**APPROVED**

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

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

**Wednesday, April 5, 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 |  |
| Evans, Michael | Brazos Electric Power Cooperative | Alt. Rep. for T. Messer |
| Franklin, Russell | Garland Power and Light |  |
| Goff, Eric | Citigroup Energy |  |
| Greer, Clayton | Morgan Stanley |  |
| Gross, Blake | AEP Service Corporation |  |
| Helton, Bob | Dynegy |  |
| Kee, David | CPS Energy |  |
| Lange, Clif | South Texas Electric Cooperative |  |
| 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 |  |
| 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 |  |

*Guests:*

|  |  |  |
| --- | --- | --- |
| Abbott, Kristin | PUCT | Via Teleconference |
| Ainspan, Malcolm | NRG | Via Teleconference |
| Barnes, Bill | Reliant Energy Retail Services |  |
| Bearden, Joel | XO Energy | Via Teleconference |
| Blakey, Eric | Just Energy | Via Teleconference |
| Brandt, Adrianne | CPS Energy |  |
| Bunch, Kevin | EDF Trading | Via Teleconference |
| Cochran, Seth | DC Energy |  |
| Cripe, Randy | Schneider Engineering | Via Teleconference |
| Davis, Anna | SE Texas | Via Teleconference |
| Denney, Kristi | Potomac Economics |  |
| Detelich, David | CPS Energy | Via Teleconference |
| Dubberly, Aaron | Tenaska | Via Teleconference |
| Elliott, Christopher | Bank of America Merrill Lynch | Via Teleconference |
| English, Barksdale | Austin Energy |  |
| Foos, Richard | Calpine |  |
| Frazier, Amanda | Vistra Energy |  |
| Garrett, Arrigo | Shell Energy | Via Teleconference |
| Garza, Beth | Potomac Economics |  |
| Gedrich, Brian | GridLiance |  |
| Haley, Ian | Luminant |  |
| Harvey, Julia | PUCT |  |
| Herman, Tom | Shell Energy | Via Teleconference |
| Hughes, Darren | LCRA | Via Teleconference |
| Hughes, Lindsey | Competetive Power | Via Teleconference |
| Johnson, Ryan | Aces Power | Via Teleconference |
| Juricek, Michael | Oncor | Via Teleconference |
| Jones, Randy | Calpine |  |
| Mena, Hugo | Electric Power Engineers, Inc. |  |
| Mueller, Paula | Texas Reliability Entity | Via Teleconference |
| Paff, Tom | Duke Energy | Via Teleconference |
| Parker, Ryan | Calpine | Via Teleconference |
| Powell, Christian | LCRA |  |
| Reedy, Steve | Potomac Economics |  |
| Robinson, Rhonda | Calpine | Via Teleconference |
| Rothschild, Eric | GDS Associates | Via Teleconference |
| Siddiqi, Shams | Crescent Power |  |
| Sithuraj, Murali | Austin Energy |  |
| Smith, Caitlin | Jewell and Assoc. |  |
| Thompson, David | Pedernales Electric Cooperative |  |
| Totten, Jess | Osprey Energy |  |
| Turner, Lucas | South Texas Electric Cooperative | Via Teleconference |
| Vinson, Paul | CPS Energy |  |
| Wallin, Shane | DME | Via Teleconference |
| White, Lauri | AEP | Via Teleconference |
| Whittle, Brandon | Megawatt Analytics |  |
| Wissink, Mike | SoftSmiths | Via Teleconference |
| Wittmeyer, Bob | DME |  |
| Zake, Diana | LoneStar Transmission | Via Teleconference |

*ERCOT Staff:*

|  |  |  |
| --- | --- | --- |
| Adams, John |  | Via Teleconference |
| Albracht, Brittney |  | Via Teleconference |
| Anderson, Connor |  | Via Teleconference |
| Bivens, Carrie |  |  |
| Blevins, Bill |  |  |
| 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 |  |  |
| Hailu, Ted |  | Via Teleconference |
| Hanson, Kevin |  | Via Teleconference |
| Holt, Blake |  | Via Teleconference |
| Hui, Hailong |  | Via Teleconference |
| Jin, Julie |  | Via Teleconference |
| Jones, Dan |  |  |
| Krein, Steve |  | Via Teleconference |
| Landry, Kelly |  |  |
| Levine, Jon |  | Via Teleconference |
| Matavosjana, Julie |  | Via Teleconference |
| Mantena, Dan |  | Via Teleconference |
| McKenna, Nikki |  |  |
| Moorty, Sai |  |  |
| Moreno, Alfredo |  | Via Teleconference |
| Ögelman. Kenan |  |  |
| Phillips, Cory |  | Via Teleconference |
| Pritchard, Lloyd |  | Via Teleconference |
| Reed, Bobby |  | Via Teleconference |
| Rios, Diana |  | Via Teleconference |
| Roberts, Randy |  | Via Teleconference |
| Ruane, Mark |  |  |
| Searcy, Robbie |  | Via Teleconference |
| Sharma, Sandip |  | Via Teleconference |
| Shaw, Pam |  |  |
| Stice, Clayton |  | Via Teleconference |
| Surendran, Resmi |  |  |
| Thompson, Chad |  | Via Teleconference |
| Wattles, Paul |  | Via Teleconference |
| Weaver, Eileen |  | Via Teleconference |
| 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)

*March 1, 2017*

**Bob Helton moved to approve the March 1, 2017 WMS meeting minutes as submitted. Clif Lange seconded the motion. The motion carried unanimously.**

Technical Advisory Committee (TAC) Update and Assignments

Mr. Carpenter reviewed the disposition of items considered at the March 23, 2017 TAC meeting.

*Define Scope of Real-Time Co-Optimization*

Market Participants discussed Real-Time co-optimization, the need for a cost benefit analysis, and consideration of locational co-optimization. Mr. Carpenter reminded Market Participants that the TAC request of WMS was limited to defining the scope of Real-Time co-optimization, requested the Supply Analysis Working Group (SAWG) take up the discussion, and encouraged interested Market Participants to attend the April 28, 2017 SAWG meeting. Market Participants further requested SAWG consider whether participation in Real-Time co-optimization would be mandatory or whether individual Resources could opt out.

*Consider Valley Load Forecast Option 1 or 2 (see Key Documents)*

Nikki McKenna presented two options for forecasting Load in the Valley area for WMS consideration.

**Bryan Sams moved to endorse Valley Load Forecast Option 2, as presented by ERCOT. Eric Goff seconded the motion. The motion carried unanimously.**

Market Participants requested ERCOT provide the Valley forecast data to the market in a simple format; as an additional tab in the current Seven-Day Load Forecast by Weather Zone report and Actual Loads of Weather Zone Display, or in a new Valley report that could be delivered without a cost impact.

*Consider Transmission losses in Real-Time Settlement and in Transmission Planning Criteria*

Dan Jones noted that the forecasted Transmission Loss Factors (TLFs) for March 2017 through February 2018 were significant compared to the 2016 through 2017 forecast TLFs, prompting a relook at the loss factor methodology and consideration of whether to incorporate actual Transmission Losses into Real-Time Settlement. Market Participants discussed the various issues of Settlement, including actual losses from the ERCOT State Estimator (SE) data and loss factors from Steady State Working Group (SSWG) case studies. In response to Market Participant questions, Kenan Ögelman proposed splitting the issues and for WMS to consider how losses are used for purposes of commercial transactions and how to improve that process, and for the Planning Working Group (PLWG) to examine how losses are calculated for SSWG cases. Mr. Carpenter requested that the Congestion Management Working Group (CMWG) and the Reliability and Operations Subcommittee (ROS) take up the issues, respectively. Market Participants also discussed inclusion of marginal losses and requested ERCOT provide additional information on the concept.

WMS Procedures (see Key Documents)

Market Participants reviewed the WMS Procedures and offered additional revisions.

**Bryan Sams moved to approve the WMS Procedures as revised by WMS. Diana Coleman seconded the motion. The motion carried unanimously.**

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

Mr. Carpenter reviewed the Open Action Items list as presented. Market Participants offered additional

revisions to include retaining the Switchable Generation Resource whitepaper and adding Aging Projects – NPRR664, Index Fuel Price to the Resource Cost Working Group (RCWG) action items.

ERCOT Operations and Market Items

*Incomplete SASM for Operating Day April 1, 2017*

Resmi Surendran provided an update on the April 1, 2017 software issue and stated that the Supplemental Ancillary Services Market (SASM) process did not complete, market notices were distributed, and ERCOT is implementing a solution.

*Greens Bayou RMR Update*

Mark Ruane presented the Greens Bayou Unit Reliability Must-Run (RMR) Cost update, highlighted changes to the budgeted and actual costs, timeline, and reconciliation process as a result of the cancelation of the Greens Bayou RMR agreement on May 29, 2017.

*Switchable Generation Resources Update/Whitepaper*

Bill Blevins provided an update on the Switchable Generation Resource whitepaper and requested an additional month to finalize recommendations for consideration at the May 3, 2017 WMS meeting. Some Market Participants expressed concern that ERCOT continues to support the Command Control option to address reliability issues stating that the proposed rule could result in an unprecedented transfer of Resources without the Qualified Scheduling Entities’ (QSEs’) consent with potential financial implications and objected to paying capacity market costs.

**Clayton Greer moved to reject the Switchable Generation Resource whitepaper as submitted.** Market Participants and ERCOT staff discussed various parts of the whitepaper including registration of switchable units, use of the Current Operating Plan (COP) status and switching in Real-Time. **Mr. Greer withdrew the motion.** **Mr. Greer moved to request ERCOT modify the Switchable Generation whitepaper to reflect the ability for the QSE alone to designate the interconnection. Greg Thurnher seconded the motion**. Mr. Blevins stated that ERCOT is trying to resolve the reliability issues between ERCOT, the Southwest Power Pool (SPP), and Midcontinent Independent System Operator (MISO) during an emergency and that based on the outcome of these discussions there may be updates to the whitepaper. **Mr. Greer withdrew his motion.**

**Mr. Greer moved to express that the Command and Control option for Switchable Generation is not the preferred option by WMS. Mr. Thurnher seconded the motion.** Mr. Ögelman stated that ERCOT was in the process of confirming the agreements with other Reliability Coordinators and the reliability obligations under the North American Electric Reliability Corporation (NERC) standards. Mr. Ögelman noted that if a unit is released and obligated to come back, a proper compensation mechanism has not yet been developed. Market Participants further discussed the reliability, Command Control, and jurisdiction issues. **The motion carried with two abstentions from the Cooperative (GSEC) and Municipal (Bryan Texas Utilities) Market Segments.**

*NPRR822, Designate Resource Node Procedure an Other Binding Document and Adjust the Process for Retiring Resource Nodes*

*Associated Revisions to the Procedure for Identifying Resource Nodes*

Carrie Bivens reviewed Nodal Protocol Revision Request (NPRR) 822, designating the “Procedure for identifying Resource Nodes” as an Other Binding Document and revisions to adjust the process for handling retiring Resource Nodes. Ms. Bivens referenced the discussion at the March 30, 2017 CMWG Meeting and the March 31, 2017 QSE Managers Working Group (QMWG) meeting, and stated that ERCOT intended to file additional clarifications. Mr. Carpenter noted NPRR822 will be considered at the April 13, 2017 PRS meeting.

New Protocol Revision Subcommittee (PRS) Referrals

*NPRR817, Create a Panhandle Hub*

Mr. Goff reviewed NPRR817 and the discussion at the March 31, 2017 QMWG meeting. Market Participants noted the need for additional review of the Hub Buses listed in Section 3.5.2.5, ERCOT Hub Average 345 kV Hub, and the pros and cons of creating a new Hub for the ERCOT Panhandle area.

**Mr. Helton moved to request PRS continue to table NPRR817 to allow additional time for review by QMWG. Mr. Greer seconded the motion. The motion carried unanimously.**

*NPRR819, Resettlement Clean-Ups*

Mr. Ruane reviewed NPRR819. Market Participants requested additional review by QMWG.

**Mr. Greer moved to request PRS continue to table NPRR819 to allow additional time for review by QMWG. David Kee seconded the motion. The motion carried unanimously.**

VCMRR018, Verifiable Cost Manual Revision Request Process

**Mr. Helton moved to recommend approval of Verifiable Cost Manual Revision Request (VCMRR) 018 as submitted. Clayton Greer 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*

Market Participants discussed the merits of NPRR768. Mr. Goff reviewed the QMWG-proposed clarifications and observed that Market Participants did not reach consensus on the revisions to the Operating Reserve Demand Curve (ORDC) calculations. Market Participants noted that the Public Utility Commission of Texas (PUCT) continues its discussion of compliance related issues. Market Participants further discussed unresolved issues with Direct Current (DC) Ties, Block Load Transfers (BLTs) and firm Load shed. Mr. Ögelman stated that the language in NPRR768 focused on the emergency actions ERCOT was taking, that ERCOT did not support broader clarifications to NPRR768, and proposed that Market Participants should submit separate NPRRs to address concerns.

**Greg Thurhner moved to endorse NPRR768 as submitted. Ken Lindberg seconded the motion.** Market Participants requested additional time to review NPRR768. **Mr. Thurnher withdrew his motion.** WMS took no action on this item.

*NPRR807, Day-Ahead Market Price Correction*

*NPRR814, Modify Black Start Procurement Cycle*

WMS took no action on these items.

*NPRR816, Clarification of Definitions of FIP and FOP*

Mr. Ruane reviewed NPRR816. Market Participants discussed the 2/7/17 Morgan Stanley comments. Paul Vinson stated that RCWG reviewed NPRR816 and determined that the existing Protocol language is sufficiently broad for ERCOT to use its discretion in selecting vendors to provide the Fuel Index Price (FIP) and Fuel Oil Price (FOP). Market Participants requested ERCOT include the specific index price identifier for the particular entity in the Market Notice anytime ERCOT chooses a new vendor. Mr. Ruane noted that due to the fact that it was determined that NPRR816 was no longer necessary, it would be withdrawn. There were no objections. WMS took no action on this item.

Notice of Withdrawal

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

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

Mr. Carpenter noted the withdrawal of NPRR777 and NPRR811.

Metering Working Group (MWG)

*2017 MWG Leadership*

**Mr. Helton moved to confirm Harry Scheffler as the 2017 MWG Vice Chair. Mr. Kee seconded the motion. The motion carried unanimously.**

QMWG (see Key Documents)

Mr. Goff reviewed recent QMWG activities.

*Day-Ahead Market (DAM) Point-to-Point (PTP) Modeling Issue*

Mr. Goff stated ERCOT identified an issue in the DAM wherein PTP Obligations clearing with nodes islanded in other contingencies Settled greater than the bid price; that both ERCOT and DC Energy proposed similar solutions at the March 31, 2017 QMWG meeting; and that additional clarifications were expected in a forthcoming conference call. Ms. Bivens provided a timeline for implementation of the ERCOT proposed solution if approved. Seth Cochran stated that DC Energy supported either solution and that the interim risk that existed is the result of a bad market design; and stated his intent to provide formal notice of this market inefficiency in accordance with paragraph (f) (12) of P.U.C. SUBST. R. 25.503, Oversight of Wholesale Market Participants. Other Market Participants objected to both proposals and suggested an alternate approach wherein the contingency could be ignored and bids not awarded where the clearing price is greater than the bid price. Mr. Ögelman stated that ERCOT had considered this alternate approach, but did not support it. Mr. Ögelman reminded Market Participants to consider the complexity of the issue and the pros and cons of the proposed solutions. Mr. Carpenter noted that following the QMWG conference call, the issue may be considered by an email vote of WMS.

CMWG (see Key Documents)

Ian Haley reviewed recent CMWG activities. In response to Market Participant questions, Ms. Bivens stated that due to Credit Monitoring and Management (CMM) application changes, ERCOT was not able to have the three year Congestion Revenue Right (CRR) Auction Calendar for consideration by TAC prior to May 1, 2017, however, the percentages are defined in the Nodal Protocols rather than the calendar and could be considered for the fall CRR Long-Term Auction Sequence. Market Participants requested consideration of capacity percentages for sequences 1 through 4 at the May 3, 2017 WMS meeting.

RCWG (see Key Documents)

Mr. Vinson reviewed recent RCWG activities including an update on RCWG’s efforts regarding fuel cost components in the fuel adder. He noted that RCWG had discussed the issue but did not identify any changes to recommend and that the group considers the assignment complete. This item was removed from the Open Action Items.

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

*Revisions to ETWG Scope*

Hugo Mena provided an update on recent ETWG activities and presented the proposed ETWG scope. Market Participants discussed differentiating between emerging technologies, the focus of WMS working groups, efficiencies of meetings, and the continued utility of ETWG. Market Participants requested that the prospect of disbanding ETWG be considered at the May 3, 2017 WMS Meeting.

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

*Voluntary Load Response in ERCOT*

Carl Raish presented an overview of the analysis that was derived from the survey responses. Mr. Raish noted that the analysis covered Load reductions associated with 4-Coincident Peak (4-CP), as well as price responsive Load and retail Demand response. Market Participants requested ERCOT provide an analysis of the market impact of 4-CP.

Other Business (see Key Documents)

*Inefficient Market Outcome Related to PUN Congestion*

Mr. Haley opined that the inaccurate modeling of the Load Distribution Factors (LDFs) and the disconnect between Load Zone prices and Locational Marginal Prices (LMPs) at Private Use Network stations create an opportunity for inefficient market outcomes in DAM transactions as evidenced in the March 14, 2017 event, wherein the Real-Time Revenue Neutrality Allocation to Loads was ~$4.9M. Mr. Haley requested ERCOT and Market Participants create a process to include an LDF for Private Use Networks in the DAM and incorporate Private Use Network LMPs in Real-Time prices, and offered an interim solution. Market Participants discussed the issue, expressed opposition to the proposed quick fix, and proposed developing contingencies around pricing to mitigate congestion. Mr. Carpenter directed CMWG take up the issue of inefficient market outcomes related to Private Use Network congestion.

*Dynamic Model Task Force April 13, 2017 Meeting*

Mr. Carpenter announced the Dynamic Model Task Force (DMTF) April 13, 2017 meeting and encouraged Market Participants to attend.

*No Report*

* Market Credit Working Group (MCWG)
* SAWG

Adjournment

Mr. Carpenter adjourned the April 5, 2017 WMS meeting at 2:04 p.m.

1. <http://www.ercot.com/calendar/2017/4/5/108817-WMS> [↑](#footnote-ref-1)