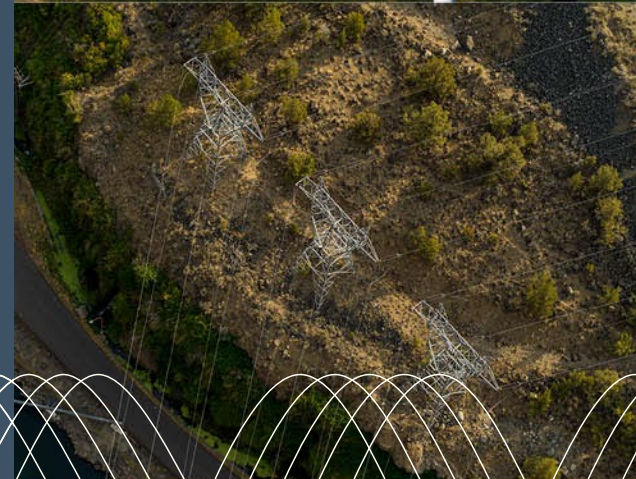


Portland General Electric 2021 All-Source RFP Final Shortlist

May 19, 2022



An Oregon kind of energy.™

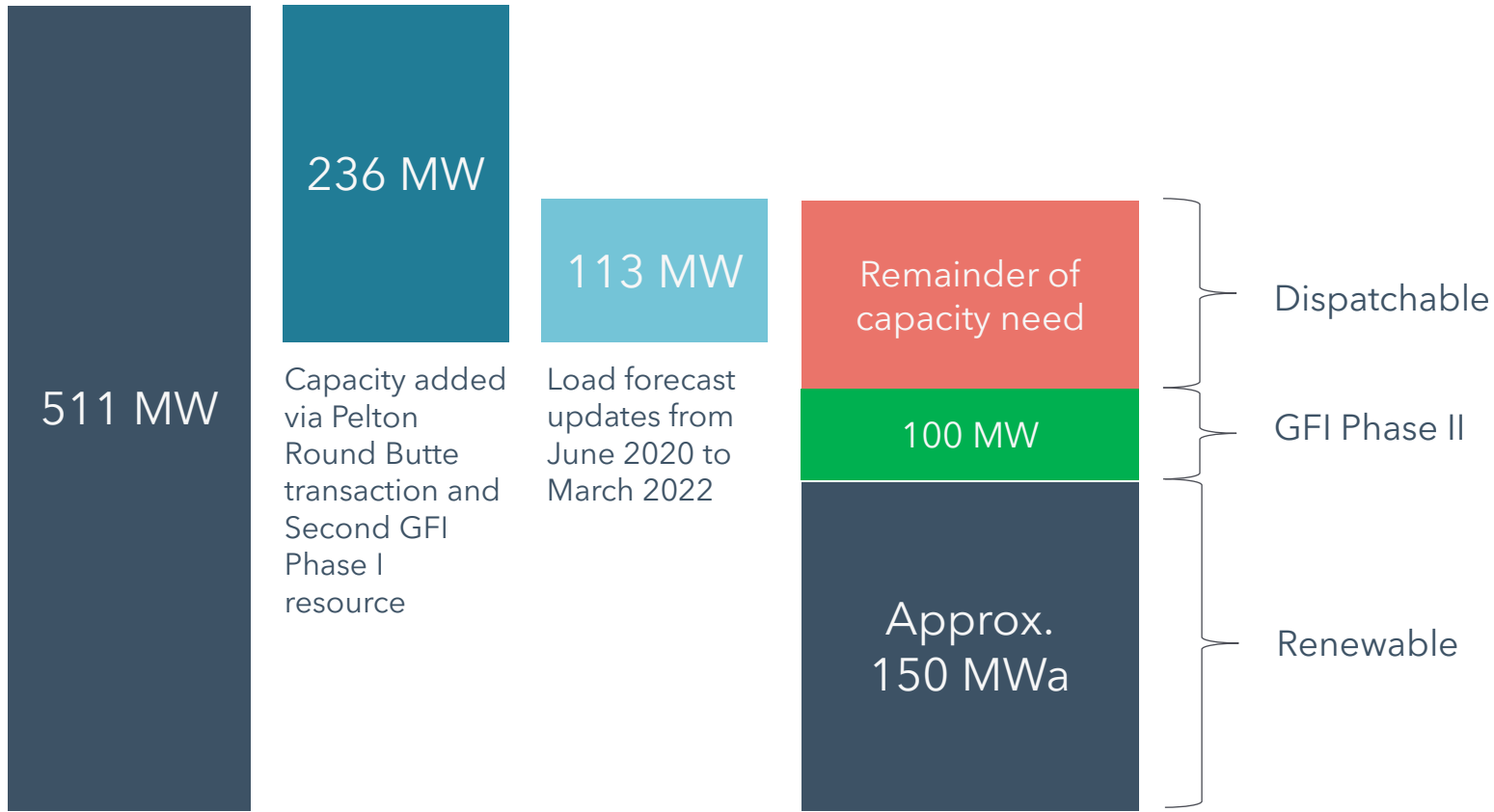


Requested Acknowledgement

PGE is seeking OPUC acknowledgement of our final shortlist:

- That the projects selected to the final shortlist are reasonable.
- That the RFP was conducted fairly, transparently, and in compliance with Oregon's competitive bidding rules.

PGE Resource Need



The volumes sought in PGE's 2021 All-Source RFP are consistent with the findings of PGE's 2019 IRP Update. PGE is seeking to procure 150 MWa of renewable resources, consistent with 2019 IRP action plan. Remaining capacity need following the acquisition of renewable resources to be met with non-emitting dispatchable resources.

PGE is also seeking to use this procurement to acquire 100 MW for PGE's Green Future Impact (GFI) Phase II program.

2025 system need per 2019 IRP Update

Approved 2021 All Source RFP

Collaborative regulatory process driven by stakeholder feedback

April 2021 –
Public process to
select IE

October 2021
Public workshop
and draft RFP filed
for review

December 2021
RFP Public Meeting



August 2021
Scoring
workshop held;
Stakeholder
feedback on
proposed
scoring
methodology

November 2021
IE and Stakeholder
comments on draft
RFP structure; Staff
report on RFP
structure.

December 2021
RFP approved, with
modifications, by
OPUC, issued to
market, and post-
issuance stakeholder
workshop held

PGE incorporated 25+ structure, scoring, and timeline changes as a result of the stakeholder feedback process.

Solicitation Process Compliant with Oregon Competitive Bidding Rules

RFP Design

- + Collaborative public process to establish RFP design and scoring methodology.
- + Clear identification of minimum requirements and standard contracts.
- + Scoring criteria presented in advance of draft RFP, with opportunity for comment.
- + Consistent with acknowledged IRP need.

Benchmark Treatment

- + Final benchmark score developed in consultation with IE.
- + Benchmark scoring filed with the Commission and sent to the IE before any additional bids were released to PGE.
- + Independence of benchmark and RFP teams.

Scoring

- + All proposed and final scoring criteria included with draft and final RFPs.
- + Non-price factors converted to minimum bidder criteria and/or price scores when possible.
- + Selection of final shortlist based on results of modeling consistent with what was used in acknowledged IRP.

Independent Evaluator

- + Oversaw competitive bidding process to ensure fairness and transparency.
- + Consulted with PGE on preparation of the draft RFP and provided feedback on the draft.
- + Checked scoring of all bids and selection of the initial and final shortlist.
- + Included in all bidder communications.

Bids Received and Reviewed

Benchmark Bids Received

Evaluated, scored, and filed with OPUC in accordance with OAR 860-089-0350

Third-Party Bids Released following benchmark filing.

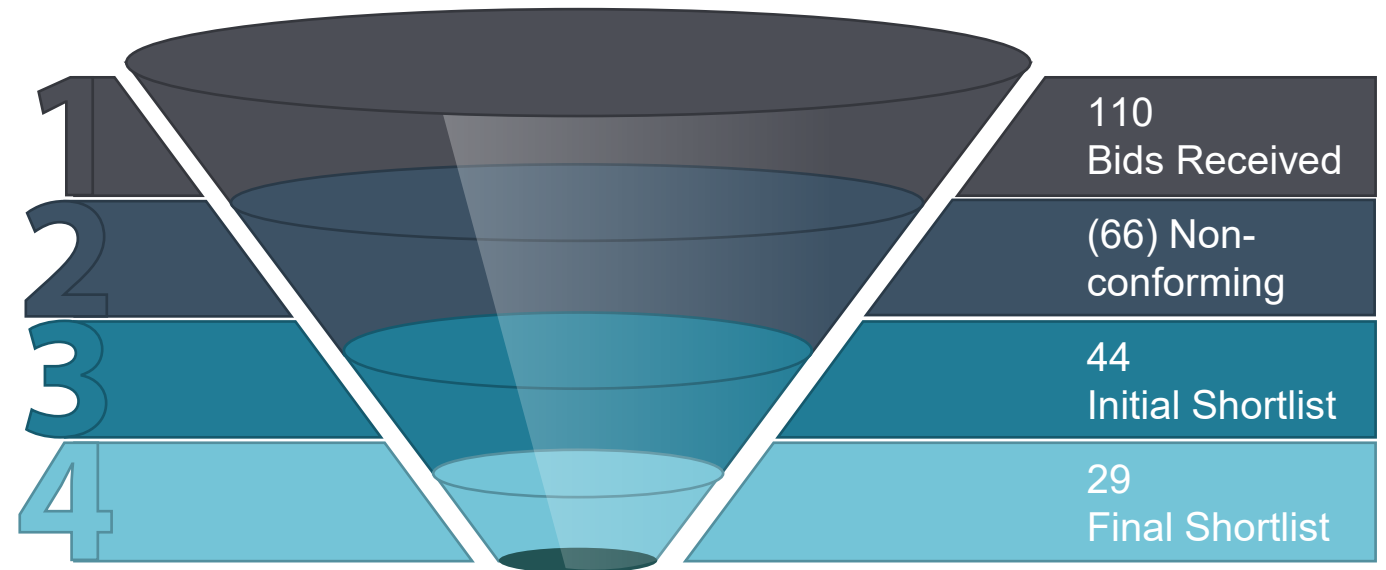
Bids evaluated for conformance by PGE in collaboration with IE per OAR 860-089-0400 and 0450.

Initial shortlist

Included all bids that met the RFP eligibility requirements. Opportunity extended to provide best and final pricing.

Final shortlist

Top renewable and dispatchable capacity resources were identified separately based on projects' price and non-price score





Final Shortlist

Represent the most competitive conforming resources received in the 2021 All-Source RFP

- PGE’s Final Shortlist includes necessary volume to meet PGE’s resource requirements in 2025 while protecting against execution risk.
 - 599 MWa energy
 - 497 MW (ELCC) capacity
- PGE will work with the OPUC to evaluate whether procuring resources beyond the amounts noted above are in the best interest of customers given the significant new clean resource additions necessary to meet the HB 2021 requirements.

Technology*	Unique Projects	Capacity / Energy
Solar	5	160 MWa
Wind & Solar	1	303 MWa
Wind	1	136 MWa
Standalone Battery	5	353 MW ELCC
Pumped Storage	1	144 MW ELCC

* Includes projects with paired battery energy storage. Unique projects proposed under multiple technology categories reflected once according to best bid variant.

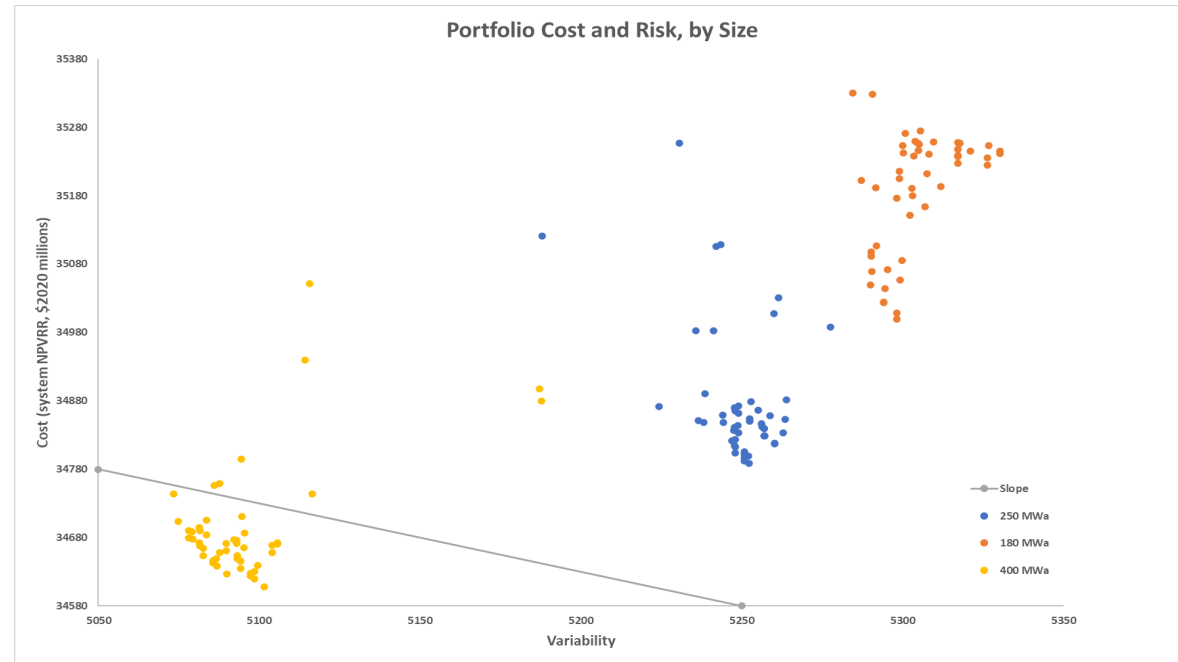
Portfolio and Sensitivity Analysis

PGE's portfolio analysis is designed to identify the best combination of resources and provide insights on optimal procurement volumes given forecast uncertainty.

Portfolios constructed at multiple renewable volume levels: 180 MWa, 250 MWa, and 400 MWa.

Consistent with the 2019 IRP, top portfolio performance measured with traditional cost and risk metrics:

- Cost
- Variability
- Severity



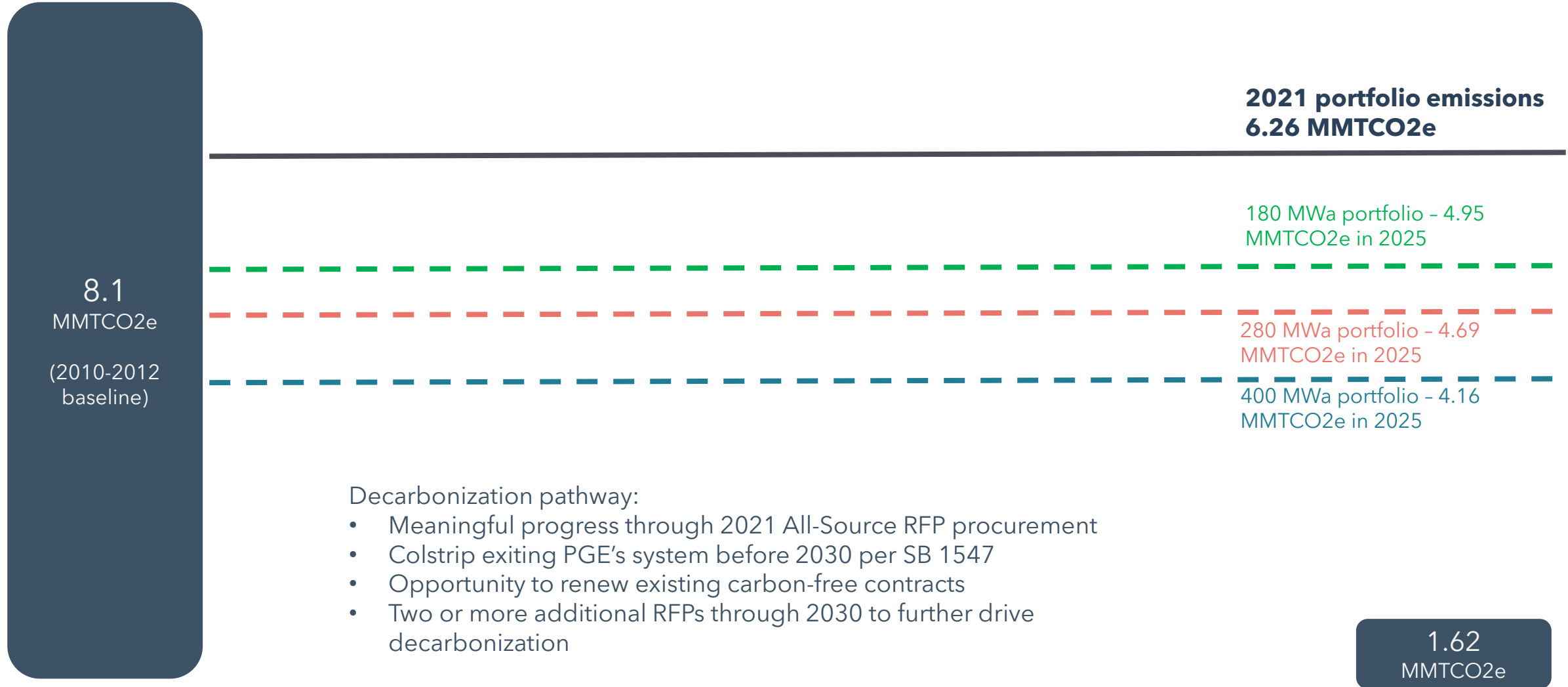
Additional sensitivity analysis considered:

- Extension of federal tax credits
- Costs of future non-emitting capacity
- The absence of short-term capacity agreements to meet near-term capacity needs

Portfolio Analysis Results

- Portfolio analysis reaffirms the preference of the top performing projects to meet renewable and capacity needs.
- Portfolio analysis suggests that portfolios with higher renewable volume have lower long-term costs and risks.
 - Larger renewable volumes mitigate the remaining capacity need for stand-alone battery resources.
 - Larger renewable volumes allow for greater capture of available federal tax credits and displace additional renewable procurement required to meet HB 2021's 2030 requirement.
 - Larger renewable volumes diminish exposure to market prices in exchange for elevated fixed costs.
 - Larger renewable volumes are associated with greater customer price impacts in 2025 and reduced portfolio CO₂ emissions.
- Sensitivity analysis validates the acknowledged IRP Action Plan even under an assumed extension of production tax credits.

Meaningful progress toward Oregon's clean energy future



Baseline Emissions

MMTCO₂e = millions of metric tons of carbon dioxide equivalent

2030 Emissions Target

Procurement Risks and Considerations

Department of Commerce

- Investigation into possible circumvention of solar tariffs has created challenges for developers procuring panels and uncertainty in the short-term future. It is possible that multiple solar projects on PGE's final shortlist are unable to transact during the pendency of the investigation.

Federal Tax Policy

- Congressional discussions continue to consider the extension and expansion of the production tax credit and the investment tax credit. Given RFP results and the inherent uncertainty regarding federal tax policy, it remains prudent to pursue tax credits available today.

Supply Chain

- General increases in bidder's assumed cost structure amid the current inflationary environment may present execution risks.

Next steps

- PGE will begin commercial negotiations with projects on this final shortlist, moving forward with counterparties that adhere to performance as bid to deliver customer benefit. PGE looks to negotiate and execute agreements to meet renewable and capacity needs before the end of 2022.
- Outstanding procurement risks may inhibit select counterparties from continuing forward in the negotiation process. In such instances, PGE will move forward with viable projects while inviting successor negotiations following the resolution of procurement risks including the DOC investigation.
- PGE will look to ongoing planning and procurement discussions with the OPUC and stakeholders to efficient and prudent paths to meet customers' HB 2021 decarbonization requirements.