



OREGON PUBLIC UTILITIES COMMISSION

PacifiCorp AS2020 RFP - Special Public Meeting

December 17, 2020

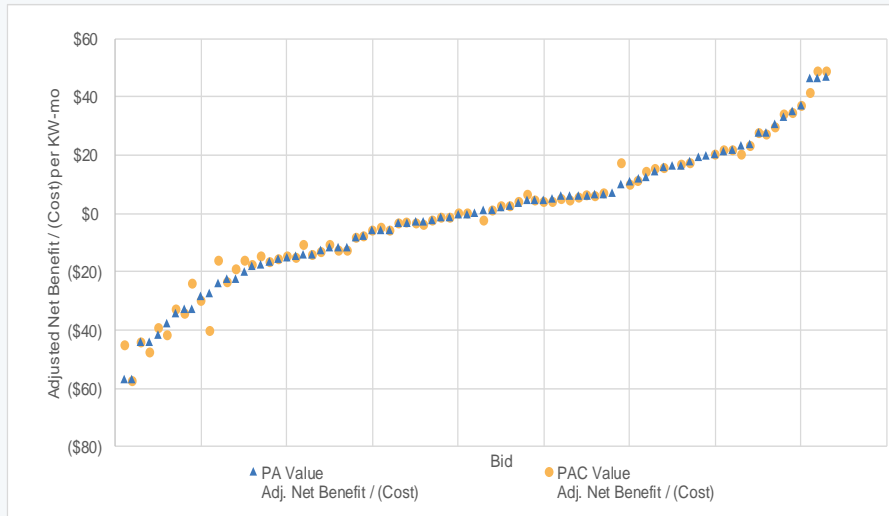
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Summary of Findings from PA's Report

1. PA Consulting's (PA) reviewed PacifiCorp's (PAC) bid scoring models and developed independent scoring of approximately 100 bids. Through this review process, PA did not find evidence of bias or unfair treatment in how bids were valued and scored by PAC
2. However, certain limitations were identified related to how certain models determined the value of storage resources with particular characteristics (specifically, pumped hydro storage as well as battery storage resources with nameplate equal to the generation capacity)
3. The resulting scores from PA's independent modelling of a sample set of bids as well as all Build-Transfer Agreement (BTA) bids were found to be within a narrow band of variance as compared to PAC's results
4. PA worked with PAC where model issues or variations were identified, and such matters were addressed either through clarification of the model methodology or revision of certain models
5. PA conducted an analysis of the value drivers underlying BTA bids and compared such drivers to equivalent Power Purchase Agreement (PPA) bids
6. In response to stakeholder and OPUC input regarding the impact of bids with Large Generator Interconnection Agreements (LGIA), PA, Merrimack Energy (the Utah Independent Evaluator), and PAC Via a joint effort amongst both IE's and PAC identified a number of bids which otherwise may have been Initial Short List (ISL) candidates had interconnection capacity not been reduced by bids with LGIAs. These additional bids were included in PacifiCorp Transmission's current network upgrade study.

Overall Price and Non-price Score Comparisons

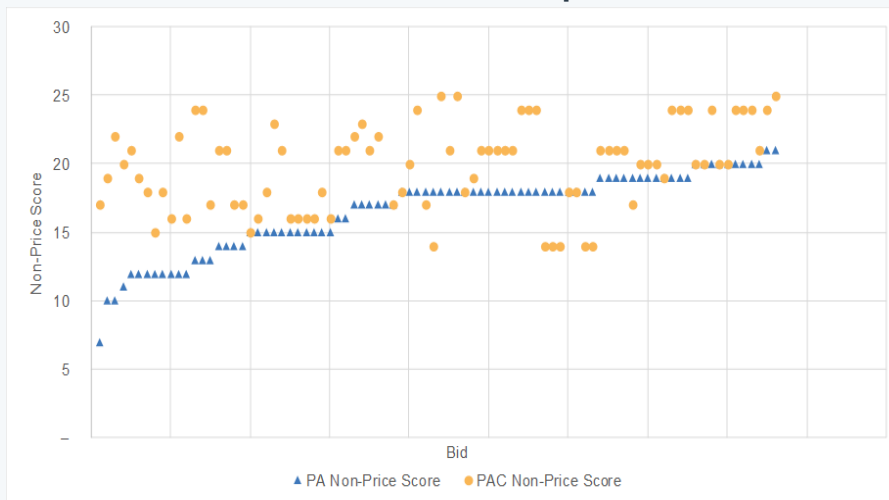
Price Score Comparison



Price score differences between PAC's and PA's models were generally due to three main factors, as outlined as follows:

1. The result of different interpretations of bidder supplied information
2. The incorrect translation of data from bidder documentation into the models
3. Additional clarifying communications between PAC and the bidders to which PA was not party

Non-Price Score Comparison



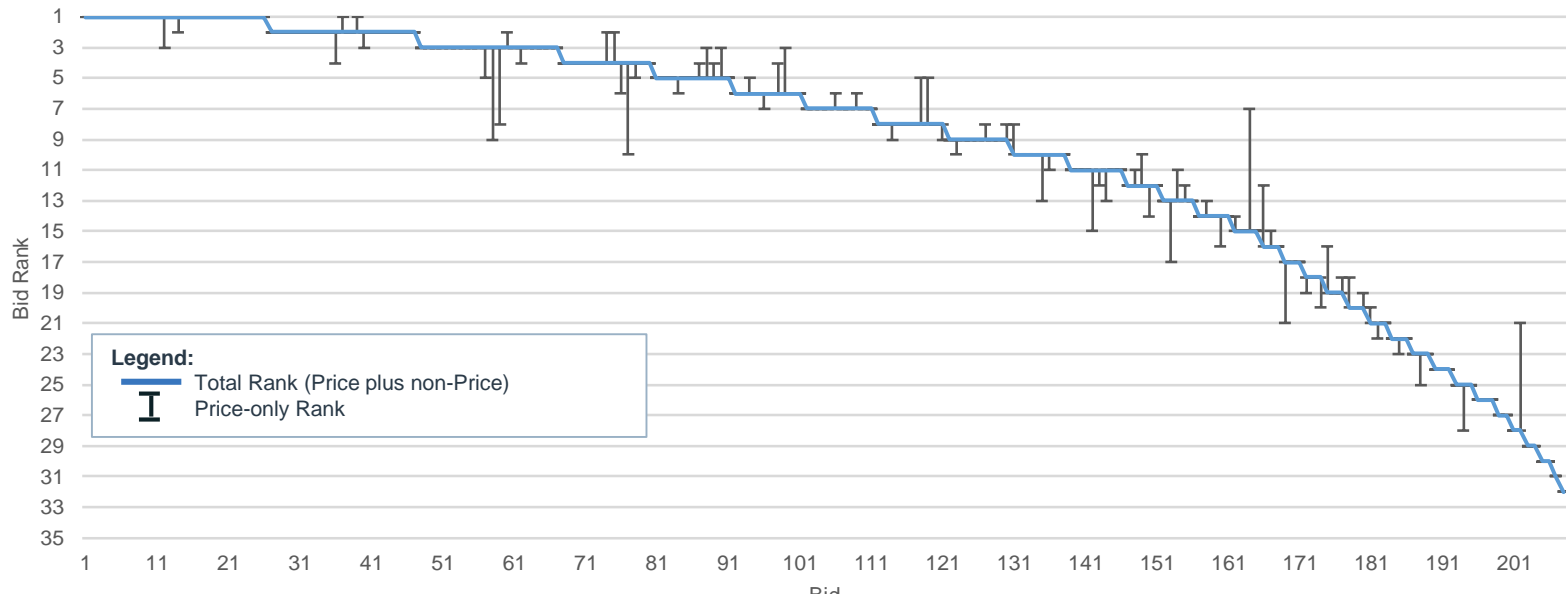
Non-price score differences between PAC's and the PA's scoring were generally due to subjectivity awarding points across the three sections of the non-price scoring matrix. These sections were:

1. Contract conformance
2. Completion of major studies and permits
3. Site Control

The results indicates the nature of the structured price scoring process vs. the less structured and potentially ambiguous nature of the non-price scoring process where judgement was necessary to complete the process

Impact of Price and Non-price Scoring on Total Rank

Rank Change Due to Non-Price Score



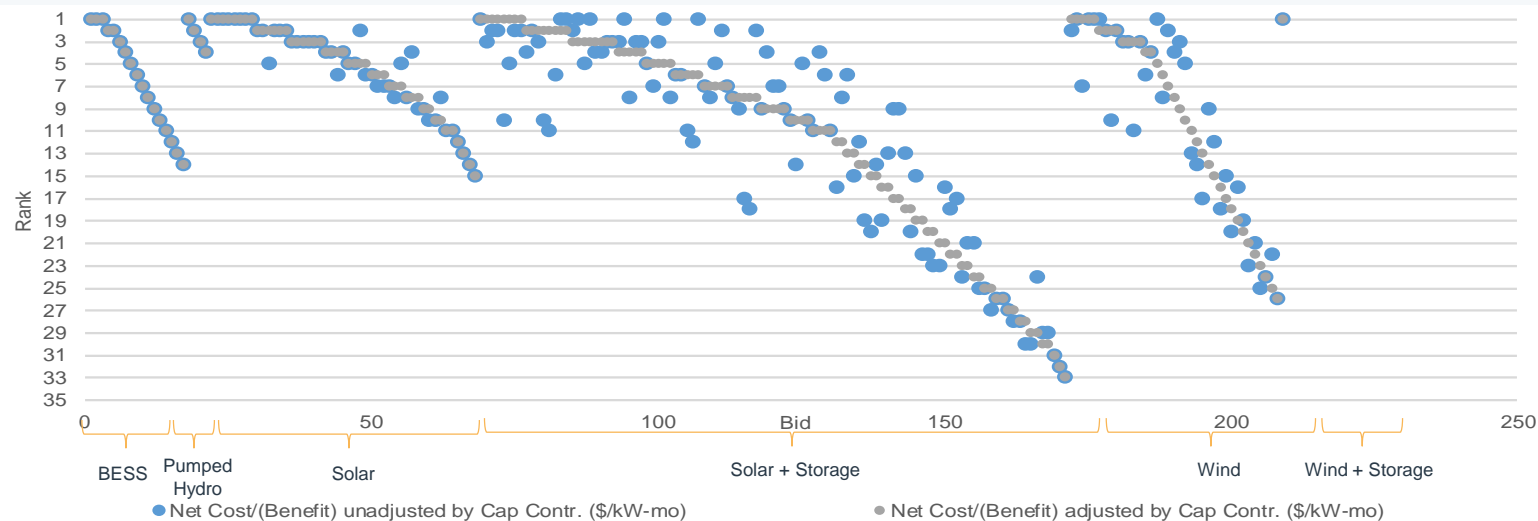
Note: The graph above represents all bids in rank order for illustration purposes. There is only one bid within a given technology/geography combination at each rank.

Observations

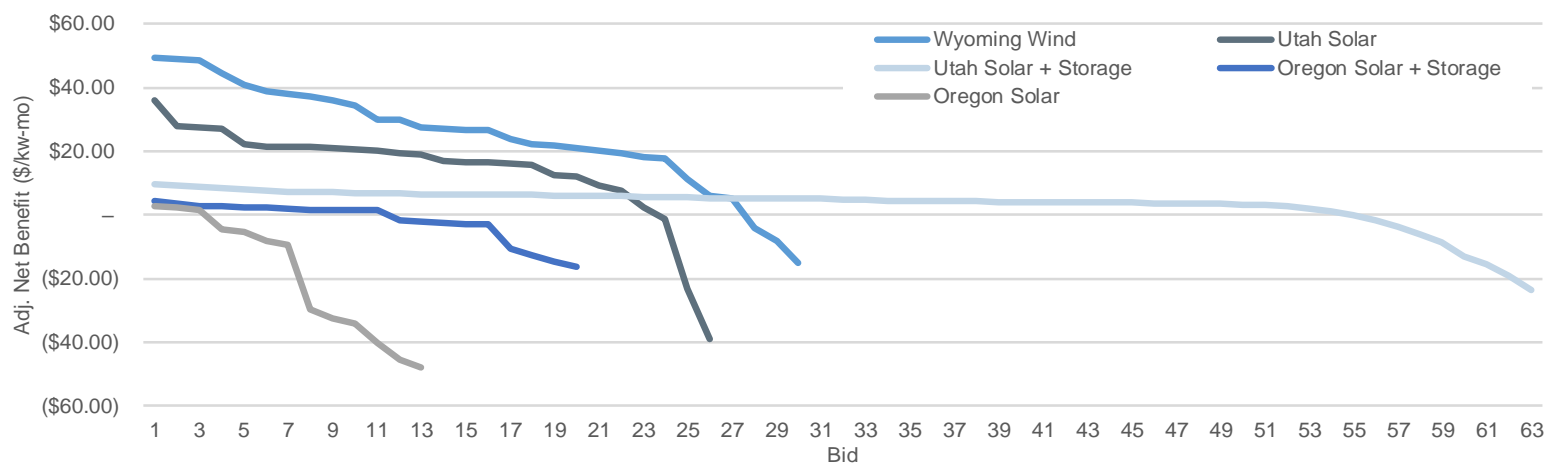
- When comparing the price-only ranking of bid to the rank of price and non-price scores, roughly 30% of bid ranks changed
- Of the bids which did change as a result of the non-price factors, the average positive change in rank was +2.2 while the average negative change was -1.9

Observations of Bid Characteristics Effect on Rank & Score

Rank Difference due to Capacity Contribution by Technology



Score Comparison by Technology Type by Geography



BTA vs. PPA Value Comparison

In addition to a sample across the entire bid population, PA also independently scored all eligible BTA bids. Further, PA assessed the primary differences of value attribution between otherwise identical BTA and PPA resources.

The primary differences of value PA identified include:

1. **Terminal value:** as discussed in Section 2.2.3 of PA's report, the terminal value is based upon the initial asset investment amount, the associated non-transmission infrastructure, and the development rights of the resource
 - Per PAC's modelling, the first two components account for roughly 85% and 5% of terminal value allocation respectively based upon proxy operational resources. Given the lifespans of typical resources in excess of 20 years, on a present value basis, these components may represent negative value on a \$/kw basis.
 - The third component is reflective also based upon proxy resources and accounts for ~10% of terminal value
 - Overall, terminal value accounted for 2-5% of a BTA resources' net benefit in present value terms
2. **Revenue requirement:** as discussed in Section 2.2.4 of PA's report, the revenue requirement is the largest component of difference between BTAs and PPAs. This calculation is reflective of PAC's recouping of the capital cost of the project (via depreciation) plus the allowed rate of return.
 - In comparison to a bid price under a PPA which is reflective of margins earned through development and construction, the economics of a BTA are burdened by both of these costs prior to operation as well as PAC's return of and return on capital earned over the life of the project
 - PA has reviewed this methodology and raised it to OPUC staff for verification
3. **Tax credit attribution:** the investment tax credits (ITC) and production tax credits (PTC) both cause material differences between BTA and PPA bids due to how they are monetized by PAC and in turn realized as value to ratepayers
 - The ITC value is received by PAC up front and amortized over time according to PAC's modelling. As a result, in comparison to a developer which can accrue the full benefit of the ITC up front and bolster returns through a PPA, the economics to PAC under a BTA are discounted across a 20 plus year life.
 - Unlike the ITC, the PTC may increase the value of a BTA above that of an equivalent PPA

The Cluster Process, LGIAs and the 2020AS RFP

Projects which do not already have an executed LGIA will be studied for interconnection together, in a “cluster”

- Upgrades needed to interconnect the entire cluster will be identified and cost responsibility assigned to cluster members
- The study will assume that all projects that already have signed LGIAs will already have connected, using existing interconnection capacity previously identified by PacTrans
- Projects in the new cluster may face high interconnection cost which would not be known until after the cluster study

PacifiCorp voiced several concerns about what would happen if apparently low-cost projects were put on the shortlist in place of projects with LGIAs that already had cost assurance

- PacifiCorp announced a plan to limit the MW volume of bids without LGIAs that would be candidates for the ISL in any bubble, based on the given bubble’s initial transfer capacity limit less the capacity bid by projects with LGIAs
- Both PA and the Merrimack Energy expressed concerns as did some bidders. The IEs identified bids that would have been deemed ISL eligible on the basis of economics and size absent that constraint
- 11 additional bids were identified to be added to the ISL



About PA.

We believe in the power of ingenuity to build a positive human future in a technology-driven world.

As strategies, technologies and innovation collide, we create opportunity from complexity.

Our diverse teams of experts combine innovative thinking and breakthrough technologies to progress further, faster. Our clients adapt and transform, and together we achieve enduring results.

An innovation and transformation consultancy, we are over 2,800 specialists in consumer, defence and security, energy and utilities, financial services, government, healthcare, life sciences, manufacturing, and transport, travel and logistics.

We operate globally from offices across the Americas, Europe, the Nordics and the Gulf.

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