**APPROVED**

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

**ERCOT Austin – 8000 Metropolis Drive (Building E), Suite 100 – Austin, Texas 78744**

**Wednesday, June 1, 2022 – 9:30 a.m.**

Attendance

*Members:*

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Allen, Thresa | Avangrid Renewables (Avangrid) | Via Teleconference |
| Barnes, Bill | Reliant Energy Retail Services (Reliant) |  |
| Bierschbach, Erika | Austin Energy | Via Teleconference |
| Cochran, Seth | DC Energy |  |
| Couch, Andrea | Texas-New Mexico Power (TNMP) | Via Teleconference |
| DeLeon, Amanda | Tenaska Power Services (Tenaska) | Via Teleconference |
| Detelich, David | CPS Energy | Via Teleconference |
| Dreyfus, Mark | City of Eastland | Alt. Rep. for Jamie Mauldin |
| Farhangi, Anoush | Demand Control 2 | Via Teleconference |
| Franklin, Russell | Garland Power & Light (GP&L) | Via Teleconference |
| Foster, Ashley | The Dow Chemical Company (Dow) | Via Teleconference |
| Goff, Eric | Residential Consumer |  |
| Greer, Clayton | Morgan Stanley |  |
| Gross, Blake | AEP Service Corporation (AEPSC) | Via Teleconference |
| Haley, Ian | Luminant Generation (Luminant) |  |
| Hunsaker, David | Chariot Energy | Via Teleconference |
| Lindberg, Ken | Bryan Texas Utilities (BTU) | Via Teleconference |
| Nguyen, Andy | Lower Colorado River Authority (LCRA) |  |
| Powell, Christian | Pedernales Electric Cooperative (PEC) |  |
| Ritch, John | Gexa Energy |  |
| Scott, Kathy | CenterPoint Energy (CNP) | Alt. Rep. for Perrin Wall Via Teleconference |
| Smith, Mark | Nucor | Via Teleconference |
| Turner, Lucas | South Texas Electric Cooperative (STEC) |  |
| Velasquez, Ivan | Oncor Electric Delivery (Oncor) |  |
| Wilson, Joe Dan | Golden Spread Electric Cooperative (GSEC) | Via Teleconference |
| Zhang, Wen | Shell Energy North America (SENA) | Alt. Rep. for Resmi Surendran Via Teleconference |

The following proxies were assigned:

* Blake Gross to Ivan Velasquez
* Bryan Sams to Ian Haley

*Guests:*

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|  |  |  |
| Anderson, Connor | AB Power Advisors | Via Teleconference |
| Anderson, Kevin | CES | Via Teleconference |
| Ashley, Kristy | Customized Energy Solutions |  |
| Benson, Mariah | PUCT | Via Teleconference |
| Blakey, Eric | Just Energy | Via Teleconference |
| Boggs, Callie | Eric Winters Goff, LLC | Via Teleconference |
| Bruce, Mark | Cratylus Advisors | Via Teleconference |
| Bunch, Kevin | EDF Trading |  |
| Coleman, Diana | CPS Energy | Via Teleconference |
| Daigneault, Ralph | Potomac Economics | Via Teleconference |
| Dharme, Neeraja | EDFT | Via Teleconference |
| Graham, Sophie | Adapt 2 Solutions | Via Teleconference |
| Henry, Mark | Texas Reliability Entity | Via Teleconference |
| Henson, Martha | Oncor | Via Teleconference |
| Hubbard, John | TIEC |  |
| Huynh, Thuy | Potomac Economics | Via Teleconference |
| Jones, Randy | Mountaineer Market Advisors | Via Teleconference |
| Kee, David | CPS Energy | Via Teleconference |
| Kilroy, Taylor | TPPA | Via Teleconference |
| Kolb, Lloyd | Invenergy | Via Teleconference |
| Kroskey, Tony | Brazos Electric Cooperative | Via Teleconference |
| Lotter, Eric | GridMonitor | Via Teleconference |
| Loving, Alicia | Austin Energy | Via Teleconference |
| Matt, Kevin | NRG | Via Teleconference |
| McMurray, Creighton | PUCT | Via Teleconference |
| Okenfuss, James | Savion Energy | Via Teleconference |
| Pokharel, Nabaraj | OPUC | Via Teleconference |
| Ramaswamy, Ramya | PUCT | Via Teleconference |
| Reedy, Steve | CIM View Consulting | Via Teleconference |
| Reid, Walter | Advanced Power Alliance | Via Teleconference |
| Rich, Katie | GSEC |  |
| Roth, Werner | PUCT | Via Teleconference |
| Sager, Brenden | Austin Energy | Via Teleconference |
| Sandidge, Clint | Calpine Solutions | Via Teleconference |
| Siddiqi, Shams | Crescent Power Consulting | Via Teleconference |
| Sithuraj, Murali | Austin Energy | Via Teleconference |
| Smith, Caitlin | Jupiter Power |  |
| Smith, Chase | Southern Power Company | Via Teleconference |
| Townsend, Aaron | Potomac Economics | Via Teleconference |
| Thurnher, Greg | MP2 Energy | Via Teleconference |
| True, Roy | ACES Power | Via Teleconference |
| Varnell, John | Tenaska | Via Teleconference |
| Walker, Floyd | PUCT | Via Teleconference |
| Williams, Wes | BTU | Via Teleconference |
| Wittmeyer, Bob | Longhorn Power | Via Teleconference |
| Wu, Tiffany | PUCT | Via Teleconference |

*ERCOT Staff:*

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| --- | --- | --- |
|  |  |  |
| Albracht, Brittney |  |  |
| Anderson, Troy |  | Via Teleconference |
| Bigbee, Nathan |  |  |
| Boren, Ann |  | Via Teleconference |
| Chen, Jian |  | Via Teleconference |
| Clifton, Suzy |  |  |
| Dwyer, Davida |  | Via Teleconference |
| Garcia, Freddy |  | Via Teleconference |
| Gonzalez, Ino |  | Via Teleconference |
| Holt, Blake |  | Via Teleconference |
| Huang, Fred |  | Via Teleconference |
| Kapiloff, Leonard |  | Via Teleconference |
| Maggio, Dave |  |  |
| Mago, Nitika |  |  |
| Moorty, Sai |  |  |
| Patterson, Mark |  | Via Teleconference |
| Phillips, Cory |  | Via Teleconference |
| Raish, Carl |  |  |
| Roberts, Randy |  | Via Teleconference |
| Ruane, Mark |  |  |
| Sharma, Sandip |  |  |
| Showalter, Dana |  | Via Teleconference |
| Singh, Vijay |  | Via Teleconference |
| Solis, Stephen |  | Via Teleconference |
| Troublefield, Jordan |  | Via Teleconference |
| Tucker, Don |  | Via Teleconference |

*Unless otherwise indicated, all Market Segments participated in the votes.*

Antitrust Admonition

Ivan Velasquez directed attention to the Antitrust Admonition, which was displayed.

Agenda Review

There were no changes to the agenda.

Approval of WMS Meeting Minutes

*May 4, 2022*

This item was deferred to the July 6, 2022 WMS meeting.

Technical Advisory Committee (TAC) Update

Mr. Velasquez reviewed the disposition of items considered at the May 25, 2022 TAC meeting, encouraged Market Participants to attend the June 14, 2022 Special TAC meeting to discuss the Proposed Maximum Daily Resource Planned Outage Capacity Methodology (Related to Nodal Protocol Revision Request (NPRR) 1108, ERCOT Shall Approve or Deny All Resource Planned Outage Requests), and stated that in consideration of TAC Leadership and ERCOT Board of Director discussions on efficiencies in the stakeholder process, TAC Leadership will host the June 14, 2022 TAC Workshop for Structural and Procedural Review.

ERCOT Operations and Market Items (see Key Documents)[[1]](#footnote-1)

*Southern Cross Directive 1, Registration and Market Segment*

Nathan Bigbee summarized the ERCOT Whitepaper, “PUC Project No. 46304 Oversight Relating to the Southern Cross Transmission DC Tie Registration and Market Segment (Directive 1)”. Market Participants discussed the stakeholder process for classifying entities in Market Segments and offered clarifications to the whitepaper. Mr. Velasquez noted this item could be considered for inclusion in the [Combined Ballot.](#Combined_Ballot)

*Southern Cross Directive 11, Cost Allocation*

Mr. Bigbee summarized the ERCOT Whitepaper, “PUC Project No. 46304 Oversight Relating to the Southern Cross Transmission (SCT) DC Tie Cost Allocation (Directive 11)”, reviewed the Memorandum of understanding (MOU) between ERCOT and Southern Cross and highlighted costs associated with each directive. Mark Bruce offered clarifications to the cost allocations associated with Directives 3, 8, and 9 in the whitepaper. Market Participants review the 8/28/20 revised Impact Analysis for NPRR999, DC Tie Ramp Limitations and offered clarifications to the whitepaper. Mr. Velasquez noted this item could be considered for inclusion in the [Combined Ballot.](#Combined_Ballot)

*Southern Cross Directive 12, QSE Costs*

Mr. Bigbee summarized the ERCOT Whitepaper, “PUC Project No. 46304 Oversight Relating to the Southern Cross Transmission (SCT) DC Tie Allocation of Export-Related Costs to QSEs (Directive 12)”. Mr. Velasquez noted this item could be considered for inclusion in the [Combined Ballot.](#Combined_Ballot)

*Analysis of Residential Rooftop PV in Competitive ERCOT Area*

Carl Raish presented the methodology and 2021 detailed analysis of residential rooftop PhotoVoltaic (PV) output from residential solar systems in the competitive areas of the ERCOT market.

*Controllable Load resources with a Nodal Price*

Sai Moorty presented concepts for an ERCOT draft NPRR, Controllable Load Resources Settled at a Nodal Price and summarized discussion at previous Wholesale Market Working Group (WMWG) and Congestion Management Working Group (CMWG) meetings.

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

*NPRR1132, Communicate Operating Limitations during Cold and Hot Weather Conditions*

Nitika Mago summarized NPRR1132. Market Participants requested further review of the issues by WMWG. Mr. Velasquez noted this item could be considered for inclusion in the [Combined Ballot.](#Combined_Ballot)

WMWG (see Key Documents)

Murali Sithuraj reviewed WMWG activities.

Revision Requests Tabled at PRS or ROS and Referred to WMS (see Key Documents)

*NPRR981, Day-Ahead Market Price Correction Process*

*NPRR1067, Market Entry Qualifications, Continued Participation Requirements, and Credit Risk Assessment*

*NPRR1070, Planning Criteria for GTC Exit Solutions*

*NPRR1118, Clarifications to the OSA Process*

*NPRR1126, Default Uplift Allocation Enhancement*

*Nodal Operating Guide Revision Request (NOGRR) 215, Limit Use of Remedial Action Schemes*

WMS took no action on these items.

*NPRR1058, Resource Offer Modernization for Real-Time Co-Optimization*

Market Participants reviewed NPRR1058 and the 4/6/21 ERCOT comments. Mr. Velasquez noted this item could be considered for inclusion in the [Combined Ballot.](#Combined_Ballot)

*NPRR1084, Improvements to Reporting of Resource Outages and Derates*

Bill Barnes summarized the 5/27/22 Reliant comments to NPRR1084. Stephen Solis stated that ERCOT was drafting additional clarifications to NPRR1084 and highlighted differences in Reliant comments and ERCOT comments to NPRR1084 and NPRR1085, Ensuring Continuous Validity of Physical Responsive Capability (PRC) and Dispatch through Timely Changes to Resource Telemetry and Current Operating Plans (COPs).

**Mr. Barnes moved to endorse NPRR1084 as amended by the 5/27/22 Reliant comments. Clayton Greer seconded the motion. The motion carried with eight abstentions from the Consumer (Residential), Independent Generator (2) (Luminant, Calpine), Independent Retail Electric Provider (IREP) (Gexa Energy), Investor Owned Utility (IOU) (2) (Oncor, CNP), and Municipal (2) (Austin Energy and CPS Energy) Market Segments.** *(Please see ballot posted with Key Documents.)*

*NPRR1088, Applying Forward Adjustment Factors to Forward Market Positions and Un-applying Forward Adjustment Factors to Prior Market Positions*

Market Participants reviewed NPRR1088.

**Mr. Greer moved to reject NPRR1088. Eric Goff seconded the motion. The motion carried with two abstentions from the Consumer (Nucor) and Independent Generator (Calpine) Market Segments.** *(Please see ballot posted with Key Documents.)*

*NPRR1128, Allow FFR Procurement up to FFR Limit Without Proration*

Ms. Mago summarized NPRR1128 and the 5/27/22 ERCOT comments. Mr. Sithuraj summarized NPRR1128 discussion at the May 20, 2022 WMWG meetings. Shams Siddiqi presented alternative solutions to ensure critical Fast Frequency Response (FFR) Responsive Reserve (RRS) participation. John Hubbard reviewed the 4/29/22 TIEC comments to NPRR1128. WMS took no action on this item.

Revision Requests Tabled at WMS (see Key Documents)

*Verifiable Cost Manual Revision Request (VCMRR) 031, Clarification Related to Variable Costs in Fuel Adders*

WMS took no action on this item.

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

Brenden Sager reviewed MCWG activities.

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

*2022 Goals*

Greg Thurnher presented 2022 DSWG Goals for WMS consideration. Mr. Velasquez noted this item could be considered for inclusion in the [Combined Ballot.](#Combined_Ballot)

Combined Ballot

**Ian Haley moved to approve the Combined Ballot as follows:**

* **To endorse ERCOT’s Whitepaper for Southern Cross Directive 1, Registration and Market Segment as amended by WMS**
* **To endorse ERCOT’s Whitepaper for Southern Cross Directive 11, Cost Allocation as amended by WMS**
* **To endorse ERCOT’s Whitepaper for Southern Cross Directive 12, QSE Costs**
* **To request PRS continue to table NPRR1132 for further discussion by WMWG**
* **To endorse NPRR1058 as amended by 4/6/22 ERCOT comments**
* **To approve 2022 DSWG Goals as submitted**

**Mr. Barnes seconded the motion. The motion carried unanimously.** *(Please see ballot posted with Key Documents.)*

CMWG)(see Key Documents)

*Real-Time On-Line Reliability Deployment Price Adder*

Katie Rich summarized CMWG activities. Mr. Siddiqi presented potential solutions to improve outcomes for the Real-Time On-Line Reliability Deployment Price Adder and requested WMS consideration on review of the issues. Mr. Velasquez assigned the following action item to CMWG:

* Review potential solutions for the Real-Time On-Line Reliability Deployment Price Adder

Other Business

*Review Open Action Items*

WMS took no action on this item.

*No Report*

* Market Settlement Working Group (MSWG)
* Meter Working Group (MWG)
* Resource Cost Working Group (RCWG)
* Supply Analysis Working Group (SAWG)

Adjournment

Mr. Velasquez adjourned the June 1, 2022 WMS meeting at 1:48 p.m.

1. Key Documents referenced in these minutes may be accessed on the ERCOT website at:

   <https://www.ercot.com/calendar/event?id=1623079914163> [↑](#footnote-ref-1)