SUMMARY OF OCTOBER 6, 2022, TECHNICAL SESSION #6

On October 6, 2022, PNM held the second of two sessions covering issues related to transmission in the IRP (Integrated Resource Planning) process. This was the sixth in the series of technical sessions for stakeholders devoted to discussing the advantages and disadvantages regarding the application of different technical methodologies within the modeling framework for the IRP for transmission.

PNM consultant E3 gave a presentation comparing transmission analysis in IRPs with transmission planning studies, highlighting the benefits and drawbacks of three approaches utilities are using for incorporating transmission in resource selection and portfolio development in their IRPS. The three approaches are "CREZ" (Competitive Renewable Energy Zones)-style cost adders for resources or locations; scenario analysis of transmission projects; and co-optimization of generation and transmission expansion under the zonal system representation.

Also, PNM staff gave an overview of transmission modeling in PNM's four previous IRPs (2011, 2014, 2017 and 2020) as well as a discussion of zonal and nodal transmission modeling.

MEETING ATTENDEES

Twenty-nine stakeholders, not including PNM staff, attended the virtual meeting, including members of the public and representatives from the following organizations: Hecate Energy, InterWest Energy Alliance, NM AREA, and Sandia National Laboratories, among others.

Meeting slides can be found here.

Stakeholders raised the following questions.

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STAKEHOLDER QUESTIONS/COMMENTS

Stakeholder	Question/Comment	Categories
NM AREA:	One of the things E3 talked about was the scenario analysis, sort of the middle course method. PNM has done some co-optimizations. Very slow. Very limited. And you've done the approach of adding, also on the cost for the transmission as an adder. Could there be some potential, and maybe [this will] depend on [your] RFP results, for [something like] PacifiCorp did - they had a large collection of RFP results, so they had resource options. But they did some scenario analysis, basically comparing one portfolio--if you built a certain transmission project that had been identified in the past as potentially being beneficial--and then take another scenario with an alternative portfolio that's optimized, assuming you don't have that, and then compared [them]. Do you see any opportunity for potentially doing that? Though it might depend on what you're seeing in your results, when you actually get in, to start doing the IRP.	**Transmission**
NM AREA:	Do you see this as really a tool for better understanding congestion going forward because, again, the zonal models have limitations and it's an art to putting those together, right?	**Transmission**

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	So, there's some art to this but this would give you a much more accurate picture of the congestion situation. For example, you could run future portfolios for a sample year in the future, or you could look at [whether] there congestion transmission projects that make sense for the PNM transmission system as a whole. That is, not just PNM retail but PNM retail and the other transmission customers. Is that how you're seeing this?	
Hecate Energy:	Do we model contract path versus do we model just the physical flows relative to the inverse impedance of the system?	**Transmission**
NM AREA:	I'm struggling understanding the difference between these two (Slide 21). I'm assuming the initial modeled topology is essentially related to the slide previous to this.	**Transmission**
InterWest Energy Alliance:	[Regarding Slide 20], I think what I heard you say is that what you did is identify transmission projects from each of these five zones, but only in relation to a known generation resource within each of these five zones that needed transmission in order to get the energy to load. But if you didn't have a known resource in one of those zones, there was no impetus	**Transmission**

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	to build any transmission. Is that about right?	
Sandia National Laboratories:	Maybe [this is] related to the third option, the more complex and customized generation and transmission**.** With the zonal model, you get those transmission investments kind of from a zonal basis. So, I was just curious, in your screening of current IRPs, or even what you have (on Slide 15) on integrated system planning, what are some methods utilities are taking to kind of translate those aggregated transmission investments into actual transmission projects?	**Transmission**
Hecate Energy:	When a generator joins a data collection process, there'll be some reliability updates assigned to it, right, based on the interconnection study? So, are we talking about upgrades? Can you explain that?	**Transmission**
InterWest Energy Alliance:	Do any of these methodologies take into account benefits, such as reliability benefits, and assign a value to them that can then be assigned a dollar value instead of just the amorphous 'it increases reliability but we're not assigning any value to it' that I've heard in several IRPs.	**Transmission**
Hecate Energy:	I think you need the cost of generation also, like different	**Transmission**

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	generation types will have different costs, right? Are you using any numbers for generation when you look at these scenarios and evaluations? (Slide 14)	
NM AREA:	Would you say it's fair to say that the scenario analysis approach works particularly well when a utility has identified various candidate transmission projects or expansions that have clear strategic benefit? And if scenario analysis kind of works well for identifying when those projects really become either cost effective or have significant benefits to justify moving forward? [Does] it work well, in that respect?	**Transmission**
NM AREA:	This is more of a comment. You've partly acknowledged [that] there are some exceptions, but not just in CAL ISO/MISO: PacifiCorp, for example, [with the] Gateway South project that was fully integrated in their most recent IRP. And the decision was integrated on both the resources and moving forward with that transmission project. And it could be argued, to some extent, some of NV Energy's recent transmission developments are tied together. I mean, not so much in an IRP, but the consideration of resources was a major driver moving forward [with] those transmission projects.	**Transmission**

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	So, I agree, it's somewhat in its infancy, but it is happening. And there are examples.	

All IRP questions and answers can be found here.

The latest future meeting schedule can be found here.

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