

**EXH. PAH-6C
DOCKETS UE-240004/UG-240005
2024 PSE GENERAL RATE CASE
WITNESS: PHILIP A. HAINES**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**Docket UE-240004
Docket UG-240005**

**FIFTH EXHIBIT (CONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF**

PHILIP A. HAINES

ON BEHALF OF PUGET SOUND ENERGY

REDACTED VERSION

FEBRUARY 15, 2024

Cost Benefit Analysis of Joining WRAP

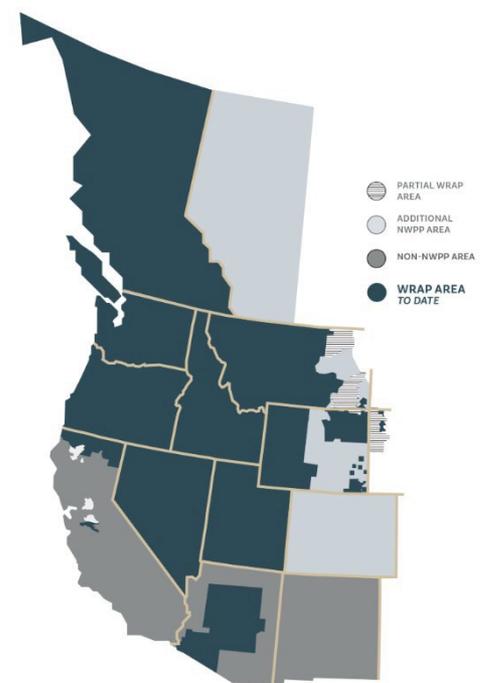
ERMC Decisional
September 30, 2022



Phil Haines
Director, Energy Supply Merchant

ESM recommends that PSE joins the Western Regional Adequacy Program (WRAP)

- As the electric grid moves toward decarbonization, the Western region must integrate new variable energy resources and retire fossil fuel baseload resources
- WRAP is a resource adequacy program designed to increase regional reliability at a potentially reduced cost across the entire footprint
- Our analysis in conjunction with consultant Energy GPS (EGPS) shows that participation would result in lower capacity requirements and costs
 - We compared two alternatives, WRAP-In and WRAP-Out, for a 2026 test year
 - WRAP-In assumes PSE is a participant and uses WRAP's capacity planning methodology
 - WRAP-Out assumes WRAP is launched, PSE is not a participant, and PSE uses the 2023 Electric Progress Report (EPR) capacity planning methodology
- Other less tangible benefits include risk reduction across several risk categories



REDACTED VERSION

Planning to WRAP standards results in reduced planning reserve margin (PRM) and lower capacity costs of \$ [REDACTED] for 2026 test year

	Summer 2026			Winter 2026-2027		
	WRAP-Out (2023 EPR)	WRAP-In (WRAP)	Wrap-In less WRAP-Out	WRAP-Out (2023 EPR)	WRAP-In (WRAP)	Wrap-In less WRAP-Out

[REDACTED]						
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[d] = [b]*[c]
 [e] = [b]+[d]
 [g] = [f]+[e]
 [i] = [h]*10³*[a]*[g]/10⁶

¹Rounded up to nearest whole month. Summer season is Jun 1 – Sep 15, winter season is Nov 1 – Mar 15.



REDACTED VERSION

Changing the WRAP-In load assumption to match PSE’s 2023 EPR results in \$ [REDACTED] in capacity cost savings for 2026, a reduction of

\$ [REDACTED]

	Summer 2026			Winter 2026-2027		
	WRAP-Out (2023 EPR)	WRAP-In (WRAP)	Wrap-In less WRAP-Out	WRAP-Out (2023 EPR)	WRAP-In (WRAP)	Wrap-In less WRAP-Out

[REDACTED]						
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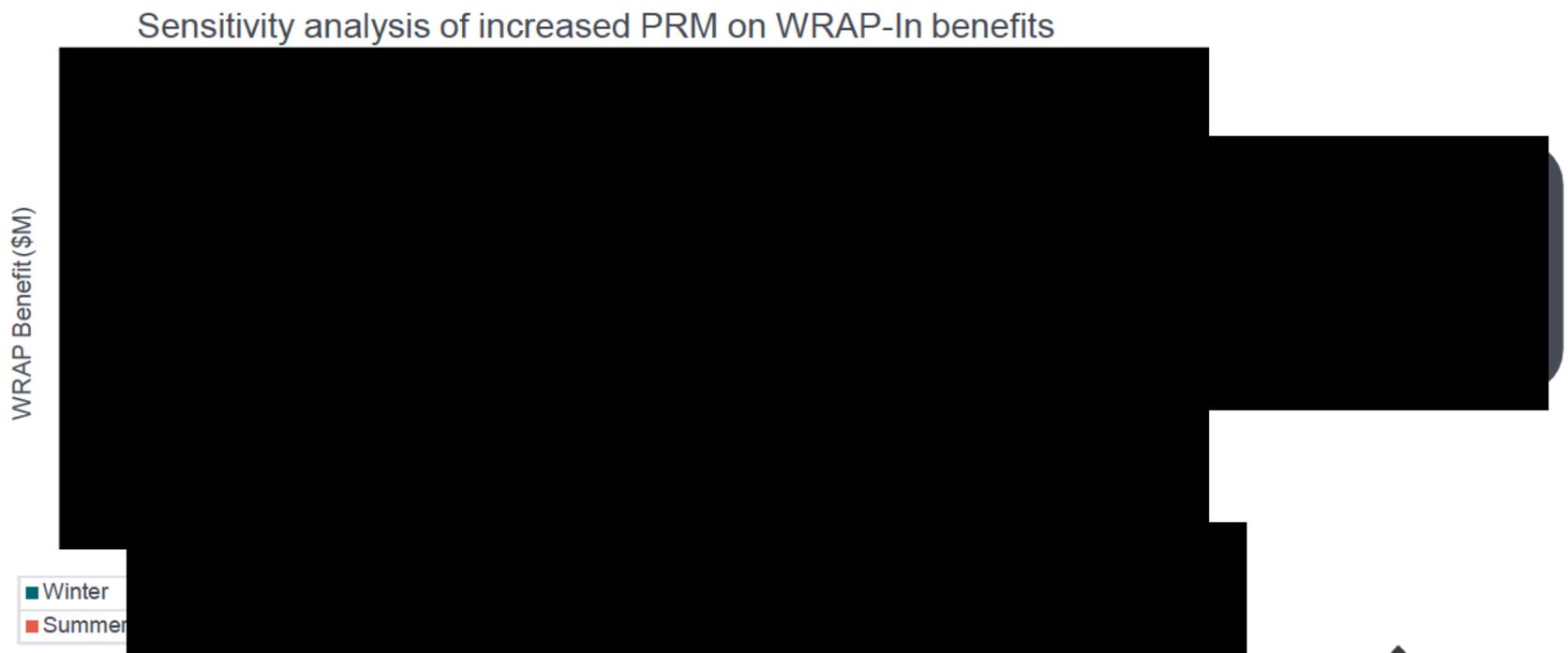
[d] = [b]*[c]
 [e] = [b]+[d]
 [g] = [f]+[e]
 [i] = [h]*10^3*[a]*[g]/10^6

¹Rounded up to nearest whole month. Summer season is Jun 1 – Sep 15, winter season is Nov 1 – Mar 15.



REDACTED VERSION

Increasing the PRM assumption for the WRAP-In alternative shows diminishing yet still positive capacity cost benefits



A regional capacity planning effort informs better decision making and reduces risk

Reliability Risk

- Forward Showing program ensures that participants have adequate capacity and transmission well in advance of delivery
- Operations program allows participants to efficiently share capacity in the Day Ahead market

Price Risk

- Adequate regional capacity should reduce likelihood of scarcity pricing events

Modeling Risk

- SPP offers robust modeling based on regional studies of load, resource and transmission attributes
- Active engagement of stakeholders leads to continuous refinement and validation of planning standards

Investment Risk

- Resource saturation curves based on region and resource type encourage participants to invest more efficiently

Regulatory Risk

- Transparency of methodology and planning process promotes buy-in from regulators and other external stakeholders and reduces risk of cost recovery

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