PacifiCorp - Stakeholder Feedback Form

2015 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 2015 IRP, including, but not limited to the process, assumptions, and analysis. In providing your feedback, PacifiCorp requests that the stakeholders identify whether they are okay with the Company posting their comments on the IRP website.

☒Yes ☐No May we post these comments to the IRP webpage? Date of Submittal 8/28/2014

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Public Meeting Date comments address: **8/7/2014** ☐ 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.
Nuclear resources costs – slides 37 and 40

☐ 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.
Thank you for the opportunity to comment on the resource costs for nuclear power used in PacifiCorp's 2015 IRP.

I am writing to request that the base capital cost of $6,705 per kilowatt (KW) used for the "Advanced Fission" resource (on slide 40) be increased to around $9,624 per KW, as explained below.

Slide 37 indicates that construction costs for Vogtle 3 and 4 reactors are in the neighborhood of $7,400 per kilowatt. However, Vogtle 3 & 4 are so-called "brownfield" reactors because they are being built next to existing reactors (Vogtle 1 & 2) and therefore are likely able to share some infrastructure.

The present IRP "Advanced Fission" resource depicted on slide 40 would necessarily be a "greenfield" nuclear power plant, since there are no existing PacifiCorp nuclear power stations to which units could be added. Therefore, in order to project appropriate costs for such a greenfield nuclear power project, we should consider the projected costs of a greenfield nuclear power project as a more appropriate analogue.

Although there are no "greenfield" nuclear power projects in advanced stages of construction in the United States, there was a proposed greenfield nuclear power project in Levy County. The total projected cost for the 2-unit, 2,234 MW generating station was estimated at between 19 billion and 24 billion. Converting the high and low cost estimates to cost per kilowatt, and then taking their average, results in a projected cost of $9,624 per kilowatt – roughly 30% higher than the per-kilowatt cost of the Vogtle 3 & 4 units.

At the meeting on August 7th, PacifiCorp representatives said that they assumed that some learning would take place, allowing the per-KW cost of nuclear power to come down over time. However, a 2009 report that exhaustively examines nuclear power cost data from the French nuclear PWR program (1970 – 2000) indicates that even the most successful nuclear buildout in the world experienced "negative learning" – in other words, real cost escalations – rather than cost decreases. In fact, the author raises a concern that, "These intrinsic characteristics of [nuclear] technology limit essentially all classical mechanisms of cost improvements—standardization, large series, and a large number of quasi-identical experiences that can lead to technological learning and ultimate cost reductions—except one: increases in unit size, i.e., economies of scale."

* Required fields

Therefore, I think a value of around $9,624 per KW would be an appropriate base capital number to use for the Advanced Fission resource. This could be viewed as a conservative number, considering that it would not assume any further cost escalation (negative learning) that has typified the history of nuclear power construction costs.

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.

Hyperlink to Levy County greenfield nuclear project cost estimates: https://www.progress-energy.com/company/media-room/news-archive/press-release.page?title=Progress+Energy+Florida+files+annual+nuclear+cost-recovery+clause+projections+with+the+Florida+Public+Service+Commission&pubdate=05-01-2012

Hyperlink to program examining costs of French nuclear program: http://www.slideshare.net/myatom/costs-of-the-french-pwr

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Recommendations: Provide any additional recommendations if not included above - specificity is greatly appreciated.

Click here to enter text.

Thank you for participating.

* Required fields