**Regional Planning Group**

**Meeting Notes**

**November 14, 2017**

**Misc. Updates**

* Sandeep Borkar gave a few updates.
  + 2017 RTP update: We are working through the process and almost done with most of the analysis. We have been working with TSPs that have seen the congestion and any economic projects as part of the economic analysis. We posted initial results and it was up for comments from TSPs. We are currently trying to wrap up the POM, Multiple Element Outage Analysis. TSPs should expect a report on those high level contingencies in the next couple of weeks and please provide feedback.
  + 2018 RTP Scope has been shared. Not much has changed since the 2017 RTP scope [process-wise]. The final input assumptions are being reviewed.
  + After the last RPG Meeting, the Whitepaper was posted explaining new methodology that would be used for economic planning which include weather sensitivities and the use of transmission outages. The Whitepaper was updated to address when you are looking at the final savings from an economic project you have to account for both the weather sensitivities and the transmission outages in the same number. In addition, we also reviewed the outage statistic data that was used in preparing the numbers, and we found a few outage entries that should not have been included in the analysis. The Whitepaper has been updated based on those numbers as well.

Q: (Cyrus Reed, Sierra Club): In the economic analysis, how do we choose the weather years? Is that part of the planning guide?

A: (Sandeep Borkar, ERCOT): We tried to explain this in the Whitepaper. If you look at the wind profiles, solar profiles, load energy level and load peak, you choose the years to get a base or an average year. To give a lower and higher end of the spectrum. We were just looking at the numbers that were available.

* Fred Huang gave a status update on the Panhandle Study in terms of EMT PSCAD Analysis. We shared the scope and status with the group. We corrected all models, and still several models were not available to us. This difficulty could be due to manufacturer support or the functionality available in the models. Current status is consultant is full speed to put all the models and develop a base case for the simulation. The panhandle area has been created and they are in the process to do the contingency analysis. At the same time, they are also working on the base case, in terms of scenario, for the south region wind farms. We are still on target to complete the study by early next year.

Q: (Clayton Greer, Morgan Stanley): Are you putting in generic values for the ones that are missing or are you waiting?

A: (Fred Huang, ERCOT): The practice right now is to look at similar size and talk to the manufacturers. We will replace with generic assumptions.

Q: (Clayton Greer, Morgan Stanley): Do you think they are pretty close?

A: (Fred Huang, ERCOT): We will follow what we did last time. If we do not have a model, we will put something reasonable to represent the model, but obviously make conservative assumptions. As a positive, the difference between this time and last is the model quality and the feedback are much better. The challenge is the model in the south because some units have been there for many years.

* Jeff Billo notified the TSPs that are submitting RPG projects, the need for the projects are partially based on stability results you get by having a dynamic load model. If you are running stability analysis, based on the dynamic load model that you have, you are seeing a reliability issue. In those cases, ERCOT is going to ask you to provide justification for parameters in the load model that you are using. We wanted to make you aware so that you can factor that into your analysis, when you submit something, we are going to want to see some justification to why the load parameters are the way they are.

Q: (Brad Schwarz, Sharyland): What does the justification look like? What is ERCOT expecting?

A: (Fred Huang, ERCOT): An example would be to provide load models together with a benchmark of a reoccurring event so that it mimics a real time response.

* Jeff Billo announced 2018 RPG schedule has been posted to the RPG website.

**2018 LTSA Load Forecast**

Calvin Opheim gave a brief update on 2018 LTSA Load Forecast.

No questions.

**Dynamic Stability Assessment of High Penetration of Renewable Generation**

Megan Miller and Fred Huang presented on preliminary results of the Dynamic Stability Assessment of High Renewable Penetration for year 2031.

Q: (Clayton Greer, Morgan Stanley): Where were the units located?

A: (Fred Huang, ERCOT): We focused on the units in the West Regions first. In this case, we have quite a few of renewable generation produced in West Texas.

Q: On slide 9, where you are seeing the ringing. Was it specific models that were causing this ringing or was it interaction of all the inverter based generation? Could you operate with little penetration? Was there any analysis done on that model?

A: (Fred Huang, ERCOT): In this study, we mainly use the PSSE tool. We know in panhandle region has similar concerns as well. We are starting to use the PSCAD analysis just because of the model limitation in the PSSE may not be able to identify or recognize more high resolution challenges. Typically, when we run PSSE or dynamic stability and we observe this noise response, it is an indication that the system isn’t strong enough. The model needs to be connected to a strong system.

**Connecting Generation into Series Compensated Lines**

Jonathan Rose presented on the challenges building resources near series capacitors.

Q: What is the restriction on a temporary tap?

A: (Jeff Billo, ERCOT): We do not have an official policy, but we are moving closer to that. We see a lot of issues with temporary taps.

Q: Is the temporary tap studied in the new stability study process?

A: (Jeff Billo, ERCOT): Yes, we need to see the study for the temporary tap.

**South Plains Project IR Update**

Ping Yan gave an update on ERCOT’s Independent Review of the South Plains Project.

Q: (Clayton Greer,): On slide 8, were the outage probabilities based on general ERCOT?

A: (Ping Yan, ERCOT): It is based on the whole ERCOT 345kV lines.

**Freeport Master Plan Project IR Update**

Ajay Pappu gave an update on ERCOT’s Independent Review on the Freeport Master Plan Project.

No questions.