

Minutes

Essential Reliability Services Task Force

June 11, 2014 | 12:00 PM – 5:00 PM Eastern

June 12, 2014 | 8:00 AM – 12:00 PM Eastern

Hyatt Regency Orlando International Airport
9300 Jeff Fuqua Boulevard
Orlando, FL 32827

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NERC Antitrust Compliance Guidelines and Public Announcement – Complete by P. Shah

June 11, 2014

1. **12:00 PM– 12:45 PM – Lunch (Provided)**
2. **12:45 PM– 1:00 PM – Introductions and confirmation of agenda – Complete by ERSTF Chair.** Please see list of attendees on Page 4. The chair also stressed on the importance of participation into this task force, and the need for sorting members from observers.
3. **1:00 PM – 1:30 PM – Overview of Draft NERC Report, Project Overview and Schedule**
 - a. There was discussion on Draft Report/Tutorial. The comment period ended Friday June 6, 2014. Summary of all comments received were sent via email to all ERSTF members. There is already enough of NERC staff as well as ERSTF's time invested in this document, and there was a discussion on finalizing it and moving forward towards the next steps for the TF. John Seelke discussed the need to incent and pay for Essential Reliability Services in order for them to be available in lieu of the changing mix. The need to address the changing resource mix in terms of ERS will be addressed by clearly defining each service: What is needed (clearly define services) → How can service(s) be measured (key objective) → how can service(s) be acquired (market or non-market solutions as suggestions, but not prescriptive).
 - b. This led the discussion into ERSTF scope document (posted online) review. The group reviewed 4 listed activities in the scope document, their deliverables and PC/OC approval requirements. There was a general consensus to rearrange activities 3 and 4 (3→ 4, 4→3). Since this is only rearranging the activities, PC/OC approval is not necessary.

4. 1:30 PM – 3:45 PM – Presentations (15 Minutes each)

- a. John Seelke – History of ERS and Ancillary Services Overview – Slide 3: Note 1, refers to FERC order 888, not 880. John provided a background and history on the services that are currently under OATI schedules and how they can be translated into ERS. He stressed the need to incentivize the ERS in order to receive sufficient supply. There was a counter argument to incentivizing; during the SW blackout in 2011, generators tripped due to voltage and frequency perturbations, and not on relay functions.
- b. Mark Ahlstrom & Charlie Smith – IVGTF findings on ERS specific to renewable resources – Mark and Charlie presented the IVGTF findings, and highlighted the need for detailed models for VG's. Multiple standards modification and recommendations have resulted from the combined IVGTF work, and it's available as leverage for the ERSTF. Ed Scott shared a Duke Energy experience with solar farm that scaled down the size of the farm to 75MW from 110 MW based on the IVGTF criteria. The developer was not willing to provide any technical data for modeling or studies.
- c. Bob Cummings & Ken McIntyre – Frequency Response & Inertia (synthetic inertia) – Bob presented the need to developing a guideline to define performance characteristics and stressed the importance for interconnection models (especially EI) that are required for studies.
- d. Clyde Loutan – Frequency Response, Ramping Capability and Active Power Control – CAISO Approach. – Clyde presented CAISO's challenges in managing non-dispatchable generation as well as variables such as solar that has changed the load duration curve for CAISO. Clyde presented the CAISO "Duck" curve that represented Net Load and how installation of major solar and wind farms in CA were affecting the loads. He stressed the need for CAISO to get Reactive Power and Inertia/Frequency Response in order to meet system demand of real and reactive power support.
- e. BREAK
- f. Michael Milligan – Technical Aspects of Operating Reserve, Frequency Response, Ramping Capability and Active Power Control. – Michael stressed the importance of Not dis-incentivizing the resources that provide ERS. Services needed in future are Power factor control, inertia, ramping.
- g. Dave Devereaux – Coal Plant retirements and Demand Response in Ontario. Dave shared IESO's experience with losing all coal units and integrating renewables into their system. IESO policy makers have encouraged innovations in renewable integration technologies including 50 MW of storage unit testing. IESO net demand is reducing and so they are mainly exporting at light loads and their Nuclear units are 30% flexible.

June 12, 2014 (No Breakfast provided)

- h. John Simonelli – Reactive Power and Voltage Control in New England. – John gave a presentation on ISO-NE Operating Procedure 17, which addresses annual load power factor for an LSE in conjunction with OP-12 that addresses voltage and reactive capabilities and needs of regulating devices. ISO-NE’s SOL and IROL definitions apply to voltage support now. VER interconnection in NE is performed under minimum interconnect standards as defined by FERC. This places stress on weak NE systems that are not designed for major wind farms and yet wind plants continue to be interconnected per existing requirements. John stressed the need for low load study methodology in addition to peak load.
 - i. Jason McDowell – Coordination of controls and equipment for voltage and reactive power control in wind plants. – Jason presented the group with GE Energy’s involvement in addressing controls and integration tools for wind farms. Type III WTG from GE offer voltage support capability, reliability of wind farms in low system strength, as well as fast control stability. Jason also discussed the plant level control systems that interact in a multi wind farm scenario. GE WTG offer reactive support and inertia, except there was comment/concern that these units are at the high end of pricing and developers do not use them.
5. **8:00 AM – 8:30 AM - ERS Approach, Timeline, Final Vision**
- a. The task force discussed the ERSTF tutorial/report. The overall consensus was that the report was representing the proverb “cart before the horse,” and that tone of the document needs to be changed. Therefore, instead of pre-defining the 6 services, refer to them as examples or characteristics. This will allow the TF to keep scope open and integrate any overlaps in the services. This will also allow adding, deleting, or modifying the current set of ERS. The ERS outputs were listed as : 1) Metrics (future and existing), 2) How to’s and best practices, and 3) Recommendations.
 - b. There was a also a discussion on timeline. The IVGTF was in service for a long span of time over 4 years and this TF deadline is end of 2014, which is unrealistic, per group consensus. John Moura mentioned to the TF, the need to deliver a quality results within a reasonable time frame (end of 2014), and that he needed TF backing to tailor the timeline to a reasonable deadline. John M indicated there is some flexibility in the schedule.
 - c. In conclusion, it was decided that the Reliability Building Blocks would serve as the ERS and other examples would fall under either one or multiple one of these blocks. This would subdivide the TF into following:
 - i. Load and Resource Balance – Chair, Clyde Loutan (CAISO)
 - ii. Voltage Support – Chair, John Simonelli (pending ISO-NE mgmt. approval)
 - iii. Frequency Support – Chair, Hassan Hamdar (FRCC)
 - iv. Policy and Advisory Group – Chair, Jack Cashin (EPSA)

d. Action Items:

- i. The task force classification of members and observers group.
- ii. TF members to inform the chair and NERC staff of their interest in any one of the three groups above.
- iii. Task Force members to identify approaches each company/planning area identifies "pinch points" and/or trends in ERS? How are issues identified in the future?

e. Next meetings/conference calls – Next meeting will be a conference call in order for the teams to start forming and kick off. General acceptance of a face to face meeting following the OC/PC technical meetings, and thus next F2F meeting will be in Vancouver, BC in September.

- i. Sub group leads and members will convene on conference calls every two weeks starting July 7, 2014.

f. Close Meeting

Attendees:
 Ken McIntyre
 Todd Lucas
 Rich Hoag
 Ed Scott
 Brian Evans Mungeon
 Dave Devereaux
 John Seelke
 Chuck Chakravarthi
 John Simonelli
 Brendan Kirby
 Michael Milligan
 Jason MacDowell
 Charlie Smith
 Alfred Corbett
 Rich Hydzik
 Mark Ahlstrom
 Hassan Hamdar
 Ron Carlson
 Gerry Beckerle
 Jagan Mandavalli
 Clyde Loutan
 Jack Cashin
 Bob Entriiken
 Dave Souder
 Phil Fedora
 Joel Wise
 John Johnson
 Paul Kure
 Mike McMullen
 Eric Senkowicz
 JT Thompson
 Dave Canter
 Antonio Franco
 Patti Metro (for Paul McCurley)
 Pat Poli (MI PSC)
 Lavne Brown

NERC Staff:
 Pooja Shah
 John Moura
 Noha Abdel-Karim
 Howard Gugel
 Mark Rogers
 Bob Cummings
 Phil Tatro
 Amir Najafzadeh
 Neil Burbere
 Darrell Richardson