PacifiCorp - Stakeholder Feedback Form

2019 Integrated Resource Plan

PacifiCorp (the Company) requests that stakeholders provide feedback to the Company upon the conclusion of each public input meeting and/or stakeholder conference calls, as scheduled. PacifiCorp values the input of its active and engaged stakeholder group, and stakeholder feedback is critical to the IRP public input process. PacifiCorp requests that stakeholders provide comments using this form, which will allow the Company to more easily review and summarize comments by topic and to readily identify specific recommendations, if any, being provided. Information collected will be used to better inform issues included in the 2019 IRP, including, but not limited to the process, assumptions, and analysis. In order to maintain open communication and provide the broader Stakeholder community with useful information, the Company will generally post all appropriate feedback on the IRP website unless you request otherwise, below.

Date of Submittal 9/7/2018

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Address: 1300 S Evergreen Park Dr. SW

City: Olympia State: WA Zip: 98504

Public Meeting Date comments address: **8/30/2018** ☐ Check here if not related to specific meeting

List additional organization attendees at cited meeting: Click here to enter text.

*__IRP Topic(s) and/or Agenda Items:__ List the specific topics that are being addressed in your comments.

☐ Check here if any of the following information being submitted is copyrighted or confidential.

*__Respondent Comment:__ Please provide your feedback for each IRP topic listed above.

All - WUTC staff intends to file feedback after each IRP meeting to keep the lines of communication open and to signal as soon as possible whether there are any concerns. Below are slide-by-slide comments and questions, working from the hard copy slides provided (33-slide Navigant presentation; 81-slide PAC presentation).

Private Generation slide deck:

- Slide 9: Is it reasonable to assume that other states won't catch up with UT's current market maturity? A fairly consistent difference between residential UT solar costs and non-UT solar costs may be accurate, but is not intuitive. What evidence is there to support this finding?
- Slide 17: I echo others in their implied requests for more background on what component of the model flips such that the slope shifts dramatically for all states between 2031 and 2032.
- Slide 25: I understood from the discussion that this study does not contemplate community solar. How does PAC incorporate those projects into their IRP? Are there any interactive effects between community solar and the outputs of this study such that using this study as an input may cause significant issues?
- Slide 28: Discussion highlighted that UT incentives as listed in this slide may not match actual UT policy. Please provide an update on whether that's the case, and if so, whether the graphs provided here change significantly because of the corrected UT residential PV incentives.
- General comment on study: One of the other stakeholders noted that PAC could decide to engage customers to move this forecast if it wanted. For example, if PAC's model runs show that, all else held constant, a high private generation curve leads to a lower PVRR, that may be a good reason for PAC to nudge the market where it can, and where it is cost effective. This concept is worth exploring in the context of the IRP, even if the conclusion is that PAC should not do more than whatever regulations require.

* Required fields

PAC's slide deck:
- Slide 7 (kind of): this is unrelated to the slide, but the discussion prompted a question about EVs as a part of the load forecast. Does PAC plan to identify or isolate the EV portion of its load forecast? Are you able to, and do you plan to perform a sensitivity on, for example, how high EV adoption rates in the 5-10 year timeframe would affect the system? A variable outside of PAC's control – say, EV price reductions or range improvements – could have an outsized impact on the system.
- Slide 9: I understand that some feedback on the CPA was received but not yet integrated into the current draft CPA or the slides. Please provide an update on this open issue.
- Slide 10: I'd like to reiterate my concerns with the DSM cost bundles. The bundles remove a level of granularity on both price and load shape in a way that will always compromise the IRP tools' DSM selections. I appreciate that PAC has to make some amount of simplifying assumptions, but the degree of inaccuracy and its impact on the final selections is still an open question. Whether this is within an acceptable is an open question that PAC should be able to analyze and discuss. Some half-baked suggestions:
o Bigger bundles in the low and high end (IE $0-20, $20-30, $170-200) to allow more granularity where the bundles start competing directly
o Bundling by load shape – perhaps DSM measures that have an outsized impact on coincident peak would be selected at $70, while DSM measures which don't affect peak much may not be cost effective even at $30
o Aggregating DSM bundles by state, or having system bundles in the very low end
- Slides 11-16: PAC and the consultants did a good job highlighting and explaining the differences among the states.
- Slide 13: WA commission staff have seen figures for a study – which I believe PAC participated in – on the health-related benefits of displacing wood due to lower particulate matter (PM 2.5) levels. This quantified non-energy benefit is likely to have a large impact on the TRC valuation of techs which displace wood-powered heating. I don't think this slide is talking about the economic selections yet, but can you help me understand how and when that TRC filter will be implemented?
- Slide 18: I'm still unclear on the incentive cost 75% discount. Please point me in the right direction to better understand how costs and benefits are viewed.
- Slide 21: How does PAC account for any interactive affects between class 1 and class 2 DSM? For example, if a WA DSM measure replacing resistance zonal heating with DHP is heavily selected, does that selection reduce the amount of available MWs for DLC Smart Thermostats?
- Slide 25: It seems that WY has a lot of potential for third-party contract DSM. Why is that?
- Slide 28: Please provide the workpapers supporting the calculation of the $4.74/MWh stochastic risk reduction credit.
- Slide 28: Another stakeholder mentioned that similar valuation studies report this value at ~15-25% of the wholesale market value, which would usually be quite a bit more than $4.74/MWh – perhaps over double. Please put PAC's valuation in context with other valuations and explain any differences. I'd strongly recommend including this context and explanation in the IRP itself.
- Slide 28: It's always hard to know what to do with carbon risk and pricing. If I understood correctly, this risk reduction credit included the 2017 IRP update carbon risk, which started at 2030. Is 'hardcoding' that carbon price risk into the valuation of the risk reduction a reasonable way to represent that risk, and the value of EE's hedge against that risk?
- Slide 28: I understood that PAC applies this risk reduction credit within SO's deterministic modeling, but not PaR. I didn't understand why. Is it because PaR's purpose is to value that risk, so including it would be 'doublecounting'?
- Slide 30: This was an interesting presentation, but we were squeezed for time. T&D planning is a focus of the commission right now. I'd appreciate seeing the workpapers for this calculation and the data informing each input, just to understand what they are.
- Slide 32: I was surprised to see that transmission cost forecasts went down relative to 2017, but then I don't have much of a foundation. Please provide workpapers and background information supporting the changes for both distribution and transmission.
- Slide 34: Is there a cost or value of decrements? It was mentioned that decrements are easier to do with curtailment, but that seems like a loss of value which would be useful to valuate. Is this correct? Is there a reason to assume that decrements are rightly valued at $0? Or am I missing something?
- Slide 37: Is there a reason why 2017 is the historical test year chosen for this study? I'm not sure how to pull in more years of actuals would add much to the study, but it seems like more than one year would be better than one year. Is this feasible? Will this be feasible in the future as EIM data builds over time?

* Required fields

- Slide 45: What happened in winter with the 5 and 6% errors?
- Slide 47: This slide does a great job boiling down the study's results into something understandable. Very good job with this!
- Slide 49: I apologize for asking again, but please explain why EIM's positive impact on PAC's power costs is best represented as a credit to flexible capacity.
- Slide 51: Why did PAC establish the TRC? Was that developed because of an order or acknowledgement letter?
- Slide 53: Not sure if this is the forum to review the decision to let PAC's COB transmission reservation lapse, but it seems pertinent. What went into that decision? Were the factors informing that decision a reason to also derate or otherwise modify FOT assumptions?
- Slide 54: Does the WECC study's include DSM?
- Slide 54: What does the last bullet mean? What are PSE values and why were they lowered for 2017?
- Slide 59: This slide is interesting but confusing. Is it fair to say that the gray and white parts of these graphs are not inclusive of outages, but that the reserve represented by the blue triangle contemplates that risk?
- Slide 61: This is the best slide I've seen in understanding how and when PAC actually relies on the market. Great job to the team for walking through the annual, monthly and daily curves.
- Slide 61: I'm still a bit confused about how PaR understands capacity. SO adds capacity as needed based on its parameters and its optimization. What does PaR see? Is a schedule of new resources an input to PaR?
- Slide 62: Someone had a good idea of presenting this table looking at a shorter view, say, 2014-2017, to see if the market availability is tightening over time. Perhaps the data could be presented on a yearly basis to show the variation in depth and PAC's activity.
- Slide 67: I'm confused about why 2017's PRM was allowed to buy FOTs up to transmission limits instead of up to the FOT depth assumption limits. Please explain that decision, as well as the decision to change that for this IRP.
- Slide 68: I'm embarrassed to say I'm still confused by the difference between capacity factor and capacity contribution. I think the terminology is used somewhat interchangeably.
- Slide 74: Again, remedial question – What is the high-risk cost PVRR based on? PaR does 50 runs, and the outputs include both fixed and variable costs. I have in my notes that the high-risk PVRR is 5% of system variable costs at the 95th percentile. Does that mean the adder is 5% of the variable costs in the roughly-third most expensive of the 50 runs?
- Slide 75: I realize that the results of the wood smoke study's PM2.5 health benefits valuation shouldn't directly apply to coal emissions, but I wonder if there's some conservative proxy value might be appropriate to include in the endogenous retirement study. Is this possible? What does an endogenous retirement case use to make optimized decisions?
- Slide 76: What is the incremental L&R? Incremental to what? Net load growth?
- Slide 77: Do core cases have CO2 prices? Or is that topic explored solely in sensitivities?
- Slide 77: I would appreciate a deeper dive on the UT requirement for an acquisition pathway analysis.

Data Support: If applicable, provide any documents, hyper-links, etc. in support of comments. (i.e. gas forecast is too high - this forecast from EIA is more appropriate). If electronic attachments are provided with your comments, please list those attachment names here.

Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated.
Click here to enter text.

☐ Check here if you do **not** want your Stakeholder feedback and accompanying materials posted to the IRP website.

Thank you for participating.

* Required fields