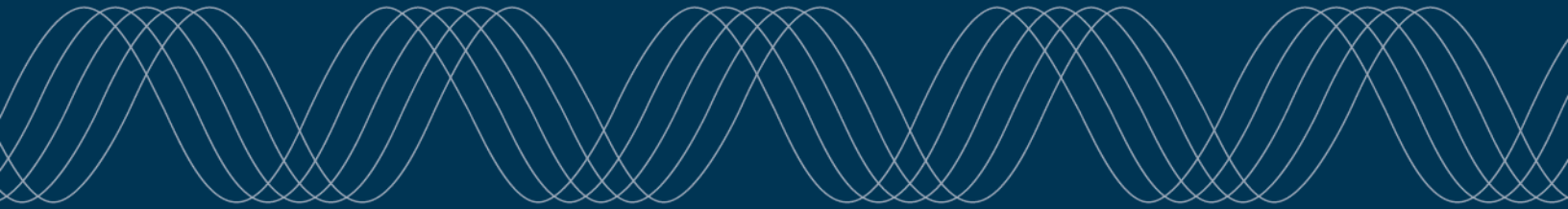


Appendix P

# Benchmark Submission



2023 All-Source RFP



# Portland General Electric's Benchmark Submission

## Bid Descriptions

PGE will submit benchmark resources into the 2023 RFP to meet both PGE's renewable needs and non-emitting capacity needs. Benchmark bids include wind, solar, hybrid and stand-alone energy storage resources. Consistent with Order No. 24-011 and the recommendation of OPUC Staff following consultations among Staff, the Company, and the Independent Evaluator, PGE Benchmark Team provides the following table to enumerate PGE's benchmark bids:

State	Resource Type	Structure	Capacity	Term	GIA Status
Oregon	Solar/BESS	EPC	175	N/A	Study
Oregon	BESS	BTA	200	N/A	IA Executed
Oregon	BESS	BTA/SCA	200	20	Study
Oregon	BESS	BTA/SCA	200	20	Study
Oregon	Solar/BESS	BTA/PPA	240	30	Received
Oregon	Solar/BESS	BTA	250	N/A	Study
Oregon	Solar/BESS	BTA/PPA	400	30	Study
Washington	Wind/Solar/BESS	BTA/PPA	1000	30	Study Completed

All utility-owned solar offers will be bid under BTA or EPC structures. Following review within PGE's RFP, those bids may be transferred to PGE's affiliate PRR at a later period following a requisite showing by PGE.

## Utility Controlled Bid Elements

Certain ratepayer funded assets controlled by the utility will be used to support select Benchmark Resources. Utility assets include:

- Subject to Commission Approval of UP 419, land in Northeast Oregon owned by the utility in support of a solar resource.
  - Approximately 300-600 acres located at the following coordinates: 45.696, -119.797
  - This property is contiguous with current PGE operations.
  - In connection with utility owned commercial structures proposed on this property, the utility assets will also include generation capacity on the generation-lead line from the Grasslands substation to BPA's Slatt substation (but does not include any transmission from the BPA Slatt substation to PGE Load).

Due to security risks associated with co-location, PGE will only be making this property available to third-party developers under a utility owned commercial structure as to avoid unacceptable risks associated with multiple entity operation within the site perimeter. Per Commission Order No. 24-011, PGE will accept straw bids that propose to use these assets and address the concerns noted below.

- Biglow Canyon Wind Farm’s Large-Generator Interconnection Agreement and transmission rights with Point of Receipt at BIGLOW and Point of Delivery at BPAT.PGE available when Biglow Canyon Wind Farm generates below nameplate capacity.
  - The transmission rights associated with a Point of Receipt at BIGLOW and Point of Delivery at BPAT.PGE will also only be made available to utility-owned bids and on the condition that the rights cannot be redirected away from the specified Point of Receipt on a long-term basis.
- Wheatridge Wind Farm’s Large-Generator Interconnection Agreement and transmission rights with Point of Receipt at UMATILLA and Point of Delivery at BPAT.PGE available when Wheatridge Wind Farm generates below nameplate capacity.

Due to the operational considerations described below, PGE will only be making this property available to third-party developers under a utility owned commercial structure. Per Commission Order No. 24-011, PGE will accept straw bids that propose to use these assets and address the concerns noted below.

## Security and Operational Analysis

### Security Analysis of Land

As identified above, 300-600 acres of land at coordinates 45.696, -119.797 (east of Carty) are being made available for use by the benchmark team as well as for third-party developed utility-owned bids. This land is in rural Morrow County, Oregon and is remote. Emergency services are provided by the Morrow County Sheriff, which covers a large geographic area.

Bidders wishing to address security concerns in their straw proposals should plan to articulate how they will reduce the threat associated with multi-entity operations. PGE recommends bidders consider proposing roving patrols around the asset, secured entry onto the property, detection and monitoring (such as thermal cameras and fence detection), and commitment to closely coordinate with both PGE security and local law enforcement.

### **Operational Analysis of Biglow Canyon and Wheatridge Large Generator Interconnections, Generator lead-line from Grassland to Slatt, and Transmission rights associated with BIGLOW to BPAT.PGE and UMATILLA to BPAT.PGE**

As identified in Chapter 9 of PGE’s 2023 Integrated Resource Plan, Bonneville Power Administration transmission rights are used to deliver power from the Biglow and Wheatridge facilities to serve PGE load. Additionally, PGE is able to leverage these rights during peak times to ensure sufficient transmission capacity to meet load. The Biglow to BPAT.PGE and Umatilla to BPAT.PGE paths together account for 750MW of transmission rights that are used by PGE both to provide renewable energy and to meet capacity need. These rights are identified for use by the benchmark team as secondary to the existing generators (i.e. “rights to be used when Biglow/Wheatridge generate below nameplate capacity”). PGE recommends that bidders wishing to address this operational concern in their straw bid make clear that they do not wish to try to redirect rights away from existing generators on a long-term basis, and make clear that their generation will use the rights only when the existing asset is generating at below nameplate capacity.

PGE’s interconnections at Biglow and Wheatridge are similarly situated to the transmission rights, in that they are used to deliver generation. PGE recommends that bidders who submit a straw proposal describe the generation profile of the proposed project and how they would make clear generation associated with the project would be complementary with Biglow and Wheatridge.

### Long-term service agreement (LTSA) costs

Consistent with RFP Condition 12 of Commission Order No. 24-011, PGE is providing the following LTSA cost information as a reasonableness check to what will be provided and scored in the evaluation process. The following data is from PGE’s 2021 RFP:

<b>Technology</b>	<b>Real Lev. (\$2021) \$/MWh</b>	<b>Term (yrs)</b>
BESS	\$5.42	Life of Asset
Wind	\$0.72	Life of Asset
Solar	\$1.22	Life of Asset
Pumped Hydro	\$11.18	Life of Asset

## Information to assist in the preparation of straw bids

In addition to the information made available in this appendix, PGE may also make available additional information that could assist in the preparation of straw bids. PGE will provide information to entities preparing a straw bid subject to the execution of NDAs and confirmation that the information does not include critical infrastructure security concerns. The process to request this additional data is included in page 9 of PGE's RFP main document. This information may include:

- Meteorological data
- Site assessments
- Existing utility interconnection agreements
- Existing utility transmission agreements
- Permitting data