**APPROVED**

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

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

**Wednesday, February 28, 2018 – 9:30 a.m.**

Attendance

*Members:*

|  |  |  |
| --- | --- | --- |
| Barnes, Bill | Reliant Energy Retail Services |  |
| Bierschbach, Erika | Austin Energy |  |
| Caraway, Shannon | Solar Prime |  |
| Carpenter, Jeremy | Tenaska Power Services |  |
| Coleman, Diana | OPUC |  |
| Downey, Marty | Electranet Power  |  |
| Dumas, John | LCRA |  |
| Evans, Mike | Brazos Electric Cooperative |  |
| Goff, Eric | Citigroup Energy |  |
| Greer, Clayton | Morgan Stanley |  |
| Johnson, Anthony | CenterPoint Energy | Alt. Rep. for Sheri Moore |
| Kee, David | CPS Energy |  |
| Lange, Clif | South Texas Electric Cooperative |  |
| Lee, Jim | AEP Service Corporation | Alt. Rep. for Blake Gross |
| Lindberg, Ken | Bryan Texas Utilities  |  |
| Maduzia, Franklin | Dow Chemical |  |
| Mauldin, Jamie | City of Eastland |  |
| Morris, Sandy | Direct Energy |  |
| Moss, Steven | E. ON | Alt. Rep. for Chris Such |
| Sandidge, Clint | Calpine Energy Solutions |  |
| Schwarz, Brad | Sharyland Utilities |  |
| Shaw, Marka | Exelon | Via Teleconference |
| Smith, Mark | Nucor |  |
| Such, Chris | E.ON |  |
| Surendran, Resmi | Shell Energy |  |
| Selvester, Michael | Infinite Energy | Alt. Rep. for Steve Madden Via Teleconference |
| Wilson, Joe Dan | Golden Spread Electric Cooperative |   |
| Woodruff, Taylor | Oncor |  |

*Guests:*

|  |  |  |
| --- | --- | --- |
| Abbott, Kristin | PUCT | Via Teleconference |
| Ainspan, Malcolm | NRG | Via Teleconference |
| Allen, Thresa | Avangrid Renewables | Via Teleconference |
| Blakey, Eric | Just Energy | Via Teleconference |
| Brown, Jack | Garland Power and Light | Via Teleconference |
| Bruce, Mark | Cratylus Advisors | Via Teleconference |
| Bryant, Mark | PUCT | Via Teleconference |
| Bunch, Kevin | EDF Energy Services |  |
| Capasso, Joe | Brilliant Energy | Via Teleconference |
| Corona, Connie | PUCT | Via Teleconference |
| Detelich, David | CPS Energy |   |
| Eckhoff, Christina | Texas Reliability Entity | Via Teleconference |
| Falcey, Jonathan | LCRA | Via Teleconference |
| Gomez, Gabe | CES Energy | Via Teleconference |
| Haley, Ian | Vistra Energy |   |
| Hall, Tim | Southern Power |  |
| Harvey, Julia | PUCT |  |
| Hastings, David | SESCO |  |
| Henson, Martha | Oncor |  |
| Hughes, Darren | LCRA | Via Teleconference |
| Hughes, Lindsey | Competitive Power | Via Teleconference |
| Kueker, Dan | Brazos Electric Cooperative | Via Teleconference |
| Melaerts, Sebastien | DTE Energy | Via Teleconference |
| Nease, Nelson |   | Via Teleconference |
| Palani, Ananth | Garland Power and Light | Via Teleconference |
| Paretkar, Piyush | Uniper Energy | Via Teleconference |
| Powell, Christian | LCRA |  |
| Reedy, Steve | Potomac Economics |  |
| Reid, Walter | Wind Coalition |  |
| Ricketts, David | Luminant Generation |  |
| Robertson, Jennifer | LCRA | Via Teleconference |
| Salinas, Michael | DTE Energy | Via Teleconference |
| Sams, Bryan | NRG |  |
| Siddiqi, Shams | Crescent Power |  |
| Smith, Caitlin | Jewell and Associates | Via Teleconference |
| Stanfield, Leonard | Invenergy | Via Teleconference |
| Thompson, David | PEC |  |
| True, Roy | ACES Power | Via Teleconference |
| Turner, Lucas | South Texas Electric Cooperative | Via Teleconference |
| Wallin, Shane | DME |  |
| Watson, Mark  | S&P Global | Via Teleconference |
| Whittle, Brandon | Megawatt Analytics |   |
| Wieck, John | Golden Spread Electric Cooperative | Via Teleconference |
| Wittmeyer, Bob | DME |  |

*ERCOT Staff:*

|  |  |  |
| --- | --- | --- |
| Albracht, Brittney |  | Via Teleconference |
| Anderson, Conner |  | Via Teleconference |
| Billo, Jeff |  | Via Teleconference |
| Bracy, Phil |  | Via Teleconference |
| Chang, Sean |  | Via Teleconference |
| Chen, Jian |  | Via Teleconference |
| Chu, Zhengguo |  | Via Teleconference |
| Clifton, Suzy |  |   |
| Covington, Austin |  | Via Teleconference |
| Dinopol, Ohlen |  | Via Teleconference |
| Gonzalez, Ino |  |   |
| Guo, Jack |  | Via Teleconference |
| Hailu, Ted |  |  |
| Hamann, James |  | Via Teleconference |
| Hartmann, Jimmy |  | Via Teleconference |
| Hilliard, Marie |  | Via Teleconference |
| Holt, Blake |  | Via Teleconference |
| House, Donald |  |  |
| Jin, Julie |  | Via Teleconference |
| Jones, Dan |  |  |
| Landry, Kelly |  |  |
| Levine, Jon |   |   |
| Liu, Cong |  | Via Teleconference |
| Maggio, Dave |  |  |
| Mago, Nitika |  | Via Teleconference |
| Manning, Brian |  | Via Teleconference |
| Matevosyan, Julia |  | Via Teleconference |
| Matlock, Robert |  | Via Teleconference |
| Moorty, Sai |  |   |
| Morehead, Juliana |  |  |
| Moreno, Alfredo |  | Via Teleconference |
| Phillips, Cory |  | Via Teleconference |
| Prichard, Lloyd |  | Via Teleconference |
| Roberts, Randy |  |  |
| Rosel, Austin |  |  |
| Ruane, Mark |  |  |
| Shanks, Magie |  | Via Teleconference |
| Shaw, Pam |  |  |
| Smith, Nathan |  |  |
| Stice, Clayton |  |  |
| Townsend, Aaron |  | Via Teleconference |
| Tucker, Don |  |  |
| Weaver, Eileen |  | 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

There were no changes to the agenda.

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

*January 31, 2018*

**Diana Coleman moved to approve the January 31, 2018 WMS meeting minutes as submitted. Clif Lange seconded the motion. The motion carried unanimously.**

Technical Advisory Committee (TAC) Update and Assignments

Mr. Kee reviewed the disposition of items considered at the February 22, 2018 TAC meeting. Mr. Kee provided an update on subcommittee restructuring, stated that moving wholesale market settlements is still being considered, and encouraged Market Participants to attend the March 5, 2018 TAC Subcommittee Restructuring Task Force meeting.

Review Open Action Items/2017 WMS Goals (see Key Documents)

Market Participants reviewed the proposed changes to the Open Action Items list. Mr. Kee requested the Open Action Items list be updated as submitted. Mr. Kee further requested the Qualified Scheduling Entity (QSE) Managers Working Group (QMWG) review the issues of price suppression caused by testing and the need for updating the Reliability Deployment Price Adder.

2018 WMS Goals (see Key Documents)

Market Participants reviewed the draft 2018 WMS Goals and offered additional revisions.

**Ms. Coleman moved to approve the 2018 WMS Goals as revised by WMS. Clayton Greer seconded the motion. The motion carried unanimously.**

ERCOT Operations and Market Items (see Key Documents)

*Annual update to the Congestion Revenue Right (CRR) Activity Calendar*

Donald House reviewed the WMS approval process and ERCOT posting requirements following implementation of Nodal Protocol Revision Request (NPRR) 852, CRR Activity Calendar Approval Process, and presented the proposed updates to the CRR Activity Calendar.

**Mr. Greer moved to approve updates to the CRR Activity Calendar as recommended by ERCOT. Marty Downey seconded the motion. The motion carried unanimously.**

*NPRR461, Energy Storage Settlements Consistent With PUCT Project 39917*

*Implement Grey Box Language Requirement to Post Total Wholesale Storage Load (WSL)*

Randy Roberts reviewed the history of NPRR461, presented the statistics on current storage sites, and requested Market Participant input on the recommended aggregation of 88.8 Megawatts (MWs) as meeting the criteria to begin posting the total WSL to the Market Information System (MIS) Secure Area. Market Participants discussed the aggregation criteria, minimum threshold requirements, and other uses for the data once published. Market Participants expressed support for ERCOT’s recommendation and requested ERCOT notify impacted Entities prior to issuing the Market Notice and posting the total WSL. Mr. Kee requested QMWG review the concept of establishing a minimum threshold, utilization of Real-Time telemetry, and Resource disclosures.

*January 2018 High Revenue Neutrality Allocation (RENA)*

Dave Maggio summarized the high RENA events that occurred on January 16, 17, and 18, 2018. Mr. Maggio presented the Real-Time components in the determination of RENA and the drivers of RENA with examples of their impacts. Mr. Maggio stated that the primary contributors of the January 2018 events were significant Real-Time Market (RTM) congestion costs and modeling of Point-to-Point (PTP) Obligations with Links to a PTP Option, with lesser impacts from the over-selling of transmission in the Day-Ahead Market (DAM). Market Participants and ERCOT Staff further discussed the issues. Mr. Kee requested the Congestion Management Working Group (CMWG) review the issue of PTP Obligations and QMWG review the issues of Load distribution factors and price floors.

*DAM Hub Bus Calculation*

Nathan Smith reviewed the DAM Hub Bus calculation and the specific scenarios where variations with DAM Hub Bus modeling creates pricing discrepancies for published DAM Hub Settlement Point Prices. In response to Market Participant questions, Sai Moorty stated that the DAM formula was implemented correctly, but because the DAM uses Power System Simulator for Engineering (PSS/E) buses to determine Hub MW distribution and prices, in certain scenarios it can diverge from Hub prices in Real-Time determined by Electrical Buses in the Common Information Model (CIM). Mr. Maggio reviewed the interim solution and encouraged Market Participant input as the long term solution is vetted through the stakeholder process.

New Protocol Revision Subcommittee (PRS) Referrals

*NPRR807, Day-Ahead Market Price Correction*

Juliana Morehead noted the 2/27/18 ERCOT comments to NPRR807 and requested additional time for review of the examples circulated by Morgan Stanley in the February 26, 2018 email to the WMS distribution list.

**Jeremy Carpenter moved to request PRS continue to table NPRR807 for one month to allow additional time for review by WMS. Resmi Surendran seconded the motion. The motion carried unanimously.**

Nodal Operating Guide Revision Request (NOGRR) 176, Hotline Call Participation

Mr. Kee stated the Reliability and Operations Subcommittee (ROS) requested WMS review the issue of clarifying QSEs representing Resources for inclusion in hotline calls. Market Participants and ERCOT Staff discussed the merits of NOGRR176, the timeline for implementation, and the current posting requirements. Market Participants expressed a desired for additional review of the issue without impeding the Revision Request as it proceeded through the stakeholder process.

**Mr. Greer moved to waive notice in order to consider NOGRR176. Martin Downey seconded the motion. The motion carried unanimously.**

**Mr. Greer moved to support NOGRR176 moving forward and that concerns regarding NOGRR176 will be discussed and should be handled with subsequent language in a new NOGRR. Joe Dan Wilson seconded the motion. The motion carried unanimously.**

Mr. Kee requested QMWG review the issue of inclusion of QSEs with Resources on hotline calls.

QMWG (see Key Documents)

Eric Goff summarized recent QMWG activities, including review of the power balance penalty curve, recent high Non-Spinning Reserve (Non-Spin) prices, and Revision Requests assigned to QMWG. Mr. Goff requested Market Participants provide input for additional analysis desired in the Percentage of Real-Time Load Transacted in DAM report. Market Participants and ERCOT Staff discussed the recent increase in the minimum Responsive Reserve (RRS) Service requirements and inertia issues being vetted at ROS and the Performance, Disturbance, Compliance Working Group (PDCWG). Market Participants expressed a desire to have the issues proceed through the stakeholder process and requested ERCOT Staff provide updates to QMWG.

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

*NPRR832, Disallow PTP Obligation Bids and DAM Energy Bids that Sink at Private Use Network Settlement Points Without a Load Distribution Factor - Urgent*

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

*NPRR845, RMR Process and Agreement Revisions*

*NPRR848, Separate Clearing Prices for RRS*

*NPRR850, Market Suspension and Restart*

*NPRR851, Procedure for Managing Disconnections for Bidirectional Electrical Connections at Transmission Level Voltages*

*NPRR856, Treatment of OFFQS Status in Day-Ahead Make Whole and RUC Settlements*

*NPRR862, Updates to Address Revisions under PUCT Project 46369*

*NPRR863, Creation of Primary Frequency Response Service Product and Revisions to Responsive Reserve*

*SCR795, Addition of Intra-Hour Wind Forecast to GTBD Calculation*

WMS took no action on these items.

*NPRR837, Regional Planning Group (RPG) Process Reform*

ERCOT Staff and Market Participants discussed the merits of NPRR837. Some Market Participants opposed NPRR837 stating that with increasing transmission build, additional scrutiny of projects is needed.

**Taylor Woodruff moved to endorse NPRR837 as amended by the 2/16/18 ERCOT comments. John Dumas seconded the motion. The motion carried with three objections from the Independent Generator (Calpine) and Consumer (2) (City of Eastland, OPUC) Market Segments; and three abstentions from the Independent Generator (Exelon), Cooperative (STEC), and Independent Power Marketer (IPM) (Shell Energy) Market Segments.**

*NPRR847, Exceptional Fuel Cost Included in the Mitigated Offer Cap*

**Mr. Goff moved to endorse NPRR847 as amended by the 1/30/18 ERCOT comments. Mr. Greer seconded the motion. The motion carried unanimously.**

*NPRR857, Creation of Direct Current Tie Operator Market Participant Role*

**Mr. Greer moved to endorse NPRR857 as submitted. Mr. Woodruff seconded the motion. The motion carried with one abstention from the Independent Retail Electric Provider (IREP) (Reliant Energy Retail Services) Market Segment.**

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

*2018 SAWG Leadership*

**Mr. Woodruff moved to confirm Bryan Sams as the 2018 SAWG Chair, and Christian Powell and Pete Warnken as 2018 SAWG Vice Chairs. Mr. Lange seconded the motion. The motion carried unanimously.**

Mr. Sams reviewed recent SAWG activities, presented the 2018 SAWG Goals, and requested WMS direction on the SAWG assignments to review extended Locational Marginal Price (LMP) proposals and Real-Time cooptimization. ERCOT Staff and Market Participants discussed the vetting process on these items and requested SAWG not take up these items at this time.

CMWG (see Key Documents)

*CMWG Scope*

David Detelich reviewed recent CMWG activities and presented the CMWG Scope.

**Bill Barnes moved to approve the CMWG Scope as submitted. Mr. Downey seconded the motion. The motion carried unanimously.**

Metering Working Group (MWG)

*2018 MWG Leadership*

**Mr. Woodruff moved to confirm Darrell Sumbera as the 2018 MWG Chair and John Cleveland as the 2018 Vice Chair. Mr. Greer seconded the motion. The motion carried unanimously.**

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

David Thompson reviewed recent DSWG activities.

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

Mr. Barnes reviewed recent MCWG activities.

Other Business

There was no Other Business.

*No Report*

* Emerging Technologies Working Group (ETWG)
* Resource Cost Working Group (RCWG)

Adjournment

Mr. Kee adjourned the February 28, 2018 WMS meeting at 12:32 p.m.

1. <http://www.ercot.com/calendar/2018/2/28/138530-WMS> [↑](#footnote-ref-1)