

Exh. DJM-1T
Docket UE-25_____
Witness: Daniel J. MacNeil

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PACIFICORP dba
PACIFIC POWER & LIGHT COMPANY

Respondent.

Docket UE-25_____

**PACIFICORP
DIRECT TESTIMONY OF DANIEL J. MACNEIL**

September 2025

TABLE OF CONTENTS

I.	QUALIFICATIONS	1
II.	PURPOSE OF TESTIMONY AND RECOMMENDATION	1
	Table 1: Export Credit Summary	2
III.	EXPORT CREDIT METHODOLOGY	3
	A. Export Profile	4
	Table 2: Monthly Generation Volume (kWh) and Capacity Factor (%)	5
	Table 3: Export Capacity Factor (%)	5
	B. Avoided Energy	6
	C. Integration	7
	D. Clean Energy Premium	9
	E. Avoided Line Losses.....	12
	E. Avoided Generation Capacity	13
	F. Avoided Transmission Capacity	15
	G. Avoided Distribution Capacity	17
V.	UPDATE METHODOLOGY FOR EXPORT CREDIT RATES.....	19
VI.	CONCLUSION.....	20

1 **Q. Please state your name, business address, and present position with PacifiCorp**
2 **d/b/a Pacific Power & Light Company (PacifiCorp or company).**

3 A. My name is Daniel J. MacNeil. My business address is 825 NE Multnomah Street,
4 Suite 600, Portland, Oregon 97232. My present position is Commercial Analytics
5 Adviser.

6 **I. QUALIFICATIONS**

7 **Q. Please describe your education and professional background.**

8 A. I received a Master of Arts degree in International Science and Technology Policy
9 from George Washington University and a Bachelor of Science degree in Materials
10 Science and Engineering from Johns Hopkins University. Before joining PacifiCorp,
11 I completed internships with the U.S. Department of Energy's Office of Policy and
12 International Affairs and the World Resources Institute's Green Power Market
13 Development Group. I have been employed by PacifiCorp since 2008, first as a
14 member of the net power costs group, then as manager of that group from June 2015
15 until September 2016. In my current role, I provide analytical expertise on a broad
16 range of topics related to PacifiCorp's resource portfolio and obligations, including
17 oversight of the calculation of avoided cost pricing in PacifiCorp's jurisdictions.

18 **Q. Have you testified in previous regulatory proceedings?**

19 A. Yes. I have provided testimony on behalf of PacifiCorp in Washington as well as
20 California, Idaho, Oregon, Utah, Wyoming, and FERC dockets.

21 **II. PURPOSE OF TESTIMONY AND RECOMMENDATION**

22 **Q. What is the purpose of your testimony in this proceeding?**

23 A. My testimony supports the company's proposed Schedule 138, Net Billing Service,

1 specifically the value of export credits applicable to the electricity generated by an
2 eligible customer and fed back to the electric grid. I address two primary issues. First,
3 I describe the elements, methodology, and calculation of the export credit value.
4 Second, I address how the export credit will be updated going forward.

5 **Q. Have you prepared a summary of the proposed export credit values?**

6 A. Yes. My calculations support an average annual export credit of \$51.67 per megawatt-
7 hour (MWh), which is equivalent to 5.167 cents per kilowatt-hour, as summarized in
8 Table 1.

Table 1: Export Credit Summary

	CY2026		
Export Profile		Capacity Factor	
Volume (kWh per kW)	832	9.47%	
Energy Elements	(cents/kWh)		
WEIM Energy	2.665		
Integration	(0.240)		
Clean Energy Premium	0.955		
Losses	0.256		
Energy Total	3.635		
Capacity Elements	(cents/kWh)	Contribution	Contribution Type
Generation Capacity	0.594	4.06%	Loss of Load Probability
Transmission System Capacity	0.513	7.49%	Transmission System Peaks
Transmission Capacity Deferral	0.059	7.49%	Transmission System Peaks
Distribution Capacity Deferral	0.366	14.85%	Top 10% WA Load Hours - Winter Adjusted Distribution Capacity
Capacity Total	1.531		
Total	5.167		

III. EXPORT CREDIT METHODOLOGY

Q. What elements are included in the customer generation export credit?

A. The proposed export credit includes the following elements related to the impact of exported energy on PacifiCorp's system and dispatch:

- **Avoided Energy Cost:** when customer generation is exported to the grid, PacifiCorp can reduce the output of its generation resources or reduce the volume of its market purchases. The resulting reduction in fuel expense and purchased power cost is the avoided energy cost.
- **Integration Cost:** PacifiCorp uses flexible resources to accommodate fluctuations in the load and resource balance of its system attributable to load, wind, solar, and other non-variable energy resources that are not under PacifiCorp's control. Integration costs represent the cost of holding reserves with flexible resources to reliably maintain the load and resource balance.
- **Clean Energy Premium:** This value reflects the incremental cost of the resources added for Clean Energy Transformation Act (CETA) compliance.
- **Avoided Line Losses:** line losses are the difference between the total generation injected into the grid, and the total metered volume at customer sites. As a result, a kilowatt-hour (kWh) produced by a generator is not equivalent to a kWh delivered to a customer. PacifiCorp's avoided energy costs are typically measured based on generation and market purchases at transmission voltages, while the metered volumes for residential generation exports are measured at the secondary voltage level. Each of the energy and capacity elements are adjusted for avoided line losses.
- **Avoided Generation Capacity:** PacifiCorp must maintain sufficient generating resources to ensure that it can reliably meet retail load. Customer generation can increase the reliability of PacifiCorp's portfolio and avoid the need for additional generating capacity.
- **Avoided Transmission and Distribution (T&D) Capacity:** PacifiCorp must maintain sufficient transmission and distribution capacity to deliver generation resources to customer load. Because customer generation is located close to customer load relative to most utility-scale generation resources, it can reduce the loading of transmission and distribution lines and avoid reliability upgrades.

1 **A. Export Profile**

2 **Q. What export profile has PacifiCorp used in the development of the proposed**
3 **export credit rates?**

4 A. At present, the metering for PacifiCorp's customer generators within Washington
5 does not collect interval data that could be used to construct an hourly export profile.
6 However, PacifiCorp does collect interval data for customer generators in Oregon
7 with Automated Metering Infrastructure (AMI) meters. To estimate the value of
8 exports from Washington customers, PacifiCorp proposes to use the mean export
9 volumes for all customer generators in counties in northeastern Oregon that border
10 Washington, specifically PacifiCorp's customers in Gilliam, Morrow, Sherman,
11 Umatilla, Wallowa, and Wasco counties. For this filing, PacifiCorp is using historical
12 export data for the twelve months ending December 2024, and at the end of that
13 period those counties had 736 customer-generators with a mean rated capacity of 11.4
14 kilowatts (Direct Current rating).

15 **Q. Please describe the export profile.**

16 A. As shown in Table 2, the mean exports total approximately 9,569 kWh per year, with
17 a monthly range from a low of 120 kWh in January to a maximum of 1,331 kWh in
18 June. This equates to a roughly 1.4 percent capacity factor in January, and a 16.1
19 percent capacity factor in June. These capacity factors are lower than utility-scale
20 fixed-tilt solar resources assumed for qualifying facilities (QFs) as part of Schedule
21 QF, which have a capacity factor ranging from 13 percent in December to 33 percent
22 in July. The capacity factor of the export profile is reduced for two reasons. First,
23 customer exports primarily come from rooftop solar panels that are aligned with the

1 underlying rooftop, rather than tilted toward the south to optimize energy production,
 2 as is typical for larger-scale solar resources. Second, exports are reduced by customer
 3 load in any given interval.

Table 2: Monthly Generation Volume (kWh) and Capacity Factor (%)

Type	Units	Month												Total
		1	2	3	4	5	6	7	8	9	10	11	12	
Exports	kWh	120	339	878	1,145	1,329	1,331	1,206	1,162	923	721	250	164	9,569
Exports	%	1.4%	4.2%	10.3%	13.8%	15.5%	16.1%	14.1%	13.6%	11.2%	8.4%	3.0%	1.9%	9.5%
Fixed-Tilt QF	%	14.3%	18.1%	24.1%	27.8%	29.4%	32.2%	33.3%	31.7%	30.7%	25.6%	17.9%	13.0%	24.9%

4 **Q. Please summarize the daily and seasonal variation of the export profile.**

5 A. Table 3 provides a heat map that illustrates the pattern of exports across each day for
 6 each month of the year, specifically the capacity factor relative to the nameplate
 7 capacity of the generation (adjusted to reflect estimated alternating current deliveries
 8 to the grid). The pattern is similar to a solar profile, with the highest capacity factors
 9 in the middle of the day during the summer time when the sun is closest to directly
 10 overhead and with diminishing capacity factors in the winter as a result of shorter
 11 days and reduced solar insolation. While most customers have solar generation, a
 12 small portion of the total comes from wind and other technologies, resulting in
 13 occasional small export values outside of solar hours.

Table 3: Export Capacity Factor (%)

Month	Hour Beginning (PPT)																							
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-	-	-	-	-	-	-	0.7%	2%	4%	7%	8%	7%	4%	1.0%	0.1%	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	0.5%	3%	9%	15%	19%	19%	17%	12%	6%	1.0%	-	-	-	-	-	-	-	-
3	-	-	-	-	-	0.1%	1.4%	7%	18%	28%	36%	39%	38%	33%	25%	15%	6%	0.6%	-	-	-	-	-	-
4	-	-	-	-	0.3%	4%	13%	25%	37%	44%	47%	47%	44%	36%	23%	10%	2%	0.1%	-	-	-	-	-	-
5	-	-	-	-	0.1%	2%	8%	19%	32%	42%	48%	50%	49%	44%	36%	25%	14%	5%	0.6%	-	-	-	-	-
6	-	-	-	-	0.2%	2%	10%	21%	34%	43%	48%	50%	49%	44%	36%	26%	15%	6%	1.1%	0.1%	-	-	-	-
7	-	-	-	-	0.1%	1.4%	7%	18%	30%	39%	44%	46%	44%	39%	32%	21%	12%	4%	0.7%	0.2%	-	-	-	-
8	-	-	-	-	0.5%	5%	16%	29%	40%	45%	46%	45%	38%	30%	19%	10%	2%	0.2%	-	-	-	-	-	-
9	-	-	0.2%	-	0.2%	0.1%	2%	10%	22%	33%	40%	42%	39%	34%	25%	14%	5%	0.6%	-	-	-	-	-	-
10	-	-	-	-	-	-	0.7%	6%	16%	25%	32%	34%	33%	28%	19%	9%	1.2%	-	-	-	-	-	-	-
11	-	-	-	-	-	-	0.7%	4%	8%	12%	15%	14%	11%	6%	2%	0.1%	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	0.1%	2%	5%	8%	10%	10%	7%	3%	0.4%	-	-	-	-	-	-	-	-	-

1 **Q. Is PacifiCorp proposing to differentiate export credit rates across the year?**

2 A. No. PacifiCorp's standard metering within Washington does not support
3 differentiation by time of day, and the seasonal variation in the energy value of the
4 export profile is not significant. Washington also exhibits both winter and summer
5 peak requirements such that exports provide capacity value in both seasons.

6 **B. Avoided Energy**

7 **Q. How does PacifiCorp propose calculating avoided energy costs?**

8 A. PacifiCorp proposes that compensation for exported energy be valued based on
9 historical prices from the Western Energy Imbalance Market (WEIM) for the twelve
10 months ending December 2024, weighted based on customers' historical export
11 volumes. Specifically, PacifiCorp proposes using fifteen-minute market pricing for
12 the PacifiCorp West WEIM Load Aggregation Point (ELAP), which represents the
13 average price for the PacifiCorp West balancing authority area (BAA).

14 **Q. Why are energy values based on historical WEIM prices appropriate?**

15 A. Using historical WEIM prices for historical exports in the same intervals is the most
16 accurate way to maintain the relationships between these data series. Historical export
17 profiles are the result of two components: customer generation, which is typically
18 dependent on solar insolation, as influenced by weather conditions, and customer
19 load, which is impacted by a variety of factors, including weather and a customer's
20 pattern of energy consumption. For example, if customer load increases on hot
21 summer days, resulting in lower exports, the historical WEIM pricing from that same
22 period may be higher if regional demand is also relatively high, or could be lower if
23 regional demand is relatively low (or if regional resource supply is relatively high).

1 The relationship between weather in PacifiCorp's service territory and the impact to
2 supply and demand across the WEIM footprint is necessarily complex but inherently
3 captured by using price and export volume data from the same historical period. It is
4 significantly more difficult to represent the relationship between customer generation,
5 customer load, and market prices on a forecast basis. While PacifiCorp's 2025
6 Integrated Resource Plan expanded the use of historical data to better represent the
7 range and relationships of weather-related variables, including wind, solar, and hydro
8 generation, load, and market prices, it cannot match historical WEIM pricing in
9 simplicity and transparency.

10 **Q. What is the proposed exported energy value for customer generators?**

11 A. The weighted average WEIM value of the export profile during the 12 months ending
12 December 2024 was 2.548 cents per kWh. Because the proposed 2026 rate effective
13 period is two years later, PacifiCorp proposes to escalate the historical costs by two
14 years of inflation, consistent with the assumptions used in Schedule QF. After
15 incorporating inflation, the WEIM energy value is 2.665 cents per kWh.

16 **C. Integration**

17 **Q. How does PacifiCorp propose calculating integration costs?**

18 A. PacifiCorp proposes that the solar integration costs included in Schedule QF be
19 applied to all export volumes. While a small portion of customer generators use other
20 generation types or a combination, approximately 99.8 percent of participants have
21 solar generation.

22 **Q. Are integration costs applicable to distributed resources?**

23 A. Yes. Utilities must maintain a balance between load and resources at all times, and

1 must have dispatchable capacity available to compensate for moment to moment
2 variations and sustained changes. While offsetting variations cancel out and can
3 reduce balancing requirements, particularly for PacifiCorp's large and geographically
4 diverse system, significant variation remains, and all changes in loads and resources
5 contribute to these requirements, regardless of size, based on their impact on the
6 system as a whole.

7 **Q. Are exports likely to exhibit relatively higher variation than solar production**
8 **overall?**

9 A. Yes. Assume a customer has a 10-kW rooftop solar array. When a passing cloud
10 reduces solar output from 8 kW to 6 kW, it results in 25 percent less generation and
11 would require deployment of 2 kW of reserve capacity to compensate for the change.
12 If a customer is using 4 kW initially, and maintains that level of consumption, the
13 same conditions would result in exports dropping from 4 kW to 2 kW, a 50 percent
14 reduction, even though the variation in output is the same. This would still require
15 deployment of 2 kW of reserve capacity, but because integration costs are applied on
16 an energy basis (i.e. a \$/MWh rate), the export volume provides less compensation
17 for integration requirements than the entire output of a solar facility. The geographic
18 distribution of customer generation facilities may offset this effect to an extent, as
19 clouds will impact different customers at different times, but PacifiCorp's integration
20 costs already reflect a significant degree of diversity among its large portfolio of load,
21 wind, solar, and non-variable energy resources. Integration costs are also tied to
22 energy prices, as the cost of holding reserves is generally higher when energy prices
23 are high, which often coincides with periods when load is high.

1 In contrast, customer exports are reduced by onsite customer load, as excess amounts
2 are higher in periods when load is low. As a result, the energy value of exports is
3 likely to be lower than that of the overall generation from a solar resource, and the
4 cost of integration in those hours may be lower. Given these factors, PacifiCorp
5 proposes accounting for integration using the same percentage of energy value
6 applicable to fixed tilt solar in Schedule QF. The current energy price for fixed tilt
7 solar (prior to removing integration cost) is \$53.23 per megawatt-hour and the current
8 solar integration cost is \$4.80 per megawatt-hour in 2026, such that integration
9 represents approximately nine percent of the energy value. That same nine percent
10 adjustment for integration can be applied to the energy value specific to the export
11 profile.

12 **Q. What is the proposed integration cost for customer exports?**

13 A. The solar integration cost reduces the export credit rate by 0.24 cents per kWh.

14 **D. Clean Energy Premium**

15 **Q. What is the clean energy premium?**

16 A. To comply with CETA, PacifiCorp must procure clean resources equivalent to its
17 retail sales, with compliance measured by the procurement of Renewable Energy
18 Credits (RECs), or an equivalent for non-emitting resources that are not eligible for
19 RECs. QFs also reduce the compliance obligation, regardless of their REC eligibility.
20 The proposed Schedule 138, Net Billing Service is limited to renewable resources and
21 reduces the need for energy and capacity supplied by the utility. As a result it is
22 reasonable to count exported customer-generated energy toward CETA compliance
23 and to include compensation for that compliance benefit as part of the export credit

1 rate. PacifiCorp refers to this avoided CETA compliance cost as the clean energy
2 premium.

3 **Q. Has PacifiCorp developed a clean energy premium for other rate schedules?**

4 A. Yes. The avoided cost pricing within Schedule QF includes a calculation of a clean
5 energy premium.

6 **Q. Please describe the calculation of the clean energy premium reflected in**
7 **Schedule QF.**

8 A. The current Schedule QF (effective January 1, 2025) reflects a clean energy premium
9 based on small-scale wind and solar resources that were identified to meet
10 incremental compliance requirements associated with CETA in PacifiCorp's 2023 IRP
11 (a.k.a. 2021 IRP Progress Report). The calculation accounts for the costs of these
12 resources over their expected operating lives, based on assumptions used in the 2023
13 IRP, as well as the benefits of the energy and capacity those resources provide, based
14 on the values reflected in Schedule QF as well as the resource characteristics used in
15 the 2023 IRP. The resource costs include capital costs, including financing and
16 decommissioning levelized over the resource life, plus fixed operation and
17 maintenance costs, minus production tax credit revenue. The resource benefits
18 include capacity value based on a simple cycle combustion turbine as assumed in
19 Schedule QF and prorated based on each resource's capacity contribution, as well as
20 energy value, which reflects forecasted hourly Mid-Columbia market prices and the
21 hourly generation profile of each resource. The net of the costs and benefits are
22 calculated starting in 2030 (the year in which CETA compliance begins), and continue
23 for each year of the resource's expected operating lives (25 years for solar and 30

1 years for wind). The present value of the net cost is calculated, converted to a dollar
2 per megawatt-hour (consistent with CETA's megawatt-hour compliance
3 requirements), and the average of the levelized values for wind and solar is used for
4 QF pricing.

5 **Q. Is PacifiCorp proposing any differences in the application of the clean energy**
6 **premium for the purposes of Schedule 138, relative to Schedule QF?**

7 A. Yes. First, Schedule QF includes a variety of resource types, while Schedule 138 is
8 expected to primarily be composed of rooftop solar resources, and is most likely to
9 reduce the need for procurement of solar resources. With that in mind, the proposed
10 export credit rate reflects the clean energy premium for a proxy solar resource, rather
11 than an average value based on both wind and solar. Second, Schedule QF is
12 primarily intended for firm, long-term contracts of up to fifteen years, and includes a
13 levelized clean energy premium over that long-term horizon, based on the value of
14 compliance starting in 2030. The proposed Schedule 138 does not have a long-term
15 commitment, but the aggregate program participation and presence of an existing
16 customer relationship (i.e. load service) can make the program dependable over time
17 in a way that individual QF resources may not be. To encourage participation and
18 continue progress toward CETA requirements in 2030, for the purpose of Schedule
19 138, PacifiCorp is proposing to include the value of CETA compliance beginning
20 immediately. Specifically, the 2030 clean energy premium for solar used in the
21 calculation of Schedule QF pricing is adjusted for inflation back to a 2026 value for
22 the purpose of the export credit.

1 potential for reduced losses at the secondary level with the additional losses incurred
2 as exports are transferred to other customers.

3 **Q. Why does PacifiCorp propose reducing losses associated with avoided**
4 **distribution capacity?**

5 A. By the time power reaches a distribution substation, losses have already occurred on
6 the transmission system as power is transferred from distant generation resources.
7 Distribution equipment is sized to cover downstream load and associated losses, so
8 losses on the transmission system do not impact distribution capacity needs and can
9 be excluded from the avoided distribution capacity calculation.

10 **Q. How are line losses incorporated in the export credit?**

11 A. Avoided line losses reflect the need for more utility-scale generation than what is
12 metered from an exporting customer generation facility, so PacifiCorp proposes that
13 the energy-related loss factor apply to all energy components, including WEIM value,
14 integration cost, and the clean energy premium. The aggregate value associated with
15 avoided energy components is 0.256 cents per kWh. Avoided line losses also increase
16 capacity value, but because these capacity-related items have smaller line loss
17 impacts the avoided costs for those elements are presented inclusive of the
18 incremental line loss savings.

19 **E. Avoided Generation Capacity**

20 **Q. How does PacifiCorp propose calculating avoided generation capacity?**

21 A. PacifiCorp proposes that avoided generation capacity costs be calculated using the
22 annualized fixed costs of a simple cycle combustion turbine (SCCT), as assumed in
23 Schedule QF. The annualized fixed costs of a SCCT are \$113.26/kW-year, and

1 include capital costs (with financing and decommissioning levelized over the resource
2 life), fixed operation and maintenance costs, and pipeline costs.

3 **Q. How do you propose calculating a generation capacity contribution for Schedule**
4 **138 exports?**

5 A. PacifiCorp proposes using the capacity factor methodology based on loss of load
6 probability (LOLP) data used in Schedule QF, which currently reflects estimates
7 derived from the 2021 IRP preferred portfolio. The capacity factor methodology
8 reports a capacity value that reflects a resource's average output during hours with a
9 potential for loss of load events, weighted based on the probability in each hour. A
10 description of this methodology and accompanying results are part of Appendix K:
11 Capacity Contribution in PacifiCorp's 2021 IRP.

12 **Q. Is PacifiCorp proposing to include a capacity deficiency period as part of the**
13 **export credit methodology?**

14 A. No. While capacity sufficiency and deficiency periods are relevant for long-term
15 contracts, the nature of Schedule 138 does not distinguish the initial participation date
16 of different participants, and doing so would be administratively burdensome and
17 could cause confusion. Because customers are likely to remain on Schedule 138 for
18 the life of their generating equipment, which can be twenty years or longer, most of
19 the exports over the life of the equipment would occur during what was considered a
20 deficiency period at the time the equipment was installed. PacifiCorp also includes
21 projected increases in customer generation installations as part of its load forecast
22 used in IRP portfolio modeling, so forecasted Schedule 138 participation is accounted

1 for as part of the load and resource balance and helps to defer future capacity needs.
2 With that in mind, PacifiCorp is proposing that capacity payments begin immediately.
3 **Q. What is the capacity contribution for Schedule 138 exports under the capacity**
4 **factor methodology?**
5 A. The capacity contribution of Schedule 138 exports is approximately 4.06 percent,
6 before accounting for the impact of line losses. After accounting for line losses, the
7 capacity contribution increases to approximately 4.36 percent.

8 **Q. What is the proposed generation capacity value for customer generators?**
9 A. The generation capacity value is 0.594 cents per kWh.

10 **F. Avoided Transmission Capacity**

11 **Q. How does PacifiCorp propose calculating avoided transmission capacity?**
12 A. PacifiCorp has identified two components for avoided transmission capacity value,
13 with slightly different applications and methodologies. First, PacifiCorp recovers the
14 cost of its overall transmission system from all customers based on their peak load
15 requirements, both retail and wholesale. Second, PacifiCorp includes the potential
16 savings from deferral of transmission capacity upgrades needed to increase load
17 serving capability as part of its modeling of energy efficiency options in its IRP
18 process.
19 **Q. Please describe PacifiCorp's proposed transmission system cost methodology.**
20 A. PacifiCorp Transmission's Open Access Transmission Tariff includes firm
21 transmission costs for network load and point-to-point transmission service that are
22 updated annually based on a formula rate. PacifiCorp proposes using the most current

1 transmission capacity cost as the basis for this component. Effective June 1, 2025, the
2 annual transmission capacity cost is \$52.92/kw-yr.

3 **Q. What capacity contribution do you propose for transmission system costs?**

4 A. Under the approved formula transmission rate methodology used to determine rates
5 for service under the Open Access Transmission Tariff, transmission costs are based
6 on the coincident monthly peak for all network load customers, plus the long-term
7 firm point-to-point transmission reservations. The timing of historical monthly
8 transmission system peaks are published as part of PacifiCorp's formula rate
9 submissions each year. For 2024, the customer generation export profile had an
10 average of approximately 0.86 kW, with values ranging from approximately 2.7 kW
11 in August to zero kW in January. The twelve-month average corresponds to a capacity
12 contribution of approximately 7.5 percent, or 8.1 percent after accounting for avoided
13 line losses.

14 **Q. What is the proposed transmission system capacity value for customer**
15 **generators?**

16 A. The transmission system capacity value is 0.513 cents per kWh.

17 **Q. Please describe PacifiCorp's proposed transmission capacity deferral**
18 **methodology.**

19 A. PacifiCorp uses the costs and capacity increase values of transmission capacity
20 expansion projects from its ten-year planning process to estimate the incremental cost
21 of transmission needed to increase load-serving capability. After applying an annual
22 carrying charge, the resulting costs reflect the potential value of deferring
23 transmission capacity increase projects. A single transmission value of \$5.83/kw-yr

1 (2024\$) is used for the entire system as presented in PacifiCorp's 2025 IRP. Because
2 the proposed 2026 rate effective period is two years later, PacifiCorp proposes to
3 escalate these costs by two years of inflation, consistent with the assumptions used in
4 Schedule QF.

5 **Q. What capacity contribution do you propose for transmission capacity deferral?**

6 A. Because costs related to transmission system upgrades would be treated similarly to
7 the existing transmission system costs described above, PacifiCorp proposes to base
8 the capacity contribution on monthly transmission system peaks, as described above.

9 **Q. What is the proposed transmission capacity deferral value for customer**
10 **generators?**

11 A. The transmission capacity value averages 0.059 cents per kWh.

12 **G. Avoided Distribution Capacity**

13 **Q. How does PacifiCorp propose calculating avoided distribution capacity?**

14 A. PacifiCorp includes the potential savings from deferral of distribution capacity
15 upgrades needed to increase load serving capability as part of its modeling of energy
16 efficiency options in its IRP process.

17 **Q. Please describe PacifiCorp's proposed distribution capacity deferral**
18 **methodology.**

19 A. PacifiCorp uses the costs and capacity increase values of distribution capacity
20 expansion projects from its ten-year planning process to estimate the incremental cost
21 of distribution projects needed to increase load-serving capability. Because
22 distribution projects are sized for future load growth and have a limited range of
23 sizing options, the distribution deferral value is adjusted to reflect a utilization

1 weighting, calculated based on the sum of Washington's distribution load divided by
2 total distribution system capacity in Washington. A high weighting indicates that
3 there is little unused distribution system capacity and means that load growth is more
4 likely to require distribution capacity upgrades. After applying an annual carrying
5 charge and utilization weighting, the resulting costs reflect the potential value of
6 deferring distribution capacity increase projects. A state-specific distribution capacity
7 value of \$18.93/kw-year (2024\$) is used for Washington as presented in PacifiCorp's
8 2025 IRP. Because the proposed 2026 rate effective period is two years later,
9 PacifiCorp proposes to escalate the historical costs by two years of inflation,
10 consistent with the assumptions used in Schedule QF.

11 **Q. What capacity contribution do you propose for distribution capacity deferral?**

12 A. Distribution capacity deferral is related to load requirements on individual circuits in
13 Washington, rather than system-wide resource supply (as reflected in the LOLP) or
14 system-wide transmission demand (as reflected in the monthly transmission peaks).
15 To estimate periods in which incremental resources could reduce distribution capacity
16 needs, PacifiCorp began with Washington's actual hourly load for 2024. Distribution
17 capacity is typically 20 percent higher in the winter, as cold temperatures increase the
18 operating capability of some of the limiting distribution system components, so the
19 actual hourly Washington load during November through March was divided by 120
20 percent to help account for the higher distribution system capability in those months.
21 PacifiCorp then identified the top ten percent highest load hours based on these
22 winter-adjusted values. These hours are primarily in the summer months, though
23 about 20 percent still occur in the winter after the adjustment. The proposed capacity

1 contribution for distribution capacity deferral reflects the average exports across all of
2 the top ten percent load hours, and results in a contribution of 14.8 percent.

3 **Q. What is the proposed distribution capacity deferral value for customer**
4 **generators?**

5 A. The distribution capacity value is 0.366 cents per kWh.

6 **V. UPDATE METHODOLOGY FOR EXPORT CREDIT RATES**

7 **Q. How often does the company plan to update the export credit rate in the**
8 **proposed Schedule 138?**

9 A. The company proposes making an advice filing each year by November 1st to update
10 the rate with the new rate becoming effective January 1st of the following calendar
11 year. This coincides with scheduled updates to QF pricing in Schedule QF, which
12 provides many of the cost inputs used to determine the export credit rate. A summary
13 of the proposed input assumptions that would be updated prior to each calendar year
14 is provided below:

- 15 • **Historical Data:** PacifiCorp proposes using the hourly export profile, WEIM
16 prices, and Washington load from the prior calendar year. The effective rates
17 will reflect changes in the historical export profile each year, even if other
18 input values are unchanged.
- 19 • **Integration Cost/Clean Energy Premium/Inflation/Generation Capacity**
20 **Cost/LOLP:** Values will be sourced from the proposed Schedule QF (and
21 underlying calculations), which is filed by Nov. 1st each year, concurrently
22 with the proposed Schedule 138 update. Any relevant changes in inputs that

are ultimately adopted for Schedule QF should also be reflected in the export credit rate for Schedule 138.

- **OATT Transmission Rates/Historical transmission peak:** Values from PacifiCorp's annual formula transmission rate projection, which is available by June 1 each year. Historical transmission peak hours aligned with the export profile are also included with these calculations.
- **Transmission and Distribution Deferral Costs:** The annual update will reflect the deferral costs from the most recently filed IRP or IRP Update, with an adjustment for inflation.
- **Line Losses:** The annual filing will reflect the line losses used in the most recently approved rate case.

Q. What are the advantages of updating the customer's export credit on an annual basis as proposed above?

A. Updating the export credit rate annually ensures that the export credit payments continue to be consistent with PacifiCorp's avoided cost and that they are consistent with the non-firm nature of the output.

VI. CONCLUSION

Q. Please summarize your recommendations for the Commission.

A. PacifiCorp recommends that the Commission adopt the export credit value contained in Table 1 of my testimony and adopt an annual updates process based on the methodology and inputs described in my testimony.

Q. Does this conclude your direct testimony?

A. Yes.