SUMMARY OF JULY 6, 2022, TECHNICAL SESSION #3

On July 6, 2022, PNM held the third 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 2023 Integrated Resource Plan (IRP). The meeting was devoted to a presentation by Itron on the scope of work concerning the fundamentals associated with developing PNM's 2023 long range load forecast for the IRP. Additionally, PNM presented its approach regarding the candidate resource pricing methodology for the 2023 IRP.

Director of Integrated Resource Planning Nick Phillips explained that the session was a preliminary look and that the forecasts would be finalized in coming months. He added that PNM had taken into consideration comments concerning the 2020 IRP's long-term load forecasts and stressed that the session gives stakeholders the opportunity to discuss the various components going into the 2023 forecasts as well as the draft scenarios under development.

MEETING ATTENDEES

A total of 32 stakeholders, not including PNM staff, attended the virtual meeting, including members of the public and representatives of the following organizations: Brubaker & Associates, InterWest Energy Alliance, New Mexico State University, the New Mexico Public Regulation Commission (NMPRC), the New Mexico Renewable Energy Transmission Authority (NM RETA), Sandia National Laboratories, and Western Resource Advocates (WRA).

Meeting slides can be found here.

Attendees raised the following questions.

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STAKEHOLDER QUESTIONS/COMMENTS

Stakeholder	Question/Comment	Categories
NMPRC:	Does the solar implementation assume that there is adequate feeder capacity, smart meters, etc. to allow the proposed residential solar projects to be built?	**Grid Mod**
WRA:	Please say a little bit more about distributed storage. Did you mean on the utility side of the meter? Or did you mean customer owned and controlled storage?	**Grid Mod**
InterWest Energy Alliance:	Do you plan to do a comparison of the impact on the night and early morning hours? I would assume that demands at that time are much lower.	**Load & Energy Efficiency Forecasting**
InterWest Energy Alliance:	Is your key need, especially during summer peak, going to be capacity or energy in the 6-9pm window, so what happens when you thicken that self-generation slice at the top (Slide: "Hourly Load on Peak Day") that just pushes your peak into the evening hours when the sun is going down or down? Is that right—partially—so that this is just a snapshot and doesn't represent the full system dynamic?	**Load & Energy Efficiency Forecasting**
New Mexico State University:	We've heard that the average temperature in New York (or for PJM) was going up .7, and we don't really know what the trend is for New Mexico. I'd like to see a scenario that does take	**Load & Energy Efficiency Forecasting**

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	into account increased heat waves, the increased occurrence of heat waves in the summer, because that's what's going to stress your system. So, can we look at the trends we know about in New Mexico, project out increases in heat waves, and make a scenario for that?	
Member of the Public:	Is there any elasticity between behind the meter solar and community solar and electricity rates? If so, is that a signal friction factor?	**Load & Energy Efficiency Forecasting**
InterWest Energy Alliance:	Is there much or any behind the meter by commercial industrial customers? And how does that affect your analysis?	**Load & Energy Efficiency Forecasting**
NM RETA:	What factors contributed to the forecast and increased residential behind the meter capacity?	**Load & Energy Efficiency Forecasting**
New Mexico State University:	The question here is climate change impacts the U.S. at different rates, depending upon the region. What is the trend? What is the trend in the Southwest versus New York, PJM?	**Load & Energy Efficiency Forecasting**
InterWest Energy Alliance:	It would be helpful to repeat this discussion in writing somewhere—the amount of increase per decade and the fact there are fewer cold days, more than hot days. Will there be a detailed report written?	**IRP Report** **Load & Energy Efficiency Forecasting**
InterWest Energy Alliance:	Why use 2015 to 2018? Why not use more recent billed sales data (Slide 15)?	**Load & Energy Efficiency Forecasting**

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Brubaker & Associates:	What are the components? Are you using government forecasts?	**Load & Energy Efficiency Forecasting**
Brubaker & Associates:	I know this is preliminary. This is obviously a very big change, particularly on the residential. What are the big drivers of this change?	**Load & Energy Efficiency Forecasting**
Brubaker & Associates:	Is the hourly weather data, both the temperature data and the global horizontal irradiation, assuming that's all in sync on an hourly basis?	**Load & Energy Efficiency Forecasting**
NMPRC:	Will there be a way for developers to know which locations will be the highest adjustments? This seems to indicate transmitted adjustments were made after bids are submitted to PNM. Will developers have access to the information later, that is to say their final project cost as calculated and adjusted by PNM?	**Modeling**
InterWest Energy Alliance:	I understand that the answer to this question may be different in the near term versus the long term because I've heard PNM say many times now that we know where we're going—to a zero-carbon system. How to get there between now and then? Can you address when the need pushes into the late evening, early morning hours? What do you see as the options, resource wise, to fill that gap?	**Modeling**

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Member of the Public:	How do you factor recharging batteries into this model?	**Modeling**
Member of the Public:	With the sales drop off, how does that impact on PNM for generation? And what is the impact on PNM's business model?	**Modeling**
Member of the Public:	What kind of fossil resources are needed for the transition to a non-carbon state of affairs?	**Modeling**
Member of the Public:	We can concede a lot about solar. But does wind generation also factor in here? Specifically, how much does weather impact the wind generation capacity for us and where does that come in?	**Modeling**
Brubaker & Associates:	Are you are still planning a technical session for stakeholders in the fall to discuss the import limit?	**Modeling**
InterWest Energy Alliance:	Shouldn't your heat wave analysis also include a length in time, depth in temperature, and demand and geographic breadth since these are assumptions that affect your assumptions regarding market availability?	**Load & Energy Efficiency Forecasting** **Reliability, Resilience & Resource Adequacy**
New Mexico State University:	We're mostly learning about how the baseline was developed for load. and how the stochastic scenarios affect production on the reliability side, but does the reliability model also apply stochastic variation to this baseline load	**Reliability, Resilience & Resource Adequacy**

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	forecast? Where would different load scenarios go?	
NMPRC:	Is a decent summary that you are largely approaching these transmission constraints in the IRP by planning for large projects, a couple of 100 megawatts where one or two developers will serve as a kind of anchor customer that will take responsibility for the transmission upgrades needed for their projects?	**Transmission**
InterWest Energy Alliance:	PNM, having acknowledged transmission constraints in the east, why not look at those as individual pieces of the IRP as well, instead of just linking it to particular resources?	**Transmission**
InterWest Energy Alliance:	My understanding is that PNM is looking to link transmission to a particular resource in a particular location, and then ascribe the costs to that resource or development or whatever. Is that right?	**Transmission**
Member of the Public:	Is transmission also an issue with wind that may be less of a transmission issue as solar?	**Transmission**
NM RETA:	Why does the minimum and maximum difference each year increase significantly (Slide 17)?	**Load & Energy Efficiency Forecasting**
PNM:	Has anybody started using a 50/50 weather forecast for their work? Are they starting to look at 75/25? Or 90/10? Is anybody starting to ask for anything	**Load & Energy Efficiency Forecasting**

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	other than a 50/50 weather scenario to look at how should we be planning as we start to recognize more and more what's going on with the changing climate?	
PNM:	If we start to think about climate change, and extreme weather, how might you adapt normal weather looking forward, if you want to consider that maybe there's going to be more extreme weather, more significant increases, as opposed to what's happened over the last 20 years?	**Load & Energy Efficiency Forecasting**

All IRP questions and answers can be found here.

The latest future meeting schedule can be found here.

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