

Regional Planning Group (RPG) Meeting Notes
January 21, 2014

Agenda

- Welcome and Antitrust Admonition
- Introductions
- Miscellaneous Updates
- Houston Import Project Study Update: ERCOT Independent Review and NGR Comments
- 2014 Regional Transmission Plan Scope Comments
- 2014 LTSA Scope Comments

Miscellaneous Updates

- High voltage requirements issues from last summer. If no high voltage requirement is required going forward with the study, then ERCOT will either 1) hold the PREZ study and review the analysis assuming it is not a high voltage requirement, or 2) put some type of disclaimer in the PREZ report stating the study was done based on high voltage so that the study can go out.
- Panhandle Interconnection Agreements - as of last week had a total of 4500 MW of wind generation interconnection capacity and about 2500 of that had provided financial commitment.
- Q&A: Is some type of monthly update on all projects going to be posted? Jeff will check on this with appropriate person at ERCOT.
- Sandeep Borkar is the new supervisor of Transmission Planning Assessment.
- RPG contact list has been updated on the RPG main page of the ERCOT.com website.
- POI is going to be retired and all information will be transferred to the MIS site. June is the target date for going live with this project.
- ERCOT Protocol requirement for annual review of the financial assumptions that go into our economic analysis, which are basically the 1/6th criteria. This report will be posted on the MIS site shortly.
- The first LTSA workshop was held on Monday, January 13th.
- Then second LTSA workshop will be held Thursday, January 23rd and Friday, January 24th. Please RSVP, as this will be an interactive workshop. Thursday morning there will be a WebEx, but the remainder of the day and Friday will be hands-on.

Q&A: Ask TAC to direct WMS to look into the impact of the load moving into ERCOT on CRRs; specifically which load zone they are moving into. There is a Sharyland Task Force designed to address questions like this. This task force meets monthly before the ROS meeting. This question should be directed to this group.

PLWG Update by John Moore

- PLWG 2014 Leadership to be up for consideration
- PGRR031 {Implement 95% Facility Rating Limit in the Planning Criteria} approved at TAC and is waiting Board approval
- PGRR032 {Stakeholder Review of Resource Registration Data Requirements} approved at TAC and is waiting Board approval
- PGRR028 Evaluation of Compliance of Reactive Requirements; PGRR035 DC Tie Interconnection Process and NPRR672 DC Tie Interconnection Process have been tabled to the Feb. meeting
- ROS directed PLWG to consider Transmission Planning criteria for Congested Generation

NRG Comments with HIP Assumptions by Adrian Pieniasek

- Baseline planning assumptions agreed upon: the coastal region load, Houston in particular, is likely to continue growing; there are other regions growing also, West Texas, Dallas/Fort Worth, South and Central regions including Corpus Christi, Austin, San Antonio and the Rio Grande Valley area; and there is not enough generation to meet the Planning load of 2018.

Q&A: So is there not enough generation to meet the planning load in 2018? Why then, from a planning perspective, is the scaling an accepted methodology, because that is unique to the way we do our studies.

- The load was reduced by greater than 8,000 mw in the North Central, North, West and far West weather zones, while holding the Coastal, East, South Central and South weather zone at the planning case level. This was done to make cases solve. In addition to reducing load in the North Central, North, West and far West weather zones, the HIP analysis included mothballed generation outside the Houston region, but excluded mothballed generation inside the Houston/coastal region. This is the baseline for the assumption going into the analysis.
- Is it proper to assume generation is never added in the coast or south, but that you add 10 GW in the north, mostly in the Dallas/Fort Worth zone? Is this really a valid and supportable assumption?
- Is the assumption that load is growing in Houston and nowhere else?
- Should you look at average” coincident peaks or “peak” cases?
- NRG asks this question: If you see the North Central load is almost always in the 89-90 of the coincident peak of Houston, then what is the justification for reducing it 26% in the HIP analysis? That is equivalent of being a 74% coincident peak that NRG doesn’t find anything that would justify this reduction.
- HIP assumption is that nothing is going to be built in the Coast or Houston area, but that everything is going to be built in the North area. This came out of the System Planning Monthly Status Report that contains the generation interconnection agreements.
- Generation projects undergoing full interconnection studies {only pulled coal & gas} and most is in the Coast, South Central and South. Out of report presented at ROS.
- 34.2% of generation is in the Coast, 18.5% in the South and 1.6% in the south central and 16.4% in the East. This is a total of 7750 vs. 3222 in the West, North, North Central and Far West areas.
- What is the basis for assumption that only 50 yrs. old units in the Houston area will retire and others outside of Houston will not?
- NRG believes that more supportable assumptions would significantly alter the HIP results and likely result in a more cost effective utilization of consumer dollars. Building a major transmission corridor with nothing to import could lead to stranded, costly transmission investments placed on the back of consumers.

Response from Jeff Billo of ERCOT.

In the 2013 RTP, ERCOT looked at the assumptions, and looked at the planning peak and took the higher of the load forecast that is contained within that system or the ERCOT 90/10 percentile forecast. If you go back and look at the 90/10 from last year, and particular the North Central, it is extremely higher than the SSWG cases. That resulted in a lot of scaling up. It was scaled about 10% to 15%. That is where the numbers came from. The NRG characterization of the scaling is misleading. ERCOT also demonstrated using SSWG cases that the need exists without performing any load scaling.

There was much discussion on the assumptions, studies, scaling and how adjustments are made.

Houston Import Project Update, by Prabhu Gnanam

Houston Import Independent Review current status:

- Evaluated several options for initial screening and identified eight selected options for detailed analysis
- Completed the detailed analysis for all eight selected options
- Received cost estimates from the TSPs for all selected options and future system upgrades and completed the cost analysis
- Completed the economic analysis for all select option. Although the RPG review of this project is driven by reliability need, ERCOT also performed an economic analysis for the year 2018 using the 2018 economic case.
- Completed other sensitivity analysis using the latest SSWG case.
 - ❖ Adding a 10-ohm series reactor on the Singleton to Zenith 345kV
 - ❖ ERCOT also tested the series reactor with the Twin Oak- Zenith option as a sensitivity check
 - ❖ Impact of new generation in Houston area

Next step:

- Review additional feedback provided by Stakeholders
- Prepare final report with ERCOT recommendations
- Present ERCOT recommendations to TAC and ERCOT Board of Directors

2014 Regional Transmission Plan Study Scope and Process Update by Jeff Billo

- New TPL Standard doesn't go into effect from a planning standpoint until 2016, but RTP will start moving in that direction. A full reliability analysis will be done for years 2017, 2019 and 2020 cases. For 2015 only a reliability assessment will be done, no plans for any project, just identify where there are reliability constraints. Economic analysis will be conducted for years 2017 and 2020.
- If more than 2400 MW of generation in the Panhandle, then we will model that interface limit. Any other stability SOL or GTL will be modeled accordingly. All system operating units will be modeled.
- Generation section: All hydro units will be turned off for the reliability analysis, but we may use a profile dispatch for hydro units for the economic analysis
- Wind is typically modeled at 0% in West Texas and at 10% in the coast for our reliability analysis. We will review the historical data and look at this from a more probabilistic standpoint. We will do some analysis and then come back at a future RPG meeting and share what we found and discuss if this is an appropriate assumption. *Question: In the panhandle, or really anywhere that the newer wind turbines are being used and have more effective blades, and getting into lower winds regimes, are you taking a look at the fact of how technology has been moving along?* ERCOT will take a look at some of the latest data we have from AWS Truepower.
- Load Assumptions. It appears that we are going to be seeing a lower load forecast so in being consistent with our methodology we will use the higher of the SSWG base case or ERCOT 90th percentile weather zone load forecast. We will probably see the greatest impact in the North central weather zone with this change. *Question from Walter Reid: Is the ERCOT forecast itself going to be regional in nature in a way that you can reflect the different expectations in each region using the new ERCOT methodology and not the TSP methodology?* Yes, ERCOT will have all of those forecasts.
- Study of Methodology will be similar to the past. In the past there was a difference between the RTP and the LTSA group. This past year the group was re-organized. Large projects will be evaluated using the 2014 LTSA cases to ensure project robustness. Small projects requiring a number of system upgrades will be evaluated on a long term basis during the 2014 RTP analysis.
- A final report is targeted for 11/14/14.
- Any comments are appreciated.

Panhandle Update by Fred Huang.

Fred gave an update on the Panhandle Study. As of 1/16/14 there is 4,516mg of IA capacity and 2,505 MW of Financial Commitment capacity of standard generation interconnection agreements in the Panhandle.

2014 Long Term System Assessment Scope and Process by Jeff Billo.

Goal of the LTSA is to meet ERCOT's obligations under PURA Section 39.904; develop a path for identifying long term transmission needs; develop DC study cases for 2024 and 2029 covering a range of scenarios for the use of near term planners in the evaluation of large transmission additions to the ERCOT system; and facilitate communications and understanding of transmission project needs and additions among MPs.

Next meeting is scheduled for February 18, 2014.