**Regional Planning Group**

**Meeting Notes**

**March 21, 2017**

**Misc. Updates-**

* Sandeep Borkar gave a brief update on the 2017 RTP.
  + In January, the RTP Scope was shared and this time there was a slight change made on the assumptions spreadsheet. The spreadsheet was updated last week and shared on the MIS. Please provide feedback. The spreadsheet does not have the latest load that will be used in the RTP cases due to the fact we are still working on the load review based on PGRR042.
  + Another update: In the past, it was mentioned that we would use October SSWG cases as a start, but we were able to move up to the March SSWG cases. That will be reflected in the assumptions document shared earlier in the week.
* Resource Adequacy Webpage Update-
  + ERCOT has added/updated the wind and solar profiles that are used for existing/future stations. As the economic studies are being ran, these profiles are being used for the analysis.

Q: (Brad, Sharyland): What was updated on the profiles?

A: (Doug Murray): The new solar profiles are from AWS and the previous profiles were from company URS. The profiles AWS gave us were similar to the wind profile and matched the weather that we used for the wind profile. There are 125 solar hypothetical sites similar to the 130 hypothetical sites we have for the wind profiles.

Q: (Brad, Sharyland): Is there any thought of updating the wind profiles as well?

A: (Doug Murray, ERCOT): The wind profiles have been updated. AWS gives us a new group of profiles every year based on the previous year’s weather.

* Prabhu Gnanam gave an update on the MISO DC Ties study-
  + In 2015, we presented and discussed the scope. We finalized the scope in January 2016. Since then, we have been working with MISO primarily on the model building phase. There were some on delays on the MISO side. MISO has been working on putting a model together which combines both ERCOT and MISO’s systems. We hope to have the initial models finalized within the next couple of months and then we will proceed through the study that is outlined in the scope.
* PLWG Meeting tomorrow, 3/22/17: Three PGRRs are up for discussion.

**Rayburn Integration Study- Ajay Pappu**

Ajay presented the study results from ERCOT’s Rayburn Integration Study.

Q: (Brad Woods, Texas RE): Slide 15: What year are you looking at?

A: Summer peak 2021

Q (Brad Woods, Texas RE): Are you looking at only 2021?

A - Yes, just that year. Lonestar’s intention is to connect in 2020. When we looked at this case, there were no reliability criteria violations and the margins were significant. We did not see a need to look at another year for this study.

Q: (Bill Bojorquez, Sharyland): Are there any SPP studies related as to the cost of this connecting the load from the system? I assume production costs go up at ERCOT, can you elaborate as to whether there is still benefits in moving the load to the ERCOT system based on production cost?

A: (Jeff Billo, ERCOT): At this point, we have only done the optimization study, what would be the best way to connect. We have not done an impact study. We have discussed that but have not scoped that out yet with SPP, that will be something after this analysis.

Q: (Camillo Ordonez, Luminant Energy): Slide 15: What kind of connection is the 345 kV?

A: (Ajay Pappu, ERCOT): It is a new 345kV Substation (6 breaker ring bus) on one circuit of Martin Lake.

**2018 LTSA Kickoff- Sandeep Borkar**

Sandeep gave a presentation summarizing lessons learned from the 2016 LTSA and beginning the process for the 2018 LTSA.

No questions.

**2017 Long-Term Stability Study Update – Fred Huang**

Jeff Billo: Coming out of the 2016 LTSA, we noticed that we had a large amount of renewables added in all eight scenarios. There is heavy focus on solar generation being added. What we have learned over the past 10 years is that when there is integrated inverter based generation, stability issues become the main issues. It is not so much the thermal constraints on the transmission system. We have seen that trend continue. Last year, almost a quarter of the generation that went through commissioning had some sort of stability issue that was identified in the interconnection study. Along those lines in the LTSA we have been focused on steady state analysis but we are seeing the need to start incorporating more stability analysis in our long term assessments. The near term assessments that are stability based, they are based on generation that is either existing or meets the Planning Guide, Section 6.9. We are seeing the trends are increasing (for renewable generation). This study is about seeing a need to do more long-term stability analysis.

Fred then presented on the Long-Term Stability Study scope.

Q: (Bill Bojorquez, Sharyland): Slide 4: On the 69% penetration, do you have some diversity of wind and solar that shouldn’t peak at the same time.

A: (Fred Huang, ERCOT) Yes. We use UPLAN as our reference, so they may not be 100% wind farm or 100% solar but a combination of output.

Q: (Bill Bojorquez, Sharyland): So, you came to the 69% of 42.2 GW after looking at the output?

A: (Fred Huang, ERCOT): Yes.

Q: What time of the day, season, or month was the 69%?

A: (Fred Huang, ERCOT): There is no particular date, season or month. We review the whole entire year, in the production cost model. Higher penetration may not result in the lowest inertia, and vice versa. We revised and select the top 20 highest transfer, and top 20 lowest inertia, reviewed all of them and tried to combine conditions. There is not a particular hour but it is in the top 20 range of extreme conditions.

Q: Slide 4: Is system inertia nuclear, coal or gas?

A: (Fred Huang, ERCOT): Yes, the system inertia here is synchronous machines.

Q: (Sharyland): On the timeline, you have September 2017 but what I would like to see, rather than completing and publishing a report, is a review process. Can you elaborate?

A: (Fred Huang, ERCOT): Yes, September we will share the report and we will provide status updates to the RPG periodically.

Q: (Camilo Ordonez, Luminant Energy): How do you think your results will vary? Do you plan to do any sensitivities where you avoid any biases that the model may have?

A: (Fred Huang, ERCOT): Yes, our intent is to focus on the scenario we developed. In terms of sensitivity, we will adjust the inertia.

**Far West Project Independent Review Update – Ben Richardson**

Ben gave an update on ERCOT’s Independent Review of the Far West Project.

Q: The premise of this entire project was the gas and solar potential growth, correct?

A: (Ben Richardson, ERCOT): Yes, we are doing our study based on committed load growth.

A,2: (Maurice Walker, Oncor): The additional load can be accounted for 100% by new signed customer agreements.

**South Plains Project Independent Review Scope –Ping Yan**

Ping presented on the study scope of ERCOT’s Independent Review of the South Plains Project.

Q: Slide 7: In talking about the three economic projects, is that a dollars per megawatt transfer analysis?

A: (Prabhu Gnanam, ERCOT): This is purely looking at the ERCOT Economic Criteria.

Q: If additional generation securitizes in the near term, will that be added to the study or was March 13th the cut off?

A: (Ping Yan, ERCOT): March 13th is not the cut off. If new generators have met the Planning Guide 6.9 requirements along the way, we will add them to our study.

Q: (Brad Schwarz, Sharyland): Shouldn’t we be using PGRR042 to rank the options that meet the economic criteria?

A: (Prabhu Gnanam, ERCOT): I agree, once we have a project that meets the threshold, we are going to look at the sensitivities based on PGRR0042.

Q: Slide 7 (Step 1): Will ERCOT will look at dynamic stability analysis for some of the options?

A: (Fred Huang, ERCOT): Initially, to determine the Panhandle interface limit it will be based on initial stages of screening. We do not plan to run dynamics for every option.