**APPROVED**

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

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

**Wednesday, January 11, 2017 – 9:30 a.m.**

Attendance

*Members:*

|  |  |  |
| --- | --- | --- |
| Allen, Thresa | Avangrid Renewables |  |
| Bierschbach, Erika | Austin Energy |  |
| Brewster, Chris | City of Eastland |  |
| Carpenter, Jeremy | Tenaska |  |
| Coleman, Diana | OPUC |  |
| Downey, Marty | Viridity Energy |  |
| Dumas, John | LCRA |  |
| Franklin, Russell | Garland Power and Light |  |
| Goff, Eric | Citigroup Energy |  |
| Greer, Clayton | Morgan Stanley | Via Teleconference |
| Gross, Blake | AEP Service Corporation |  |
| Helton, Bob | GDF Suez |  |
| Kee, David | CPS Energy |  |
| Lindberg, Ken | Bryan Texas Utilities |  |
| Maduzia, Franklin | Dow Chemical |  |
| Morris, Sandy | Direct Energy |  |
| Plunkett, Derenda | CenterPoint Energy |  |
| Sams, Bryan | Reliant Energy Retail Services |  |
| Schwarz, Brad | Sharyland |  |
| Shaw, Marka | Exelon |  |
| Smith, Mark | Nucor |  |
| Such, Chris | E. On |  |
| Turner, Lucas | South Texas Electric Cooperative | Alt. Rep for C. Lange |
| Wilson, Joe Dan | Golden Spread Electric Cooperative |   |
| Woodruff, Taylor | Oncor |  |
|  |  |  |

*Guests:*

|  |  |  |
| --- | --- | --- |
| Abbott, Kristin | PUCT | Via Teleconference |
| Ainspan, Malcolm | NRG | Via Teleconference |
| Ashley, Kristy | CES |  |
| Barnes, Bill | Reliant Energy Retail Services |   |
| Blackburn, Don | Utilligent | Via Teleconference |
| Brandt, Adrianne | CPS Energy |  |
| Callender, Wayne | CPS Energy |  |
| Carter, Tim | MP2 Energy |  |
| Clark, Jack | NextEra Energy | Via Teleconference |
| Cochran, Seth | DC Energy |  |
| English, Barksdale | Austin Energy | Via Teleconference |
| Frazier, Amanda | Luminant Generation | Via Teleconference |
| Garza, Beth | Potomac Economics |  |
| Graham, Greg | Texas Reliability Entity | Via Teleconference |
| Gomez, Gabe  | CES | Via Teleconference |
| Hellinghausen, Bill | EDF Energy | Via Teleconference |
| Hoatson, Tom | LSPower | Via Teleconference |
| Hughes. Lindsey | Competetive Power | Via Teleconference |
| Hurst, Jay | Schneider Engineering | Via Teleconference |
| Jones, Randy | Calpine |  |
| Lane, Robert | Oncor | Via Teleconference |
| Mena, Hugo | EPE |  |
| Markham, Craig | CPower Energy Management  | Via Teleconference |
| Matos, Chris | PUCT | Via Teleconference |
| McCamant, Frank | McCamant Consulting | Via Teleconference |
| Nease, Nelson | NHNPC | Via Teleconference |
| Peters, Patrick | CenterPoint Energy |  |
| Powell, Christian | LCRA |  |
| Reedy, Steve | Potomac Economics |   |
| Reid, Walter | Wind Coalition |   |
| Rothschild, Eric | GDS | Via Teleconference |
| Sandidge, Clint | Noble Solutions | Via Teleconference |
| Siddiqi, Shams | Crescent Power |  |
| Smith, Caitlin | Jewell & Associates |  |
| Tessema, Biruk | Austin Energy | Via Teleconference |
| Thompson, David | Pedernales Electric Cooperative |  |
| Trevino, Melissa | Oxy | Via Teleconference |
| Varnell, John | Tenaska | Via Teleconference |
| Vinson, Paul | CPS Energy |  |
| Wall, Perrin | CenterPoint Energy |  |
| Wallin, Shane | DME Power | Via Teleconference |
| Watson, Mark | S & P Global Platts | Via Teleconference |
| Whittle, Brandon | Megawatt Analytics |  |
| Whitworth, Doug | Texas Reliability Entity | Via Teleconference |
| Wittmeyer, Bob | DME |  |

*ERCOT Staff:*

|  |  |  |
| --- | --- | --- |
| Anderson, Connor |  | Via Teleconference |
| Billo, Jeff |  |   |
| Bracy, Phil |  | Via Teleconference |
| Boswell, Bill |  | Via Teleconference |
| Butterfield, Lindsay |  | Via Teleconference |
| Chang, Sean |  | Via Teleconference |
| Chen, Jian |  | Via Teleconference |
| Chu, Zhengguo |  | Via Teleconference |
| Clifton, Suzy |  |  |
| Findley, Samantha |  | Via Teleconference |
| Gonzalez, Ino |  |  |
| Guo, Jack |  | Via Teleconference |
| Hanson, Kevin |  | Via Teleconference |
| Holt, Blake |  | Via Teleconference |
| House, Donald |  | Via Teleconference |
| Hailong, Hui |  | Via Teleconference |
| Jin, Julie |  | Via Teleconference |
| Jones, Dan |  |  |
| Krein, Steve |  | Via Teleconference |
| Landry, Kelly |  |  |
| Levine, Jon |  | Via Teleconference |
| Maggio, David |  |  |
| Mauldin, Stormy |  |  |
| Moorty, Sai |  | Via Teleconference |
| Morehead, Juliana |  | Via Teleconference |
| Opheim, Calvin  |  | Via Teleconference |
| Phillips, Cory |  | Via Teleconference |
| Ruane, Mark |  |  |
| Scott, Vicki |  | Via Teleconference |
| Solis, Stephen |  | Via Teleconference |
| Stice, Clayton |  |  |
| Surendran, Resmi |  |  |
| Townsend, Aaron |  | Via Teleconference |
| Weaver, Eileen |  |  |
| Wu, Jian |  | Via Teleconference |

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

Suzy Clifton called the January 11, 2017 WMS meeting to order at 9:30 a.m.

Antitrust Admonition

Ms. Clifton directed attention to the Antitrust Admonition, which was displayed.

Election to 2016 WMS Chair and Vice Chair

Ms. Clifton reviewed the leadership election process codified in the Technical Advisory Committee Procedures and opened the floor for nominations.

**Bob Helton nominated Jeremy Carpenter for 2017 WMS Chair.** Mr. Carpenter accepted the nomination. **Mr. Carpenter was named 2017 WMS Chair by acclamation.**

**Taylor Woodruff nominated David Kee for 2017 WMS Vice Chair.** Mr. Kee accepted the nomination. **Mr. Kee was named 2017 WMS Vice Chair by acclamation.**

Agenda Review

There were no changes to the agenda.

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

*November 2, 2016*

**Blake Gross moved to approve the November 2, 2016 WMS meeting minutes as submitted. Brad Schwarz seconded the motion. The motion carried unanimously.**

Technical Advisory Committee (TAC) Update and Assignments

Mr. Carpenter reviewed the disposition of items considered at the December 1, 2017 TAC meeting.

*2% Resettlement Rule (see Key Documents)*

Mark Ruane reviewed the root cause of the increased Day Ahead Market (DAM) Make-Whole Payments that occurred after implementation of Nodal Protocol Revision Request (NPRR) 617, Energy Offer Flexibility, and presented the total charges and threshold values considered under the current 2% Resettlement rule. Market Participants discussed the Resettlement threshold percentage and requested further review pending consideration by the Commercial Operations Subcommittee (COPS).

ERCOT Operations and Market Items

*Greens Bayou Study Update*

Resmi Surendran informed Market Participants there are no updates to report related to the Greens Bayou study. Market Participants requested ERCOT provide a more comprehensive update, including when the Greens Bayou Unit is used under the Reliability Must-Run (RMR) agreement, when congestion occurs, and other changes along with potential contract changes so that the market can be more informed of the risks and cost benefits over time.

New Protocol Revision Subcommittee (PRS) Referrals

*NPRR807, Day-Ahead Market Price Correction*

Ms. Surendran reviewed NPRR807, stating that it clarifies when ERCOT performs price corrections and provides market certainty to Real-Time decisions based on DAM solutions; and that the language changes do not modify the DAM Resettlement Statement and Alternative Dispute Resolution (ADR) procedure.

**Eric Goff moved to request PRS continue to table NPRR807 to allow additional time for review by the Qualified Scheduling Entity (QSE) Managers Working Group (QMWG). Mr. Helton seconded the motion. The motion carried unanimously.**

*NPRR808, Three Year CRR Auction*

Clayton Greer provided an update on NPRR808. ERCOT staff opined that extending the Congestion Revenue Right (CRR) Auction process into the third year forward could impact staffing needs and result in increased overselling in the market. Proponents of NPRR808 opined that long term hedging increases Market Participants ability to mitigate market risks and provides price transparency. Market Participants expressed concerns for a Full-time Equivalent (FTE) need, use of a static CRR Network Model, and inclusion of new Load Resources.

**Mr. Goff moved to endorse NPRR808 as amended by the 12/6/16 Morgan Stanley comments. Mr. Greer seconded the motion. The motion carried unanimously.**

*NPRR809, GTC or GTL for New Generation Interconnection*

Market Participants discussed the merits of NPRR809 pending consideration at the January 12, 2017 Reliability and Operations Subcommittee (ROS) meeting, and the associated Planning Guide Revision Request (PGRR) 054, Stability Limits in the Full Interconnect Study; and requested review of NPRR809 by the Congestion Management Working Group (CMWG) and QMWG.

**Mr. Greer moved to request PRS continue to table NPRR809 to allow additional time for review by the CMWG and QMWG. Marty Downey seconded the motion. The motion carried unanimously.**

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

*NPRR768, Revisions to Real-Time On-Line Reliability Deployment Price Adder Categories*

*NPRR776, Voltage Set Point Communication*

*PRR777, ERCOT-directed Dispatch of Price-Responsive Distributed Generation (DG)*

*NPRR798, Additional CRR Accounts Request*

*NPRR799, Updates to Outages of Transmission Facilities*

*NPRR804, Remove Posting Requirement for One-Line Diagram*

WMS took no action on these items.

*NPRR802, Settlements Clean-up*

**Mr. Goff moved to endorse NPRR802 as amended by the 11/16/16 ERCOT comments. Bryan Sams seconded the motion. The motion carried unanimously.**

*NPRR804, Remove Posting Requirement for One-Line Diagram*

Market Participants discussed the merits of NPRR804 and the revised Impact Analysis. ERCOT Staff noted that the $40-$60K internal project would include format changes and software upgrades needed as a result of recent system upgrades. Market Participants requested retention of the one-line diagram posting requirement due to Market Participants use, and offered language revisions.

**Mr. Goff moved to endorse NPRR804 as revised by WMS and to propose the deletion of the comment in the 1/4/17 Revised Impact Analysis for NPRR804 specifying the cost to deliver the one-line diagram functionality. Mr. Kee seconded the motion. The motion carried unanimously.**

Reliability Must-Run (RMR) Issues (see Key Documents)

*TAC Assignment – RMR Issue: Long Term Solution – Alternatives to NPRR784, Mitigated Offer Cap for Reliability Must-Run (RMR) Units*

*Analysis of RMR Resource Mitigated Offer Cap Curve Alternatives*

David Maggio reviewed the previous approaches for the Settlement of RMR Units as alternatives to NPRR784, provided the assumptions for the current analysis and methodology, and presented the results of the analysis and potential implications. Market Participants discussed the various Shift Factors, pricing and dispatch order, and frequency of calculations.

**Mr. Goff moved to endorse RMR pricing options that:**

* **do not include offers from generators that exceed the Shadow Price cap (the last dispatchable offer)**
* **do not include a Shift Factor cut off and instead allow the Shadow Price cap and Nodal market design to manage Shift Factors**
* **update monthly**
* **include $50/ Megawatt Hour (MWh) buffer to cover instances where the RMR curve could be below a competitive offer due to infrequency of updates and other issues**
* **use the Energy Offer Curve Step 2 offers**

**Mr. Greer seconded the motion**. Market Participants discussed the various approaches and implications, requested ERCOT provide additional analysis with resulting values not having the Shift Factor cut off and draft language for review by QMWG.

**Mr. Goff moved to table the motion for one month and to refer consideration of these issues to QMWG. Mr. Helton seconded the motion. The motion carried unanimously.**

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

Mr. Barnes reviewed recent MCWG activities.

*NPRR800, Revisions to Credit Exposure Calculations to Use Electricity Futures Market Prices*

Amanda Frazier stated Luminant Generation would oppose further consideration of NPRR800 as it proceeded through the stakeholder process, opined that the benefits of NPRR800 do not offset the significant implementation costs, and encouraged Market Participants to have their credit teams review NPRR800.

**Mr. Greer moved to endorse NPRR800 as amended by the 11/16/16 Credit Work Group (Credit WG) comments. Sandy Morris seconded the motion. The motion carried with one abstention from the Consumer (Nucor) Market Segment.**

QMWG

Mr. Goff reviewed recent QMWG activities.

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

Tim Carter reviewed recent DSWG activities.

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

Brandon Whittle reviewed recent SAWG activities.  In response to Market Participants request for SAWG to consider a relook of enhancements to the Real-Time Market (RTM), specifically Real-Time Cooptimization, Multi-Interval Real Time Market, and Locational Reserves; Mr. Whittle requested WMS provide further guidance. Mr. Carpenter requested Market Participants bring back direction for SAWG at the February 1, 2017 WMS meeting.

Emerging Technologies Working Group (ETWG) (see Key Documents)

Hugo Mena reviewed recent ETWG activities.

Other Business

*2017 WMS Working Group Leadership*

Suzy Clifton reminded Market Participants that 2017 WMS working group leadership would be considered at the February 1, 2017 WMS meeting.

*No Report*

* CMWG
* Metering Working Group (MWG)
* Outage Coordination Working Group (OCWG)
* Resource Cost Working Group (RCWG)

Adjournment

Mr. Carpenter adjourned the January 11, 2017 WMS meeting at 12:59 p.m.

1. [*http://www.ercot.com/calendar/2017/1/11/108801-WMS*](http://www.ercot.com/calendar/2017/1/11/108801-WMS) [↑](#footnote-ref-1)