

Meeting Summary

NorthWestern Energy Electric Technical Advisory Committee

Butte, Montana

November 10, 2016

Attendance

Those participating in or attending the Electric Technical Advisory Committee (ETAC) meeting in person or via the web and by teleconference included:

Name	Organization
Beki Brandborg	ETAC Facilitator
Chuck Magraw	Natural Resource Defense Council
Brian Fadie	Montana Environmental Information Center (MEIC)
Bleau LaFave	NorthWestern Energy (via web and telephone)
John Hines	NorthWestern Energy (via web and telephone)
Todd Guldseth	NorthWestern Energy
Frank Bennett	NorthWestern Energy
John Bushnell	NorthWestern Energy
Luke Hansen	NorthWestern Energy
Pat Corcoran	NorthWestern Energy (via web and telephone)
Joe Schwartzenberger	NorthWestern Energy
Danie Williams	NorthWestern Energy
Dan Yeoman	NorthWestern Energy
Pamela Hanson	NorthWestern Energy
Dave Bausch	NorthWestern Energy
Deb Young	NorthWestern Energy
Joe Stimatz	NorthWestern Energy
June Pusich-Lester	NorthWestern Energy
Mike Babineaux	NorthWestern Energy
Diego Rivas	NW Energy Coalition
Patrick Barkey	University of Montana - Bureau of Business and Economic Research (via web and telephone)
Thomas M. Power	District XI Human Resource Council (via web and telephone)
Brian Dekiep	Northwest Power and Conservation Council
Wyley Hodgson	Nexant
Patrick Burns	Nexant
Mike Dalton	Montana Public Service Commission (MPSC)
Jamie Stamatson	Montana Consumer Counsel (MCC) (via web and telephone)
Bill Thompson	NorthWestern Energy (via web and telephone)
Will Rosquist	MPSC (via web and telephone)

Al Brogan
Jeff Blend

NorthWestern Energy
Montana Department of Environmental Quality (DEQ)

Meeting

New Facilitator

John Bushnell facilitated this meeting but introduced the new ETAC meeting facilitator, Beki Brandborg, who will be filling this role in the future.

2017 Plan Kickoff

John Hines announced that this is the kickoff ETAC meeting for the 2017 Electric Resource Procurement Plan for Montana. He noted several changes from previous plans, including:

- changes in the modeling
- regional markets are perhaps the direction of the future
- more substance in future meeting.

He mentioned that NorthWestern recognizes that it can and will do a better job of involvement with ETAC meetings, including the following points:

- new facilitator
- weren't enough meetings before – there will be more this time around
- willing to commit internal resources as shown by attendee list
- bringing issues to ETAC and problem-solving in a more proactive manner with time for comments and responses
- NorthWestern would like to see more of committee members and that 1-way communication is not beneficial (and not the intent of ETAC); the expectation is that participants are active, and also that they don't misrepresent information or documents that are part of this process to outside parties
- Would like more diversity of participants/groups (which will be discussed in more detail)

Pat Corcoran talked about the history of ETAC:

- It was started in the 80's/90's
- The goal has always been meaningful dialogue
- NorthWestern is hoping to “refresh the activity”

John Bushnell:

This Plan will be different from previous ones in that it will outline regional market directions.

– We've given quite a bit of thought to the process which we want to improve over the last round. We will provide more substance and have conversations about this at the meeting in December, but in the meantime:

- NWE can and will do a better job of involving ETAC members in the process by utilizing a facilitator, and recognizing that we didn't have enough meetings to best convey the assumptions and modeling. We are willing to commit a tremendous amount of resources and people because of the seriousness of our commitment.
- NWE will bring issues to the ETAC and problem solve with you, so members can better understand the issues and be able to make comments back to the utility.
- We envision more interaction to make the process more helpful. Our meetings are intended to be a dialogue, back and forth with full participation, to facilitate sharing and understanding. This will include doing homework.
- Also expected is correct representation in good faith among all participants versus a political mechanism of the parties at the table.
- We also want more diversification by stakeholder membership with additional groups or individuals.

All of this will be an agenda item at our next meeting. NWE will provide foundational documents and expectations of ETAC members in writing.

Question - What is the new modeling?

Answer - It will be covered later.

Question - Will NorthWestern be moving beyond Ascend?

Answer - No, NorthWestern is staying with Ascend for the 2017 Plan.

Nexant End-Use Study

Danie Williams introduced Wyley Hodgson and Patrick Burns of Nexant. Wyley proceeded to present a PowerPoint showing the results of Nexant's End-Use Study.

Question - Regarding the last slide, what is the meaning of the technical achievable potential estimate?

Answer - This will be challenging to explain. We do an economic stream. The Council looks at the technical potential, then the economic study. We recognize their vernacular is different than ours

Question – (Referring to slide 14) Was linear LED technology studied?

Answer – This was a negligible share of stock

Question – (Referring to slide 15) On top chart, the vertical axis range is ~3.5 – 9.5%?

Answer – On a scale of 1-10, what is the customer's willingness to purchase this technology. As the costs comes down, the willingness to purchase goes up.

Comment – Perhaps change the chart axis or something because the data presented is not really clear.

Question – (Referring to slide 15) On the top chart, do you break this down by customer type?
Answer – No.

Question – What was the sample size? Were you able to stratify on income?

Answer – The number of residential customers sampled was 108, while the number of commercial customers sampled was 118. We were not able to stratify low income.

Question – (Follow-up) Why such a low number?

Answer – It would have been costly to sample more.

Question – What was the mix of rural/urban customers?

Answer – About 40% rural/60% urban. (Danie added that we'll get a more definitive answer.)

Question – Will there be a written report?

Answer – Yes, the End-Use is completed, and we will get that out quickly. The Potential Study report has not yet been completed.

Question/Comment – Would like to be able to see the report beforehand, (i.e., before these meetings). Is this possible in the future?

Comment – That would be more useful.

Response – The Potential Study report and comparisons to the previous 2009 study and Northwest Power and Conservation Council's 7th Plan will be completed next month.

Nexant Electric Potential Study

Patrick Burns presented the results of Nexant's Electric Potential Study in a PowerPoint. His comments included:

- These are forecast studies – not a crystal ball
- Over 20 year horizon
- Forecast over time, in comparison to NorthWestern's 20-year forecast
- Looking at measures with permutations
- Looking in layers:
 - Technical Potential (savings available based on replacement with most efficient options)
 - Economic Potential (savings available using measures that meet the requirement of TRC ≥ 1.0)
 - Achievable Potential (portion of Economic Potential savings available based on NorthWestern customers that will overcome market barriers and have the willingness to participate)
 - Low
 - Middle – incentive level
 - High
- Industrial & Large commercial buildings are removed from this due to no incentives

Question – (Were both tests considered for determining Economic Potential) - Utility Cost Test vs. Total Resource Cost Test?

Answer – No, the Utility Cost Test was not considered.

Question – What multiplier was used to get from Economic Potential to Achievable Potential?

Answer – In the first year, maybe 30% for a measure. After 20 years, maybe 60%.

Patrick commented that this uses an avoided cost of \$40.70/MWh, and TRC = 1.0.

Question – Was there no capacity value associated with this avoided costs?

Answer – No, this was based on energy only.

In contrast to the previous study, Nexant gave NorthWestern a lot of resolution (several permutations).

Changes in the lighting market:

- There is T8 and CFL saturation, but lighting still has the highest potential
- Key drivers:
 - Residential energy savings reduced by 69%
 - Standard in residential lighting is now 43 W not 60 W, which means 17 W of potential have been removed
 - EISA in 2020 will be based on a 13 W CFL.
 - Reduced LED costs mean several LED technologies are cost effective
 - Energy Star computers have no potential
- (Referring to slide 26) Key drop in 2021 is when EISA backstop comes into play

Question – Looking at technology line, if every customer took on all measures that would be 2% or less of sales?

Answer – Yes, 2% or less per year.

- (Referring to slide 28) These are 20-year numbers so the EISA backstop is already converting lighting to HVAC Aux as the largest potential

Wyley mentioned that the Home Energy Report was modeled but did not pass the TRC test (with a TRC = 0.58).

Patrick Burns commented that

- (Referring to slide 31) NorthWestern's CHOICE customers are not eligible for these programs, which reduces the large office component. This also means that the industrial sector is typically smaller industrial because the larger ones are CHOICE.
- (Referring to slide 37) NWPPC 7th Plan (key differences from this study)
 - Regional difference in fuel share (heating in the I-5 corridor is primarily electric)

- Different interpretation of EISA backstop (savings are assumed to continue after 2021)
- Adoption rates are more aggressive
- Considers utility distribution opportunities and this study does not

Question – (Referring to slide 37) what is the “Technical Achievable Potential – Estimated”?

Answer – The methods are different – we do an economic screening, looking at technology and remove non-economic potential. NWPCC look at technical then adoption measures and apply a threshold.

Question – Referring to the EISA 2021 backstop – is there consideration of LEDs as well in this?

Answer – This applies to screw-in light bulbs (45 Lumens/Watt - similar to a CFL).

Question – Consumers are choosing LEDs over CFLs. How is this accounted for?

Answer – There are several factors:

1. The lighting market is very dynamic
2. We gave this measure an adoption rate in the next 5 years but 80% of opportunity is eroded by then.
3. We also found opportunity for CFLs.

Question – You modeled what share of opportunity for CFLs / LEDs?

Answer – Manufacturing heavily influences this. Comparing measure to measure may be different from the End-Use results.

Danie mentioned that we will have another ETAC meeting to talk about acquisition schedule for this potential, after we provide the reports if there are no objections. (There were none objections.)

2016 CREP RFP

John Bushnell handed out two documents:

- “Competitive solicitation for flexible capacity resources”, and
- “Qualifying Facility (QF) Activity”.

Bleau made several comments on the 2016 CREP RFP process:

- Issued in May; Responses were due in July
- 11 responses including power purchase agreement (PPA) and Build-Transfer options (mostly wind)
- Evaluated on cost-effectiveness basis within NorthWestern’s portfolio
- Review Process
 - Sapere Consulting provided the services of issuing the RFP through the initial screening. This phase was blind to NorthWestern until a final short list was chosen.
 - 4 potential projects, of these:

- 1 has costs higher than the threshold given
 - 3 below the threshold
- Transmission issues: 2 projects had significant upgrade requirements
- Remaining projects (NorthWestern is currently negotiating with both)
 - 25 MW wind
 - 7.5 MW hydro PPA
- DNV-GL was hired to conduct overview analysis as part of NorthWestern's due diligence particularly with the build-transfer proposals
- The process is due to be completed in November
- At this point, we feel that both projects have a 50% chance of making it

Question – (Were there any) changes, and what were their origin?

Answer – Some due to environmental, land rights, capability, and FERC processes for hydro.

Question – Would the wind project connect to NorthWestern's system?

Answer – Yes

Question – In terms of ownership on the 25 MW wind project, will there be conflicts on ownership to comply with CREP requirements?

Answer – This would be a build-transfer with ownership transferring to NorthWestern so there would be no issues provided everything flows accordingly. (The Hydro project would involve a PPA.)

2016 Flexible Capacity RFP

John Bushnell made several comments on the 2016 Flexible Capacity RFP (referring to first handout):

- We intend to issue an RFP for capacity (the 2015 Plan selected Wartsila
- We will consider a range of options (see handout), including siting, and fuel options
- NorthWestern will utilize HDR as owner engineer (technology study, B.O.D.)
- Comprehensive pre-qualifications list will be developed to assure that only qualified bidders respond
- NorthWestern is currently negotiating with Accion Group to manage the RFP

Question – Why is Dave Gates Generating Station (DGGS) listed as a potential site?

Answer – We have room inside the fence at this facility. It could be proposed elsewhere but up to bidders to work out those details in their proposals.

Question – What is the EPC at DGGS?

Answer – Using a general example, the engineering and procurement process vs. the wide-open RFP process.

Joe Stimatz commented that this would be open to any other site as well but we have room at DGGS.

Question – What is the timing of this vs. the 2017 plan (considering work with the DGGGS RFP)?

Answer – The timing is roughly the following:

- after the first year, issue an RFP.
- On Nov 17, we'll make a decision on Accion retention.
- The HDR study is ongoing now.
- After Accion is on board (if selected) it will move fast
- 6 - 8 weeks for the bidding period
- So in March or April (the selection process will be completed)
- The bulk of our energy supply planning RFP work will be before the end of the year
- The plan won't start until 2017

Question – Where in this process does NorthWestern fit and does it think it can build cheaper (when/how did we make that call)?

Answer – Under either condition, we won't construct, even at DGGGS. The RFP process is a pure RFP process until down to short list. We think we have a nice site, but if there is a better alternative, we'll consider it.

Question – What about the gas-constraining issue of DGGGS (referring to previous issues at DGGGS)?

Answer – This is a consideration and possible issue at other sites as well.

Question – Are you concerned about going forward with this so quickly after comments at the last resource plan meetings?

Answer – No, we have not made any conclusion on the nature of the resource. We will fill a need.

Question – Will NorthWestern consider flexible capacity in a shorter term PPA to give us the ability to reconsider in light of the changing landscape?

Answer – This is not exclusive of potentially negotiating a PPA.

Question – There were significant concerns on the 2015 Plan and timing with the RFP and 2017 Plan?

Answer – (There is a) physical resource shortfall of 360 MW. We're looking for RFP in 50-100 MW range. There are plenty of opportunities for other arrangements.

John Bushnell made comments concerning the QF status, referring to the second handout:

- There has been a significant increase in QF activity this year
- With the attractiveness of current QF rates, we have developers' attention
- At a minimum load and medium load, we are long without these

Bleau mentioned that there are over 1,000 MW of proposed QF projects. The largest they can be is 80 MW. This list includes Greycliff, Crazy Mountain, and others. NorthWestern is trying to work with the PSC to make sure that customers are protected.

Question – On this QF handout, should the second sentence read “Over the last four months...” or “Over the last four years...”?

Answer – Over the last years, the activity has been sporadic, but over the last four months, QF activity has increased dramatically.

Question – (Referring to page 1 of the QF handout) Why are some of these numbers highlighted in yellow?

Answer – AC vs. DC rating to qualify under the 80 MW requirement.

Question – What is the deficit?

Answer – Under high load conditions, we are capacity deficit.

Question - I hope NWE is working on economic as well as reliability as to why they should rely on significant capacity that they control versus regional markets or non-build proposals.

Answer - It was clear that NWE is not self-sufficient in the last Plan. NWE still has a piece of important analysis to put in place that I haven't found anywhere yet.

Question – NorthWestern should be relying on controllable resources vs. market and other RFP options.

Answer - The 2015 Plan concluded that NorthWestern was not self-sufficient in capacity. Ratepayers are responsible, which means that NorthWestern still has an important piece of analysis to put in place. We aren't locked in with the build-out all at once – it can go one step at a time. In the resource plan, we can't point to market. This RFP allows us to test the market to get more information. There is no current indication that DGGS or any other option is preferable.

Beki introduced herself and made a few comments.

- The focus of her efforts will be to “prod” participation
- Room arrangement may change to facilitate discussion
- Asked the committee to weigh the advantages of attending meetings in person, rather than on the phone

John Bushnell asked for a preferred next meeting date.

Question – Do we want consistent meeting days (of the month) or stay flexible?

Response – Consistent dates haven't worked that well in the past.

Question – December or January?

Answer – December for RFP update and kickoff:

- Wed/Thur work best historically
- Dec 7, 2016
- Typically 9:00 or 9:30 a.m. – 3 p.m.
- May be in Helena

Next Meeting

The meeting adjourned after this discussion and an email proposing a meeting for December 7, 2016 was sent out to members at a later date.