PACIFIC POWER
A DIVISION OF PACIFICORP

825 NE Multnomah, Suite 2000
Portland, Oregon 97232

May 15, 2018

VIA ELECTRONIC FILING

Public Utility Commission of Oregon
201 High Street SE, Suite 100
Salem, OR 97301-3398

Attn: Filing Center

RE: UE 344—PacifiCorp's 2017 Power Cost Adjustment Mechanism

PacifiCorp d/b/a Pacific Power encloses for electronic filing its 2017 Power Cost Adjustment Mechanism (PCAM) filing.

In Order No. 12-493, the Public Utility Commission of Oregon (Commission) approved a PCAM to allow PacifiCorp to recover the difference between actual net power costs (NPC) incurred to serve customers and the base NPC established in PacifiCorp's annual transition adjustment mechanism (TAM) filing. The amount recovered from or refunded to customers for a given year is subject to the following parameters:

- Asymmetrical Deadband. Any variance between negative $15 million and positive $30 million will be absorbed by the company.
- Sharing Band. Any variance above or below the deadband will be shared 90 percent by customers and 10 percent by the company.
- Earnings Test. If PacifiCorp's earned return on equity (ROE) is within plus or minus 100 basis points of the allowed ROE, there will be no recovery from or refund to customers.
- Amortization Cap. The amortization of deferred amounts are capped at six percent of the revenue for the preceding calendar year.

On an Oregon-allocated basis, actual PCAM costs were $2.3 million more than base PCAM costs established in the 2017 TAM (docket UE 307). The application of the deadband results in no recovery for the 2017 PCAM. Because Schedule 206, the Power Cost Adjustment Mechanism, is currently set at zero cents per kilowatt hour for all schedules, no tariff change is required at this time.

In compliance with Order No. 17-524, PacifiCorp includes supporting direct testimony of Michael G. Wilding that includes a discussion of any unusual expenses incurred over the course of the 2017 PCAM year and large deviations of actual NPC from forecasted NPC. A differential worksheet indicating actual minus base power costs for each separate cost category in the PCAM on a gross cost and per MWh unit basis is included in the workpapers accompanying this filing.

Confidential material supporting this filing is provided under Order No. 18-165.

PacifiCorp respectfully requests that all communications related to this filing be addressed to:

Oregon Dockets
PacifiCorp
825 NE Multnomah Street, Suite 2000
Portland, OR 97232
oregondockets@pacificorp.com

Matthew McVee
Chief Regulatory Counsel
825 NE Multnomah Street, Suite 1800
Portland, OR 97232
Matthew.mcvee@pacificorp.com

Additionally, PacifiCorp requests that all formal information requests regarding this matter be addressed to:

By E-mail (preferred): datarequest@pacificorp.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, OR 97232

Informal inquiries may be directed to Natasha Siores at (503) 813-6583.

Sincerely,

Etta Lockey
Vice President, Regulation

cc: Service List UE 263
Service List UE 323

CERTIFICATE OF SERVICE

I certify that I served a true and correct copy of PacifiCorp's **2017 Power Cost Adjustment Mechanism** on the parties listed below via electronic mail and/or overnight delivery in compliance with OAR 860-001-0180.

Service List
UE 263

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Dated May 15, 2018.

Katie Savarin

Katie Savarin
Coordinator, Regulatory Operations

CERTIFICATE OF SERVICE

I certify that I served a true and correct copy of PacifiCorp's 2017 Power Cost Adjustment Mechanism on the parties listed below via electronic mail and/or or overnight delivery in compliance with OAR 860-001-0180.

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Dated May 15, 2018.

Katie Savarin

Katie Savarin
Coordinator, Regulatory Operations

Docket No. UE 344
Exhibit PAC/100
Witness: Michael G. Wilding

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PACIFICORP

Direct Testimony of Michael G. Wilding

May 2018

DIRECT TESTIMONY OF MICHAEL G. WILDING
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ATTACHED EXHIBITS

Q. Please state your name, business address, and present position with PacifiCorp d/b/a Pacific Power.

A. My name is Michael G. Wilding. My business address is 825 NE Multnomah Street, Suite 600, Portland, Oregon 97232. My title is Director, Net Power Costs and Regulatory Strategy.

QUALIFICATIONS

Q. Briefly describe your education and professional experience.

A. I received a Master of Accounting from Weber State University and a Bachelor of Science degree in accounting from Utah State University. I am a Certified Public Accountant licensed in the state of Utah. Before joining the company, I was employed as an internal auditor for Intermountain Healthcare and an auditor for the Utah State Tax Commission. I have been employed by PacifiCorp since February 2014.

Q. Have you testified in previous regulatory proceedings?

A. Yes. I have filed testimony in proceedings before the public service commissions in Oregon, California, Washington, Idaho, Utah, and Wyoming.

PURPOSE OF TESTIMONY

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

A. My testimony presents and supports PacifiCorp's calculation of the Power Cost Adjustment Mechanism (PCAM) costs for the 12-month period beginning January 1, 2017, through December 31, 2017 (Deferral Period). More specifically, my testimony provides:

- A background on the PCAM and an accounting of how the PCAM balance was calculated for the Deferral Period;
- A discussion of the main differences between adjusted actual net power costs (Actual NPC) and net power costs in rates (Base NPC); and
- A discussion about PacifiCorp's participation in the energy imbalance market (EIM) with the California Independent System Operator (CAISO) and the benefits passed through to customers.

Q. Are additional witnesses presenting testimony specifically for the PCAM and Rate Schedule 206 in this case?

A. No.

SUMMARY OF THE PCAM DEFERRAL CALCULATION

Q. Please briefly describe PacifiCorp's PCAM authorized by the Public Utility Commission of Oregon (Commission).

A. Commission Order No. 12-493 approved a PCAM to allow PacifiCorp to recover the difference between actual PCAM costs incurred to serve customers and the base PCAM costs established in PacifiCorp's annual transition adjustment mechanism (TAM) filing.[1] PCAM costs include NPC, non-NPC EIM costs, other revenues, and Production Tax Credits (PTC).

Q. Please summarize the calculation of the PCAM deferral included in this filing.

A. For the Deferral Period, on an Oregon-allocated basis, actual PCAM costs are $2.3 million more than base PCAM costs established in docket UE 307 (2017 TAM). The application of the deadband results in no recovery through the 2017 PCAM.

[1] *In the Matter of PacifiCorp, dba Pacific Power, Request for a General Rate Case*, Docket No. UE 246, Order No. 12-493 (Dec. 20, 2012)(Order No. 12-493).

Q. Are there any changes to the PCAM calculation?

A. Yes. Per Senate Bill 1547, forecasted and actual allocated PTCs are included in the PCAM. In addition, per Order No. 17-524 in docket UE 327, the EIM rate of return costs have been excluded from the PCAM deferral calculation.[2]

Q. Have you provided detailed support for the calculation of the PCAM balance with your testimony?

A. Yes. Exhibit PAC/101 is a summary of the calculation of PacifiCorp's 2017 PCAM deferral on a monthly basis. Detailed workpapers supporting Exhibit PAC/101 are provided separately.[3]

PCAM DEFERRAL CALCULATION

Q. Please describe the calculation of the PCAM deferral included in this filing.

A. The PCAM deferral is calculated on a monthly basis by comparing actual PCAM costs to base PCAM on a per-unit basis. The amount recovered from or refunded to customers for a given year is subject to the following parameters:

- Asymmetrical Deadband. Any PCAM difference between negative $15 million and positive $30 million will be absorbed by the company.
- Sharing Band. Any PCAM difference above or below the deadband will be shared 90 percent by customers and 10 percent by PacifiCorp.
- Earnings Test. If PacifiCorp's earned return on equity (ROE) is within plus or minus 100 basis points of the authorized ROE, there will be no recovery from or refund to customers.

[2] *In the Matter of PacifiCorp, dba Pacific Power, 2016 Power Cost Adjustment Mechanism*, Docket No. UE 327, Order No. 17-524 (Dec. 27, 2017)(Order No. 17-524).
[3] Confidential workpapers are provided to the Commission under OAR 860-01-0070.

- Amortization Cap. The amortization of deferred amounts are capped at six percent of the revenue for the preceding calendar year.

For the Deferral Period the PCAM differential was $2.3 million before application of the deadband. Therefore, PacifiCorp is not requesting a rate change to Schedule 206. A summary of the deferral calculation is shown in Table 1.

Table 1
Summary of PCAM Account Balance

Calendar Year 2017 PCAM Deferral		
Actual PCAM Costs ($/MWh)		$ 25.97
Base PCAM Costs ($/MWh)		$ 25.73
$/MWh PCAM Cost Differential		**$ 0.25**
Oregon Retail Load (MWh)		13,200,282
PCAM Differential*	$	2,583,953
Situs Resource True-Up*		(255,684)
Total PCAM Differential*	**$**	**2,328,268**
Total Deferrable ABOVE Deadband	$	-
Total Deferrable BELOW Deadband		-
Oregon Deferral at 90% Sharing	$	-
Oregon Deferral at 90% Sharing after Earning Test	$	-
Interest Accrued through December 31, 2017	$	-
Requested PCAM Recovery	**$**	**-**

** Calculated monthly*

Q. How is the PCAM differential calculated on a monthly basis?

A. As previously noted, on a monthly basis, actual PCAM costs are compared to base PCAM on a per-unit basis. PCAM costs are established in the Oregon TAM and include NPC, EIM costs, Other Revenues, and PTCs. EIM benefits are included in NPC. Any differences in the system per-unit cost are multiplied by the actual megawatt hours of Oregon retail sales in that month to determine Oregon's share of any differential. The calculation uses the following formula:

$$(PCAMC_a \div Load_a) - (PCAMC_b \div Load_b) = \text{System PCAM Unit Cost Differential}$$

$$\text{System PCAM Unit Cost Differential} \times Load_o + (SR_a - SR_b) = \text{PCAM Differential}$$

Where:

$PCAMC_a$ =Total Company Adjusted Actual NPC (Excluding Situs Resources) plus other costs/benefits reflected in Oregon TAM

$Load_a$ = Actual System Retail Load

$PCAMC_b$ = Total Company Base NPC (Excluding Situs Resources) adjusted for Direct Access plus other costs/benefits reflected in Oregon TAM

$Load_b$ = Base System Retail Load

$Load_o$ = Actual Oregon Retail Load

SR_a = Actual Situs Resource Value

SR_b = Forecasted Situs Resource Value

The cumulative PCAM differential (under- or over-recovery) is first compared against the asymmetrical deadband. Cumulative PCAM differential amounts in excess of the asymmetrical deadband are then subject to the sharing band (90 percent customers, 10 percent company). Monthly balances accrue interest at PacifiCorp's authorized rate of return in Oregon for 2017. The final step is to apply, if necessary, the earnings test to determine if any amount is eligible for recovery from or refund to customers. To the extent earnings are within plus or minus 100 basis points of the authorized ROE, no recovery or refund is allowed under the approved PCAM design.

Q. What were total-company adjusted Actual NPC for the Deferral Period and how were they determined?

A. The total-company adjusted Actual NPC in the Deferral Period were approximately $1,528 million. This amount captures all components of NPC as modeled by PacifiCorp's Generation and Regulation Initiative Decision Tool (GRID) model in the company's annual TAM filings. Specifically, it includes amounts booked to the following Federal Energy Regulatory Commission accounts:

Account 447 – Sales for resale, excluding on-system wholesale sales and other revenues that are not modeled in GRID;

Account 501 – Fuel, steam generation; excluding fuel handling, start-up fuel (gas and diesel fuel, residual disposal) and other costs that are not modeled in GRID;

Account 503 – Steam from other sources;

Account 547 – Fuel, other generation;

Account 555 – Purchased power, excluding the Bonneville Power Administration (BPA) residential exchange credit pass-through if applicable; and

Account 565 – Transmission of electricity by others.

Q. What adjustments are made to Actual NPC and why are they needed?

A. PacifiCorp adjusts Actual NPC to remove accounting entries that relate to operations before implementation of the PCAM on January 1, 2013, and to reflect previously approved ratemaking treatment of several items, including:

- buy-through of economic curtailment by interruptible industrial customers;
- situs assignment of the generation from Oregon solar resources procured to satisfy ORS 757.370 solar capacity standard;
- situs assignment of the generation from a Utah Subscriber Solar resource;
- revenue associated with a unique contract for the company's Leaning Juniper facility;
- reductions to coal costs for management overtime, 50 percent of management incentive compensation, and legal fees related to fines and citations;

- removal of liquidated damage fees per a coal supply agreement that relate to 2018 but were booked in 2017 in accordance with generally accepted accounting principles, this expense will be included as part of 2018 Actual NPC; and
- the exclusion of Rolling Hills wind farm from Oregon rates (consistent with docket UE 200).

Q. Please summarize the calculation of the Actual Non-NPC EIM Costs.

A. Non-NPC EIM costs are trued-up as part of the PCAM costs. These EIM costs include ongoing operations and maintenance expense and depreciation expense; the return on rate base is not included in the true-up per the 2016 PCAM Order.[4] Actual non-NPC EIM costs were $0.7 million higher than the EIM costs included in the 2017 TAM on a total-company basis. As described in more detail later on in my testimony, the EIM provides benefits to customers in the form of reduced Actual NPC.

Q. Please summarize the calculation of Other Revenues.

A. Other Revenues, or Oregon Schedule 205, that are forecasted in the TAM are also included in the PCAM. On a total-company basis, actual Other Revenues were $0.8 million lower than Other Revenues in the 2017 TAM.

Q. Please summarize the Direct Access included in the PCAM.

A. Each year Base NPC is set in the TAM. After Base NPC is determined certain customers have the option to move to Direct Access (DA) and purchase energy from an Electricity Service Provider (ESS). In the PCAM, Base NPC is adjusted for the lost DA load.

[4] Order No. 17-524.

Q. Please summarize the PTCs included in the PCAM.

A. PTCs forecasted in the TAM are also included in the PCAM. On a total-company basis, actual PTCs were $1.2 million higher than PTCs in the 2017 TAM.

Q. Please describe the true-up of solar facilities included in the PCAM.

A. The PCAM includes a true-up of the value of energy from solar facilities procured to satisfy the solar capacity standard in ORS 757.370. Consistent with the Commission-approved 2017 Inter-Jurisdictional Allocation Protocol, these resources are situs-assigned to Oregon. Base NPC established in the TAM includes a situs credit for the market value of the solar energy. In the PCAM, the actual market value of the solar energy is compared to the prior forecast, and the difference is included in the balancing account. This treatment is necessary to ensure 100 percent of the energy benefits are assigned to Oregon customers, rather than allocated system-wide.

Q. Is PacifiCorp requesting a rate change with this filing?

A. As described earlier, on an Oregon-allocated basis, actual PCAM costs were $2.3 million higher than base PCAM costs. This amount does not exceed the established deadband. Accordingly, no recovery from or refund to customers is necessary. Because Schedule 206, the Power Cost Adjustment Mechanism, is currently set at zero cents per kilowatt hour for all schedules, no tariff change is required at this time.

SUMMARY OF THE NPC DIFFERENCES

Q. Please describe the Base NPC PacifiCorp used to calculate the NPC component of the PCAM deferral.

A. The Base NPC for the 2017 PCAM was set in Order No. 16-482 in docket UE 307. Base rates became effective January 1, 2017.

Q. Please describe Table 2 and the line items making up the difference between Actual NPC and Base NPC.

A. Table 2 displays the Base NPC approved by the Commission for the Deferral Period. The remainder of Table 2 is a breakout of the difference between Actual NPC and Base NPC, by cost category, on a total-company basis. The differences by category in Table 2 result from comparing Actual NPC to the Base NPC effective during the Deferral Period.

Table 2
Net Power Cost Reconciliation ($millions)

		TOTAL
Oregon Base NPC	**$**	**1,536**
Increase/(Decrease) to NPC:		
Wholesale Sales Revenue		186
Purchased Power Expense		(70)
Coal Fuel Expense		(27)
Natural Gas Expense		(83)
Wheeling, Hydro and Other Expense		(14)
Total Increase/(Decrease)	**$**	**(8)**
Adjusted Actual NPC	**$**	**1,528**

Q. Please describe the differences between Actual NPC and Base NPC.

A. Actual NPC were $8 lower than Base NPC due to an $83 million reduction in natural gas expense, $70 million reduction in purchased power expense, $27 million reduction in coal fuel expense, and a $14 million reduction in wheeling and other expenses. These reduced expenses were partially offset by a $186 million decrease in wholesale sales revenues. Notably, actual hydro generation, a zero-fuel cost resource, was 23 percent higher than Base NPC and actual wind generation, a zero-fuel cost resource, was 16 percent lower than Base NPC.

Q. Please explain the changes in wholesale sales revenue.

A. The decline in wholesale sales revenue was driven by a reduction in wholesale sales volume of market transactions (represented in PacifiCorp's production dispatch model (GRID) as short-term firm and system balancing sales). Actual wholesale market volumes were 7,371 GWh, or 53 percent, lower than the Base NPC. The average price of actual market sales transactions was $28.65/MWh, or five percent, higher than the average price in Base NPC.

Q. Please explain the changes in purchased power expense.

A. The reduction in purchased power expense was due to a $20 million decrease (six percent) in qualifying facility (QF) transactions and a $7 million decrease in actual market transactions (represented in GRID as short-term firm and system balancing purchases). Actual QF transaction volumes were 453 GWh, or eight percent, lower than Base NPC. Actual market purchase were 900 GWh, 13 percent, lower than Base NPC and the average price of actual market purchase transactions was $2.64/MWh or 10 percent lower than Base NPC.

Q. Please explain the changes in coal fuel expense.

A. Actual coal fuel expense is $27 million lower than Base NPC due to lower coal generation volume. Coal-fired generation decreased 2,776 GWh, or seven percent. . The lower generation was partially offset by an increase in the average cost of coal generation which increased from $19.66/MWh in Base NPC to $20.40/MWh in the Deferral Period.

Q. Please explain the changes in natural gas fuel expense.

A. The total natural gas fuel expense in Actual NPC decreased by $83 million compared to Base NPC due to a decrease in natural gas generation volume. Natural gas generation volume decreased by 4,906 GWh (40 percent) below Base NPC during the Deferral Period. The lower natural gas generation was partially offset by an increase in the average cost of natural gas generation which increased from $24.27/MWh in Base NPC to $29.07/MWh (20 percent) in the Deferral Period.

IMPACT OF PARTICIPATING IN THE EIM

Q. Please describe the EIM.

A. The EIM is a balancing market that optimizes generator dispatch every five minutes within and between the PacifiCorp, CAISO, and other EIM participating balancing authority areas (BAAs). The EIM allows for more reliable and lower cost operation than was possible with the bilateral hourly market transactions previously available to PacifiCorp.

Q. Are the actual benefits from participating in the EIM with CAISO included in the PCAM deferral?

A. Yes. Participation in the EIM provides benefits to customers in the form of reduced Actual NPC. Financially binding EIM operation went live November 1, 2014, and all net benefits arising from EIM operation from January 1, 2017 to December 31, 2017, are included in the PCAM deferral.

Q. Has PacifiCorp quantified the benefits realized during 2017 from participating in the EIM?

A. Yes. PacifiCorp has calculated the EIM inter-regional benefit, i.e., the margin realized on EIM imports and exports. PacifiCorp's EIM inter-regional benefit for the deferral period was approximately $25.7 million.

Q. How does PacifiCorp calculate its actual EIM benefits?

A. Using actual information from the EIM, including five- and 15-minute pricing, the company identifies the incremental resource that could have facilitated the transfer to an adjacent EIM area or the CAISO in each five-minute interval. The benefit is then calculated as the difference between the revenue received less the expense of generation assumed to supply the transfer. In the event of an import, the benefit is equal to the cost of the import minus the avoided expense of the generation that would have otherwise been dispatched.

Q. What are the estimated 2017 EIM benefits as reported by CAISO?

A. CAISO publishes quarterly EIM Benefit Reports (CAISO Benefit Reports) estimating the benefits realized through EIM operation for each entity that participates in the EIM. The CAISO Benefit Reports estimated EIM benefits attributable to PacifiCorp of approximately $37.4 million on a total-company basis for the deferral period. In comparison, the CAISO estimated benefits for the prior year deferral period were approximately $45.5 million on a total-company basis. The benefits estimated for PacifiCorp in the CAISO Reports include the benefits of EIM operation due to more efficient dispatch (both inter- and intra-regional), reduced renewable energy curtailment, and reduced flexibility reserves.

Q. What is the difference between the EIM benefits estimated by CAISO and the inter-regional EIM benefits calculated by PacifiCorp?

A. The EIM benefits are embedded in the Actual NPC through lower fuel and purchased power costs. However, PacifiCorp is able to calculate the margin realized on its EIM imports and exports, the inter-regional benefit. In its quarterly EIM Benefit Report, CAISO estimates all the benefits of EIM participation, including intra-regional dispatch savings (optimizing the resources in PacifiCorp's two balancing area authorities), inter-regional dispatch savings (transacting with other EIM participants), reduced renewable energy curtailment and flexibility reserve savings (reduced reserves due to diversity across the EIM footprint).

The CAISO calculation utilizes a counterfactual scenario that is built to mimic the more manual dispatch process PacifiCorp utilized in actual operations before EIM participation. Based on the subjectivity of the counterfactual scenario, the EIM benefits reports by CAISO are presented as an estimate.

Q. Does this conclude your direct testimony?

A. Yes.

Docket No. UE 344
Exhibit PAC/101
Witness: Michael G. Wilding

BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

PACIFICORP

Exhibit Accompanying Direct Testimony of Michael G. Wilding

2017 PCAM Calculation

May 2018

Oregon Power Cost Adjustment Mechanism
January 1, 2017 - December 31, 2017
Attachment A - Power Cost Adjustment Mechanism Calculation

Line No.		Reference	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Total	
Actual:																
1	Total Company Adjusted Actual NPC	(2.1)	$ 138,590,571	$ 116,924,463	$ 113,018,110	$ 108,185,764	$ 115,246,592	$ 125,188,870	$ 152,659,742	$ 164,992,347	$ 131,586,685	$ 119,201,242	$ 113,389,351	$ 129,072,708	$ 1,528,056,446	
2	Actual Allocated PTC	(4.1)	(8,454,789)	(10,428,390)	(11,459,227)	(9,983,310)	(5,479,012)	(7,040,913)	(4,518,493)	(3,508,195)	(4,194,324)	(5,309,249)	(8,245,032)	(10,722,506)	(89,343,441)	(1,226,972)
3	Actual EIM Costs	(5.1)	381,196	381,196	381,196	381,196	381,196	381,196	381,196	381,196	381,196	381,196	381,196	381,196	4,574,351	673,839
4	Actual Other Revenues	(6.1)	(540,918)	(768,234)	(975,206)	(1,073,334)	(767,085)	(950,069)	(885,354)	(694,411)	(729,314)	(998,584)	(869,619)	(561,113)	(9,813,243)	841,510
5	Total PCAM Adjusted Actual Costs	Sum Lines 1 - 4	$ 129,976,060	$ 106,109,035	$ 100,964,872	$ 97,510,316	$ 109,381,691	$ 117,579,084	$ 147,637,091	$ 161,170,937	$ 127,044,242	$ 113,274,604	$ 104,655,895	$ 118,170,285	$ 1,433,474,113	
6	Actual System Retail Load	(8.1)	5,135,856	4,192,309	4,332,834	4,123,991	4,332,163	4,803,602	5,378,125	5,122,566	4,304,828	4,227,257	4,318,686	4,921,839	55,194,054	
7	Actual PCAM Costs $/MWH	Line 5 / Line 6	$ 25.31	$ 25.31	$ 23.30	$ 23.64	$ 25.25	$ 24.48	$ 27.45	$ 31.46	$ 29.51	$ 26.80	$ 24.23	$ 24.01	$ 25.97	
Base:																
8	Total Company Base NPC	(3.1)	$ 130,984,697	$ 118,713,689	$ 122,651,318	$ 117,262,046	$ 123,701,137	$ 129,386,833	$ 151,077,299	$ 143,761,067	$ 122,682,472	$ 121,024,247	$ 122,421,004	$ 131,903,005	$ 1,535,568,814	
9	Adjustment for Direct Access	(3.3)	(643,721)	(622,392)	(645,087)	(604,394)	(689,026)	(817,169)	(1,131,058)	(892,424)	(835,050)	(880,879)	(808,738)	(731,739)	(9,301,677)	
10	Base Allocated PTC	(2.2)	(7,343,039)	(7,343,039)	(7,343,039)	(7,343,039)	(7,343,039)	(7,343,039)	(7,343,039)	(7,343,039)	(7,343,039)	(7,343,039)	(7,343,039)	(7,343,039)	(88,116,470)	
11	Base EIM Costs	(3.4)	325,043	325,043	325,043	325,043	325,043	325,043	325,043	325,043	325,043	325,043	325,043	325,043	3,900,512	
12	Base Other Revenues	(6.2)	(887,896)	(887,896)	(887,896)	(887,896)	(887,896)	(887,896)	(887,896)	(887,896)	(887,896)	(887,896)	(887,896)	(887,896)	(10,654,753)	
13	Total PCAM Base Costs	Sum Lines 8 - 12	$ 122,435,083	$ 110,185,405	$ 114,100,338	$ 108,751,759	$ 115,106,218	$ 120,663,771	$ 142,040,349	$ 134,962,750	$ 113,941,530	$ 112,237,475	$ 113,706,374	$ 123,265,373	$ 1,431,396,427	
14	Base System Retail Load	(8.1)	4,941,400	4,367,578	4,526,701	4,222,416	4,452,704	4,549,044	5,262,767	5,101,299	4,442,315	4,340,824	4,474,948	4,958,612	55,640,607	
15	Base PCAM Costs $/MWh	Line 8 / Line 14	$ 24.78	$ 25.23	$ 25.21	$ 25.76	$ 25.85	$ 26.53	$ 26.99	$ 26.46	$ 25.65	$ 25.86	$ 25.41	$ 24.86	$ 25.73	
16	System PCAM Unit Cost Differential $/MWh	Line 7 - Line 15	$ 0.53	$ 0.08	$ (1.90)	$ (2.11)	$ (0.60)	$ (2.05)	$ 0.46	$ 5.01	$ 3.86	$ 0.94	$ (1.18)	$ (0.85)	$ 0.25	#
17	Oregon Retail Load	(8.1)	1,398,157	1,102,176	1,095,610	973,812	992,435	1,027,506	1,167,493	1,149,408	964,488	979,879	1,068,793	1,280,524	13,200,282	
Deferral:																
18	Monthly PCAM Differential - Above or (Below) Base	Line 17 * Line 16	$ 741,255	$ 90,791	$ (2,085,817)	$ (2,055,881)	$ (597,551)	$ (2,104,136)	$ 539,071	$ 5,754,384	$ 3,725,722	$ 921,070	$ (1,257,187)	$ (1,087,767)	$ 2,583,953	
19	Oregon Situs Resource True-Up	(7.1)	$ (4,969)	$ (7,019)	$ 13,618	$ (2,325)	$ (11,579)	$ (20,579)	$ (48,825)	$ (89,886)	$ (39,782)	$ (22,067)	$ (14,066)	$ (8,206)	$ (255,684)	
20	Total Monthly PCAM Differential - Above or (Below) Base	Line 18 + Line 19	$ 736,287	$ 83,772	$ (2,072,199)	$ (2,058,207)	$ (609,130)	$ (2,124,716)	$ 490,246	$ 5,664,498	$ 3,685,939	$ 899,003	$ (1,271,253)	$ (1,095,972)	$ 2,328,268	
21	Cumulative PCAM Differential - Above or (Below) base		$ 736,287	$ 820,059	$ (1,252,140)	$ (3,310,346)	$ (3,919,477)	$ (6,044,192)	$ (5,553,947)	$ 110,551	$ 3,796,490	$ 4,695,493	$ 3,424,241	$ 2,328,268		
22	Positive Deadband - ABOVE Base	Order. 12-493	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	$ 30,000,000	
23	Negative Deadband - BELOW Base	Order. 12-493	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	$ (15,000,000)	
24	Amount Deferrable - ABOVE Deadband		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
25	Amount Deferrable - BELOW Deadband		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
26	Total Incremental Deferrable	Line 24 + Line 25	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
27	Total Incremental Deferral After 90%/10% Sharing Band	Line 26 * 90%	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Energy Balancing Account:																
28	Monthly Interest Rate	Note 1	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%	0.64%		
29	Beginning Balance	Prior Month Line 32	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
30	Incremental Deferral	Line 27	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
31	Interest	Line 28 * (Line 29 + 50% x Line 30)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
32	**Ending Balance**	∑ Lines 29:31	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Earnings Test:																
33	Earned Return on Equity	(9.1)													11.13%	
34	Allowed Return on Equity	UE 246													9.80%	
35	100bp ROE Revenue Requirement														$ 27,940,555	
36	Allowed Deferral After Earning Test														$ (9,354,883)	
37	**Total Deferred**														**$ -**	

Notes:

Note 1: 7.621% annual interest rate based on Oregon approved rate of return