**APPROVED**

**Minutes of the Technical Advisory Committee (TAC) Meeting**

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

**Monday, April 15, 2024 – 9:30 a.m.**

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| *TAC Representatives:* |  |  |
| Barnes, Bill | Reliant Energy Retail Services (Reliant) |  |
| Blakey, Eric | Pedernales Electric Cooperative (PEC) |  |
| Bonskowski, Ned | Luminant Generation (Luminant) |  |
| Campo, Curtis | Garland Power and Light (GP&L) | Alt. Rep. for Russell Franklin Via Teleconference |
| Carpenter, Jeremy | Tenaska Power Services (Tenaska( |  |
| Dreyfus, Mark | City of Eastland |  |
| Fehrenbach, Nick | City of Dallas |  |
| Gaytan, Jose | Denton Municipal Electric (DME) | Via Teleconference |
| Goff, Eric | Residential Consumer | Via Teleconference |
| Haley, Ian | Morgan Stanley  |  |
| Hanson, Kevin | National Grid (NG) Renewables |  |
| Harpole, Jay | AP Gas & Electric (APG&E) | Via Teleconference |
| Helton, Bob | ENGIE North America (ENGIE) |  |
| Hendrix, Chris | Demand Control 2 | Via Teleconference |
| Holt, Blake | Lower Colorado River Authority (LCRA) | Via Teleconference |
| John, Ebby | CenterPoint (CNP)  | Alt. Rep. for David Mercado  |
| Kee, David | CPS Energy |  |
| Kent, Garret | CMC Steel Texas (CMC Steel) | Via Teleconference |
| Loving, Alicia | Austin Energy |  |
| Martin, Collin | Oncor Electric Delivery (Oncor) |  |
| Nix, Keith | Texas-New Mexico Power Company (TNMP) | Via Teleconference |
| Packard, John | South Texas Electric Cooperative (STEC) |  |
| Pokharel, Nabaraj | Office of Public Utility Counsel (OPUC) |  |
| Ross, Richard | AEP Service Corporation (AEPSC) |  |
| Sams, Bryan | Calpine Corporation (Calpine) | Via Teleconference |
| Schmitt, Jennifer | Rhythm Ops |  |
| Schubert, Eric | Lyondell Chemical |  |
| Smith, Caitlin | Jupiter Power |  |
| Surendran, Resmi | Shell Energy North America (SENA) | Via Teleconference |
| Whitehurst, Stacey | TNMP | Alt. Rep. for Keith Nix Via Teleconference |
| Withrow, David | AEPSC | Alt. Rep. for Richard Ross |
| Wise, Mike | Golden Spread Electric Cooperative (GSEC) |  |
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The following proxies were assigned:

* Mark Dreyfus to Nick Fehrenbach
* Mike Wise to John Packard
* Caitlin Smith to Bob Helton

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| *Guests:*Ainspan, Malcom | NRG | Via Teleconference |
| Aldridge, Ryan | AB Power Advisors | Via Teleconference |
| Allen, Thresa | Avangrid Renewables | Via Teleconference |
| Anderson, Connor | AB Power Advisors | Via Teleconference |
| Anderson, Kevin | Customized Energy Solutions (CES) | Via Teleconference |
| Andrus, Sydney | PGR | Via Teleconference |
| Ashley, Kristy | CES |   |
| Aus, Fred |  |  |
| Azari, David | Invenergy | Via Teleconference |
| Barati, Camron | Potomac Economics | Via Teleconference |
| Beckman, Kara | NextEra Energy | Via Teleconference |
| Bell, Brad | Solar Proponent | Via Teleconference |
| Benson, Mariah | Texas Public Power Association (TPPA) |  |
| Bertin, Suzanne |  | Via Teleconference |
| Bevill, Rob | TNMP |  |
| Bezwada, Neelima | Potomac Economics | Via Teleconference |
| Bivens, Carrie | NextEra Energy | Via Teleconference |
| Blackburn, Don | Hunt Energy | Via Teleconference |
| Block, Laurie | L Block Consulting, LLC | Via Teleconference |
| Boneck, Steve |  | Via Teleconference |
| Bulzak, Jacob | Public Utility Commission of Texas (PUCT) | Via Teleconference |
| Bunch, Kevin | EDF Trading | Via Teleconference |
| Callender, Hudson | CPS Energy | Via Teleconference |
| Chan, Vanessa | Enel | Via Teleconference |
| Cheng, Yong | LCRA | Via Teleconference |
| Chwialkowski, Todd | EDF Renewables | Via Teleconference |
| Cockrell, Justin | DC Energy | Via Teleconference |
| Coleman, Diana | CPS Energy |  |
| Cortez, Sarai | Trailstone | Via Teleconference |
| Cripe, Ramsey | SEnergy | Via Teleconference |
| Crist, Kelly | ENGIE | Via Teleconference |
| Detelich, David | CPS  | Via Teleconference |
| Dharme, Neeraja | EDFT | Via Teleconference |
| Dietert, Cole | EPE Consulting | Via Teleconference |
| Dollar, Zachary | PUCT | Via Teleconference |
| Donohoo, Ken | OwlERC |  |
| Duensing, Allison | Sarac Energy | Via Teleconference |
| Ewing, Lee | CPower Energy | Via Teleconference |
| Feitshans, Charles | TC Energy | Via Teleconference |
| Gilman, Portia | Yes Energy | Via Teleconference |
| Goff, Eric | NextEra Energy Resources NOGRR245 Discussion Only |  |
| Goodall, Tyler |  | Via Teleconference |
| Harvey, Julia | Texas Electric Cooperatives (TEC) | Via Teleconference |
| Hedrick, Bridget  | CES |  |
| Heith, Mattie | Calpine | Via Teleconference |
| Hernandez, Evelyn | Nordex | Via Teleconference |
| Hernandez, Jessica | CNP | Via Teleconference |
| Henson, Martha | Oncor | Via Teleconference |
| Hjaltman, Courtney | OPUC | Via Teleconference |
| Horstmyer, Reid | Altop Energy | Via Teleconference |
| Hubbard, John Russ | Texas Industrial Energy Consumers (TIEC) |  |
| Jamar, Ben | ECI | Via Teleconference |
| Jewell, Michael | Jewell and Associates | Via Teleconference |
| Jha, Monica | Vistra | Via Teleconference |
| Júlia, Ana |  | Via Teleconference |
| Lee, Jim | CNP |  |
| Lin, Blake | Potomac Economics | Via Teleconference |
| Lotter, Eric | GridMonitor | Via Teleconference |
| Jewell, Michael | Jewell and Associates | Via Teleconference |
| Kaepplinger, Ashley | Enel | Via Teleconference |
| Keefer, Andrew | City of Denton | Via Teleconference |
| Keller, Jenna | Potomac Economics | Via Teleconference |
| Kemper, Jason | EDFR | Via Teleconference |
| Kepple, Annie | University of Texas at Austin | Via Teleconference |
| Khayat, Maribel | CNP | Via Teleconference |
| Kilroy, Taylor | TPPA | Via Teleconference |
| Kimbrough, Todd |  | Via Teleconference |
| Koz, Brian |   | Via Teleconference |
| Kremling, Barry | GVEC | Via Teleconference |
| Kurthakoti, Divya | Orsted | Via Teleconference |
| Leverett, Travis | WETT | Via Teleconference |
| Loew, Beverly | Goff Policy |  |
| Lotter, Eric | GridMonitor | Via Teleconference |
| Macaraeg, Tad | Stem | Via Teleconference |
| Macías, Jesse | AEP Texas  | Via Teleconference |
| Martin, Loretto | NRG | Via Teleconference |
| McClellan, Suzi | Good Company Associates | Via Teleconference |
| McD Wyman, Constance | AEP | Via Teleconference |
| McDonald, Jeff | Potomac Economics | Via Teleconference |
| McKeever, Debbie | Oncor | Via Teleconference |
| McMurray, Creighton |  | Via Teleconference |
| Melaerts, Sebastien | 61 Commodities | Via Teleconference |
| Moore, Sylvain | Boralex, Inc. | Via Teleconference |
| Morris, Sandy | WETT | Via Teleconference |
| Munter, Megan | GE | Via Teleconference |
| Nease, Nelson | Cross Oak Group | Via Teleconference |
| Nicholson, Tyler | PUCT | Via Teleconference |
| Nguyen, Andy | Constellation Energy Generation | Via Teleconference |
| Orr, Rob | Lone Star Transmission | Via Teleconference |
| Pearson, Kelsey | Longhorn Power |  |
| Pyka, Greg | SEnergy | Via Teleconference |
| Ratliff, Shannon |  | Via Teleconference |
| Reasor, Deidra | GVEC | Via Teleconference |
| Reed, Cyrus | Sierra Club | Via Teleconference |
| Rich, Katie | Vistra |  |
| Richmond, Michele | Texas Competitive Power Advocates (TCPA) | Via Teleconference |
| Ritch, John | Trafigura | Via Teleconference |
| Rochelle, Jennifer | CES |  |
| Sager, Brenden | Austin Energy | Via Teleconference |
| Sandidge, Clint | Calpine | Via Teleconference |
| Scott, Kathy | CNP |  |
| Sersen, Juliana | Baker Botts  | Via Teleconference |
| Shaffer, Jarred | Office of Texas Governor Greg Abbott | Via Teleconference |
| Siddiqi, Shams | Crescent Power Consulting | Via Teleconference |
| Sisk, Linden | IEEE | Via Teleconference |
| Smith, Mark | Mark Smith Law, LLC  | Via Teleconference |
| Snyder, Bill | AEP Texas | Via Teleconference |
| Spencer, Mark | Linebacker Power |  |
| Stephens, Caleb |  | Via Teleconference |
| Stephenson, Zach | TEC | Via Teleconference |
| Tay, Sing | AES | Via Teleconference |
| Teng, Shuye | Constellation | Via Teleconference |
| True, Roy | ACES | Via Teleconference |
| Turner, Lucas | STEC | Via Teleconference |
| Van Winkle, Kim | PUCT | Via Teleconference |
| Velasquez, Ivan | Oncor | Via Teleconference |
| Villasana, Kristi | NBU | Via Teleconference |
| Viswanathan, Jay |  | Via Teleconference |
| Wagner, Julia | PUCT |  |
| Wall, Perrin | CNP | Via Teleconference |
| Watson, Markham |  | Via Teleconference |
| White, Lauri | AEP Texas | Via Teleconference |
| Williams, Wes | Bryan Texas Utilities | Via Teleconference |
| Wilson, Joe Dan | GSEC | Via Teleconference |
| Wittmeyer, Bob | Longhorn Power |  |
| Zambrano, Tadeo | SEnergy | Via Teleconference |
| Zang, Hailing | Potomac Economics | Via Teleconference |
| Zhang, Mandy | GEUS | Via Teleconference |
| Zito, David | Gabel Associates | Via Teleconference |
|  |  |  |
| *ERCOT Staff:* |  |  |
| Abbott, Kristin |  | Via Teleconference |
| Albracht, Brittney |  |  |
| Anderson, Troy |  |  |
| Arth, Matt |  | Via Teleconference |
| Benavides, Marcos |  | Via Teleconference |
| Billo, Jeff |  |  |
| Boren, Ann |  |   |
| Butler, Luke |  | Via Teleconference |
| Carswell, Cory |  | Via Teleconference |
| Castillo, Leo |  | Via Teleconference |
| Clifton, Suzy |  |   |
| Cyphers, Darrell |  | Via Teleconference |
| Day, Betty |  | Via Teleconference |
| Deller, Art |  | Via Teleconference |
| Devadhas Mohanadha, Thinesh |  | Via Teleconference |
| Drake, Gordon |  |  |
| Du, Pengwei |  | Via Teleconference |
| Dwyer, Davida |  | Via Teleconference |
| El-Madhoun, Mohamed |  | Via Teleconference |
| Fernandes, Jenifer |  | Via Teleconference |
| Fohn, Doug |  | Via Teleconference |
| Garcia, Freddy |  | Via Teleconference |
| Gnanam, Prabhu |  |  |
| Golen, Robert |  | Via Teleconference |
| González, Ino |  | Via Teleconference |
| Gravois, Patrick |  | Via Teleconference |
| Green, Alex |  | Via Teleconference |
| Hanson, Pamela |  |   |
| Huang, Fred |  | Via Teleconference |
| Jenkins, Darrell |  | Via Teleconference |
| King, Ryan |  |  |
| Lee, Alex |  | Via Teleconference |
| Levine, Jonathan |  |  |
| Maggio, Dave |  | Via Teleconference |
| Mago, Nitika |  |  |
| McGuire, Joshua |  | Via Teleconference |
| Mereness, Matt |  |  |
| Miller, Megan |  | Via Teleconference |
| Moore, Ava |  | Via Teleconference |
| Morales, Mia |  | Via Teleconference |
| Opheim, Calvin |  |  |
| Parakkuth, JP |  | Via Teleconference |
| Phillips, Cory |  |  |
| Ragsdale, Kenneth |  |  |
| Rainwater, Kim |  |  |
| Ramthun, Eli |  | Via Teleconference |
| Roberts, Randy |  | Via Teleconference |
| Sanchez, Daniel |  | Via Teleconference |
| Shanks, Magie |  | Via Teleconference |
| Solis, Stephen |  | Via Teleconference |
| Springer, Agee |  | Via Teleconference |
| Thompson, Chad |  | Via Teleconference |
| Troublefield, Jordan |  |  |
| Urquhart, Ike |  | Via Teleconference |
| Vega, Lupe |  | Via Teleconference |
| Wasik-Gutierrez, Erin |  |  |
| Woodfin, Dan |  |  |

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

Caitlin Smith called the April 15, 2024 meeting to order at 9:30 a.m.

Antitrust Admonition

Ms. Smith 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 27, 2024*

Ms. Smith noted this item could be considered in the [Combined Ballot](#Combined_Ballot).

Meeting Updates

*April 11, 2024 Public Utility Commission of Texas (PUCT) Meeting*

Ms. Smith reviewed the disposition of items considered at the April 11, 2024 PUCT meeting.

Review of Revision Request Summary/ERCOT Market Impact Statement/Opinions (See Key Documents)

Ann Boren presented a Revision Request Summary, including the ERCOT Market Impact Statements, ERCOT Opinions, Credit Finance Subgroup (CFSG) Review, budgetary impacts, and reasons for revisions for Revision Requests to be considered by TAC. Jeff McDonald noted the Independent Market Monitor (IMM) opinions for Revision Requests to be considered by TAC.

ERCOT Reports (see Key Documents)

*Update on 2023 Maximum Daily Resource Planned Outage Capacity (MDRPOC) Performance and Methodology Review Timeline*

Luke Butler summarized the updated timeline for the review of 2023 MDRPOC performance and methodology, responded to Market Participant questions and concerns, requested stakeholders email their requests for additional analysis for the performance review by April 29, 2024 to OperationsAnalysis@ercot.com, and stated that ERCOT will present the final scope of the performance review at the May 22, 2024 TAC meeting.

*ERCOT Independent Review – San Antonio South Reliability II Regional Planning Group (RPG) Project*

Prabhu Gnanam presented the ERCOT independent review of the Tier 1 San Antonio South Reliability II RPG Project, a comparison of options, and the ERCOT recommendation for Option 14 to address the reliability need in the San Antonio area, located in Guadalupe, Wilson, and Atascosa Counties in the South and South-Central Weather Zones. Mr. Gnanam also responded to Market Participant questions and concerns. Ms. Smith noted this item could be considered in the [Combined Ballot](#Combined_Ballot).

*Proposed revisions to Board Policies and Procedures*

Kim Rainwater presented the proposed revisions to the ERCOT Board Policies and Procedures and responded to Market Participants questions and concerns. Jon Levine reviewed the timeline for consideration at the June 18, 2024 ERCOT Board (Board) meeting. Ms. Smith encouraged Market Participants to submit additional proposed redlines to Ms. Rainwater and/or Jonathan Levine in advance of the May 22, 2024 TAC meeting, noted that a TAC vote is not required, and requested Market Participants notify TAC leadership if formal action on this item is desired.

*ERCOT Contingency Reserve Service (ECRS) Deployment/Release Triggers for Summer 2024*

Nitika Mago reminded Market Participants of the TAC request for ERCOT Staff to review ECRS concerns and potential alternate solutions to the 2024 Ancillary Service Methodology by April 30, 2024, summarized the analysis, and highlighted ERCOT and IMM Staff discussion on the issues. Ms. Mago noted that based on the reliability risks, analysis, and current tools available, ERCOT discouraged further changes to the 2024 Ancillary Service methodology. However, Ms. Mago stated that ERCOT did support incremental changes, including Nodal Protocol Revision Request (NPRR) 1224, ECRS Manual Deployment Triggers, for a summer 2024 implementation and the “Standing ECRS Deployment” concept for a future Revision Request, until a more holistic review of the issues could be completed in consideration of future PUCT and legislative direction. Ms. Mago noted that at the April 5, 2024 Protocol Revision Subcommittee (PRS) meeting, PRS granted NPRR1224 Urgent status and tabled it. Some Market Participants expressed concern for the summer implementation timeline with action taken by PRS; and concern for the costs of reliability, pricing outcomes, alternate solutions, and additional analysis. Ms. Smith noted that NPRR1224 would be considered at the May 9, 2024 PRS meeting.

PRS Report (see Key Documents)

Diana Coleman reviewed PRS activities and presented NPRR1212 and 2024 PRS Goals for TAC consideration.

*NPRR1212, Clarification of Distribution Service Provider’s Obligation to Provide an ESI ID*

John Packard reviewed the 4/12/24 STEC comments to NPRR1212. Doug Fohn reviewed the 4/12/24 ERCOT comments to NPRR1212. Some Market Participants questioned if NPRR1212, as written, fully resolves the change that it proposes. Katie Rich presented Planning Guide Revision Request (PGRR) 114, Related to NPRR1212, Clarification of Distribution Service Provider’s Obligation to Provide an ESI ID, for TAC consideration.

**Eric Goff moved to approve the Mini Combined Ballot as follows:**

* **To recommend approval of NPRR1212 as recommended by PRS in the 4/5/24 PRS Report**
* **To recommend approval of PGRR114 as recommended by ROS in the 4/4/24 ROS Report**

**Kevin Hanson seconded the motion. The motion carried with four abstentions from the Cooperative (GSEC, LCRA, PEC, STEC) Market Segment.** *(Please see ballot posted with Key Documents.)*

*PRS Goals*

Collin Martin noted this item could be considered in the [Combined Ballot](#Combined_Ballot).

Revision Requests Tabled at TAC (See Key Documents)

*Nodal Operating Guide Revision Request (NOGRR) 255, High Resolution Data Requirements*

Ned Bonskowski reviewed the 4/11/24 Luminant comments to NOGRR255.

**Mr. Bonskowski moved to recommend approval of NOGRR255 as recommended by ROS in the 3/7/24 ROS Report as amended by the 4/11/24 Luminant comments. Bill Barnes seconded the motion**. Cory Phillips reviewed applicable motions and the balloting process. Market Participants discussed the potential for consensus on NOGRR255. Mr. Bonskowski withdrew his motion. Mr. Barnes withdrew the second. Mr. Martin noted this item could be considered in the [Combined Ballot](#Combined_Ballot).

*Other Binding Document Revision Request (OBDRR) 046, Related to NPRR1188, Implement Nodal Dispatch and Energy Settlement for Controllable Load Resources*

*OBDRR051, Related to NPRR1216, Implementation of Emergency Pricing Program*

*Planning Guide Revision Request (PGRR) 105, Deliverability Criteria for DC Tie Imports*

TAC took no action on these items.

Retail Market Subcommittee (RMS) Report (See Key Documents)

Debbie McKeever reviewed RMS activities.

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

Ms. Rich reviewed ROS activities and presented Revision Requests for TAC consideration.

*PGRR112, Dynamic Data Model and Full Interconnection Study (FIS) Deadline for Quarterly Stability Assessment*

Mr. Martin noted this item could be considered in the [Combined Ballot](#Combined_Ballot).

*PGRR114*

This item was considered above with NPRR1212.

Wholesale Market Subcommittee (WMS) Report (see Key Documents)

Eric Blakey reviewed WMS activities.

Large Flexible Load Task Force (LFLTF) Report

Agee Springer reviewed LFLTF activities.

Real-Time Co-optimization plus Batteries Task Force (RTCBTF) (see Key Documents)

*Reliability Unit Commitment (RUC) Capacity Short White Paper*

Matt Mereness reviewed RTCBTF activities; encouraged Participants to attend the limited series of RTC+B Technical Workshops on April 18, May 6, May 15, and June 6, 2204; and presented the RUC Capacity Short White Paper for TAC consideration. Mr. Martin noted this item could be considered in the [Combined Ballot](#Combined_Ballot).

Other Business (see Key Documents)

*2025 Block Calendar*

Ms. Boren presented the draft 2025 Block Calendar and noted potential changes on the frequency of TAC and subcommittee meetings in consideration of the Board schedule. Market Participants expressed support for meeting efficiencies. Ms. Boren offered to provide the revised draft 2025 Block Calendar at the May 22, 2024 TAC meeting.

*NOGRR245, Inverter-Based Resource (IBR) Ride-Through Requirements Update*

Caitlin Smith reminded Market Participants that NOGRR245 would be considered at the April 22, 2024 Reliability and Markets Committee meeting and the April 23, 2024 Board meeting. Dan Woodfin stated that ERCOT would be filing additional clarifications to NOGRR245, requesting the Board remand NOGR245 to TAC to address the reliability concerns and review the broader implications with NOGRR245 as recommended by TAC in the 3/27/24 TAC Report. Mr. Goff, representing NextEra, noted that Joint Commenters would file further clarifications in opposition to the remand and request that the Board adopt NOGRR245 as recommended by TAC in the 3/27/24 TAC Report without delay. Participants and ERCOT Staff discussed potential forums for additional discussion of the issues.

Combined Ballot

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

* **To approve the March 27, 2024 TAC Meeting Minutes as presented**
* **To endorse San Antonio South Reliability II RPG project – Option 14 as presented by ERCOT**
* **To approve the 2024 PRS Goals as presented**
* **To recommend approval of NOGRR255 as recommended by ROS in the 3/7/24 ROS Report as amended by the 4/11/24 Luminant comments**
* **To recommend approval of PGRR112 as recommended by ROS in the 4/4/24 ROS Report**
* **To endorse the RTC+B Task Force RUC Capacity Short White Paper as presented**

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

Mr. Martin adjourned the April 15, 2024 TAC meeting at 1:39 p.m.

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

<https://www.ercot.com/calendar/04152024-TAC-Meeting> [↑](#footnote-ref-2)