**November 6, 2023**

**TO:** NAESB Wholesale Electric Quadrant Executive Committee and Interested Industry Participants

**FROM:** Caroline Trum, Director, Wholesale Electric Quadrant

**RE:** Wholesale Electric QuadrantExecutive Committee Meeting Draft Minutes

**NORTH AMERICAN ENERGY STANDARDS BOARD**

**WHOLESALE ELECTRIC QUADRANT**

**EXECUTIVE COMMITTEE MEETING**

**Wednesday, October 25, 2023 – 1:00 PM – 4:00 PM Central**

**DRAFT MINUTES**

**1. Welcome**

Mr. Phillips called the meeting to order and welcomed the WEQ Executive Committee (EC) members, alternates and other participants. He thanked Ms. Hogge and BHE Eastern Gas Transmission & Storge, Inc. for hosting the meeting. Ms. Trum reminded the participants that the [NAESB Antitrust Guidelines and Other Meeting Policies](http://www.naesb.org/misc/antitrust_guidance.doc) were in effect and called the roll of the WEQ EC members and alternates. Quorum was established.

Mr. Phillips welcomed new WEQ EC members Mr. Scott with Duke Energy, Mr. Williams with Tampa Electric Company, and Mr. Handlin with PJM as well as the new alternates, Mr. Lamb with CAISO and Mr. Wharton with PJM. He thanked resigning WEQ EC members Mr. Crabtree with Tampa Electric Company, Mr. Kemmerer with SSL.com, and Mr. Hatch with PJM as well as the resigning alternates Mr. Kitchens with Southern Company Services, Mr. Zulkader with CAISO, and Mr. Dajewslo with PJM.

1. **Consent Agenda**

Mr. Phillips reviewed the consent agenda with the participants, which included the adoption of the [agenda](https://www.naesb.org/pdf4/ec102523a.docx) and the [draft meeting minutes](https://www.naesb.org/pdf4/weq_ec061323dm.docx) from the June 13, 2023 meeting. Mr. Watson moved, seconded by Mr. Robinson, to adopt the consent agenda. The motion passed a simple majority vote.

1. **Review and consider for vote the NO ACTION recommendation for 2023 WEQ Annual Plan Item 6.a.i/R22002 – Develop and/or modify as needed business practices, including the WEQ-023 Modeling Business Practice Standards, to support industry implementation of FERC Order No. 881**

Mr. Phillips reviewed the [no action recommendation](https://www.naesb.org/pdf4/weq_2023_api_6ai_R22002_rec_061323.docx). He stated that the WEQ Business Practices Subcommittee (BPS) held several meetings to review the WEQ-023 Modeling Business Practice Standards and the industry directives in FERC Order No. 881 before determining that the existing standards language accommodates ambient adjustments to transmission line ratings. Mr. Phillips stated that the subcommittee unanimously agreed to pursue a no action recommendation and that no formal comments were submitted. Mr. Johnson noted that WEQ-003 does not contain a data element for ambient adjustment ratings and asked if the standards should be modified to include it. Mr. Wood stated that the WEQ OASIS Subcommittee discussed this while evaluating a similar annual plan item but that WEQ-003 only contains terms and abbreviations used within the WEQ OASIS Suite of Standards. He explained that ambient adjustment ratings is not a term currently used in these standards.

Mr. Phillips asked if there were any questions or comments on the no action recommendation. None were offered. Mr. Buccigross moved, seconded by Mr. Williams, to adopt the no action recommendation. The motion passed a simple majority vote without opposition.

1. **Review and consider for vote the recommendation for request R23002 – Request to modify WEQ-004 Coordinate Interchange 004-17, 004-17.2, and 004-17.3 to provide clarity regarding ramp durations**

Mr. Phillips asked Mr. Buus to review the [recommendation](https://www.naesb.org/member_login_check.asp?doc=weq_R23002_rec_072023.docx). Mr. Buus stated that the recommendation was developed by the WEQ Coordinate Interchange Scheduling Subcommittee (CISS) and modifies WEQ-004-17, WEQ-004-17.2, and WEQ-004-17.3. He explained that the modifications do not change the substantive meaning of the standards but rather better clarify when modifications to an e-Tag result in changes to the ramp duration as well as the default ramp durations for the Eastern and Western Interconnections. Mr. Buus noted that formal comments were submitted by the [WEQ Standards Review Subcommittee (SRS)](https://www.naesb.org/pdf4/weq_072023_weq_srs.docx), [PJM](https://www.naesb.org/member_login_check.asp?doc=weq_072023_pjm.docx), and [Southern Company](https://www.naesb.org/member_login_check.asp?doc=weq_072023_soco.docx). He stated that the WEQ CISS met to review the comments and developed additional proposed modifications submitted as [late comments](https://www.naesb.org/member_login_check.asp?doc=weq_072023_weq_ciss_late.docx).

Mr. Phillips asked if there were any questions or comments on the recommendation. None were offered. Mr. Robinson moved, seconded by Mr. Watson, to adopt the [recommendation](https://naesb.org/member_login_check.asp?doc=weq_ec102523a1.docx) as revised by the late comments of the WEQ CISS. The motion passed a super majority vote. [Vote 1]

1. **Review and consider for vote the NO ACTION recommendation for 2023 WEQ Annual Plan Item 1.b – Review annually at a minimum, the current version of the NAESB Electronic Tagging Functional Specification and make revisions as necessary to ensure the specification continues to be supportive of applicable NERC Reliability Standards and NAESB WEQ Business Practice Standards and is reflective of current cybersecurity best practices**

Mr. Phillips asked Mr. Buus to review the [no action recommendation](https://www.naesb.org/pdf4/weq_2023_api_1b_rec_083023.docx). Mr. Buus stated that as it had been several years since a wholistic review of the NAESB Electronic Tagging (e-Tag) Functional Specification had been performed, the WEQ Coordinate Interchange Scheduling Subcommittee (CISS) performed a line-by-line examination to ensure that the specification is reflective of current standards and incorporates the appropriate cybersecurity requirements. He explained that the subcommittee held six meetings to review and discuss the document before reaching a consensus that no substantive modifications are needed at this time and developing a no action recommendation. Mr. Buus stated that no formal comments were submitted.

Mr. Buus noted that in the WEQ CISS review, participants did identify a number of non-substantive changes that would be needed to correct capitalizations, typographical errors and provide consistent use in terminology. He explained that as these modifications do not impact the functionality of the specification, subcommittee participants agreed that the revisions would be best addressed through a minor correction, following the process that has been used in the past for similar situations. Mr. Buus stated that the submitted request for minor correction is on the agenda for WEQ Executive Committee consideration and thanked the subcommittee participants who participated in the review.

Mr. Phillips asked if there were any questions or comments on the recommendation. None were offered, Mr. Watson moved, seconded by Mr. Tritch, to adopt the no action recommendation. The motion passed a simple majority vote without opposition.

1. **Review and consider for vote the NO ACTION recommendation for 2023 WEQ Annual Plan Items 5.a, 5.b, and 5.c – (a) Develop business practices that define an index/registry for qualified energy storage resources and distributed energy resources participating in the wholesale markets; (b) Develop business practices for information and reporting requirements for the qualified energy storage resources and distributed energy resources participating in the wholesale markets; (c) Develop business practices to establish performance metrics for the qualified energy storage resources and distributed energy resources participating in the wholesale markets**

Mr. Phillips reviewed the [no action recommendation](https://www.naesb.org/pdf4/weq_2023_api_5a_5b_5c_rec_091123.docx) to address2023 WEQ Annual Plan Items 5.a, 5.b, and 5.c. He explained that the WEQ BPS initially began addressing the annual plan items in February 2021, holding monthly meetings through June 2022. Mr. Phillips stated that these initial subcommittee discussions focused the development a use case to identify the types of information that may need to be exchanged in the registration of a distributed energy resource aggregation and/or an individual resource comprising an aggregation. While the WEQ BPS was working on this effort, the U.S. Department of Energy, Lawrence Berkeley National Laboratory, and Pacific Northwest National Laboratory submitted Standards Request R22001. Mr. Phillips indicated that in reviewing the request, the subcommittee participants determined that standards development in this area could provide a better understanding of the information that should be communicated regarding grid services, and in an effort to prevent duplicative standards development, agreed to shift focus to the request. He stated that the WEQ BPS reconvened to address the annual plan items beginning in March 2023 and requested participants provide white papers or additional use cases but that none were submitted. The subcommittee held five meetings between March and September 2023 before determining to pursue a no action recommendation. No formal comments were submitted.

Mr. Phillips asked if there were any questions or comments on the recommendation. Mr. Robinson moved, seconded by Mr. Williams, to adopt the no action recommendation. Mr. Watson asked if there was a reason for the lack of interest in pursuing standards development. Mr. Phillips stated that there may have been hesitance by participants as several ISOs/RTOs have not received final approval on proposals included in the compliance filings submitted in response to FERC Order Nos. 841 and 2222. He explained that during the meeting, there were comments from participants suggesting that action on these items may be premature at this time and should not preclude the possibility for future standards development.

Mr. Phillips asked if there were any additional questions. None were offered. The motion passed a simple majority vote without opposition.

1. **Consideration and Vote on Minor Correction MC23014**

Mr. Phillips asked Mr. Buus to review the [minor](https://www.naesb.org/pdf4/weq_mc23014.docx) correction. Mr. Buus stated that the minor correction proposes a number of revisions to ensure consistency within the NAESB e-Tag Functional Specification and correct typographical errors. He noted that none of the modifications are substantive changes. Mr. Phillips proposed an additional change to page 5 in the document to correct an additional typographical error. There was general consensus to make the revision.

Mr. Phillips asked if there were any questions or comments on the minor correction. None were offered. Mr. Buccigross moved, seconded by Mr. Tritch, to adopt the minor correction as modified during the meeting. The motion passed a simple majority vote without opposition.

1. **Update on Coordination Activities with NERC**

Mr. Phillips provided the [update](https://www.naesb.org/pdf4/weq_ec102523w3.docx). He stated that NAESB staff continues to coordinate with NERC and noted that recent topics of discussion have included NERC Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination and NERC Project 2022-01 Reporting ACE Definition and Associated Terms, both efforts being monitored by the WEQ SRS, as well as the work by the WEQ and RMQ to develop business practices that may be necessary to secure electronic communications for DERs. Mr. Phillips stated that NERC staff has indicated that the organization anticipates the cold weather-related reliability standards to be filed with the FERC before the end of the year and that any changes to ACE-related definitions should be finalized in this timeframe as well. He noted that the proposed 2024 WEQ Annual Plan includes an item for the WEQ BPS to review the cold weather standards approved by NERC and develop or modify business practice standards to support the reliability requirements.

Mr. Phillips stated that during the kick-off meeting of the WEQ BPS, WEQ Cybersecurity Subcommittee, and RMQ BPS, participants noted that there were several industry white papers which could be beneficial references for standards development, including those developed by NERC. He indicated that NAESB staff reached out to NERC who provided a white paper developed by its System Planning Impacts from DER Working Group (SPIDERWG) and Security Integration and Technology Enablement Subcommittee (SITES) and also noted other industry reports referenced in the creation of the white paper. Mr. Phillips stated that the NAESB subcommittees reviewed and discussed these documents during the October 23, 2023 meeting.

1. **Subcommittee/Development Updates**

Triage Subcommittee

Mr. Booe provided the update. He stated that since the March WEQ EC meeting, there have been triage dispositions for six requests. Mr. Booe stated that Standards Request R23001, which proposed revisions to the force majeure provisions of the NAESB Base Contract for Sale and Purchase of Natural Gas was [assigned](https://www.naesb.org/pdf4/tr050423disposition.docx) to the WGQ Contracts Subcommittee He noted that this request resulted in the development of a no action which will be considered by the WGQ EC during its meeting on October 26, 2023.

Mr. Booe stated that R23002, was [assigned](https://www.naesb.org/pdf4/tr060823disposition.docx) to the WEQ CISS and the recommended modifications were adopted by the WEQ EC earlier in the meeting. He noted that in August, three requests, R23003, R23004, and R23005 were [assigned](https://www.naesb.org/pdf4/tr080823disposition.docx) to the WGQ BPS and in September one request, R23006, was [assigned](https://www.naesb.org/pdf4/tr082823disposition.docx) to the RMQ ESPI Task Force.

Business Practices Subcommittee

Mr. Phillips provided the update. He stated that WEQ BPS is currently working jointly with the WEQ Cybersecurity Subcommittee and RMQ BPS to consider cybersecurity protections to secure DER electric communications as part of 2023 WEQ Annual Plan Item 3.c. Mr. Phillips noted that the subcommittees have reviewed white papers developed by NERC, NIST, and the U.S. DoE and are now working to develop potential use cases. He indicated that the subcommittees have meetings scheduled through the end of the year.

OASIS Subcommittee

Mr. Wood provided the update. He stated that the WEQ OASIS Subcommittee has continued to hold regular meetings as participants address the annual plan assignment to review the WEQ OASIS Suite of Business Practice Standards and identify any modifications that may be needed based on operational experiences from the implementation of WEQ Version 003.3. Mr. Wood explained that in discussing this item, the participants discovered unrelated changes that should be made regarding the response time limits for resales occurring off OASIS. He noted that subcommittee leadership would like to propose a new 2023 WEQ Annual Plan Item to address this issue.

Coordinate Interchange Scheduling Subcommittee

Mr. Buus provided the update. He stated that the WEQ CISS held a number of meetings between May and August to develop recommendations in response to its annual plan assignment and Standards Request R23002. Mr. Buus noted that the proposed 2024 WEQ Annual Plan includes two assignments to the WEQ CISS, the annual review of the NAESB e-Tag Functional Specification and consideration of modifications to the active approval process for e-Tags. He explained that changes to this process may require a number of substantive revisions and could be a significant standards development effort.

Standards Review Subcommittee

Mr. Robinson provided the update. He stated that beyond efforts to review submitted requests and subcommittee recommendations, the WEQ SRS held a meeting in August to review the draft 2024 – 2026 NERC Reliability Standards Development Plan. Mr. Robinson explained that the subcommittee participants identified nine NERC projects included in the development plan that are or may be coordinated with NAESB efforts. He noted that the feedback from the WEQ SRS was forwarded to the NAESB Managing Committee and subsequently provided to NERC staff.

Cybersecurity Subcommittee

Mr. Buccigross provided the update. He stated that in addition to the joint work with the WEQ and RMQ BPS, the WEQ Cybersecurity Subcommittee has scheduled a meeting for November 9, 2023 to discuss recent industry activities regarding potential changes to certificate authority best practices for issuing digital certificates. Mr. Buccigross explained that some entities which own and operate web browsers have indicated a desire to transition from a public trust to a private trust standard to verify any digital certificate interacting with its browser. He stated that while this is a long-term consideration that would take multiple years to implement, the deprecation of public trust by a web browser would impact how digital certificates are issued by any certificate authority, including NAESB ACAs, and that these changes could affect client digital certificate usage as well.

1. **Adoption of the 2023 WEQ Annual Plan Adopted by the Board of Directors on December 8, 2022**

Mr. Phillips reviewed the [proposed changes](https://www.naesb.org/pdf4/weq_ec102523w1.docx) to the 2023 WEQ Annual Plan. Mr. Wood proposed the addition of Item 2.b – Review the WEQ Business Practice Standards for needed modifications regarding Resales “off OASIS.” Mr. Phillips asked if there were any other proposed modifications. None were offered. Mr. Watson moved, seconded by Mr. Johnson, to adopt the proposed modifications to the 2023 WEQ Annual Plan with the [additional revisions](https://naesb.org/pdf4/weq_ec102523a2.docx) discussed during the meeting. The motion passed a simple majority vote without opposition.

1. **Adoption of the Proposed 2024 WEQ Annual Plan adopted by the Annual Plan Subcommittee**

Mr. Phillips reviewed the [proposed 2024 WEQ Annual Plan](https://www.naesb.org/pdf4/weq_ec102523w2.docx). He proposed that the assignment for the item related to DER cybersecurity, 2024 WEQ Annual Plan Item 3.c, be updated to reflect that it is a joint effort between the WEQ BPS, WEQ Cybersecurity Subcommittee, RMQ BPS, and RMQ Information Requirements/Technical Electronic Implementation Subcommittee. Mr. Watson stated that the RMQ EC will be considering the same modification to the 2024 RMQ Annual Plan during the meeting on October 26, 2023. There was no objection to making this revision.

Mr. Phillips explained that Items 5.a and 5.b address the development of standards to support the integration of DER management systems and DER/DER aggregation registries by the industry. He proposed that the general descriptive language for 2024 WEQ Annual Plan Item 5 be modified to reflect that these efforts are broader than and not specific to FERC Order Nos. 841 or 2222. Mr. Phillips also noted that recent industry discussion seems to indicate that standards to address DER management systems may be of a greater priority for the industry and suggested this effort be addressed first as Item 5.a. There was general agreement to incorporate these changes.

Mr. Watson stated that the standard development efforts proposed by 2024 WEQ Annual Plan Items 5.a and 5.b may impact retail market participants in addition to wholesale market participants and suggested that these be made joint efforts with the RMQ BPS. Mr. Phillips noted that a joint assignment would not necessarily mean that both the WEQ and RMQ would have to adopt standards and suggested that the subcommittees follow a similar process to that used in the development of demand response and energy efficiency related standards. He explained that the WEQ and RMQ worked jointly to develop initial standards and then separately developed any additional standards needed to address market-specific conditions. Mr. Phillips stated that this resulted in separate but complementary WEQ and RMQ Business Practice Standards. There was general support to make the two items joint efforts and create separate annual plan assignments for the WEQ BPS to consider further standards development needed to support wholesale market specific considerations.

Mr. Phillips asked if there were any additional modifications to the proposed 2024 WEQ Annual Plan. None were offered. Mr. Watson moved, seconded by Mr. Robinson, to adopt the proposed 2024 WEQ Annual Plan with the [additional revisions](https://naesb.org/pdf4/weq_ec102523a3.docx) discussed during the meeting. The motion passed a simple majority vote without opposition.

1. **Publication Schedule Review**

Mr. Booe provided the update. He stated that the [WGQ](https://www.naesb.org/misc/wgq_publication_schedule_ver004_1.doc) published Version 4.0 on September 29, 2023 and the [WEQ](https://www.naesb.org/misc/weq_publication_schedule_ver004_1.doc) published Version 004 on July 31, 2023. Mr. Booe thanked Mr. Woods for his assistance in reviewing the application of all the standards revisions made as part of WEQ Version 004 prior to publication. He noted that the [RMQ](https://www.naesb.org/misc/retail_publication_schedule_ver004.docx) is scheduled to publish Version 4.0 on December 13, 2023.

1. **Board of Directors, Board Committee, and Regulatory Updates**

Mr. Booe provided the [membership update](https://www.naesb.org/misc/membership_report_102523.docx), stating that NAESB currently has 278 members. He noted that since the beginning of the year, the WEQ has lost five members but gained three and the WGQ has lost nine members but gained twelve, with new memberships likely attributable to recent contract standards development efforts. Mr. Booe stated that the RMQ has had one new member and while there was one resignation, the member switched their membership from the RMQ to WGQ. He asked that participants to verify their company contact information and inform the NAESB office of any needed updates.

Mr. Booe stated that the NAESB Board of Directors last met on [September 7, 2023](https://www.naesb.org/pdf4/bd090723a.docx) and that the meeting also served as the annual Meeting of the Members and Strategic Session for the Board. He noted that during the meeting, former FERC Chairman Norman Bay provided remarks regarding his perspective on the future direction of the industry and a second guest speaker, Mason Fried from the Climate Center at ICF, reviewed a recently released report regarding the use of new data analytics to support weather projections concerning climate change. The final meeting of the Board of Directors for the year will be held on December 14, 2023. Mr. Booe noted that Kevin Book with Clearview Partners, who has been participating with NAESB on the National Petroleum Council’s greenhouse gas study, has been invited as a guest speaker for the meeting.

Mr. Booe stated that the Managing Committee last met on [September 5, 2023](https://www.naesb.org/pdf4/managing090523notes.docx). He noted that during the meeting, the committee conducted the annual staff review and discussed the status of the Distributed Ledger Technology pilot project, industry gas-electric harmonization related activities, and the efforts of the WGQ Contracts Subcommittee to address Standards Request R23001. Mr. Booe indicated that the Managing Committee will likely be scheduling an additional meeting before the end of the year to review the proposed 2024 budget before presentation to the NAESB Board of Directors in December.

Mr. Booe stated that the Board Revenue Committee last met on [August 29, 2023](https://www.naesb.org/pdf4/bd_revenue082923notes.docx) to review the committee’s standing agenda items, NAESB communications, membership, and the organization’s revenue streams. He noted the recent changes made to the non-member participation policies that followed a review by the Committee. Mr. Booe stated that while there has been an increase in membership dues, the non-member participation fees have not changed since implemented in 2011. The next meeting of the Board Revenue Committee will be on December 6, 2023.

Mr. Booe noted that the Board Strategy Committee also has a meeting scheduled for December 6, 2023 to review the proposed 2024 WEQ Annual Plans and develop the 2023 – 2025 NAESB Strategic Plan which will be considered for adoption by the NAESB Board of Directors.

Mr. Booe stated that since the last WEQ EC meeting, NAESB has made two regulatory filings with the FERC regarding the publication of [WEQ Version 004](https://www.naesb.org/pdf4/naesb_073123_weq_version_004_report.pdf) and [WGQ Version 4.0](https://www.naesb.org/pdf4/naesb_092923_wgq_version_40_report.pdf). He noted that on July 28, 2023, the Chair of the NAESB Board of Directors sent a [letter](https://www.naesb.org/pdf4/md_correspondence_072823.docx) to membership regarding the release of the final report on the Gas Electric Harmonization Forum activities. Copies of the report were provided to FERC Chairman Willie L. Phillips, the President and CEO of NERC, Jim Robb, and the Executive Director of NARUC, Greg White.

1. **Other Business**

Ms. Trum stated that the U.S. DoE has recently reached out to NAESB regarding the potential creation of a model contract for the acquisition of distribution services. She indicated that this is an area of standards development recommended by the U.S. DoE in its September 2023 report, Pathways to Commercial Liftoff: Virtual Power Plants. The report notes that a standardized agreement could be used to support distribution-level transactions across various jurisdictions and that the development of terms and conditions consistent with FERC Order No. 2222 could facilitate more seamless wholesale market participation by DERs. Mr. Booe stated that while no official request has been made, there has been interest expressed in NAESB facilitating development of the model contract. He noted that there are an increasing number of activities within the electric sector that span both wholesale and retail markets and that NAESB’s ability to bring together distribution and wholesale participants is being recognized by the industry.

Mr. Booe stated that the 2024 meeting calendar was posted as supplemental material and that for next year, the current plan is to continue with half-day, in-person meetings of the Executive Committees. He noted that in-person Executive Committee meeting attendance for 2023 is not at the same level as prior to the pandemic. Mr. Booe asked for members to provide feedback to the NAESB office on both the changed meeting structure and in-person versus virtual meetings. Mr. Phillips stated that continuing to hold in-person meetings would be helpful as the face-to-face discussions facilitated by these meetings can be beneficial in conducting the business of the Executive Committee.

1. **Adjourn**

The meeting adjourned at 3:18 PM Eastern on a motion by Mr. Watson, seconded by Mr. Williams.

1. **Attendance & Voting Record**

| **Wholesale Electric Quadrant Executive Committee**  | **Attendance** | **Vote 1** |
| --- | --- | --- |
| **Transmission Segment** |  |
| Michael Scott | Lead Engineer, Tariff Administration, Duke Energy Corporation | By Phone | Support |
| Lisa Sieg (as alt. for Layne Brown) | Senior Reliability and Market Interface Specialist, Western Electricity Coordinating Council | By Phone | Abstain |
| Mark Thomas | Engineer, Operational Engineering Administration, Entergy Services Inc. | In Person | Support |
| Troy Willis | Engineer-V, System Services, Georgia Transmission Corporation |  |  |
| Ron Robinson | Senior System Operator, Transmission and Interchange Services, Tennessee Valley Authority | In Person | Support |
| Wesley P. Barber | Transmission Policy and Services, Southern Company Services, Inc. | By Phone | Support |
| Matt Kura | Manager – Balancing Authority, Arizona Public Service Company |  |  |
| **Generation Segment** |  |
| Dustin DeGroff | Real Time Trading Manager, Tenaska, Inc. | By Phone | Abstain |
| Brian Evans-Mongeon | Special Projects Chief, Vermont Public Power Supply Authority | By Phone | Support |
| Alan Johnson | Managing Director – Regulatory Compliance, NRG Energy, Inc. | By Phone | Support |
| Valerie Crockett | Senior Program Manager – Environment & Energy Policy, Tennessee Valley Authority | By Phone | Support |
| Cory Samm | Manager, Power Supply Portfolio, Hoosier Energy REC, Inc. | By Phone | Support |
| **Marketers/Brokers Segment** |  |
| John Fitzgerald | Sr. Program Mgr., Market Optimization, Tennessee Valley Authority | By Phone | Support |
| Ryan Atkins | Vice President, Resource Optimization, NV Energy |  |  |
| Raj Hundal | Market Policy and Practices Manager, Powerex Corp. |  |  |
| Chris Norton | Director of Market Regulatory Affairs, American Municipal Power, Inc. | By Phone | Support |
| **Distribution/Load Serving Entities (LSE) Segment** |  |
| Danielle Johnson | Supervisor, OASIS Manager Group, Bonneville Power Administration | By Phone | Support |
| Scott Lewter  | Lead System Operations Analyst, Duke Energy Corporation | By Phone | Support |
| Jordan Williams | Director – Federal Regulatory Affairs, Compliance & Transmission Policy, Tampa Electric Company | In Person | Support |
| **End Users Segment** |  |
| Ben Stander | Director and Assistant General Counsel, OATI |  |  |
| Keith Sappenfield | Principal, Project Strategy, Corpus Christi Liquefaction | By Phone | Support |
| Sam Watson | General Counsel – North Carolina Utilities Commission rep. National Association of Regulatory Utility Commissioners (NARUC) | In Person | Support |
| **Independent Grid Operators/Planners** |  |  |
| Joshua Phillips | Lead Policy Analyst, Southwest Power Pool | In Person | Support |
| Karen Frank | Advisor – Standards & Assurance, MISO | By Phone | Support |
| Gregory Campoli | Manager, Reliability Compliance and Industry Affairs, New York ISO | By Phone | Support |
| Brian Jacobsen | Manager of Enterprise Model Management, California ISO |  |  |
| John Pearson | Compliance Manager, Reliability and Operations Compliance, ISO New England, Inc. |  |  |
| Michael Handlin | Manager, Reliability Engineering, PJM Interconnection, LLC | By Phone | Support |
| **Technology and Services** |  |  |
| Andy Tritch | Director of Bilateral Markets, Hartigen Solutions, LLC | By Phone | Support |
| Jim Buccigross | Vice President Energy Industry Practice, Group 8760 LLC | By Phone | Support |
| Robin Pollara | Product Manager, Global Power Operations & Trading, FIS - Energy |  |  |

| **Other Attendees** | **Organization** | **Attendance** |
| --- | --- | --- |
| Jonathan Booe | NAESB | In Person |
| Dick Brooks | Reliable Energy Analytics | By Phone |
| Christopher Burden | Enbridge (U.S.), Inc. | In Person |
| Zack Buus | BPA | By Phone |
| Michael Courchesne | ISO New England | By Phone |
| Adrian Harris | MISO | By Phone |
| Rachel Hogge | BHE Eastern Gas Transmission & Storge, Inc | In Person |
| Elizabeth Mallett | NAESB | By Phone |
| Sandra Montes de Oca | NAESB | By Phone |
| Christopher Siewert | BPA | By Phone |
| Veronica Thomason | NAESB | In Person |
| Caroline Trum | NAESB | In Person |
| Kimberly Van Pelt | Boardwalk | By Phone |
| Jill Vaughan | Court Reporter | In Person |
| JT Wood | Southern Company | By Phone |
| Charles Yeung | SPP | By Phone |