

RPG Meeting
January 20, 2015
9:30 a.m. to 11:30 a.m.

Agenda

- Miscellaneous Updates
- 2015 Stability Study Scope
- 2015 Regional Transmission Plan
- Economic Studies Financial Assumptions Update
- West Texas Update

Misc. Updates, Jeff Billo

- GINR (was Resource Integration) has moved back to Transmission Planning. Prabhu is now in charge of GINR and Fred is in charge of SSO part of the work.
- Q&A: Status update on access to Interconnection Studies on MIS?
 - Still working with legal on that.
- Panhandle study:
 - The updated Panhandle Wind Generation project list is posted on the RPG calendar page. Total of 3,454 MW wind generation capacity meet the Planning Guide 6.9 requirements.
 - The addition of new wind generation in Panhandle region is not expected to change the previous DATC Panhandle assessment results.
 - ERCOT will consider presenting the process to manage the Panhandle export limit in real-time in a future ROS or WMS meeting.
 - ERCOT issued a Request for Proposal (RFP) for a detailed Panhandle study and expects to have the study results by summer, 2015. The outcome of the project will help to review and potentially revise the existing Weighted Short Circuit Ratio method and criteria.

2015 Stability Study Scope, Fred Huang

- We will follow NERC Standard TPL-001-4 for 2015 Transmission Planning Assessment. We are required to perform a much broader assessment than with the previous TPL standards.
- Data Inputs
 - Long-term planning horizon – system peak load: DWG 2021 summer peak case
 - Near-term planning horizon – system peak load: DWG 2017 summer peak case
 - Near-term planning horizon – system off-peak load: DWG 2018 high wind low load case
- Study scenarios will focus on key ERCOT areas
- Q&A: What's your schedule for performing this study?
 - We will have the results by the end of the year.

2015 Regional Transmission Plan, Sandeep Borkar

- Sent out scope document in October.
- Any changes that you see, most of them, are driven by new standard TPL-001-4.
- In addition to the summer peak reliability basecase for years 2016, 2018, 2020, and 2021, the following cases will also be studied.
 - Off-peak (min load) reliability basecase for 2018
 - Sensitivity cases for summer peak cases of years 2016 and 2020
 - Sensitivity cases for off-peak case for 2018

- Additions to the RTP
 - Contingency analysis (single event)
 - N-1-1 and cascade analysis
 - Short circuit analysis
 - Analysis of sensitivity cases
- RTP Scope: The finalized document and comments received are on the RPG page. Thank you for your comments. We either addressed them in the finalized document or responded to each comment.
- Noteworthy changes: new TPL changes, and new dynamic ratings in the reliability analysis
- Dynamic ratings in reliability analysis using 90th percentile temperature
 - 90th percentile temperature for each weather zone was based on 30 years of temperature data (1984-2013)
 - Temperature data based on historical data from ERCOT databases
- Q&A: as far as the dynamic ratings, comments from ONCOR and CenterPoint show general agreement as far as the use of dynamic rating for reliability study. It's more conservative, it bothers us that it's different from what we have in the SSWG cases. It may be more conservative than necessary to use the lower rate based on the dynamic rating. It could very well be that if you looked at the stats and decided to use the higher temps as your base static reading, then you would determine that you'd use something different for other parameters such as wind speed.
 - Our thinking here is we're only applying this to lines that are already dynamically rated. When you get to real-time, the only data that they are looking at is temperature. They're not looking at wind speed. I think there may be a few exceptions, but if you get to a day when it's 108 in Dallas, the ratings of the dynamically-rated lines will be whatever shows up on the chart for a 108-degree rating. So our thinking is that this change will make the results of the planning analysis more consistent with what the operators would see.
- Q&A: these are all related to summer peak cases. Is ERCOT thinking about applying criteria to min peak or any of the sensitivity cases?
 - That is a good point – we will look into that.
- Next steps
 - Create and publish RTP reliability start cases
 - Conduct N-1 SCOPF and contingency analysis
 - Post contingency definitions and resulting violations
 - Corrective action plans such as transmission upgrades or additions will be tested in collaboration with respective transmission owners
 - Create and post N-1 secure case
 - Conduct G-1+N-1 and X-1+N-1 screen and identify corrective action plans to address violations
- Q&A: Last year ERCOT posted a file that had the annual peaks, but also had flat load and the hourly load year for the study plan. Have you posted that or is that out and available?
 - Yes, posted yesterday. In the 2014 RTP postings on the MIS, I sent out the link to the RPG listserv.

Economic Studies Financial Assumptions Update, Prabhu Gnanam

- To be in compliance with ERCOT Nodal Protocols, Section 3.11.2 (5) Planning Criteria, ERCOT reviewed the first year annual revenue requirements. The 2015 ERCOT economic studies will use 15% of the capital cost of the project as the first year annual revenue requirement to determine societal benefit.

- 2014 Financial Assumptions posted on the MIS at Reports—Reports and Extracts Index—“Economic Planning Criteria - Financial Assumptions”
- Q&A: In relation to looking at the Panhandle, do they align with your decision not to move forward on additional studies?
 - Yes, we considered that. The updated assumption would mean that less production cost savings would be required to justify the project, but we do not believe that it would make enough of a difference to change the resulting conclusion.

West Texas Update, Paul Bell

- Actual demand in ERCOT west weather zone, Oncor experiencing 25% increase
- Q&A: Is 25% a real rate?
 - Those are actual numbers from the past 4 years in the ONCOR area
 - Why growing 25% in west weather zone when Far West seems to be fracking
 - Sharyland experiencing same growth in same area.
- Load characteristics: delays in service have resulted in some load (30 MW to +100 MW) being served by onsite generation.

Q&A: is that operating synchronously with the grid but behind the meter? How is that functioning?

 - This is load that we cannot serve so customers are having to serve their own load to run their operations. It is not synchronous with the grid.
- Key elements: some of the load we cannot serve at all. Options include:
 - Convert 69 kV system to 138 kV
 - New 138 kV system
 - Upgrade and add switching stations
 - Upgrade and add autotransformers with Load Tap Changing (LTCs)
 - Upgrade and add substations with LTCs
 - 345 kV Infrastructure