

Rocky Mountain Power
Exhibit RMP__ (HBE-2)
Docket No. 21-035-52
Witness: Heather B. Eberhardt

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Direct Testimony of Heather B. Eberhardt

2022AS RFP Pre-Issuance Bidders Conference Presentation Held

January 11, 2022

January 2022

PacifiCorp 2022 All-Source Request for Proposals

Pre-Issuance Bidders Conference

January 11, 2022





Logistics

- Conference Date and Time
 - January 11, 2022
 - 1:00 – 3:00 PM (Mountain Time)
- Location
 - Microsoft Teams meeting
Join on your computer or mobile app
[Click here to join the meeting](#)
 - Or call in (audio only)
Phone Number: (563) 275-5003 or 563-275-5003
Phone Conference ID: 767 205 280#
 - [+1 563-275-5003,,767205280#](#)



Agenda

- Purpose and Scope
- Resource Types
- Bid Structures
- Interconnection Requirements
- Proposed RFP Schedule
- Evaluation and Selection Methodology
- Role of Independent Evaluators (IEs)
- Next Steps
- Questions and Comments

Purpose and Scope of 2022AS RFP

- Action item out of PacifiCorp's 2021 Integrated Resource Plan (IRP) established an all-source RFP in 2022 (2022AS RFP), driven by the IRP preferred portfolio, targeting approximately 1,345 megawatts (MW) of new renewable wind and solar resources, 600 MW of new co-located battery energy storage system (BESS) capacity, and 274 MW of new demand-side resources (demand response) by the end of 2026.
- Eligible bids will not be limited by location, technology or capacity; however, bidders should be cognizant of existing requests in higher positioned PacifiCorp's interconnection queues, signed interconnection agreement reservations and cluster studies.
- RFP will consider bids that can achieve commercial operation by December 31, 2026.
 - PacifiCorp will also consider bids from pumped storage hydro and nuclear resources requiring longer lead time to develop and construct so long as they can demonstrate their ability to be commercially operational by December 31, 2028.
- Proposals must be capable of interconnecting with or delivering to PacifiCorp's transmission system in its east or west balancing authority areas (PACE and PACW, respectively).
- PacifiCorp is planning to submit several self-build ownership proposals (benchmark resources).
- Two independent evaluator (IEs) have been retained by PacifiCorp on behalf of Public Utility Commission of Oregon and Washington Utilities and Transportation Commission. An IE will also be retained by Utah Public Service Commission.
- Bid fee(s) of \$15,000 will be required for each bid proposal greater than 5 MW. Bid proposals 5MW and smaller will be subject to a sliding scale bid fee of \$1,000 per MW up to \$5,000. A single free bid alternative will be allowed if bidders wish to bid an alternative diversity strategy.
- Intent to bid form and bidder credit information are requested prior to bid submittal(s).

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<u>Resource Types</u>	Bid Structure Accepted				
	Bench- mark	PPA	Tolling Agreement	BTA	Professional Services Agreement
Renewable	X	X		X	
Renewable plus Battery Storage	X	X		X	
Non-Renewable		X		X	
Standalone Battery Storage	X		X	X	
Pumped Hydro Storage / Nuclear	X	X	X	X	
Demand-side Resource / Other		X	X	X	X

- Bids will be accepted for both new and existing operating facilities.
- All renewable capacity, energy, and associated environmental attributes go to PacifiCorp.
- BTA bids MUST directly interconnect to PacifiCorp’s transmission system.
- BTA projects must be constructed to PacifiCorp specifications.

Bid Structures

1. **Benchmark** transaction whereby PacifiCorp proposes to develop, construct, own and operate a bid project. Under this transaction structure, PacifiCorp will be responsible for all required development, design, equipment supply, construction, commissioning, and performance testing.
2. **Build-transfer** transaction whereby the bidder develops the project, assumes responsibility for construction and ultimately transfers the completed asset to PacifiCorp in accordance with the terms of a build-transfer agreement (BTA).
 - PacifiCorp will ONLY accept BTA bids that are directly interconnected to PacifiCorp's transmission system.
 - Bidder responsible for all development, design, equipment supply, construction, commissioning, and performance testing, and will be required to design and construct the resource in conformance with PacifiCorp's specifications.
 - PacifiCorp will not accommodate BTAs that involve the ultimate transfer of a project company to PacifiCorp.
3. **Power-purchase agreement (PPA)** requires exclusive ownership by PacifiCorp of any and all capacity and environmental attributes associated with all energy generated.
 - Renewable resources bid with collocated storage will include a \$/MW-month tolling price for the right to dispatch the battery.
 - PacifiCorp will accept PPAs with 5 to 30-year contractual term lengths. Collocated renewable resource with storage must offer the same term length for the energy storage as the renewable resource.
4. **Tolling agreement** requires exclusive rights by PacifiCorp to dispatch standalone storage or pumped-hydro storage on a \$/MW-month basis over the proposed 5 to 30-year term.
 - Collocated resource and battery storage must have agreements that are the same term length.
5. **Professional services agreement** whereby bidder offers demand-side resources to PacifiCorp.

Interconnection and Transmission

1. Eligible bidders must have a completed interconnection study demonstrating the proposed resource's ability to reach commercial operation by December 31, 2026 as a result of:
 - Serial Queue: 5 queue positions accounting for 529 MW in capacity.¹
 - LGIAs signed and not yet interconnected: 79 contractual agreements accounting for 7,253 MW in capacity.¹
 - Transition Cluster Study: 23 active requests accounting for 1,588 MW in capacity.¹
 - Cluster Study 1: 52 active requests accounting for 11,348 MW in capacity.¹
 - Cluster Study 2: Cluster Study Window opens April 1, 2022 and closes 45 days later.¹
 - Fast Track Process available to certain small generation interconnection customers
 - More information (up-to-date counts¹) are available on Pac's Open Access Same-time Information System (OASIS).
 - For off-system projects, a completed system impact study from the third-party Interconnection Provider, and related sufficient transmission information (see below), demonstrating an ability to deliver firm energy to PacifiCorp at the requested point of delivery (POD).
2. Interconnection studies and agreements should be consistent with the bid proposal's technology, size, inclusion of BESS, etc.; otherwise, bidder will provide documentation from interconnection/transmission provider that a material modification to their interconnection documentation is not required.
3. On-system resources:
 - Bidders must include the Interconnection Provider's estimated direct interconnection cost in their bid price and provide the Interconnection Provider's estimated cost of network upgrades to PacifiCorp for consideration in the portfolio optimization models
 - Bidders are requested to have their interconnection requests studied by the Interconnection Provider for both network resource interconnection service (NRIS) and energy resource interconnection service (ERIS) as part of their interconnection study.
4. Off-system resources:
 - Bidders must provide evidence of availability of firm point-to-point transmission from the off-system point of interconnection (POI) to the requested POD on PAC's system and include wheeling costs in their bid price.

7 ¹ The OASIS queue, LGIA and cluster study counts are as of December 28, 2021 and are all subject to change. **POWERING YOUR GREATNESS**

Proposed RFP Schedule

Milestone	Date
2022AS RFP Issued to market	04/26/2022
First Bidder's Conference	05/06/2022
PacifiCorp Cluster Request Window closes – PacifiCorp OATT Section 39.2.1	05/16/2022
Notice of Intent to Bid due	06/16/2022
Demand-side targeted RFP Issued to Market	Q3 2022
Second Bidder's Conference	10/20/2022
Cluster study results posted to OASIS / bidders notified by PacifiCorp Transmission	11/12/2022
Benchmark bids due	11/21/2022
RFP bids due from market	01/16/2023
PacifiCorp and IE review of bid eligibility screening complete	02/22/2023
PacifiCorp completes bid preparation and provides supply-side and demand-side bid inputs to PLEXOS portfolio optimization modeling team	02/23/2023
Capacity factor and BESS evaluation of bids completed	02/23/2023
PacifiCorp completes due diligence and non-price scoring	03/15/2023
PLEXOS generates price score and list of preferred new resources	04/14/2023
PacifiCorp and IE review of FSL recommendation complete	05/05/2023
Execute contractual agreements	11/21/2023
Bid validity date	11/21/2023
Winning bid Guaranteed Commercial Operations Date	12/31/2026

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Evaluation and Selection Criteria

PacifiCorp will evaluate proposals based on the following:

1. Conformance with the RFP minimum eligibility requirements.
2. Cost to customers, determined by PacifiCorp's portfolio optimization model (PLEXOS) associated with the bid submission.
3. Deliverability – or viability – of the resource including: ability to interconnect by the proposed COD, site control, development maturity (status of site studies (geotechnical/cultural/environmental/avian/wildlife/fish), permitting status, developer's experience, procurement and supply chain plan strategies, and demonstration that the project's COD will be achieved by December 31, 2026, or in the case of long-lead resources, the ability to issue notice to proceed for construction by 2023 and reach commercial operation by 2028.
4. Transmission access and interconnection status in conformance with RFP requirements.
5. Technical design, feasibility, and compliance with defined RFP specifications.
6. Ability to provide acceptable credit security as determined by bidder's credit information.
7. Conformance with the terms and conditions in the pro forma contracts including the PPA, BTA, tolling agreement, and professional services contract as applicable to the individual bid submissions.



Evaluation and Selection Process Steps

1. PacifiCorp Transmission posts interconnection cluster study results
2. Benchmark bid deadline for PacifiCorp and affiliate bids.
3. Evaluation and scoring of Benchmark bids with IE review.
4. Deadline for Market bids: PPA, BTA, Tolls, professional service agreements.
5. Eligibility determination: conformance to minimum requirements in RFP.
6. Input review:
 - a. Third-party engineer review of resource production and energy storage estimates.
 - b. Bid Preparation excel file prepares modeling inputs for PLEXOS and aligns bidder production estimates with modeled renewable output and load.
 - c. Due diligence to determine non-price score (up to 25 points).
7. Portfolio Modeling: PLEXOS selects portfolio of resources and provides price score inputs (up to 75 points), which are combined with non-price scores (up to 25 points).
8. Compare bid ranking to PLEXOS preferred resources and run additional PLEXOS iterations as needed to determine the final shortlist.
9. State compliance analysis.
10. Final shortlist notification by PacifiCorp.

Non-Price Scoring

Non-Price Score Attribute	Points
Bid Submittal Completeness	5
Contracting Progress and Viability	5
Project Readiness and Deliverability	15
Total Score	25

Consistent with OR 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.

- Bid Completeness:
 - Bid submittals are thorough, comprehensive and consistent.
- Contracting Progress and Viability:
 - Ability to contract with the resource on terms and conditions consistent with the bid and the proforma agreements included in the RFP.
- Project Readiness and Deliverability:
 - Development status and maturity.
 - Viability with respect to site control, studies and entitlements (permits etc.), equipment and construction sourcing strategy, and other development and operational characteristics.
 - Likelihood of achieving commercial operation by December 31, 2026 (or 2028 for long-lead resources).

Price Proposal – Bidder Inputs

Each Proposal is required to include a completed Appendix C-2, which provides PacifiCorp a “numbers based” overview of the bid offering:

Appendix C-2 Inputs – Required for Bid Submittal		Location
Project Input Data		Tab 1
A forecasted p50 first year 8760 generation profile (not including any storage/battery charging or discharging) including annual generation degradation		Tab 2
PPA Pricing ¹ for each year		Tab 3
Storage/battery pricing and operational requirements: <ul style="list-style-type: none"> ▪ Rated Storage Capacity (augmented) ▪ Storage Duration ▪ Full Cycle Charges per Day ▪ Calendar Year Degradation ▪ Calendar Year Efficiency Degradation ▪ Storage Ramp Rate 		Tab 4
Pump Storage Hydro (PSH) Pricing & Operations		Tab 5
BTA or Benchmark Pricing		Tab 6
Other bidder supplied information		Tab 10
<i>Not in use</i>		Tabs 7-9

¹Bid prices are inclusive of direct interconnection costs. PacifiCorp separately includes the network upgrades from the interconnection studies in bid preparation model for use by PLEXOS to determine price scoring.

Eligibility and Bid Input Requirements for Energy Storage

- Energy storage evaluated as to “toll” or “call option” to PacifiCorp
 - Pricing: \$/kW-month for right to charge and discharge (dispatch) the storage facility.
 - Bidders may not charge or discharge the storage facility without PacifiCorp’s approval.
 - Bidder must be able to follow four second Automated Generator Control (AGC) signal.
 - Bidders must contract separately with local electric provider for station service and auxiliary load.
- Collocated battery energy storage system (BESS) specifications
 - BESS must be AC coupled.
 - Collocated bids must be 50% or greater than generating resource with same term as generating resource. 50%, 75%, 100% bids accepted.
 - PacifiCorp understands most bidders will specify that battery is charged during first five years from collocated renewable generation due to federal tax incentive recapture risk.
 - PacifiCorp requests collocated batteries are designed with ability to grid charge after recapture period.
- Rated capacity
 - Must be consistent with interconnection study, or else have documentation from PacifiCorp Transmission that no material modification is required.
 - Lithium-based battery bids must assume and price-in augmentation to maintain capacity and duration throughout contract life and specify:
 - Round trip efficiency.
 - Allowable full charge cycles.
 - Annual degradation schedule.
 - Other technologies must maintain original capability of proposed storage resource.
- Storage Duration
 - Minimum of four (4) hours duration accepted.
- Long lead-time pumped hydro storage bids must demonstrate ability to be online by December 31, 2028.

Price Scoring and Final Shortlist Determination

1. PLEXOS Upload of Bid Preparation Excel File Inputs
2. PLEXOS Modeling:
 - Recommends a least-cost, least-risk portfolio of new resources.
 - Provides a numeric net system benefit (value in dollars) for each bid evaluated, which will be used to establish a price score.
 - Runs sensitivities related to portfolio reliability, cost/risk, state-specific compliance.
3. Total Scoring and Ranking:
 - PLEXOS-based Price Scores (0-75 points) are added to Non-Price score for each bid (0-25 points) to yield a Total Score (0-100 points) for each bid. Total scores are then used to rank bids for final shortlist.
4. Final Shortlist Determination:
 - Should the top ranked bids conform with the PLEXOS portfolio of preferred new resources, then the final shortlist will be established.
 - If the bid ranking (inclusive of non-price scores) is inconsistent with the PLEXOS portfolio of preferred new resources, then PacifiCorp in coordination with the IEs may identify bid resources to add or subtract PLEXOS' recommended portfolio. PacifiCorp's Resource Planning team may test different iterations for system stability and reliability until it determines a final recommended portfolio of new resources consistent with both non-price scores and the PLEXOS portfolio optimization model.
 - Following the determination of the final shortlist, in coordination with the IEs, PacifiCorp will check for compliance with state regulations and may run state-specific sensitivities.



Role of the Independent Evaluator (IE)

1. Consistent with R746-420-6 Functions of Independent Evaluator.
2. Review draft RFP document and stakeholder comments to facilitate final RFP for commission approval.
3. Review and validate the bid submittals and non-conforming bid decisions.
4. Facilitate and monitor communications between PacifiCorp and bidders.
5. Analyze, operate and validate models, assumptions and inputs used in the RFP process, including the evaluation of bids relative to price and non-price scoring.
6. Ensure that all the bids are treated in a fair and non-discriminatory manner.
7. Monitor, observe, validate and offer feedback to PacifiCorp and the state regulatory commissions (Oregon, Washington and Utah).
8. Solicit additional information on bids necessary for screening and evaluation purposes.
9. Perform other evaluations and tasks as directed by state regulatory commissions (Oregon HB2021 or Washington CETA, for example).

There will be three IEs overseeing the 2022AS RFP (Oregon, Washington and Utah).

Independent Evaluators

State	Independent Evaluator	Contact Email
Oregon	PA Consulting Group, Inc.	2022as_ie@paconsulting.com
Utah	TBD	TBD
Washington	Bates White, LLC	frank.mossburg@bateswhite.com

Next Steps

1. Schedule for Approval of 2022AS RFP

Regulatory Schedule	Date
Final draft RFP was filed in Washington	12-29-2021
Final draft RFP to be filed in Oregon	01-14-2022
Final draft RFP to be filed in Utah	01-26-2022
PacifiCorp Transmission Cluster Request Window opens	05-16-2022
Commission approvals in three states	04-11-2022
RFP issued to market	04-26-2022
PacifiCorp Transmission Cluster Request Window closes	05-16-2022

2. Upon filing its RFP Application, PacifiCorp will notify its bidders list of the docket number. Per Utah Admin. Code 746-420 (4) (a) stakeholders and interested parties may file comments with the Utah Commission within 45 days after the filing of the Application.
3. Questions or comments regarding this pre-issuance bidders' conference should be sent to the following mailbox, even if an answer was provided verbally in today's meeting, to ensure all Bidders receive responses: 2022AS_RFP@pacificorp.com
4. Responses to questions received by January 20, 2022 will be posted on PacifiCorp's 2022AS RFP website by January 24, 2022.
5. 2022AS RFP information will be provided at www.pacificorp.com, as information is developed. From website main page, go to Suppliers, then RFPs, then 2022AS RFP. <https://www.pacificorp.com/suppliers/rfps/2022-all-source-rfp.html>



Supporting Materials

PacifiCorp 2021 IRP Preferred Portfolio Selections

Project Name	Type	Location	Resource Size (MW)	Battery Size (MW)	Expected Online
Portland/N. Coast	Wind	NW Oregon	130	n/a	2025
Willamette	Wind	NW Oregon	615	n/a	2025
Borah Hemingway	Solar with Battery	Idaho	600	600	2025

- 1,345 MW new renewable generating resources, 600 MW energy storage resources enabled by area reinforcements and new transmission projects.

Year	Resource(s)	From	To	Description
2025	1,641 MW RFP Wind (2025)	Aeolus WY	Clover	Enables 1,930 MW of interconnection with 1700 MW of TTC; Energy Gateway South
2026	615 MW Wind (2026)	Within Willamette Valley OR Transmission Area		Enables 615 MW of interconnection; Albany OR area reinforcement
2026	130 MW Wind (2026)	Portland North Coast	Willamette Valley	Enables 2080 MW of interconnection with 1950 MW TTC; Portland Coast area reinforcement, Willamette Valley and Southern Oregon
	450 MW Wind (2032)		Southern Oregon	
	650 MW Battery (2037)			
2026	600 MW Solar-Storage (2026)	Borah-Populous	Hemingway	Enables 600 MW of interconnection with 600 MW of TTC; B2H Boardman-Hemingway

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PacifiCorp Transmission OASIS Interconnection Requests and Queues



Serial Queue	https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacifcorp giaq.htm
Archive - Executed IA - Not in Service	https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacifcorp giaqenis.htm
Transition Cluster	https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacifcorp liaq.htm
Cluster Study 1	https://www.oasis.oati.com/woa/docs/PPW/PPWdocs/pacifcorp liaq1.htm

Anticipated RFP Requirements

Main RFP Document	Informational
Appendix A-Q Umbrella Document	Both information and required. Includes (umbrella document for) appendices listed below.
App A-1 Technical Specifications (Wind, Solar, Storage, HV)	Required of BTAs, as applicable
App A-2 Interconnection Studies and Agreements	Required of all bids
App A-3 Permitting Matrix	Required of all bids
App A-4 Safety Requirements	Required of BTAs
App A-5 Project Single-Line Drawing and Layouts	Required of all bids
App A-6 Division of Responsibility	Required of BTAs
App A-7 General Owner Technical Specifications	Required of BTAs
App A-8 Real Estate Specifications	Required of BTAs
App A-9 Equipment Supply Matrix	Required of all bids
App A-10 Plant Performance Guarantee	Required of BTAs
App B-1 Notice of Intent to Bid	Requested of all bids
App B-2 Bid Proposal Instructions and Required Information	Required of all bids
App C-1 Bid Summary and Pricing Input Sheet Instructions	Informational
App C-2 Bid Summary and Pricing Input Sheet	Required of all bids
App C-3 Energy Performance Report	Required of all bids
Appendix D Bidder's Credit Information	Required of all bidders

Anticipated RFP Requirements Continued

App E-1 PPA and Tolling Agreement Instructions	Informational
Appendix E-2 PPA Documents	Required of PPA bidders, as applicable
App E-3 Tolling Agreement Document	Required of Tolling Agreement bidders
App F-1 BTA Instructions	Informational
App F-2 BTA Documents	Required of BTAs
App G-1 Confidentiality Agreement	Required of all bidders
App G-2 Non-Reliance Letter	Informational (Required at final shortlist)
App H-1 2021 IRP Preferred Portfolio Transmission Upgrade Selections	Informational
App H-2 2021 PacifiCorp IRP Preferred Portfolio Proxy Resource Selections	Informational
App H-3 PacifiCorp Transmission: Summary of OASIS queue positions	Informational
App I Standards of Conduct; Separation of Functions	Informational
App J PacifiCorp Transmission Waiver	Requested of all bidders
App K Operations and Maintenance Services Agreement	Required of BTAs
App L Non-Price Scoring Matrix	Required of all bidders
App M Role of the Independent Evaluator	Informational
App N PacifiCorp's Organization for RFP Process	Informational
App O PacifiCorp's Company Alternative (Benchmark Resource)	Required of all bidders
App P Equity Questionnaire	Requested of all bidders
App Q 2021 Demand Response RFP – Requirements for Demand-side Bids	Informational
App Q-1 Professional Services Contract, including scope of work, etc.	Required of all demand-side bidders

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Proposed RFP Regulatory Schedule

Circulate draft RFP to Oregon stakeholders	OR Docket	12/28/2021	
File final draft RFP with WA Commission	WA Docket	12/29/2021	WAC 480-107-017 (1)
Oregon workshop with IE stakeholders on RFP draft	OR Docket	01/07/2022	OR 860-089-0250 (1)
Pre-issuance bidders conference	UT Docket	01/11/2022	UT R746-420-1 (3)(b)
File final draft RFP with OR Commission	OR Docket	01/14/2022	
File final RFP application for UT	UT Docket	01/26/2022	
Oregon party comments on final draft RFP	OR Docket	02/11/2022	
RFP comments due from WA interested persons	WA Docket	02/14/2022	WAC 480-107-017 (3)
PacifiCorp reply comments on final draft RFP	OR Docket	02/25/2022	
Oregon IE files report on final draft RFP	OR Docket	03/04/2022	OR 860-090-0450 (3)
WA Commission approval of RFP	WA Docket	03/10/2022	WAC 480-107-017 (4)
UT stakeholder party comments on RFP draft	UT Docket	03/14/2022	UT R746-420-1 (4)(a)
UT IE comments on RFP due	UT Docket	03/22/2022	UT R746-420-1 (4)(a)
PacifiCorp comments on RFP due	UT Docket	03/22/2022	UT R746-420-1 (4)(a)
Oregon Commission Staff files memo on RFP	OR Docket	03/29/2022	
All party / PacifiCorp's reply comments due	UT Docket	04/01/2022	UT R746-420-1 (4)(a)
PacifiCorp OATT - Cluster Request Window opens	OATT	04/01/2022	OV11 Section 39.2.1
OR Commission Special Public Meeting approving RFP	OR Docket	04/07/2022	OR 860-089-0250 (6)
WA Procurement Rules - Deadline for issuing RFP	WA Docket	04/09/2022	WAC 480-107-017 (5)
UT Commission decision on RFP	UT Docket	04/11/2022	UT R746-420-1 (4)(a)
RFP Issued to market	2022 AS RFP	04/26/2022	
PacifiCorp OATT - Cluster Request Window closes	OATT	05/16/2022	OV11 Section 39.2.1

Question & Comments

