

November 29, 2021

***VIA ELECTRONIC FILING***

Public Utility Commission of Oregon  
201 High Street SE, Suite 100  
Salem, OR 97301-3398

Attn: Filing Center

**Re: Docket UM 2193 – PacifiCorp’s Comments**

**I. INTRODUCTION**

PacifiCorp d/b/a Pacific Power (PacifiCorp or Company) submits these comments in response to the comments filed by Public Utility Commission of Oregon (Commission) Staff (Staff), PA Consulting Group, Inc. (PA Consulting), Northwest and Intermountain Power Producers Coalition (NIPPC), Renewable Northwest, and the Oregon and Idaho District Council of Laborers (OSIDCL) regarding the Company’s scoring and associated modeling methodology for its 2022 All-Source Request For Proposals (2022AS RFP).<sup>1</sup> PacifiCorp appreciates the comments submitted by Staff and parties. The Company offers these reply comments to the filed comments concerning the scoring and associated modeling methodology for its 2022AS RFP.

The Company has attached as Appendix A to these comments a revised version of the scoring and associated modeling methodology for the 2022AS RFP based on the revisions outlined by the Company at the workshop held on November 15, 2021 (November 15 Workshop).

PacifiCorp respectfully requests the Commission approve its scoring and associated modeling methodology as set forth in Appendix A. In the alternative, if the Commission determines that Staff and parties should have additional time with the scoring and associated modeling methodology contained in Appendix A, the Company recommends that the Commission consider the scoring and associated modeling methodology at the same time it deliberates on the final draft 2022AS RFP on April 4, 2022. With respect to the exact details related to minimum criteria and non-price scoring questions, PacifiCorp has provided summaries and screenshots in its workshop materials; however, the final details and questions remain subject to change in response to IE review and additional party comments in docket UM 2193 prior to the Commission consideration of the final draft 2022AS RFP on April 4, 2022.

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<sup>1</sup> Staff, PA, NIPPC, and Renewable Northwest filed comments on November 22, 2021. OSIDCL filed comments on November 4, 2021.

## II. COMMENTS

### A. Revisions to the Scoring and Associated Methodology Presented at the November 15 Workshop

As part of its application for approval of an independent evaluator (IE) for the 2022AS RFP, PacifiCorp also requested approval of its proposed scoring and associated modeling methodology, which was attached to the application as part of the IE RFP (Application).<sup>2</sup> Following the filing of its Application, PacifiCorp proposed incremental, discrete revisions to the scoring and associated modeling methodology, first reflected in an updated schedule filed on October 1, 2021,<sup>3</sup> next as part of its comments filed on October 20, 2021 in response to the Staff Report regarding approval of the IE (October 20 Comments), and then discussed at the public meeting held on October 21, 2021 (October 21 Public Meeting). Additional discrete revisions were made based on experience gained in its 2020 All-Source Request for Proposal (2020AS RFP),<sup>4</sup> as a result of more recently accumulated understanding of the interconnection cluster study process, and upon reflection of the PLEXOS portfolio optimization functionality gained during the 2021 Integrated Resource Plan (2021 IRP) process. In sum, the process refinements allow for additional time in this proceeding for Staff and parties to review the 2022AS RFP prior to Commission approval and also allow for a simpler, more streamlined evaluation and selection process with more time for Staff and IE oversight and review.

PacifiCorp discussed the proposed revisions with the IE, PA Consulting. A complete set of proposed process refinements were presented at the November 15 Workshop. Each of the revisions are discussed below.

#### 1. RFP Bid Deadline

As discussed in the October 21 Public Meeting,<sup>5</sup> PacifiCorp proposed to move the date of bid acceptance until after the results of the cluster study have been posted to PacifiCorp Transmission Open Access Same-time Information System (OASIS).<sup>6</sup>

By comparison to the transitional cluster study (Transition Cluster)<sup>7</sup> conducted in 2020, PacifiCorp Open Access Transmission Tariff (OATT)'s ongoing annual cluster study (Cluster Study 1 conducted in 2021<sup>8</sup> and Cluster Study 2 to be conducted in 2022) participants can demonstrate readiness criteria in several ways, including refundable deposits and site-specific

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<sup>2</sup> *In the Matter of PacifiCorp d/b/a Pacific Power Application for Approval of 2022 All-Source Request for Proposals*, Docket No. UM 2193, Application filed Sept. 2, 2021.

<sup>3</sup> PacifiCorp Notice of Proposed Updated Schedule for 2022 All-Source Request for Proposal Proceeding, October 1, 2021.

<sup>4</sup> *In the Matter of PacifiCorp d/b/a Pacific Power Application for Approval of 2020 All-Source Request for Proposals*, Docket No. UM 2059, Order No. 21-437 (Nov. 24, 2021).

<sup>5</sup> October 21 Public Meeting video at minute 42:52 through minute 47:15.

<sup>6</sup> *Id.*

<sup>7</sup> See [www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacificorpcliaq.htm](http://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacificorpcliaq.htm)

<sup>8</sup> See [www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacificorpcliaq1.htm](http://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacificorpcliaq1.htm)

purchase orders.<sup>9</sup> PacifiCorp's Cluster Study 1, as posted to OASIS, indicated that there were 59 participants amounting to over 12,000 megawatts<sup>10</sup> of interconnection requests. The robust amount of market participation in this cluster study indicates that the new Readiness Criteria are not a disincentive for interested parties to participate in the current cluster study process. Therefore, for the 2022AS RFP, PacifiCorp is proposing a bid receipt date for benchmark bids in December 2022 and for market bids in January 2023 after the Cluster Study 2 results have been posted.

## 2. Interconnection Study

As discussed in the October 21 Public Meeting,<sup>11</sup> PacifiCorp proposes to require all bidders to provide as part of their bids at the bid deadline a completed interconnection study or signed interconnection agreement, which shall include interconnection cost estimates and demonstrate the ability of the resource to be interconnected in time to achieve their proposed commercial online date. Because interconnection is vital and material to project due diligence, it is industry standard to require proposed resources to include completed interconnection studies. Including the interconnection studies will allow for a simpler and more streamlined RFP process, because PacifiCorp will receive a complete bid with all relevant pricing information and be able to conduct complete project due diligence, bid eligibility screening and non-price scoring. By waiting to receive completed bids, PacifiCorp will run PLEXOS one time (after Cluster Study 2) saving resources and eliminating concerns about bidder's gaming potential as a result of the proposed shortened 2022AS RFP bid evaluation process.

## 3. RFP Bid Pricing

As noted above and discussed in the October 21 Public Meeting, PacifiCorp has moved the date of bid acceptance until after the results of Cluster Study 2 have been posted to PacifiCorp Transmission OASIS and will ask bidders to provide completed interconnection studies as part of bids. As a result, PacifiCorp proposes requiring all bids include interconnection cost estimates, including direct assigned cost assumptions because a completed interconnection study or signed interconnection agreement is required to be part of bids. PacifiCorp will include the network upgrade cost estimates in its PLEXOS bid preparation file to be utilized in the portfolio optimization modeling. Because interconnection costs are vital and material to price scoring, it is industry standard to consider pricing proposals inclusive of full interconnection cost assumptions. This is consistent with the Company's October 20 Comments, where it stated "[b]ased on the updated 2022AS RFP schedule, PacifiCorp is recommending that IRP portfolio optimization model be used only once at the final shortlist stage which minimizes the time between receipt of the 2022AS RFP bids and the RFP final shortlist selection process and eliminates the step allowing bidders to reprice their bid, thereby alleviating potential price

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<sup>9</sup> [www.oasis.oati.com/woa/docs/PPW/PPWdocs/20211105\\_OATTMaster.pdf](http://www.oasis.oati.com/woa/docs/PPW/PPWdocs/20211105_OATTMaster.pdf) Section 38.4.1(v)

<sup>10</sup> [www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacificorpcliaq1.htm](http://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacificorpcliaq1.htm)

<sup>11</sup> October 21 Public Meeting video at minute 42:52 through minute 47:15.

“gaming” identified by Staff as a concern in the 2020AS RFP.<sup>12</sup> Further, including the interconnection cost as part of the initial bid will allow for a simpler and more streamlined RFP process, because PacifiCorp will receive a complete bid at one time and by waiting to receive completed bids, PacifiCorp will only have to run PLEXOS one time (after the cluster study), saving resources

#### 4. Price Score

For the 2020AS RFP, PacifiCorp used proprietary excel models to calculate net benefits for each bid and then calculated a price score worth up to 75 points. The price score was combined with a non-price score to determine a total score. In the 2020AS RFP, the total score was then used to prioritize and reduce the number of bids eligible to proceed to the portfolio optimization valuation and selection step. Rather than using a proprietary excel model to determine price score, PacifiCorp proposes to use PLEXOS results to determine price scores for the 2022AS RFP. PacifiCorp has determined that PLEXOS has fewer limitations than the portfolio optimization tool previously used and is therefore more flexible and capable of accepting and valuing all bids received in the 2022AS RFP. The total allocation of 75 points price score will remain the same as will the force ranking to determine the price score. As a result, the price scoring previously done by proprietary excel models, including the use of StorageVet, will now be solely calculated based on PLEXOS results.

#### 5. Non-Price Score

In the 2020AS RFP, PacifiCorp conducted its due diligence and assigned non-price criteria scores to each bid based on three main categories: bid submittal completeness worth five points, contracting progress/viability worth five points and project readiness/deliverability worth fifteen points for a total potential non-price score of twenty-five points. The non-price score was combined with the price score to determine a total score worth up to one hundred points, and the total score was used to rank and prioritize bids prior to portfolio optimization modeling. For the 2022AS RFP, while the non-price score categories, point allocation, and total points (25) have not changed, the level of detailed questions used to calculate the score as well as the influence non-price score has on the ultimate final shortlist have changed.

PacifiCorp recommends replacing the non-price scorecard used for 2020AS RFP with a more detailed set of questions which bidders can self-score in the 2022AS RFP. In each category, the model automatically calculates the proportion of points a bidder receives as compared with the total number of points available in the category and then multiplies the point allocation for the category. For example, a bidder may self-score and receive seven (7) of 11 possible points in the bid completeness section. The 7/11 proportion is then applied to the total point allocation of 5 points for the bid completeness section.

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<sup>12</sup> The bidder’s gaming concern results from bidders leaving prices incomplete, yet open during the 30-day duration of the cluster study customer engagement window followed by the 150 days of the cluster study. This 180-day commercial engagement window is contained in the Sections 42.2 and 42.4(b) of the OATT

Finally, rather than being used to determine the initial shortlist and therefore prioritize resources for inclusion in the portfolio optimization models, the non-price score will instead be used in conjunction with the price score to rank the bids and determine the final shortlist. In this way, the non-price score will provide a mechanism for considering the difference between more and less mature resources and those resources with greater or fewer risks prior to selecting the final shortlist. PacifiCorp believes that this is consistent with OAR 860-089-0400(2), which provides that “the electric utility must base the scoring of bids and selection of an initial shortlist on price, and as appropriate, non-price factors.” Given the growing number of social policies influencing energy policies (equity criteria and labor standards) across PacifiCorp’s service territory such as HB2021, PacifiCorp is recommending the more detailed (and self-scoring) non-price score card as a means to increase transparency with respect to how these criteria are weighted. Further, with respect to a proposed resource’s ultimate viability, PacifiCorp believes it is appropriate to consider non-price factors such as contracting viability and project deliverability at the same time as it considers price factors to determine a final shortlist. By waiting until after the cluster study to apply non-price scoring, PacifiCorp’s new streamlined evaluation process will reduce the risk to PacifiCorp’s customers of final shortlist resources not being contractually viable or able to achieve commercial operation by the bidder’s proposed deadline.

With respect to the exact non-price scoring questions, PacifiCorp has provided screenshots in its workshop materials of its proposed scorecard, but the final details and questions remain subject to change in response to IE review and additional party comments to docket UM 2193 prior to the Commission consideration of the final draft 2022AS RFP on April 4, 2022.

## 6. Bid Ranking and Initial Shortlist

For the 2020AS RFP, PacifiCorp used the total of the price and non-price scores to rank bids and prioritize those bids eligible to move forward as part of an initial shortlist. During the 2020AS RFP, the initial shortlist determination allowed bidders to participate in the transitional cluster study and ultimately be considered by the portfolio optimization model. PacifiCorp has determined that PLEXOS has fewer limitations than the portfolio optimization tool previously used and is therefore more flexible and capable of accepting and valuing all bids received in the 2022AS RFP. For this reason, it simplifies and streamlines the process to have PLEXOS perform the price scoring used to determine ranking that was previously done by proprietary excel models. Furthermore, PacifiCorp will receive bids after the cluster study in which all eligible participants will have received a study. Because there is no longer a need to prioritize resources prior to either a cluster study or portfolio optimization modeling, all eligible resources bidding into the 2022AS RFP which meet the minimum criteria will be deemed to be part of the initial shortlist and will move forward to the portfolio optimization model.

Consistent with the 2021 IRP, PLEXOS will be used to optimize the portfolio of resources, test for reliability, run policy-price scenarios and conduct stochastic risk analysis (for more information please see Appendix A). PLEXOS will select resources and determine price scores for each of the bids. PacifiCorp will then combine the price and non-price scores to generate a total final bid score and ranking for each bid. PacifiCorp will calculate the sum of the price score (up to 75 points) and non-price score (up to 25 points) to determine the final score (up to

100 total possible points). In the event that the bid ranking (based on the sum of price and non-price scores) is inconsistent with the selected resources and preferred portfolio resulting from the PLEXOS performance optimization models, in coordination with the IE, PacifiCorp will investigate the discrepancy(ies) and may add or remove resources and run additional iterations of the PLEXOS reliability tests and price-policy scenarios. In this way, bid ranking will ultimately be used to recommend a final shortlist.

## 7. Storage Valuation

For the 2020AS RFP, PacifiCorp used StorageVet to value storage assets. PacifiCorp proposes to eliminate the StorageVet step and allow PLEXOS to endogenously value storage as part of its portfolio optimization and valuation modeling. PacifiCorp's proposal is appropriate as it streamlines the process given the capabilities of PLEXOS.

## B. Response to Staff Comments

Based on its review, Staff notes that the Company's proposed bid scoring and associated methodology is an improvement over past RFPs.<sup>13</sup> However, Staff requested that the Company provide additional clarification on five items. Specifically, Staff request that:

1. PacifiCorp should clarify, using information from the November 15 Workshop presentation, the main changes to its bid scoring and associated methodology as compared to the Application.
2. PacifiCorp should clarify the interactions of older studies and signed large generator interconnection agreements (LGIAs) with the new cluster, in addition to what cost and upgrade assumptions PacifiCorp intends to use when it inputs bids into PLEXOS.
3. PacifiCorp should also indicate megawatts (MW) of existing LGIA by state, generation type, and estimated interconnection and transmission costs are already available, in addition to how transmission costs will be treated in the 2022AS RFP.
4. The Company should clarify how storage is being considered in the 2022AS RFP, and whether storage will be considered a load after the first five years of commercial operation. The Company should also clarify whether interconnection studies, including the cluster, and transmission studies, will include potential upgrades needed with respect to battery charging in the 2022AS RFP.
5. PacifiCorp should elaborate upon how it intends to conduct its state compliance analysis.<sup>14</sup>

PacifiCorp addresses each of these items below.

First, Staff requests that the Company clarify the main changes to its bid scoring and associated methodology as compared to the Application. In Section II.A above, PacifiCorp clarifies, using information from the November 15 Workshop presentation, the main changes to its bid scoring

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<sup>13</sup> Staff Comments at 8.

<sup>14</sup> *Id.*

and associated methodology as compared to the Application. Additionally, PacifiCorp is providing as Appendix A to these comments an updated Section 6: Evaluation and Selection Methodology.

With respect to the interconnection study criterion,<sup>15</sup> PacifiCorp is proposing to accept resources with any of the following interconnection documents subject to the caveat that the relevant study or agreement must include interconnection cost estimates (including wheeling costs as appropriate), support the proposed resource with respect to technology type, capacity size and commercial online date, and demonstrate ability to supply firm energy to PacifiCorp's balancing authority areas:

- 1) Fast Track Process studies resulting from the Small Generation Interconnection Service (Section V) of the OATT;
- 2) A signed interconnection agreement;
- 3) A completed interconnection study resulting from the Transition Cluster, Cluster Study 1 or Cluster Study 2; or
- 4) A completed interconnection study from an off-system resource.

Second, Staff requests clarification regarding cluster study precedence and the interactions of older studies and signed LGIAs with the new cluster study. PacifiCorp's OATT section 42.3 states:

42.3 Execution of Cluster Study Agreement and Scope of Cluster Study.  
Interconnection Customer shall execute the Cluster Study Agreement and deliver the executed Cluster Study Agreement to Transmission Provider no later than the close of the Customer Engagement Window. The Cluster Study shall evaluate the impact of the proposed interconnection on the reliability of the Transmission System. The Cluster Study will consider the Base Case as well as all generating facilities (and with respect to (iii) below, any identified Network Upgrades associated with such higher queued interconnection) that, on the date the Cluster Request Window closes: (i) are existing and directly interconnected to the Transmission System; (ii) are existing and interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending higher queued or higher clustered Interconnection Request to interconnect to the Transmission System; and (iv) have no Queue Position but have executed an LGIA or requested that an unexecuted LGIA be filed with FERC.

Thus, as described above, the OATT has a mechanism for considering precedence and older studies and signed LGIAs as part of a new annual cluster study. PacifiCorp's RFP Team will simply review the completed study (or agreement) and consider the associated interconnection costs. So long as a proposed resource has a completed study (or agreement) demonstrating the resource's ability to interconnect by the proposed operations date, PacifiCorp's RFP Team does not need to consider precedence. Bidders will include the direct interconnection costs in their bid

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<sup>15</sup> Staff Comments at 5.

prices, whereas PacifiCorp will include network upgrade costs in its bid preparation file for PLEXOS.

With respect to transmission, PacifiCorp provided the IE, PA Consulting, with information as to how transmission costs will be treated in the RFP, which PA included in their filing:

“All transmission expansions are represented as options within PLEXOS. Transmission expansions can include incremental transfer capability (among multiple points) and/or incremental interconnection capability for new resources. To the extent a transmission cost is specific to a single resource and does not impact any other transfer or interconnection capability, that cost can be embedded within the cost inputs assigned to a specific resource, as was done with most network upgrades in the 2020AS RFP. If the associated transmission upgrades do relate to other interconnection options or transfer capability, they can be modeled as appropriate.”<sup>16</sup>

Third, Staff asks that PacifiCorp indicate the MW of existing LGIA by state, generation type, and estimated interconnection and transmission costs are already available, in addition to how transmission costs will be treated in the 2022AS RFP. PacifiCorp intends to include as an exhibit to the RFP the current status on OASIS of active interconnection cluster study requests and executed, active LGIAs<sup>17</sup> at the time of RFP issuance, which will include the MW by state and generation type. Inasmuch as estimated interconnection and transmission costs are publicly and readily available, PacifiCorp may also include cost information in the exhibit. The treatment of transmission costs was described in PA Consulting’s filing and copied in the section above.

Fourth, Staff requests that the Company (1) clarify how storage is being considered in the 2022AS RFP, and whether storage will be considered a load after the first five years of commercial operation; and (2) clarify and whether interconnection studies, including the cluster, and transmission studies, will include potential upgrades needed with respect to battery charging in the 2022AS RFP. Subject to potential tax code changes, the 2022AS RFP considers storage in the following ways:

- a. Bidders may elect to bid with or without grid charging.
- b. In order for a bid to be considered eligible for grid charging, it would need to have been studied by PacifiCorp. An additional load study to determine potential upgrades would be required in the future at the time when the bidder wanted to grid charge. The result of such a study is unknown and may represent new incremental costs.

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<sup>16</sup> PA Consulting Comments at 3.

<sup>17</sup> Information on interconnection cluster study requests and executed LGIAs are publicly available here: <https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacificorplgiaqenis.htm> (“Archive - Executed IA – Not in Service)

<https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacificorplciaq.htm> (Transition Cluster)

<https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacificorplciaql.htm> (Cluster Study 1)

- c. Consistent with what was done for the 2020AS RFP, the main 2022AS RFP document will require bidders to complete an Appendix C-3 – Energy Performance Report response, and with respect to storage bids, bidders are asked to include a description of “limitation of charging only from renewable energy production, if applicable,” and Appendix C-3 asks bidders to respond to whether there is an “option for battery charging from grid.”
- d. The pro forma agreements assume that all collocated storage will only be charged using renewable resource generation but also asks bidders to ensure the design allows for future grid charging upgrades. It has been PacifiCorp’s assumption that bidders will not allow grid charging until after the tax credit recapture period unless they are compensated for any reduction in tax benefits. In the event PacifiCorp Transmission allows the material modification and, in the event, market conditions result in a benefit to customers, PacifiCorp may negotiate an amendment with the resource to add grid-charging capability. However, the United States House of Representatives has very recently passed a new social spending bill, the Build Back Better Act (the “Act”), which provides new and material changes to renewable tax credit legislation. Existing assumptions related to grid charging and proforma agreement assumptions are subject to change dependent on final passage of this or similar legislation as well as our evolving understanding of the changes.
- e. The Appendix B-2 of the 2022AS RFP, consistent with what was done in 2020AS RFP, will ask bidders to respond: “Can storage be charged from the grid? (Please further describe on Tab 4 (if battery) or Tab 10)”. However, PacifiCorp currently contemplates that grid charging in the future will be accomplished through mutual agreement between bidders and PacifiCorp as described in Section B.4.c. In the event of future contractual negotiations and amendments to enable grid charging, the methodology and potential incremental cost will be evaluated by PacifiCorp on a project-by-project basis.
- f. PacifiCorp’s experience in 2020AS RFP is that no bidders offered grid charging at the time of commercial operation date, and bidders do not allow for grid charging in the first five years due to their exposure during the tax credit recapture period.
- g. PLEXOS models may assume grid charging is subject to a penalty price under certain conditions, but the commercial assumption is that in the short-term storage resources will not be grid charged. In the later years of the planning horizon, there may be more cost-effective grid-charging storage options for customers.

Finally, with respect to state compliance obligations, such as with HB2021, PacifiCorp will require Oregon bidders provide an attestation as required under HB 2021 as part of the proforma agreement. PacifiCorp has included a non-price scorecard question to determine bidder’s willingness to comply with the attestation. With respect to other states, PacifiCorp may add state-situs resources if required to meet those state compliance obligations.

### **C. Response to PA Consulting Comments**

Regarding the Company's proposed bid scoring and associated methodology, PA Consulting states that the revised process for incorporating the transmission cluster study interconnection cost estimates into the 2022AS RFP is an improvement and should provide clarity to bidders and the broad bid eligibility categories are reasonable subject to review in the final draft of the 2022AS RFP.<sup>18</sup> PA Consulting also states that it believes that the Company's overall price scoring methodology and its overall process for evaluation and scoring of the 2022AS RFP are reasonable. However, PA Consulting expresses concerns about the PLEXOS model's ability to evaluate energy storage facilities appropriately. Specifically, PA Consulting states its "concerns include the model's ability to appropriately evaluate energy storage daily vs. annual cycling limitations and the model's ability to appropriately constrain resources from "grid charging" vs. charging from the host renewable generator for paired renewable-storage bids."<sup>19</sup> PacifiCorp responds that the PLEXOS model is capable of accounting for a variety of constraints relevant to storage resources, including daily and annual cycle limits, restrictions on grid charging, and interactions with a host renewable generator. These capabilities were used successfully in the 2021 IRP and are part of PLEXOS's core functionality.

### **D. Response to NIPPC Comments**

NIPPC claims that PacifiCorp submitted an incomplete document containing its bid scoring and associated methodology with its application and then made revisions in its November 15 Workshop presentation. NIPPC argues that it is premature to approve the bid scoring and associated methodology at this time.<sup>20</sup> PacifiCorp disagrees that it is premature to approve the bid scoring and associated methodology at this time as it is consistent with the IRP modeling methodology and more closely aligned to the intent of the bid scoring rules. Further the fundamental adjustments of i) receiving bids after the cluster study, ii) including interconnection studies at the time of bid receipt; and iii) evaluating the bids with the portfolio optimization tool only one time after the cluster study were either included in the Company's October 20 Comments or discussed at the October 21 Public Meeting. The modifications to the methodology first introduced at the November 15 Workshop fall into two categories: i) the increased functionality of PLEXOS and associated transition from the use of proprietary models to PLEXOS to provide price scores and storage values, which is consistent with the IRP and ii) the changes to non-price scoring which we believe more closely align to the intent of the bid scoring rules. NIPPC also offers a number of recommendations, which PacifiCorp addresses below.

First, NIPPC recommends that PacifiCorp accept conditional as well as firm transmission service, implying that it might result in least-cost and least-risk bids.<sup>21</sup> This recommendation should be rejected. PacifiCorp has a vast transmission network and has been able to identify least-cost and least-risk bids offering firm transmission. As transmission is most valuable and

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<sup>18</sup> PA Consulting Comments at 2.

<sup>19</sup> *Id.* at 4.

<sup>20</sup> NIPPC Comments at 1-2.

<sup>21</sup> *Id.* at 3.

most needed when the system is constrained, a conditional firm product will provide less value and create more risk to PacifiCorp's customers as compared to its demonstrated ability to acquire resources using firm transmission.

Second, NIPPC recommends that the Commission require PacifiCorp to use price/non-price score ratio of 80/20 instead of 75/25.<sup>22</sup> The Commission should reject NIPPC's recommendation. Non-price scores are an important mechanism for assigning value to critical due diligence items that indicate project viability and readiness. PacifiCorp has endeavored to create a self-scoring non-price scorecard that can easily be audited by both the Company and the IEs. A 75/25 ratio remains a good balance for assigning value to price and non-price criteria, especially given the objective way the scorecard has evolved.

With respect to the key principles listed by NIPCC, PacifiCorp has developed its non-price scoring consistent with OAR 860-089-0400(2):

- Non-price factors converted to price factors where practicable.
- Non-price scores primarily relate to resource characteristics identified in 2021 IRP Action Plan and reflect standard form contracts.
- Criteria is objective and reasonably subject to self-scoring.
- Criteria which seek to identify minimum thresholds bid have been converted into minimum bidder requirements.

Third, NIPPC seeks additional clarification regarding how bids will be assigned price score points. Further, it expresses concerns about a level playing field for bids of different term lengths.<sup>23</sup> Regarding NIPPC's concerns about price scoring, PacifiCorp will provide all production, price, and degradation schedules as inputs to PLEXOS via the Bid Preparation Model as described in Appendix A. PLEXOS will evaluate resources on a real levelized basis, thereby fairly treating bids of different durations. With respect to NIPPC's concerns of fairness, when an RFP is issued under the Commission's competitive bidding rules, a utility is required to engage an IE.<sup>24</sup> The competitive bidding rules requires that the IE "oversee the competitive bidding process to ensure that it is conducted fairly, transparently, and properly."<sup>25</sup> Additionally, in its comments submitted regarding the Company's scoring and evaluation process, PA Consulting stated:

The bids will be evaluated on an economic basis in PacifiCorp's models, considering the bid's production shape, pricing, energy storage characteristics - such as cycling limitations, degradation and ramp rate, etc. - and other operational characteristics of each bid. The models will produce a quantitative ranking of each bid submitted, regardless of its inclusion or exclusion from the optimal portfolio; these scores will be normalized to a 75 point scale. The Non-

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<sup>22</sup> *Id.* at 3-6.

<sup>23</sup> *Id.* at 6-7.

<sup>24</sup> OAR 860-089-0200(1).

<sup>25</sup> OAR 860-089-0450(1).

Price Scoring for each bid will be added to the Pricing score to create a Total Score and a ranked list of bid values.<sup>26</sup>

With the oversight of the IE and working closely with Staff and the IE for the 2022AS RFP, any concerns regarding the fairness of the process are misplaced.

Fourth, NIPPC recommends that the Commission require PacifiCorp accept alternating current (AC) and direct current (DC) coupled collocated storage and renewable resources, expressing a concern that that the proposed 2022AS RFP limits collocated renewable energy plus storage bids to those which are AC-coupled storage resources and does not also allow DC-coupled storage resources.<sup>27</sup>

The renewable energy market has been developing two different designs for collocated storage resources, each with their unique advantages and disadvantages. To simplify, an AC-coupled system is a centralized storage facility that charges and discharges energy after the energy has been inverted from DC-current to AC-current by inverters but before the energy is sent to the point of delivery and/or point of interconnection with the transmission system. PacifiCorp prefers these AC-coupled systems for the following reasons:

- they are centrally located;
- there are readily available American National Standards Institute (ANSI)-approved, revenue-grade bi-directional meters available to measure the renewable energy in and out of the battery, which are currently compliant with CAISO requirements;
- as energy is charged and discharged, it is relatively easy to calculate the battery losses (round trip efficiency);
- it is relatively straight forward to dispatch in that there are typically fewer SCADA and metering points for an AC-coupled system than for a DC-coupled system;
- it is relatively straight forward to allow for future grid charging; and
- PacifiCorp has received competitive AC-coupled bids as part of the 2020AS RFP and bidders have been willing to design, offer and price AC-coupled systems.

PacifiCorp is concerned DC-coupled systems create unnecessary risk for customers for a number of reasons. PacifiCorp Transmission has communicated via Cluster Study 1 for Area 1<sup>28</sup> that its interconnection customers proposing DC-coupled systems in the near-term time horizon may experience schedule delays, stating:

The Transmission Provider assumes it will be required to meter DC coupled solar and battery storage separately. This may result in a significant amount of Interconnection Facilities for Interconnection

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<sup>26</sup> PA Consulting Comments at 3.

<sup>27</sup> NIPPC Comments at 7-8.

<sup>28</sup> <https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/2021CA1CS.pdf>

Customer's proposing this type of design. It may also result in significant, annual maintenance costs for Interconnection Customers. Please note that the Transmission Provider does not currently have an approved meter capable of this function therefore cost estimates and schedules are preliminary at this time. The Transmission Provider assumes it will not be able to support a Commercial Operation Date for any Interconnection Request with DC coupled battery storage prior to Q4 2024.

Additionally, PacifiCorp Transmission does not currently have an approved meter capable of being used on a DC configuration nor has it yet identified a manufacturer that has produced this type of meter.

Further, separate from the PacifiCorp Transmission issues, there is additional risk and uncertainty involved regarding DC-coupled battery storage design. First, bidders, and subsequently ratepayers, may be assuming more risk if the PacifiCorp Transmission is not able to support the proposed commercial operation date (COD) for the Interconnection Request due to the DC-couple battery storage design. Second, bidders, and subsequently ratepayers, may be assuming more risk related to up-front and ongoing metering cost assumptions, because PacifiCorp understands there are currently no ANSI-approved revenue-grade DC meters and because DC-coupled systems can potentially have materially more meters per MW than an AC-coupled system. Third, DC-coupled batteries are distributed throughout a solar field with multiple meter points, which create uncertainty around metering the amount of losses and system inefficiencies. Fourth, DC-coupled systems may be more challenging to schedule and dispatch from multiple locations. Finally, DC-coupled systems may be more difficult and costly to establish grid charging in future years.

Fifth, NIPPC recommends that (1) the interconnection process timeline be changed and the COD be extended past December 31, 2026; and (2) require PacifiCorp to accelerate the RFP process timeline.<sup>29</sup> In the alternative, NIPPC seeks clarification regarding the timing of the receipt of bids in light of cluster study recipient's requirements to enter into a Facilities Study.<sup>30</sup>

The Commission should reject NIPPC's recommendations. With respect to the recommendation to extend the COD past December 31, 2026, the 2022AS RFP is in response to the short-term resource need identified in the 2021 IRP. Given the rapid change of technology and market conditions, PacifiCorp believes that the shorter time horizon for the RFPs following IRP action items continues to be an appropriate balance of risk and opportunity for PacifiCorp's customers. To contract now for resources farther out in the planning horizon may lock in higher costs and greater uncertainty with respect to resource deliverability as opposed to considering more immediate resources with clearer development steps and time horizons and market conditions. As PacifiCorp meets its clean energy goals, it will continue to have resource needs and will consider those resources in future RFPs.

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<sup>29</sup> NIPPC Comments at 8-9.

<sup>30</sup> *Id.* at 9-12.

Further, regarding the recommendation PacifiCorp accelerate this RFP process, as mentioned above in Section A, PacifiCorp's experience with Cluster Study 1 indicate that there are sufficient market participants willing and able to provide readiness criteria and participate in the cluster study. PacifiCorp does not recommend accelerating the bid deadline or accepting or evaluating bids prior to bidder's ability to provide a completed interconnection study.

With respect to NIPCC's concerns about the timing of PacifiCorp's bid receipt in light of cluster study recipient's requirements to enter into a Facilities Study, PacifiCorp has to balance several constraining factors: facilities studies readiness requirements, benchmark bid oversight, and evaluating, scoring, and IE filing timeframes. After the cluster study results are posted and bids are received, PacifiCorp's RFP team will require time to complete due diligence for minimum criteria and seek appropriate IE review within its six-state regulatory constraints. Within the OATT, PacifiCorp Transmission allows for only 30 days from positing of the cluster study results on OASIS to the time which study participants must commit to a Facilities Study, subject to applicable cure periods. Readiness Milestone options available to facilities study participants include:

demonstration of a Readiness Milestone option in Sections 38.4.1(v)(b)-(c), Section 38.4.1(v)(e), or a Financial Security payment equal to the Network Upgrade costs allocated to Interconnection Customer in the most recent Cluster Study Report minus any amounts already paid pursuant to Section 38.4.1(v)(d). Such additional Financial Security shall be refunded in accordance with Section 48.3.3."

While PacifiCorp may endeavor to seek means to provide eligible bidders with some documentation to support their Readiness Milestone requirement under the OATT, PacifiCorp would note that it is highly unusual elsewhere in the electric utility industry for a utility to structure its RFP timing requirements around an interconnection study process with a goal towards forgoing security requirements. Furthermore, in the event PacifiCorp does propose changes, it is always possible and out of the control of the PacifiCorp 2022AS RFP Team that should PacifiCorp Transmission complete the Cluster Study 2 early, the readiness criteria deadlines would change and still be the obligation of the interconnection customer regardless of PacifiCorp's RFP Team's ability to shift the RFP schedule deadlines within the context of a six-state regulatory process. PacifiCorp notes that at the time it is able to provide a bidder with sufficient documentation to satisfy the Readiness Milestone, financial security shall be refunded.

Finally, PacifiCorp observes that in the event the Company determines, after the cluster study results are posted, that it will participate in the 2022AS RFP and submit benchmark bids for submission to the RFP team, those benchmark bids will need to undergo a separate review process under OAR 860-089-0350(1). Like with all other bids, the RFP team will require time to conduct due diligence, bid eligibility screening, non-price scoring and PLEXOS bid preparation for each of the benchmark resources. Only following the Commission filing required for benchmark bids under OAR 860-089-0350(1) will PacifiCorp be able to receive and open market bids. PacifiCorp will then require sufficient time to review the market bids for eligibility and gain IE approval before it may be in a position to provide bidders with any documentation to serve as readiness criteria required for the Facilities Study.

PacifiCorp does not at this time have any changes to the proposed schedule or specific recommendations that it is able to put forward and notes that changes may be infeasible given the timing constraints associated with benchmark bid guidelines in OAR 869-089-0300 and 869-089-0350. The proposed RFP schedule included in PacifiCorp’s scoring and modeling workshop in the Supplemental Materials section indicates the following schedule, subject to change:

Cluster study results posted to OASIS / bidders notified by Pac Trans	OATT	11/12/2022
Benchmark bid deadline	2022 AS RFP	11/21/2022
Pac Trans meetings with cluster study participants	OATT	11/22/2022
Benchmark bid evaluations complete - eligibility, non-price score, PLEXOS bid preparation	2022 AS RFP	12/14/2022
PacifiCorp Transmission - Facility Study (Readiness Criteria /security posting deadline)	OATT	12/22/2022
IEs complete review - Benchmark bid evaluation (eligibility, non-price score, PLEXOS bid preparation)	2022 AS RFP	01/13/2023
PacifiCorp files Benchmark bid evaluation	2022 AS RFP	01/13/2023
Market bid deadline	2022 AS RFP	01/16/2023
PacifiCorp Transmission - Facility Study (End of cure period)	OATT	01/21/2023
Market bid eligibility screening completed	2022 AS RFP	02/15/2023
IEs complete review/confirmation of bid eligibility - Market bids	2022 AS RFP	02/22/2023

**E. Response to Renewable Northwest Comments**

In its comments, Renewable Northwest expressed certain concerns and recommendations regarding the bid scoring and associated methodology for PacifiCorp’s 2022AS RFP.

First, because the resource values identified in the Application reflect the least-cost, least-risk portfolio identified in the 2021 IRP that does not account for the requirements of HB 2021, Renewable Northwest recommends that Staff work with the Company to identify additional analysis that can take place within the 2022AS RFP to explore whether bringing on more non-emitting resources sooner will help PacifiCorp achieve compliance with Oregon’s emission mandates.<sup>31</sup> With respect to the 2022AS RFP, PacifiCorp does not plan to limit PLEXOS ability to pick new resources to the amount or location of resources identified in the Company’s 2021 IRP. The resources identified by the 2021 IRP are indicative in size and location; by comparison the 2022AS RFP bidders will provide real resources from which PLEXOS will pick new resources and may recommend a portfolio greater than or less than the IRP preferred portfolio based on the analyzed customer benefit within the proposed action window. PacifiCorp will work with the IEs and Staff prior to making its ultimate recommendation with respect to resources recommended to the final shortlist.

<sup>31</sup> Renewable Northwest Comments at 2.

Second, Renewable Northwest requests additional clarification on the bid scoring and modeling methodology.<sup>32</sup> PacifiCorp has provided its proposed 2022AS RFP scoring and modeling methodology, which have been summarized in Section II.A above and provided in full in Appendix A. Renewable Northwest also requests clarification on how scores will be assigned within the 0-75 range; for example, will the new benefits value and the price score be directly proportional or will another approach be used? In Section II.B and Appendix A of these comments, PacifiCorp has addressed how the price score will be calculated. With respect to Renewable Northwest clarification regarding the Equity Questionnaire, PacifiCorp has not proposed the Equity Questionnaire be scored and is not proposing to do so. Instead, bidders will receive a binary point, simply reflecting whether or not a bidder has completed and submitted the questionnaire. The non-price scorecard itself is designed to be self-scoring and relatively objective, and PacifiCorp does not intend to use the Equity Questionnaire to inform the non-price score. A screen shot of the proposed Equity Questionnaire was included in the November 15 Workshop presentation in the Supplemental Materials section.

Finally, Renewable Northwest recommends that PacifiCorp not limit hybrid bids to only AC-coupled resources.<sup>33</sup> PacifiCorp addressed the AC-coupled and DC-coupled co-located storage resources issue Section C above. As part of its reply comments, Renewable Northwest quoted PacifiCorp's response to the question it had submitted to the 2022AS RFP website but did not include the complete response, which can be found in the Q&A posting to PacifiCorp's 2022AS RFP website.<sup>34</sup> PacifiCorp's full response was:

Due to CAISO metering requirements and the lack of utility-grade, ANSI-approved revenue-quality ~~AC-meters~~ DC-meters not being available at the current time, potential contractual complications associated with the distributed nature of DC-coupled battery systems, and PacifiCorp's goal of managing the dispatch of energy storage, PacifiCorp will accept only AC-coupled collocated battery systems in this RFP. *PacifiCorp may lift the restriction in the future as metering technology and standards further evolve. Different developers have proposed AC-coupled systems that are cost competitive, and many see the construction and operational benefit of a central battery storage system that AC-coupled systems afford.*

During the preparation of these comments, PacifiCorp discovered an inadvertent error in its response. As noted in legislative format, in the first sentence, "AC-meters" should be replaced with "DC-meters."

Finally, Renewable Northwest expresses its concern that the schedule set for docket UM 2193 and the Company's bid scoring and associated methodology may significantly limit bids in the 2022AS RFP. PacifiCorp has addressed this issue in Section II.C above.

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<sup>32</sup> Id. at 3-4.

<sup>33</sup> Id. at 4-5.

<sup>34</sup> [https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/suppliers/rfps/pacificorps-2022-all-source-request-for-proposals/2022\\_RFP\\_Mailbox\\_QA\\_Master\\_Record\\_Sheet\\_2021-11-19.pdf](https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/suppliers/rfps/pacificorps-2022-all-source-request-for-proposals/2022_RFP_Mailbox_QA_Master_Record_Sheet_2021-11-19.pdf)

**F. Response to OSIDCL Comments**

In its comments filed on November 4, 2021, OSIDCL urges the Commission to condition the 2022AS RFP on a working group between interested parties, Staff and the Company to determine what labor or economic language should be included in this RFP and expresses the importance of local job creation and apprenticeship opportunities. The competitive bidding rules ensure a fair, transparent, and proper process for the acquisition of resources in a RFP. Throughout the RFP process, the Company works closely with Staff and the IE and the Commission establishes a schedule to allow all stakeholders to participate through workshops and the filing of comments. Furthermore, PacifiCorp agrees that local job creation and apprenticeship opportunities are requirements of HB 2021 and Oregon-located bidders will be required to attest their compliance with the HB 2021 requirements.

**III. CONCLUSION**

PacifiCorp appreciates the engagement and comments of Staff, the IE, and stakeholders in the 2022AS RFP process. The Company's proposed revised scoring and associated modeling methodology for the 2022AS RFP, attached to these comments as Appendix A, are appropriate and improve upon and streamline processes used in previous RFPs. PacifiCorp respectfully requests that the Commission issue an order approving the proposed revised scoring and associated modeling methodology for the 2022AS RFP. In the alternative, if the Commission determines that Staff and parties should have additional time with the scoring and associated modeling methodology contained in Appendix A, the Company recommends that the Commission consider the scoring and associated modeling methodology at the same time it deliberates on the final draft 2022AS RFP on April 4, 2021.

If you have questions about this filing, please contact Cathie Allen, Manager, Regulatory Affairs, at (503) 813-5934.

Sincerely,



Shelley E. McCoy  
Director, Regulation  
PacifiCorp

# **Appendix A**

## SECTION 6. BID EVALUATION AND SELECTION

### OVERVIEW OF THE EVALUATION PROCESS

PacifiCorp’s bid evaluation and selection process is designed to identify the combination and amount of new resources that will maximize customer benefits through the selection of bids that will satisfy projected capacity and energy needs while maintaining reliability. The method for evaluating benchmark resources will be transparent, fair, and consistent with how market bids are evaluated with additional oversight by the IEs.

The 2021 IRP selected individual resources and optimized a preferred portfolio from a list of generic “proxy” resources to reliably meet PacifiCorp’s energy and capacity needs across its six-state service territory. The PLEXOS portfolio optimization model that PacifiCorp will use to evaluate the 2022AS RFP bids and select the best combination and amount of bids is the same model that was used to evaluate proxy resources in PacifiCorp’s 2021 IRP with limited updates for market conditions conducted with IE oversight. PacifiCorp uses PLEXOS to serve as a decision support tool that can be used to guide prudent resource acquisition paths that maintain system reliability at a reasonable cost.

At a high level, the 2022AS RFP evaluation process involves multiple phases:

1. Minimum criteria and bid eligibility.
2. Due diligence and non-price scoring.
3. Bid preparation for input into PLEXOS, including resource shaping.
4. PLEXOS modeling, including bid selection, portfolio optimization, reliability testing, price-policy scenario analysis, stochastic risk analysis and price scoring.
5. Combination of price and non-price scoring and ranking of preferred resources.
6. Sensitivities may be run as part of the state regulatory approval process.
7. Finally, state-specific resource analyses to comply with evolving regulations. Specifically, resources allocated to Washington will be measured by certain community benefit indicators in compliance with CETA.

The final shortlist will be selected following a series of PLEXOS model analyses based on a combination of price and non-price factors as weighted in Table 2.

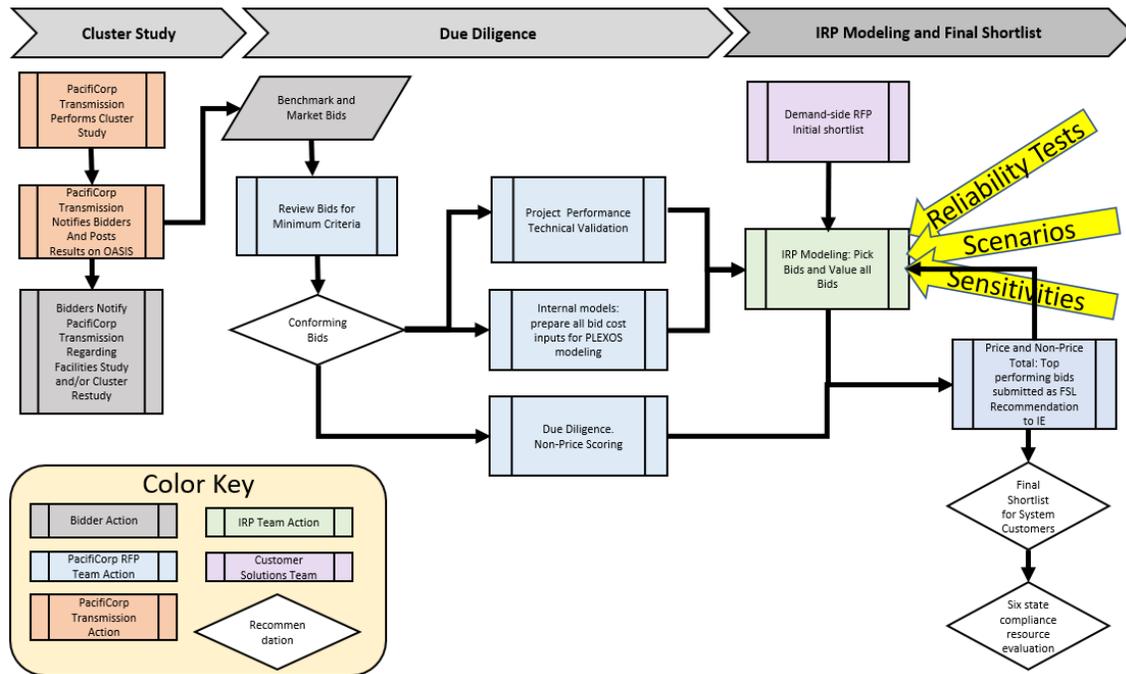
**Table 2. Scoring to Determine the Final Shortlist**

	<b>Maximum Score</b>
1. Price	75 points
2. Non-price score	25 points

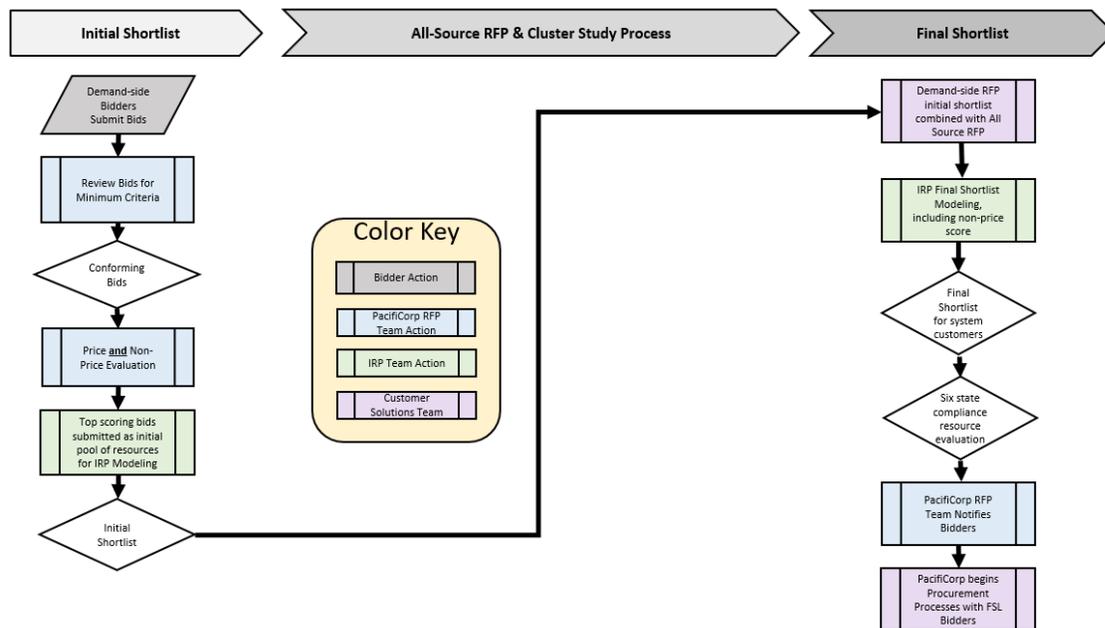
Price scores are determined using PLEXOS model outcomes. Non-price scores are determined using a non-proprietary, self-scoring matrix. Developers will be asked to grade themselves as part of their bid package, which PacifiCorp will audit before determining a final non-price score for each bid.

The 2022AS RFP evaluation process is shown in Figure 1 and Figure 2. More detail on the price and non-price score methodology is provided below.

**Figure 1. Bid Evaluation and Selection Process – Generation and Storage Resources**



**Figure 2. Bid Evaluation and Selection Process – Demand-side Resources**



**A. BID ELIGIBILITY: CONFORMANCE TO MINIMUM REQUIREMENTS**

Benchmark and market bids will initially be screened after receipt against minimum requirements to determine RFP conformance and eligibility. After IE review and consultation, non-conforming bids will be notified to correct their bid within two (2) business days or be removed from the RFP. Consistent with OR

860-089-0400 (2), non-price score criteria that seek to identify minimum thresholds for a successful bid have been converted into minimum bidder requirements.

## B. DUE DILIGENCE AND NON-PRICE SCORING

After PacifiCorp has screened for eligibility, conforming bids will be evaluated according to the non-price criteria in Table 3. PacifiCorp's review will focus on i) identifying bid attributes that would prevent PacifiCorp from reaching a contract with Bidder and ii) identifying bid deficiencies that would prevent the resources from coming online by the required deadline.

**Table 3. Non-Price Factor Weighting**

<b>Non-Price Factors</b>	<b>Maximum Non-Price Factor Points</b>
1. Bid Submittal Completeness	5 points
2. Contracting Progress and Viability	5 points
3. Project Readiness and Deliverability	15 points
<b>TOTAL NON-PRICE SCORE</b>	<b>25 points</b>

Bidders will have, as part of their bid, self-scored their bids using the non-price scorecard, which will be audited by PacifiCorp prior to giving each bid a non-price score. A maximum of 25 points will be allocated for non-price score. The non-price evaluation rubric is included in **Appendix L – Non-Price Scoring Matrix**.<sup>1</sup> For each non-price factor, proposals will be assigned a one or a zero. PacifiCorp's non-price scoring model evaluates whether bids are thorough and comprehensive, whether the proposed resource is viable, and whether the bidder is likely to achieve commercial operation by December 31, 2026 or the proposed COD. The non-price rubric is designed to be objective, intuitive, and self-scoring. As a bid requirement, bidders are required to score themselves based on the completeness of RFP bid requirements, the ability to contract with the resource, and the maturity of the project and ability of the bidder to deliver the resource by the commercial operation deadline.

The first section of non-price scoring model is similar to a check list and grades bids based on completion of bid requirements such as providing complete, thorough and consistent responses. The second section grades bidders based on the ability to contract the resource bid. The third section of the non-price scoring model assesses each bid's development status and viability. Points are earned based on degree of site control, permits attained, completed equipment sourcing strategy and other development and operational characteristics such as dispatchability and having a reasonable construction schedule.

In compliance with OR 860-089-0400 (2), non-price factors have been converted to price factors where practicable. Non-price scores primarily relate to resource characteristics identified in the electric company's most recent acknowledged IRP Action Plan and reflect standard form contracts. Non-price scoring criteria is objective and reasonably subject to self-scoring analysis by bidders. Non-price score criteria that seek to identify minimum thresholds for a successful bid have been converted into minimum bidder requirements.

PacifiCorp requests that all resources complete the equity questionnaire in **Appendix P – Equity Questionnaire**. Bids located in PacifiCorp's California, Washington and Oregon service territory will earn points in the non-price scorecard consistent with the following state policies:

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<sup>1</sup> OAR 860-089-400-2(b).

- For resources located in California, PacifiCorp has a preference for renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases when ranking projects. As described in Section [1.G of the RFP], bids located in PacifiCorp's California service territory are requested to provide a bid alternative meeting a supplier diversity target for women-owned, minority-owned, disabled veteran-owned and LGBTQ-owned business enterprises and we encourage the bidder to register with California's supplier clearing house.
- Resources in Oregon will be required to provide attestations consistent with HB2021 in order to demonstrate their intent to meet the requirements of HB2021, including but not limited to apprenticeship and workforce requirements.
- When considering resources allocated to Washington customers, PacifiCorp has a preference for projects that provide environmental and economic benefits to highly impacted communities and vulnerable populations. When considering resources to be allocated to Washington customers, **Appendix P – Equity Questionnaire** responses will be used in the final phase of the evaluation process to measure Washington customer benefit indicators as part of Washington's CETA.

### **C. BID PREPARATION INTO PLEXOS AND RESOURCE SHAPING**

Both supply-side and demand-side resources will be prepared and uploaded into PLEXOS. PacifiCorp uses its proprietary excel models to process bid costs for input to PLEXOS modeling with oversight by the IEs. PacifiCorp's proprietary excel file will be used to prepare supply side bids by creating leveled costs for each eligible bid to be included in PLEXOS.

Consistent with the treatment of capital revenue requirement in PacifiCorp's IRP modeling, PacifiCorp will convert any calculated revenue requirement associated with capital costs, as applicable (i.e., return on investment, return of investment, and taxes, net of tax credits, as applicable) to first-year-real-leveled costs. Consistent with the treatment of non-capital revenue requirement in PacifiCorp's IRP modeling, all other bid costs will be summarized in nominal dollars and formatted for input into to the IRP models.

PacifiCorp's proprietary excel model will calculate the delivered revenue requirement cost of each bid, inclusive of any applicable carrying cost and net of tax credit benefits, all operations and maintenance expenses, property taxes, generation taxes, direct assigned interconnection costs and PacifiCorp Transmission network upgrade cost, as applicable (see Table 4). In developing the delivered cost for each bid, PacifiCorp requires certain cost data as inputs to the bid preparation model. Table 4 contains a summary of the cost / benefit components included in PacifiCorp's bid preparation model by bid structure.

Table 4. Summary of Cost/Benefit Components by Bid Structure

Component	PPA Option	BTA Option	Toll Option	Benchmark
Initial Capital Revenue Requirements (net of ITC, if solar)	-	(X)	-	(X)
Ongoing Capital Revenue Requirements	-	(X)	-	(X)
PTC Schedule Benefit (if wind)	-	Z	-	Z
Terminal Value	-	Z	-	Z
O&M, Lease/Royalty, Insurance	-	(X)	-	(X)
Property Taxes	-	(X)	-	(X)
State Generation Tax (if Wyoming or Montana)	-	(X)	-	(X)
Network Upgrade Revenue Requirements	(X)	(X)	(X)	(X)
PPA Price Schedule	(X)	-	-	-
Storage Costs (Toll or Call Option Price Schedule for PPA/Tolls, or capital cost schedule for BTAs)	(X)	(X)	(X)	(X)
Integration Cost	(X)	(X)	-	(X)

\*Demand-side resources will be evaluated on a cost of capacity basis net of benefits specific to state cost-effectiveness requirements.

Z	Benefit
(X)	Cost

Any internal assumptions for key financial inputs (*i.e.*, inflation, discount rates, marginal tax rates, asset lives, AFUDC rates, *etc.*) and PacifiCorp carrying costs (*i.e.*, integration costs, owner’s costs, *etc.*) will be applied consistently to all bids, as applicable, and reviewed by the IEs prior to finalizing the bid preparation model for PLEXOS.

As part of this bid preparation effort, PacifiCorp may screen proposals and prioritize bids when the same resource is bid with multiple Proposal Attributes related to term length, start and end date, and pricing structure (fixed and escalating prices). In coordination with the IEs, PacifiCorp will submit to PLEXOS the proposals with the COD, term and price structure offering the lowest levelized cost by calculating the net present value using PacifiCorp’s discount rate.

Projected renewable resource performance data (expected hourly capacity factor information) and degradation schedules will also be processed for input into the PLEXOS model. PacifiCorp will process verified capacity factors for inclusion in the production cost models. Upon determination of bid eligibility, PacifiCorp will engage a third-party subject matter expert to verify the capacity factor of the proposed wind and solar resources meeting the RFP eligibility criteria, consistent with Oregon rule 860-089-0400 5(a), so that technical due diligence is completed in parallel with the non-price scoring effort and so that validated resource estimates are ready and available to be input into PLEXOS.

As part of the preparation for inputting bid results into PLEXOS, bidder’s resource estimates (8760s) will be re-shaped based on a similar technology and location present in the 2018 reference year, consistent with the methodology used in the 2021 IRP.

## **D. PLEXOS ANALYSIS: BID SELECTION AND PORTFOLIO OPTIMIZATION**

The IRP team will evaluate the bids using PLEXOS, the same production cost models used in the 2021 IRP. The IRP production cost models will select the optimized portfolio of resources proposed as part of the 2022AS RFP as well as the demand-side bids received as part of the targeted demand-side RFP issued by Q3 2022. The IRP modeling tools will select from the supply-side and demand-side bids the least cost resources based on bid cost and performance data.

PacifiCorp will not make any of the IRP evaluation models available to the IE, bidders, or stakeholders. However, PacifiCorp will summarize for the IE how the IRP evaluation models function, and the IE will be provided with the inputs and outputs of PLEXOS model runs used during the evaluation process.

### **1. Bid Resource Portfolio Development**

The PLEXOS model is used to develop an optimized portfolio of resources and candidates for the final shortlist. PacifiCorp uses PLEXOS to develop, test and evaluate the cost of multiple resource portfolios including sensitivities to understand the relative performance of portfolio and resource alternatives under certain conditions.

### **2. Reliability Tests**

PacifiCorp will perform a reliability assessment to ensure that the selected portfolio of resources can meet all hourly load and operating reserve requirements with sufficient cushion to account for other system uncertainties such as non-normal weather events. Should incremental flexible resource capacity be required to maintain system reliability, additional resources will be selected from the bids that are capable of providing incremental flex capacity to hit the targeted reliability requirements.

### **3. Price Policy Scenarios and Risk Analysis**

PacifiCorp evaluates portfolios under a range of different environmental policy and market price scenarios (policy-price scenarios).<sup>2</sup> PLEXOS calculates the stochastic mean PVRR and the risk-adjusted PVRR for various policy-price scenarios<sup>3</sup> to help identify whether top-performing portfolios exhibit especially poor performance under the range of scenarios. PacifiCorp summarizes and analyzes the portfolios to identify the specific bid resources that are most consistently selected among the policy-price scenarios.

In this way, PacifiCorp uses PLEXOS to optimize its selection of bid resources to identify the lowest cost, reliable portfolio under multiple scenarios for further consideration as part of the final shortlist process. PacifiCorp may select one or more 2022AS RFP resource portfolios for further scenario risk analysis.

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<sup>2</sup> Policy-price scenarios will be conceptually consistent with those used in the 2021 IRP (i.e., alternative environmental policy assumptions among low, medium, and high price scenarios), but updated to reflect PacifiCorp's assessment of the most current information. Policy-price scenario assumptions will be established and reviewed with the IE before updated bids with updated pricing are received and opened.

<sup>3</sup> The stochastic mean metric is the average of system net variable operating costs among 50 iterations, combined with the real-levelized capital costs and fixed costs taken from PLEXOS. The risk-adjusted metric adds 5% of system variable costs from the 95<sup>th</sup> percentile to the stochastic mean. The risk-adjusted metric incorporates the expected value of low-probability, high-cost outcomes.

PacifiCorp uses PLEXOS to test each portfolio and evaluate its ability to perform under dynamic weather and market conditions. PLEXOS measures the stochastic risk of each portfolio through its production cost estimates. By holding a resource portfolio fixed and using Monte Carlo simulations of stochastic variables, including load, wholesale electricity and natural gas prices, hydro generation, and thermal unit outages, PLEXOS can measure the expected cost of each portfolio in an uncertain future.

#### **4. Price Scoring**

PLEXOS will calculate the relative system costs and benefits of each resource included in the model for evaluation. The operational characteristics of every bid will be included in the model so that PLEXOS will generate a value stream specific to each bid that will then be used to calculate a price score.

### **E. FINAL SCORING AND RANKING TO RECOMMEND FINAL SHORTLIST**

Following the PLEXOS analysis to select resources and determine price scores for each of the bids, PacifiCorp will combine the price and non-price scores to generate a total final bid score and ranking for each bid (both supply side and demand side bids). In the event that the ranked bids are inconsistent with the selected resources and preferred portfolio resulting from the PLEXOS performance optimization models, in coordination with the IE, PacifiCorp will investigate the discrepancy(ies) and may add or remove resources and run additional iterations of PLEXOS including, but not limited to, reliability tests and price-policy scenarios.

When considering tiebreakers for inclusion in the final shortlist, PacifiCorp will give preference to renewable energy and demand-side resources that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases when ranking projects.<sup>4</sup>

Before establishing a final shortlist, PacifiCorp may take into consideration, in consultation with the IE, other factors that are not expressly or adequately factored into the evaluation process outlined above, particularly any factor required by applicable law or Commission order to be considered.<sup>5</sup>

PacifiCorp will summarize and evaluate the results of its scenario risk analysis, considering PVRR results, to identify the specific least-cost, least-risk bids in consideration of non-price scores. Based on these data and certain other factors as described above, and in consultation with the IE, PacifiCorp may establish a final shortlist.

#### **Selection of the final shortlist will not be conditioned on the results of any future restudy arising out of the applicable PacifiCorp Transmission cluster study process.**

After the final shortlist is established and approved, PacifiCorp will engage in negotiations with the selected bidders to finalize their contract and prepare the contract for execution. Selection of a bid to the final shortlist does not constitute a winning bid. Only execution of a definitive agreement between

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<sup>4</sup> Pub. Util. Code § 399.13(a)(5)(7)(A) requires the following: “In soliciting and procuring renewable energy resources for California based projects, each electrical corporation shall give preference to renewable projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants and greenhouse gas emissions.”

<sup>5</sup> Footnote to UT, OR, WA, CA requirements.

PacifiCorp and the bidder, on terms acceptable to PacifiCorp, in its sole and absolute discretion, will constitute a winning bid proposal.

#### **F. BENCHMARK BID CONSIDERATIONS**

In compliance with Oregon rule 860-089-0350, prior to receiving and evaluating market bids, PacifiCorp will i) complete due diligence and non-price scoring for all benchmark bids and forward such models and result to the IEs. PacifiCorp will apply the same assumptions and bid scoring and evaluation criteria to the benchmark bids that are used to score other bids. Prior to opening and scoring the market bids, PacifiCorp will file with the Commission, and submit to the IEs for review and comment, its detailed bid preparation models and non-price scores for the benchmark resources developed in consultation with the IEs and any other supporting cost or related information.

The Benchmark bids will be validated by the IEs and no changes to any aspect of the Benchmark bids by PacifiCorp will be permitted after the filing and receipt of market bids. All relevant costs, assumptions, model inputs and characteristics of the Benchmark bids will be validated by the IEs prior to receiving any of the bids and are not subject to change during except as provided herein.

Benchmark bids will not be subject to change unless updates to other bids are permitted. If, during the course of the RFP process, the Commission or the IEs determines that it is appropriate to update any bids, PacifiCorp will make the equivalent update to the score of the benchmark resource.

PacifiCorp and the IEs will file under protective order(s) an assessment of the benchmark scores as well as cost and other information as required.

In this way, in compliance with Washington rule 480-107-024(3), PacifiCorp will not disclose the contents or results of competing market bids to personnel involved in developing the utility's benchmark bids. Further in compliance with Utah rule R746-420-3(3)9e), by completing the due diligence and scoring of Benchmark bids prior to accepting market bids, PacifiCorp assures that resource evaluations will be conducted in a fair and non-preferential manner.

#### **G. STATE REGULATORY CONSIDERATIONS**

Following the final shortlist selection, PacifiCorp may consider resources additions and changes required for state compliance purposes. For example, to address Washington's CETA requirements, in consultation with the IE, PacifiCorp will evaluate the final shortlist bids designated in part to serve Washington customers. In accordance with WAC 480-107-035, PacifiCorp will review the Equity Questionnaire for each resource and evaluate the associated risks and benefits to vulnerable populations and highly impacted communities associated with those bids. PacifiCorp, in consultation with the IE, may add or replace resources allocated to Washington customers in order to meet CETA goals. Per CETA rules, the incremental cost associated with those resources would later be assigned to Washington customers.