**APPROVED**

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

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

**Wednesday, March 1, 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 |  |
| Goff, Eric | Citigroup Energy |  |
| Greer, Clayton | Morgan Stanley |  |
| Gross, Blake | AEP Service Corporation |  |
| Hauk, Christine | Garland Power and Light | Alt. Rep. for R. Franklin |
| Helton, Bob | Dynegy |  |
| Kee, David | CPS Energy |  |
| Lange, Clif | South Texas Electric Cooperative |  |
| Lindberg, Ken | Bryan Texas Utilities |  |
| Morris, Sandy | Direct Energy |  |
| Plunkett, Derenda | CenterPoint Energy |  |
| Sams, Bryan | Reliant Energy Retail Services |  |
| Schwarz, Brad | Sharyland |  |
| Such, Chris | E. On |  |
| Thurnher, Greg | Shell Energy |  |
| Trefny, Floyd | Nucor | Alt. Rep. for M. Smith |
|  |  | Via Teleconference |
| Wilson, Joe Dan | Golden Spread Electric Cooperative |  |
| Woodruff, Taylor | Oncor |  |

The following proxies were assigned:

* Franklin Maduzia to Floyd Trefny
* Tayaun Messer to Clif Lange
* Chris Brewster to Diana Coleman (11:30 a.m.)
* Greg Thurnher to Eric Goff (12:30 p.m.)
* Chris Such to Thresa Allen (1:30 p.m.)

*Guests:*

|  |  |  |
| --- | --- | --- |
| Abbott, Kristin | PUCT | Via Teleconference |
| Ainspan, Malcolm | NRG | Via Teleconference |
| Anderson, Kevin | CES | Via Teleconference |
| Bailey, Dan | Garland Power and Light | Via Teleconference |
| Barnes, Bill | Reliant Energy Retail Services |  |
| Bern, Alan | Oncor |  |
| Briscoe, Judy | BP | Via Teleconference |
| Bryant, Mark | PUCT | Via Teleconference |
| Burke, Tom | Golden Spread Electric Cooperative | Via Teleconference |
| Cochran, Seth | DC Energy |  |
| Cripe, Randy | Schneider Engineering | Via Teleconference |
| Denney, Kristi | Potomac Economics |  |
| Elliott, Andrew | ENGIE |  |
| English, Barksdale | Austin Energy |  |
| Foos, Richard | Calpine | Via Teleconference |
| Garza, Beth | Potomac Economics |  |
| Harvey, Julia | PUCT |  |
| Hellinghausen, Bill | EDF Energy Services |  |
| Hughes, Darren | LCRA | Via Teleconference |
| Jones, Randy | Calpine |  |
| Lee, Jim | AEP | Via Teleconference |
| Markham, Craig | CPower Energy Management | Via Teleconference |
| Moeller, Jason | LCRA | Via Teleconference |
| Nguyen, Andy | LCRA | Via Teleconference |
| Perry, Chris | Windhorse Energy | Via Teleconference |
| Powell, Christian | LCRA |  |
| Reedy, Steve | Potomac Economics |  |
| Reid, Walter | Wind Coalition | Via Teleconference |
| Reilley, Bob | Shell Energy |  |
| Robertson, Jennifer | LCRA |  |
| Rowe, Evan | Osprey Energy | Via Teleconference |
| Sandidge, Clint | Calpine Energy Solutions | Via Teleconference |
| Siddiqi, Shams | Crescent Power |  |
| Slagel, Ron | MICS | Via Teleconference |
| Smith, Caitlin | Jewell and Assoc. |  |
| Smyth, Scott | BPUB |  |
| Thompson, David | Pedernales Electric Cooperative |  |
| Trevino, Melissa | Occidental Chemical | Via Teleconference |
| True, Roy | ACES Power | Via Teleconference |
| Turner, Lucas | South Texas Electric Cooperative | Via Teleconference |
| Varnell, John | Tenaska | Via Teleconference |
| Watson, Mark | SP Global | Via Teleconference |
| Whittle, Brandon | Megawatt Analytics | Via Teleconference |
| Wittmeyer, Bob | DME |  |
| Woods, Brad | Texas Reliability Entity | Via Teleconference |

*ERCOT Staff:*

|  |  |  |
| --- | --- | --- |
| Albracht, Brittney |  | Via Teleconference |
| Anderson, Connor |  | Via Teleconference |
| Billo, Jeff |  |  |
| Bivens, Carrie |  | Via Teleconference |
| Blevins, Bill |  | Via Teleconference |
| Boren, Ann |  | Via Teleconference |
| Boswell, Bob |  | Via Teleconference |
| Bracy, Phil |  | Via Teleconference |
| Butterfield, Lindsay |  | Via Teleconference |
| Chang, Sean |  | Via Teleconference |
| Chen, Jian |  | Via Teleconference |
| Clifton, Suzy |  |  |
| Dovalina, Julio |  | Via Teleconference |
| Du, Pengwei |  | Via Teleconference |
| Gonzalez, Ino |  |  |
| Guo, Jack |  | Via Teleconference |
| Hanson, Kevin |  | Via Teleconference |
| Jones, Dan |  |  |
| Krein, Steve |  | Via Teleconference |
| Landry, Kelly |  |  |
| Lasher, Warren |  |  |
| Li, Weifeng |  | Via Teleconference |
| Maggio, David |  |  |
| Moorty, Sai |  | Via Teleconference |
| Morehead, Juliana |  |  |
| Moreno, Alfredo |  | Via Teleconference |
| Phillips, Cory |  |  |
| Pritchard, Lloyd |  | Via Teleconference |
| Rajagopalan, Sidharth |  | Via Teleconference |
| Reed, Bobby |  | Via Teleconference |
| Rosel, Austin |  | Via Teleconference |
| Ruane, Mark |  |  |
| Sharma, Sandip |  |  |
| Shaw, Pam |  |  |
| Surendran, Resmi |  |  |
| Townsend, Aaron |  | Via Teleconference |
| Weaver, Eileen |  |  |
| Xiao, Hong |  | Via Teleconference |

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

Antitrust Admonition

Jeremy Carpenter directed attention to the Antitrust Admonition, which was displayed.

Agenda Review

There were no changes to the agenda.

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

*February 1, 2017*

**Clif Lange moved to approve the February 1, 2017 WMS meeting minutes as submitted. Chris Such seconded the motion. The motion carried unanimously.**

Technical Advisory Committee (TAC) Update and Assignments

Mr. Carpenter reminded Market Participants that TAC did not meet in February 2017.

WMS Procedures

Market Participants reviewed the draft WMS Procedures with edits proposed by Diana Coleman and Taylor Woodruff and offered additional revisions. Mr. Carpenter requested Market Participants review the revised WMS procedures and stated they will be considered at the April 5, 2017 WMS meeting.

Open Action Items/QSE Issue List (see Key Documents)

No action was taken on this item.

ERCOT Operations and Market Items

*Reporting on any Reliability Must-Run (RMR) usage and any contract changes*

Warren Lasher stated that based on the recently completed studies incorporating the criteria in Nodal Protocol Revision Request (NPRR) 788, RMR Study Modifications, the January 2017 Generator Interconnection Status (GIS) Report, and the Colorado Bend II Generating Station expected operational date of June 2017, ERCOT determined that the Greens Bayou Unit 5 RMR Agreement can be terminated on May 29, 2017. Mr. Lasher further stated that ERCOT has provided NRG the 90 day notice of termination of the Greens Bayou Unit 5 RMR Agreement and the Market Notice was distributed to Market Participants on February 27, 2017. In response to Market Participants questions regarding potential avoidable costs, Mark Ruane reviewed the reconciliation process and the anticipated timeline. Market Participants requested ERCOT provide an update on the final costs for the Greens Bayou Unit 5 RMR Agreement at the September 6, 2017 WMS meeting.

*Day-Ahead Market (DAM) software issue*

Resmi Surendran provided an update for the February 11, 2017 software issue relating to the number of Ancillary Service Offers received from Qualified Scheduling Entities (QSEs) representing Load Resources for the DAM, stating the issue was triggered by an increase in an activity of one type of offers and that ERCOT implemented a solution to resolve the limitation.

*DAM PTP clearing when nodes are islanded under contingency*

Ms. Surendran provided an update on the DAM Point-to-Point (PTP) issue and stated that in certain scenarios involving a contingency that disconnects a Resource Node, the Settlement price can diverge from the clearing price and the awarded PTP Obligation bid can be settled at a price higher than the bid price. Ms. Surendran further explained that ERCOT is developing potential solutions for stakeholder consideration and encouraged Market Participants to attend the March 31, 2017 QSE Managers Working Group (QMWG) meeting.

*Switchable Generation Resources Update*

Bill Blevins provided an update on the Switchable Generation Resource whitepaper, stating that ERCOT has met with the Midcontinent Independent System Operator (MISO) and the Southwest Power Pool (SPP) to develop an alternative approach to address the related North American Electric Reliability Corporation (NERC) Reliability Standards regarding the management of Switchable Generation Resources, and that the whitepaper developed for the command control option is currently progressing through legal reviews. Mr. Blevins stated ERCOT is meeting with the independent system operator for Mexico, El Centro Nacional de Control de Energía (CENACE).

In response to Market Participant questions on Settlement concerns, Mr. Blevins stated the primary issue being addressed is reliability, but that consideration is being given to the Reliability Unit Commitment (RUC) process and the avoidance of penalties if de-committing for an emergency. Market Participants opined that the proposed rule could result in an unprecedented transfer of Resources without the QSE’s consent and that this action would have financial implications that could result in substantial make whole costs. Market Participants suggested that ERCOT has not identified reliability concerns and noted that other ISO’s have capacity constructs with different incentives. Market Participants requested that ERCOT clarify the RUC process and provide the Switchable Generation Resources whitepaper for consideration at the April 5, 2017 WMS meeting. Mr. Blevins stated that additional time was needed to complete the legal reviews and identify what specific types of emergencies would qualify; and offered to provide an update at the meeting.

New Protocol Revision Subcommittee (PRS) Referrals

*NPRR814, Modify Black Start Procurement Cycle*

Sandip Sharma reviewed NPRR814, stating that based on recommendations from an external review of Black Start Services (BSS), ERCOT proposed modifying the procurement cycle from two to five years to increase market participation and presented proposed timelines. Market Participants discussed the merits of NPRR814. Some Market Participants opined that the increased risk and uncertainty of the five year commitment would reduce participation rather than increase it, that lack of participation in the current two year contract was due to ERCOT not marketing the lucrative compensation available, and requested further review by QMWG.

**Erika Bierschbach moved to request PRS continue to table NPRR814 to allow additional time for review by QMWG. Greg Thurnher seconded the motion. The motion carried unanimously.**

*NPRR815, Revise the Limitation of Load Resources Providing Responsive Reserve (RRS) Service*

Market Participants discussed the merits of NPRR815. John Dumas opined that the changes proposed in NPRR815 will result in less On-Line thermal generation, that the 2/24/17 ERCOT comments do not include consideration of un-modeled wind events when determining the appropriate level of Ancillary Services, or consideration from a commercial perspective to meet anticipated minimum generation requirements. Mr. Dumas requested NPRR815 be further reviewed by WMS. Mr. Lange stated that consideration should be given to the tradeoff between energy and RRS and reminded Market Participants of the WMS desire that changes be cost effective. Mr. Sharma reviewed the 2/24/17 ERCOT comments explaining that ERCOT has instituted a number of changes since 2007, including improvements to the wind forecast and implementing a new operation desk focused on wind and inertia, and that the current 50% limit on Load Resources providing RRS actually results in EROT having to procure more than it otherwise would.

Mr. Lange moved to request PRS continue to table NPRR815 to allow additional time for review by QMWG. The motion failed for a lack of a second.

**Clayton Greer moved to endorse NPRR815 as submitted. Sandy Morris seconded the motion. The motion carried via roll call vote with four objections from the Cooperative (3) (LCRA, STEC, Brazos Electric) and Municipal (Garland Power and Light) Market Segments; and three abstentions from the Cooperative (GSEC), Independent Generator (Exelon), and Investor Owned Utility (IOU) (CenterPoint Energy) Market Segments.** *(Please see ballot posted with Key Documents.)[[2]](#footnote-2)*

*NPRR816, Clarification of Definitions of FIP and FOP*

**Ms. Morris moved to request PRS continue to table NPRR816 to allow additional time for review by the Resource Cost Working Group (RCWG). David Kee seconded the motion. The motion carried unanimously.**

*NPRR818, Allow Curtailment of DC Tie Load Prior to Declaring Emergency Condition – Urgent*

Market Participants discussed the merits of NPRR818 and the discussion at the February 27, 2017 QMWG meeting; and expressed a concern for curtailments of Direct Current Tie (DC Tie) exports during a Watch rather than in an Energy Emergency Alert (EEA) event.

Proponents of NPRR818 opined that NPRR818 should proceed on an Urgent timeline so that the commercial activity could resume as it had prior to implementation of Power Operations Bulletin (POB) #755 without harm to stakeholders, and that the concerns of curtailments during a Watch could be addressed in a subsequent NPRR. Opponents of NPRR818 argued that any curtailment of DC Tie exports should occur during an EEA event and not during a Watch, that NPRR816 should not proceed on an urgent timeline without sufficient vetting, and that the issue should be referred to QMWG.

Mr. Thurnher moved to request PRS continue to table NPRR818 to allow additional time for review by QMWG at a special meeting on March 3, 2017 and with a WMS email vote on Monday, March 6, 2017. Ms. Bierschbach seconded the motion. Market Participants discussed the urgent timeline. In response to Market Participants questions, Dan Woodfin reviewed the current DC Tie limit process, stating that limits are set with assumptions on planned commitments of generation and that the proposed changes in NPRR818 are an improvement as all generation is considered. Mr. Woodfin stated that due to limitations, ERCOT needed to be able to do this in a Watch, rather than an EEA event. Mr. Thurnher withdrew his motion.

**Eric Goff moved to endorse NPRR818 with the 2/24/17 REMC comments and to request QMWG to address the related issues of curtailments during a Watch. Mr. Greer seconded the motion. The motion carried with one objection from the Independent Generator (Exelon) Market Segment and four abstentions from the Independent Generator (E.ON), Independent Power Marketer (IPM) (Shell Energy), Independent Retail Electric Provider (IREP) (Reliant Energy Services), and Municipal (Bryan Texas Utilities) Market Segments.**

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

*NPRR807, Day-Ahead Market Price Correction*

*NPRR811, Two Day Cure Period for Foreign Market Participant Guarantee Agreements*

*NPRR777, ERCOT-directed Dispatch of Price-Responsive Distributed Generation*

Mr. Carpenter noted the sponsor’s intent to withdraw NPRR777.

WMS took no action on these items.

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

Mr. Carpenter referred NPRR768 to QMWG.

*NPRR798, Additional CRR Accounts Request*

Market Participants opined that allowing a Counter-Party unlimited Congestion Revenue Rights (CRR) accounts was not acceptable.

**Mr. Greer moved to recommend PRS reject NPRR798. Bryan Sams seconded the motion. The motion carried unanimously.**

RMR Issues (see Key Documents)

*TAC Assignment – RMR Issue: Long Term Solution – Alternatives to NPRR784, Mitigated Offer Cap for RMR Units*

Mr. Carpenter stated his intention to verify the TAC request that WMS discuss a long term solution that would offer an appropriate Mitigated Offer Cap so that RMR Units would be priced to be dispatched behind other units. Bill Barnes requested that this item be removed from the WMS agenda as ERCOT had provided WMS with the analysis of RMR Resource Mitigated Offer Cap Curve Alternatives and draft concept should a Market Participant choose to sponsor it. There were no objections.

QMWG (see Key Documents)

Mr. Goff reviewed recent QMWG activities. Mr. Goff requested additional direction from WMS on the Ancillary Services Enhancement assignment, noting the submittal of NPRR815, Revise the Limitation of Load Resources Providing Responsive Reserve (RRS) Service, and an anticipated draft Revision Request addressing fast frequency response. Mr. Carpenter confirmed the TAC assignment to explore opportunities to modify current Ancillary Services individually rather than as one redesign, following the rejection of NPRR667, Ancillary Service Redesign. Mr. Goff provided an update on the various RUC issues and requested the QMWG Action Item, Alternatives for extreme cold weather RUC, be removed because the methodology has changed, opening up to an Ancillary Services market before using RUC. There were no objections.

*Nodal Operating Guide Revision Request (NOGRR) 166, Daily Grid Operations Summary Reports*

Mr. Goff stated QMWG reviewed NOGRR166, proposed removing the Daily Grid Operations Summary report rather than rejecting the NOGRR, and supported the desire to create a reporting infrastructure so Market Participants could create their own reports. Market Participants offered revisions.

**Mr. Greer moved to endorse NOGRR166 as revised by WMS. Mr. Goff seconded the motion. The motion carried unanimously.**

Redesign Congestion Management Working Group (CMWG)/QMWG

Mr. Goff proposed a redesign of CMWG and QMWG due to similar agenda items and meeting attendees. Suzy Clifton presented potential considerations in merging either working group under the other, forming a new working group, or eliminating both working groups and having WMS consider the issues. Market Participants discussed the pros and cons of each option and requested CMWG and QMWG host joint meetings to further explore the issue.

Metering Working Group (MWG)

*2017 MWG Leadership*

**Bob Helton moved to confirm Darrell Sumbera as the 2017 MWG Chair. Mr. Sams seconded the motion. The motion carried unanimously.**

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

Mr. Sams reviewed recent SAWG activities, including the discussion on how Block Loads are incorporated into load assumptions for planning and stated ERCOT requested Market Participants input in developing best practices.

*Multi-Interval Real-Time Market Feasibility Study*

Dan Jones presented the Multi-Interval Real-Time Market Study Summary, stating that following the February 6, 2017 SAWG meeting, the document was updated to include three additional conclusions. Market Participants discussed the Study Summary and additional conclusions. Proponents of the additional conclusions opined it was prudent to support the identification of other problems and possible enhancements that ERCOT may be working on or want to work on in the future. Opponents of the additional conclusions opined that they offered no value and that ERCOT was requested to provide analysis to confirm cost effectiveness, and that the conclusions should capture the results of the analysis and not reflect opinions. Mr. Dumas offered revisions.

**Mr. Dumas moved to endorse the Multi-Interval Real-Time Market Feasibility Study Summary as recommended by SAWG and as revised by WMS. Mr. Lange seconded the motion. The motion carried with five objections from the IREP (3) (Direct Energy, Viridity, Reliant) and IPM (2) (Citigroup, Morgan Stanley) Market Segments.** Market Participants objecting to the motion opined they were opposed to the revisions, not to the Study Summary.

Market Credit Working Group (MCWG)

Mr. Barnes reviewed recent MCWG activities.

Other Business

*No Report*

* CMWG
* Demand Side Working Group (DSWG)
* Emerging Technologies Working Group (ETWG)
* RCWG

Adjournment

Mr. Carpenter adjourned the March 1, 2017 WMS meeting at 2:23 p.m.

1. [*http://www.ercot.com/calendar/2017/3/1/108813-WMS*](http://www.ercot.com/calendar/2017/3/1/108813-WMS) [↑](#footnote-ref-1)
2. [*http://www.ercot.com/mktrules/issues/NPRR815#keydocs*](http://www.ercot.com/mktrules/issues/NPRR815#keydocs) [↑](#footnote-ref-2)