

SUMMARY OF FEBRUARY 15, 2023, TECHNICAL SESSION #11

On February 15, 2023, PNM held the 11th 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 (Integrated Resource Plan).

The session, led by PNM's IRP director Nick Phillips, covered the following elements of the modeling framework: terminology; scenario screening with examples; modeled technologies versus RFP resources; RFI selections for Phase 1 modeling; the treatment of existing resources; economic development sensitivity cases; and IRP scenarios.

PNM IRP staff also demonstrated new features of the IRP website, including a Q&A section where stakeholders and others can assess responses to questions stakeholders raise at meetings.

MEETING ATTENDEES

Twenty-five stakeholders, not including PNM and its contractors, attended the virtual meeting, including members of the public and representatives from CCAE, InterWest Energy Alliance, NM AREA, NMPRC, New Mexico State University, Onward Energy, SWEEP, and Synapse Energy for the New Mexico Attorney General, among others.

Meeting slides can be found [here](#).

Stakeholders raised the following questions.



Stakeholder	Question/Comment	Categories
<p>NM AREA:</p>	<p>To make sure I'm understanding this right--this slide [Slide 11], which I think is helpful--what you're trying to do with Phase 1 is you've got ... a large set of scenarios, and you want to try to ... weed out the ones that are fairly clearly not going to perform well, such that it really wouldn't be efficient to go on running against all futures. So, if I understand right, what you're proposing to do on the screening is that it would be a more limited set of futures. Is that kind of what you're proposing to do--basically run that first initial set of scenarios against the more limited set of futures to see what it produces and whether there's clearly some scenarios that are not worth pursuing because just the economics, or what have you, aren't working?</p>	<p>Modeling</p>
<p>NM AREA:</p>	<p>Does the company see this [Slide 14] more as something that the economics are showing has promise, or should be explored? Or do you foresee that there will be a reliability-based business case that really long-term storage of this nature might be necessary, or dispatchable resources in the alternative?</p>	<p>Modeling</p>





<p>CCAЕ:</p>	<p>Are you including identification of an additional or new demand-side resources like load shifting time of use rates, interruptible rates, demand response programs, and energy efficiency, as you identify the resource mix necessary to enable a carbon free system?</p>	<p>Modeling</p>
<p>CCAЕ:</p>	<p>This slide [Slide 15] refers to your RFI. Are any of the demand-side resources part of the RFI?</p>	<p>Modeling</p>
<p>Onward Energy:</p>	<p>You indicated Valencia, that you would be doing sensitivity modeling. In what context? Are you going to be doing that through the IRP process--is that something that's going to be included? I'd like to get a little more detail on what you mean by allowing that asset to retire or expire, and to allow a generic replacement to come in.</p>	<p>Modeling</p>
<p>Member of the Public:</p>	<p>My question was kind of generic in nature. I was just wondering what you're going to do about those southern resources. Also, [as] I understand [it] you really don't use much of the southern [New Mexico] resources in the northern part of your system. But you're going to have to do something about those also, aren't you--relative to going to zero carbon sometime in this timeframe?</p>	<p>Modeling</p>





<p>Member of the Public:</p>	<p>I ran across a recommendation about reviewing the reliability requirements for all the changes that are occurring, and considering inverter-based resources to maybe somehow be modified or the operation be modified to look at it and see if that can be used; and in response to operating reserves, which I think is going to impact, [that is] the change to renewables is certainly impacting the operating reserve and what you need to have.</p> <p>I'll send that report to you if you haven't looked at it.</p>	<p>Modeling</p>
<p>InterWest Energy Alliance:</p>	<p>Do you intend to file a notice on or before March 1 [2023] pursuant to the amended IRP procurement rule?</p> <p>Are you planning on filing the IRP on September 1 [2023]?</p>	<p>Modeling</p>
<p>InterWest Energy Alliance:</p>	<p>I'm wondering, how realistic do you think this more accelerated forecast [Slide 16] is compared to the stable forecast? I mean, are you seeing inquiries that you think may actually hold water, that may come to fruition? That leads you to believe that an accelerated forecast may be what actually comes to pass, and that's why you want to look at this kind of a scenario more seriously?</p>	<p>Modeling</p>





<p>NMPRC:</p>	<p>Do the generic resources modeled [Slide 16] have a location assigned with them due to the improbability of having any new transmission built to accommodate projects? I understand these generic resources to be placeholders. But is there an expectation that they are reasonable/possible that needs to be established?</p>	<p>Modeling</p>
<p>InterWest Energy Alliance:</p>	<p>Why not include a Phase 1 scenario base plus expanded solar, especially in the load pocket [Slide 17]?</p>	<p>Modeling</p>
<p>InterWest Energy Alliance:</p>	<p>Does this exclude the “least cost among all of the bids” with reasonable transmission expansion scenario [Slide 18]? I just wonder if you are: A) over emphasizing the cost of the new transmission, the transmission plus wind scenario, and B) not allowing the market to bring forth the best local mix of all, which we cannot predict through the scenarios, [and] which I feel is somewhat too narrowly focused.</p>	<p>Modeling</p>
<p>SWEEP:</p>	<p>Will the scenarios consider placing new resources at retired sites, like Four Corners or San Juan?</p>	<p>Modeling</p>
<p>New Mexico State University:</p>	<p>Have you excluded the flow battery technology which showed in the previous IRP?</p>	<p>Modeling</p>





<p>Synapse Energy for the New Mexico Attorney General:</p>	<p>What percent hydrogen fuel do you anticipate these new gas resources being converted to?</p>	<p>Modeling</p>
<p>InterWest Energy Alliance:</p>	<p>We are hoping the new rules provide more transparency about the least cost, least risk path options offered by the bids while protecting confidentiality because the projects available in the market are hard to predict.</p>	<p>Modeling</p>
<p>NM AREA:</p>	<p>It sounds like, in these scenarios [Slide 23], the main one that would involve looking at transmission as part of it is the wind one. Is that pretty much right? Are there any others that you can see that where adding a transmission option as part of it would make a difference or would be useful?</p>	<p>Modeling</p>
<p>New Mexico State University:</p>	<p>Have you already covered the hydrogen fuel cost scenarios, or will it all come from electrolysis?</p>	<p>Modeling</p>
<p>Member of the Public:</p>	<p>How do you treat the electric energy needed for electrolysis?</p>	<p>Modeling</p>
<p>InterWest Energy Alliance:</p>	<p>My question follows up on [the question regarding the inclusion of transmission expansion].</p> <p>[At Slide 22], I thought I heard you say that you were going to look also at, along with perhaps using the Luna and the other site that's in the south, that you would need to look at north/south transmission</p>	<p>Modeling</p>





	<p>capacity expansion as part of that. And that's completely understandable. I'm assuming that, if you look at a base plus solar expansion, that you would similarly need to perhaps, depending on the geography, if you wanted to site solar, say, for example, in the south, where you might get better capacity factors and efficiencies and so on, you'd also need to look at transmission expansion on that north/south route.</p> <p>I'm wondering, why not look at this more holistically, so that you're not just saying base plus carbon capture, and we'll lump all the transmission costs into that? And then base plus solar, will lump all the transmission costs into that? Why not look at it more holistically to see what benefits the north/south transmission expansion could provide you--with a diversity of resources, not just at your existing gas sites, but also add solar or a combination of things?</p>	
<p>Member of the Public:</p>	<p>What is the source of electricity for allowed electrolysis on site--solar or wind?</p>	<p>Modeling</p>

All IRP questions and answers can be found [here](#).

The latest future meeting schedule can be found [here](#).

