**AGENDA**

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

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

**Thursday, September 5, 2019 / 9:30 a.m.**

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

Meeting Number: 621 903 951

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. |
|  | * **August 8, 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 |  |
|  | * August 13and August 15, 2019 Energy Emergency Alert (EEA) Update | D. Woodfin |  |
|  | * UFLS Survey Results | D. Sanchez |  |
|  | * Inverter-Based Resources Workshop follow up Update | F. Huang |  |
|  | * Dynamic Model Improvement Update | F. Huang |  |
|  | * NPRR966, Changes to Support Reactive Power Coordination Tool and Workshop | S. Solis |  |
| 6. | **New Protocol Revision Subcommittee (PRS) Referrals (Vote)** | K. Bunch | 11:05 a.m. |
|  | * **NPRR963, Creation of Generation and Controllable Load Resource Group (GCLR Group)** * **NPRR964, Improvement of RMR Process and Removal of Synchronous Condenser Unit and Agreement** |  |  |
| 7. | Revision Requests Tabled at PRS, Referred to ROS (Possible Vote)   * NPRR950, Switchable Generation Resources Providing Black Start Service * NPRR953, Addition of Relay Loadability Rating Definition (SPWG) (SSWG) | K. Bunch | 11:35 a.m. |
|  | Lunch |  | 12:05 p.m. |
| 8. | **ROS Revision Requests (Vote)** | K. Bunch | 1:15 p.m. |
|  | *Language Review* |  |  |
|  | * **NOGRR195, Generator Voltage Control Tolerance Band** |  |  |
|  | *Impact Analysis Review* |  |  |
|  | * **PGRR072, Treatment of Generation Resource Retirement and Mothball in Regional Transmission Plan and Geomagnetic Disturbance Vulnerability Assessment** * **NOGRR194, Relocate Black Start Training Attendance Requirements to Nodal Operating Guides** |  |  |
| 9, | Revision Requests Tabled at ROS (Possible Vote) | K. Bunch | 1:35 p.m. |
|  | * PGRR071, Update Interconnection Process Timetables to Align with NPRR926 (PLWG) |  |  |
|  | * PGRR073, Related to NPRR956, Designation of Providers of Transmission Additions (Possible Vote) |  |  |
| 10. | Performance Disturbance Compliance Working Group (PDCWG) | C. Mulholland | 1:45 p.m. |
|  | * NPRR919, Exemption from Governor Primary Frequency Response Control for Certain Resources in Private Use Networks (PDCWG) (Possible Vote) |  |  |
|  | * NOGRR184, Related to NPRR919, Exemption from Governor Primary Frequency Response Control for Certain Resources in Private Use Networks (PDCWG) (Possible Vote) |  |  |
|  | * SCR800, Addition of DC Tie Ramp to GTBD Calculation (PDCWG) (Possible Vote) |  |  |
|  | * **Methodology to Calculate RRS Limits (Vote)** |  |  |
| 11. | Operations Working Group (OWG) | R. Floyd | 2:05 p.m. |
|  | * NOGRR183, Remedial Action Scheme (RAS) Submittal and Review Requirements (PLWG/OWG) (Possible Vote) |  |  |
|  | * NPRR937, Distribution Voltage Level Block Load Transfer (BLT) Deployment (OWG) (Possible Vote) * NOGRR190, Related to NPRR937, Distribution Voltage Level Block Load Transfer (BLT) Deployment (OWG) (Possible Vote) |  |  |
|  | * NPRR955, Define Limited Impact Remedial Action Scheme (RAS) (Possible Vote) |  |  |
|  | * High Impact Transmission Elements (HITE) List (Possible Vote) |  |  |
| 12. | Steady State Working Group (SSWG) | B. Hithersay | 2:25 p.m. |
|  | * **SSWG Procedural Manual (Vote)** |  |  |
| 13. | Planning Geomagnetic Disturbance Task Force (PGDTF) | A. Amahatsion | 2:35 p.m. |
| 14. | Voltage Profile Working Group (VPWG) | M. Lewis | 2:45 p.m. |
| 15. | Other Business | K. Bunch | 2:55 p.m. |
|  | * Energy Storage Update | W. Lasher |  |
|  | * Annual TAC Subcommittee Structural Review |  |  |
|  | * 2020 Meeting Schedule |  |  |
|  | * Review Open Action Items |  |  |
|  | * No Report: |  |  |
|  | * + Black Start Working Group (BSWG) |  |  |
|  | * + Dynamics Working Group (DWG) |  |  |
|  | * + Network Data Support Working Group (NDSWG) |  |  |
|  | * + Planning Working Group (PLWG) |  |  |
|  | * + Operations Training Working Group (OTWG)   + System Protection Working Group (SPWG) |  |  |
|  | Adjourn | K. Bunch | 3:25 p.m. |
|  | Future ROS Meetings |  |  |
|  | * October 3, 2019 |  |  |
|  | * November 7, 2019 |  |  |

| Open Action Items | Responsible | Assigned |
| --- | --- | --- |
| SCT Directive 9: Ancillary Services; Issues related to study of frequency overshoot and LRs UFR setting | DWG |  |
| 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 |
| ~~SCT Directive 4: Development of Methodology for Outage Coordination~~  Approved 8/8/2019 ROS | ~~OWG~~ | ~~01/10/2019~~ |
| SCT Directive 9: Ancillary Services; Margin between min RRS Procurement & Contingency Reserve Requirements | OWG/PDCWG |  |
|  | ROS voted 7/11/19 |  |
| TAC Assignment: Reliability considerations regarding Outage Activity Related to Operating Condition Notice (OCN) | ROS assigned to OWG to look at Operating Guides to confirm consistent after WMS/WMWG review the issues | 07/11/2019 |
| SCT Directive 9: Ancillary Services; Address issues related to NSRS and Regulation Service | PDCWG |  |
| BAL-001-TRE Standard Workshop Items | PDCWG |  |
| Review issues of showing “0” on HSL reporting and consider NPRR919 and NOGRR919 together. | PDCWG | 02/07/2019 |
| SCT Directive 3: Determination of Ramp Rate Restrictions | PDCWG | 03/07/2019 |
| Include Solar in monthly report | PDCWG | 07/11/2019 |
| Review ramp rate of DC ties in GTBD calculation | PDCWG | 07/11/2019 |
| Evaluating and improving ERCOT’s Dynamic Frequency Response Model | PDCWG | 07/11/2019 |
| Create a ROS-approved methodology for developing list(s) of equipment potentially removed from service as a result of a protection system operation or misoperation due to harmonics that could result from benchmark or supplemental GMD events. This update is due to language changes in PGRR070, to not create an OBD.  Develop Other Binding Document (OBD) Assessing GMD Effects on Power Systems related to PGRR070, Revised Responsibilities for Performing Geomagnetic Disturbance (GMD) Vulnerability Assessments | PGDTF | 05/02/2019  04/04/2019 |
| 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 | ROS/WMS | 07/11/2019 |
| TAC Assignment: Energy Storage Issue 7: Alternative Device Modeling Options | ROS/WMS | 07/11/2019 |