Exhibit No. MGW-1T
Docket UE-_____
Witness: Michael G. Wilding

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of PACIFIC POWER & LIGHT COMPANY, 2017 Power Cost Adjustment Mechanism	Docket UE-_____

PACIFIC POWER & LIGHT COMPANY

DIRECT TESTIMONY OF MICHAEL G. WILDING

June 2018

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ATTACHED EXHIBITS

Q. Please state your name, business address, and present position with Pacific Power & Light Company (Pacific Power), a division of PacifiCorp.

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 the company since February 2014.

Q. Have you testified in previous regulatory proceedings?

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

PURPOSE OF TESTIMONY

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

A. My testimony presents and supports the company's calculation of the Power Cost Adjustment Mechanism (PCAM) for the 12-month period from January 1, 2017, through December 31, 2017 (Deferral Period). More specifically, I provide the following:

- 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 west control area net power costs (Actual NPC) and west control area net power costs in rates (Base NPC); and,
- A discussion about the company's participation in the energy imbalance market (EIM) with the California Independent System Operator (CAISO) and the benefits from EIM that are passed through to customers.

Q. Are additional witnesses presenting testimony specifically for the PCAM and Tariff Schedule 97 in this case?

A. No.

SUMMARY OF THE PCAM DEFERRAL CALCULATION

Q. Please briefly describe the company's PCAM authorized by the Washington Utilities and Transportation Commission (Commission or WUTC).

A. The Commission's Order 09 in Docket UE-140762 approved the PCAM to allow the company to track unexpected variations in power costs in the PCAM deferral account. If the cumulative positive or negative balance in the PCAM deferral account, including monthly interest, exceeds $17 million either a surcharge or sur-credit is triggered.

Q. Please summarize the company's calculation of the PCAM deferral for the Deferral Period.

A. For the Deferral Period the cumulative PCAM differential was an approximate $19.2 million credit before application of the deadband and sharing bands. After

application of the deadband and asymmetrical sharing bands, the filing results in a deferral credit of approximately $13.2 million, including interest.

Q. Does the PCAM deferral account trigger a rate change?

A. If both the 2016 PCAM and 2017 PCAM are approved by the Commission, the PCAM deferral account balance will be approximately $-17.9 which would trigger a sur-credit to customers. The company will propose changes to Schedule 97 to refund any balance back to customers upon approval of the 2016 PCAM and the 2017 PCAM.

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

A. Yes. Exhibit No. MGW-2 includes a detailed calculation of the company's 2017 PCAM deferral on a monthly basis. Detailed confidential workpapers supporting Exhibit No. MGW-2 are provided separately.

2017 PCAM CALCULATION

Q. Please describe the company's calculation of the PCAM deferral for the Deferral Period.

A. As previously noted, the PCAM deferral is calculated on a monthly basis as the difference between Base NPC collected through general rates and Actual NPC, including actual non-NPC EIM costs. The accrued PCAM variance is subject to the following parameters:

- Symmetrical Deadband: Any PCAM difference between negative $4 million and positive $4 million will be absorbed by the company.
- Asymmetrical sharing of the PCAM difference as follows:
    - Between $4 and $10 million; shared 50 percent by customers and 50 percent by the company;

- Greater than $10 million; shared 90 percent by customers and 10 percent by the company;
- Between $-4 and $-10 million; shared 75 percent by customers and 25 percent by the company; and
- Less than $-10 million; shared 90 percent by customers and 10 percent by the company.

- Amortization of Deferral: The amortization of PCAM variances are deferred until the balance of the deferral balancing account results in either a surcharge or credit greater than $17 million.

For the Deferral Period, the PCAM differential was approximately a $19.2 million credit. After application of the deadband and asymmetrical sharing band, the company is seeking approval to credit the PCAM balancing account with approximately $13.2 million including interest. 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)		$ 27.20
Base PCAM Costs ($/MWh)		$ 31.76
$/MWh PCAM Cost Differential	**$**	**(4.56)**
Washington Sales (MWh)		4,221,298
Total PCAM Differential*	$	(19,249,685)
Total Deferrable ABOVE Deadband	$	-
Total Deferrable BELOW Deadband		(15,249,685)
Washington Deferral after Sharing	$	(12,824,717)
Interest Accrued through December 31, 2017	$	(366,560)
Requested PCAM Recovery	**$**	**(13,191,277)**

** Calculated monthly*

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

A. The PCAM differential is calculated by subtracting the NPC collected in base rates from the PCAM Adjusted Actual Costs as shown in the formula below:

$$\text{PCAMC} - (\text{Base NPC}_{\$/\text{MWh}} \times \text{Actual Sales}) = \text{PCAM Differential}$$

Where:

PCAMC -	Adjusted actual west control area NPC costs allocated to Washington using allocation factors calculated with actual jurisdictional load plus Washington allocated actual non-NPC EIM costs
Base $NPC_{\$/MWh}$ -	Base NPC unit cost; calculated by dividing Washington-allocated NPC as established in a rate proceeding by the Washington sales-at-meter used to set rates in the rate proceeding
Actual Sales -	Actual Washington retail sales at the meter.

The cumulative PCAM variance is first compared against the symmetrical deadband. Cumulative amounts in excess of the symmetrical deadband are then subject to the sharing bands. The customer portion of the PCAM variance is tracked in the deferral balancing account and monthly balances accrue interest at the current Federal Energy Regulatory Commission (FERC) interest rate. A rate change is triggered when the customer surcharge or credit exceeds $17 million.

Q. What were the 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 $500 million on a west control area basis. This amount captures all components of NPC as defined in the company's general rate case proceedings and modeled by the company's Generation and Regulation Initiative Decision Tool (GRID) model. Booked NPC are adjusted to reflect a balanced west control area consistent with the

methodology used in Docket UE-140762. Specifically, it includes amounts booked to the following FERC 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. The company adjusts Actual NPC to remove accounting entries that relate to operations before implementation of the PCAM on April 1, 2015, and to reflect previously approved ratemaking treatment of several items, including:

- Reductions to coal costs for legal fees related to fines and citations; and
- Revenue from a contract related to the Leaning Juniper wind resource.

Q. Please state the amount of the adjusted Actual NPC that were allocated to Washington and describe how the amount was calculated.

A. Washington-allocated Actual NPC were approximately $114 million during the Deferral Period. To arrive at this value, the company applied the allocation

methodology approved by the Commission using actual allocation factors from calendar year 2017.

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

A. The company has included in the PCAM actual non-NPC EIM costs that are not otherwise included in NPC. These EIM costs include the return on rate base, ongoing operations and maintenance expense, and depreciation expense. This treatment was approved by the Commission to match recovery of EIM costs and benefits.[1] As described in more detail later on in my testimony, the EIM provides benefits to customers in the form of reduced Actual NPC.

Q. How much of Base PCAM costs did the company collect from Washington customers during the Deferral Period?

A. During the Deferral Period, the company received approximately $134.1 million in Base PCAM revenue from Washington customers, approximately $19.2 million more than Washington allocated Actual NPC and EIM Costs.

Q. What was the total amount of the deferral over the Deferral Period?

A. After application of the deadband and asymmetrical sharing band, the deferral was approximately $13.2 million credit including interest, as shown in Table 1.

Q. Please describe how the interest on the PCAM deferral balance was determined.

A. Interest is accrued monthly on the PCAM deferral balance at the FERC interest rates that are published quarterly. Over the Deferral Period, the PCAM balance accrued $0.4 million of interest refundable to customers.

[1] *Wash. Utils and Transp. Comm'n v. PacifiCorp*, Docket UE-152253, Order 12 at 74 (September 1, 2016).

Q. Is the company requesting a rate change with this filing?

A. No. Although the PCAM balancing account does exceed the customer surcharge or credit of $17 million, the company intends to request a rate change to Tariff Schedule 97 once the 2016 PCAM and 2017 PCAM are approved. The cumulative Deferred Balancing Account includes the pending settlement from the 2016 PCAM calculation as filed by the company and settling parties on May 4, 2018.[2] A settlement hearing is scheduled for the 2016 PCAM on June 19, 2018. See Table 2 for a summary of the deferred balancing account.

Table 2
Deferred Balancing Account

	Washington Customers
Balancing Account Activity	
Beginning Deferral Balance (Note 1)	$ (4,708,218)
2017 PCAM Deferral	(12,824,717)
Interest	(366,560)
Activity Through December 31, 2017	**$ (17,899,494)**
December 31, 2017 Balance	**$ (17,899,494)**

Note 1: The January 1, 2017 beginning balance is pending commission approval in Docket UE-170717

DIFFERENCES IN NPC

Q. On a west control area basis, what was the difference between Actual NPC and Base NPC for the Deferral Period?

A. On a west control area basis, Actual NPC for the Deferral Period were $500 million, less than Base NPC for the Deferral Period by approximately $51 million. Table 3

[2] Docket UE-170717, Settlement Stipulation, Paragraph 8.

below provides a high level summary of the difference between the Base NPC and Actual NPC by category on a west control area basis.

Table 3
Net Power Cost Reconciliation ($millions)

	TOTAL
Base NPC	**$ 551**
Increase/(Decrease) to NPC:	
Wholesale Sales Revenue	56
Purchased Power Expense	(85)
Coal Fuel Expense	(6)
Natural Gas Expense	(18)
Wheeling and Other Expense	3
Total Increase/(Decrease)	**$ (51)**
Adjusted Actual NPC	**$ 500**

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

A. The Base NPC of $551 million was established in Docket UE-140762 using a test period of April 2015 through March 2016.

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

A. Actual NPC were lower than Base NPC due to an $85 million reduction in purchased power expense, $18 million reduction in natural gas fuel expense, and a $6 million reduction in coal fuel expense. These reduced expenses were partially offset by a $56 million decrease in wholesale sales revenues and a $3 million increase in wheeling and other expenses. Notably, hydro generation, a zero fuel-cost resource, was higher than Base NPC by 15 percent.

Q. Please explain the changes in wholesale sales revenue.

A. The decline in wholesale sales revenue was driven by lower market prices and a reduction in wholesale sales volume of market transactions (represented in GRID as short-term firm and system balancing sales). The average price of actual market sales transactions was $15.46/MWh, or 41 percent, lower 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 decrease in long-term purchase power contracts. The expiration of the Hermiston power purchase agreement and the Georgia-Pacific Camas contract resulted in lower purchased power costs of $85.7 million.

Actual market purchases were approximately 1,147 GWh, or 36 percent, higher than Base NPC. The increased volume was partially offset by the lower average price of actual market purchase transactions which was $8.11/MWh, or 27 percent, lower than Base NPC.

Q. Please explain the changes in coal fuel expense.

A. Actual coal fuel expense is $6 million lower than Base NPC due to lower coal generation volume. Coal-fired generation decreased 1,402 GWh, or 13 percent. The lower generation was partially offset by an increase in the average cost of coal generation, which increased from $23.53/MWh in Base NPC to $26.44/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 $18 million compared to Base NPC. Natural gas generation volume increased by 454 GWh (19 percent) over Base NPC during the Deferral Period. The average cost of natural gas generation decreased by $12.62/MWh from $39.03/MWh in Base NPC to $26.42/MWh (32 percent) in the Deferral Period.

IMPACT OF PARTICIPATING IN THE EIM

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 the company quantified the benefits realized during 2017 from participating in the EIM?

A. Yes, the company has calculated the EIM inter-regional benefit, *i.e.*, the margin realized on EIM imports and exports. The company's EIM inter-regional benefit for the deferral period was approximately $25.7 million, separately identified as $19.9 million on a west control area basis and $5.8 million on an east control area basis.

Q. How does the company 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 the company?

A. The EIM benefits are embedded in the Actual NPC through lower fuel and purchased power costs. However, the company 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.