**APPROVED**

**Minutes of the Technical Advisory Committee (TAC) Meeting – Webex Only**

**Tuesday, May 23, 2023 – 9:30 a.m.**

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| *Members:* |  |  |
| Barnes, Bill | Reliant Energy Retail Services (Reliant) |  |
| Carpenter, Jeremy | Tenaska Power Services (Tenaska) |  |
| Cochran, Seth | DC Energy |  |
| Dreyfus, Mark | City of Eastland |  |
| Fehrenbach, Nick | City of Dallas |  |
| Franklin, Russell | Garland Power and Light (GP&L) |  |
| Gaytan, Jose | Denton Municipal Electric (DME) |  |
| Goff, Eric | Residential Consumer |  |
| Hanson, Kevin | National Grid Renewables (NG Renewables) |  |
| Haley, Ian | Luminant Generation (Luminant) |  |
| Harpole, Jay | AP Gas & Electric (APG&E) |  |
| Hendrix, Chris | Demand Control 2 |  |
| Jolly, Emily | Lower Colorado River Authority (LCRA) |  |
| Kee, David | CPS Energy |  |
| Lange, Clif | South Texas Electric Cooperative (STEC) |  |
| Loving, Alicia | Austin Energy |  |
| Martin, Collin | Oncor Electric Delivery (Oncor) |  |
| Mercado, David | CenterPoint Energy (CNP) |  |
| Nix, Keith | Texas-New Mexico Power (TNMP) |  |
| Pokharel, Nabaraj | Office of Public Utility Counsel (OPUC) |  |
| Powell, Christian | Pedernales Electric Cooperative (PEC) |  |
| Ross, Richard | AEP Service Corporation |  |
| Sams, Bryan | Calpine Corporation (Calpine) |  |
| Schmitt, Jennifer | Rhythm Ops |  |
| Smith, Bill | Air Liquide |  |
| Smith, Caitlin | Jupiter Power |  |
| Surendran, Resmi | Shell Energy North America (SENA) |  |
| Wise, Mike | Golden Spread Electric Cooperative (GSEC) |  |

The following proxies were assigned:

* Garret Kent to Bill Smith
* Alicia Loving to David Kee
* Bob Helton to Caitlin Smith
* Clif Lange to Mike Wise

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| *Guests:* | |  |  |
| Ainspan, Malcolm | | NRG |  |
| Aldridge, Ryan | | AB Power Advisors |  |
| Anderson, Connor | | AB Power Advisors |  |
| Anderson, Kevin | | CES |  |
| Arnold, John | | Lockelord |  |
| Barati, Camron | | Potomac Economics |  |
| Barr, Bill | | LCRA |  |
| Basaran, Harika | | PUCT |  |
| Beavers, Rachel | | Locklord |  |
| Benson, Mariah | | PUCT |  |
| Bernier, Benjamin | |  |  |
| Berry, Danny | | LCRA |  |
| Bertin, Suzanne | |  |  |
| Bezwada, Neelima | | Potomac Economics |  |
| Bivens, Carrie | | Potomac Economics |  |
| Blackburn, Don | | Hunt Energy Network |  |
| Blakey, Eric | | PEC |  |
| Block, Laurie | | LBlock Consulting, LLC |  |
| Bonskowski, Ned | | Luminant Generation |  |
| Bunyan, Mike | | ENGIE |  |
| Burkhead, Brett | | Calpine |  |
| Callender, Hudson | | CPS Energy |  |
| Campo, Curtis | | City of Garland |  |
| Clifford, Brigid | | PG Renewables |  |
| Coleman, Diana | | CPS Energy |  |
| Cook, Kristin | | Southern Power |  |
| Cortez, Sarai | | Trailstone Group |  |
| Cripe, Ramsey | | Schneider Engineering |  |
| Crist, Kelly | | ENGIE |  |
| Daigneault, Ralph | | Potomac Economics |  |
| DeLeon, Seth | | DME |  |
| Dharme, Neeraja | | EDF Energy |  |
| Donohoo, Ken | | OwlERC, LLC |  |
| Duensing, Allison | | Sarac Energy |  |
| Greer, Clayton | | Chollapetro |  |
| Gross, Blake | | AEPSC |  |
| Hall, Matthew | | Invenergy |  |
| Hankins, Laura | | LCRA |  |
| Headrick, Bridget | | CES |  |
| Henson, Martha | | Oncor |  |
| Holt, Blake | | LCRA |  |
| Hook, Marcia | | Kirkland |  |
| Hubbard, John | | TIEC |  |
| Hudis, Gabriella | | Gabel Associates |  |
| Huynh, Thuy | | Potomac Economics |  |
| Inman, Grant | | BP |  |
| Jones, Randy | | Mountaineer Market Advisors |  |
| Katzinski, Oliver | |  |  |
| Kilroy, Taylor | | TPPA |  |
| Kirby, Brandon | | GEUS |  |
| Kleckner, Tom | | RTO Insider |  |
| Korde, Kshitij | | NG Renewables |  |
| Koz, Brian | | Alpha Taraxia |  |
| Kremling, Barry | | GVEC |  |
| Lacek, Mollie | | Talen Energy |  |
| Lasher, Warren | | Lasher Energy Consulting |  |
| Lee, Jim | | CNP |  |
| Lotter, Eric | | GridMonitor |  |
| Macaraeg. Tad | | Stem |  |
| Mayers, Sharon | | Worley |  |
| McClellan, Suzi | | Good Company |  |
| McKeever, Debbie | | Oncor |  |
| Minero, Juan | | Just Energy |  |
| Mock, Christopher | | BP |  |
| Morris, Sandy | | WETT |  |
| Musher, Danny | | Key Capture Energy |  |
| Myers, Matthew | |  |  |
| Nguyen, Andy | | Constellation Energy Generation |  |
| Nicholson, Tyler | | PUCT |  |
| Nix, Emma | | Leeward Renewables |  |
| Noyes, Theresa | | LCRA |  |
| Oliver, Jon | | PUCT |  |
| Ramaswamy, Ramya | | PUCT |  |
| Rich, Katie | | GSEC |  |
| Ritch, John | | NextEra Energy |  |
| Rodrigo, Dilhan | | TC Energy |  |
| Sager, Brenden | | Austin Energy |  |
| Sandidge, Clint | | Calpine |  |
| Schwarz, Brad | | Sharyland |  |
| Scott, Kathy | | CNP |  |
| Showalter, Dana | | Plus Power |  |
| Siddiqi, Shams | | Crescent Power Consulting |  |
| Slaughter, Jeff | | Just Energy |  |
| Smith, Chase | | Southern Power |  |
| Smith, Lisa | | Kinder Morgan |  |
| Smith, Mark | | CMC |  |
| Stephenson, Zach | | Texas Electric Cooperatives |  |
| Teng, Shuye | | LCRA |  |
| Thompson, David | | PEC |  |
| True, Roy | | ACES |  |
| Turner, Lucas | | STEC |  |
| Uy, Manny | | Hunt Energy |  |
| Varnell, John | | Tenaska |  |
| Velasquez, Ivan | | Oncor |  |
| Villasana, Kristi | | NBU |  |
| Walker, Floyd | | PUCT |  |
| Wall, Perrin | | CNP |  |
| White, Lauri | | AEP |  |
| Williams, Wes | | BTU |  |
| Wittmeyer, Bob | | Longhorn Power |  |
| Wu, Tiffany | | PUCT |  |
| Xie, Fei | | Austin Energy |  |
| Zang, Hailing | | TC Energy |  |
| Zhang, Wen | | Potomac Economics |  |
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| *ERCOT Staff:* |  | |  |
| Albracht, Brittney |  | |  |
| Anderson, Troy |  | |  |
| Arth, Matt |  | |  |
| Azeredo, Chris |  | |  |
| Bigbee, Nathan |  | |  |
| Billo, Jeff |  | |  |
| Boren, Ann |  | |  |
| Castillo, Leo |  | |  |
| Chu, Zhengguo |  | |  |
| Clifton, Suzy |  | |  |
| Day, Betty |  | |  |
| Dinopol, Ohlen |  | |  |
| Du, Pengwei |  | |  |
| Dwyer, Davida |  | |  |
| Garcia, Freddy |  | |  |
| Gnanam, Prabhu |  | |  |
| Gonzalez, Ino |  | |  |
| Gross, Katherine |  | |  |
| Hahne, Cynthia |  | |  |
| Hobbs, Kristy |  | |  |
| Hughes, Lindsey |  | |  |
| King, Ryan |  | |  |
| Lee, Alex |  | |  |
| Maggio, Dave |  | |  |
| Mago, Nitika |  | |  |
| Mereness, Matt |  | |  |
| Moreno, Alfredo |  | |  |
| Ögelman, Kenan |  | |  |
| Phillips, Cory |  | |  |
| Rosel, Austin |  | |  |
| Shanks, Magie |  | |  |
| Shaw, Pamela |  | |  |
| Solis, Stephen |  | |  |
| Thomas, Shane |  | |  |
| Troublefield, Jordan |  | |  |
| Urquhart, Ike |  | |  |
| Wasik-Gutierrez, Erin |  | |  |
| You, Haibo |  | |  |
| Young, Matthew |  | |  |
| Zhou, Emily |  | |  |

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

Clif Lange called the May 23, 2023 meeting to order at 9:30 a.m.

Antitrust Admonition

Mr. Lange directed attention to the displayed Antitrust Admonition and noted that the Antitrust Guidelines are available for review on the ERCOT website.

Approval of TAC Meeting Minutes (see Key Documents)[[1]](#footnote-2)

*March 21, 2023*

*March 31, 2023*

*April 10, 2023*

Mr. Lange noted these items could be considered in the [Combined Ballot](#Combined_Ballot_2).

Meetings Update

March 23, 2023 Public Utility Commission of Texas (PUCT) Meeting

April 17-18, 2023 Board Meetings

May 11, 2023 PUCT Meeting

Mr. Lange reviewed the disposition of items considered at the March 23 and May 11, 2023 PUCT Open Meetings and the April 18, 2023 Board of Directors Meeting, and presented highlights of the April 17 and 18, 2023 Board Committee Meetings.

Review of ERCOT Market Impact Statements/Opinions and Independent Market Monitor (IMM) Opinion (see Key Documents)

Ann Boren presented the ERCOT Market Impact Statements and ERCOT Opinions for Revision Requests to be considered by TAC. Carrie Bivens presented the IMM opinions for Revision Requests to be considered by TAC.

Protocol Revision Subcommittee (PRS) Report (see Key Documents)

Martha Henson reviewed PRS activities and presented Revision Requests for TAC consideration.

*Nodal Protocol Revision Request (NPRR) 1143, Provide ERCOT Flexibility to Determine When ESRs May Charge During an EEA Level 3*

Mr. Lange yielded the chair to Caitlin Smith. Nitika Mago reviewed the 5/19/23 ERCOT comments to NPRR1143. Some Market Participants expressed concern regarding the optics of charging batteries during an Energy Emergency Alert (EEA) event when involuntary Load shed is occurring, and requested that ERCOT provide public messaging if NPRR1143 is not rejected. Other Market Participants stated that rejecting NPRR1143 puts the market at a bigger risk than not providing ERCOT with the broadest reliability tools possible. Market Participants reviewed the 5/22/23 Revised Impact Analysis.

**Bill Barnes moved to recommend approval of NPRR1143 as recommended by PRS in the 5/10/23 PRS Report as amended by the 5/19/23 ERCOT comments and the 5/22/23 Revised Impact Analysis. Kevin Hanson seconded the motion. The motion carried with one objection from the Cooperative (STEC) Market Segment and six abstentions from the Consumer (2) (Air Liquide, CMC Steel), Cooperative (3) (GSEC, LCRA, PEC), and Independent Generator (Luminant) Market Segments.** *(Please see ballot posted with Key Documents.)*

*NPRR1161, Clarify AVR Notification Requirements for IRRs*

*NPRR1166, Protected Information Status of DC Tie Schedule Information*

*NPRR1168, Related to RMGRR172, Texas SET V5.0 Continuous Service Agreements Changes*

*NPRR1178, Expectations for Resources Providing ERCOT Contingency Reserve Service – URGENT*

Mr. Lange noted these items could be considered in the [Combined Ballot](#Combined_Ballot_2).

*NPRR1163, Related to LPGRR070, Discontinuation of Interval Data Recorder (IDR) Meter Weather Sensitivity Process*

Market Participants discussed tabling NPRR1163 to allow TAC to consider NPRR1163 and Load Profiling Guide Revision Request (LPGRR) 070 together. Mr. Lange noted this item could be considered in the [Combined Ballot](#Combined_Ballot_2).

*NPRR1167, Improvements to Firm Fuel Supply Service Based on Lessons Learned*

Dave Maggio presented the 5/16/23 ERCOT comments to NPRR1167, stating that Firm Fuel Supply Service (FFSS), as a program, should balance issues of obtaining fuel with Resource performance. Davida Dwyer summarized the testing and decertification process. Market Participants debated the strength of existing clawback measures versus decertifying Resources from the program. In response to Market Participant requests for a compromise solution, Kenan Ögelman offered to collaborate with Stakeholders, if they chose to advance NPRR1167 as recommended by PRS in the 5/10/23 PRS Report, to address the disqualification issue in a separate NPRR based on lessons learned. Mr. Lange confirmed the TAC action item and noted NPRR1167 could be considered in the [Combined Ballot](#Combined_Ballot_2).

*NPRR1169, Expansion of Generation Resources Qualified to Provide Firm Fuel Supply Service in Phase 2 of the Service – URGENT*

Bryan Sams reviewed the 5/22/23 Calpine comments to NPRR1169. Ms. Dwyer reviewed the 5/22/23 ERCOT comments to NPRR1169. Market Participants debated the appropriate definition of FFSS Qualifying Pipeline, and proposed desktop edits to merge the 5/22/23 ERCOT comments with the 5/22/23 Calpine comments. Mr. Lange noted this item could be considered in the [Combined Ballot](#Combined_Ballot_2). Ian Haley stated that his intention to abstain on the combo ballot was related to NPRR1169 only.

*NPRR1177, Enhance Exceptional Fuel Cost Process – URGENT*

Eric Goff reviewed the 5/22/23 Consumers comments to NPRR1177.

**Mr. Goff moved to recommend approval of NPRR1177 as recommended by PRS in the 5/10/23 PRS Report as amended by the 5/22/23 Consumers comments. Mark Dreyfus seconded the motion.** Market Participants discussed the preference for a holistic approach to cost recovery; that certain parties are suffering unrecoverable losses; that additional time is needed to review the 5/22/23 Consumer comments; and that a temporary solution with a sunset date might be preferable to waiting for a long-term solution. Mr. Lange offered to host a Special TAC meeting to consider the issues. Mr. Goff withdrew his motion. Mr. Lange noted this item could be considered in the [Combined Ballot](#Combined_Ballot_2), and encouraged interested parties to file additional comments ahead of the June 5, 2023 Special TAC Meeting.

In response to Market Participants’ request for a holistic review of the cost recovery issues and standard language for firm fuel supply contracts, Mr. Lange requested the Wholesale Market Subcommittee (WMS) review the issues.

Other Binding Documents (see Key Documents)

*Other Binding Document Revision Request (OBDRR) 045,* *Additional Revisions to Demand Response Data Definitions and Technical Specifications*

Market Participants reviewed the 5/4/23 WMS comments to OBDRR045 and noted that the Other Binding Document’s change control process also requires the Retail Market Subcommittee (RMS) to review changes prior to TAC approval. Mr. Lange noted this item could be considered in the [Combined Ballot](#Combined_Ballot_2).

RMS Report (See Key Documents)

*Retail Market Guide Revision Request (RMGRR) 172, Texas SET V5.0 Continuous Service Agreements Changes*

Debbie McKeever reviewed RMS activities and presented RMGRR172 for TAC consideration. Mr. Lange noted this item could be considered in the [Combined Ballot](#Combined_Ballot_2).

Reliability and Operations Subcommittee (ROS) Report (see Key Documents)

Chase Smith reviewed ROS activities and presented Revision Requests for TAC consideration.

*Nodal Operating Guide Revision Request (NOGRR) 246, Related to NPRR1161, Clarify AVR Notification Requirements for IRRs*

*NOGRR253, Related to NPRR1178, Expectations for Resources Providing ERCOT Contingency Reserve Service – URGENT*

Mr. Lange noted these items could be considered in the [Combined Ballot](#Combined_Ballot_2).

WMS Report (see Key Documents)

Eric Blakey reviewed WMS activities, including the approval of the Resource Cost Working Group (RCWG) Leadership, and presented a Revision Request for TAC consideration.

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

**Chris Hendrix moved to recommend approval of VCMRR031 as recommended by WMS in the 5/3/23 WMS Report. Mr. Goff seconded the motion. The motion carried with two objections from the Independent Generator (Calpine, Luminant) Market Segment, and ten abstentions from the Cooperative (4) (GSEC, LCRA, PEC, STEC), Independent Generator (2) (Jupiter Power, ENGIE), and Municipal (4) (DME, CPS Energy, Austin Energy GP&L) Market Segments.** *(Please see ballot posted with Key Documents.)*

Mr. Lange requested that entities objecting or abstaining on VCMRR031 provide reasoning for the objections and abstentions to TAC leadership prior to the June 19, 2023 Reliability and Markets Committee Meeting and June 20, 2023 Board of Directors Meeting.

*2023 WMS Goals*

Mr. Blakey presented the 2023 WMS Goals for TAC consideration. Mr. Lange noted this item could be considered in the [Combined Ballot](#Combined_Ballot_2).

*TAC action items for WMS*

Mr. Blakey presented the list of completed WMS Action Items and TAC Assignments. Mr. Lange directed

the following TAC Assignments be removed:

* Address Day-Ahead Market (DAM) Performance (DAM delays)
* Review the issues raised along with the impacts of OBDRR031 and return to the October 27, 2021 TAC meeting with recommendations
* Review issues related to Addition of Weatherization Inspection Fees to the ERCOT Fee Schedule and Clarification of Generation

Credit Finance Sub Group (CFSG) Report (see Key Documents)

*Approval of CFSG Leadership*

*Approval of CFSG Membership*

Brenden Sager reviewed CFSG activities; and presented the proposed CFSG leadership of Mr. Sager, Austin Energy, as Chair and Loretto Martin, NRG as Vice-Chair. Mr. Lange noted this item could be considered in the [Combined Ballot](#Combined_Ballot_2). Mr. Sager stated that additional CFSG members would be presented for TAC consideration at the June 27, 2023 TAC meeting.

ERCOT Reports (see Key Documents)

*ERCOT Contingency Reserve Service (ECRS) Market Readiness*

Matt Mereness presented an update on the ECRS project, including the current items in flight and reminded Market Participants of the June 6 through June 8, 2023 project Go-Live.

*Real-Time Cooptimization (RTC) Update*

Mr. Mereness provided an update on the status of the RTC project and encouraged Market Participants to attend the June 20, 2023 ERCOT Board of Directors Meeting for further details.

*Review of Potential DAM Price Correction for Certain Days in February-March ‘23 – Inclusion of Energy Storage Resources (ESRs) and Controllable Load Resources (CLRs) in Load Zone Pricing*

Matt Young summarized the error in the ERCOT Market Management System (MMS) that impacted Load Zone calculations for both the Real-Time Market (RTM) and the DAM; noted that ERCOT issued Market notice M-C030923-01 on March 9, 2023 and an updated notice, M-C030923-02, on April 25, 2023; presented the analysis of the price and Settlement impacts for the 16 Operating Days (ODs) in the DAM; and stated that potential price corrections will be considered at the June 19, 2023 Reliability and Market Committee Meeting and the June 20, 2023 ERCOT Board of Directors Meeting.

*Firm Fuel Supply Service Settlement Report*

Magie Shanks presented the Annual Settlement Report regarding the FFSS Hourly Standby Fee payments and fuel replacement costs of the FFSS program during the November 15, 2022 through March 15, 2023 obligation period.

Other Business

*Incorporation of Other Binding Documents into Protocols/Guides*

Ms. Boren noted that recent NPRR and Market Guide revisions that incorporate PUCT approval into the Revision Request process will be effective in the Protocols and Guides on June 1, 2023; that PUCT approval applies to all Other Binding Documents; and that ERCOT will work with stakeholders to incorporate Other Binding Documents into Protocols and Market Guides where appropriate.

Combined Ballot

**Mr. Sams moved to approve the Combined Ballot as follows:**

* **To approve the March 21, 2023 TAC Meeting Minutes as presented**
* **To approve the March 31, 2023 TAC Meeting Minutes as presented**
* **To approve the April 10, 2023 TAC Meeting Minutes as presented**
* **To recommend approval of NPRR1167 as recommended by PRS in the 5/10/23 PRS Report**
* **To recommend approval of NPRR1169 as recommended by PRS in the 5/10/23 PRS Report as amended by the 5/22/23 Calpine comments as revised by TAC**
* **To table NPRR1177**
* **To recommend approval of NPRR1161 as recommended by PRS in the 4/13/23 PRS Report**
* **To table NPRR1163**
* **To recommend approval of NPRR1166 as recommended by PRS in the 5/10/23 PRS Report**
* **To recommend approval of NPRR1168 as recommended by PRS in the 5/10/23 PRS Report**
* **To recommend approval of NPRR1178 as recommended by PRS in the 5/10/23 PRS Report**
* **To table OBDRR045**
* **To recommend approval of RMGRR172 as recommended by RMS in the 4/4/23 RMS Report**
* **To recommend approval of NOGRR246 as recommended by ROS in the 4/6/23 ROS Report**
* **To recommend approval of NOGRR253 as recommended by ROS in the 5/4/23 ROS Report**
* **To approve 2023 WMS Goals as submitted**
* **To approve the 2023 CFSG Leadership as presented (Brenden Sager, Austin Energy, Chair; Loretto Martin, NRG, Vice Chair)**

**David Kee seconded the motion. The motion carried with one abstention from the Independent Generator (Luminant) Market Segment.** *(Please see ballot posted with Key Documents.)*

Ms. Smith adjourned the May 23, 2023 TAC meeting at 1:13 p.m.

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

   <https://www.ercot.com/calendar/05232023-TAC-Meeting-_-Webex> [↑](#footnote-ref-2)