



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

December 20, 2023

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

**RE: UM 1953 PGE's Green Energy Affinity Rider, Schedule 55, CSO Option, Rate and Credit Calculations, Submitted in Compliance with Order No. 21-091**

Portland General Electric (PGE) submits these confidential work papers pursuant to Schedule 55 adopted by Public Utility Commission of Oregon (OPUC or Commission) Order No. 21-091 (Docket No. UM 1953). PGE's tariff specifically directs PGE to submit rate and credit calculations to OPUC Staff for review. Highly Confidential Attachment A provides the work paper demonstrating the rate and credit calculations that were performed in accordance with the filed tariff Schedule 55 using the methodologies authorized in Commission Order No. 21-091.

The attached calculations are related to a renegotiated power purchase agreement associated with the 300 MW Phase 1 cap, of which 140 MW is reserved for the Customer Supplied Option (CSO). These calculations remain consistent with the credit methodology applied to the previous filings under Phase I as filed on January 22, 2021, and November 18, 2022, in Docket No. UM 1953 and approved under Order No. 21-053 and Order No. 23-035 but are updated to reflect the renegotiated power purchase agreement.

In its Phase I testimony PGE committed to bring the completed customer agreements before Staff in a compliance filing. Highly Confidential Attachment B provides the draft customer agreement for the CSO portion.

Attachments A and B contain highly confidential information and are subject to Modified Protective Order No. 20-302. They are being submitted electronically using an encrypted file to [puc.workpapers@puc.oregon.gov](mailto:puc.workpapers@puc.oregon.gov).

PGE respectfully requests that the OPUC Staff review this filing and submit acknowledgement of PGE's compliance during the January 23, 2024, public meeting.

UM 1953 PGE's Green Energy Affinity Rider, Schedule 55,  
CSO Option, Rate and Credit Calculations  
Page 2

Please direct questions to Christopher Pleasant at [christopher.pleasant@pgn.com](mailto:christopher.pleasant@pgn.com).  
Please direct all formal correspondence and requests to the following email address  
[pgc.opuc.filings@pgn.com](mailto:pgc.opuc.filings@pgn.com).

Sincerely,

*\s\ Robert Macfarlane*

Robert Macfarlane  
Manager, Pricing and Tariffs

Enclosures

UM 1953  
Green Energy Affinity Rider, Schedule 55  
CSO Option, Rate and Credit Calculations  
Submitted in Compliance with Order No. 21-091

Attachments A & B

Portions are Highly Confidential  
Submitted under Modified Protective Order No. 20-302

Attachments A (Partially Redacted)

Attachment B (Fully Redacted)

**Begin Highly Confidential**

Subscriber Cost (\$/MWh)		
	PPA	Subscriber Agmt
PPA Cost		
PGE admin	\$ 0.04	\$ 0.05
Energy Credit	\$ (53.58)	
Capacity Credit	\$ (6.70)	
PPA Premium		
Subscriber Cost w/ Admin		

**End Highly Confidential**

Assumptions	
Resource	GFI - Phase 1 CSO
Project Size (MW)	140
ELCC	8.50%
Term Length (years)	25
Start Year	2026
Start Date	1/1/2026
End Date	12/31/2050
PPA Cost	
Inflation	2.04%
After Tax Nominal Cost of Capital	
Net Cost of Capacity (\$/kW-yr)	\$149.58
Degradation	0.50%

**Begin Highly Confidential**

**End Highly Confidential**

**Begin Highly Confidential**

**End Highly Confidential**

**Begin Highly Confidential**

**Begin Highly Confidential**

Cost & Credit Analysis							
Year	Year #	MWh's	PPA Cost	PGE Admin Cost	Energy Value	Capacity Value	Net Cost/ (Benefit)
2026	1	354,408		18,378			
2027	2	352,636		18,287			
2028	3	351,470		18,226			
2029	4	349,118		18,104			
2030	5	347,373		18,014			
2031	6	345,636		17,924			
2032	7	344,494		17,864			
2033	8	342,188		17,745			
2034	9	340,477		17,656			
2035	10	338,775		17,568			
2036	11	337,655		17,510			
2037	12	335,396		17,392			
2038	13	333,719		17,306			
2039	14	332,050		17,219			
2040	15	330,953		17,162			
2041	16	328,738		17,047			
2042	17	327,094		16,962			
2043	18	325,459		16,877			
2044	19	324,383		16,821			
2045	20	322,212		16,709			
2046	21	320,601		-			
2047	22	318,998		-			
2048	23	317,944		-			
2049	24	315,816		-			
2050	25	314,237		-			
0	0	-		-			
NPV				\$350,770			
Average		338,212					
LCOE (\$/MWh)				0.04	(53.58)	(6.70)	
Nominal LCOE (\$/MWh) for Subscriber Agreement*:				\$ 0.05			

**End Highly Confidential**

**End Highly Confidential**

\* Note that the entire 25-year expected Net Cost to PGE will be collected from Subscriber in their 20-year Subscriber Term

**Begin Highly Confidential**  
Total Expected Average Annual Cost to Subscriber  
Total Expected Average Annual Cost to Subscriber  
**End Highly Confidential**

**Net Cost of Capacity**

DSP

2021\$

Resource COD	6-Hour Battery 2025	
Fixed Cost	\$	163.97
Variable Cost	\$	-
Integration Cost	\$	-
Energy Value	\$	(10.98)
Flexibility Value	\$	(29.43)
ELCC		86%
<b>Net Cost of Capacity</b>	\$	149.58 2023\$

**Effective Load Carrying Capability (ELCC)**

	Capacity shortage	Capacity Contribution	ELCC
Base case at the time of capacity commitment	385.0		
with 140 MW GFI Resource Addition (Daybreak)	371.0	14.00	10.00% **

\*\* PGE is using 8.50% ELCC in the 'Cost & Credit Analysis' tab in accordance with Order 23-036

Given that the ELCC value is not largely disparate from the agreed upon 8.5 percent rate for PURPA QF's, the reasonableness of shifting to a non-emitting avoided capacity resource, and the use of data from the most recent RFP, Staff does not propose that the Commission delay approval of these updates to existing Phases of the program. However, Staff does recommend prioritizing a more comprehensive investigation into voluntary bundled capacity valuation methods that consider the goals and practices developed in Docket No. UM 2011.

**\*\*No change in cost since originally filed January 22, 2021\*\***

<b>Costs*</b>	<i>Annual Operations</i>
	<b>2023 - 2036</b>
System Integration, IT, billing, misc.	\$556
Resource Procurement	\$2,000
Marketing	\$0
Communications	\$0
Project Management FTE	0.0667
Product Management	\$13,020
Subtotal	\$15,576
Amortized development costs	\$1,963
Total annual budget	\$17,539

	CSO Admin fee (per MWh)
\$/MWh	\$0.05
\$/kWh	\$0.00005
Generation (MWh)	338,212
Salary	\$90,000
Loadings	117%
Fully allocated salary	\$195,300
Program length	20

\*Integration, shaping, and firming costs are included in the PPA price.

## CERTIFICATE OF SERVICE

I hereby certify that I have this day caused **Portland General Electric Company's** **HIGHLY CONFIDENTIAL Phase 2 CSO Compliance Filing** to be served by electronic mail to those parties whose e-mail addresses appear on the attached service list for OPUC Docket UM 1953.

Dated at Portland, Oregon, this 20th day of December, 2023.

*/s/ Danielle McCain*

Danielle McCain  
Office Administrator  
Portland General Electric Company  
121 SW Salmon Street, 1WTC0306Portland, OR 97204  
E-mail: [pge.opuc.filings@pgn.com](mailto:pge.opuc.filings@pgn.com)

## UM 1953 Service List

<b>ALLIANCE OF WESTERN ENERGY CONSUMERS</b>	
<b>BRENT COLEMAN (C) (HC)</b> <b>DAVISON VAN CLEVE</b>	1750 SW HARBOR WAY, SUITE 450 PORTLAND OR 97201 blc@dvclaw.com
<b>TYLER C PEPPLE (C) (HC)</b> <b>DAVISON VAN CLEVE</b>	107 SE WASHINGTON ST STE 430 PORTLAND OR 97214 tcp@dvclaw.com
<b>CALPINE SOLUTIONS</b>	
<b>GREGORY M. ADAMS (C) (HC)</b> <b>RICHARDSON ADAMS PLLC</b>	515 N 27TH ST BOISE ID 83702 greg@richardsonadams.com
<b>NIPPC</b>	
<b>CARL FINK (C) (HC)</b> <b>BLUE PLANET ENERGY</b> <b>LAW LLC</b>	628 SW CHESTNUT ST, STE 200 PORTLAND OR 97219 cmfink@blueplanetlaw.com
<b>OREGON CITIZENS UTILITY BOARD</b>	
<b>MICHAEL GOETZ (C) (HC)</b> <b>OREGON CITIZENS' UTILITY</b> <b>BOARD</b>	610 SW BROADWAY STE 400 PORTLAND OR 97205 mike@oregoncub.org
<b>ROBERT JENKS (C) (HC)</b> <b>OREGON CITIZENS' UTILITY</b> <b>BOARD</b>	610 SW BROADWAY, STE 400 PORTLAND OR 97205 bob@oregoncub.org
<b>RENEWABLE NW</b>	
<b>MAX GREENE (C) (HC)</b> <b>RENEWABLE NORTHWEST</b>	421 SW 6TH AVE STE 975 PORTLAND OR 97204 max@renewablenw.org
<b>STAFF</b>	
<b>SCOTT GIBBENS (C) (HC)</b> <b>PUBLIC UTILITY COMMISSION</b> <b>OF OREGON</b>	201 HIGH ST SE SALEM OR 97301 scott.gibbens@puc.oregon.gov
<b>BETSY BRIDGE (C) (HC)</b> <b>OREGON DEPARTMENT OF</b> <b>JUSTICE</b>	1162 COURT STREET SALEM OR 97301-4520 betsy.bridge@doj.state.or.us