

APPENDIX R

Bid Scoring and Modeling

PacifiCorp proposes that all bids be scored considering two scoring methodologies, Case 1 and Case 2 as described below.

PacifiCorp's proposed 2022AS RFP price scoring approach is comprised of two methodologies both of which will be evaluated and discussed with the IEs. The first, Case 1, is embedded in the second, Case 2, which includes additional consideration for capacity contribution, as described in the examples below. PacifiCorp is proposing the two Case methodologies so that the Company and IEs can explicitly review and discuss how bids rank based on 1) net benefit to the system and 2) net benefit plus the value of deferring¹ a proxy peaking resource whose costs will be included in the 2023 IRP.

As described in the main RFP document, Section 6, PacifiCorp's RFP team will provide bid preparation models to the portfolio optimization team and will also share those models with the IEs. Within the bid preparation models will be the results from a Location Capacity Cost model which will recast a bidder's production profiles to reflect the actual profiles of a given reference year (2018 was used in the 2021 IRP). In other words, while the total annual average generation provided in the bid will not change, 8760 net output will be reallocated across the year according to the performance of existing resources in that part of PacifiCorp's system as experienced by PacifiCorp in the reference year, aligning the windy and/or sunny days in the generation forecast for each resource with the comparable conditions of neighboring resources. The recast production profiles will be uploaded into PLEXOS along with levelized cost information. PLEXOS will then run its LT-MT-ST models and provide a final net system benefit for each resource in terms of \$/kW-mon, where kW is the resource's maximum output (the lower of its nameplate or LGIA limit).

The net benefit is simply the difference between the levelized costs provided by the bidder and the system benefit values identified by PLEXOS for each bid. The net benefit may be negative indicating a resource which reduces system costs for PacifiCorp's customers, or it may be positive indicating a resource which increases system costs, but which may or may not provide other value to the system. This net benefit will be used to create price scores in accordance with the two methodologies (Cases) provided below.

Micro-resources: In order to provide a price score for all resources, including those not picked as part of the portfolio optimization process, PacifiCorp will create micro versions of each bid² and upload the fractional (proportional) bid representation into PLEXOS to determine the micro-resource marginal net benefit and ultimately its price score. Because of the immaterial size of

¹ Deferral basis is adjusted by the capacity contribution adjustment mechanism and may be complete or partial deferral.

² Sized at or below 100kW

the micro-resources, PacifiCorp will be able to upload and include micro-resource bids without impacting the ultimate bid portfolio selection.

After completion of the PLEXOS runs, PacifiCorp will have net benefit values for each micro-resource bid into the 2022AS RFP which will be used to determine price scores. The PLEXOS outputs will be provided to the IEs for their oversight purposes. A detailed description of the two scoring methodologies which will be prepared is provided below and an excel example demonstrating the math and formula behind each example is included as Appendix R-1:

Case 1 will provide initial “price scores” for each of the 2022AS RFP bids by ranking the net benefit of each bid against the range of “best” and “worst” bids submitted into the 2020AS RFP on a \$/kw-month basis. The tables below use for example the range of best to worst prices bids into the 2020AS RFP that are indicative of what might be offered in the 2022AS RFP. The range of best and worst bids sets a minimum (0) and maximum (75) “price” point range to be awarded.

Case 2 will provide PacifiCorp’s preferred “price score” for use in determining the price score for final bid ranking purposes, subject to review and adjustment in coordination with the IEs. The Case 2 scores will be calculated as the sum of i) each bid’s net benefit and ii) an additional capacity adder, or credit, for the resource’s contribution to system reliability, based on the cost of a peaking resource. The deferred peaking resource value (or capacity contribution adder) will be calculated as the product of a) each bid’s capacity contribution as determined in the Location Capacity Cost model with the bid preparation file and b) PacifiCorp’s “proxy” cost assumption for a peaking resource included in the 2023 IRP. The sum of the net benefit and capacity contribution adder will then be ranked using the same methodology as Case 1, where bids will be ranked based on a range of “best” and “worst” bids on a \$/kw-month basis. The example below shows how Case 2 bids perform against the best and worst bids from the 2020AS RFP. Consistent with Case 1, the best and worst bid prices set the minimum and maximum point range to be awarded in Case 2.

The following page includes examples.

Example Assumptions:

Bid Types: Each of Case 1 and Case 2 scoring methodologies show scoring calculations for four representative bids demonstrating how price scores would be calculated for each of the four potential bid types:

1. Bid 1: Low capacity contribution resource equal to 10%. Net cost to PacifiCorp system (positive difference between levelized cost and system benefit)
2. Bid 2: Same low capacity contribution. Same levelized cost, but net benefit to PacifiCorp system (negative difference)
3. Bid 3: High capacity contribution resource equal to 100%. Net benefit to PacifiCorp system (negative difference between levelized cost and system benefit)
4. Bid 4: Same high capacity contribution. Net cost to PacifiCorp system (positive difference)

Ranking: The highest and lowest net benefits realized from bid from the 2020AS RFP are used to force rank bids between zero and 75 potential price score points:

- 2020AS RFP: Most net benefit: -\$93/MW-mon³
- 2020AS RFP: Least net benefit (net cost): \$196/MW-mon

Case 1: Price scoring methodology used to rank all bids using PLEXOS benefit results (in dollars) based on the equation below:

$$\text{Bid Score}_x = \frac{[(\text{PLEXOS Bid Benefit of Score}_x - \text{Lowest ("worst") Bid Net Benefit of ALL 2020AS RFP Bid Scores})]}{\text{divided by: } [(\text{Highest ("best") Bid Net Benefit of ALL 2020AS RFP Bids} - \text{Lowest ("worst") Bid Net Benefit of ALL 2020AS RFP Bid Scores})]}$$

Where,

- the Lowest Bid Score = 75 points; and
- the Highest Bid Score = 0 points

Case 2: Price scoring methodology to rank all bids using PLEXOS benefit results (in dollars) and a capacity contribution adder based on the equation below:

$$\text{Bid Score}_x = \frac{[(\text{PLEXOS Bid Benefit of Score}_x - \text{Lowest ("worst") Bid Net Benefit of ALL 2020AS RFP Bid Scores})]}{\text{divided by: } [(\text{Highest ("best") Bid Net Benefit of ALL 2020AS RFP Bids} - \text{Lowest ("worst") Bid Net Benefit of ALL 2020AS RFP Bid Scores})]}$$

Plus, the positive benefit from;

[Proxy cost of new peaking resource in 2025-2027 X Capacity Contribution of the Project (from the Locational Capacity Cost (LCC) Model within the Bid Preparation model)]

Where,

- the Lowest Bid Score = 75 points; and
- the Highest Bid Score = 0 points

³ Following consultation with the IEs, the high and low scores may be rounded for ease of scoring purposes.

By example,

Case 1:

Example Bids		Bid 1	Bid 2	Bid 3	Bid 4
Calcuated Capacit Contribution from LCC Model		10%	10%	100%	100%
Points					
0	2020AS RFP Highest Cost Bid (\$/kw-mon)	\$196.00	\$196.00	\$196.00	\$196.00
75	2020AS RFP Lowest Cost Bid (\$/kw-mon)	-\$93.00	-\$93.00	-\$93.00	-\$93.00
Nom. Levelized Cost over Contract Life (\$/kw-mon)		\$80	\$80	\$130	\$100
Nom. Levelized Benefit (from PLEXOS) over Contract Life (\$/kw-mon)		(\$70)	(\$90)	(\$160)	\$0
Nom. Levelized Net Benefit (from PLEXOS) over Contract Life (\$/kw-mon)		\$10	(\$10)	(\$30)	\$100
Bid Score _x		48	53	59	25

This Case 1 example scores Net Benefit results from PLEXOS, by bid asset, then ranks each net benefit result within the range of results received from all bids received in the 2020AS RFP. It is clear in Case 1 that bids with net costs (positive difference) to the system perform poorly relative to bids with net benefits (negative difference), which is reflected in the price scores ranging from \$25 to \$59/kW-mon based on a net benefit range of \$196/kW-mon to -\$93/kW-mon realized in the 2020AS RFP bid results. The relative capacity contributions of the resources are not reflected in this indicative price scoring methodology.

Case 2:

Example Bids		Bid 1	Bid 2	Bid 3	Bid 4
Calcuated Capacit Contribution from LCC Model		10%	10%	100%	100%
Points					
0	2020AS RFP Highest Cost Bid (\$/kw-mon)	\$196.00	\$196.00	\$196.00	\$196.00
->	Est. Cost of a Natural Gas Peaker (\$/kw-mon)	\$123.00	\$123.00	\$123.00	\$123.00
75	2020AS RFP Lowest Cost Bid (\$/kw-mon)	-\$93.00	-\$93.00	-\$93.00	-\$93.00
Nom. Levelized Cost over Contract Life (\$/kw-mon)		\$80	\$80	\$80	\$100
Nom. Levelized Benefit (from PLEXOS) over Contract Life (\$/kw-mon)		(\$70)	(\$90)	(\$160)	\$0
Added Value for Deferred NG Peaker Based on Capacity Contribution		(\$12)	(\$12)	(\$123)	(\$123)
Nom. Levelized Net Benefit (from PLEXOS) over Contract Life (\$/kw-mon)		(\$2)	(\$22)	(\$203)	(\$23)
Bid Score _x		51	57	75	57

This Case 2 example scores Net Benefit results from PLEXOS, by bid asset plus the capacity contribution adjusted value of a deferred peaking resource, then ranks the resultant net benefit result within the range of results received from all bids received in the 2020AS RFP.

It is clear by comparing Case 1 and Case 2 that bids with net costs (positive difference) to the system and lower capacity contribution factors perform relatively poorly as compared to bids with net benefits (negative difference) and higher capacity contributions, which is reflected in

the price scores ranging from \$51 to \$75/kW-mon based on a net benefit range of \$196/kW-mon to -\$93/kW-mon realized in the 2020AS RFP bid results. The relative capacity contributions of the resources are not reflected in the Case 1 price scoring methodology.

All pricing results from both Case 1 and Case 2, by bid, will be considered when determining a final price score to be summed with the non-price score, which will be used to rank bids for the 2022AS RFP. PacifiCorp will consult with all the IEs to determine whether Case 1 or Case 2 should be the preferred methodology before finalizing the price score and determining the final shortlist.

APPENDIX R-1

Bid Scoring Example

[INCLUDED AS A SEPARATE EXCEL ATTACHMENT]