4:45 PM
To: mpappl@ercot.com
Cc: Ellen Maher; David Smith; Kim Takayesu; Document Control
Subject: SW1-5 PRR833 Attestations
Attachments: Sweetwater Wind 1 LLC PRR833 Attestation0001.pdf; Sweetwater Wind 2 LLC PRR833 Attestation0001.pdf; Sweetwater Wind 3 LLC PRR833 Attestation0001.pdf; Sweetwater Wind 5 LLC PRR833 Attestation0001.pdf; Sweetwater Wind 4 LLC PRR833 Attestation0001.pdf

Please find attestations for Sweetwater Wind 1 – 5 LLC for technical infeasibility of providing primary frequency response per PRR833.

Thank You,
Lane

Lane Robinson
Regulatory Manager



Bluarc Management Group LLC
5307 E. Mockingbird Lane, 7th Floor
Dallas, Texas 75206
ph 512.914.6630 • fx 214.368.9920 • cel 512.914.6630

SWEETWATER WIND 1 LLC
5307 E. Mockingbird Lane, Suite 710
Dallas, TX 75206
(214) 368-9920

Attestation Regarding Technical Infeasibility of
Certain Wind-powered Generation Resources (WGRs)

June 1, 2010

Electric Reliability Council of Texas, Inc. (ERCOT)
Attn: ERCOT Legal Department
7620 Metro Center Drive
Austin, Texas 78744

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 will become effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by **June 1, 2010**, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from Primary Frequency Response capability requirement.

As such, I, **Lane Robinson**, the Authorized Representative or officer for **Sweetwater Wind 1 LLC**, a registered Resource Entity owning or operating WGRs in the ERCOT Region, hereby attests, to the best of my information, knowledge, and belief, that **SWEETWIND_WND1** cannot technically be retrofitted with Primary Frequency Response capability for the following reasons:

As wind turbines are designed to extract the most energy they can from the wind resource available on a short term basis, it is not technically possible on variable speed pitch controlled turbines to pitch the blades when the frequency drops and increase the power output from the turbine. In fact in general, for a given wind speed, pitching the blades from the position prior to the frequency drop would decrease the power output as the angle of attack of the wind to the blade would be sub optimal.

A number of recently supplied multi-megawatt variable speed pitch regulated turbines have available a central project controller (either as part of the turbine supplier SCADA or as a separate controller integrated with the turbine supplier SCADA) which can provide active power and reactive power regulation depending on the options purchased and the licenses procured (GE has a number of patents that preclude some vendors from providing some of these capabilities).

In general the active power control can be performed via the centralized SCADA/controller. This system can reduce power by a few percent by pitching the blades and then it has to shut machines down. Another method adopted by some manufacturers is to change the rotational speed of the rotor which changes the C_p to tip speed ratio away from optimum and reduces the power. This later method requires significant

changes to the individual turbine controller software and additional available memory and processing power in the controllers. If the tip speed (rotational speed is decreased to achieve this result the energy stored in the rotor will be transferred to the system increasing the output of the turbine (which is the opposite the requirement) until the energy is transferred.


A number of the multi-megawatt turbines supplied into Texas have been in the market for up to 9 years. These turbines have seen significant upgrades and changes in hardware and software, and the warranties and maintenance agreements have long expired on many of these.

The 37.5MW Sweetwater 1 project signed its SGIA in 2002 and utilizes Enron 1.5MW turbines, rebadged by GE who procured Enron Wind assets out of bankruptcy in 2002, without a central control system, ie each wind turbine operates independently of the others, and thus it does not have voltage or reactive power setpoint control. These turbines were not purchased with a central control system in mind and the supplier has implemented several generations of improvements to this model since that time and doesn't even use the same controller hardware in the individual turbines.

I certify that I have authority from my company to attest to the statements contained herein. I further certify that the statements in this attestation and any information contained within attached documents to this attestation and provided to ERCOT are accurate, complete, and current as of this date.



Signature of Authorized Representative or Officer



Date

SWEETWATER WIND 2 LLC
5307 E. Mockingbird Lane, Suite 710
Dallas, TX 75206
(214) 368-9920

Attestation Regarding Technical Infeasibility of
Certain Wind-powered Generation Resources (WGRs)

June 1, 2010

Electric Reliability Council of Texas, Inc. (ERCOT)
Attn: ERCOT Legal Department
7620 Metro Center Drive
Austin, Texas 78744

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 will become effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by **June 1, 2010**, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from Primary Frequency Response capability requirement.

As such, I, **Lane Robinson**, the Authorized Representative or officer for **Sweetwater Wind 2 LLC**, a registered Resource Entity owning or operating WGRs in the ERCOT Region, hereby attests, to the best of my information, knowledge, and belief, that **SWEETWN2_WND2** and **SWEETWN2_WND24** cannot technically be retrofitted with Primary Frequency Response capability for the following reasons:

As wind turbines are designed to extract the most energy they can from the wind resource available on a short term basis, it is not technically possible on variable speed pitch controlled turbines to pitch the blades when the frequency drops and increase the power output from the turbine. In fact in general, for a given wind speed, pitching the blades from the position prior to the frequency drop would decrease the power output as the angle of attack of the wind to the blade would be sub optimal.

A number of recently supplied multi-megawatt variable speed pitch regulated turbines have available a central project controller (either as part of the turbine supplier SCADA or as a separate controller integrated with the turbine supplier SCADA) which can provide active power and reactive power regulation depending on the options purchased and the licenses procured (GE has a number of patents that preclude some vendors from providing some of these capabilities).

In general the active power control can be performed via the centralized SCADA/controller. This system can reduce power by a few percent by pitching the blades and then it has to shut machines down. Another method adopted by some manufacturers is to change the rotational speed of the rotor which changes the C_p to tip speed ratio away from optimum and reduces the power. This later method requires significant

changes to the individual turbine controller software and additional available memory and processing power in the controllers. If the tip speed (rotational speed is decreased to achieve this result the energy stored in the rotor will be transferred to the system increasing the output of the turbine (which is the opposite the requirement) until the energy is transferred.

A number of the multi-megawatt turbines supplied into Texas have been in the market for up to 9 years. These turbines have seen significant upgrades and changes in hardware and software, and the warranties and maintenance agreements have long expired on many of these.

The Sweetwater 2 project uses GE 1.5MW turbines with the second generation Wind Farm Management System and the associated turbine controller and algorithms, current project use GE's new WindControl system and new turbine controller and software. The existing Wind Farm Management System can change the total power output from one level to another but the maximum rate of change is limited by a parameter (MW/min). This functionality could be used to adjust the output based on a frequency input from an external source however it is unclear that the rate of change will be as fast as ERCOT is expecting as it is unclear what ERCOT requires

I certify that I have authority from my company to attest to the statements contained herein. I further certify that the statements in this attestation and any information contained within attached documents to this attestation and provided to ERCOT are accurate, complete, and current as of this date.

Jane Robinson
Signature of Authorized Representative or Officer

6-1-2010
Date

SWEETWATER WIND 3 LLC
5307 E. Mockingbird Lane, Suite 710
Dallas, TX 75206
(214) 368-9920

Attestation Regarding Technical Infeasibility of
Certain Wind-powered Generation Resources (WGRs)

June 1, 2010

Electric Reliability Council of Texas, Inc. (ERCOT)

Attn: ERCOT Legal Department

7620 Metro Center Drive

Austin, Texas 78744

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 will become effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by **June 1, 2010**, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from Primary Frequency Response capability requirement.

As such, I, **Lane Robinson**, the Authorized Representative or officer for **Sweetwater Wind 3 LLC**, a registered Resource Entity owning or operating WGRs in the ERCOT Region, hereby attests, to the best of my information, knowledge, and belief, that **SWEETWN3_WND3** cannot technically be retrofitted with Primary Frequency Response capability for the following reasons:

As wind turbines are designed to extract the most energy they can from the wind resource available on a short term basis, it is not technically possible on variable speed pitch controlled turbines to pitch the blades when the frequency drops and increase the power output from the turbine. In fact in general, for a given wind speed, pitching the blades from the position prior to the frequency drop would decrease the power output as the angle of attack of the wind to the blade would be sub optimal.

A number of recently supplied multi-megawatt variable speed pitch regulated turbines have available a central project controller (either as part of the turbine supplier SCADA or as a separate controller integrated with the turbine supplier SCADA) which can provide active power and reactive power regulation depending on the options purchased and the licenses procured (GE has a number of patents that preclude some vendors from providing some of these capabilities).

In general the active power control can be performed via the centralized SCADA/controller. This system can reduce power by a few percent by pitching the blades and then it has to shut machines down. Another method adopted by some manufacturers is to change the rotational speed of the rotor which changes the C_p to tip speed ratio away from optimum and reduces the power. This later method requires significant

changes to the individual turbine controller software and additional available memory and processing power in the controllers. If the tip speed (rotational speed is decreased to achieve this result the energy stored in the rotor will be transferred to the system increasing the output of the turbine (which is the opposite the requirement) until the energy is transferred.

A number of the multi-megawatt turbines supplied into Texas have been in the market for up to 9 years. These turbines have seen significant upgrades and changes in hardware and software, and the warranties and maintenance agreements have long expired on many of these.

The Sweetwater 3 project uses GE 1.5MW turbines with the second generation Wind Farm Management System and the associated turbine controller and algorithms, current project use GE's new WindControl system and new turbine controller and software. The existing Wind Farm Management System can change the total power output from one level to another but the maximum rate of change is limited by a parameter (MW/min). This functionality could be used to adjust the output based on a frequency input from an external source however it is unclear that the rate of change will be as fast as ERCOT is expecting as it is unclear what ERCOT requires

I certify that I have authority from my company to attest to the statements contained herein. I further certify that the statements in this attestation and any information contained within attached documents to this attestation and provided to ERCOT are accurate, complete, and current as of this date.

Lore Robinson
Signature of Authorized Representative or Officer

6-1-2010
Date

SWEETWATER WIND 4 LLC
5307 E. Mockingbird Lane, Suite 710
Dallas, TX 75206
(214) 368-9920

Attestation Regarding Technical Infeasibility of
Certain Wind-powered Generation Resources (WGRs)

June 1, 2010

Electric Reliability Council of Texas, Inc. (ERCOT)
Attn: ERCOT Legal Department
7620 Metro Center Drive
Austin, Texas 78744

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 will become effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by **June 1, 2010**, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from Primary Frequency Response capability requirement.

As such, I, **Lane Robinson**, the Authorized Representative or officer for **Sweetwater Wind 4 LLC**, a registered Resource Entity owning or operating WGRs in the ERCOT Region, hereby attests, to the best of my information, knowledge, and belief, that **SWEETWN4_WND4A**, **SWEETWN4_WND4B**, **SWEETWN2_WND24** and **SWEETWN4_WND5** cannot technically be retrofitted with Primary Frequency Response capability for the following reasons:

SW4a

As wind turbines are designed to extract the most energy they can from the wind resource available on a short term basis, it is not technically possible on variable speed pitch controlled turbines to pitch the blades when the frequency drops and increase the power output from the turbine. In fact in general, for a given wind speed, pitching the blades from the position prior to the frequency drop would decrease the power output as the angle of attack of the wind to the blade would be sub optimal.

A number of recently supplied multi-megawatt variable speed pitch regulated turbines have available a central project controller (either as part of the turbine supplier SCADA or as a separate controller integrated with the turbine supplier SCADA) which can provide active power and reactive power regulation depending on the options purchased and the licenses procured (GE has a number of patents that preclude some vendors from providing some of these capabilities).

In general the active power control can be performed via the centralized SCADA/controller. This system can reduce power by a few percent by pitching the blades and then it has to shut machines down.

A number of the multi-megawatt turbines supplied into Texas have been in the market for up to 9 years. These turbines have seen significant upgrades and changes in hardware and software, and the warranties and maintenance agreements have long expired on many of these.

Sweetwater 4a consists of 135 1MW MHI fixed speed pitch controlled turbines with simple induction generators. These machines are supplied without a central control system or manufacturer supplied SCADA system. And thus the only way to adjust output for a increase in frequency is to shut turbines down, however, it seems that the duration of a frequency excursion above the usual deadband, used of thermal generation by ERCOT and NERC , is relatively short and thus the project would be starting and stopping turbines on a quick rotation.

SW4b

As wind turbines are designed to extract the most energy they can from the wind resource available on a short term basis, it is not technically possible on variable speed pitch controlled turbines to pitch the blades when the frequency drops and increase the power output from the turbine. In fact in general, for a given wind speed, pitching the blades from the position prior to the frequency drop would decrease the power output as the angle of attack of the wind to the blade would be sub optimal.

A number of recently supplied multi-megawatt variable speed pitch regulated turbines have available a central project controller (either as part of the turbine supplier SCADA or as a separate controller integrated with the turbine supplier SCADA) which can provide active power and reactive power regulation depending on the options purchased and the licenses procured (GE has a number of patents that preclude some vendors from providing some of these capabilities).

In general the active power control can be performed via the centralized SCADA/controller. This system can reduce power by a few percent by pitching the blades and then it has to shut machines down. Another method adopted by some manufacturers is to change the rotational speed of the rotor which changes the C_p to tip speed ratio away from optimum and reduces the power. This later method requires significant changes to the individual turbine controller software and additional available memory and processing power in the controllers. If the tip speed (rotational speed is decreased to achieve this result the energy stored in the rotor will be transferred to the system increasing the output of the turbine (which is the opposite the requirement) until the energy is transferred.

A number of the multi-megawatt turbines supplied into Texas have been in the market for up to 9 years. These turbines have seen significant upgrades and changes in hardware and software, and the warranties and maintenance agreements have long expired on many of these.

Sweetwater 4b utilizes the early generation Siemens S93 2.3MW turbine. The existing Vendor Supplied SCADA system can change the total power output from one level to another but the maximum rate of change is limited by a parameter (MW/min). This functionality could be used to adjust the output based on a frequency input from an external source however it is unclear that

the rate of change will be as fast as ERCOT is expecting as it is unclear what ERCOT requires in this regard. On this basis it is not possible to attest that SW4b can comply with the intent of PRR833.

I certify that I have authority from my company to attest to the statements contained herein. I further certify that the statements in this attestation and any information contained within attached documents to this attestation and provided to ERCOT are accurate, complete, and current as of this date.

Jane Robinson

Signature of Authorized Representative or Officer

6-1-2010

Date

SWEETWATER WIND 5 LLC
5307 E. Mockingbird Lane, Suite 710
Dallas, TX 75206
(214) 368-9920

Attestation Regarding Technical Infeasibility of
Certain Wind-powered Generation Resources (WGRs)

June 1, 2010

Electric Reliability Council of Texas, Inc. (ERCOT)
Attn: ERCOT Legal Department
7620 Metro Center Drive
Austin, Texas 78744

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 will become effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by **June 1, 2010**, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from Primary Frequency Response capability requirement.

As such, I, **Lane Robinson**, the Authorized Representative or officer for **Sweetwater Wind 5 LLC**, a registered Resource Entity owning or operating WGRs in the ERCOT Region, hereby attests, to the best of my information, knowledge, and belief, that **SWEETWN4_WND5** cannot technically be retrofitted with Primary Frequency Response capability for the following reasons:

SW5

As wind turbines are designed to extract the most energy they can from the wind resource available on a short term basis, it is not technically possible on variable speed pitch controlled turbines to pitch the blades when the frequency drops and increase the power output from the turbine. In fact in general, for a given wind speed, pitching the blades from the position prior to the frequency drop would decrease the power output as the angle of attack of the wind to the blade would be sub optimal.

A number of recently supplied multi-megawatt variable speed pitch regulated turbines have available a central project controller (either as part of the turbine supplier SCADA or as a separate controller integrated with the turbine supplier SCADA) which can provide active power and reactive power regulation depending on the options purchased and the licenses procured (GE has a number of patents that preclude some vendors from providing some of these capabilities).

In general the active power control can be performed via the centralized SCADA/controller. This system can reduce power by a few percent by pitching the blades and then it has to shut machines down. Another method adopted by some manufacturers is to change the rotational speed of the rotor which changes the Cp to tip speed ratio away from optimum and reduces the power. This later method requires significant changes to the individual turbine controller software and additional available memory and processing power in the controllers. If the tip speed (rotational speed is decreased to achieve this result the energy stored in the rotor will be transferred to the system increasing the output of the turbine (which is the opposite the requirement) until the energy is transferred.

A number of the multi-megawatt turbines supplied into Texas have been in the market for up to 9 years. These turbines have seen significant upgrades and changes in hardware and software, and the warranties and maintenance agreements have long expired on many of these.

Sweetwater 5 utilizes the early generation Siemens S93 2.3MW turbine. The existing Vendor Supplied SCADA system can change the total power output from one level to another but the maximum rate of change is limited by a parameter (MW/min). This functionality could be used to adjust the output based on a frequency input from an external source however it is unclear that the rate of change will be as fast as ERCOT is expecting as it is unclear what ERCOT requires in this regard. On this basis it is not possible to attest that SW5 can comply with the intent of PRR833.

I certify that I have authority from my company to attest to the statements contained herein. I further certify that the statements in this attestation and any information contained within attached documents to this attestation and provided to ERCOT are accurate, complete, and current as of this date.

Jane Robinson
Signature of Authorized Representative or Officer

6-1-2010
Date

**PATTERN GULF WIND LLC
c/o Pattern Energy Group LP
1600 Smith Street, Ste. 4025
Houston, Texas 77002**

Attestation Regarding Technical Infeasibility of
Certain Wind-powered Generation Resources (WGRs)

May 28, 2010

BY E-MAIL AND CERTIFIED MAIL DELIVERY

Electric Reliability Council of Texas, Inc.
Attn: ERCOT Legal Department
7620 Metro Center Drive
Austin, Texas 78744

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 will become effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by **June 1, 2010**, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from Primary Frequency Response capability requirement.

The undersigned, an Authorized Representative and officer of **Pattern Gulf Wind LLC**, a registered Resource Entity owning or operating WGRs in the ERCOT Region, hereby attests, that **TGW_T1 and TGW_T2** cannot be competently retrofitted with Primary Frequency Response capability for the following reasons:

Pattern Gulf Wind LLC includes 118 MHI Wind Turbine Generators model MWT95/2.4MW-80m, each with nameplate capacity of 2.4 MW, 95 meter rotor diameter and 80 meter hub height. MHI MWT 95/2.4 Wind Turbine Generator (WTG) is the latest generation of wind turbines designed by MHI which includes new and complex technologies and control systems. The MHI MWT 2.4/95 WTG does not have speed regulation dependent on active power for the primary frequency regulation. Such functionality is not an option that is currently offered by

MHI for the operating turbines. A custom solution by MHI for the primary frequency response would require extensive research, development, retrofitting and testing at substantial cost, and the successful implementation of such a system is not assured.

We hereby confirm that Pattern Gulf Wind LLC Windfarm will not be able to retrofit a competent primary frequency response capability and functionality to provide under frequency regulation.

I am authorized to, and do, attest to the statements contained herein, which are true and correct to the best of my knowledge, information and belief after reasonable inquiry.



Signature of Authorized Representative or Officer

May 28, 2010
Date

PUC DOCKET NO. _____

APPELLANTS' APPEAL AND	§	BEFORE THE
COMPLAINT CONCERNING	§	
ERCOT'S DENIAL OF EXEMPTION	§	PUBLIC UTILITY COMMISSION
REQUESTS UNDER PROTOCOL	§	
5.9.1.3 AND REQUESTS FOR	§	OF TEXAS
RELATED RELIEF	§	

APPENDIX B: MANUFACTURER SUPPORTING DOCUMENTATION



299 FM 604
Abilene, Texas 79601
325.548.9463 phone
325.548.9377 fax

October 29, 2010

Electric Reliability Council of Texas, Inc. (ERCOT)
Attn: ERCOT Legal Department
7620 Metro Center Drive
Austin, Texas 78744

*Re: May 24, 2010 Notice; M-A052410-01 PRR; Implementation of PRR 833 Primary
Frequency Response Requirement from Existing WGRs*

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 became effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by June 1, 2010, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from the Primary Frequency Response capability requirement.

Post Oak, LLC ("Post Oak") submitted its attestation to ERCOT on June 1 stating that it was technically infeasible for Post Oak to be retrofitted to provide Primary Frequency Response to meet the requirements of PRR 833 based on information obtained from its wind turbine manufacturer regarding the capability of the turbines in the Post Oak project. Post Oak then received a request for information from ERCOT on May 24, 2010 with a response to be provided by October 29, 2010, to which this letter is responsive.

The responses to each ERCOT question seeking information concerning the Post Oak frequency response are as follows with each question set forth before the response for ease of reference.

1. For each unique turbine manufacturer and turbine type please provide information regarding the capability of the turbine to pitch their blades and please indicate if this turbine is a type I, II, III, or IV turbine including manufacturer's information.

The Gamesa G87 wind turbine generators installed at the Post Oak resource are doubly fed induction machines with wound rotors, slip rings and a rated power of 2.0 MW – making them Type III wind turbine generators. They have a rated power of 2.0 MW. Turbine speed and power is controlled through IGBT converters and Pulse Width Modulation electronic control. This control system includes the capability to pitch blades to control power.

2. If you responded in your attestation with – "it is not technically feasible to provide primary frequency response"; Please indicate whether you contacted your turbine manufacturer regarding the feasibility of providing Primary Frequency Response? Please provide documentation from the turbine manufacturer stating why it is not technically feasible to control their turbines in a manner necessary to provide Primary Frequency Response. For the purpose of this response please indicate how quickly the turbine can respond to control signals and can decrease output in response to high frequency and increase output in response to low frequency provided that there is room to decrease generation or increase generation.

Following presentation by ERCOT Staff on frequency control in January of 2009, Post Oak first began researching the technical manuals relating to the capability to provide frequency response of the wind turbine generators ("WTGs") at Post Oak. As PRR 833 proceeded, Post Oak contacted the turbine manufacturer, Gamesa, and Gamesa stated that the turbines "do not have this functionality," which formed the basis for Post Oak's attestation of technical infeasibility submitted to ERCOT on June 1, 2010. The Gamesa representative indicated that there was no existing Gamesa upgrade to provide this functionality.

At that time, Post Oak indicated two areas in which clarification would be needed for Gamesa to attempt to design an upgrade that might provide the Primary Frequency Response in a defined response time, concerning the response expected by ERCOT when the wind generation resource (WGR) is operating below its Low Sustainable Limit. Once the response times for WGRs were clarified for testing purposes by OGRR 238, approved June 3, 2010, and effective July 1, 2010, Horizon provided those additional details to Gamesa to assist in efforts to attempt to determine the feasibility of designing a solution for these existing turbines. However, the inability to provide Primary Frequency Response when operating below LSL levels has not been addressed. Horizon continues to work with Gamesa to examine whether it is possible to upgrade the existing turbines to provide Primary Frequency Response, though it is simply not possible for Post Oak to comply with the requirements as drafted.

As of communication from Gamesa October 28, 2010, attached hereto, Gamesa continues to affirm that "it is not technically feasible at this time to provide primary frequency response for its wind turbine generators ("WTG")." Moreover, the technology for primary frequency response and/or cross signal implementation does not currently exist for these WTGs that have been deployed in the United States.

The turbine manufacturer would need to develop applications for frequency regulation tools that are not available and that have never been tested. As a result, even if the tools were developed, the retrofit performed and additional equipment installed, there is no evidence that the standards in PRR 833 will or can be met.

3. Please explain how you plan to meet the Primary Frequency Response testing requirement stated in the Operating Guide for WGRs (OGRR 238).

Post Oak cannot respond to this request without additional information from Gamesa regarding the feasibility of providing Primary Frequency Response, whether any upgrade would actually meet the PRR 833 requirements, and how the testing would be accommodated under existing equipment warranties.

Sincerely,

A handwritten signature in black ink, appearing to read "Brian Hayes", with a horizontal line extending to the right.

Brian Hayes
Chief Asset Operations Officer
Horizon Wind Energy LLC
P.O. Box 3827
Houston TX 77253-3827

enclosure

ERCOT - Frequency Response

As of October 28 2010:

The turbine supplier (Gamesa) affirms that it is not technically feasible at this time to provide primary frequency response for its wind turbine generators ("WTG").

Such technology for (1) primary frequency response, and/or (2) cross signal implementation does not currently exist for the turbine supplier's WTGs deployed in the U.S. market. Such functions require applications or frequency regulating tools which the turbine supplier does not currently offer, nor has tested as of yet, in the U.S. market.



299 FM 604
Abilene, Texas 79601

325.548.9463 phone
325.548.9377 fax

October 29, 2010

Electric Reliability Council of Texas, Inc. (ERCOT)
Attn: ERCOT Legal Department
7620 Metro Center Drive
Austin, Texas 78744

*Re: May 24, 2010 Notice; M-A052410-01 PRR; Implementation of PRR 833 Primary
Frequency Response Requirement from Existing WGRs*

On May 18, 2010, ERCOT's Board of Directors approved Protocol Revision Request (PRR) 833, Primary Frequency Response Requirement from Existing WGRs. PRR833 became effective on June 1, 2010, and requires any Wind-powered Generation Resource (WGR) that cannot technically be retrofitted with Primary Frequency Response capability to submit an attestation to ERCOT by June 1, 2010, explaining the technical infeasibility. Based upon information provided, ERCOT, at its sole discretion, may grant a permanent exemption from the Primary Frequency Response capability requirement.

Mesquite Wind, LLC ("Mesquite Wind") submitted its attestation to ERCOT on June 1 stating that it was technically infeasible for Mesquite Wind to be retrofitted to provide Primary Frequency Response to meet the requirements of PRR 833 based on information obtained from its wind turbine manufacturer regarding the capability of the turbines in the Mesquite Wind project. Mesquite Wind then received a request for information from ERCOT on May 24, 2010 with a response to be provided by October 29, 2010, to which this letter is responsive.

The responses to each ERCOT question seeking information concerning the Mesquite Wind frequency response are as follows with each question set forth before the response for ease of reference.

1. For each unique turbine manufacturer and turbine type please provide information regarding the capability of the turbine to pitch their blades and please indicate if this turbine is a type I, II, III, or IV turbine including manufacturer's information.

Both the Gamesa G83 wind turbine generators and the Gamesa G87 wind turbine generators installed at the Mesquite Wind resource are doubly fed induction machines with wound rotors, slip rings and a rated power of 2.0 MW – making them Type III wind turbine generators. Turbine speed and power is controlled through IGBT converters and Pulse Width Modulation electronic control. This control system includes the capability to pitch blades to control power.

2. If you responded in your attestation with – "it is not technically feasible to provide primary frequency response"; Please indicate whether you contacted your turbine manufacturer regarding the feasibility of providing Primary Frequency Response? Please provide documentation from the turbine manufacturer stating why it is not technically feasible to control their turbines in a manner necessary to provide Primary Frequency Response. For the purpose of this response please indicate how quickly the turbine can respond to control signals and can decrease output in response to high frequency and increase output in response to low frequency provided that there is room to decrease generation or increase generation.

Following presentation by ERCOT Staff on frequency control in January of 2009, Mesquite Wind first began researching the technical manuals relating to the capability to provide frequency response of the wind turbine generators ("WTGs") at Mesquite Wind. As PRR 833 proceeded, Mesquite Wind contacted the turbine manufacturer, Gamesa, and Gamesa stated that the turbines "do not have this functionality," which formed the basis for Mesquite Wind's attestation of technical infeasibility submitted to ERCOT on June 1, 2010. The Gamesa representative indicated that there was no existing Gamesa upgrade to provide this functionality.

At that time, Mesquite Wind indicated two areas in which clarification would be needed for Gamesa to attempt to design an upgrade that might provide the Primary Frequency Response in a defined response time, concerning the response expected by ERCOT when the wind generation resource (WGR) is operating below its Low Sustainable Limit. Once the response times for WGRs were clarified for testing purposes by OGRR 238, approved June 3, 2010, and effective July 1, 2010, Horizon provided those additional details to Gamesa to assist in efforts to attempt to determine the feasibility of designing a solution for these existing turbines. However, the inability to provide Primary Frequency Response when operating below LSL levels has not been addressed. Horizon continues to work with Gamesa to examine whether it is possible to upgrade the existing turbines to provide Primary Frequency Response, though it is simply not possible for Mesquite Wind to comply with the requirements as drafted.

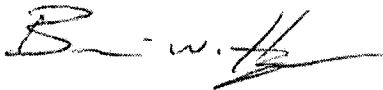
As of communication from Gamesa October 28, 2010, attached hereto, Gamesa continues to affirm that "it is not technically feasible at this time to provide primary frequency response for its wind turbine generators ("WTG")." Moreover, the technology for primary frequency response and/or cross signal implementation does not currently exist for these WTGs that have been deployed in the United States.

The turbine manufacturer would need to develop applications for frequency regulation tools that are not available and that have never been tested. As a result, even if the tools were developed, the retrofit performed and additional equipment installed, there is no evidence that the standards in PRR 833 will or can be met.

3. Please explain how you plan to meet the Primary Frequency Response testing requirement stated in the Operating Guide for WGRs (OGRR 238).

Mesquite Wind cannot respond to this request without additional information from Gamesa regarding the feasibility of providing Primary Frequency Response, whether any upgrade would actually meet the PRR 833 requirements, and how the testing would be accommodated under existing equipment warranties.

Sincerely,

A handwritten signature in black ink, appearing to read "B. Hayes", with a stylized flourish at the end.

Brian Hayes
Chief Asset Operations Officer
Horizon Wind Energy LLC
P.O. Box 3827
Houston TX 77253-3827

enclosure

ERCOT - Frequency Response

As of October 28 2010:

The turbine supplier (Gamesa) affirms that it is not technically feasible at this time to provide primary frequency response for its wind turbine generators ("WTG").

Such technology for (1) primary frequency response, and/or (2) cross signal implementation does not currently exist for the turbine supplier's WTGs deployed in the U.S. market. Such functions require applications or frequency regulating tools which the turbine supplier does not currently offer, nor has tested as of yet, in the U.S. market.

Sullivan, Patrick

Subject: Additional Questions on PRR-833 Attestations to Post Oak (LNCRK) WGRs

From: Hayes, Brian [mailto:Brian.Hayes@horizonwind.com]

Sent: Wednesday, November 24, 2010 12:46 AM

To: Garza, Samantha

Cc: Liebmann, Diana M.

Subject: RE: Additional Questions on PRR-833 Attestations to Post Oak (LNCRK) WGRs

Samantha -

Apologies for my delayed response.

In regards to the question from the Operations Planning Group, at this time Post Oak is not aware of any third party that can provide the control system technology necessary for Post Oak's Gamesa turbines to meet primary frequency response per ERCOT Protocols and Operating Guides requirements.

Best Regards,
Brian

From: Garza, Samantha [sgarza@ercot.com]

Sent: Tuesday, November 23, 2010 2:45 PM

To: Garza, Samantha; Hayes, Brian

Cc: 'mgrimes@alumni.rice.edu'; Freiman, Leslie

Subject: RE: Additional Questions on PRR-833 Attestations to Post Oak (LNCRK) WGRs

Brian,

Operations Planning has asked if you have a response to their request below. Please let me know if you have any questions.

Thanks,
Samantha Garza
ERCOT Wholesale Client Services
512-248-4633 office
512-632-5507 mobile

From: Garza, Samantha

Sent: Wednesday, November 17, 2010 2:02 PM

To: 'brian.hayes@horizonwind.com'

Cc: 'mgrimes@alumni.rice.edu'; Freiman, Leslie

Subject: FW: Additional Questions on PRR-833 Attestations to Post Oak (LNCRK) WGRs

Brian,

The question below is from the Operations Planning group regarding your response received to the additional questions on PRR-833 attestation.

You have stated in your response received by ERCOT on 10/29/2010 that the Post Oak Wind Farm has Wind Turbines which are Type III machines (GAMESA) whose blades can be pitched, can you respond whether it is

12/29/2010

possible to acquire the control system technology from a third party provider to provide primary frequency response to meet ERCOT Protocols and Operating Guides Requirements?

Thanks,
Samantha Garza
512-248-4633

From: ERCOT Client Relations
To: Ted Hofbauer;
cc: Rienfeld, Rodney; Sharma, Sandip; Grit Schmieder-Copeland;
Subject: Request for additional information from PATTERN GULF WIND LLC (RE) regarding M-A052410-01 Implementation of PRR833
Date: Thursday, October 21, 2010 11:56:40 AM

Dear Mr. Hofbauer;

ERCOT is requesting additional information from PATTERN GULF WIND LLC (RE) related to attestation submitted for PRR-833, in response to "Market Notice M-A052410-01 PRR" (below). This PRR affects Protocol Section 5.9.1.3.

Please address the following items and questions and reply by close of business October 29, 2010.

1. For each unique turbine manufacturer and turbine type please provide information regarding the capability of the turbine to pitch their blades and please indicate if this turbine is a type I, II, III, IV turbine including manufacturer's information.
2. If you responded in your attestation with "it is not technically feasible to provide primary frequency response"; Please indicate whether you contacted your turbine manufacturer regarding the feasibility of providing primary frequency response? Please provide documentation from the turbine manufacturer stating why it is not technically feasible to control their turbines in a manner necessary to provide Primary Frequency Response. For the purpose of this response please indicate how quickly the turbine can respond to control signals and can decrease output in response to high frequency and increase output in response to low frequency provided that there is room to decrease generation or increase generation.
3. Please explain how you plan to meet the Primary Frequency Response testing requirement stated in the Operating Guide for WGRs (OGRR 238).
4. In your attestation you have stated that *"We hereby confirm that Pattern Gulf Wind LLC Windfarm will not be able to retrofit a competent primary frequency response capability and functionality to provide under frequency regulation."*; Please explain how you plan to provide Primary Frequency Response to the frequency deviation higher than 60 HZ and outside the maximum allowable Deadband.

Please contact your ERCOT Account Manager at (512)248-, or ERCOT Client Relations at (512)248-3900 with any questions. Thank you.

ERCOT Client Services
clientservices@ercot.com
(512)248-3900



Pattern Gulf Wind LLC
1600 Smith Street Suite 4025
Houston, TX 77002
T 713 308 4200 F 713 571 8004
www.patternenergy.com

November 15, 2010

BY E-MAIL AND FEDEX

Mr. Rodney Rienfeld
Attn: ERCOT Customer Relations
7620 Metro Center Drive
Austin, Texas 78744

Re: Your E-mail dated October 21, 2010
Request for Additional Information
M-A052410-01 Implementation of PRR833

Dear Mr. Rienfeld:

Thank you very much for allowing Pattern Gulf Wind LLC (Pattern Gulf Wind) to provide its response to your October 21, 2010 request for additional information regarding the ability of the Pattern Gulf Wind to provide Primary Frequency Response.

Question No. 1. For each unique turbine manufacturer and turbine type please provide information regarding the capability of the turbine to pitch their blades and please indicate if this turbine is a type I, II, III, IV turbine including manufacturer's information.

Response. The turbines at Pattern Gulf Wind are manufactured by Mitsubishi Heavy Industries, Ltd.. They are the first generation of the model no. MWT2.4/95, Type III turbines. The turbines have only local full span (88 degrees) pitch control capability. The pitch regulating speed is 7.5 degrees/sec in the positive direction and 6 degrees/sec in the negative direction (7.5 deg/sec & -6 deg/sec). Please see the attached document titled: *PSS E Dynamic Simulation Model for Mitsubishi MWT-92/95 Wind Turbines, Section 2 MWT2.4/92 & MWT 2.4/95 PSS/E Model Structure.*

Question No. 2 (Part 1). If you responded in your attestation with –“it is not technically feasible to provide primary frequency response”; Please indicate whether you contacted your turbine manufacturer regarding the feasibility of providing primary frequency response?

Response. Yes, Pattern has contacted Mitsubishi Power Systems Americas, Inc., the Western Hemisphere headquarters for Mitsubishi Heavy Industries, Ltd. (Mitsubishi) by telephone, and has held meetings with its engineers. Pattern Gulf Wind requested and has received a written response to the ERCOT questions from the manufacturer. Please see the written e-mail response to Amin Shakill and Dean Russell from Yuji

Yatomi, Technical Director for Mitsubishi dated November 10, 2010, and the attachment titled: *Grid Connection Characteristic of MWT/2.4&2.3 Wind Turbine Generator (WTI-C-69-R1) RO 30th .Apr. 2010.*

Question No. 2 (Part 2.). Please provide documentation from the turbine manufacturer stating why it is not technically feasible to control their turbines in a manner necessary to provide Primary Frequency Response.

Response. Please see the attached document from Mitsubishi provided in response to Question No. 2 (Part 1) above, which states: The current machine which are operating at Gulf Wind can not comply the frequency response. Mitsubishi and a vendor are currently attempting to develop software that would allow the Pattern Gulf Wind turbines to provide automated Primary Frequency Response capability. No date has been identified for the commercial release and availability of such software.

Question No. 2 (Part 3). For the purpose of this response please indicate how quickly the turbine can respond to control signals and can decrease output in response to high frequency and increase output in response to low frequency provided that there is room to decrease generation or increase generation.

Response. As noted in the attached Mitsubishi response, the speed of response would depend on the design and development of the new control software. However, from the available information, the current pitch angle speed is 7.5 deg/sec and 6.5 deg/sec as documented in the attached PSS/E information. Please note that in spite of modification to the wind turbine control software that may be available in the future, Mitsubishi believes that the achievable frequency response speed from the control system and the mechanical interface would be limited.

Under normal commercial operating conditions, the wind farm does not have the ability ("room") to increase output and generate additional active power in response to a low frequency deviation.

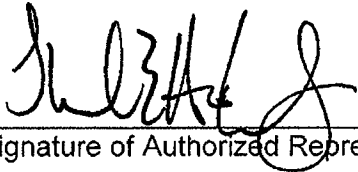
Question No. 3. Please explain how you plan to meet the Primary Frequency Response testing requirement stated in the Operating Guide for WGRs (OGRR 238)

Response. OGRR 238 appears to apply to generating plants having Primary Frequency Response capability. Pattern Gulf Wind cannot currently retrofit a competent primary frequency response capability and functionality to provide under frequency regulation. Therefore, Pattern Gulf Wind cannot be tested for under frequency response as contemplated under OGRR 238. Pattern Gulf Wind is willing to work with ERCOT if testing of Pattern Gulf Wind's future limited over frequency response capability, as proposed in response to Question 4 below, is implemented and will benefit ERCOT.

Question No. 4. In your attestation you have stated that "We hereby confirm that Pattern Gulf Wind LLC Windfarm will not be able to retrofit a competent primary frequency response capability and functionality to provide under frequency regulation."; Please explain how you plan to provide Primary Frequency Response to the frequency deviation higher than 60 HZ and outside the maximum allowable Deadband.

Response: Pattern Gulf Wind cannot currently retrofit a competent primary frequency response capability and functionality to provide under frequency regulation. It is unknown when or if such capability will be available in the future. Should Pattern Gulf Wind be granted an exemption from PRR 833, Pattern is willing to work with ERCOT to implement a generation shedding scheme that will progressively trip the collection circuits (involving 6 to 17 turbines each) temporarily, based on high frequency protection relays. This scheme would allow the wind farm to lower determined amounts of generation (MW) as a function of determined frequency errors (Hz), roughly following a stepped MW/Hz characteristic. Each circuit would remain tripped and blocked until the frequency error threshold returns to normal operating conditions. Pattern will implement the trip relay scheme reasonably consistent with the February 10, 2010, comments provided in PRR 833 by the ERCOT Performance, Disturbance, Compliance Working Group.

I am authorized to, and do, attest to the statements contained herein, which are true and correct to the best of my knowledge, information and belief after reasonable inquiry.



Signature of Authorized Representative

NOV 15, 2010
Date

From: Yatomi, Yuji
To: Amin Shakill; Dean Russell;
cc: UCHIYAMA, ATSUSHI; MIYAKE, HISAO; Pi, Johnson; KATO, KENTARO;
MURATA, NAOTO; Iwai, Nobuki; Hamasaki, Osamu;
Subject: FW: ERCOT Questions Regarding Primary Frequency Response
Date: Thursday, November 11, 2010 1:57:57 AM
Attachments: WTI-C-069 R1 Grid connection characteristic 20100721.pdf

Amin san

For your questionnaires , please let me inform MHI official comment ..

Q1.) Please provide information regarding the capability of the MHI MWTv2.4/95 turbine to pitch their blades. Please indicate if this turbine

Is a type I, II, III, IV turbine including any information that can be shared with ERCOT.

MHI response 1) MWT2.4/95 has a full span pitch control , the pitch regulating speed is ???? rad /sec... This turbine is classified as Type III.

Q2) Can the turbine provide primary frequency response and functionality?

If the provision of primary frequency response is not feasible, please describe why it is not technically feasible to control the turbines in a manner necessary to provide Primary Frequency Response. Please indicate how quickly the turbine can respond to control signals and can decrease output in response to high frequency and increase output in response to low frequency provided that there is room to decrease generation or increase generation.

MHI Response 2) The current machine which are operating at Gulf Wind can not comply the frequency response. To comply these additional requirement, need to modify the software. Please give us more specific design condition such as required inertia response value against frequency deviation so as to suitable modification..

Q3) Can the turbine be retrofitted to provide primary

frequency response capability and functionality for (a) under frequency regulation, and (b) Primary Frequency Response to the frequency deviation higher than 60 HZ and outside the maximum allowable Dead band.

MHI Response 3)


a) Under frequency regulation, Same reply as 2 can be applied. And by the addition of any type of Stored Electric Energy system , performance might be better, but the effect may depend upon the grid condition.

b) Primary Frequency Response to the frequency deviation higher than 60HZ and outside the maximum allowable Dead band. To regulate the active power, the Fig 5 in the attachment would support with some additional soft ware which MHI /Vendor is developing ...

If you have any question , please let us know..

Best Regards

////////////////////////////////////

 Mitsubishi Power Systems Americas, Inc.
100 Bayview Circle, Suite 6000, Newport Beach, CA 92660
Project Management and Engineerig Team
Yuji Yatomi / Technical Director
Tel 949-856-8400
Fax 949-856-4481/4482
Direct 949-856-8460
Cell 949-355-2135
e-mail; yyatomi@mpshq.com

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This email message may contain information that is confidential and proprietary to Mitsubishi Power Systems Americas, Inc., this writer or a third party or may be Attorney/Client Privileged/Attorney Work Product. If you are not the intended recipient, please contact the sender and destroy the original and any copies of the original message.

**HIGHLY SENSITIVE CONFIDENTIAL MATERIAL REDACTED PURSUANT TO
SECTION 552.110 OF THE PUBLIC INFORMATION ACT**

FILED SEPARATELY

PUC DOCKET NO. _____

APPELLANTS' APPEAL AND	§	BEFORE THE
COMPLAINT CONCERNING	§	
ERCOT'S DENIAL OF EXEMPTION	§	PUBLIC UTILITY COMMISSION
REQUESTS UNDER PROTOCOL	§	
5.9.1.3 AND REQUESTS FOR	§	OF TEXAS
RELATED RELIEF	§	

APPENDIX C: DENIALS FROM ERCOT

Sullivan, Patrick

Subject: PRR 833 Attestation

From: ERCOT Client Services [mailto:clientservices@ercot.com]
Sent: Tuesday, November 30, 2010 4:12 PM
To: Hayes, Brian
Cc: Freiman, Leslie; Riefeld, Rodney
Subject: PRR833 Attestation - MESQUITE WIND LLC

Mr. Hayes,

On May 18, 2010, the ERCOT Board of Directors (ERCOT Board) approved Protocol Revision Request (PRR) 833, *Primary Frequency Response Requirement from Existing WGRs*. PRR833 allowed existing Wind-powered Generation Resources (WGRs) to submit an attestation to ERCOT by June 1, 2010 documenting why it was technically infeasible for those WGRs to be equipped with Primary Frequency Response capability. ERCOT, in its sole discretion, had one hundred eighty (180) days of receipt of the attestation to grant a permanent exemption from the requirement.

During the stakeholder review process of PRR833, ERCOT filed comments on April 1, 2010 providing the following guidance on the documentation that would be necessary to demonstrate technical infeasibility;

Any wind turbine that is not capable of pitching its blades will be considered "technically infeasible" of retrofitting with Primary Frequency Response capability. However, in order for ERCOT to consider a permanent exemption, ERCOT will require the WGR to provide documentation, with the attestation, from the turbine manufacturer that specifically states the reason why these wind turbines are incapable of receiving control signals to the blade pitch mechanism and therefore immediately changing the pitch of the blade. ERCOT will not consider cost of retrofitting wind turbines in making its determination.

ERCOT has received MESQUITE WIND LLC attestation regarding its "technical infeasibility" to provide Primary Frequency Response pursuant to ERCOT Protocols Section 5.9.1.3 (PRR833) and ERCOT Nodal Protocols Section 8.5.1.3 (NPRR258). After consideration of the attestation and supporting documentation, ERCOT hereby denies MESQUITE WIND LLC request for a permanent exemption from providing Primary Frequency Response because the WGR did not provide adequate documentation to prove a technical infeasibility claim. As such, the WGR must acquire the capability to provide Primary Frequency Response within twenty-four (24) months of the date of this notification.

A WGR, who disagrees with this determination, may file an Alternative

Dispute Resolution (ADR) request under Section 20 of the ERCOT Nodal Protocols. Pursuant to Section 20.2.2(3), the WGR must initiate the ADR Procedure within six months of this determination.

Client Services

Electric Reliability Council of Texas

ClientRelations@ercot.com

512-248-3900

From: ERCOT Client Services [mailto:clientservices@ercot.com]
Sent: Tuesday, November 30, 2010 4:13 PM
To: Hayes, Brian
Cc: Freiman, Leslie; Garza, Samantha
Subject: PRR833 Attestation - POST OAK WIND LLC_LNCRK2

Mr. Hayes,

On May 18, 2010, the ERCOT Board of Directors (ERCOT Board) approved Protocol Revision Request (PRR) 833, *Primary Frequency Response Requirement from Existing WGRs*. PRR833 allowed existing Wind-powered Generation Resources (WGRs) to submit an attestation to ERCOT by June 1, 2010 documenting why it was technically infeasible for those WGRs to be equipped with Primary Frequency Response capability. ERCOT, in its sole discretion, had one hundred eighty (180) days of receipt of the attestation to grant a permanent exemption from the requirement.

During the stakeholder review process of PRR833, ERCOT filed comments on April 1, 2010 providing the following guidance on the documentation that would be necessary to demonstrate technical infeasibility;

Any wind turbine that is not capable of pitching its blades will be considered "technically infeasible" of retrofitting with Primary Frequency Response capability. However, in order for ERCOT to consider a permanent exemption, ERCOT will require the WGR to provide documentation, with the attestation, from the turbine manufacturer that specifically states the reason why these wind turbines are incapable of receiving control signals to the blade pitch mechanism and therefore immediately changing the pitch of the blade. ERCOT will not consider cost of retrofitting wind turbines in making its determination.

ERCOT has received POST OAK WIND LLC_LNCRK2 attestation regarding its "technical infeasibility" to provide Primary Frequency Response pursuant to ERCOT Protocols Section 5.9.1.3 (PRR833) and ERCOT Nodal Protocols Section 8.5.1.3 (NPRR258). After consideration of the attestation and supporting

documentation, ERCOT hereby denies POST OAK WIND LLC_LNCRK2 request for a permanent exemption from providing Primary Frequency Response because the WGR did not provide adequate documentation to prove a technical infeasibility claim. As such, the WGR must acquire the capability to provide Primary Frequency Response within twenty-four (24) months of the date of this notification.

A WGR, who disagrees with this determination, may file an Alternative Dispute Resolution (ADR) request under Section 20 of the ERCOT Nodal Protocols. Pursuant to Section 20.2.2(3), the WGR must initiate the ADR Procedure within six months of this determination.

Client Services

Electric Reliability Council of Texas

ClientServices@ercot.com

512-248-3900

Sullivan, Patrick

From: ERCOT Client Services [clientservices@ercot.com]
Sent: Tuesday, November 30, 2010 4:13 PM
To: Lane Robinson
Cc: David Smith; Rienfeld, Rodney
Subject: PRR833 Attestation - SWEETWATER WIND 1 LLC
Mr. Robinson,

On May 18, 2010, the ERCOT Board of Directors (ERCOT Board) approved Protocol Revision Request (PRR) 833, *Primary Frequency Response Requirement from Existing WGRs*. PRR833 allowed existing Wind-powered Generation Resources (WGRs) to submit an attestation to ERCOT by June 1, 2010 documenting why it was technically infeasible for those WGRs to be equipped with Primary Frequency Response capability. ERCOT, in its sole discretion, had one hundred eighty (180) days of receipt of the attestation to grant a permanent exemption from the requirement.

During the stakeholder review process of PRR833, ERCOT filed comments on April 1, 2010 providing the following guidance on the documentation that would be necessary to demonstrate technical infeasibility;

Any wind turbine that is not capable of pitching its blades will be considered "technically infeasible" of retrofitting with Primary Frequency Response capability. However, in order for ERCOT to consider a permanent exemption, ERCOT will require the WGR to provide documentation, with the attestation, from the turbine manufacturer that specifically states the reason why these wind turbines are incapable of receiving control signals to the blade pitch mechanism and therefore immediately changing the pitch of the blade. ERCOT will not consider cost of retrofitting wind turbines in making its determination.

ERCOT has received SWEETWATER WIND 1 LLC attestation regarding its "technical infeasibility" to provide Primary Frequency Response pursuant to ERCOT Protocols Section 5.9.1.3 (PRR833) and ERCOT Nodal Protocols Section 8.5.1.3 (NPRR258). After consideration of the attestation and supporting documentation, ERCOT hereby denies SWEETWATER WIND 1 LLC request for a permanent exemption from providing Primary Frequency Response because the WGR did not provide adequate documentation to prove a technical infeasibility claim. As such, the WGR must acquire the capability to provide Primary Frequency Response within twenty-four (24) months of the date of this notification.

A WGR, who disagrees with this determination, may file an Alternative Dispute Resolution (ADR) request under Section 20 of the ERCOT Nodal Protocols. Pursuant to Section 20.2.2(3), the WGR must initiate the ADR Procedure within six months of this determination.

Client Services
Electric Reliability Council of Texas
ClientServices@ercot.com
512-248-3900

12/29/2010

Sullivan, Patrick

From: ERCOT Client Services [clientservices@ercot.com]
Sent: Tuesday, November 30, 2010 4:13 PM
To: Lane Robinson
Cc: David Smith; Riefeld, Rodney
Subject: PRR833 Attestation - SWEETWATER WIND 3

On May 18, 2010, the ERCOT Board of Directors (ERCOT Board) approved Protocol Revision Request (PRR) 833, *Primary Frequency Response Requirement from Existing WGRs*. PRR833 allowed existing Wind-powered Generation Resources (WGRs) to submit an attestation to ERCOT by June 1, 2010 documenting why it was technically infeasible for those WGRs to be equipped with Primary Frequency Response capability. ERCOT, in its sole discretion, had one hundred eighty (180) days of receipt of the attestation to grant a permanent exemption from the requirement.

During the stakeholder review process of PRR833, ERCOT filed comments on April 1, 2010 providing the following guidance on the documentation that would be necessary to demonstrate technical infeasibility;

Any wind turbine that is not capable of pitching its blades will be considered "technically infeasible" of retrofitting with Primary Frequency Response capability. However, in order for ERCOT to consider a permanent exemption, ERCOT will require the WGR to provide documentation, with the attestation, from the turbine manufacturer that specifically states the reason why these wind turbines are incapable of receiving control signals to the blade pitch mechanism and therefore immediately changing the pitch of the blade. ERCOT will not consider cost of retrofitting wind turbines in making its determination.

ERCOT has received SWEETWATER WIND 3 attestation regarding its "technical infeasibility" to provide Primary Frequency Response pursuant to ERCOT Protocols Section 5.9.1.3 (PRR833) and ERCOT Nodal Protocols Section 8.5.1.3 (NPRR258). After consideration of the attestation and supporting documentation, ERCOT hereby denies SWEETWATER WIND 3 request for a permanent exemption from providing Primary Frequency Response because the WGR did not provide adequate documentation to prove a technical infeasibility claim. As such, the WGR must acquire the capability to provide Primary Frequency Response within twenty-four (24) months of the date of this notification.

A WGR, who disagrees with this determination, may file an Alternative Dispute Resolution (ADR) request under Section 20 of the ERCOT Nodal Protocols. Pursuant to Section 20.2.2(3), the WGR must initiate the ADR Procedure within six months of this determination.

Client Services
Electric Reliability Council of Texas
ClientServices@ercot.com
512-248-3900

Sullivan, Patrick

From: ERCOT Client Services [clientservices@ercot.com]
Sent: Tuesday, November 30, 2010 4:13 PM
To: Lane Robinson
Cc: David Smith; Riefeld, Rodney
Subject: PRR833 Attestation - SWEETWATER WIND 4 LLC (RES)

Mr. Robinson,

On May 18, 2010, the ERCOT Board of Directors (ERCOT Board) approved Protocol Revision Request (PRR) 833, *Primary Frequency Response Requirement from Existing WGRs*. PRR833 allowed existing Wind-powered Generation Resources (WGRs) to submit an attestation to ERCOT by June 1, 2010 documenting why it was technically infeasible for those WGRs to be equipped with Primary Frequency Response capability. ERCOT, in its sole discretion, had one hundred eighty (180) days of receipt of the attestation to grant a permanent exemption from the requirement.

During the stakeholder review process of PRR833, ERCOT filed comments on April 1, 2010 providing the following guidance on the documentation that would be necessary to demonstrate technical infeasibility;

Any wind turbine that is not capable of pitching its blades will be considered "technically infeasible" of retrofitting with Primary Frequency Response capability. However, in order for ERCOT to consider a permanent exemption, ERCOT will require the WGR to provide documentation, with the attestation, from the turbine manufacturer that specifically states the reason why these wind turbines are incapable of receiving control signals to the blade pitch mechanism and therefore immediately changing the pitch of the blade. ERCOT will not consider cost of retrofitting wind turbines in making its determination.

ERCOT has received SWEETWATER WIND 4 LLC (RES) attestation regarding its "technical infeasibility" to provide Primary Frequency Response pursuant to ERCOT Protocols Section 5.9.1.3 (PRR833) and ERCOT Nodal Protocols Section 8.5.1.3 (NPRR258). After consideration of the attestation and supporting documentation, ERCOT hereby denies SWEETWATER WIND 4 LLC (RES) request for a permanent exemption from providing Primary Frequency Response because the WGR did not provide adequate documentation to prove a technical infeasibility claim. As such, the WGR must acquire the capability to provide Primary Frequency Response within twenty-four (24) months of the date of this notification.

A WGR, who disagrees with this determination, may file an Alternative Dispute Resolution (ADR) request under Section 20 of the ERCOT Nodal Protocols. Pursuant to Section 20.2.2(3), the WGR must initiate the ADR Procedure within six months of this determination.

Client Services
Electric Reliability Council of Texas
ClientServices@ercot.com
512-248-3900

Sullivan, Patrick

From: ERCOT Client Services [clientservices@ercot.com]
Sent: Tuesday, November 30, 2010 4:14 PM
To: Lane Robinson
Cc: David Smith; Rienfeld, Rodney
Subject: PRR833 Attestation - SWEETWATER WIND 4 LLC (RES)_SWEETWN4_WND4A
Mr. Robinson,

On May 18, 2010, the ERCOT Board of Directors (ERCOT Board) approved Protocol Revision Request (PRR) 833, *Primary Frequency Response Requirement from Existing WGRs*. PRR833 allowed existing Wind-powered Generation Resources (WGRs) to submit an attestation to ERCOT by June 1, 2010 documenting why it was technically infeasible for those WGRs to be equipped with Primary Frequency Response capability. ERCOT, in its sole discretion, had one hundred eighty (180) days of receipt of the attestation to grant a permanent exemption from the requirement.

During the stakeholder review process of PRR833, ERCOT filed comments on April 1, 2010 providing the following guidance on the documentation that would be necessary to demonstrate technical infeasibility;

Any wind turbine that is not capable of pitching its blades will be considered "technically infeasible" of retrofitting with Primary Frequency Response capability. However, in order for ERCOT to consider a permanent exemption, ERCOT will require the WGR to provide documentation, with the attestation, from the turbine manufacturer that specifically states the reason why these wind turbines are incapable of receiving control signals to the blade pitch mechanism and therefore immediately changing the pitch of the blade. ERCOT will not consider cost of retrofitting wind turbines in making its determination.

ERCOT has received SWEETWATER WIND 4 LLC (RES)_SWEETWN4_WND4A attestation regarding its "technical infeasibility" to provide Primary Frequency Response pursuant to ERCOT Protocols Section 5.9.1.3 (PRR833) and ERCOT Nodal Protocols Section 8.5.1.3 (NPRR258). After consideration of the attestation and supporting documentation, ERCOT hereby denies SWEETWATER WIND 4 LLC (RES)_SWEETWN4_WND4A request for a permanent exemption from providing Primary Frequency Response because the WGR did not provide adequate documentation to prove a technical infeasibility claim. As such, the WGR must acquire the capability to provide Primary Frequency Response within twenty-four (24) months of the date of this notification.

A WGR, who disagrees with this determination, may file an Alternative Dispute Resolution (ADR) request under Section 20 of the ERCOT Nodal Protocols. Pursuant to Section 20.2.2(3), the WGR must initiate the ADR Procedure within six months of this determination.

Client Services
Electric Reliability Council of Texas
ClientServices@ercot.com
512-248-3900

12/29/2010

Sullivan, Patrick

From: ERCOT Client Services [clientservices@ercot.com]
Sent: Tuesday, November 30, 2010 4:14 PM
To: Lane Robinson
Cc: David Smith; Rienfeld, Rodney
Subject: PRR833 Attestation - SWEETWATER WIND 5 LLC (RE)
Mr. Robinson,

On May 18, 2010, the ERCOT Board of Directors (ERCOT Board) approved Protocol Revision Request (PRR) 833, *Primary Frequency Response Requirement from Existing WGRs*. PRR833 allowed existing Wind-powered Generation Resources (WGRs) to submit an attestation to ERCOT by June 1, 2010 documenting why it was technically infeasible for those WGRs to be equipped with Primary Frequency Response capability. ERCOT, in its sole discretion, had one hundred eighty (180) days of receipt of the attestation to grant a permanent exemption from the requirement.

During the stakeholder review process of PRR833, ERCOT filed comments on April 1, 2010 providing the following guidance on the documentation that would be necessary to demonstrate technical infeasibility;

Any wind turbine that is not capable of pitching its blades will be considered "technically infeasible" of retrofitting with Primary Frequency Response capability. However, in order for ERCOT to consider a permanent exemption, ERCOT will require the WGR to provide documentation, with the attestation, from the turbine manufacturer that specifically states the reason why these wind turbines are incapable of receiving control signals to the blade pitch mechanism and therefore immediately changing the pitch of the blade. ERCOT will not consider cost of retrofitting wind turbines in making its determination.

ERCOT has received SWEETWATER WIND 5 LLC (RE) attestation regarding its "technical infeasibility" to provide Primary Frequency Response pursuant to ERCOT Protocols Section 5.9.1.3 (PRR833) and ERCOT Nodal Protocols Section 8.5.1.3 (NPRR258). After consideration of the attestation and supporting documentation, ERCOT hereby denies SWEETWATER WIND 5 LLC (RE) request for a permanent exemption from providing Primary Frequency Response because the WGR did not provide adequate documentation to prove a technical infeasibility claim. As such, the WGR must acquire the capability to provide Primary Frequency Response within twenty-four (24) months of the date of this notification.

A WGR, who disagrees with this determination, may file an Alternative Dispute Resolution (ADR) request under Section 20 of the ERCOT Nodal Protocols. Pursuant to Section 20.2.2(3), the WGR must initiate the ADR Procedure within six months of this determination.

Client Services
Electric Reliability Council of Texas
ClientServices@ercot.com
512-248-3900

From: ERCOT Client Services [<mailto:clientservices@ercot.com>]
Sent: Tuesday, November 30, 2010 4:12 PM
To: Ted Hofbauer
Cc: Grit Schmieder-Copeland; Rienfeld, Rodney
Subject: PRR833 Attestation - PATTERN GULF WIND LLC

Mr. Hofbauer,

On May 18, 2010, the ERCOT Board of Directors (ERCOT Board) approved Protocol Revision Request (PRR) 833, *Primary Frequency Response Requirement from Existing WGRs*. PRR833 allowed existing Wind-powered Generation Resources (WGRs) to submit an attestation to ERCOT by June 1, 2010 documenting why it was technically infeasible for those WGRs to be equipped with Primary Frequency Response capability. ERCOT, in its sole discretion, had one hundred eighty (180) days of receipt of the attestation to grant a permanent exemption from the requirement.

During the stakeholder review process of PRR833, ERCOT filed comments on April 1, 2010 providing the following guidance on the documentation that would be necessary to demonstrate technical infeasibility;

Any wind turbine that is not capable of pitching its blades will be considered "technically infeasible" of retrofitting with Primary Frequency Response capability. However, in order for ERCOT to consider a permanent exemption, ERCOT will require the WGR to provide documentation, with the attestation, from the turbine manufacturer that specifically states the reason why these wind turbines are incapable of receiving control signals to the blade pitch mechanism and therefore immediately changing the pitch of the blade. ERCOT will not consider cost of retrofitting wind turbines in making its determination.

ERCOT has received PATTERN GULF WIND LLC attestation regarding its "technical infeasibility" to provide Primary Frequency Response pursuant to ERCOT Protocols Section 5.9.1.3 (PRR833) and ERCOT Nodal Protocols Section 8.5.1.3 (NPRR258). After consideration of the attestation and supporting documentation, ERCOT hereby denies PATTERN GULF WIND LLC request for a permanent exemption from providing Primary Frequency Response because the WGR did not provide adequate documentation to prove a technical infeasibility claim. As such, the WGR must acquire the capability to provide Primary Frequency Response within twenty-four (24) months of the date of this notification.

A WGR, who disagrees with this determination, may file an Alternative Dispute Resolution (ADR) request under Section 20 of the ERCOT Nodal Protocols. Pursuant to Section 20.2.2(3), the WGR must initiate the ADR Procedure within six months of this determination.

Client Services
Electric Reliability Council of Texas
ClientRelations@ercot.com
512-248-3900

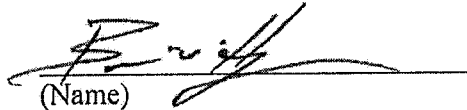
AFFIDAVITS

PUC DOCKET NO. _____

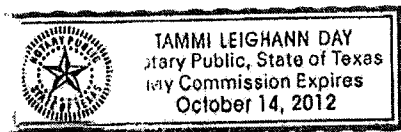
APPELLANTS' APPEAL AND	§	BEFORE THE
COMPLAINT CONCERNING	§	
ERCOT'S DENIAL OF EXEMPTION	§	PUBLIC UTILITY COMMISSION
REQUESTS UNDER PROTOCOL	§	
5.9.1.3 AND REQUEST FOR	§	OF TEXAS
RELATED RELIEF	§	

AFFIDAVIT OF BRIAN HAYES

1. My name is Brian Hayes. I am the Chief Asset Operations Officer for Horizon Wind Energy, 808 Travis Street, Suite 700, Houston, Texas 77002. I am testifying in this proceeding on behalf of Horizon Wind Energy, LLC, Post Oak Wind LLC and Mesquite Wind LLC (collectively "Horizon").
2. This affidavit is attached to the above-styled appeal and is made a part thereof for all purposes.
3. I hereby swear or affirm that the information contained in the above-styled appeal as related to Horizon is true and correct to the best of my knowledge and belief.


(Name)

Subscribed and sworn before me this 3rd day of January, 2011.




Notary Public

PUC DOCKET NO. _____

APPELLANTS' APPEAL AND
COMPLAINT CONCERNING
ERCOT'S DENIAL OF EXEMPTION
REQUESTS UNDER PROTOCOL
5.9.1.3 AND REQUEST FOR
RELATED RELIEF

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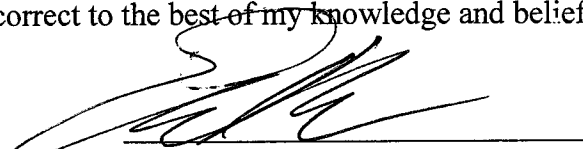
BEFORE THE
PUBLIC UTILITY COMMISSION
OF TEXAS

AFFIDAVIT OF ELLEN MAHER

1. My name is Ellen Maher. I am the Vice President of the Managing Members for Sweetwater Wind 1 LLC, Sweetwater Wind 2 LLC, Sweetwater Wind 3 LLC, Sweetwater Wind 4 LLC, and Sweetwater Wind 5 LLC (collectively "Sweetwater Wind") all of which have a mailing address of 5307 East Mockingbird Lane, 7th Floor, Dallas, TX 75206. I am testifying in this proceeding on behalf of Sweetwater Wind.

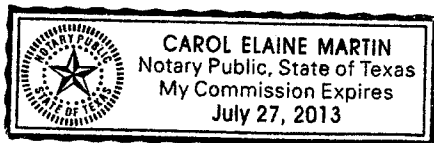
2. This affidavit is attached to the above-styled appeal and is made a part thereof for all purposes.

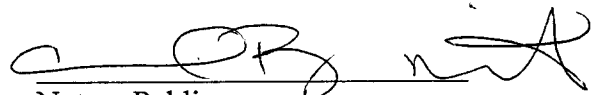
3. I hereby swear or affirm that the information contained in the above-styled appeal as related to Sweetwater Wind is true and correct to the best of my knowledge and belief.



Ellen Maher

Subscribed and sworn before me this 3rd day of January, 2010.





Notary Public

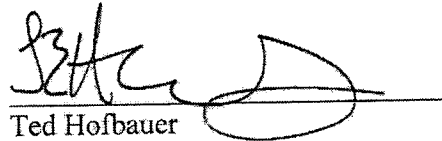
PUC DOCKET NO. _____

APPELLANTS' APPEAL AND §
COMPLAINT CONCERNING §
ERCOT'S DENIAL OF EXEMPTION §
REQUESTS UNDER PROTOCOL §
5.9.1.3 AND REQUEST FOR §
RELATED RELIEF §

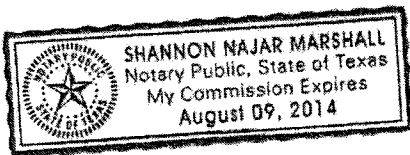
BEFORE THE
PUBLIC UTILITY COMMISSION
OF TEXAS

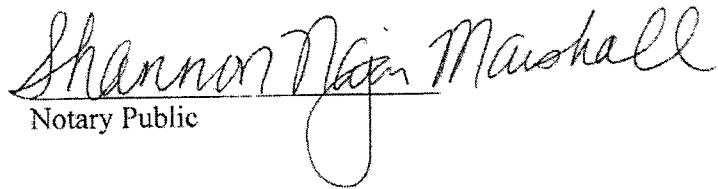
AFFIDAVIT OF TED HOFBAUER

1. My name is Ted Hofbauer. I am the ASSET MGR for Pattern Gulf Wind LLC. I am testifying in this proceeding on behalf of Pattern Gulf Wind LLC.
2. This affidavit is attached to the above-styled appeal and is made a part thereof for all purposes.
3. I hereby swear or affirm that the information contained in the above-styled appeal as related to Pattern Gulf Wind LLC is true and correct to the best of my knowledge and belief.


Ted Hofbauer

Subscribed and sworn before me this 3rd day of January, 2010.




Notary Public