



e-FILING REPORT COVER SHEET

COMPANY NAME: Portland General Electric Company

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? No Yes If yes, submit a redacted public version (or a cover letter) by email. Submit the confidential information as directed in OAR 860-001-0070 or the terms of an applicable protective order.

Select report type: RE (Electric) RG (Gas) RW (Water) RT (Telecommunications)
 RO (Other, for example, industry safety information)

Did you previously file a similar report? No Yes, report docket number: RE-182

Report is required by: OAR 860-030-0011

Statute

Order

Note: A one-time submission required by an order is a compliance filing and not a report (file compliance in the applicable docket)

Other

(For example, federal regulations, or requested by Staff)

Is this report associated with a specific docket/case? No Yes, docket number: UM 1893

List Key Words for this report. We use these to improve search results.

Energy Efficiency Avoided Cost Submission

Send the completed Cover Sheet and the Report in an email addressed to PUC.FilingCenter@state.or.us

Send confidential information, voluminous reports, or energy utility Results of Operations Reports to PUC Filing Center, PO Box 1088, Salem, OR 97308-1088 or by delivery service to 201 High Street SE Suite 100, Salem, OR 97301.



Portland General Electric
121 SW Salmon Street · Portland, Ore. 97204

March 1, 2024

Public Utility Commission of Oregon
Attn: Filing Center
201 High Street, S.E.
P.O. Box 1088
Salem, OR 97308-1088

RE: RE 182 / UM 1893 PGE's Energy Efficiency Avoided Cost Submission

Portland General Electric Company (PGE) submits this compliance filing under RE 182 pursuant to Oregon Administrative Rule (OAR) 860-030-0011. Please see the attached pages for PGE's energy efficiency avoided cost submission. OAR 860-030-0011 (1) requires utilities to file energy efficiency avoided cost reports by October 15 each year for use in the next energy efficiency program budget cycle. At the public meeting on October 3, 2023, the Oregon Public Utility Commission adopted OPUC Staff's recommendation for a waiver to the rule and directed utilities to file the required report by March 1, 2024.

On December 20, 2023, Staff provided a docket update in Docket No. UM 1893. Staff laid out a two-phase approach for updating energy efficiency avoided costs in 2024. In phase 1, Staff updated the workbook template to add a new input for avoided energy cost to allow electric utilities to better reflect the true cost of acquiring energy in compliance with Oregon decarbonization policies and requirements, intended as an interim step. Subsequently, Phase 2 of the docket will consider broader revisions to the methodology through discussions with stakeholders in workshops. Staff expects to publish an updated template later this year, to be used in the annual update in October 2024.

The avoided cost inputs provided in this filing are from PGE's recently acknowledged Integrated Resource Plan (IRP) in LC 80 which occurred at a Special Public Meeting on January 25, 2024, and from PGE's last General Rate Case UE 416.

All updated avoided cost values are provided in this filing with the exception of the interim avoided energy cost element. For the interim avoided energy cost, PGE will use the avoided energy price value for a renewable Qualified Facility. The renewable energy price is filed via Docket No. UM 1728, PGE's avoided cost filing. It is based on a proxy wind plant, minus the capacity value of that wind resource, to isolate the energy value. The Effective Load Carrying Capability (ELCC) is a necessary input to calculate the capacity value of the wind resource. Staff's recommendation in LC 80 (which the Commission adopted in LC 80) requires PGE to recalculate the ELCC values for renewable resources.

PGE needs to finalize its QF avoided costs in Docket No. UM 1728 to have the renewable energy value.

On February 20, 2024, PGE was granted a waiver of OAR 860-029-004(4)(a) to file its standard rates for qualifying facilities in UM 1728 within 30 days of Commission Acknowledgement of its IRP, due to the time needed to comply with the Commission's decision to adopt Staff's recommendation in LC 80. OAR 860-029-004(4)(a) was temporarily waived, and PGE must file rates consistent with the rule no later than March 15, 2024. On March 15, 2024, PGE will make a Supplemental Filing in this docket and provide the requested avoided energy costs at that time.

Please direct any questions or comments regarding this filing to Chris Pleasant at (503) 464-2555.

Please direct all formal correspondence and requests to the following email address pge.opuc.filings@pqn.com.

Sincerely,

\s\ Robert Macfarlane

Robert Macfarlane
Manager, Pricing & Tariffs

Enclosure

cc: Peter Kernan, OPUC

Energy Efficiency Avoided Cost Submission Template - Electric

Utility Name: PGE

Submission Date: 1-Mar-24

Instructions and Definitions

<> Please fill out this workbook completely and per the instructions and submit via electronic filing to docket UM 1893. Submissions are due March 1, 2024
 <> Inputs will be reviewed and approved by the OPUC before being sent to the Energy Trust of Oregon for use in Avoided Cost development
 <> **Provide as much detail as possible when sourcing** data inputs, including the link to the source (if available), page number and table or graph number
This will increase the efficiency of this process and require less iteration during the OPUC review period
Required pages 1,2,3,4 refer to data presented in the most recently acknowledged IRP, IRP Update, or General Rate Case unless otherwise noted

1) Global Inputs - IRP

<> Most components of the avoided costs are input into this tab including inflation/discount rates, line losses, risk reduction values, T&D deferral values, and generation deferral values
 <> Identify the winter & summer peak periods for Transmission and Distribution. The Generation LOLP Map will be utilized for generation peak definitions.
 <> If necessary, Energy Trust will work with each utility about sector definitions for T&D for which values to provide for Res, Com, and Ind
 <> **Ensure that the dollar years of the data inputs match the source** - Energy Trust will inflate to the proper year
 <> Please provide the values in the most recently acknowledged IRP

2) Forward Market Prices - IRP

<> Provide forward market price forecast by month for both high load hours and low load hours
 <> Please provide the dollar amount of these prices that is associated with carbon costs (or %). If it is a dollar value, this is a subset of the total prices provided - The total forward market prices should be the FULL price, including carbon
 <> Indicate if the forecast is in nominal or real dollars (and what dollar year if real)
 <> Please provide the values in the most recently acknowledged IRP

3) Forecast of Avoided Energy Costs - IRP

<> Provide an avoided energy cost forecast by month for both high load hours and low load hours. Please also use the alternative data submission tab to provide data in a native format if that is preferred by the Company
 <> Please provide the dollar amount of these costs that is associated with carbon costs (or %). If it is a dollar value, this is a subset of the total prices provided - The total avoided energy cost should be the FULL costs, including carbon
 <> Indicate if the forecast is in nominal or real dollars (and what dollar year if real)
 <> Please provide values found in analysis for the most recently acknowledged IRP
 <> If the Company would like to propose alternative data for the avoided energy cost, please do so in the alternative tab. This includes, but is not limited to, if the Company would like to model a forward market price that includes quantity- and carbon-constraints

4) LOLP - IRP

<> Input a 12x24 Loss of Load Probability heat map per the example in the worksheet
 <> These will be potentially utilized in future iterations of avoided cost updates pending outcome of UM1893
 <> Include heat maps for all days, weekdays only, and weekends only
 <> Please provide the values in the most recently acknowledged IRP

5) RPS Compliance - IRP

<> Input RPS compliance costs by year
 <> Please provide the values in the most recently acknowledged IRP

1a, 2a, 3a, 4a, 5a) Alternative Submissions

<> Use these worksheets to provide alternative values to the most recently acknowledged IRP values
 <> Provide a rationale for submitting the alternative values in the box provided at the top of each alternative worksheet
 <> If a second set of alternative values is submitted, simply copy the alt tabs necessary and rename to 1b, alt 2 in the tab name

Global Assumptions Inputs				SOURCING				
Provide as much detail as possible with sourcing including a link. Ensure that dollar years listed here are the same as the source.								
Avoided Cost Element	Units	Value	Dollar Year	Source	Source Page #	Table # (if applicable)	Source Link or File Name	Source Notes
Inflation Rate	Percent	2.10%	N/A	2023 IRP - Appendix H Table 127				
Real Discount Rate	Percent	4.0%	N/A	Table 127. 2023 IRP long-term financial assumptions				=(1+Weighted after tax discount rate)/(1+inflation rate) - 1
Regional Act Credit	Percent	10.00%	N/A					
Transmission Loss Factor (Summer)	Percent	2.09%	N/A	BPA Open Access Transmission Tariff, Effective Date: October 1, 2023	137		https://www.bpa.gov/-/media/Aep/transmission/open-access-transmission-tariff/bpa-open-access-transmission-tariff-20231001.pdf	Real Power Loss factor for one segment of BPA transmission. This factor is for the losses external to PGE's system for avoided energy purchases, generation capacity, and risk value. This factor does not apply to the PGE Transmission in the Transmission Deferral Credit.
Transmission Loss Factor (Winter)	Percent	2.04%	N/A	BPA Open Access Transmission Tariff, Effective Date: October 1, 2023	137		https://www.bpa.gov/-/media/Aep/transmission/open-access-transmission-tariff/bpa-open-access-transmission-tariff-20231001.pdf	Real Power Loss factor for one segment of BPA transmission. This factor is for the losses external to PGE's system for avoided energy purchases, generation capacity, and risk value. This factor does not apply to the PGE Transmission in the Transmission Deferral Credit.
Distribution Loss Factor, Commercial	Percent	4.02%	N/A	2022 GRC (UE 394) Line Loss Study			Workpaper "LineLoss2022"	Internal loss factor for Commercial loads based on weighted average of primary and secondary losses from the 2015 GRC Line Loss Study.
Distribution Loss Factor, Industrial	Percent	1.96%	N/A	2022 GRC (UE 394) Line Loss Study	1		"2022 GRC loss report.pdf"	Internal loss factor from study for loads with subtransmission delivery voltage.
Distribution Loss Factor, Residential	Percent	4.20%	N/A	2022 GRC (UE 394) Line Loss Study	1		"2022 GRC loss report.pdf"	Internal loss factor for loads with secondary delivery voltage.
Risk Reduction Value	\$/MWh	\$3.00	2020	2019 IRP (not updated in 2023 IRP)			Workpaper "EE_RiskCalc_2019IRP"	Risk reduction value calculated from 2019 IRP values.

Transmission Deferral Credit	\$/kW-yr	\$87.34		2024 GRC (UE 416) Transmission Marginal Costy Study			Workpaper "Ratesread_2024 GRC.xlsx"	2024 GRC, most recently approved GRC filing. TransmissionDeferralCredit = (TransmissionRevReq/MarginalSystemPeakGrowth)
Seasonal Capacity Split - Summer	Percent	50.00%	N/A	Per previous assumption.			Per previous assumption.	PGE analysis of month-hour average net system load
Seasonal Capacity Split - Winter	Percent	50.00%	N/A	Per previous assumption.			Per previous assumption.	PGE analysis of month-hour average net system load
Summer Peak Period Definition	Month/Day/Hour		N/A					Day is intended to be weekday or weekend
Winter Peak Period Definition	Month/Day/Hour		N/A					Day is intended to be weekday or weekend
Deficiency start year	Year	2026	N/A	2023 IRP				
Distribution Deferral Credit	\$/kW-yr	\$17.21					Workpaper "Ratesread_2024 GRC.xlsx"	2024 GRC, most recently approved GRC filing. DistributionDeferralCredit = (SubtransmissionMarginalCostRevenues/SubtransmissionRateclassPeak)+(SubstationMarginalCostRevenues/SubstationRateclassPeak) Subtransmission MCOS - \$1.33/kW-year Substation MCOS - \$15.88/kW-year
Seasonal Capacity Split - Summer	Percent	50.00%	N/A	Per previous assumption.			Per previous assumption.	PGE analysis of month-hour average net system load
Seasonal Capacity Split - Winter	Percent	50.00%	N/A	Per previous assumption.			Per previous assumption.	PGE analysis of month-hour average net system load
Summer Peak Period Definition	Month/Day/Hour		N/A					Day is intended to be weekday or weekend
Winter Peak Period Definition	Month/Day/Hour		N/A					Day is intended to be weekday or weekend
Deficiency start year	Year	2026	N/A	2023 IRP				
Generation Capacity Credit	\$/kW-yr	\$228	2023	2023 IRP Update - New Resource Economics				2023 IRP - 2026 Update net cost of capacity.
Seasonal Capacity Split - Summer	Percent	50.00%	N/A	Per previous assumption.				This is the seasonal capacity split used by Staff in the December 2018 process. PGE may calculate an alternative seasonal capacity split for future filings, but did not for this filing.
Seasonal Capacity Split - Winter	Percent	50.00%	N/A	Per previous assumption.				This is the seasonal capacity split used by Staff in the December 2018 process. PGE may calculate an alternative seasonal capacity split for future filings, but did not for this filing.
Deficiency start year	Year	2026	N/A	2023 IRP				
RPS Compliance Cost	\$/MWh	\$ -	2020	2023 IRP	Page 293			IHB 2021 requires a larger renewable buildout than required by RPS. Thus, the RPS requirement is no longer binding. Thus, there is no avoided cost related to RPS compliance cost. With the introduction of HB2021, this value can be removed from avoided cost calculations.
Avoided RPS Compliance Obligation	%	0.00%	N/A					

Forward Price Inputs

Real or Nominal?	Nominal
Dollar Year:	2023
Carbon Prices Additive?	Embedded in Market Prices
Carbon Value Units (\$/MWh or \$/Ton)	\$/MWh
Source and Pg #:	Annual energy prices - LC 80 PGE's Response to OPUC DR 076 Attachment A Carbon data - Carbon data - "PGE_Internal_UseOnly_ELE_AECO_Carbon_2023IRPrevised_2021H2_033122TC_052322.xlsx"
Source Link or File Name:	LC 80_OPUC DR 076-Attach A.xlsx
Source Notes:	PNW Wholesale Electricity Prices, Nominal \$/MWh

NOTES:
 Please provide notes as to how this value relates to forward market prices. It can be expressed as a percentage of forward market prices, a set \$/MWh, or \$/ton. Please identify the units in the box to the left

Year	Date	HLH Total (\$/MWh)	LLH Total (\$/MWh)
2022	1/1/2022	See annual values in column J.	See annual values in column K.
2022	2/1/2022		
2022	3/1/2022		
2022	4/1/2022		
2022	5/1/2022		
2022	6/1/2022		
2022	7/1/2022		
2022	8/1/2022		
2022	9/1/2022		
2022	10/1/2022		
2022	11/1/2022		
2022	12/1/2022		
2023	1/1/2023		
2023	2/1/2023		
2023	3/1/2023		
2023	4/1/2023		
2023	5/1/2023		
2023	6/1/2023		
2023	7/1/2023		
2023	8/1/2023		
2023	9/1/2023		
2023	10/1/2023		

HLH Carbon Cost
 (OR % of HLH Price that accounts for Carbon?)
 See annual values in column L.

LLH Carbon Cost
 (OR % of LLH Price that accounts for Carbon?)
 See annual values in column L.

Year	ANNUAL		ANNUAL	
	Wholesale Market Energy HLH Total (\$/MWh)	Wholesale Market Energy LLH Total (\$/MWh)	Wholesale Market Energy LLH Total (\$/MWh)	Carbon emissions price (nominal CEC \$ per metric ton)
2022				
2023	\$ 45.99	42.949		29.69
2024	\$ 36.29	33.716		34.21
2025	\$ 33.62	31.016		39.43
2026	\$ 34.69	32.090		45.45
2027	\$ 31.66	29.334		52.37
2028	\$ 30.33	28.185		60.34
2029	\$ 29.64	28.025		69.5
2030	\$ 29.45	28.497		80.07
2031	\$ 29.54	28.427		81.78
2032	\$ 29.06	28.405		83.52
2033	\$ 29.48	29.661		85.31
2034	\$ 29.03	29.489		87.13
2035	\$ 30.08	30.406		88.98
2036	\$ 28.38	29.749		90.88
2037	\$ 29.68	30.542		92.82
2038	\$ 28.84	30.813		94.8
2039	\$ 29.31	31.075		96.82
2040	\$ 29.68	31.580		98.89
2041	\$ 31.31	32.915		101
2042	\$ 32.21	33.613		103.15
2043	\$ 32.34	34.618		105.35

Avoided Energy Cost Inputs

Real or Nominal?	
Dollar Year:	
Carbon Prices Additive?	
Carbon Value Units (\$/MW)	\$/MWh
Source and Pg #:	
Source Link or File Name:	
Source Notes:	

NOTES:
 Please provide notes as to how this value relates to avoided energy cost. It can be expressed as a percentage of

Year	Date	Monthly	Monthly	Monthly	Monthly
		Avoided Energy Cost HLH Total (\$/MWh)	Avoided Energy Cost LLH Total (\$/MWh)	HLH Carbon Cost (OR % of HLH Price that accounts for Carbon?)	LLH Carbon Cost (OR % of LLH Price that accounts for Carbon?)
	2022 1/1/2022	[To be provided by March 15, 2024]			
	2022 2/1/2022				
	2022 3/1/2022				
	2022 4/1/2022				
	2022 5/1/2022				
	2022 6/1/2022				
	2022 7/1/2022				
	2022 8/1/2022				
	2022 9/1/2022				
	2022 10/1/2022				
	2022 11/1/2022				
	2022 12/1/2022				
	2023 1/1/2023				
	2023 2/1/2023				
	2023 3/1/2023				
	2023 4/1/2023				
	2023 5/1/2023				
	2023 6/1/2023				
	2023 7/1/2023				
	2023 8/1/2023				
	2023 9/1/2023				
	2023 10/1/2023				
	2023 11/1/2023				
	2023 12/1/2023				
	2024 1/1/2024				
	2024 2/1/2024				
	2024 3/1/2024				
	2024 4/1/2024				
	2024 5/1/2024				

Loss of Load Probability Heat Map Input

NOTE: This is utilized for generation deferrals only.

Source and page #: 2023 IRP Updated Analysis

Source Link or File Name: 2026_LOLPHeatmap_.xlsx

Source Notes: Attached are the 12x24 LOLP heatmaps requested for 2026, both combined and broken apart for weekend and weekday

WEEKDAYS & WEEKENDS

Count	31	28	31	30	31	30	31	31	30	31	30	31
Hr Ending	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.04%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.06%
2	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%
3	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%
4	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%
5	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.06%
6	0.06%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.01%	0.13%
7	0.39%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.13%	0.97%
8	0.67%	0.20%	0.00%	0.00%	0.00%	0.02%	0.00%	0.01%	0.00%	0.00%	0.21%	1.46%
9	0.71%	0.17%	0.00%	0.00%	0.00%	0.03%	0.00%	0.03%	0.00%	0.00%	0.22%	1.53%
10	0.66%	0.15%	0.00%	0.00%	0.00%	0.04%	0.01%	0.06%	0.00%	0.00%	0.20%	1.45%
11	0.68%	0.15%	0.00%	0.00%	0.00%	0.05%	0.06%	0.16%	0.00%	0.00%	0.20%	1.46%
12	0.67%	0.15%	0.00%	0.00%	0.00%	0.07%	0.21%	0.46%	0.01%	0.00%	0.22%	1.46%
13	0.66%	0.14%	0.00%	0.00%	0.00%	0.09%	0.52%	0.87%	0.01%	0.00%	0.21%	1.43%
14	0.64%	0.13%	0.00%	0.00%	0.00%	0.14%	0.83%	1.40%	0.04%	0.00%	0.20%	1.34%
15	0.66%	0.14%	0.00%	0.00%	0.00%	0.18%	1.09%	1.95%	0.09%	0.00%	0.22%	1.42%
16	0.82%	0.17%	0.00%	0.00%	0.00%	0.20%	1.23%	2.49%	0.19%	0.00%	0.37%	2.00%
17	0.94%	0.21%	0.00%	0.00%	0.00%	0.23%	1.40%	2.97%	0.25%	0.00%	0.45%	2.24%
18	1.00%	0.24%	0.00%	0.00%	0.00%	0.23%	1.39%	3.17%	0.30%	0.00%	0.46%	2.35%
19	1.02%	0.26%	0.00%	0.00%	0.00%	0.27%	1.62%	4.54%	0.49%	0.00%	0.48%	2.44%
20	1.06%	0.28%	0.01%	0.00%	0.00%	0.35%	2.20%	5.19%	0.52%	0.00%	0.55%	2.54%
21	1.08%	0.30%	0.00%	0.00%	0.00%	0.33%	1.97%	4.58%	0.43%	0.00%	0.58%	2.59%
22	1.01%	0.26%	0.00%	0.00%	0.00%	0.17%	0.47%	1.63%	0.12%	0.00%	0.53%	2.42%
23	0.27%	0.08%	0.00%	0.00%	0.00%	0.08%	0.03%	0.35%	0.01%	0.00%	0.17%	0.45%
24	0.09%	0.03%	0.00%	0.00%	0.00%	0.02%	0.00%	0.04%	0.00%	0.00%	0.02%	0.12%

100%

UM 1893, UM1893_EE-Avoided-Cost-Inputs 4) LOLP IRP

WEEKDAYS ONLY

Count	31	28	31	30	31	30	31	31	30	31	30	31
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%
2	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.04%
3	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%
4	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%
5	0.03%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.05%
6	0.05%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.01%	0.13%
7	0.39%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%	0.14%	0.99%
8	0.68%	0.21%	0.00%	0.00%	0.00%	0.02%	0.00%	0.01%	0.00%	0.00%	0.23%	1.50%
9	0.72%	0.17%	0.00%	0.00%	0.00%	0.03%	0.00%	0.03%	0.00%	0.00%	0.24%	1.56%
10	0.66%	0.15%	0.00%	0.00%	0.00%	0.04%	0.01%	0.07%	0.00%	0.00%	0.21%	1.48%
11	0.68%	0.15%	0.00%	0.00%	0.00%	0.05%	0.06%	0.17%	0.00%	0.00%	0.21%	1.48%
12	0.66%	0.15%	0.00%	0.00%	0.00%	0.06%	0.22%	0.50%	0.01%	0.00%	0.23%	1.47%
13	0.65%	0.14%	0.00%	0.00%	0.00%	0.07%	0.56%	0.93%	0.02%	0.00%	0.22%	1.43%
14	0.63%	0.14%	0.00%	0.00%	0.00%	0.11%	0.89%	1.49%	0.04%	0.00%	0.21%	1.35%
15	0.65%	0.15%	0.00%	0.00%	0.00%	0.14%	1.15%	2.07%	0.10%	0.00%	0.23%	1.44%
16	0.81%	0.18%	0.00%	0.00%	0.00%	0.15%	1.28%	2.60%	0.20%	0.00%	0.39%	1.97%
17	0.93%	0.21%	0.00%	0.00%	0.00%	0.17%	1.45%	3.10%	0.26%	0.00%	0.47%	2.19%
18	0.98%	0.24%	0.00%	0.00%	0.00%	0.17%	1.42%	3.25%	0.30%	0.00%	0.48%	2.29%
19	1.00%	0.26%	0.00%	0.00%	0.00%	0.19%	1.62%	4.47%	0.49%	0.00%	0.50%	2.38%
20	1.04%	0.28%	0.01%	0.00%	0.00%	0.26%	2.13%	5.04%	0.52%	0.00%	0.57%	2.47%
21	1.07%	0.31%	0.00%	0.00%	0.00%	0.25%	1.98%	4.59%	0.44%	0.00%	0.60%	2.55%
22	1.00%	0.27%	0.00%	0.00%	0.00%	0.09%	0.48%	1.71%	0.13%	0.00%	0.55%	2.36%
23	0.26%	0.08%	0.00%	0.00%	0.00%	0.01%	0.03%	0.37%	0.01%	0.00%	0.18%	0.42%
24	0.07%	0.02%	0.00%	0.00%	0.00%	0.01%	0.00%	0.04%	0.00%	0.00%	0.02%	0.10%

92.6%

UM 1893, UM1893_EE-Avoided-Cost-Inputs 4) LOLP IRP

WEEKENDS ONLY

Count	31	28	31	30	31	30	31	31	30	31	30	31
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.22%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.19%
2	0.17%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.11%
3	0.08%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.02%	0.04%
4	0.12%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.08%
5	0.09%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.12%
6	0.17%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.14%
7	0.40%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.70%
8	0.54%	0.08%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	1.05%
9	0.66%	0.09%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.04%	1.15%
10	0.70%	0.09%	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	0.06%	1.12%
11	0.72%	0.12%	0.00%	0.00%	0.00%	0.06%	0.01%	0.02%	0.00%	0.00%	0.06%	1.20%
12	0.75%	0.11%	0.00%	0.00%	0.00%	0.20%	0.03%	0.02%	0.00%	0.00%	0.04%	1.38%
13	0.78%	0.07%	0.00%	0.00%	0.00%	0.28%	0.04%	0.09%	0.00%	0.00%	0.03%	1.40%
14	0.77%	0.07%	0.00%	0.00%	0.00%	0.48%	0.16%	0.20%	0.00%	0.00%	0.06%	1.13%
15	0.78%	0.09%	0.00%	0.00%	0.00%	0.75%	0.36%	0.56%	0.01%	0.00%	0.07%	1.21%
16	0.92%	0.11%	0.00%	0.00%	0.00%	0.83%	0.60%	1.03%	0.06%	0.00%	0.12%	2.39%
17	1.10%	0.16%	0.00%	0.00%	0.00%	0.95%	0.78%	1.36%	0.09%	0.00%	0.19%	2.79%
18	1.26%	0.18%	0.00%	0.00%	0.00%	1.09%	1.02%	2.15%	0.24%	0.00%	0.20%	3.10%
19	1.27%	0.23%	0.00%	0.00%	0.00%	1.22%	1.70%	5.48%	0.58%	0.00%	0.24%	3.17%
20	1.32%	0.26%	0.00%	0.00%	0.00%	1.48%	3.03%	7.18%	0.57%	0.00%	0.28%	3.37%
21	1.30%	0.27%	0.00%	0.00%	0.00%	1.33%	1.85%	4.56%	0.23%	0.00%	0.24%	3.16%
22	1.13%	0.20%	0.00%	0.00%	0.00%	1.17%	0.30%	0.57%	0.03%	0.00%	0.22%	3.11%
23	0.47%	0.07%	0.00%	0.00%	0.00%	0.95%	0.00%	0.04%	0.00%	0.00%	0.03%	0.81%
24	0.31%	0.11%	0.00%	0.00%	0.00%	0.20%	0.00%	0.03%	0.00%	0.00%	0.03%	0.38%

7.4%

RPS Compliance Inputs IRP

Real or Nominal?	Real
Dollar Year:	2023
Source and Pg #:	2023 CEP/IRP, Chapter 10, pg. 249-250. Figures 75 & 76
Source Link or File Name:	https://edocs.puc.state.or.us/efdocs/HAA/lc80haa8431.pdf
Source Notes:	2023 CEP/IRP, there is no incremental cost of PNW wind resources net of capacity and energy value

	RPS Compliance Cost (\$/MWh)	Avoided RPS Compliance Obligation (%)
2022	\$ -	20.00%
2023	\$ -	20.00%
2024	\$ -	20.00%
2025	\$ -	27.00%
2026	\$ -	27.00%
2027	\$ -	27.00%
2028	\$ -	27.00%
2029	\$ -	27.00%
2030	\$ -	35.00%
2031	\$ -	35.00%
2032	\$ -	35.00%
2033	\$ -	35.00%
2034	\$ -	35.00%
2035	\$ -	45.00%
2036	\$ -	45.00%
2037	\$ -	45.00%
2038	\$ -	45.00%
2039	\$ -	45.00%
2040	\$ -	50.00%
2041	\$ -	50.00%
2042	\$ -	50.00%
2043	\$ -	50.00%
2044	\$ -	50.00%
2045	\$ -	50.00%
2046	\$ -	50.00%
2047	\$ -	50.00%
2048	\$ -	50.00%
2049	\$ -	50.00%
2050	\$ -	50.00%