

CenterPoint 2022 IRP
3rd Stakeholder Meeting Minutes Q&A
December 13, 2022, 9:30 am – 3:00 pm CDT

Richard Leger (Senior Vice President, CenterPoint Energy) – Welcome, Safety Message

Matt Rice (Director, Regulatory and Rates, CenterPoint Energy) – Discussed the meeting agenda, guidelines for the meeting, discussed updates from the last stakeholder meeting including feedback, and the 2022/2023 IRP status update.

- Slide 10 Generation Transition Update:
 - Question: You mentioned the solar panel supply is the reason the solar project was pushed back a bit. Have you experienced any bottlenecks or roadblocks from MISO on these projects?
 - Response: Our projects are in the MISO 2020 queue, and it has been delayed a few times. It has pushed the Rustic Hill and Vermillion projects into 2025, and we don't expect to see an interconnection agreement until mid-2023.
- Slide 11 Stakeholder Feedback – Resources:
 - Question: I don't recall which technology was modeled for flow batteries in the last IRP. What is the preference for compressed air storage vs iron-air batteries?
 - Response: There's a lot of multi-day storage technologies being discussed in the market, but the viability of those is still being questioned and understood. Trying to balance commercial viability effectiveness is why we chose to model Compressed Air Storage.
 - Question: What about the new technology being created by FORM energy?
 - Response: We have heard of FORM energy, but everything that is being announced is in pilot and is several years out from being viable. We don't know if those technologies will come to fruition, and we cannot count on something that may not even be available.
- Slide 12 Stakeholder Feedback – Resources:
 - Question: For the repowering of the wind farms, is there a different or easier way to get a cost estimate for repowering wind farms?
 - Response: At this point, we don't have the cost estimate to repower the wind farm. We are in initial discussion on what we can do given our existing contracts. These contracts don't expire for a few years. If wind is selected in the model, it could be used as proxy for these existing wind contracts.
 - Question: You mentioned you would adjust up the capacity factor of wind because they are proving more resilient. Are you adjusting down the capacity factor of FB Culley 3 as it has been offline since June?
 - Response: When we looked at accreditation of existing units, we look at historical performance. We adjusted the accreditation of FB Culley 3 down for the next several years based on the current outage, but historically FB Culley has been a very reliable unit.
- Slide 16 Stakeholder Feedback – Resources:
 - Question: Can you clarify the decision to include the remaining book value of units in a retirement decision and to exclude inputting book value in units that continue to operate?
 - Response: We can discuss this offline to gain a better understanding of your feedback.
- General Questions:
 - Questions: For the FB Culley 3 gas conversion scenario, would that be a new gas pipeline? Are we bringing that pipeline in because there is not enough gas to supply this new peaking plant?
 - Response: It would be a new pipeline. The pipeline costs being modeled for a potential gas unit at FB Culley is separate from the line going to serve AB Brown for the new, approved CTs.¹
 - Question: Why are the CTs at AB Brown being listed as Peaker plants? Are there black start capabilities?
 - Response: They are there to back up renewable resources when they are not providing enough energy to serve our customers. There are black start capabilities at that AB Brown.

¹ Other questions were posed about gas pipelines that were outside of the scope of this IRP.

Matt Lind (Director, Resource Planning & Market Assessments, 1898 & Co.) – Discussed scorecard metrics and reviewed modeling scenarios.

- Slide 22 Updated IRP Draft Objectives and Measures:
 - Question: Is spinning reserve/ fast start referring to black start capability?
 - Response: Those are more in line with MISO. Spinning reserve would be for a plant that is already online. Black start is for units that can help bring the grid back online. I would not define that as black start.
- General Questions:
 - Question: Do you have any updates on when the repairs for FB Culley 3 are expected to be completed?
 - Response: They are expected to be done sometime between the end of February and early March. We are going to see what the capacity accreditation for all resources within CenterPoint's portfolio and reflect that in the modeling. We do expect for units like FB Culley that its capacity accreditation will be accounted for in the modeling. We are waiting for MISO's numbers. Resource reliability is important to CenterPoint, MISO, and everyone to keep the lights on.
 - Question: Where will we see a final accounting of what the unplanned outage of FB Culley is going to cost customers? Are those repair costs going to be passed on to customers?
 - Response: A sub-docket is expected to be opened with the IURC which will provide that information. The commission will set it up, and the public information will be on their website.
 - Question: Is the RFP final for this IRP cycle?
 - Response: The RFP is closed, and the information received from that RFP is reflected in the modeling assumptions. However, we are still receiving market information for wind projects through on-going negotiations for a wind project.

Brian Despard (Project Manager, Resource Planning & Market Assessments, 1898 & Co.) – Discussed updates to the probabilistic modeling approach and assumptions including inputs.

Kyle Combes (Project Manager, Resource Planning & Market Assessments, 1898 & Co.) – Discussed the final 2022/2023 IRP resource inputs, seasonal accreditation, technical assessment, and cost curves.

- Slide 39 MISO Update:
 - Question: How is MISO treating storage? Is that still to be determined? How do you see them addressing storage accreditation?
 - Response: MISO has not said how they are treating storage; for now, we are giving it the 95% accreditation for 4-hour storage across the entire time period.
 - Question: Are these accreditation values marginal, not average? MISO derives them basically by taking out all renewables, performing a LOLE study and then adding them back in to rerun the analysis. These values are very different than the values finalized the week before. It seems like you are treating these as average values.
 - Response: These numbers are still not finalized. If you see anything that's not shared publicly from MISO, please let us know.
- General Questions:
 - Question: Can you talk at a high level about where the cost numbers for SMR's come from?
 - Response: Those cost come from our engineering department at Burns & McDonnell and their involvement in front end development in a few SMR projects.

Drew Burczyk (Consultant, Resource Planning & Market Assessments, 1898 & Co.) – Discussed the 2022/2023 draft portfolios.

Drew Burczyk – Presented draft scenario optimization results including project selections, and portfolio breakdowns.

- Slide 47 Draft Optimized Portfolios:
 - Question: There is a difference in the 2024 makeup for the solar selections, why is that?
 - Response: There are different assumptions going into each scenario. Solar is selectable in each portfolio, but only being picked up in certain portfolios.

- Question: For the potential CT conversion to a Combined Cycle at AB Brown, what were the dates in which the model could choose that conversion? Is it correct that you cannot reuse injection rights and it would have to go through the whole MISO queue process?
 - Response: 2027 – 2042. Correct.
- General
 - Question: Hydroelectric is never mentioned in your predictions. There are two dams on the river that haven't been used. If there is federal funding available, would that make up for the cost factor?
 - Response: Hydroelectric technology is a selectable option, and it is not being picked up as the best option. We will be happy to add a portfolio or two that add hydroelectric.
 - Question: Can you talk briefly about how you developed the cost and performance assumptions for the hydroelectric resources? Is it a run of river plant?
 - Response: The information came from the US Corps of Engineers study and costs associated with Cannelton. We can double check that second question [Confirmed Cannelton is a run-of-the-river hydro power plant].
 - Question: What do you expect for the next iteration of portfolios in regard to limiting sales?
 - Response: That is more focused on deterministic portfolios and less on optimized portfolios. We are using 15% of peak load for purchases and sales on the capacity expansion step. Once we step into the 8760 dispatch of the model, we increase that to 750 MW to be aligned with CenterPoint's import/export capabilities.
 - Question: Are you planning to update these assumptions for the proposed enhancement to the Planning Resource Auction (PRA) construct? They are changing the way that maximum capacity price would be assigned.
 - Response: We have not made any of those adjustments, but if you have any feedback, we are open to that.
 - Question: How would the Combined Cycle conversion work? Are you going to build them with the approved Certificate of Public Convenience and Necessity (CPCN) and then later convert them? Would you need a 2nd CPCN and then convert them?
 - Response: It's just an option with all the portfolios. If we were to go down that path, we would need another CPCN to go on and install the Heat Recovery Steam Generator(s) to be considered a Combined Cycle. Just like any new generation resource selected in the IRP.

Drew Burczyk – Presented draft deterministic portfolio results including project selections, and portfolio breakdowns.

- General
 - Question: Could you share information about exiting the Warrick 4 plant? What is involved with exiting Warrick 4?
 - Response: Our intent is to exit our agreement with Warrick at the end of 2023. We do have a capacity need in 2024/2025. If we can come to an agreement and at a reasonable cost compared to capacity purchases, there's a possibility that we can continue the Warrick 4 agreement until 2025 when the CTs come online.

Open Q&A Session

No questions.