

Meeting Summary
NorthWestern Energy Electric Technical Advisory Committee
Helena, Montana
January 7, 2020

Attendance:

| ETAC Member Organization | Attendees |
|---|-----------------|
| Consumer at Large | Chris Pope |
| District XI Resource Council | Tom Power |
| Northwest Energy Coalition | Diego Rivas |
| Montana Consumer Counsel | Jamie Stamatson |
| Montana Consumer Counsel | Paul Schulz |
| Montana Department of Environmental Quality | Jeff Blend |
| Montana Department of Environmental Quality | Ben Brouwer |
| Northwest Power and Conservation Council | Brian Dekiep |
| Montana Environmental Information Center | Brian Fadie |
| Montana Public Service Commission | Will Rosequist |
| MPSC Consultant (Synapse Energy Economics) | Shelley Kwok |
| University of Montana | Brad Layton |

| Organization | Attendees |
|---------------------|---------------------|
| ETAC Facilitator | Beki Brandborg |
| Aion Energy | Scott Leigh |
| NorthWestern Energy | Bleau LaFave |
| | John Bushnell |
| | Mike Babineaux |
| | John Hines |
| | Jim Williams |
| | Bill Thompson |
| | Joe Schwarzenberger |
| | Kelli Schermerhorn |
| | Dani Williams |
| | Robert Campbell |
| | Ella Caillouette |
| | Luke Hansen |

The purpose of this meeting was to discuss NorthWestern's 2020 Montana RFP for capacity resources. The meeting was hosted by Bleau LaFave, who began with an overview of NorthWestern's current capacity situation and goals with the RFP. The meeting was then opened up for questions from ETAC members, which were addressed by Mr. LaFave and other NorthWestern representatives. Content of the RFP was addressed first, followed by discussion on the RFP process and timeline.

RFP Content Discussion

Drivers of capacity need, including requirements of EIM and RTO

Question (Brian Dekiep) – According to the 2019 plan, NorthWestern Energy want to join a RTO? Will the RTO give NorthWestern a resource adequacy calculation?

Answer – The plan doesn't specify that NorthWestern wants to join an RTO, instead that we expect it will be a natural progression toward a RTO after joining EIM. The EIM will have an hour-ahead call for sufficiency.

Question (Jeff Blend) – I hope RFP considers the fact that if we expect Northwestern to join an RTO, carbon pricing or regulation may have to be considered in the future.

Answer – In 2019 NorthWestern produced about as much energy as we used, but it was at the wrong time. Installing more capacity does not mean we run them all the time. In SPP, we still purchase 20% of our load in the market. We can turn off our resources to take advantage of lower market prices, or stop relying on the market when appropriate.

Question (Brian Fadie) – Modeling should also be done with the assumption that NorthWestern does not enter an RTO in 2025. If joining RTO is the justification for needing to be resource adequate, not joining should be modeled as well. Cost benefit analysis of joining EIM was done in the plan. If part of justification for the RFP is joining RTO, cost benefit analysis should be done to show size of potential savings.

Answer – Joining a RTO is not the sole driver of needing resource adequacy. Other adequacy standards are likely to emerge regionally even without a RTO and we need to be resource adequate regardless. In addition, joining RTO is more of a modeling assumption and the only effect the assumption has on modeling is to change market prices and we modeled low and high price scenarios. There are economic consequences of resource inadequacy in RTOs: \$1M starting each May 1 in SPP; ERCOT has not defined RA, and the costs of inadequacy is \$7000 MWh. Because NorthWestern's SD assets, operating in SPP, border ERCOT, we have examined our import / export capability. Bleau stressed the need to avoid impactful winter blackouts.

Question (Jeff Blend) – Can PPA's be counted toward meeting capacity requirements in a RTO?

Answer – No, except under certain limited circumstances, PPA's do not count toward capacity requirements for a RTO. A PPA needs to show a full firm path to count for capacity. If a utility is resource adequate, a "non-firm" PPA may be acceptable. EIM does not have capacity requirement, you must bring enough resources to serve your load into the market with you.

Question (Chris Pope) - On page 13 of the 2019 Plan NorthWestern identifies a three step plan to address capacity shortage by first seeking short term capacity to bridge gap, then conducting competitive solicitation for 400MW of capacity, and then considering what other efforts are needed to get to 16%. So, is there a connection between that language and this RFP? Are you seeking short term PPAs first?

Answer – Our energy marketing department does that in the short term for anything less than 3 year requirement. The first step referenced in the Plan refers to the activities of the energy marketing.

Question (Chris Pope) – Will additional capacity (200MW or so) be pursued in the future subsequent after the additions from this RFP have been made?

Answer –Yes, but that amount is TBD due to a number of unknowns. First we need to get to our peak need and then address additional needs associated with reserve requirements. From here we anticipate a ramping RFP need, where we may go out for the additional need. The Northwest Regional adequacy efforts could also include a definition of credible capacity which could change this.

Question (Chris Pope) – There is a graph in the Plan showing capacity additions through time. Does what we're talking about here fit with that graph?

Answer – Generally that is the idea, but the time frames change. The earliest we will bring something online from this RFP is 2024. CU4 addition if approved will come online earlier.

Question (Ben DEQ) – How does potential Colstrip capacity acquisition affect needs identified in RFP? Does the CU4 Acquisition affect the ride through?

Answer – We assume Colstrip addition is part of the portfolio in the RFP. We have a 450MW deficit to meet peak load. The 185 MW Colstrip addition (170MW accredited capacity), reduces the need to 280MW, which is the amount of need identified in the RFP. If we are not granted approval for CU4 this will create issues.

Question (Ben Brouwer) – Does PPA associated with Colstrip acquisition to sell 90MW to Puget weigh into calculation of capacity needs?

Answer– The PPA does not affect our capacity need. The structure of the PPA specifies with delivery at Mid-C hub, so we could have access to full amount of capacity if we needed it.

Question (Ben DEQ) – Will you entertain independent bids of smaller sizes (less than the full 280MW)?

Answer – Yes we will consider bids of any size. For each ride-through tier, they will each be evaluated individually and in a resource stack of smaller resources added up to reach 280MW of capacity.

Suggestion (Ben DEQ, Diego Rivas) – That is unclear in the draft RFP. Please clarify.

Question (Diego Rivas) – Will NorthWestern pursue the full 280MW under all circumstances, or consider acquiring less capacity from this RFP?

Answer – We will only acquire the full 280MW if it is cost appropriate.

Question (Diego Rivas) – How will you determine what is too costly? What is the threshold? The last 50MW is likely to be the most expensive.

Answer –The last 50MW is not necessarily going to be most expensive because we will be addressing lower requirements for ride-through for the last 50MW.

Suggestion (Diego Rivas) – Include discussion of the criteria for capping the capacity additions based on cost.

Question (Diego Rivas) – Is NorthWestern looking for resources in all three duration tiers? Would you consider take all 280MW from the longest duration tier?

Answer - To qualify for a given tier, the resource must provide ride-through meeting *at least* the length of that tier. Resources that qualify for longest duration could also qualify for shorter duration. We assume the longer duration requirement will be more cost effective.

RFP Evaluation Criteria and Modeling

Question (Ben DEQ) – As stated in page 10 of the DEQ’s written comments, did NorthWestern consider statutory requirements for utilizing cost effective carbon offsets for new natural gas resources? 69.8.421

Answer – We will have to look into that. Hines stated this can include actions like tree planting and that this is not significant from a dollar perspective.

Question (Diego Rivas) – As stated on page 14 of the RFP: “Thermal resources will be evaluated on up to 5 starts per day...” That means running for 7 hours a day 365 days a year. The assumption of this amount of use does not seem to match claimed need for capacity vs energy. 2600 annual hours of operation for thermal generation seems like more than you’re claiming what you need it for. The higher the operating hours, the lower the cost per MWh, which may might make natural gas generation look cheaper than it should.

Answer – This is for level setting to determine baseline ability to provide all services we need in terms of dispatchability. It is in essence a proxy of the resource’s operations which are needed to evaluate a resource’s NPV. What was once traditional “peaking” has changed over time -- the need is now more diverse. The requirements of peaking are all over the map. A resources’ cycling ability drives costs. Operating times are needed to account for operating costs when evaluating lifecycle cost. Once in the portfolio these become economic dispatch. 30% dispatch is appropriate in the market. Although we need it for peak, that is not all that it would be used for. We will not be force running the asset. Once it is in your portfolio in EIM, it is not under your control, others will also dispatch it based on economics. Dispatch decisions are made only based on variable costs, not fixed costs.

Question (Brian Fadie) – In the 2019 Plan, there was a modeling constraint that resources couldn’t sell into the market more that 10% of the time. Will that constraint in the RFP? Will you include the value of market sales in the RFP evaluation?

Answer – We used that modeling constraint only for ARS in the plan in order to not just value profit from selling into the market, which is not our business model. We do want to value offsetting high market prices, but we don’t want ARS to select a resource just because it provides market value. We want NorthWestern’s load to be protected against high market costs.

However, not all portfolios had that constraint. That constraint will not be in the RFP. We have to lift that constraint in our modeling now because of additional wind resources coming on that means we are already over that 10%. Even without the constraint we still pick RICEs. We do the NPV modeling to determine the effect of the market on that resources.

Suggestion (Brain Fadie) – It would helpful to identify and explain instances where modeling in the RFP differs from the plan.

Answer – That will be covered that in pre-approval process but that is more information than bidders need or want.

Question (Diego Rivas) – How is risk accounted for in the evaluation process? Is increasing risk associated with building additional gas plants modeled?

Answer – Risk is accounted for through a risk premium metric that reflects increasing risk.

Question (Ben Brouwer) – Is carbon pricing included in risk premium?

Answer – No.

Question (Brian Fadie) – Does CAISO carbon pricing that mean that if you sell energy into CA, they add a carbon price to it?

Answer – A carbon price metric could be used to differentiate between otherwise identical bids.

Question (Chris Pope) – Regarding the correlation between winter peak electric and gas demand - Are potential natural gas capacity constraints considered? How do you factor potential need for pipeline in RFP? If there is a proposal with a \$7M need to build pipeline, would that included in the evaluation?

Answer – Yes, natural gas plants must demonstrate firm fuel supply or have backup fuel. If new pipeline must be constructed, it is accounted for in a similar manner to electric transmission upgrades. Bid specific characteristics are all about location and availability of gas.

Question (DEQ Ben) – For EPC proposals associated with DGGS and Billings – what is known about existing gas for those sites?

Answer – We are evaluating that and it will be included in the evaluation

Question (DEQ Ben) – What does backup fuel supply at DGGS allow for?

Answer – We have met a 5 day need with backup fuel.

Question (Diego Rivas) – NorthWestern makes a point in the RFP that DR is a player in this, but do parts of the RFP make it difficult for DR in reality. On page 14 of the RFP, you say you want flexible capacity in multiple bullet points – Are any of those bullet points going to exclude DR? Is requirement to be able to participate in EIM limiting for DR bids?

Answer – It is possible for DR bids to meet the requirements mentioned. Unique situation in MT given that the large users are not part of our load. We would need to renegotiate the suppliers' delivery to essentially re-deliver to us.

Suggestion (Diego Rivas) – Given this is mostly reliability issue, on the cost side, DR should be an appealing option.

Answer – Agreed. There will be other opportunities outside of the RFP for DR in the future as well. We deal with a lot of gray area right now which creates some issues. How do we guess what EIM, RTO, will bring for DR? DR will also need to follow ICP protocol (communication and software) for DR to participate in EIM.

Suggestion (Diego Rivas) – DR is a tricky resource, you have to figure out as you go forward. Knowing change is coming is not a reason to not start DR.

Question (Jeff Blend) – Is it possible to end up with a resource outside of MT, in say, WY or Alberta?

Answer – It is possible but there are issues (such as import capacity) that would need to be included in evaluation. Prior to RFP we reached out to potential bidders outside of MT. We will need to perform a cost and deliverability analysis on assets like this.

RFP Administration Process and Timeline

NorthWestern seeks comments back as quickly as possible on this RFP. PSC deadline is January 13, 2020, to meet a month end RFP release date. The bids are due in May. Aion will rank and shortlist the resources and will audit and record if there is any process deviation. NorthWestern will set up a schema environment to evaluate the bids. Regarding the schema environment, NorthWestern will set the criteria, lock down the environment, run the proxy resources before entering in bids. NorthWestern will run the model of bid in, candidate resources, and then re-run proxy resources to ensure that nothing has changed. NorthWestern will follow the communication protocol laid forth in the RFP.

Question (Beki Brandborg) – What types of firms are expected to submit proposals?

Answer (Scott Leigh) – Aion has heard from almost 100 interested parties representing many types of bidders, including developers, financiers, equipment manufacturers, municipalities, and existing facilities. Scott expects an increase in interest through the end of the week when pre-qualification documents are due.

Question (Beki Brandborg) – Will novel approaches be among the applicants? Pumped hydro?

Answer – Yes

Question (Ben Brouwer) – Will the MCC have an independent evaluator for the RFP?

Answer (Paul Schulz) – Doubtful, perhaps on an informal basis. The law isn't in place on that yet.

Question (Brian Fadie) – There appears to be different roles for NorthWestern staff in the 2020 RFP than in the 2017 RFP. Is there a difference?

Answer – The roles are the same, but some of the detail wasn't communicated in 2017 RFP.

Question (Brian Fadie) – How much experience does Aion have administering RFPs? Is NWE staff augmenting Aion's team?

Answer (Scott Leigh) – Aion is active in another RFP in the SouthWest, and has administered others previously as well. This process is consistent with what we've seen across the country.

Answer - Aion engages necessary subject matter experts from NWE and ensures consistency. NWE staff are blind to the specifics of the bidders through most of the process. It would be prohibitively expensive and unusual to hire an administrator to do all of the modeling.

Question (Brian Fadie) – The prequalification step takes place earlier in the timeline of the 2020 RFP than the 2017 RFP. Will this discourage some parties from submitting bids?

Answer – It is earlier, but the requirements for prequalification are lower this time and are not prohibitively burdensome.

Question (Brian Fadie) – Is the PSC planning on issuing comments on the draft RFP prior to release of the final draft?

Answer (Will Rosequist) – Probably not. The PSC will address their comments through the pre-approval process.

Question (Brian Fadie) – The Plan should feed into RFP. Plan comment period just ended. It would seem prudent to wait for comments from PSC on the Plan before moving forward on RFP. The urgency being described is not justification for moving forward without PSC comments on the Plan. There are new assumptions being made here and NWE is moving forward without regulator feedback.

Answer – It is not prudent for us to wait given our critical capacity situation. NorthWestern has an obligation to serve. PSC comments do not provide justification for a resource acquisition. The PSC is already familiar with our modeling from many past dockets. The PSC will have an opportunity to comment through pre-approval. The earliest an RFP resource could come online is end of 2023.

Question (Diego Rivas) – Given the timeline, there could be a role for commission comments on the Plan to be taken into account in evaluation of proposals.

Answer – Yes we will do that.

Question (Ben Brouwer) – So the scoring criteria is not set then?

Answer– Scoring criteria will be set and if we deviate from the set criteria we will document it and it will trigger an audit by Aion.

Point of clarity (DEQ) – MT DEQ would like to point out that they are unlikely to submit their comments by the PSC deadline.

Future of ETAC

The current ETAC configuration will change as a result of HB-597, effective in mid-2020. We will move to a more public process that will involve pre- or post-meeting discussions with ETAC.

Note: Questions and answers are paraphrased and grouped by similar topics by the note taker.