**AGENDA**

**ERCOT Reliability Operations Subcommittee (ROS) Meeting**

ERCOT Austin / 7620 Metro Center Drive / Austin, Texas 78744

**Thursday, November 7, 2019 / 9:30 a.m.**

[**http://ercot.webex.com**](http://ercot.webex.com)

Meeting Number: 629 164 548

Meeting Password: ROS

Teleconference: 1.877.668.4493

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| 1. | Antitrust Admonition | K. Bunch | 9:30 a.m. |
| 2. | Agenda Review | K. Bunch |  |
| 3. | **Approval of ROS Meeting Minutes (Vote)** | K. Bunch | 9:35 a.m. |
|  | * **October 3, 2019** |  |  |
| 4. | Technical Advisory Committee (TAC) Update | K. Bunch | 9:40 a.m. |
| 5. | ERCOT Reports |  | 9:45 a.m. |
|  | * Operations Report | ERCOT Staff |  |
|  | * System Planning Report | F. Huang |  |
|  | * **Proposed changes to Ancillary Service Methodology for 2020 (Vote)** | N. Mago |  |
|  | * Inverter-Based Resources Update | F. Huang |  |
|  | * Energy Storage Update | S. Sharma |  |
| 6. | NERC and FERC Report on January 2018 Operational Issues in MISO South | D. Huff/ H. Polzin/ K. Lyons | 10:25 a.m. |
| 7. | **New Protocol Revision Subcommittee (PRS) Referrals (Vote)** | K. Bunch | 11:10 a.m. |
|  | * **NPRR973, Add Definitions for Generator Step-Up and Main Power** |  |  |
| 8. | Revision Requests Tabled at PRS, Referred to ROS (Possible Vote) | K. Bunch | 11:20 a.m. |
|  | * NPRR953, Addition of Relay Loadability Rating Definition (SPWG) |  |  |
| 9. | **ROS Revision Requests (Vote)** | K. Bunch | 11:30 a.m. |
|  | ***Language Review*** |  |  |
|  | * **NOGRR196, Related to NPRR973, Add Definitions Generator Step-Up and Main Power Transformer** |  |  |
|  | * **PGRR074, Related to NPRR973, Add Definitions Generator Step-Up and Main Power Transformer** |  |  |
|  | * **RRGRR022, Related to NPRR973, Add Definitions Generator Step-Up and Main Power Transformer** |  |  |
|  | * **PGRR075, Dynamic Model Quality Requirement** |  |  |
|  | * **PGRR076, Improvements to Generation Resource Interconnection or Change Request (GINR) Process** |  |  |
|  | *Impact Analysis Review* |  |  |
|  | * **PGRR071, Update Interconnection Process Timetables to Align with NPRR926** |  |  |
| 10. | Revision Requests Tabled at ROS (Possible Vote) | K. Bunch | 11:40 a.m. |
|  | * PGRR073, Related to NPRR956, Designation of Providers of Transmission Additions |  |  |
| 11. | Operations Working Group (OWG) | R. Floyd | 11:50 a.m. |
|  | * NPRR955, Define Limited Impact Remedial Action Scheme (RAS) (OWG) (Possible Vote) |  |  |
|  | * NOGRR183, Remedial Action Scheme (RAS) Submittal and Review Requirements (PLWG/OWG) (Possible Vote) |  |  |
|  | * NOGRR190, Related to NPRR937, Distribution Voltage Level Block Load Transfer (BLT) Deployment (OWG) (Possible Vote) |  |  |
|  | * NOGRR195, Generator Voltage Control Tolerance Band (OWG) (VPWG) (Possible Vote) |  |  |
|  | * RRGRR021, Dynamic Model Requirement for TSAT (DWG) (OWG) |  |  |
| 12. | Performance Disturbance Compliance Working Group (PDCWG) | C. Mulholland | 12:00 p.m. |
|  | * NPRR963, Creation of Generation and Controllable Load Resource Group (GCLR Group) (PDCWG) (Possible Vote) |  |  |
| 13. | Steady State Working Group (SSWG) | B. Hithersay | 12:10 p.m. |
| 14. | Planning Geomagnetic Disturbance Task Force (PGDTF) | A. Amahatsion | 12:20 p.m. |
| 15. | Voltage Profile Working Group (VPWG) | M. Lewis | 12:30 p.m. |
| 16. | Network Data Support Working Group (NDSWG) | B. Ravulapati | 12:40 p.m. |
| 17. | Dynamics Working Group (DWG) | C. Minchew | 12:50 p.m. |
| 18. | Other Business | K. Bunch | 1:00 p.m. |
|  | * Distribution Generation Resources (DGR) Workshop Update | ERCOT Staff |  |
|  | * 2020 ERCOT Membership/Segment Representative Elections | S. Clifton |  |
|  | * Review Open Action Items |  |  |
|  | * No Report: |  |  |
|  | * + Black Start Working Group (BSWG) |  |  |
|  | * + Operations Training Working Group (OTWG) |  |  |
|  | * + Planning Working Group (PLWG) |  |  |
|  | * + System Protection Working Group (SPWG) |  |  |
|  | Adjourn | K. Bunch | 1:15 p.m. |
|  | Future ROS Meetings |  |  |
|  | * December 5, 2019 |  |  |
|  | * January 9, 2020 |  |  |

| Open Action Items | Responsible | Assigned |
| --- | --- | --- |
| Inverter-Based Resource Issue 3, Voltage Ride through | DWG | 07/11/2019 |
| Inverter-Based Resource Issue 4, Dynamic Models | DWG | 07/11/2019 |
| ERCOT Nodal ICCP Communication Handbook – update to include review of what is binding and what is nonbinding, consider what is in reference material, OBD and Operating Guide, and then figure out repository | NDSWG | 05/02/2019  04/04/2019 |
| TAC Assignment: Reliability considerations regarding Outage Activity Related to Operating Condition Notice (OCN) | OWG to look at Operating Guides to confirm consistent after WMS/WMWG review the issues | 07/11/2019 |
| Evaluating and improving ERCOT’s Dynamic Frequency Response Model | PDCWG | 07/11/2019 |
| *Southern Cross Directives*  SCT Directive 3: Determination of Ramp Rate Restrictions  Directive 9, Ancillary Services   * Issues related to study of frequency overshoot and LRs UFR setting * Margin between min RRS Procurement & Contingency Reserve Requirements   Address issues related to NSRS and Regulation Service | ROS  PDCWG  DWG  OWG/PDCWG  PDCWG | 03/07/2019 |
| TAC Assignment: Energy Storage Issue 2: Battery Energy Storage Operational Requirements   1. Address whether batteries should have different operational requirements when charging and discharging | ROS  PDCWG – Open meeting | 07/11/2019  07/11/2019 |
| TAC Assignment: Energy Storage Issue 5: Operations System Design Changes | ROS | 07/11/2019 |
| TAC Assignment: Energy Storage Issue 6: State of Charge/Limited Duration Considerations   * Develop appropriate battery state of charge requirements/procedures for Reliability-Unit Commitment (RUC) | ROS/WMS  OWG | 07/11/2019  08/08/2019 |
| TAC Assignment: Energy Storage Issue 7: Alternative Device Modeling Options | ROS/WMS | 07/11/2019 |