

Minutes

Essential Reliability Services Working Group

May 11, 2016 | 12:00 – 5:00 p.m. Central Time

May 12, 2016 | 8:00 a.m. – 12:00 p.m. Central Time

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NERC Antitrust Compliance Guidelines and Public Announcement

Agenda Items

May 11, 2016

1. **Lunch** – Provided
2. **NERC Overview** – Pooja Shah – Done
3. **Co-chairs' remarks** – Todd Lucas, Brian Evans-Mongeon – Brian went over the objectives of both groups due by end of 2016. DERTF report and ERSWG Methodology whitepaper by due Dec 2016
4. **Discuss ERS Subgroup Activities** – Sufficiency Guidelines (SGs)
 - a. Frequency Support – Julia presented the draft write up on Frequency Support SGs that incorporated input from many members. The document contains means to measure adequate levels of screening for inertia-related challenges. ERCOT is doing a test on this methodology, and Julia thinks Hydro Quebec (HQ) will also be an informative test case to study with the proposed approach as they have Type 4 wind turbines that provide frequency support. Troy mentioned that this approach would be done on the interconnection level and it should provide useful values for ERCOT, HQ and WECC; however Eastern Interconnection (EI) was still an issue. Bob noted that EI has very high load and inertia values, so results will need to be viewed in the appropriate context to avoid being misinterpreted. John S. proposed breaking EI into subareas (assume they have no neighboring support for frequency) and using the method for each subarea. This does not mean islanding the system, but just refers to looking at zones in terms of frequency support. Todd indicated that this method was a good starting point for interconnection level studies. Bob noted that nomenclature is very important here, since we are looking for “critical” inertia levels but these are not “minimum” inertia levels because there are many ways to mitigate lower levels with faster power injection, so he suggested using the term “theoretical critical synchronous inertia level” or something similar for the report. Mike McMullen noted that there is a huge difference between using UFLS values of 59.7 Hz as used in parts of the EI and 59.3 Hz as is now used for the core of the system. Which should we use?

The consensus was that the document and flowchart are very good starting points, we will look further at results based on data from ERCOT and HQ, and ongoing discussion is needed to clarify exactly how this would be applied to the EI.

- b. **Voltage Support** – John S. presented two documents to the group: 1) Concept Paper as designed by the ERS subgroup, and 2) Reactive Support Guideline prepared by the SAMS group. John mentioned that most of the industry studies reactive needs by subareas, even if it's not clarified in procedures. Bob noted that another way to describe subareas is “cohesive zones that behave the same way” with regard to voltage. Secondly, sufficiency for reactive needs cannot be one size fits all, they could be different based on the footprint, for e.g. cities vs. rural needs in one BA footprint. Lastly, John mentioned that the SAMS group was revising the reactive needs guidelines to incorporate newer challenges such as light load high voltage. There was a discussion on incorporating the guidelines in the report as appendix (or by reference once the guideline is final) and summarize the guidelines in the report, with the concept paper being used as the primary voltage section of the report. The intent is to provide a strong industry practice for the industry, not standard or revision to standards. John S. is working with SAMS feedback and his subgroup to have a revised version of the concept paper for the June meeting.
- c. Break

5. Discuss ERS Subgroup Activities (cont'd)

- a. **Load Ramping** – Clyde presented a simpler formula for screening ramping needs of a given system, however it is only tested with CA data. Nick Miller commented that the formula seems to mix the known/forecasted ramping with unknown/uncertainty-driven ramping, and that he believes these are two different problems. Clyde asked for members for his subgroup to test the theory and formula. The following people offered to help: Rodney O’Bryant, John Simonelli, Julia Matevosyan, Dariush Shirmohamadi, Mark Ahlstrom, Paul Turner, and the Resources Subcommittee (RS). This measure needs to have results incorporated in NERC’s annual Long-Term Reliability Assessment (LTRA), EOY 2016. It was noted that the RS looks at ramping now (one metric is RMS error of scheduled and actual frequency, a second is daily RMS error, and a third is BAL exceedances in buckets by BA, looking at time patterns). Since the RS has these metrics already defined with data requested as part of the BAL data, the relationship between their activities and the proposed ERS method may need to be resolved.
- b. **DERTF** – Rich and his group presented on various sections of the DERTF draft report that Mark A. and Dave C. started. Definitions are now done, along with operating characteristics, and various configuration methods of the resources.

On Day 2, the TF continued their discussion on modeling the DERs. The subgroup of members have done a great job in covering the extent of modeling challenges with DERs. The key takeaway from the discussion was ‘Don’t NET DERs’. Use composite load models to the extent possible and do not over-equivalize. The discussion emphasized that we will need to show the reasons for separating generation and load based on modeling and reliability justifications, but this is quite separate from net metering tariff considerations.

Jason MacDowell provided an update on his subgroup that is reviewing each standard that is applicable to DERs. They have done an extensive search and list of standards. There was a

discussion on informing the Standards Committee and Operating and Planning Committees on time to ensure that this suggestion, recommendation will be picked up by them post 2016. The subgroup is NOT doing any GAP analysis or studying to update standards – this will be done by appropriate members of the SC.

May 12, 2016

1. Monitor, Track and Trent ERSTF Measures with Subcommittees

- a. RS – ~~Todd, Julia, Pooja~~ Troy Blalock – Troy provided an in depth update on what the RS is doing with Measures 1-4 data gathering and evaluation. Basically, all four interconnections will provide inertia data as discussed before in the June timeframe. Hongming from Peak presented Peak’s methodology on getting data and demonstrated their real-time tool that monitors the inertia data. Mike McMullen presented on EI – based on the Parallel Visualization Tool that EI uses for other purposes but can help with this data collection. ERCOT and HQ will also be able to provide the data as requested.
- b. PAS – Pooja, ~~John S.~~ Melinda Montgomery – Melinda mentioned that the PAS has been busy with the *State of Reliability* and hasn’t had a chance to work on Measure 7 metrics. Pooja Shah brought up the concern that the submetric team had with the measure and what seemed like a major disconnect between what’s presented to PC/OC and what was happening at PAS. Essentially, the submetric team was not aware of all that was done so far with Measure 7 and what that team was tasked to do. Melinda agreed to ensure the concern is cleared with the PAS.
- c. RAS – Pooja, ~~Brian~~ – The RAS leadership had a call with Clyde on Monday, May 9 where they agreed to have a screening tool to determine if an area has ramping issues. They are looking forward to incorporating this in the LTRA. Troy mentioned that the RS will be getting the BAAL exceedances and CPS1 scores will be available by October as part of BAL-003 data. These values in combination with ACE and Frequency that they already get, will help determine which BA’s have issues with ramping.

2. Next Meeting

- a. June 8-9, 2016 – St. Louis, MO following the Standing Committee meetings
- b. DERTF Workshop – August 2 – 3, 2016 – half day half day
- c. ERSWG and DERTF Working meeting – August 3 – 4, 2016 half day, half day
- d. Location for both b. and c. TBD

3. Close Meeting

4. Attendees:

- a. **In-Person** - Pooja Shah, Dariush Shirmohamadi, Fred Huang, Troy Blalock, Rich Hydzik, Barry Mather, Joseph Mulhorn, Taylor Woodruff, Bob Cummings, John Simonelli, Jim Fletcher, Brant Werts, Kara Clark, Nick Miller, Jason MacDowell, Mark Ahlstrom, David Canter, Mike McMullen, Chad Blevins, Jagan Mandavilli, Clyde Loutan, Tony Jankowski, Quoc Le, Tom Siegrist, Sylvester Toe, Paul Turner, Sasoon Assatarian, Brian Evans-Mongeon, Todd Lucas, Rodney O’Bryant, Olushola Lutalo, Julia Matevosyan

Phone: Ray Kershaw, Jaison Tsikirai, Tim Reynolds, Brad Gordon, Elsa Prince, Binaya Shreshtha, Deb Lew, Ken Schyuler, Al Corbett, Melinda Montgomery, Jens Boemer, Hongming Zhang