**APPROVED**

**Minutes of the Wholesale Market Subcommittee (WMS) Meeting**

**ERCOT Austin – 7620 Metro Center Drive – Austin, Texas 78744**

**Wednesday, November 6, 2019 – 9:30 a.m.**

Attendance

*Members:*

|  |  |  |
| --- | --- | --- |
| Allen, Thresa | Avangrid Renewables | Via Teleconference |
| Barnes, Bill | Reliant Energy Retail Services |  |
| Bunch, Kevin | EDF Energy Services |  |
| Carpenter, Jeremy | Tenaska Power Services |  |
| Claiborn-Pinto, Shawnee | OPUC |  |
| Franklin, Russell | Garland Power and Light |  |
| Greer, Clayton | Morgan Stanley |  |
| Gross, Blake | AEP Service Corporation |  |
| Helton, Bob | Avangrid Renewables | Alt. Rep. for Thresa Allen |
| Johnson, Anthony | CenterPoint Energy |  |
| Jolly, Emily | LCRA | Alt. Rep. for John Dumas |
| Kee, David | CPS Energy |  |
| Lange, Clif | South Texas Electric Cooperative | Via Teleconference |
| Lindberg, Ken | Bryan Texas Utilities |  |
| Mauldin, Jamie | City of Eastland |  |
| Morris, Sandy | Direct Energy | Via Teleconference |
| Parker, Ty | Infinite Energy | Via Teleconference |
| Sams, Bryan | Calpine Corporation | Alt. Rep. for Brandon Whittle |
| Shaw, Marka | Exelon |  |
| Sithuraj, Murali | Austin Energy | Alt. Rep. for Erika Bierschbach |
| Smith, Mark | Nucor |  |
| Surendran, Resmi | Shell Energy |  |
| Turner, Lucas | South Texas Electric Cooperative | Alt. Rep. for Clif Lange |
| Velasquez, Ivan | Oncor |  |
| Wieck, John | Golden Spread Electric Cooperative | Alt. Rep. for Joe Dan Wilson |
| Wilson, Joe Dan | Golden Spread Electric Cooperative |  |

The following proxies were assigned:

* Shannon Caraway to Bob Helton
* Ty Parker to Sandy Morris
* Blake Gross to Ivan Velasquez

*Guests:*

|  |  |  |
| --- | --- | --- |
| Abbott, Kristin | PUCT | Via Teleconference |
| Ainspan, Malcolm | NRG | Via Teleconference |
| Baldwin, Stephanie | Softsmiths |  |
| Benson, Mariah | PUCT | Via Teleconference |
| Boisseau, Heather | LCRA |  |
| Brandin, Samuel | Able Grid Energy | Via Teleconference |
| Bryant, Mark | PUCT | Via Teleconference |
| Bruce, Mark | Cratylus Advisors | Via Teleconference |
| Cochran, Seth | DC Energy |  |
| Coleman, Diana | CPS Energy |  |
| Cook, Tim | CTT | Via Teleconference |
| Daigneault, Ralph | Potomac Economics |  |
| Detelich, David | CPS Energy |  |
| Downey, Marty | Viridity |  |
| Dreyfus, Mark | MD Energy Consulting | Via Teleconference |
| Fazio, Danielle | ECTP | Via Teleconference |
| Garza, Beth | Potomac Economics |  |
| Gregg, Michele | TCPA |  |
| Haley, Ian | Luminant Generation |  |
| Harvey, Julia | Texas Electric Cooperatives | Via Teleconference |
| Hastings, David | MICS | Via Teleconference |
| Henson, Martha | Oncor |  |
| Jewell, Michael | Jewell and Associates | Via Teleconference |
| Jones, Randy | Mountaineer Market Advisors | Via Teleconference |
| Klein, Mark | Brand Reach Power |  |
| Kroskey, Tony | Brazos Electric Cooperative | Via Teleconference |
| Kuhn, Tyler | Citadel | Via Teleconference |
| Marsh, Tony | Legends Unity | Via Teleconference |
| McClellan, Suzi | Good Company Associates |  |
| Musher, Danny | Key Capture Energy | Via Teleconference |
| Nguyen, Andy | LCRA |  |
| O’Neill, Holly | MP2 Energy |  |
| Parker, Ryan | Calpine Corporation | Via Teleconference |
| Pollo, Kevin | CPS Energy |  |
| Powell, Christian | Pedernales Electric Cooperative |  |
| Priestly, Vanus | Priestly Consulting | Via Teleconference |
| Rainwater, Kim | Environmental Defense Fund |  |
| Reader, Raborn | Enterprise Products |  |
| Reid, Walter | Advanced Power Alliance |  |
| Rich, Katie | Golden Spread Electric Cooperative | Via Teleconference |
| Robinson, Rhonda | Calpine | Via Teleconference |
| Schwarz, Brad | Sharyland |  |
| Siddiqi, Shams | Crescent Power |  |
| Singer, Chad | Trane | Via Teleconference |
| Smith, Caitlin | AB Power Advisors |  |
| Smyth, Scott | DTRG Law | Via Teleconference |
| Tran, Diana | TIEC | Via Teleconference |
| Van Booven, Ashley | New Braunfels Utilities | Via Teleconference |
| Varnell, John | Tenaska Power Services | Via Teleconference |
| Viswanathan, Jay | PNT Financial | Via Teleconference |
| Watson, Mark | SP Global | Via Teleconference |
| Whitworth, Doug | Texas Reliability Entity | Via Teleconference |
| Wittington, Pam | Jewell and Associates | Via Teleconference |
| Wittmeyer, Bob | Longhorn Power |  |
| Woods, Brad | Texas Reliability Entity | Via Teleconference |
| Zhao, Botao | GEUS |  |

*ERCOT Staff:*

|  |  |  |
| --- | --- | --- |
| Albracht, Brittney |  |  |
| Anderson, Connor |  | Via Teleconference |
| Pethke, Ponda |  | Via Teleconference |
| Bivens, Carrie |  |  |
| Bracy, Phil |  | Via Teleconference |
| Blevins, Bill |  |  |
| Chen, Jian |  | Via Teleconference |
| Chu, Zhengguo |  | Via Teleconference |
| Clifton, Suzy |  |  |
| Covington, Austin |  | Via Teleconference |
| Dinopol, Ohlen |  | Via Teleconference |
| Gonzalez, Ino |  |  |
| Hilliard, Marie |  | Via Teleconference |
| Holt, Blake |  | Via Teleconference |
| Hughes, Lindsey |  |  |
| Hui, Hailong |  | Via Teleconference |
| Jones, Dan |  |  |
| Khodabaksh, Fred |  | Via Teleconference |
| Krein, Steve |  | Via Teleconference |
| Lasher, Warren |  |  |
| Lee, Anson |  | Via Teleconference |
| Maggio, Dave |  |  |
| Mago, Nitika |  |  |
| Mickey, Joel |  |  |
| Morehead, Juliana |  |  |
| Ögelman, Kenan |  |  |
| Orr, Rob |  | Via Teleconference |
| Phillips, Cory |  |  |
| Roberts, Randy |  | Via Teleconference |
| Shaw, Pam |  |  |
| Smith, Nathan |  | Via Teleconference |
| Stice, Clayton |  | Via Teleconference |
| Sumruld, Lisa |  |  |
| Townsend, Aaron |  | Via Teleconference |
| Troublefield, Jordan |  | Via Teleconference |
| Warnken, Pete |  | Via Teleconference |
| Zhang, Wen |  | Via Teleconference |

***Unless otherwise indicated, all Market Segments were present for a vote.***

Antitrust Admonition

David Kee directed attention to the Antitrust Admonition, which was displayed.

Agenda Review

Mr. Kee reviewed items scheduled for a vote and noted changes to the order items would be taken up.

Approval of WMS Meeting Minutes (see Key Documents)[[1]](#footnote-1)

*September 4, 2019*

**Clayton Greer moved to approve the September 4, 2019 WMS meeting minutes as submitted. Kevin Bunch seconded the motion. The motion carried with two abstentions from the Independent Generator (Avangrid, Solar Prime) Market Segment.**

Technical Advisory Committee (TAC) Update and Assignments

Mr. Kee reviewed the disposition of items considered at the September 25 and October 23, 2019 TAC meetings and stated that battery energy storage issues previously assigned to WMS were moved to the Battery Energy Storage Task Force (BESTF).

ERCOT Operations and Market Items (See Key Documents)

*Potential Day-Ahead Market (DAM) Price Corrections for September Days*

ERCOT Staff summarized pricing impacts for potential DAM price corrections for Operating Days September 16 through September 23 discussed at the October 23, 2019 TAC meeting, resulting from a software implementation error that caused ERCOT’s Market Management System (MMS) to inadvertently model all withdrawn Outages for DAM and Reliability Unit Commitment (RUC), rather than just those undergoing restoration.

*Potential Real-Time Market (RTM) Price Corrections for October Days*

ERCOT Staff summarized pricing impacts for potential RTM price corrections for Operating Days October 16 through October 20, 2019 resulting from incorrect Electrical Bus Shift Factors due to a software error.

With respect to price corrections generally, ERCOT Staff and Market Participants discussed parameters for determining whether prices are “significantly affected by an error”, impacts of price corrections, and possible ERCOT process improvements.

*Summer Assessment Items*

Kenan Ögelman presented Summer 2019 Lessons Learned items, responded to questions and comments from Market Participants and Independent Market Monitor (IMM) Staff, and encouraged Market Participants to submit additional items prior to the November 20, 2019 TAC meeting.

*External Telemetry – Proposed validation changes*

Mr. Ögelman noted ERCOT is developing a System Change Request (SCR) for proposed telemetry validation changes.

*Overview of Fixed Costs in Fuel Adders*

ERCOT Staff summarized discrepancies in the Protocols and Verifiable Cost Manual regarding fixed cost components in fuel adders. Market Participants, ERCOT and IMM Staff discussed mitigating costs, competitive offers, and fuel contracts. Mr. Kee requested the Resource Cost Working Group (RCWG) review the issue and provide their recommendation to WMS.

*Proposed Changes to Ancillary Service Methodology for 2020*

Nitika Mago presented the proposed ERCOT Methodologies for Determining Minimum Ancillary Service Requirements for 2020.

**Mr. Greer moved to endorse the ERCOT Methodologies for Determining Minimum Ancillary Service Requirements for 2020. Emily Jolly seconded the motion. The motion carried unanimously.**

*Unregistered Distributed Generation (DG) Report 2019 Q3 Update*

Connor Anderson presented the 3rd Quarter 2019 Unregistered DG Report.

New Protocol Revision Subcommittee (PRS) Referrals (see Key Documents)

*Nodal Protocol Revision Request (NPRR) 967, Allow Limited Duration Resource Energy Offer Curve Updates Near Real-Time and Remove the 10 MW Limit*

Walter Reid summarized NPRR967 and the 10/2/19 APA comments. Bob Wittmeyer noted that “Energy Storage Resource” is not yet a defined term and reviewed the anticipated timeline for approval of NPRR957, RTF-4 Definition of Energy Storage Resource and Related Registration and Telemetry Requirements.

**Mr. Greer moved to endorse NPRR967 as amended by the 10/2/19 APA Comments. Bob Helton seconded the motion. The motion carried with three abstentions from the Cooperative (GSEC) and Independent Generator (Calpine, Exelon) Market Segments.**

*NPRR970, Reliability Unit Commitment (RUC) Fuel Dispute Process Clarification*

**Mr. Greer moved to waive notice in order to consider NPRR970. Jeremy Carpenter seconded the motion. The motion carried unanimously.**

**Mr. Greer moved to request PRS continue to table NPRR970. Mr. Helton seconded the motion. The motion carried with one abstention from the Consumer (OPUC) Market Segment.**

*NPRR971, Changing Energy Offer Curve Caps for Make-Whole Calculation Purposes and Replacing the Real-Time Average Incremental Energy Cost*

**Mr. Greer moved to waive notice in order to consider NPRR971. Mr. Carpenter seconded the motion. The motion carried unanimously.**

**Mr. Greer moved to request PRS continue to table NPRR971 for one month. Mr. Helton seconded the motion. The motion carried unanimously***.*

WMS Revision Requests (see Key Documents)

*Impact Analysis Review*

*Verifiable Cost Manual Revision Request (VCMRR) 025, Related to NPRR957, RTF-4 Definition of Energy Storage Resource and Related Registration and Telemetry Requirements*

**Mr. Greer moved to endorse and forward to TAC the 10/2/19 WMS Report and Impact Analysis for VCMRR025. Bryan Sams seconded the motion. The motion carried unanimously.**

*Language Review*

*VCMRR026, Related to NPRR970, Reliability Unit Commitment (RUC) Fuel Dispute Process Clarification*

**Mr. Greer moved to recommend approval of VCMRR026 as submitted. Mr. Helton seconded the motion. The motion carried unanimously.**

Wholesale Market Working Group (WMWG) (see Key Documents)

David Detelich summarized recent WMWG activities.

Market Settlement Working Group (MSWG) (see Key Documents)

Heather Boisseau summarized recent MSWG activities, including NPRR947 and stated that MSWG reached consensus in recommending WMS endorse it.

Revision Requests Tabled at PRS, Referred to WMS (see Key Documents)

*NPRR903, Day-Ahead Market Timing Deviations*

*NPRR933, Reporting of Demand Response by Retail Electric Providers and Non-Opt-In Entities*

*NPRR938, Distribution Voltage Level Block Load (BLT) Compensation*

*NPRR947, Clarification to Ancillary Service Supply Responsibility Definition and Improvements to Determining and Charging for Ancillary Service Failed Quantities*

WMS took no action on these items.

*NPRR838, Updated O&M Cost for RMR Resources*

**Bill Barnes moved to endorse NPRR838 as amended by the 10/2/19 ERCOT comments. Mr. Greer seconded the motion. The motion carried unanimously.**

*NPRR963, Creation of Generation and Controllable Load Resource Group (GCLR Group)*

Mr. Detelich summarized WMWG discussions on NPRR963 and stated that WMWG reached consensus that WMS should endorse NPRR963.

**Mr. Carpenter moved to endorse NPRR963 as amended by the 10/11/19 ERCOT comments. Mr. Greer seconded the motion. The motion carried unanimously.**

*NPRR964, Improvement of RMR Process and Removal of Synchronous Condenser Unit and Agreement*

**Mr. Greer moved to endorse NPRR964 as amended by the 9/24/19 ERCOT comments. Mr. Sams seconded the motion. The motion carried unanimously.**

Supply Analysis Working Group (SAWG) (see Key Documents)

*SAWG Leadership*

Mr. Kee noted Caitlin Smith’s employment with AB Power Advisors.

**Mr. Greer moved to confirm Ms. Smith as 2019 SAWG Chair. Mr. Sams seconded the motion. The motion carried unanimously.**

*SAWG Scope*

*Cost of New Entry (CONE) Study Methodology*

Ms. Smith reviewed recent SAWG activities, including the SAWG Scope, CONE Study Methodology, and potential implementation timeline for a request for proposal (RFP) for the CONE Study and new Peaker Net Margin (PNM) threshold.

*NPRR980, Accounting for NSO Forced Outages and GINR Inactive Projects in the Report on the Capacity, Demand and Reserves in the ERCOT Region*

**Mr. Barnes moved to waive notice in order to consider NPRR980. Mr. Greer seconded the motion. The motion carried with one abstention from the Consumer (OPUC) Market Segment.**

Pete Warnken summarized NPRR980 and reviewed the implementation timeline for inclusion in the May 2020 Report on Capacity, Demand, and Reserves in the ERCOT Region. Market Participants offered additional clarifications.

**Mr. Barnes moved to endorse NPRR980 as revised by WMS. Mr. Greer seconded the motion. The motion carried with two abstentions from the Consumer (City of Eastland, OPUC) Market Segment.**

Congestion Management Working Group (CMWG)

Sandy Morris reviewed MCWG activities.

Demand Side Working Group (DSWG) (see Key Documents)

Holly O’Neill reviewed DSWG activities.

Market Credit Working Group (MCWG) (see Key Documents)

Mr. Barnes reviewed MCWG activities.

RCWG (see Key Documents)

Katie Rich reviewed RCWG activities.

Other Business

*DGR Workshop*

Mr. Kee encouraged Market Participants to review the November 5, 2019 Distribution Generation Resource (DGR) Workshop materials and noted that additional workshops would be scheduled to finalize the DGR process.

*2020 ERCOT Membership/Segment Representative Elections*

ERCOT Staff reminded Market Participants that the membership date of record is Friday, November 8, 2019 and stated that 2020 Segment Representative Elections would begin on Monday, November 11, 2019.

*Review of Open Action Items*

Market Participants reviewed the Open Action Items list and removed the following completed items as submitted:

* TAC Assignment: Review DC Tie Treatment in Relation to Load (CMWG)
* TAC Assignment: Review the commercial impacts of DC Tie Curtailments (CMWG/WMWG)

*No Report*

* Metering Working Group (MWG)

Adjournment

Mr. Kee adjourned the November 6, 2019 WMS meeting at 3:15 p.m.

1. http://www.ercot.com/calendar/2019/11/6/165260-WMS [↑](#footnote-ref-1)