# DRAFT MINUTES OF THE BOARD OF DIRECTORS MEETING OF ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.

Electric Reliability Council of Texas, Inc. 7620 Metro Center Drive, Room 206 March 18, 2008 at 10:00 a.m.

Pursuant to notice duly given, the meeting of the Board of Directors (Board) of Electric Reliability Council of Texas, Inc. (ERCOT) convened on the above-referenced date.

## Meeting Attendance:

#### Board Members:

Director	Affiliation	Segment
Armentrout, Mark		Unaffiliated; Board Chairman
Ballard, Don	OPUC	Consumers/Residential & Small Commercial
Cox, Brad	Tenaska Power Services	Independent Power Marketers
Crowder, Calvin	Electric Transmission	Investor-Owned Utilities
	Texas	
Dalton, Andrew	Valero Energy Corp.	Consumers/Industrial
Espinosa, Miguel		Unaffiliated
Fehrenbach, Nick	City of Dallas	Consumers/Commercial
Gallagher, Carolyn Lewis		Unaffiliated
Gent, Michehl		Unaffiliated; Board Vice-Chairman
Helton, Bob	International Power	Independent Generators
	America	
Kahn, Bob	ERCOT President/CEO	
Karnei, Clifton	Brazos Electric Coop	Electric Cooperatives
Newton, Jan		Unaffiliated
Smitherman, Barry T.	PUCT Chairman	PUCT

Independent Retail Electric Providers

Municipally-Owned Utilities

## Staff and Guests:

Smitherman, Barry T. Thomas, Robert

Wilkerson, Dan

Adib, Parviz	APX
Behroon, BJ	KEMA
Bell, Wendell	TPPA

Boehmer, Greg PA Consulting

Brandt, Adrianne AE

Brewster, Chris City of Eastland Bruce, Mark FPL Energy

Burt, Matthew RES Americas/Whirlwind LLC.

Green Mountain Energy

Bryan Texas Utilities

Cochran, Seth Sempra Trading Comstock, Read Strategic Energy Crozin, Richard PUB Brownsville

Damen, Lauren Public Utility Commission (PUC) Staff

Day, Betty ERCOT
Firestone, Joel Direct Energy
Forfia, David ERCOT

Fournier, Margarite Competitive Assets

Gage, Theresa ERCOT
Grable, Mike ERCOT
Greer, Clayton J. Aron
Haas, Jason PUC
Headrick, Bridget PUCT

Jones, Dan Potomac Economics

Jones, Liz Oncor Jones, Randy Calpine King, Kelso King Energy

Leech, Bob Citi

Morris, Sandy Lower Colorado River Authority (LCRA)

Ogelman, Kenan CPS Oldham, Phillip TIEC

Orr, John Constellation
Pabst, Wendell AREVA
Rexrode, Caryn CES

Spilman, Matt Strategic Energy
Trefay, Floyd Reliant Energy
Troutman, Jennifer Direct Energy
Troxtell, David ERCOT

Twiggs, Thane Thomas Direct Energy
Whittle, Brandon DB Energy Trading

Wullenjohn, Bill ERCOT Yoho, Lisa Citi Zion, Mark TPPA

## 1. <u>Call to Order/Announcements</u>

Mark Armentrout, Chairman, called the meeting to order at approximately 10:10 a.m., pointed out the Antitrust Admonition and determined a quorum was present. Chairman Armentrout announced that Ms. Gallagher's term as a Director is coming to an end and he thanked her for her service as a Director and noted her many accomplishments as a Governor of the U.S. Postal Service and in connection with other endeavors.

#### 2. Consent Agenda

The following items were handled in the consent agenda:

• Item 3 – Approval of February 19, 2008 Board meeting minutes

- Item 10a Protocol Revision Request PRR740 (as set forth in the Resolution appended hereto as Attachment D)
- Item 10b Nodal Protocol Revision Requests NPRR081, NPRR089, NPRR094, NPRR095, NPRR096, NPRR098 (as set forth in the Resolution appended hereto as Attachment E)

Mr. Gent moved to approve the items on the Consent Agenda. Mr. Helton seconded the motion. The motion passed by unanimous voice vote with no abstentions.

## 3. Approval of Minutes

This item was handled in the consent agenda.

## 4. Chief Executive Officer Report

Bob Kahn, ERCOT President and Chief Executive Officer (CEO), reported that ERCOT filed a fee case at the Public Utility Commission of Texas (PUCT) on March 6, 2008 to revise the Nodal fee and a pre-hearing conference will take place tomorrow. He also stated that Kent Saathoff, ERCOT Vice President of System Operations, will present a report on the February Emergency Electric Curtailment Plan (EECP) event later in the meeting.

Mr. Kahn stated that he attended North American Electric Reliability Corporation (NERC) meetings last week which, in his opinion, went well. He then turned his attention to the Vision, Mission, Core Values and Strategic Plan document on which ERCOT management has been working. A revised document was recently authorized and, if approved by the Board, will be rolled out to ERCOT staff. Mr. Kahn moved to approve the Resolution appended hereto as Attachment A regarding the revised Mission, Vision, Core Values and Strategic Plan document (appended hereto as Attachment B). Mr. Espinosa seconded the motion. The motion passed by unanimous voice vote with no abstentions.

## 5. **Operating Reports**

Chairman Armentrout requested that Mr. Kahn look into improving the quality of the audio on the 4:00 p.m. meetings that take place the day before the monthly Board meetings.

Chairman Armentrout then invited comments or questions regarding the Financial Summary, Market Operations Report, Grid Operations Report and Information Technology (IT) Report. Ms. Newton asked whether the increase in employee turnover will jeopardize on-going activities. Mr. Kahn and Ms. Capezzuti indicated they do not believe any on-going work is in jeopardy due to the increased turnover rate. Mr. Kahn pointed out that some employees who resigned have returned to ERCOT. Mr. Ballard asked whether ERCOT conducts exit interviews. Ms. Capezzuti stated that the Human Resources Department conducts exit interviews with departing employees. Chairman

Armentrout stated that the H.R. & Governance Committee should periodically review a summary of exit interview issues.

Chairman Smitherman asked a question about the difference between the budgeted gigawatt hours for 2007 versus the actual gigawatt hours for 2007. Bill Bojorquez, ERCOT V.P. of System Planning, stated that the drop in energy usage last year related directly to weather. Nonetheless, he stated that ERCOT is working economic assumptions into its energy forecast for the future.

Mr. Gent noted that ERCOT exceeded its revenue estimates for interconnection studies and asked whether ERCOT has increased its interconnection fees. Mr. Bojorquez stated that ERCOT staff is looking into that issue and he anticipates ERCOT will seek to increase its fees as part of its upcoming fee case.

Mr. Thomas noted that ERCOT experienced no alerts for the second straight month and asked about cost data for the additional Replacement Reserve Service (RPRS) being procured. Mr. Saathoff stated that ERCOT has been procuring approximately 200 MWs of additional RPRS in recent days but he does not have cost data for that service.

Chairman Armentrout asked if the retail Market Participants are satisfied with ERCOT's retail market support. Mr. Thomas stated that he has not heard any negative comments from members of his segment.

Mr. Bojorquez and Dan Woodfin, ERCOT's Director of System Planning, made a presentation regarding the status of the Competitive Renewable Energy Zone (CREZ) docket at the PUCT. Mr. Bojorquez stated that Mr. Woodfin and the System Planning staff deserve a lot of credit for their work in connection with this docket. Mr. Woodfin highlighted recent developments in that docket, including:

- Development of ten significantly different plan concepts
- A consensus on study scope and assumptions
- Development and evaluation of plans around the concepts for four scenarios

He stated that analyses continue and no recommendations are ready yet. Mr. Woodfin then presented one of several plans being analyzed.

Mr. Dalton asked if ERCOT staff conduct a cost/benefit analysis for various scenarios. Mr. Woodfin stated that ERCOT will provide cost information to the PUCT as part of the docket. Mr. Dalton noted that wind power has implications on the reliability of the grid and he wants to ensure the PUCT takes into account all issues. Additional discussion took place regarding the implications of wind energy.

#### 6. Nodal Update

Jerry Sullivan, Executive Director of the Texas Nodal Market Implementation Program (TNMIP), reported that the TNMIP status remains unchanged (*i.e.* in "amber" status) and

the product quality is considered good. He still believes the "go live" date will be December 1, 2008.

Mr. Sullivan stated that the ERCOT readiness indicator remains "amber" and the Market Participant readiness indicator improved to "amber." He indicated that a great deal of emphasis is being put on the upcoming 168-hour test.

Mr. Sullivan invited Eileen Hall to the podium discuss testing issues. She pointed out several areas of concern, including vendor defect resolution time and the high percentage of Energy Management System (EMS) defects not detected until Early Delivery System (EDS) testing. She then reviewed several mitigation measures being put into place and stated that the TNMIP team has a great deal of work ahead of them.

Mr. Gent asked if ERCOT staff is confident that fixes being implemented will solve the defects. Ms. Hall stated that many strides have been made and the fixes seem to work well.

Mr. Sullivan then summarized the program status and complimented Ms. Hall for her work on the program and stated he will report monthly on the trends in defects and their mitigation.

Chairman Armentrout asked Mr. Sullivan to – next month -- present a list of test defects by severity and to report on how ERCOT staff knows that prior testing is not invalidated when fixes are implemented.

Mr. Sullivan pointed out that EDS1 is in "green" status, but EDS2, EDS3 and EDS4 are in "red" status. He expects EDS3 to move to "amber" status within the next few days and believes EDS1, 2 and 3 are under control, but sees a great deal of work needed with respect to EDS4.

Finally, Mr. Sullivan reported that the TNMIP remains on budget based on the revised budget. Chairman Armentrout then asked for a summary of dates for the Nodal fee case. Mike Grable, ERCOT General Counsel, stated that the PUCT has tentatively set a hearing for May 1 and 2.

Mr. Hinsley then stated that \$2.0 million of the contingency funds shown on Mr. Sullivan's budget slides relates to integration testing.

Ms. Newton asked Mr. Sullivan for his opinion of the top risk facing the TNMIP and Mr. Sullivan replied that integrating the various systems is a big concern, as is the Common Information Model (CIM). Ms. Newton asked that Mr. Sullivan provide an update on the status of the CIM project in the future in light of its importance.

#### 7. February 26, 2008 Event Report

Mr. Saathoff mentioned that ERCOT had a "readiness" assessment by the NERC last

week. That assessment involves industry experts who review the "big picture" of how an Independent System Operator (ISO) performs the functions for which it is registered. ERCOT received a very favorable preliminary report, with only six recommendations for areas of improvement, none of which were very significant.

Regarding the February 26<sup>th</sup> Emergency Electric Curtailment Plan (EECP) event, Mr. Saathoff stated that ERCOT invoked the EECP because it began to see:

- (a) a rapid decline in responsive reserves,
- (b) a depletion of the Balancing Energy Service Up bid stack and Regulation Service Up, and
- (c) a decline in system frequency.

Consequently, ERCOT declared an EECP Step 2 and deployed Loads acting as a Resource (LaaRs) and arranged for support over the DC Ties. As a result, frequency recovered. The EECP stayed in affect for approximately three hours.

After reviewing the event, ERCOT staff reached the following conclusions:

- ERCOT's System Operators had no prior indication of the approaching capacity deficiency when they could have arranged for more capacity to come on-line
- ERCOT's look-ahead tools depend on Resource Plans submitted by Qualified Scheduling Entities (QSEs) to determine how much capacity ERCOT will have available in future periods
- Resource Plans indicated about 1,000 MW of available wind capacity during the period that was not available at that time
- A new wind generation forecast for use in the Nodal system is not integrated into the existing Zonal operating system
- Some non-wind QSEs did not generate to schedule

Mark Dreyfus, Technical Advisory Committee (TAC) Chairman, asked if the difference between wind QSEs' Resource Plans and actual output is a rare event. Mr. Saathoff stated that the difference is not unusual but, in the past, ERCOT has had sufficient other Generation Resources to avoid an EECP. Mr. Fehrenbach asked if the Resource Plans were kept current. Mr. Saathoff stated that Resource Plans are submitted day-ahead but can be updated until shortly before the Operating Hour.

Mr. Ballard asked about the consequences for QSEs who do not meet their schedule. Mr. Saathoff stated that they would have a Resource Imbalance charge and also indicated that the Texas Regional Entity (Texas RE) keeps track of Schedule Control Error (SCE) for QSEs.

Mr. Dalton asked if all LaaRs timely responded to their Dispatch Instructions. Mr. Saathoff stated that two LaaRs did not meet the Protocols requirement, but other LaaRs over-responded and, therefore, overall response was satisfactory.

Chairman Smitherman asked if any events before 18:00 on February 26<sup>th</sup> might have acted as a sign post that trouble was on the horizon that day. Mr. Saathoff stated that, if ERCOT had a mechanism to compare the AWS Truewind, LLC (AWS) forecast for wind resources versus the Resource Plans submitted by wind QSEs, it might have helped. Chairman Smitherman asked about the tripping of a 150 MW thermal Generation Resource at the time of the EECP event. Mr. Saathoff stated that such an event is common and did not greatly affect the situation.

Chairman Smitherman asked about the voltage reduction aspect of EECP Step 2. Mr. Saathoff stated that the voltage reduction in this event yielded approximately 14 MWs of Load reduction and such voltage reduction is not mandatory under the Protocols.

Chairman Smitherman then noted that it appears ERCOT was "disappointed" in the failure to obtain support over the DC Ties. Mr. Saathoff stated that ERCOT would have liked more energy support over the North and East DC Ties and the issue was more of a communication issue than anything else and, therefore, a meeting has been scheduled among the parties involved to improve the Operating Procedures.

Chairman Smitherman encouraged ERCOT to analyze the various tools it uses in the event of an EECP event to see whether those tools work properly when an emergency arises. Mr. Saathoff stated that the focus right now is in ensuring that those tools work.

Chairman Armentrout asked for a "lessons learned" presentation in the future. He left it up to ERCOT staff to decide when to make such a presentation.

Mr. Fehrenbach stated that, in hindsight, wind generation began to drop steadily after 17:00 and asked if ERCOT has the tools to compare the wind forecast to actual wind performance in real-time. Mr. Saathoff stated that ERCOT staff is working to integrate the AWS forecast into the zonal operations system and, at this point, doing so would be a manual process.

Mr. Dalton asked if ERCOT's day-ahead Load forecast normally tracks the actual Load. Mr. Saathoff stated that a gap of 2,000 MWs is probably a bit high, but not unusual. Mr. Dalton asked Mr. Saathoff to analyze whether ERCOT could improve Load forecasting.

Mr. Dreyfus noted that the TAC reviews events of this type (EECP) and, more specifically, the Reliability and Operations Subcommittee (ROS) and Performance, Disturbance, Compliance Working Group (PDCWG) perform in-depth analyses of these types of events. He expects the TAC to receive a full report within the next few months.

Mr. Ballard asked whether it is common for a QSE to not meet its Resource Plan. Mr. Saathoff replied affirmatively.

Chairman Smitherman emphasized the value of the LaaR program in light of its performance in this event and noted that Emergency Interruptible Load Service (EILS) would have been the next step if frequency had not recovered through LaaR deployment.

#### Lunch

The meeting adjourned for lunch at 12:25 p.m.

The meeting reconvened at 1:10 p.m.

## 8. Tyler Autotransformer Addition and 138 kV Line Upgrade Project

Mr. Bojorquez made a presentation regarding a proposed transmission upgrade project in the Tyler, Texas area. The project has a total cost of \$11.1 million and the expected cost savings are approximately \$38 million for the 2009-2012 time period. ERCOT staff recommends endorsement of the project.

Mr. Gent asked how common it is to use switchable equipment, as proposed in this project. Mr. Bojorquez replied that it is not uncommon.

Mr. Karnei moved to endorse the Tyler Autotransformer Addition and 138 kV Line Upgrade Project as set forth in the Resolution appended hereto as Attachment C. Mr. Helton seconded the motion. The motion passed by unanimous voice vote with no abstentions.

## 10. Technical Advisory Committee Report

Chairman Armentrout invited Mark Dreyfus, TAC Chair, to report on recent TAC activities.

#### a. <u>Protocol Revision Requests (PRRs)</u>,

This item was handled in the Consent Agenda.

## b. <u>Nodal Protocol Revision Requests (NPRRs)</u>

This item was handled in the Consent Agenda.

#### c. Retail Market Guide Revision Request (RMGRR)

Mr. Dreyfus explained that RMGRR059 revises sections of the Retail Market Guide to clarify timelines and responsibilities of all parties with respect to inadvertent gains. The TAC unanimously recommended this item for approval, with all market segments present. Mr. Dreyfus noted that, at yesterdays pre-meeting conference, a question was raised regarding permissive language in the RMGRR and, as a result, he and others

reviewed the four instances of permissive language and have the following recommendations:

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Section 7.2.2.1.2 – change "should" to "shall"
Section 7.2.2.2 – "may" should stay permissive
Section 7.2.2.2(2) – change "may" to "shall"
Section 7.2.2.3.1 – "may" should stay permissive
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Mr. Grable suggested changing the word "should" in Section 7.2.2.2(1) to "shall."

Jennifer Troutman of Direct Energy stated that this RMGRR has been very well received by Market Participants.

Mr. Karnei moved to approve the revised version of RMGRR059, as set forth in Attachment F appended hereto. Mr. Cox seconded the motion. The motion passed by unanimous voice vote with no abstentions.

Other TAC items of interest:

Mr. Dreyfus then informed the Directors that RMGRR060 and OGRR198 were approved and mentioned that the TAC has created a document for a new process to address scope issues that may arise in connection with the TNMIP. This document will come before the Directors next month. Mr. Ballard asked if this document had to be brought to the Directors for approval. Mr. Dreyfus stated that the TAC will bring this document to the Directors for approval even if such approval is not required by any Protocol or Guide. Mr. Ballard supported the development of this proposal and approach.

Mr. Dreyfus also mentioned that PRR727 deals with readiness issues associated with the TNMIP.

Mr. Dreyfus also pointed out that the TAC requested the running of sensitivity cases to identify key underlying assumptions in connection with the Oliver Wyman study presented to the Directors last month. Additionally, the Credit Work Group (CWG) will work with the Wholesale Market Subcommittee (WMS) and Retail Market Subcommittee (RMS) to develop "risk appetite" values. Chairman Armentrout stated that the Directors intend to develop a "risk appetite" document through the Finance & Audit (F&A) committee.

#### 11. F&A Committee Report

Mr. Karnei, F&A Committee Chair, stated that the committee met this morning and considered the following matters:

- Audit reports from Internal Audit
- EthicsPoint reports
- Turnover issues

- Two vacancies in the Internal Audit Dept.
- Interest Rate management (to be handled in Executive Session)
- The PricewaterhouseCoopers (PwC) independence affirmation
- 2007 financial audit status
- Preliminary review of ERCOT's 2009 budget. Mr. Karnei mentioned that a meeting open to the public -- will take place on April 3, 2008 at 1:30 p.m. to discuss budget issues.

## 12. H.R. & Governance Committee

Jan Newton, the committee Chair, stated that the committee met this morning and considered the following matters:

- Personnel issues to be addressed in Executive Session
- External relations plans and activities
- A status report on the Market Participant survey which will be distributed soon
- Board Policies & Procedures amendments

Chairman Armentrout asked Ms. Capezzuti to take the Directors' Ethics Agreement to the HR&G committee two months before the date on which they should be signed.

#### 13. Other Business

No other business was raised.

## 14. Future Agenda Items

Chairman Armentrout invited anyone to raise any items for future meetings. The following matters were discussed:

- May an update by Mr. Saathoff and TAC regarding the February EECP event
- May/June F&A committee should deliver the "risk appetite" document previously mentioned
- July Market Participant Survey results
- April Follow-up on CREZ filings by ERCOT
- Item 4 should read IBM report on Market Participant and ERCOT readiness; also, the date should be changed to June.

Mr. Ballard suggested that the Texas RE should create and disseminate its own meeting materials (in hard copy) every month. There was general agreement to this idea.

#### 15. Executive Session

Chairman Armentrout adjourned the meeting to Executive Session at approximately 2:00 p.m.

## 16. <u>Voting on Executive Session Items</u>

Chairman Armentrout re-opened the open portion of the meeting when the Executive Session ended at approximately 3:30 p.m.

Chairman Armentrout moved to approve the Resolution appended to the Executive Session minutes as Attachment B. Mr. Wilkerson seconded the motion. The motion passed by unanimous voice vote with no abstentions.

Mr. Karnei moved to approve the Resolution appended to the Executive Session minutes as Attachment C. Mr. Espinosa seconded the motion. The motion passed by unanimous voice vote with no abstentions.

#### **Adjournment**

Chairman Armentrout adjourned the meeting at approximately 3:35 p.m.

Board materials and presentations from the meeting are available on ERCOT's website at <a href="http://www.ercot.com/committees/board/index.html">http://www.ercot.com/committees/board/index.html</a>.

Michael G. Grable
General Counsel & Corporate Secretary