**Regional Planning Group**

**Meeting Notes**

**January 24, 2017**

**Misc. Updates**

* Jeff Billo announced CIGRE has released a technical document, ERCOT participated, connecting wind farms to weak grids.
* SSR Update 1/31/17
  + SSR workshop to go over results of studies, NPRR 562.
* Note on 2017 Regional Transmission plan: We are still working through load forecast and differences between ERCOT forecasts and TSP forecasts. We need to update the forecast numbers that we shared in November. There is a conversion factor that we need to apply to get the weather zones allocated correctly. We will post the updated forecast.

Questions:

Q: (Brad Woods, Texas RE): Is the load that you are looking at the 90th percentile?

A: (Jeff Billo): Yes.

Q: Is that change to reconcile the Settlements and Operations weather zone differences going to change the weather zone forecasts?

A: (Jeff Billo): I think it is going to change all of them.

**2016 RTP Long-Term Assessment Recap**

Sandeep Borkar wrapped up the 2016 Long-Term System Assessment.

Q: (Eric Goff, CEI): Are you going to stick with this one for this annual update or are you considering revising based on federal/political outcomes on the tax scenario?

A: (Sandeep Borkar): This 2016 LTSA is now complete, there are no plans of revising the study. However, we will keep this in mind when we are preparing the next set of scenarios for 2018 LTSA.

Q: (Eric Goff, CEI): Remind me what this output is used for?

A: (Sandeep Borkar): This is used as information to the market, this is how the system would look like. At that point if you have to adjust, if you have to start any detailed study it would tee off of this.

A: (Jeff Billo): To add to that, as we are looking at our near term plans, we will take into account the longer term direction based on the LTSA.

Q: (Eric Goff, CEI): So we use the 2016? Isn’t that problematic, since Washington’s goal is to eliminate these tax credits?

A: (Jeff Billo): We have to keep that in mind. We cannot ignore that fact.

Q: (Brad Woods, Texas RE): This is the amount of solar that would be added if there were no transmission constraints? This is economic?

A: (Sandeep Borkar): Yes.

Q: (Melissa Trevino, Occidental): Question about declining capital costs, at what point did you assume that it tapered off and went flat or did you?

S: I do not have our capital cost experts, but we can follow up on that question. Follow up – They decline and started increasing after 2021 for solar and 2025 for wind.

A: (Jeff Billo): I think there was a point where they bottomed out and then started going back up again. I believe that was presented around the 2015 November RPG Meeting

Q: (Brad Woods, Texas RE): Do you know at what point this begins? Do you know certain amount of solar is needed around 8 p.m.? How much solar is needed for this to start showing up as an issue around 8 p.m. Is there a certain amount of solar that you have pin pointed?

A: (Jeff Billo): We did not quantify that in this analysis. We looked at the current trends scenario and between the peak load hour and net peak load hour dropped off about 7-8%. You will start to see it when solar reaches 7-8% of the peak load.

A: (Sandeep Borkar): You could say you saw it in all of the scenarios. The range of solar was 14,500-28,000 MW.

Q: (Brad Woods, Texas RE): What year was that?

A: (Sandeep Borkar): 2026-2031.

Q (Aruna Ranaweera, E.ON): Did you try putting in more storage?

A: (Sandeep Borkar): One scenario where we had high storage assumptions. It did help with the scenario, but given the economics, fewer storage units were added at that time. It at least indicated that there is some potential and can be looked into.

Q: (Brad Woods, Texas RE): Jeff, is this going to feed into the CDR? How resource adequacy is considered in CDR?

A: (Jeff Billo): At this point there are not any immediate plans, but because of this study we are aware it is an issue and it is something to keep an eye on, I do not think it is going to be an issue immediately but it could be down the road. We have a SAWG group that I am sure would be happy to look at that.

Bryan Sams, NRG: We would be happy to look at that at a SAWG meeting.

Q: (Brad Woods, Texas RE): For all the solar that you are projecting, did you propose projects in the LTSA that will accommodate all that solar?

A: (Sandeep Borkar): Yes, I wouldn’t say accommodate all solar but I would say there were transmission which would meet the system needs in the longer range. All the details and the summary of the report is included in the slide deck.

Q: (Brad Woods, Texas RE): Jeff, projects that are being recommended and approved now, you’ll consider what is being proposed in LTSA to accommodate the solar?

A: (Jeff Billo): We will use the LTSA as a guideline, to give us vision into longer term needs of the system as we are looking at short term needs.

Q: (Brad Woods, Texas RE): One concern, if you’re building a transmission line for what is needed based on a five-year-out, if it is going to cost more to build it to accommodate the future ten year out. How do you to justify 10-year-out cost? You were going to try to work and justify that additional cost? Even if it is a cheaper cost, for what is projected 5 years out. There a possible way to justify that cost?

A: (Jeff Billo): Yes.

Q: (Brad Woods, Texas RE): Do the transmission planners understand that you will? Do you encourage that? As far as the additional cost, do you encourage the TSP to provide you that? Do you look at that? And if you don’t see it do you provide feedback and recommend they revise to include something from the LTSA? Do you go that far out?

A: (Jeff Billo): I wouldn’t word it that strongly, that I would say we are encouraging. I am not actively out there evangelizing based on the LTSA. It is a tool that we use internally as we review projects to look at longer term needs of the system.

Q: (Steven, Austin Energy): You said the Panhandle needs upgrade? Does solar provide a similar amount of reactive power as wind to help provide voltage support? Are y’all considering the voltage support from the solar?

A: (Jeff Billo): Solar has same requirements as any other generator for providing reactive support.

Q: (Steven, Austin Energy): Is it better or the same as wind?

A: (Walter, Wind Coalition): Wind and solar provide significantly more reactive capability than a conventional generator because it goes all the way down to ten percent loading and so it is available in many of them. I don’t know about solar, but many of the wind generator actually provide full reactive capability when they have 0% output.

**Mountain Home Project**-

Charles DeWitt (LCRA) presented on the Mountain Home Project in the Kerrville/Fredericksburg area.

(No questions.)

**North Garland Reliability Infrastructure Project (N-GRIP)**

Juan Santos (Garland Power and Light) presented on the North Garland Reliability Infrastructure Project.

Q (Eric Goff, CEI): Do you have data centers that are currently planning to come or is it a good site?

A: (Juan Santos, GPL): We have data centers that are breaking ground and some that will be in the future.

Q: The 550 that you have on lookout there, is that is your new load?

A: (Juan Santos, GPL): We studied a bunch of levels and this is just an extreme of those levels for this audience, a summary)

Q: Are you going to serve 550 out of one station?

A (Juan Santos): Yes, we have to.

Q: This is just stubbed out as an example? This is an extreme case so you will do it as you grow but you are securing sites now?

A: (Juan Santos, GPL): Yes, one other site.

Q: What is the study year for this assumption?

A: (Juan Santos, GPL): 2020.

Q: Question about data centers: This rivals block load addition like natural gas export terminals, they can be faster and more modular than LNG terminals. How many more are similarly situated? How fast are they coming? Are they being picked in the load forecast? Are they being similarly reported by TDSPs who are seeing similar activity?

A: (Calvin Opheim, ERCOT): Is that included currently? No. This is why we need to have interactions with TSPs which we are starting this year. We need to determine the significant block loads.

Q: (Bryan Sams, NRG): Does being jointly owned by Oncor and Garland give the customer the option to choose who serves this load?

A: (Juan Santos, GPL): No, customers are designated.

**Maverick County Project Independent Review**

Ying Li presented on the Maverick County Project Independent Review.

Q: (Brad Woods, Texas RE): On slide 7, is 90% the margin you’re wanting to build to for 2020-2021?

A: (Ying Li): We use 90% as a threshold.

Q: (Brad Woods, Texas RE): On slide 11, on the new line from Brackettville to Escondido, what is the loading on that line?

A: Ying Li: Base case loading is overloaded in both 2018 and 2021.

Prabhu Gnanam: I agree with the comment, but project addresses overloads which are going to be 128% or so. It does not solve all problems, but does address some concerns. In the long run, this project is needed.

Q: (Brad Woods, Texas RE): Would be helpful to look at what it would take to get to 10 percent or 20 percent margin. What kind of project would it take to be to get up to 20% margin in that project?

A: (Dan Lyons, AEP): One thing that obscures these numbers somewhat is extreme congestion in this area. Reliability is not a risk if you consider the decrease in generation as an option.

**Far West Project Independent Review Update**

Ben Richardson gave an update on the Far West Project Independent Review.

Q: (Kris Koellner, LCRA): We gave some feedback to ERCOT, AEP and Oncor in the October timeframe regarding the benefit value of the links 345 addition outside of Bakersville, is that aspect being looked at as part of the independent review?

A: (Ben Richardson): Yes.

Q: Was solar the main driver or was the load? Or both?

A: (Ben Richardson): Both

Q: Are there interconnect requests out there?

A: (Maurice Walker, Oncor): The loads that were projected in the case were justified. Yes.

Q: (Brad Woods, Texas RE): Is that load information? Is that being added to the cases or is it being provided to the ALDR [Annual Load Data Request]?

A: (Maurice Walker, Oncor): We are working with ERCOT. It is being considered at this part.

Q: (Brad Woods, Texas RE): Is the ALDR protected?

A: (Maurice Walker, Oncor): The ALDR is just TSPs and ERCOT.

Q: (Liz Jones, LCRA): Response to Brad Wood’s question, ALDR is completed once a year and we are getting load additions across the year and so there may be a mismatch temporarily because of that timing difference.

Q: (Brad Woods, Texas RE): as far as cases whenever TSPs learn of additional block loads, I am assuming there is a process for cases to be updated with the load information? Or do you wait for a case update? How are you providing the information for other neighboring TSPs?

A: (Maurice Walker, Oncor): We make sure that the information is presented to those that participate in the RPG process.

Q: (Steve, Austin Energy): On slide 3, the 138 kV line going from Solstice to Permian basin, is that showing a 138 kV?

A: (Ben Richardson): Yes.

Q: (Charlie): On slide 4, is this just oil and gas related load? Is that the absolute number or the additive number?

A: (Ben Richardson): Total number.

Q: (Charlie): Is ERCOT evaluating the upgrade?

A: (Ben Richardson): Yes, that is our base case assumption.

Q: So the base case is the current system without the upgrade?

A: (Ben Richardson): Yes, without the 345 kV Far West Texas Project.

Q: No solar cases?

A: (Ben Richardson): That is correct.

Q: (Brad Woods, Texas RE): About the Far West Texas Project, this is the project where you are considering the LTSA for solar?

A: (Jeff Billo): Yes.

Q: (Brad Woods, Texas RE): Is it a certain amount of solar? What assumptions will you be using?

A: (Jeff Billo): We are looking at plants that have interconnection agreements that will dictate what that sensitivity looks like. We feel at this point that this will be a good representation of what is in the LTSA.

**Rayburn Integration Study Update**

Ajay Pappu gave an update on the Rayburn Integration Study.

(No questions.)