

April 1, 2014

### VIA ELECTRONIC FILING AND OVERNIGHT DELIVERY

Public Utility Commission of Oregon 3930 Fairview Industrial Dr. S.E. Salem, OR 97302-1166

Attn: Filing Center

Re: Advice No. 14-006

Docket UE \_\_\_\_\_ PacifiCorp's 2015 Transition Adjustment Mechanism

In compliance with ORS 757.205, OAR 860-022-0025, and OAR 860-022-0030, PacifiCorp d/b/a Pacific Power (PacifiCorp or Company) submits for filing the following proposed tariff pages associated with Tariff P.U.C. OR No. 36, which sets forth all rates, tolls, charges, rules, and regulations applicable to electric service in Oregon. The Company requests an effective date of January 1, 2015.

#### A. Description of Filing

The purpose of the Transition Adjustment Mechanism (TAM) is to update net power costs for 2015 and to set transition credits for Oregon customers who choose direct access in the November open enrollment window. The TAM Guidelines adopted in Commission Order No. 09-274 specify that if the TAM is filed in a year in which PacifiCorp does not file a general rate case, then the TAM must be filed by April 1 to allow for a January 1 rate effective date. Accordingly, the Company is filing the 2015 TAM on April 1, 2014. This tariff filing is supported by testimony and exhibits from the following witnesses:

- Brian S. Dickman, Manager, Net Power Costs
- Cindy A. Crane, Vice President, Interwest Mining Company and Fuel Resources
- Judith M. Ridenour, Specialist, Cost of Service and Pricing

#### B. Tariff Sheets

Fifth Revision of Sheet No. 201-1	Schedule 201	Net Power Costs – Cost-Based
		Supply Service
Fourth Revision of Sheet No. 201-2	Schedule 201	Net Power Costs – Cost-Based
		Supply Service
Fifth Revision of Sheet No. 201-3	Schedule 201	Net Power Costs – Cost-Based
		Supply Service
Third Revision of Sheet No. 205-1	Schedule 205	TAM Adjustment for Other Revenues
Second Revision of Sheet No. 205-2	Schedule 205	TAM Adjustment for Other Revenues
Third Revision of Sheet No. 205-3	Schedule 205	TAM Adjustment for Other Revenues

Public Utility Commission of Oregon April 1, 2014 Page 2

### C. Correspondence

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

PacifiCorp Oregon Dockets 825 NE Multnomah Street, Suite 2000 Portland, OR 97232 oregondockets@pacificorp.com Sarah K. Wallace Assistant General Counsel 825 NE Multnomah Street, Suite 1800 Portland, OR 97232 sarah.wallace@pacificorp.com

Katherine A. McDowell McDowell, Rackner & Gibson PC 419 SW 11th Ave, Suite 400 Portland, OR 97204 Katherine@mcd-law.com

Additionally, PacifiCorp requests that all data 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 Street, Suite 2000

Portland, OR 97232

Please direct informal correspondence and questions regarding this filing to Gary Tawwater, Regulatory Affairs Manager, at (503) 813-6805.

A copy of this filing has been served on all parties to PacifiCorp's 2014 TAM proceeding, docket UE 264, as indicated on the attached certificate of service. Confidential material in support of the filing has been provided to parties under Order No. 10-069, the standing protective order adopted for all TAM proceedings.

Sincerely,

R. Bryce Dalley

Vice President, Regulation

Enclosures

cc:

UE 264 Service List

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#### CERTIFICATE OF SERVICE

I certify that I served a true and correct copy of PacifiCorp's 2015 Transition Adjustment Mechanism on the parties listed below via electronic mail and/or US mail in compliance with OAR 860-001-0180.

### SERVICE LIST UE 264

OPUC Dockets (W) Citizens' Utility Board of Oregon 610 Broadway, Suite 400 Portland, OR 97205 dockets@oregoncub.org

G. Catriona McCracken (C)(W) Citizens' Utility Board of Oregon 610 Broadway, Suite 400 Portland, OR 97205 catriona@oregoncub.org

Melinda J Davison (C)(W) Davison Van Cleve PC 333 SW Taylor – Ste 400 Portland, OR 97204 mail@dvclaw.com

Samuel L. Roberts (C)(W) Hutchinson Cox Coons Orr & Sherlock 777 High Street, Ste. 200 PO Box 10886 Eugene, OR 97440 sroberts@eugenelaw.com

Katherine A McDowell (W) McDowell Rackner & Gibson PC 419 SW 11<sup>th</sup> Ave, Suite 400 Portland, OR 97205 Katherine@mcd-law.com

Sarah Wallace (C)(W)
Pacific Power
825 NE Multnomah St Ste 1800
Portland, OR 97232
Sarah.wallace@pacificorp.com

Robert Jenks (C)(W) Citizens' Utility Board of Oregon 610 Broadway, Suite 400 Portland, OR 97205 bob@oregoncub.org

Irion A Sanger (C)(W)
Davison Van Cleve
333 SW Taylor – Ste 400
Portland, OR 97204
ias@dvclaw.com

Kevin Higgins (C)(W) Energy Strategies LLC 215 State St Ste 200 Salt Lake City, UT 84111-2322 Khiggins@energystrat.com

Michael T. Weirich (C)(W)
PUC Staff – Department of Justice
Business Activities Section
1162 Court Street NE
Salem, OR 97301-4096
Michael.weirich@state.or.us

Greg Bass (W)
Noble Americas Energy Solutions LLC
401 West A St., Ste. 500
San Diego, CA 92101
gbass@noblesolutions.com

Oregon Dockets (W)
Pacific Power
825 NE Multnomah St, Ste 2000
Portland, OR 97232
oregondockets@pacificorp.com

Gregory M. Adams (C)(W) Richardson & O'Leary PO Box 7218 Boise, ID 83702 greg@richardsonandoleary.com

Douglas C. Tingey (W)
Portland General Electric
121 SW Salmon St. 1WTC 13
Portland, OR 97204
Doug.tingey@pgn.com

Lissa Maldonado (W) Safeway Inc. 5918 Stoneridge Mall Road Pleasanton, CA 94588-3229 Lissa.maldonado@safeway.com

Steve W. Chriss (C)(W) Wal-Mart Stores Inc. 2001 SE 10<sup>th</sup> Street Bentonville, AR 72716-0550 Stephen-chriss@wal-mart.com

Dated this 1<sup>st</sup> of April 2014.

Donald W. Schoenbeck (C)(W) Regulatory & Cogeneration Services Inc 900 Washington St Ste 780 Vancouver, WA 98660-3455 dws@r-c-s-inc.com

John Crider (C)(W) Public Utility Commission of Oregon PO Box 2148 Salem, OR 97308-2148 john.crider@state.or.us

Jay Tinker (W)
Portland General Electric
121 SW Salmon St. 1WTC-0702
Portland, OR 97204
pge.opuc.filings@pgn.com

George Waidelich (W) Safeway Inc. 5918 Stoneridge Mall Road Pleasanton, CA 94588-3229 george.waidelich@safeway.com

Carrie Mever

Supervisor, Regulatory Operations

Docket No. UE \_\_\_\_ Exhibit PAC/100 Witness: Brian S. Dickman BEFORE THE PUBLIC UTILITY COMMISSION **OF OREGON PACIFICORP** Direct Testimony of Brian S. Dickman **April 2014** 

## DIRECT TESTIMONY OF BRIAN S. DICKMAN

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### **ATTACHED EXHIBITS**

Exhibit 101—Oregon-Allocated Net Power Costs

Exhibit 102—Net Power Costs Report

Exhibit 103—Update to Other Revenues

Exhibit 104—List of Expected or Known Contract Updates

1	Q.	Please state your name, business address, and present position with
2		PacifiCorp d/b/a Pacific Power (PacifiCorp or Company).
3	A.	My name is Brian S. Dickman. My business address is 825 NE Multnomah Street
4		Suite 600, Portland, Oregon 97232. My title is Manager, Net Power Costs.
5		QUALIFICATIONS
6	Q.	Briefly describe your education and professional experience.
7	A.	I received a Master of Business Administration from the University of Utah with
8		an emphasis in finance and a Bachelor of Science degree in accounting from Utah
9		State University. Before joining the Company, I was employed as an analyst for
10		Duke Energy Trading and Marketing. I have been employed by the Company
11		since 2003, including positions in revenue requirement and regulatory affairs.
12		I assumed my current role managing the Company's net power cost group in
13		March 2012.
14	Q.	Have you testified in previous regulatory proceedings?
15	A.	Yes. I have filed testimony in proceedings before the public utility commissions
16		in Oregon, California, Idaho, Utah, and Wyoming.
17		PURPOSE AND SUMMARY OF TESTIMONY
18	Q.	What is the purpose of your testimony in this proceeding?
19	A.	I present the Company's proposed 2015 Transition Adjustment Mechanism
20		(TAM) net power costs (NPC). Specifically, my testimony:
21		• Summarizes the content of the filing.

1 Defines NPC and describes the primary drivers behind the increase in total-2 company NPC for 2015 compared to the final NPC in the Company's previous TAM, docket UE 264 (2014 TAM).<sup>1</sup> 3 4 Describes the Company's implementation of the Commission order from the 5 2014 TAM and identifies refinements to the modeling of NPC in the 2015 TAM. 6 7 Describes how the filing is consistent with the TAM Guidelines. 8 Q. Please identify the other Company witnesses supporting the 2015 TAM. 9 A. Two additional Company witnesses provide testimony supporting the Company's 10 filing. Ms. Cindy A. Crane, Vice President, Interwest Mining & Fuels, provides 11 testimony supporting the coal costs included in the 2015 test period. Ms. Crane 12 also discusses the Company's plans to develop periodic fuel supply plans in 13 accordance with the 2014 TAM order. Ms. Judith M. Ridenour, Regulatory 14 Specialist, Pricing & Cost of Service, presents the Company's proposed prices 15 and tariffs and provides a comparison of existing and estimated customer rates. 16 **SUMMARY OF PACIFICORP'S 2015 TAM FILING** 17 Q. Please provide background on the Company's 2015 TAM filing. 18 The TAM is the Company's annual filing to update its NPC in rates. The updated A. NPC are used to set the transition adjustments for direct access customers and, in 19 20 this case, become effective in base rates on January 1, 2015. The Company is

<sup>1</sup> In the Matter of PacifiCorp, d/b/a Pacific Power, 2014 Transition Adjustment Mechanism, Docket No. UE 264, Order No. 13-387 (Oct. 28, 2013).

filing the 2015 TAM on a stand-alone basis without a general rate case. As

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1		explained in Ms. Ridenour's testimony, the 2015 TAM results in an overall
2		average rate increase of approximately \$18.3 million, or 1.5 percent.
3	Q.	What are the estimated Oregon-allocated NPC for calendar year 2015?
4	A.	As shown on Exhibit PAC/101, on an Oregon-allocated basis, the forecasted
5		normalized NPC for calendar year 2015 are \$378.3 million. This is
6		approximately \$17.1 million higher than the Oregon-allocated NPC of
7		\$361.1 million from the 2014 TAM.
8	Q.	What are the forecasted normalized total-company NPC for calendar year
9		2015?
10	A.	The total forecasted normalized total-company NPC for calendar year 2015 are
11		\$1.530 billion. This is approximately \$81.2 million higher than the \$1.449 billion
12		reflected in the 2014 TAM. Details of the total-company NPC are provided in
13		Exhibit PAC/102.
14	Q.	Does the proposed rate increase reflect changes in Oregon load since the 2014
15		TAM?
16	A.	Yes. The 2015 load forecast used in the Company's calculation of NPC reflects a
17		decrease in Oregon load compared to the 2014 forecast loads from the 2014
18		TAM. Due to the decreased Oregon load, the Company will collect \$1.9 million
19		less for NPC based on the rates approved in the 2014 TAM, adding to the overall
20		rate change for the 2015 TAM.
21	Q.	Have Oregon's allocation factors changed since the 2014 TAM?
22	A.	Yes. The reduction in projected Oregon load, coupled with a net increase in total-
23		company load, caused a decrease in Oregon's allocation factors and the

1		corresponding share of total-company NPC allocated to Oregon compared with
2		the 2014 TAM. This reduction in allocation factors is reflected in the Company's
3		requested rate increase.
4	Q.	Because this is a stand-alone TAM filing, did the Company include an update
5		to Other Revenues for certain items related to NPC, as stipulated in docket
6		UE 216?
7	A.	Yes. Exhibit PAC/103 shows the update to "Other Revenues" for which a
8		baseline was set in the 2014 TAM. Other Revenues are expected to increase in
9		2015 due to an increase in revenue from an ancillary services contract with Seattle
10		City Light for the Stateline wind farm and the South Idaho Exchange with
11		Bonneville Power Administration. On an Oregon-allocated basis, projected Other
12		Revenues are approximately \$0.6 million higher in 2015. This increase in Other
13		Revenues partially offsets the increase in NPC, reducing the TAM by
14		approximately \$0.6 million.
15	Q.	Have you included the costs and benefits associated with the Energy
16		Imbalance Market (EIM) in the 2015 TAM?
17	A.	No. Due to the uncertainty surrounding the level of benefits that will be achieved,
18		particularly in the early stages of EIM operation, the Company has not included
19		the impact of the EIM in this case. The Company intends to file a separate
20		application with the Commission to address the Company's participation in the
21		EIM, including a proposal to defer the associated costs and benefits.

1		DETERMINATION OF NPC
2	Q.	Please explain NPC.
3	A.	NPC are defined as the sum of fuel expenses, wholesale purchase power expenses
4		and wheeling expenses, less wholesale sales revenue.
5	Q.	Please explain how the Company calculates NPC.
6	A.	NPC are calculated for a future test period based on projected data using the
7		Generation and Regulatory Initiative Decision Tools (GRID) model. GRID is a
8		production cost model that simulates the operation of the Company's power
9		system on an hourly basis.
10	Q.	Is the Company's general approach to the calculation of NPC using the
11		GRID model the same in this case as in previous cases?
12	A.	Yes. The Company has used the GRID model to determine NPC in its Oregon
13		filings since 2002. As I discuss below, the Company has updated and refined
14		various inputs to the GRID model in compliance with past Commission orders,
15		including the order in the 2014 TAM, and in an effort to improve the NPC
16		calculation for the 2015 test period.
17	Q.	Is the Company using the same version of the GRID model as used in its
18		2014 TAM?
19	A.	Yes.
20	Q.	What general inputs were updated for this filing?
21	A.	The Company updated inputs to the GRID model to reflect the information
22		available at the time the Company prepared the NPC study for the current filing.
23		In addition to system load, the Company undated wholesale sales and purchase

1 contracts for electricity, natural gas, and wheeling; wholesale market prices for 2 electricity and natural gas; fuel expenses; transmission capability; characteristics 3 of the Company's generation facilities; and planned outages and forced outages of 4 the Company's generation resources. The historical base period used for outage 5 rates and other inputs relying on four-year historical averages in this filing is the 6 48-month period ended June 2013. 7 Q. What reports does the GRID model produce? 8 A. The major output from the GRID model is the NPC report. This is the same 9 information contained in Exhibit PAC/102. An electronic version of the exhibit is 10 included in the workpapers accompanying the Company's filing, including 11 additional data with more detailed analyses in hourly, daily, monthly, and annual 12 formats by heavy load hours and light load hours. 13 Q. Please generally describe the changes in NPC compared to the 2014 TAM. 14 A. Table 1 illustrates the change in total-company NPC by category from the NPC

baseline in the 2014 TAM:

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Table 1
Net Power Cost Reconciliation

	Total Company (\$ millions)	\$/MWh
OR TAM CY 2014	\$1,449	\$24.31
Increase/(Decrease) to NPC:		
Wholesale Sales Revenue	\$41	
Purchased Power Expense	\$13	
Coal Fuel Expense	(\$4)	
Natural Gas Fuel Expense	\$27	
Wheeling, Hydro and Other Expense	\$4	
Total Increase/(Decrease) to NPC	\$81	
OR TAM CY 2015	\$1,530	\$25.53

As shown in Table 1, the increase in NPC is driven by a reduction in wholesale sales revenue and increase in natural-gas fuel expense, along with smaller increases in purchased power, wheeling, and other expenses. The increase is partially offset by a reduction in coal fuel expense.

# Q. Does this filing reflect changes in the operation of certain Company-owned thermal resources since the 2014 TAM?

Yes. First, the 2015 TAM includes a full 12 months of operation of the Lake Side 2 natural-gas-fired generating plant (Lake Side 2). The 2014 TAM included Lake Side 2 generation beginning June 2014. Second, the 2015 TAM includes the retirement of one coal-fired generating plant and the conversion of one coal-fired unit to gas-fired operation. The Carbon coal-fired generating plant, located in Utah, will be retired from service April 15, 2015. Unit 3 of the Naughton generating plant, located in Wyoming, is assumed to cease coal-fired operation on

A.

1		December 31, 2014, and resume operation as a gas-fired unit effective June 1,
2		2015.
3	Q.	Is it possible that the Company would continue to operate Naughton Unit 3
4		as a coal-fired facility through the 2015 test period?
5	A.	Yes. To comply with state of Wyoming Regional Haze State Implementation
6		Plan (SIP) requirements, the Company must install selective catalytic reduction
7		(SCR) equipment and a baghouse to reduce emissions of $NO_X$ and PM on
8		Naughton Unit 3 by December 31, 2014. The Company assessed the economics
9		associated with these requirements in a certificate of public convenience and
10		necessity docket before the Wyoming Pubic Service Commission and determined
11		that natural-gas conversion is in the best interests of the Company's customers. In
12		its final action on the Wyoming Regional Haze SIP, the Environmental Protection
13		Agency (EPA) approved the SIP requirements for Naughton Unit 3. The EPA
14		specifically stated its support of the gas conversion of Naughton Unit 3, but noted
15		that because the SIP documentation did not include a gas conversion option, the
16		EPA could not consider that option until the SIP is changed. PacifiCorp is
17		currently working with the State of Wyoming Department of Environmental
18		Quality to amend the permit requiring installation of an SCR and a baghouse at
19		Naughton Unit 3 by December 31, 2014. Once the amended permit is issued, the
20		gas conversion can be delayed until June 30, 2018.
21		If the allowable timeframe for coal-fired operation is extended beyond
22		December 31, 2014, the Company will update the TAM to reflect the continuation
23		of the unit as a coal-fired base load generation facility and any associated

1 operating restrictions. The Company plans to incorporate the most recent 2 information possible in its NPC update filings throughout the course of this 3 proceeding. 4 Q. Have you calculated the impact to NPC if Naughton Unit 3 is not converted 5 to gas during the test period and is instead allowed to continue to operate as a coal-fired resource? 6 Yes. The Company prepared a second NPC study for 2015 that incorporates the 7 A. 8 assumption that coal-fired operations at Naughton Unit 3 continue through the test 9 period. The result is a reduction to total-company NPC of \$32.0 million, or 10 approximately \$7.8 million on an Oregon-allocated basis. This would result in an 11 overall increase in customer rates of approximately \$10.5 million, or 0.9 percent. 12 Because an amended permit has not yet been issued, unless otherwise indicated, 13 the NPC results described in my testimony refer to the scenario that assumes 14 Naughton Unit 3 is converted to gas generation during the test period. 15 DISCUSSION OF MAJOR COST DRIVERS IN NPC 16 Q. Please explain the reduction in wholesale sales revenue shown in Table 1. 17 A. The reduction in wholesale sales revenue is driven by: (1) the expiration of two 18 long-term sales contracts; and (2) reduced volume of wholesale market sales due to a reduction in economic resources. The reduction in sales volumes is partially 19 20 offset by higher average market prices during 2015. 21 The 2014 TAM included a long-term sales contract with Shell that expires 22 December 2014. The 2014 TAM also included a legacy sales agreement with 23 Sacramento Municipal Utility District (SMUD) that expires at the end of 2014.

Removing these two contracts reduces wholesale sales revenue by approximately \$17.8 million.

Revenue from market transactions (represented in GRID as short-term firm and system balancing sales) is approximately \$22.3 million lower than in the 2014 TAM due to a reduction in volume of 1,231 GWh, partially offset by a rise in wholesale market prices. Lower wholesale sales volume is attributed to a reduction in economic thermal resources, mainly related to the loss of low-cost generation from Carbon and Naughton Unit 3 and higher system load. Overall, coal generation is 1,541 GWh lower in the 2015 TAM compared to the 2014 TAM. Forecasted system load in 2015 is 436 GWh higher than the 2014 TAM, reducing the Company's ability to make wholesale sales. Market sales transactions in the 2014 TAM were included at an average price of \$33.67/MWh, while market sales in the current case are included at an average price of \$35.61/MWh.

### Q. Please discuss the increase in natural-gas fuel expense since the 2014 TAM.

A. The increase in natural-gas fuel expense is attributed to Lake Side 2 being included for all 12 months of the test period and the natural-gas-fired operation of Naughton Unit 3 beginning June 2015. In total, these changes increase natural-gas expense by \$50.1 million compared to the 2014 TAM. This increase in expense is partially offset by reductions in natural-gas generation volume at other facilities. Total generation from natural-gas facilities increased 539 GWh, and the average cost of natural-gas generation increased from \$33.91/MWh to \$34.73/MWh in the current case.

1	Q.	Does this case include the natural-gas contracts executed as a result of the
2		Company's 2012 Natural Gas Request for Proposals?
3	A.	Yes. In August 2013, the Company entered into two gas swap transactions as a
4		result of the Company's 2012 Natural Gas Request for Proposals. These contracts
5		were identified in the Company's September 2013 notice of corrections and
6		updates in the 2014 TAM, and were included in the indicative and final updates
7		filed in November 2013.
8	Q.	Why did purchased power expense increase compared to the 2014 TAM?
9	A.	The increase in purchased power expense is driven by higher prices for short-term
10		market purchases and the addition of several new qualifying facilities (QFs),
11		partially offset by a reduction in the portion of the output from the Hermiston
12		plant that is purchased by the Company.
13		Expenses from market transactions (represented in GRID as short-term
14		firm and system balancing purchases) are approximately \$11.9 million higher
15		than in the 2014 TAM, while the volume from such transactions remained
16		relatively steady, decreasing by only 55 GWh (or one percent). Market purchase
17		transactions in the 2014 TAM were included at an average price of \$28.30/MWh,
18		while market purchases in the current case are included at an average price of
19		\$31.13/MWh.
20		Total expenses for power purchased from QFs increased by approximately
21		\$10.9 million compared to the 2014 TAM. The increase is due to several new
22		renewable QFs, including four large wind QFs and several small solar projects in
23		Utah expected to reach commercial operation in 2015. The increase is partially

1 offset by reduced expenses related to one customer electing to use its QF 2 generation to serve its own load and removal of two QFs that were included in the 3 2014 TAM but never reached commercial operation. 4 Q. Did the Company extend any purchased power contracts in its NPC study 5 that are scheduled to expire before the end of 2015? 6 A. Yes. Several existing QF contracts terminate before the end of the test period, 7 and the Company assumed that these customers will enter contracts to continue 8 selling to the Company at the most recent avoided cost rates. In addition, the 9 Company assumed the existing contract with an industrial customer for operating 10 reserves would be renewed after it expires in December 2014. The Company 11 anticipates updating NPC in this proceeding as more information becomes 12 available. 13 Please explain the net decrease in coal fuel expense shown in Table 1. Q. 14 Total coal fuel expense is \$4.0 million lower than the 2014 TAM due to the A. 15 aforementioned retirement of Carbon and the conversion of Naughton Unit 3 to 16 natural-gas-fired operation. The reduction in expense due to ceased coal-fired 17 operations at these two facilities is largely offset by increased fuel costs at other 18 plants. Further details supporting the cost of fuel to the Company's remaining 19 coal-fired facilities are provided in the direct testimony of Ms. Crane. 20 Q. Did the Company include any anticipated changes to plant capacity due to 21 environmental upgrades placed in service through the end of the test period? 22 A. Yes. The Company's modeling incorporates the following reductions in capacity 23 at three coal-fired generating plants to account for environmental upgrades

1		through the end of the 2015 TAM test period: (1) a 4 MW reduction at Hunter
2		Unit 1 effective July 1, 2014; (2) a 0.5 MW reduction at Hayden Unit effective
3		May 15, 2015; and (3) a 3.5 MW reduction at Jim Bridger Unit 3 effective
4		November 5, 2015.
5		REFINEMENTS TO THE NPC STUDY SINCE THE 2014 TAM
6	Q.	Has the Company modeled NPC in accordance with the Commission's final
7		order in the 2014 TAM?
8	A.	Yes. The Company's 2015 TAM filing is consistent with Order No. 13-387 in the
9		2014 TAM, as follows:
10		• Wind Shaping—Consistent with the method adopted in the 2014 TAM, the
11		Company used actual energy output data from its owned and purchased
12		wind facilities to shape hourly wind generation profiles, scaled up or down
13		so when the output within the Company's traditional four-hour blocks is
14		averaged over the course of a month, it is the same as in the long-run
15		median, or P50, forecast. In this case, the Company used 2012 actual
16		output, rather than 2011 output, to shape the normalized forecast. Rolling
17		forward to 2012 output uses the most recent year available at the time the
18		filing was prepared.
19		• Bridger Coal Expense—Expenses for Bridger Coal Company are included
20		based on the operating costs of the mine. Additional details are provided
21		in the testimony of Ms. Crane.
22		Captive Coal Mine Costs—The Company has excluded management
23		overtime and 50 percent of management annual incentive plan expenses

I		from the calculation of the cost of coal from affiliate coal mines.
2		• Jim Bridger Unit 2 Heat Rate Coefficient—Rather than use 48 months of
3		actual data, the heat rate for Jim Bridger Unit 2 is based on the actual heat
4		rate for Jim Bridger Unit 1 beginning July 2010 to reflect efficiency
5		improvements from a turbine upgrade.
6		• Transition Adjustment—The Company will calculate the transition
7		adjustments consistent with the 2014 TAM, valuing the freed-up energy
8		using GRID and not including a credit for avoided transmission service
9		from Bonneville Power Administration.
10	Q.	Has the Company refined any inputs to the GRID model to improve the
11		accuracy of its forecast?
12	A.	Yes. The Company included a change to the output of the Leaning Juniper wind
13		plant (Leaning Juniper) associated with a contract unique to that wind project. As
14		a result of the contract, output at Leaning Juniper is forecast at a slightly reduced
15		level, but the Company will receive an offsetting amount of revenue. Both of
16		these components are included in the 2015 TAM.
17	•	The Company also plans to update the 2015 TAM for two changes to
18		network reliability standards recently approved by the Federal Energy Regulatory
19		Commission (FERC). First, BAL-002-WECC-2 modifies contingency reserve
20		requirements, effective October 1, 2014. The current contingency reserve
21		requirement is for the sum of five percent of load responsibility served by hydro
22		generation and seven percent of the load responsibility served by thermal
23		generation. Wind and solar are treated the same as hydro. The newly approved

I		contingency reserve requirement is for the sum of three percent of hourly
2		integrated load plus three percent of hourly integrated generation. Second,
3		BAL-003-1 includes requirements pertaining to the provision of reserves for
4		frequency response effective April 1, 2015. The Company is evaluating the
5		impact of each of these standards and developing the required inputs to
6		incorporate the modified reserve requirements in GRID. The Company
7		anticipates including the updated reserve calculation in its rebuttal filing.
8		COMPLIANCE WITH TAM GUIDELINES
9	Q.	Did the Company prepare this filing in accordance with the TAM Guidelines
10		adopted by Order No. 09-274, as clarified and amended in Order No. 09-432?
11	A.	Yes. The Company has complied with the TAM Guidelines applicable to the
12		initial filing in a stand-alone TAM. As previously discussed, the Company
13		proposes to update the 2015 TAM to reflect a change in the operation of
14		Naughton Unit 3 if continued coal-fired generation is allowed during 2015.
15	Q.	Did the Company make changes to the GRID model in this case?
16	A.	No.
17	Q.	Does this filing include updates to all NPC components identified in
18		Attachment A to the TAM Guidelines?
19	A.	Yes.
20	Q.	Has the Company provided information regarding its anticipated TAM
21		updates?
22	A.	Yes. Exhibit PAC/104 contains a list of known contracts and other items that
23		could be included in the Company's TAM updates in this case based on the best

- information available at the time the Company prepared the NPC study.

  What workpapers did the Company provide with this filing?

  In compliance with Attachment B to the TAM Guidelines, the Company provided access to the GRID model and workpapers concurrently with this initial filing.

  Specifically, the Company is providing the NPC report workbook and the GRID project report.
- 7 Q. Does this conclude your direct testimony?
- 8 A. Yes.

Docket No. UE \_\_\_ Exhibit PAC/101 Witness: Brian S. Dickman

# BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

### **PACIFICORP**

Exhibit Accompanying Direct Testimony of Brian S. Dickman
Oregon-Allocated Net Power Costs

**April 2014** 

PacifiCorp CY 2015 TAM		Total Company	npany				Oregon Allocated	located
	ACCT.	UE-264 Final TAM CY 2014	TAM CY 2015	Factor	Factors CY 2014	Factors CY 2015	UE-264 Final TAM CY 2014	TAM CY 2015
Sales for Resale	)				- - - - - -			
Existing Firm PPL	447	26,770,321	13,961,671	SG G	26.053%	25.687%	6,974,472	3,586,366
Existing Firm UPL	447	30,332,094	29,139,801	უ ე	26.053%	25.687%	7,902,421	7,485,207
Post-Merger Firm	447	392,665,570	365,630,296	ე ე	26.053%	25.687%	102,301,167	93,920,287
Total Sales for Resale	Ì	449,767,986	408,731,768	4	24.00.42		117,178,061	104,991,860
Purchased Power	ļ			(			!	1
Existing Firm Demand PPL Existing Firm Demand UPL	555 555	2,867,295	3,292,634	ა დ უ ლ	26.053% 26.053%	25.687%	747,016	845,787
Existing Firm Energy	555	25,971,161	29,154,344	SS	24.687%	24.484%	6,411,431	7,138,141
Post-merger Firm	222	519,804,990	526,772,591	SG	26.053%	25.687%	135,424,802	135,313,275
Secondary Purchases Other Generation Expense	555 555	3 344 256	3 515 487	S S	24.687%	24.484%	- 871 279	- 903 031
Total Purchased Power	}	604,520,448	618,114,674	)			157,140,886	158,425,722
Wheeling Expense Existing Firm PPI.	565	27,297,335	27.165.030	S.	26.053%	25.687%	7,111,775	6.977.943
Existing Firm UPL	565			SG	26.053%	25.687%		
Post-merger Firm	265	110,997,010	112,112,433	SG	26.053%	25.687%	28,918,053	28,798,576
Non-Firm	265	5,066,934	6,899,428	SE	24.687%	24.484%	1,250,860	1,689,254
i otal Wheeling Expense		143,301,260	140,170,091				37,280,089	57,405,775
Fuel Expense Fuel Consumed - Coal	501	744,132,904	733,921,363	SE	24.687%	24.484%	183,702,102	179,693,090
Fuel Consumed - Coal (Cholla)	501	55,644,930	61,820,042	SE	24.687%	24.484%	13,736,915	15,136,001
Fuel Consumed - Gas	501	4,104,921	4,798,513	S G	24.687%	24.484%	1,013,371	1,174,866
Natural Gas Consumed Simple Cycle Comb Turbines	547	336,503,960	363,638,686	3	24.687%	24.484%	83,071,834	89,033,188
Steam from Other Sources	503	3,441,624	4,106,159	S	24.687%	24.484%	849,624	1,005,351
Total Fuel Expense		1,150,528,274	1,174,275,784				284,027,841	287,509,336
Net Power Costs (Per GRID)		1,448,642,016	1,529,835,581				361,271,356	378,408,972
Oregon Situs Solar Project Benefit  Total Net of Adjustments		(131,319)	(1529,681,417	OR	100.000%	100.000%	(131,319)	(154,164) 378,254,808
						 Increase Abse	Increase Absent Load Change	17,114,771
		Oregon \$ Chai	Oregon-allocated NPC Baseline in Rates from UE-264 \$ Change due to load variance from UE-264 forecast 2015 Recovery of NPC in Rates	eline in Rates iance from UE Recovery of	Saseline in Rates from UE-264 d variance from UE-264 forecast 2015 Recovery of NPC in Rates		\$361,140,037 (1,852,305) \$359,287,732	
					Incr	ease Includin	Increase Including Load Change	18,967,076

Add Other Revenue Change (642,976)

Total TAM Increase 18,324,099

Docket No. UE \_\_\_ Exhibit PAC/102 Witness: Brian S. Dickman

# BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

### **PACIFICORP**

**Exhibit Accompanying Direct Testimony of Brian S. Dickman Net Power Costs Report** 

**April 2014** 

PacifiCorp					OR T	OR TAM 2015 NPC Net Power Cost Analysis	PC sis						
12 months ending December 2015	01/15-12/15	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
						₩.							
Special Sales For Resale Long Term Firm Sales Back Hills 27701322160 BPA Wind 942818 Hurricane Sale 8393046 LADWR (IPP Layoff) Leaning Juniper Revenue UMPA II 845631	13,961,670 2,633,762 13,751 29,139,801 120,727	1,172,416 298,403 1,146 2,402,996 7,467 <u>593,283</u>	1,119,070 267,250 1,146 2,058,084 7,861 561,909	1,185,767 297,745 1,146 2,080,694 12,327 <u>593,283</u>	1,145,501 186,990 1,146 1,645,803 6,824 582,825	1,173,236 191,247 1,146 2,403,743 8,738 <u>593,283</u>	1,151,796 181,087 1,146 2,692,677 9,185	1,176,884 112,516 1,146 2,830,751 13,516 1,779,848	1,169,735 113,088 1,146 2,828,315 14,132	1,162,394 159,620 1,146 2,013,576 12,523	1,174,130 199,177 1,146 3,397,116 11,070	1,149,347 278,458 1,146 2,281,743 8,345 582,825	1,181,394 348,181 1,146 2,504,305 8,739 593,283
Total Long Term Firm Sales	55,468,836	4,475,711	4,015,321	4,170,962	3,569,088	4,371,392	4,968,407	5,914,660	5,526,567	4,141,898	5,375,921	4,301,864	4,637,046
Short Term Firm Sales Palo Verde Electric Swaps Sales STF Index Trades	894,440	310,780	272,880	310,780			]						
Total Short Tern Firm Sales	894,440	310,780	272,880	310,780		,					ı		
System Balancing Sales COB Four Corners Mead Mid Columbia Mona NOB Palo Verde SP15 Trapped Energy	63,851,530 89,141,474 44,730,741 14,219,804 20,806,405 119,616,225	7,859,245 8,541,652 4,179,051 740,742 1,008,359	5,731,113 7,431,203 3,855,967 998,183 367,319 10,326,269	6,398,103 5,439,192 3,537,624 1,521,367 3,88,336 9,301,732	3,106,598 6,570,907 2,839,294 18,826 1,546,917 8,880,372	1,112,151 5,347,222 3,400,979 9,251 2,023,519 9,760,212	663,590 5,330,239 2,445,512 82,908 2,038,709 9,700,610	5,486,451 8,282,583 4,208,704 824,690 2,818,481 11,879,793	6,424,790 11,311,379 4,735,150 1,748,714 3,057,464 9,330,589	6,544,275 8,242,035 3,960,466 2,866,144 3,793,126 8,872,800	5,768,924 6,312,618 4,101,503 2,926,591 1,942,502 10,218,306	7,484,760 8,987,987 3,854,187 1,686,692 817,092 10,387,137	7,271,533 7,344,458 3,612,315 795,696 1,004,583
Total System Balancing Sales	352,368,492	33,188,765	28,710,390	26,586,353	22,963,713	21,653,390	20,261,567	33,500,700	36,608,086	34,279,411	31,270,989	33,217,855	30,127,274
Total Special Sales For Resale	408,731,768	37,975,255	32,998,590	31,068,094	26,532,801	26,024,783	25,229,974	39,415,361	42,134,652	38,421,309	36,646,910	37,519,718	34,764,320

PacifiCorp					ORT	OR TAM 2015 NPC	ည						
12 months ending December 2015	01/15-12/15	Jan-15	Feb-15	Mar-15	Net Po Apr-15	Net Power Cost Analysis 5 May-15 J	sis Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Purchased Power & Net Interchange	hange												
Long Term Firm Purchases	)												
APS Supplemental p27875	826,309	56,121	270,449		106,524	150,345					34,052	123,768	115,050
Combine Hills Wind p160595	5,184,876	496,898	323,085	574,537	403,458	375,039	451,979	433,241	429,645	409,479	439,678	490,452	357,384
Deseret Purchase p194277	35,867,980	3,083,965	2,951,197	3,083,965	3,032,333	2,558,418	2,742,824	3,083,965	3,083,965	3,039,709	3,083,965	3,039,709	3,083,965
Douglas PUD Settlement p38185	2,055,576	98,518	89,713	144,774	254,273	325,677	352,433	257,843	179,186	87,568	78,044	81,282	106,263
Gemstate p99489	3,211,600	263,700	260,500	265,400	260,500	260,500	260,500	260,500	279,400	260,500	282,900	293,500	263,700
Georgia-Pacific Camas	6,501,763	552,204	498,766	552,204	534,392	552,204	534,392	552,204	552,204	534,392	552,204	534,392	552,204
Hermiston Purchase p99563	79,391,905	7,844,212	7,162,650	6,027,109	4,765,954	3,824,893	4,385,746	7,155,402	7,859,013	7,405,821	7,816,713	7,323,052	7,821,340
Hurricane Purchase p393045	125,120	10,427	10,427	10,427	10,427	10,427	10,427	10,427	10,427	10,427	10,427	10,427	10,427
IPP Purchase	29,139,801	2,402,996	2,058,084	2,080,694	1,645,803	2,403,743	2,692,677	2,830,751	2,828,315	2,013,576	3,397,116	2,281,743	2,504,305
MagCorp Reserves p510378	6,355,850	533,330	581,450	545,360	469,170	461,150	477,190	533,330	537,340	545,360	569,420	549,370	553,380
Nucor p346856	6,018,000	501,500	501,500	501,500	501,500	501,500	501,500	501,500	501,500	501,500	501,500	501,500	501,500
P4 Production p137215/p145258	19,999,999	1,666,667	1,666,667	1,666,667	1,666,667	1,666,667	1,666,667	1,666,667	1,666,667	1,666,667	1,666,667	1,666,667	1,666,667
PGE Cove p83984	323,118	26,927	26,927	26,927	26,927	26,927	26,927	26,927	26,927	26,927	26,927	26,927	26,927
Rock River Wind p100371	4,940,852	602,477	475,464	480,834	376,185	360,263	271,745	193,726	234,387	304,450	436,506	593,879	610,936
Small Purchases east	56,350	5,310	5,186	6,277	4,722	3,887	3,884	3,623	3,956	5,488	4,433	4,476	5,107
Small Purchases west													
Three Buttes Wind p460457	20,598,497	2,305,957	1,595,827	2,351,682	1,690,904	1,714,597	1,181,550	1,054,248	1,080,038	1,423,019	1,787,221	2,006,943	2,406,511
Top of the World Wind p522807	40,244,926	5,293,915	3,991,015	3,804,703	3,095,178	2,664,502	2,418,363	1,930,210	2,086,321	2,260,849	2,895,794	4,238,572	5,565,507
Tri-State Purchase p27057	10,417,371	922,911	854,296	807,547	770,766	817,365	858,148	936,165	935,183	902,330	917,020	877,785	817,856
Wolverine Creek Wind p244520	10,256,405	760,815	599,185	1,196,907	1,150,456	1,120,408	872,763	852,864	799,983	744,483	643,953	843,433	671,156
Long Term Firm Purchases Total	281,546,298	27,428,850	23,922,389	24,127,512	20,766,138	19,798,511	19,709,713	22,283,592	23,094,455	22,142,542	25,144,537	25,487,875	27,640,184
Seasonal Purchased Power	009 890 9	1				1		2 150 116	707	1 780 000		1	
Constenation 2013-2010	0,000,000					•		2, 136, 410	401,121,	1,109,000			•
Seasonal Purchased Power Total	6 068 600							2 158 416	2 121 184	1 789 000			•

cifiCorp					OR T	OR TAM 2015 NPC	ည						
months ending December 2015	01/15-12/15	Jan-15	Feb-15	Mar-15	Net Pov Apr-15	Net Power Cost Analysis 5 May-15 J	sis Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Qualifying Facilities													
QF California	6,902,169	637,342	714,280	794,400	1,013,509	1,028,382	797,732	379,511	282,458	261,797	263,905	292,373	436,479
QF Idaho	8,545,790	611,664	557,257	689,422	752,035	911,295	1,002,105	759,176	623,073	635,084	685,849	677,916	640,916
QF Oregon	27,437,190	2,284,419	2,144,052	2,453,355	2,798,328	2,888,377	2,584,588	2,218,163	2,086,992	2,142,692	1,949,187	1,736,818	2,150,219
QF Utah	5,254,276	126,215	146,009	173,780	186,556	281,386	432,138	406,781	751,356	710,386	728,840	686,975	623,853
QF Washington	627,025	31,328	31,324	31,290	35,658	51,401	72,623	88,902	93,412	80,707	47,670	31,385	31,328
QF Wyoming	760,108	22,889	21,559	20,863	49,065	89,336	296'68	116,599	116,514	105,605	59,394	34,124	34,193
Biomass One QF	14,187,605	1,302,686	1,190,159	1,319,319	718,405	723,393	718,402	1,404,148	1,404,217	1.395,239	1,425,312	1,341,046	1,245,279
Champlin Blue Mtn Wind QF	1,612,152	. '	. '	. '	. •	. '	. •		. '		. '	47,243	1,564,910
Chevron Wind p499335 QF	2,439,897	220,458	199,832	196,164	78,193	89,146	172,426	153,292	243,792	205,029	307,113	324,394	250,058
DCFP p316701 QF	153,092	12,362	9,535	10,916	10,907	20,324	18,943	10,178	5,422	11,770	20,203	16,729	5,804
Evergreen BioPower p351030 QF	2,478,138	194,715	189,958	176,523	141,532	157,092	168,446	194,211	269,823	256,445	306,267	211,156	211,968
ExxonMobil p255042 QF													
Five Pine Wind QF	7,452,821	671,391	572,575	680,769	532,192	533,286	435,110	544,635	643,933	546,835	661,873	724,901	905,322
Kennecott Refinery QF													
Kennecott Smelter QF													
Latigo Wind Park QF	4,764,355					735,564	616,578	557,900	453,103	488,178	673,102	597,668	642,263
Long Ridge Wind I QF	44,112												44,112
Long Ridge Wind II QF	44,112												44,112
Mountain Wind 1 p367721 QF	8,485,221	1,204,831	771,242	797,935	584,542	493,472	364,985	403,538	539,866	644,506	724,873	831,109	1,124,321
Mountain Wind 2 p398449 QF	12,284,280	1,758,851	1,078,685	1,124,962	797,084	859,408	702,966	794,867	839,387	813,454	861,128	1,116,705	1,536,783
North Point Wind QF	16,299,568	1,454,189	1,243,197	1,472,266	1,168,023	1,156,823	962,878	1,213,856	1,429,690	1,214,962	1,456,640	1,567,358	1,959,686
Oregon Wind Farm QF	11,798,090	691,263	738,788	952,230	1,170,368	1,187,991	1,389,764	1,420,408	1,070,425	881,619	901,747	1,036,952	356,535
Power County North Wind QF p5756	4,124,755	379,580	383,534	351,063	330,930	266,151	237,420	296,505	270,575	307,628	402,527	388,503	510,340
Power County South Wind QF p5756	3,943,700	410,977	368,187	379,161	298,713	235,677	235,457	222,141	230,438	274,775	344,969	403,347	539,857
Roseburg Dillard QF	1,065,195	134,050	134,834	66,560	45,762	25,361	32,675	142,165	126,948	110,133	35,941	86,074	124,692
SF Phosphates		. '	. •	. '	. '	. '	. '	. '	. '	. '		. •	. '
Spanish Fork Wind 2 p311681 QF	2,844,147	183,965	199,368	175,977	166,978	170,414	248,216	297,076	351,514	285,067	231,636	255,544	278,391
Sunnyside p83997/p59965 QF	27,794,859	2,451,869	2,344,758	2,454,297	1,629,359	2,205,904	2,405,857	2,482,305	2,410,580	2,396,768	2,087,195	2,427,954	2,498,014
Tesoro QF	1,245,907	114,108	102,529	137,336	112,604	84,580	73,956	94,579	88,406	94,416	106,915	99,265	137,215
Threemile Canyon Wind QF p500139	2,087,775	152,303	159,689	178,983	167,021	212,401	199,278	177,403	174,888	165,712	193,399	149,917	156,781
US Magnesium QF						•					•		
Qualifying Facilities Total	174,676,338	15,051,453	13,301,352	14,637,572	12,787,764	14,407,164	13,962,510	14,378,337	14,506,810	14,028,807	14,475,684	15,085,456	18,053,429
Mid-Columbia Contracts	1											0	0
Douglas - Wells peuszs	3,637,620	301,420	301,420	301,420	301,420	301,420	301,420	301,420	301,420	306,564	306,564	306,564	306,564
Grant Surplus p258951	2,046,082	170,507	170,507	170,507	170,507	170,507	170,507	170,507	170,507	170,507	170,507	170,507	170,507
Mid-Columbia Contracts Total	(307,901)	(27,373)	(27,373)	(27,373)	(27,373)	(27,373)	(27,373)	(27,373)	(27,373)	(22,229)	(22,229)	(22,229)	(22,229)
Total Long Term Firm Purchases	461,983,335	42,452,930	37,196,368	38,737,711	33,526,529	34,178,302	33,644,850	38,792,972	39,695,076	37,938,120	39,597,992	40,551,102	45,671,383

PacifiCorp					ORT	OR TAM 2015 NPC	PC						
12 months ending December 2015	01/15-12/15	Jan-15	Feb-15	Mar-15	Net Pc Apr-15	Net Power Cost Analysis 5 May-15 Ju	/sis Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Storage & Exchange APS Exchange p58118/s58119			,			•		,		•		,	
BPA FC II Wind p63507		•					•						
BPA FC IV Wind p79207													
BPA So. Idaho p64885/p83975/p647	(42)							(42)					
Cowlitz Swift p65787													
EWEB FC I p63508/p63510				,		,			,				
PSCo Exchange p340325	5,400,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000
PSCO FC III p63362/s63361													
Redding Exchange p66276													
SCL State Line p105228													
Total Storage & Exchange	5,399,958	450,000	450,000	450,000	450,000	450,000	450,000	449,958	450,000	450,000	450,000	450,000	450,000
Short Term Firm Purchases Mid Columbia	1,005,360	349,320	306,720	349,320									
Total Short Tern Firm Purchases	1,005,360	349,320	306,720	349,320		•		•			•	•	
System Balancing Purchases COB	8,293,205	97,208	34,095	64,068	670,591	2,460,362	2,926,650	775,582	246,660	310,231	284,837	151,948	270,972
Four Corners	7,320,088	233,227	177,310	1,070,471	176,568	31,927	302,390	951,022	819,774	988,561	1,155,998	759,932	652,907
Mead	32,350	3,022	1,095	1,563	1,028	461	396	3,804		7,711	450	2,542	10,279
Mid Columbia	93,882,442	1,628,345	2,171,342	4,976,832	13,199,749	16,212,971	15,398,666	19,046,976	16,827,304	995,435	2,158,744	453,048	813,029
Mona	36,580,762	3,988,151	5,927,254	7,047,452	2,560,061	2,277,666	1,219,239	679,208	1,098,402	810,949	3,035,207	4,594,226	3,342,947
MON I	101,685				8,343	22,026	32,735	38,580					
Palo Verde Emergency Purchases													
Total System Balancing Purchases	146,210,533	5,949,953	8,311,097	13,160,387	16,616,340	21,005,414	19,880,077	21,495,173	18,992,141	3,112,887	6,635,236	5,961,696	5,090,134
Total Purchased Power & Net Inte	614,599,186	49,202,203	46,264,184	52,697,418	50,592,869	55,633,716	53,974,927	60,738,103	59,137,216	41,501,007	46,683,228	46,962,798	51,211,518

PacifiCorp					OR T	OR TAM 2015 NPC	PC						
12 months ending December 2015	01/15-12/15	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
Wheeling & U. of F. Expense Firm Wheeling ST Firm & Non-Firm	146,137,031 <u>39,860</u>	12,434,123 <u>8,223</u>	11,978,101 <u>5,919</u>	12,001,307 <u>1,938</u>	11,850,132 <u>1,276</u>	11,683,614 <u>5,286</u>	12,479,111 <u>2,059</u>	13,078,991 1,000	12,709,466 <u>957</u>	11,705,595 2,587	11,703,899 1,827	12,139,548 <u>1,535</u>	12,373,145 <u>7,253</u>
Total Wheeling & U. of F. Expense	146,176,891	12,442,346	11,984,020	12,003,245	11,851,408	11,688,899	12,481,170	13,079,991	12,710,423	11,708,182	11,705,726	12,141,083	12,380,398
Coal Fuel Burn Expense Carbon Cholla Costrip Craig Dave Johnston Hayden Hunter	7,359,409 61,820,042 16,049,189 25,020,339 62,822,559 13,859,273 164,989,491	2,137,237 5,588,502 1,436,955 2,234,130 5,315,449 1,273,584	2,024,530 5,203,376 1,297,276 2,016,833 4,727,019 1,225,753	2,249,101 5,617,886 1,436,713 2,233,454 3,967,051 1,350,255	952,683 3,441,911 1,390,665 2,161,236 5,337,126 908,972	(560) 4,521,247 880,422 2,231,711 5,436,305 598,623	(630) 4,382,269 1,080,045 2,156,529 5,379,608 928,344 13,114,309	(447) 5,160,655 1,437,115 2,234,098 5,700,495 1,209,956	(500) 5,883,131 1,436,284 2,231,144 5,695,857 1,256,199	(502) 5,507,740 1,390,964 2,159,803 5,460,851 1,139,687	(385) 5,498,096 1,436,401 1,730,677 5,539,120 1,345,308	(453) 5,358,807 1,389,738 1,397,909 5,237,719 1,338,402 14,321,029	(666) 5,656,420 1,436,621 2,232,814 5,065,959 1,284,189
Huntington Jim Bridger Naughton Wyodak	723,718,548 220,910,304 71,354,607 27,797,644	11,242,262 18,948,063 6,401,618 2,483,406	10,157,399 17,045,760 5,780,522 2,222,260	11,264,448 17,189,218 6,377,568 2,401,772	10,319,369 15,726,190 4,446,898 1,435,428	10,253,175 14,822,095 4,864,840 2,398,078	9,906,448 16,967,510 5,535,793 2,351,480	11,198,878 20,596,236 6,403,951 2,432,755	11,339,958 20,666,713 6,394,236 2,430,060	9,492,385 19,367,022 6,196,913 2,351,352	8,428,874 20,398,142 6,377,775 2,432,014	9,027,989 19,273,033 6,192,698 2,401,780	11,087,362 19,910,323 6,381,796 2,457,260
Total Coal Fuel Burn Expense	795,741,405	71,833,270	64,907,453	64,170,866	59,153,238	59,331,966	61,801,706	71,143,454	72,277,135	67,266,450	67,651,758	65,938,651	70,265,458
Gas Fuel Burn Expense Chehalis Curant Creek Gadsby, CT Hemision Lake Side 1 Lake Side 2 Naughton - Gas	40,745,984 58,804,374 4,499,991 5,085,127 35,290,406 84,599,021 88,669,032	1,372,857 4,395,055 - 186,174 4,148,649 8,069,186 8,715,829	4,314,297 - 236,002 3,510,053 7,085,399 7,853,018	5,357,394 177,053 2,373,449 6,753,064 7,136,536	4,313,785 222,719 1,147,829 5,734,730 4,198,254	3,528,162 176,423 222,065 5,331,059 6,494,867	3,666,844 355,703 778,267 6,564,011 7,089,118	6,907,932 6,306,455 1,528,276 642,618 3,462,786 8,287,618 7,691,562 3,091,218	7,600,863 6,647,060 2,167,489 835,089 4,147,587 8,636,192 8,299,131 4,346,231	7,275,036 6,034,286 804,226 679,976 3,716,692 8,114,277 7,869,736	8,642,590 3,193,293 - 691,160 4,106,037 4,588,626 7,659,334	4,533,451 5,620,923 494,244 3,598,969 7,812,545 7,547,444	4,413,256 5,426,848
Total Gas Fuel Bum	327,927,356	26,887,750	22,998,769	21,797,496	15,617,317	15,752,577	18,453,943	37,898,464	42,679,642	37,290,173	28,881,039	29,607,576	30,062,609
Gas Physical Gas Swaps Clay Basin Gas Storage Pipeline Reservation Fees	(66,375) 8,543,303 302,193 37,721,744	(22,863) 103,928 (32,194) 3,045,438	(20,650) 164,430 (20,421) 2,908,486	(22,863) 299,228 (2,763) 3,045,438	926,850 50,533 2,981,673	996,805 50,533 3,030,053	931,050 50,533 3,055,826	- 1,145,295 50,533 3,479,657	- 1,111,815 50,533 3,479,657	- 1,092,150 50,533 3,431,277	- 857,925 50,533 3,104,206	596,310 23,331 3,055,826	317,518 (19,491) 3,104,206
Total Gas Fuel Burn Expense	374,428,221	29,982,059	26,030,613	25,116,537	19,576,372	19,829,968	22,491,352	42,573,950	47,321,647	41,864,133	32,893,704	33,283,043	33,464,843
Other Generation Blundell Integration Charge	4,106,159 3,515,487	375,239 338,097	338,919 277,333	375,239 320,883	340,684 273,128	216,481 282,736	331,059 272,879	342,081 264,073	342,178 269,293	341,738 260,279	364,203 289,457	363,150 319,171	375,186 348,160
Total Other Generation	7,621,646	713,336	616,251	696,122	613,812	499,217	603,938	606,154	611,471	602,017	653,660	682,321	723,346
Net Power Cost	9,835,581	126,197,959	116,803,932	. "	115,254,898	120,958,983	126,123,118	148,726,291	149,923,241	124,520,479	122,941,167	121,488,178	133,281,241
Net Power Cost/Net System Load	25.53	23.66	24.69	25.23	24.96	25.27	25.87	27.10	27.75	26.17	25.70	24.71	24.99

Docket No. UE \_\_\_ Exhibit PAC/103 Witness: Brian S. Dickman

# BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

### **PACIFICORP**

Exhibit Accompanying Direct Testimony of Brian S. Dickman

Update to Other Revenues

**April 2014** 

PacifiCorp Oregon - CY 2015 TAM Other Revenues - Stand Alone TAM Adjustment

	Total Company	pany				Oregon Allocated	ocated
				Factors CY Factors CY	-actors CY		
	UE-264	CY 2015	Factor	2014	2015	UE-264	CY 2015
Seattle City Light - Stateline Wind Farm	(7,377,376)	(10,205,770)	SG	26.053%	25.687%	(1,922,028)	(2,621,579)
Non-company owned Foote Creek	(2,454,093)	(1,106,372)	SG	26.053%	25.687%	(639,365)	(284,196)
BPA South Idaho Exchange	(7,645,512)	(9,240,627)	SG	26.053%	25.687%	(1,991,885)	(2,373,661)
Little Mountain Steam Revenues			SG	26.053%	25.687%	•	
James River Royalty Offset	(4,302,805)	(3,926,947)	SG	26.053%	25.687%	(1,121,010)	(1,008,724)
Total Other Revenue	(21,779,786)	(24,479,716)				(5,674,288)	(6,288,160)
		Decr	ease (Incre	ase) in Other R	evenues Abse	Decrease (Increase) in Other Revenues Absent Load Change	(613,873)
	•		Baseline	Baseline Other Revenues in Rates	es in Rates	(5,674,288)	
	& Cha	\$ Change due to load variance from UE 264 CY 2014 forecast	iance from	UE 264 CY 20	14 forecast	29,104	
		Other Revenu	ues in Rates	Other Revenues in Rates using 2015 load forecast	ad forecast	(5,645,184)	
		Decrease	(Increase)	in Other Reve	nues Includir	Decrease (Increase) in Other Revenues Including Load Change	(642,976)

Docket No. UE \_\_\_ Exhibit PAC/104 Witness: Brian S. Dickman

# BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

### **PACIFICORP**

Exhibit Accompanying Direct Testimony of Brian S. Dickman
List of Expected or Known Contract Updates

**April 2014** 

### List of Known Items Expected to be Updated During the 2015 Oregon TAM

### Sales and Purchases of Electricity and Natural Gas

- 1. New electricity sales and purchase contracts, physical and financial, including contracts with qualifying facilities.
- 2. Changes in contract terms of existing electricity sales and purchase and exchange contracts.
- 3. New natural gas sales and purchase contracts, physical and financial.
- 4. Changes in contract terms of existing natural gas sales and purchase contracts.
- 5. Contracts whose prices are linked to market indexes and inflation rates.
- 6. Sales contract with Black Hills Company for energy price and fixed payments.
- 7. Purchase contracts for generation and fixed costs from the Mid Columbia projects.
- 8. Purchase contract with Tri-State Generation and Transmission Association Inc. for energy price.
- 9. Potential new qualifying facility purchase contracts with Bevan Solar, BPA Foote Creek II, Chopin Wind, City of Astoria, Enterprise Solar, Escalante Solar I, Escalante Solar II, Granite Mountain East, Granite Mountain West, Iron Springs Solar, Milford II, Pavant Solar, Pioneer Wind Park, PSCO Foote Creek III, Redmond Minerals, Surprise Valley Electric Coop, Warm Springs Hydro.
- 10. Purchase expenses of PGE Cove based on PGE projection.
- 11. Election decision for Grant Meaningful Priority.

### Transportation and Storage of Natural Gas

- 12. New pipeline and storage contracts for transporting natural gas from market to Company's generating facilities.
- 13. Changes in contract terms of existing pipeline and storage contracts.
- 14. Contracts whose prices are linked to market indexes and inflation rates.

### Wheeling Expenses and Transmission

- 15. New transmission contracts to wheel power to serve the Company's load obligations.
- 16. Changes in contract terms of existing transmission contracts.
- 17. Wheeling expenses that are impacted by changes in third-parties' transmission tariff rates.

18. Contracts whose prices are linked to market indexes and inflation rates.

## Other

- 19. Changes to reserve requirements related to network reliability standards BAL-002-WECC-2, effective October 1, 2014, and BAL-003-1, effective April 1, 2015.
- 20. Potential extension of coal-fired operation at Naughton Unit 3 pending approval of a revised permit from the State of Wyoming Department of Environmental Quality.

# Coal Expense Update Items

The table below lists the coal and transportation contracts that maybe affected by changes in volumes as well as changes to market indexes and inflation rates.

	C	Cap	tive	Fixed Contr		Escal Contr	_	Transpo Cont	
Plant	Supplier/Mine	Volume	Price	Volume	Price	Volume	Price	Volume	Price
Bridger	Bridger Coal Company Black Butte Union Pacific Railway	$\checkmark$				$\checkmark$	$\sqrt{}$	$\checkmark$	$\checkmark$
Carbon	Deer Creek Utah American Energy - West Ridge Rhino Energy - Castle Valley Utah Trucking	$\checkmark$		√ √	√ √			$\checkmark$	$\checkmark$
Cholla	Peabody Coalsales - Lee Ranch Mine BNSF Railway					$\checkmark$	$\checkmark$	$\sqrt{}$	$\checkmark$
Colstrip	Westmoreland - Rosebud Mine					$\sqrt{}$	$\sqrt{}$	$\sqrt{}$	$\checkmark$
Craig	Trapper Mine Rio Tinto Colowyo Mine Union Pacific Railway	$\sqrt{}$					<b>√</b>		$\checkmark$
Hayden	Twentymile Mine Union Pacific					$\sqrt{}$	1	$\sqrt{}$	$\checkmark$
Hunter	Deer Creek Arch - Sufco Utah American Energy - West Ridge Utah Trucking	$\sqrt{}$		√ √	√ √			$\checkmark$	$\checkmark$
Huntington	Deer Creek Arch - Sufco Rhino Energy - Castle Valley Utah Trucking	V		$\sqrt{}$	$\sqrt{}$			$\checkmark$	$\checkmark$
D Johnston	Open Position Western Fuels - Dry Fork Mine BNSF Railway					$\sqrt{}$	<b>V</b>	$\sqrt{}$	$\checkmark$
Naughton	Chevron Mining - Kemmerer Mine					$\sqrt{}$	$\sqrt{}$		
Wyodak	Black Hills - Wyodak Mine					$\checkmark$	$\sqrt{}$		

REDACTED Docket No. UE \_\_\_\_ Exhibit PAC/200 Witness: Cindy A. Crane BEFORE THE PUBLIC UTILITY COMMISSION **OF OREGON PACIFICORP** Direct Testimony of Cindy A. Crane **April 2014** 

# DIRECT TESTIMONY OF CINDY A. CRANE

# TABLE OF CONTENTS

QUALIFICATIONS	1
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# **ATTACHED EXHIBITS**

Exhibit PAC/201— PacifiCorp Compliance Proposal for Periodic Fuel Supply Plans for PacifiCorp's Affiliate Mines

1	Q.	Please state your name, business address, and present position with
2		PacifiCorp d/b/a Pacific Power (PacifiCorp or Company).
3	A.	My name is Cindy A. Crane. My business address is 1407 West North Temple,
4		Suite 310, Salt Lake City, Utah 84116. My position is Vice President, Interwest
5		Mining Company and Fuel Resources for PacifiCorp Energy.
6		QUALIFICATIONS
7	Q.	Briefly describe your professional experience.
8	A.	I joined PacifiCorp in 1990 and have held positions of increasing responsibility,
9		including Director of Business Systems Integration, Managing Director of
10		Business Planning and Strategic Analysis, and Vice President of Strategy and
11		Division Services. My responsibilities have included the management and
12		development of PacifiCorp's 10-year business plan, assessing individual business
13		strategies for PacifiCorp Energy, managing the construction of the Company's
14		Wyoming wind plants, and assessing the feasibility of a nuclear power plant. In
15		March 2009, I was appointed to my present position as Vice President of
16		Interwest Mining Company and Fuel Resources. In this position, I am responsible
17		for the operations of Energy West Mining Company and Bridger Coal Company,
18		as well as overall coal supply acquisition and fuel management for PacifiCorp's
19		coal-fired generating plants.
20		PURPOSE AND SUMMARY
21	Q.	What is the purpose of your testimony in this proceeding?
22	A.	I explain the Company's overall approach to providing the coal supply for the

	Company's coal-fired generating plants and support for the level of coal prices
	included in coal fuel expense in this case.
Q.	Please summarize your testimony.
A.	My testimony:
	Presents the Company's proposed approach to developing periodic fuel supply
	plans directed by Order No. 13-387 in docket UE 264, the Company's 2014
	Transition Adjustment Mechanism (TAM); <sup>1</sup>
	• Explains the primary causes of changes to the total-company coal fuel
	expense reflected in the 2015 TAM;
	Provides background on third-party coal contracts and current contract price
	re-openers; and
	Reviews the Company's affiliate mine coal prices and compares them to other
	supply alternatives.
	OVERVIEW OF THE COMPANY'S COAL SUPPLIES
Q.	How does the Company plan to meet fuel supplies for its coal plants in 2015?
A.	As reflected below in confidential Table 1, the Company employs a diversified
	coal supply strategy. The Company will supply approximately 62.3 percent of its
	2015 coal requirements with third-party coal supplies and 37.7 percent with coal
	from the Company's affiliate mines. More specifically: (1) approximately
	24.8 percent of the Company's total coal requirement will be supplied under
	fixed-price contracts; (2) approximately 28.7 percent will be supplied under
	contracts that escalate or de-escalate based on changes to producer and consumer
	A. <b>Q.</b>

Redacted Direct Testimony of Cindy A. Crane

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<sup>&</sup>lt;sup>1</sup> In the Matter of PacifiCorp, d/b/a Pacific Power, 2014 Transition Adjustment Mechanism, Docket No. UE 264, Order No. 13-387 at 7 (Oct. 28, 2013) (2014 TAM).

price indices; (3) approximately 8.5 percent of the total coal requirement will be supplied to the Dave Johnston plant from currently unidentified Powder River Basin mines; and (4) approximately 0.3 percent represents the consumption of Carbon plant inventory before its closure in April 2015.

**Table 1: Coal Sourcing** 



- Q. Please explain how the Company's Utah coal-fired generating plants are
   supplied with coal.
- 7 A. The Utah plants are sourced collectively through a diversified portfolio of coal
  8 supplies. While the Deer Creek mine supplies primarily the Huntington plant and
  9 a portion of the Hunter plant, the contract coal supplies are typically

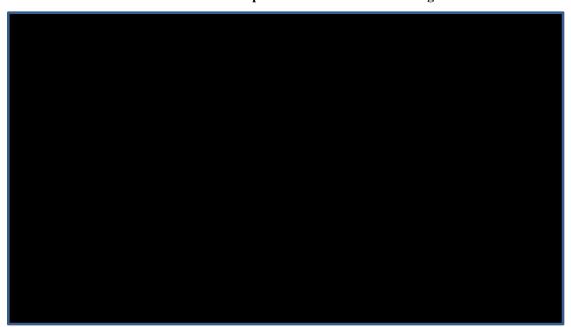
Redacted Direct Testimony of Cindy A. Crane

1 interchangeable between the plants. Interchangeable coal supplies allow the 2 Company to minimize transportation costs between the coal mines and generating 3 plants while ensuring that the coal quality blend meets the quality specifications 4 for each plant. 5 Q. Confidential Table 1 includes spot/unidentified coal for the Dave Johnston 6 plant. Please explain. 7 A. The Dave Johnston plant is projected to consume approximately 3.7 million tons 8 in 2015; the Company currently has 1.5 million tons of coal for the plant under 9 contract. The Company intends to solicit multi-year coal supplies from Powder 10 River Basin mines through a request for proposal during the second quarter of 11 2014. 12 PERIODIC FUEL SUPPLY PLANS 13 In the final order in the Company's 2014 TAM, the Commission stated that Q. 14 the Company must prepare periodic fuel supply plans. Is the Company in 15 the process of developing the required plans? 16 A. Yes. The company is currently working on developing periodic fuel supply plans 17 for the Jim Bridger generating plant and the Hunter and Huntington plants that 18 compare "affiliate mine fuel supply to other alternative fuel supply options, 19 including market alternatives, to facilitate implementing prudence and affiliate 20 transaction standards in future proceedings[,]" as ordered in Order No. 13-387.<sup>2</sup> 21 What is the status of the Company's periodic fuel supply plans? Q. 22 A. The Company developed an outline of its periodic fuel supply plans, which is

<sup>2</sup> Order No. 13-387 at 7.

Redacted Direct Testimony of Cindy A. Crane

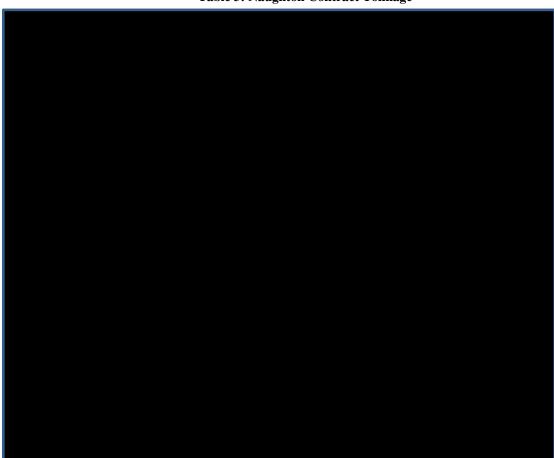
1		attached to my testimony as Exhibit PAC/201. The Company plans to file its
2		periodic fuel plans in 2015.
3		COAL COST CHANGES
4	Q.	Has coal fuel expense in the 2015 TAM changed from levels reflected in the
5		Company's 2014 TAM?
6	A.	Yes. As mentioned in the testimony of Mr. Brian S. Dickman, coal fuel expense
7		has decreased by \$4.1 million on a total-company basis, decreasing from
8		\$799.8 million in the 2014 TAM update to \$795.7 million in the 2015 TAM. This
9		decrease represents an increase related to higher coal prices of approximately
10		\$35.4 million, offset by a decrease relating to reduced coal-fired generation of
11		approximately \$39.5 million.
12	Q.	What are the primary drivers of the \$35.4 million increase in coal prices?
13	A.	Approximately \$15.5 million of the increase in coal prices is associated with
14		third-party coal purchases and transportation costs, \$19.4 million is associated
15		with the Company's affiliated mines, and \$0.5 million is associated with
16		increased operating costs at the Hunter prep plant.
17		THIRD-PARTY COAL CONTRACTS
18	Q.	Please discuss the change in third-party coal supplies.
19	A.	The Company expects a net increase in third-party coal supply costs as shown in
20		confidential Table 2 below:



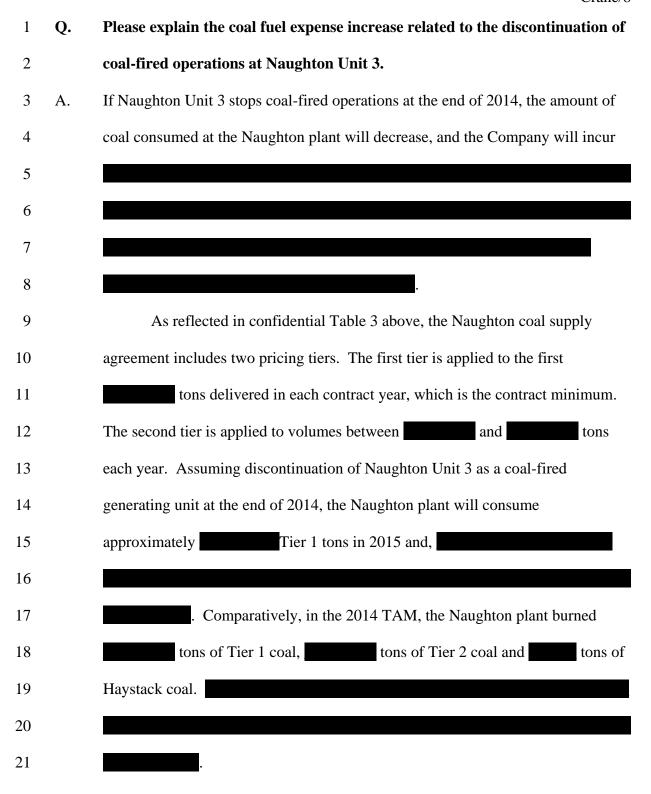
**Table 2: Coal and Transportation Contract Price Changes** 

- 1 Coal Supply Agreements for the Wyoming Plants
- 2 Naughton
- 3 Q. Please describe the coal supply arrangement for the Naughton plant.
- 4 A. The Naughton plant is supplied by an overland conveyor by Westmoreland's
- 5 adjacent Kemmerer mine under a long-term coal supply agreement through 2021.
- The Kemmerer mine has supplied the Naughton plant with coal for more than
- 7 50 years. Westmoreland acquired the Kemmerer mine from Chevron Mining in
- 8 January 2012.
- 9 The current coal supply agreement was renegotiated in September 2010
- and includes a contract minimum of tons. The contract allows for
- 11 contract escalation and de-escalation of the new contract price based on quarterly
- changes in contract-specific producer and consumer price indices, as well as
- production taxes and royalties through 2015.

- 1 Q. How do coal prices for the Naughton plant compare to the 2014 TAM?
- 2 A. As reflected in confidential Table 3 below, coal fuel expense at the Naughton
- generating plant increases from per ton in the 2014 TAM to per ton
- 4 in the 2015 TAM, an increase of per ton or total.
- 5 Approximately of the increase is associated with the discontinuation
- of coal-fired operations at Naughton Unit 3 at the end of 2014; the remaining
- 7 increase of is associated with contract price escalation.



**Table 3: Naughton Contract Tonnage** 



1	Q.	How much of the increase related to the discontinuation of coal-fired
2		operations at Naughton Unit 3 is attributable to
3		?
4	A.	As reflected in confidential Table 3 above, almost
5		
6		
7		
8		
9		
10		
11		
12		
13	Wyod	lak
14	Q.	Please describe the price increase related to the Wyodak contract.
15	A.	As I previously testified in the 2014 TAM, the Wyodak plant is supplied under a
16		long-term coal supply agreement with Wyodak Resources Development Company
17		(Wyodak Resources). This agreement provides for two contract price re-
18		openers—July 1, 2014, and July 1, 2019. The 2015 TAM reflects a full-year
19		impact of the July 2014 contract re-opener, compared to the half-year impact
20		reflected in the 2014 TAM.
21	Q.	Please explain how the Wyodak coal price is reset under the July 1, 2014
22		price re-opener.
23	A.	The agreement provides for the purchase coal price to be set at a level equal to the

1		sum of the spot price of Powder River Basin 8400 Btu coal, average rail
2		transportation costs from the two closest Powder River Basin mines to the
3		Wyodak plant in railroad-supplied railcars, and a levelized fixed charge
4		associated with construction of a hypothetical rail unloading facility amortized on
5		a straight-line basis over 20 years.
6	Q.	What is the current status of negotiations with Wyodak Resources?
7	A.	The Company and Wyodak Resources reached agreement on the third price
8		component—the capital costs associated with construction of a hypothetical rail
9		unloading facility. But the parties continue to negotiate the first and second
10		contract price components—the spot price of Powder River Basin 8400 Btu coal
11		and average rail transportation costs.
12	Q.	What capital costs did the Company and Wyodak Resources agree to use in
13		determining a levelized fixed charge for the third price component?
14	A.	The Company and Wyodak Resources agreed to establish (nominal
15		dollars) as the capital cost to construct the unloading facility, which includes an
16		unloading hopper, track configuration, requisite supporting structures, acquisition
17		of required rights-of-way, roads and underpasses, and environmental and
18		engineering costs.
19	Q.	How did the Company determine an appropriate price range for the
20		hypothetical unloading facility?
21	A.	The Company hired Burns & McDonnell Engineering Company (Burns &
22		McDonnell) in 2012 to develop two cost estimates (using 2012 dollars):

1		included a located at the Wyodak plant
2		and absent the
3	Q.	How does the negotiated cost compare to the study performed by the Burns
4		& McDonnell?
5	A.	The agreed-upon capital costs compare favorably to the cost estimates developed
6		by Burns & McDonnell. The Company and Wyodak Resources agreed to use the
7		lower capital projection, adjusted for inflation.
8	Q.	Does the Company anticipate reaching agreement on the other price
9		components before the Company's rebuttal update in the 2015 TAM?
10	A.	Yes. The Company continues to engage Wyodak Resources on the two remaining
11		contract price components and remains hopeful that an agreement will be reached
12		before the Company files its rebuttal TAM update. If the Company and Wyodak
13		Resources are unable to reach agreement, then the contract allows for either party
14		to seek resolution of the price dispute through binding arbitration.
15	Jim I	Bridger
16	Q.	Please explain the increase in third-party coal prices for the Jim Bridger
17		plant.
18	A.	The price of Black Butte coal delivered to the Jim Bridger plant has increased
19		from per ton in the 2014 TAM to per ton, an increase of per
20		ton. This price increase is principally due to an increase in the Black Butte Free-
21		On-Board (F.O.B.) mine costs associated with the delivery of previously deferred
22		Black Butte contract tonnage. During the term of the Black Butte coal supply
23		agreement, the Jim Bridger plant owners had a contractual right to defer up to

1		250,000 tons of coal annually. The 2015 TAM reflects delivery of previously
2		deferred tonnage at contract specified pricing.
3		
4		
5		
6		
7		. The actual calculation is included in my workpapers.
8	Dave	Johnston
9	Q.	Does the 2015 TAM reflect an increase in Dave Johnston generating plant
10		coal supply costs?
11	A.	Yes. Dave Johnston plant coal costs have increased by only
12		compared to the 2014 TAM. Rail rates increased by approximately;
13		coal prices decreased by approximately primarily due to a new coal
14		supply agreement with Western Fuels Dry Fork mine and current forward pricing
15		for Powder River Basin 8400 Btu coal.
16	Q.	What are the coal supply arrangements for Dave Johnston in the 2015 TAM?
17	A.	The Company executed a three-year coal supply agreement for the purchase of
18		Dry Fork mine coal from Western Fuels through 2016. Western Fuels is
19		contracted to provided tons in 2015; the Company intends to solicit
20		additional multi-year coal supplies for the Dave Johnston plant through a request
21		for proposals during the second quarter of 2014. The coal price for Dave
22		Johnston's open position in the 2015 TAM reflects the forward price for Powder
23		River Basin 8400 Btu coal per ICAP Energy LLC's weekly assessment of coal

1		prices as of The Company plans to update both rail rates and
2		spot market supply costs in the Company's rebuttal update.
3	Coal	Supply Agreements for the Utah Plants
4	Q.	Which non-affiliated mines currently supply coal to the Utah plants?
5	A.	The Company has a diversified portfolio of multi-year coal supply agreements
6		with Bowie's Sufco mine (Sufco), Utah American Energy's West Ridge mine
7		(West Ridge), and Rhino Energy's Castle Valley mine (Castle Valley).
8	Q.	Have prices for coal supply to the Utah plants changed from levels reflected
9		in the 2014 TAM?
10	A.	Yes. Collectively, purchased coal and transportation costs for the Utah plants
11		decrease by approximately
12		with a price reduction for Castle Valley coal resulting from a January 2015
13		contract price re-opener, an expected reduction in price and tonnage for West
14		Ridge coal, a decrease in transportation expense, and an increase in Sufco
15		tonnage.
16	Q.	Please discuss the coal supply arrangements with Castle Valley, West Ridge,
17		and Sufco.
18	A.	Under a long-term coal supply agreement, Castle Valley is required to supply
19		tons of coal annually through 2017 for the Company's Utah plants. The
20		contract provides fixed pricing through 2014; beginning January 2015, the price is
21		determined through a price re-opener subject a collar. The Castle Valley F.O.B.
22		mine price is projected to decrease from per ton in the 2014 TAM to
23		per ton, the contract floor, in the 2015 TAM.

1		The Company's current agreement with the West Ridge mine expires at
2		the end of 2014, and the Company is currently in negotiations with Utah
3		American Energy to extend the coal supply agreement, albeit at reduced volumes
4		and lower prices. The 2015 TAM assumes approximately tons of West
5		Ridge coal is purchased at a F.O.B. mine price of per ton, compared to the
6		2014 TAM of tons at per ton, a reduction of per ton.
7		To offset the decrease in West Ridge coal purchases, the 2015 TAM
8		reflects an increase of Sufco purchases, from tons in the 2014 TAM to
9		tons. Sufco coal is purchased
10		, resulting in ratepayer benefits from costs
11		associated with the approximate increase in Sufco tonnage. The
12		Company's rebuttal update will include changes to reflect ongoing negotiations
13		with the Utah coal suppliers.
14	Coal	Supply Agreements for the Jointly Owned Plants
15	Chol	la
16	Q.	Please describe the coal supply arrangements for the Cholla plant.
17	A.	The Cholla plant is supplied under a long-term coal supply agreement with
18		Peabody's Lee Ranch and El Segundo mine complex through 2024, which
19		includes two price re-openers: January 1, 2013, and January 1, 2018.
20	Q.	In reply testimony in the 2014 TAM, you testified that the negotiations
21		between the Cholla plant owners and Peabody were ongoing. Have the
22		parties reached agreement on the price re-opener?
23	A.	Yes, the Cholla plant owners and Peabody reached agreement in December 2013.

1		The agreement includes a January 2013 clean coal price, meaning that the
2		contract price excludes royalties and taxes, of per ton, with quarterly
3		changes reflecting changes in producer and consumer price indices.
4	Q.	What price has the Company assumed for the Cholla coal supply in the 2015
5		TAM?
6	A.	With quarterly escalation and de-escalation based on producer and consumer price
7		indices, the average clean coal price under the new agreement is projected to
8		increase to from the per ton price assumed in the 2014 TAM to per
9		ton in the 2015 TAM, or per ton. Including royalties, taxes and
10		transportation, the Company forecasts that delivered coal prices will increase
11		from per ton in the 2014 TAM to per ton in the current TAM, or
12		per ton.
13	Haya	len
14	Q.	Has the Hayden plant's coal cost changed from the 2014 TAM?
15	A.	Yes, delivered coal prices have increased slightly from per ton in the 2014
16		TAM to per ton in the 2015 TAM, an increase of per ton or
17		. The contract price adjusts with changes in producer and consumer price
18		indices.
19	Colst	rip
20	Q.	Please explain the increase in coal fuel expense for Colstrip in the 2015 TAM.
21	A.	Coal prices for the Colstrip plant have increased from per ton in the 2014
22		TAM to per ton in the 2015 TAM, or per ton. Colstrip costs are
23		developed based on Western Energy's Annual Operating Plan (AOP) for the

1 Rosebud mine. The AOP is reviewed and approved annually by the owners of 2 Colstrip Units 3 and 4. The increase in 2015 is primarily attributable to an increase in Rosebud's variable production cost. 3 4 **CAPTIVE MINE COAL COSTS** 5 Q. Please explain the changes associated with the captive mines. 6 Bridger Coal Company mine costs have increased from per ton in the 2014 A. 7 per ton in the 2015 TAM, or by production costs have decreased from per ton in the 2014 TAM to 8 9 per ton in the 2015 TAM, but increased on a per million-British-thermal-10 unit (MMBtu) basis due to lower heat content. Trapper mine costs have increased 11 per ton in the 2014 TAM to per ton in the 2015 TAM, or 12 per ton. Confidential Table 4 below shows the effect of these changes on 13



captive mine coal fuel expense in the 2015 TAM compared to the 2014 TAM.



1	Q.	In Order No. 13-387, the Commission ordered the Company to remove
2		50 percent of annual incentive plan awards from rates. <sup>3</sup> Did the Company
3		remove all management overtime and 50 percent of annual incentive plan
4		(AIP) awards from Bridger Coal Company and Deer Creek costs in this
5		proceeding?
6	A.	Yes. In the 2015 TAM, the Company reduced Bridger Coal Company costs by
7		approximately \$1.2 million (PacifiCorp share) and Deer Creek costs by
8		approximately \$0.5 million to reflect removal of management overtime, fines and
9		citations, and 50 percent of AIP.
10	Bridg	ger Coal Company
11	Q.	Please describe the change in Bridger Coal Company coal costs.
12	A.	Bridger Coal Company costs increased from the 2014 TAM by approximately
13		. Bridger Coal Company costs increased from per ton in
14		the 2014 TAM to per ton in the 2015 TAM, or by per ton or
15		. A slight decrease in heat content of coal from the Bridger Coal
16		Company accounts for of the increase, and changes in volume
17		account for the remaining.
18	Q.	Have Bridger Coal Company's production levels changed?
19	A.	Yes, as reflected in confidential Table 5 below, Bridger Coal Company's
20		production has increased from tons in the 2014 TAM to
21		tons in the 2015 TAM, and Bridger Coal Company deliveries have increased from
22		tons to tons. The increase in Bridger Coal Company

Redacted Direct Testimony of Cindy A. Crane

<sup>&</sup>lt;sup>3</sup> Order 13-387 at 8.

deliveries corresponds with

2

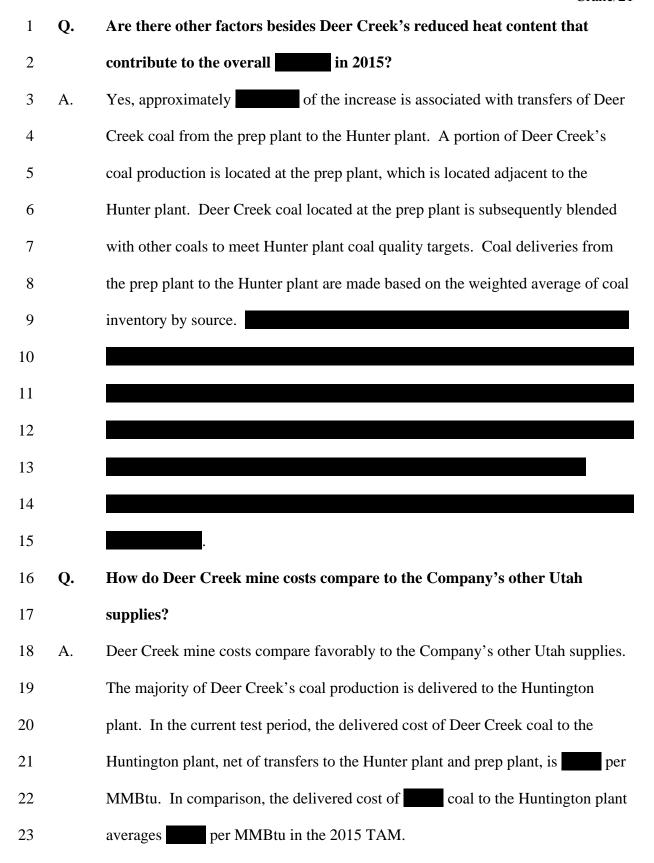
**Table 5: Bridger Coal Production** 



- Q. Please explain the decrease in production from the Bridger Coal Company's
   underground mine.
- The decrease in coal production reflects both the shortening of longwall panels
  due to roof control issues and an additional longwall move in 2015. Typically,
  there are two longwall moves in a calendar year; in 2015 there will be three. The
  third longwall move results in a loss of longwall production for approximately
  22 days.
- Q. Please describe the major drivers of the increase in cost of Bridger Coal
   Company deliveries to the Bridger plant.
- 12 A. In addition to the cost impact of reduced coal production from the underground
  13 mine, there are two other primary drivers for the Bridger Coal Company cost
  14 increase: (1) a significant reduction in final reclamation activity; and (2) increased
  15 royalty and production tax expense.
- 16 Q. How much of the increase is attributable to the difference
  17 between coal production and coal deliveries at the Bridger Coal Company's
  18 surface and underground mines between 2014 and 2015?
- 19 A. Approximately or can be attributed to changes in Bridger Redacted Direct Testimony of Cindy A. Crane

1 Coal Company's coal production and coal deliveries. The 2014 TAM reflected an 2 increase to the underground mine inventory levels of 39,175 tons and an increase 3 to the surface mine inventory levels of 6,382 tons. The 2015 TAM reflects a 4 projected decrease in underground inventory levels of 311,694 tons and a 5 projected decrease in surface inventory levels of 171,800 tons. The decrease in 6 inventory levels in the 2015 TAM results in approximately (total 7 Bridger Coal Company) being credited to coal inventory and debited to coal expense. In the 2014 TAM, approximately 8 (total Bridger Coal 9 Company) was credited to coal expense and debited to mine inventory. 10 Will Bridger Coal Company perform the same level of final reclamation in Q. 11 the 2015 TAM as the 2014 TAM? 12 A. No. The cash operating costs associated with actual final reclamation activity will 13 decrease from \$16.1 million in the 2014 TAM to \$11.0 million (total Bridger Coal 14 Company) in the 2015 TAM. The reduction in final reclamation includes a 15 decrease in actual final reclamation, measured in millions of cubic yards, from 16 6.6 in the 2014 TAM to 5.7 in 2015. Since the cash operating costs associated 17 with final reclamation activity are debited against the final reclamation liability, 18 the decrease in final reclamation volume results in a reduction in operating costs 19 charged to the final reclamation and a corresponding increase in Bridger Coal 20 Company's mine operating costs. 21 Do the above cost increases affect Bridger Coal Company's royalty expenses? Q. 22 A. Yes. Average royalties and production taxes have increased from per ton in 23 the 2014 TAM to per ton in the 2015 TAM. The Company's royalty

1		obligations for coal production from federal and states leases are determined by
2		adding a return on net mine investment to actual mine operating costs. Production
3		taxes are assessed based on third-party coal supplies to Jim Bridger plant.
4	Q.	How do Bridger Coal Company costs compare to the Company's other
5		supply options for the Jim Bridger plant?
6	A.	The delivered cost of coal from Bridger Coal Company is per ton in the
7		2015 TAM, which is comparable to the forecasted Black Butte cost of per
8		ton and
9	Deer	Creek Mine
10	Q.	Please describe the million increase related to Deer Creek mine coal
11		deliveries.
12	A.	Deer Creek mine production costs are projected to decrease from per ton
13		in the 2014 TAM to per ton in the 2015 TAM, but increase from
14		per MMBtu to per MMBtu. Reduced post-retirement expense,
15		based on actuarial studies prepared by Towers Watson in 2013, is the primary
16		driver of the lower production costs.
17	Q.	Why are production costs increasing per MMBtu but decreasing per ton?
18	A.	Deer Creek's heat content is projected to decrease from
19		
20		
21		
22		Deer Creek's ash content typically ranges from 12 percent to 14 percent.



Trapp	er Mine
Q.	Have Trapper mine costs changed from the 2014 TAM?
A.	Yes. Trapper mine costs have increased from per ton in the 2014 TAM to
	per ton in the 2015 TAM, or by per ton. This increase is primarily
	attributable to higher stripping costs.
Q.	How does the Company's Trapper mine compare to other alternatives?
A.	Trapper remains the least-cost fuel supply in Colorado. Trapper's costs in the
	2015 TAM are roughly per ton less than the delivered price of Colowyo coal to
	the Craig plant and approximately per ton less than the delivered coal
	price of Twentymile coal to the Hayden plant.
Q.	Please summarize the benefits of the Company's coal supply strategy.
A.	Customers have significantly benefited from the Company's diversified fueling
	strategy. This strategy relies on fixed contracts, indexed contracts, and affiliate-
	owned coal mines to meet the fuel needs of its coal-fired generating plants. While
	coal costs have increased in this case as a result of various factors, the Company's
	strategy has resulted in a long-term, stable, and low-cost supply of coal for its
	customers.
Q.	Does this conclude your direct testimony?
	Q. A. Q. A.

19 A. Yes.

Docket No. UE \_\_\_ Exhibit PAC/201 Witness: Cindy A. Crane

# BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

# **PACIFICORP**

**Exhibit Accompanying Direct Testimony of Cindy A. Crane** 

PacifiCorp Compliance Proposal for Periodic Fuel Supply Plans for PacifiCorp's Affiliate Mines

**April 2014** 

# PACIFICORP COMPLIANCE PROPOSAL—ORDER NO. 13-387 PERIODIC FUEL SUPPLY PLANS FOR PACIFICORP'S AFFILIATE MINES

#### A. Background

PacifiCorp is a co-owner of the Jim Bridger plant in Wyoming. The Jim Bridger plant obtains coal supply from the Bridger Coal Company (BCC), which is co-owned by PacifiCorp. PacifiCorp owns the Huntington and Hunter plants in Utah. These plants obtain coal supply from the Deer Creek Mine, owned by Energy West Mining Company (EWMC). EWMC is a wholly owned subsidiary of PacifiCorp. Collectively, BCC and EWMC are referred to as "captive coal" mines. For regulatory purposes, PacifiCorp's captive coal mines are consolidated for reporting and ratemaking on PacifiCorp's books. The Commission has approved the coal supply agreements between PacifiCorp and BCC and PacifiCorp and EWMC under the Commission's transfer pricing rule, OAR 860-027-0048. The Commission conditioned this approval upon the right to review the coal supply agreements for reasonableness in subsequent rate proceedings and the requirement that the Company notify the Commission of any substantive changes to the coal supply agreements, including material changes in cost.

In Order No. 13-387 in PacifiCorp's 2014 Transition Adjustment Mechanism (TAM), the Commission resolved a challenge to Jim Bridger's fuel supply costs by adopting a proposal to facilitate implementing prudence and affiliated interest standards for PacifiCorp's captive mines in future rate cases.<sup>4</sup> The proposal, which was endorsed by PacifiCorp, Staff, and CUB, contemplates PacifiCorp's preparation of periodic fuel supply plans that compare affiliate fuel supply to alternative fuel supply options, including market alternatives. PacifiCorp has prepared this compliance proposal in response to Order No. 13-387.

#### B. Long-Term Fuel Supply Plans

1. Purpose of Long-Term Fuel Supply Plans. The purpose of the long-term fuel supply plan for plants fueled by coal from captive coal mines is to demonstrate that the fuel supplies are "fair, just, and reasonable," and satisfy the Commission's prudence and affiliate interest standards. The long-term fuel supply plans recognize

<sup>&</sup>lt;sup>1</sup> The Bridger Coal Company and the Jim Bridger Plant are jointly owned and fuel supply and/or mining operations decisions must be made jointly.

<sup>&</sup>lt;sup>2</sup> In the Matter of Pacific Power & Light Company, Docket No. UE 21, Order No. 84-898 (Nov. 14, 1984); In the Matter of Idaho Power Company, Docket No. UI 107, Order No. 91-567 at 4 (Apr. 29, 1991).

<sup>&</sup>lt;sup>3</sup> In the Matter of PacifiCorp, Docket No. UI 189, Order No. 01-472 at 2 (June 12, 2001); In the Matter of Idaho Power Company, Docket No. UI 107, Order No. 91-567 at 4 (Apr. 29, 1991); In the Matter of the Application of Pacific Power & Light Company for an Order Authorizing It to Enter into Agreements with Energy West Company, Docket No. UI 105, Order No. 91-513 (Apr. 12, 1991).

<sup>&</sup>lt;sup>4</sup> In the Matter of PacifiCorp d/b/a Pacific Power 2014 Transition Adjustment Mechanism, Docket No. UE 264, Order No. 13-387 at 6-7 (Oct. 28, 2013).

<sup>&</sup>lt;sup>5</sup> *Id*. at 6.

- that, given the nature of coal mining operations, a multi-year assessment of coal supply costs is more appropriate than an annual review.<sup>6</sup>
- 2. Contents of Long-Term Fuel Supply Plans. PacifiCorp will prepare long-term fuel supply plans to address the economics of continued coal supply from BCC for the Jim Bridger plant and from EWMC to the Huntington and Hunter plants. The form and content of the fuel supply plans may vary from year to year, but the plans will always retain the objective of determining the least-cost, least-risk coal supply. The long-term fuel supply plans will:
  - Use best available data to determine the least-cost, least-risk coal supplies for the plants;
  - Review fueling options for the plants and prepare least-cost mine plans for the key options;
  - Review data on market costs for alternative coal supplies and transportation and the costs associated with plant modifications necessary for alternative fuel supplies; and
  - Review and compare fuel supply options with sensitivities.
- **3. Initial Fuel Supply Plans for Jim Bridger, Huntington and Hunter.** PacifiCorp will file the first long-term fuel supply plans for the Jim Bridger, Huntington and Hunter plants in 2015 in a separate docket subject to the Commission's Open Meetings decision-making process (similar to other utility planning dockets).
- **4. Future Fuel Supply Plans.** PacifiCorp will update its long-term fuel supply plans once every five years. PacifiCorp will update the plans more often as necessary to address major milestones in coal supply cycles, such as the expiration of third party-coal supply arrangements, major capital investments in the affiliate coal mines, or potential acquisition of new reserves.
- 5. Confidential Material. The long-term fuel supply plans will contain significant confidential information and will require confidential handling. PacifiCorp will request entry of an ongoing protective order for its long-term fuel supply plan dockets, similar to that applicable to TAM proceedings under Order No. 10-069 in docket UE 216.<sup>7</sup>

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<sup>&</sup>lt;sup>6</sup> *Id.* at 15 (Commissioner Savage, concurring).

<sup>&</sup>lt;sup>7</sup> In the Matter of PacifiCorp, dba Pacific Power 2011 Transition Adjustment Mechanism, Docket No. UE 216, Order No. 10-069 (Feb. 25, 2010).

Docket No. UE \_\_\_\_ Exhibit PAC/300 Witness: Judith M. Ridenour BEFORE THE PUBLIC UTILITY COMMISSION **OF OREGON PACIFICORP** Direct Testimony of Judith M. Ridenour **April 2014** 

# DIRECT TESTIMONY OF JUDITH M. RIDENOUR

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PROPOSED RATE SPREAD AND RATE DESIGN	2
COMPARISON OF PRESENT AND PROPOSED CUSTOMER RATES	

#### **ATTACHED EXHIBITS**

Exhibit PAC/301—Proposed TAM Rate Spread and Rates

Exhibit PAC/302—Proposed Tariff Schedules

Exhibit PAC/303—Estimated Effect of Proposed TAM Price Change

1	Q.	Please state your name, business address, and present position with
2		PacifiCorp d/b/a Pacific Power (PacifiCorp or Company).
3	A.	My name is Judith M. Ridenour. My business address is 825 NE Multnomah
4		Street, Suite 2000, Portland, Oregon 97232. My current position is Specialist,
5		Pricing & Cost of Service, in the Regulation Department.
6		QUALIFICATIONS
7	Q.	Briefly describe your education and professional experience.
8	A.	I hold a Bachelor of Arts degree in Mathematics from Reed College. I joined the
9		Company in the Regulation Department in October 2000. I assumed my present
10		responsibilities in May 2001. In my current position, I am responsible for the
11		preparation of rate designs used in retail price filings and related analyses. Since
12		2001, with levels of increasing responsibility, I have analyzed and implemented
13		rate design proposals throughout the Company's six-state service territory.
14		PURPOSE OF TESTIMONY
15	Q.	What is the purpose of your testimony in this proceeding?
16	A.	I present the Company's proposed rate spread, rates, and revised tariff pages for
17		the 2015 Transition Adjustment Mechanism (TAM) to recover the Oregon-
18		allocated forecast net power costs (NPC) and the TAM adjustment for Other
19		Revenues identified by Mr. Brian S. Dickman. I also provide a summary of the
20		impact of the proposed rate change on customers' bills.

1		PROPOSED RATE SPREAD AND RATE DESIGN
2	Q.	Please describe the Company's tariff rate schedule that collects NPC.
3	A.	The Company collects NPC through Schedule 201, Net Power Costs, Cost-Based
4		Supply Service. Collecting NPC through a separate rate schedule allows NPC to
5		be more easily and accurately updated through TAM filings.
6	Q.	What is the rate design test period for this TAM?
7	A.	In accordance with the TAM Guidelines adopted in Order No. 09-274, because
8		this TAM is filed on a stand-alone basis without a concurrent general rate case,
9		the rate design test year for the TAM is the forecast test year during which the
10		Schedule 201 rates will be effective, which is the 12 months ending December 31,
11		2015.
12	Q.	How have the proposed NPC been allocated to the rate schedule classes?
13	A.	Consistent with the TAM Guidelines, the proposed NPC have been allocated to
14		the customer classes as agreed in the stipulation from the Company's last general
15		rate case, docket UE 263, which was approved in Order No. 13-474 (UE 263
16		Stipulation). Paragraph 18 of the UE 263 Stipulation states that the stipulating
17		parties agree to use the "applicable functionalized revenue requirement allocation
18		factors presented on page 4 of Exhibit B [to the UE 263 Stipulation] as the rate
19		spread allocation factors for rate changes until the Commission approves new
20		functionalized revenue requirement allocation factors in a subsequent general rate
21		case filing." The UE 263 Stipulation also lists specific cases to which this rate
22		spread agreement applies, including the Company's 2015 TAM filing. The
23		proposed rate spread in this case is therefore based on the generation allocation

1		factors set forth in Exhibit B to the UE 263 Stipulation. The generation allocation
2		factors and the spread of the proposed NPC to the customer classes are shown on
3		page one of Exhibit PAC/301.
4	Q.	Have you prepared an exhibit showing the present and proposed Schedule
5		201 rates and revenues?
6	A.	Yes. Pages two and three of Exhibit PAC/301 show the present and proposed
7		Schedule 201 rates and revenues based on the Oregon-allocated forecast NPC
8		identified by Mr. Dickman. As explained by Mr. Dickman, forecast NPC is
9		subject to updates throughout the proceeding.
10	Q.	Is the proposed Schedule 201 rate design consistent with the TAM
11		Guidelines?
12	A.	Yes. The proposed Schedule 201 rates are designed to collect revenues from rate
13		schedules based on the proposed rate spread described above. Additionally, the
14		rates in the Company's proposed Schedule 201 use the same rate blocks and
15		relationships between rate blocks as the existing Schedule 201 rates.
16	Q.	How does the Company propose to reflect in rates the amount related to
17		Other Revenues associated with this TAM filing?
18	A.	The Company's Schedule 205, TAM Adjustment for Other Revenues, is used to
19		collect or distribute the adjustment related to Other Revenues in a stand-alone
20		TAM filing. Rates for this tariff are presently zero. The proposed rate spread and
21		rate design of Schedule 205, TAM Adjustment for Other Revenues, parallels the
22		generation based rate spread and rate design of Schedule 201 for NPC as
23		described above, consistent with past treatment of this adjustment.

1	Q.	Have you prepared an exhibit showing proposed Schedule 205 rates and
2		revenues?
3	A.	Yes. Pages four and five of Exhibit PAC/301 show the proposed Schedule 205
4		rates and revenues.
5	Q.	Please describe Exhibit PAC/302.
6	A.	Exhibit PAC/302 contains the proposed revised Schedule 201, Net Power Costs,
7		Cost-Based Supply Service, and Schedule 205, TAM Adjustment for Other
8		Revenues.
9	Q.	Is the Company proposing changes to its Transition Adjustment tariff
10		schedules at this time?
11	A.	No. The Company will file changes to the Transition Adjustment tariff schedules
12		once the final TAM rates have been posted and are known. The Transition
13		Adjustment rates will be established in November, just before the open enrollment
14		window.
15		COMPARISON OF PRESENT AND PROPOSED CUSTOMER RATES
16	Q.	What are the overall effects of the changes proposed in this filing?
17	A.	The overall proposed effect is a rate increase of 1.5 percent on a net basis. The
18		rate change varies by customer type. Page one of Exhibit PAC/303 shows the
19		estimated effect of the Company's proposed prices by Delivery Service schedule
20		both exclusive (base) and inclusive (net) of applicable adjustment schedules. The
21		net rates in Columns 7 and 10 exclude effects of the Low Income Bill Payment
22		Assistance Charge (Schedule 91), the Adjustment Associated with the Pacific
23		Northwest Electric Power Planning and Conservation Act (Schedule 98), the

1		Klamath Dam Removal Surcharges (Schedule 199), the Public Purpose Charge
2		(Schedule 290), and the Energy Conservation Charge (Schedule 297).
3	Q.	Have you prepared an exhibit that shows the impact on customer bills as a
4		result of the proposed changes to Schedule 201 and Schedule 205?
5	A.	Yes. Exhibit PAC/303, beginning on page 2, contains monthly billing
6		comparisons for customers at different usage levels served on each of the major
7		Delivery Service schedules. Each bill impact is shown in both dollars and
8		percentages. These bill comparisons include the effects of all adjustment
9		schedules including the Low Income Bill Payment Assistance Charge (Schedule
10		91), the Adjustment Associated with the Pacific Northwest Electric Power
11		Planning and Conservation Act (Schedule 98), the Klamath Dam Removal
12		Surcharges (Schedule 199), the Public Purpose Charge (Schedule 290), and the
13		Energy Conservation Charge (Schedule 297).
14	Q.	What is the estimated monthly impact to an average residential customer?
15	A.	The estimated monthly impact to the average residential customer using
16		900 kilowatt-hours per month is a bill increase of \$1.84.
17	Q.	Does this conclude your direct testimony?
18	A.	Yes.

Docket No. UE \_\_\_ Exhibit PAC/301 Witness: Judith M. Ridenour

# BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

# **PACIFICORP**

Exhibit Accompanying Direct Testimony of Judith M. Ridenour

Proposed TAM Rate Spread and Rates

**April 2014** 

PACIFIC POWER
STATE OF OREGON
Functionalized Net Power Cost Revenue Requirement
Forecast 12 Months Ending December 31, 2015
Dollars in Thousands

		-		(B) (C)	-	(D) (E)	(E)	(F) (G)	<u>(</u> 9	(H)	(H) (J) (J)		(K	(K) (L)
		,	Residential	General S	_	General S	ervice	General	ervice	Large	Power Ser		Irrigation	Street Lgt.
	Description	Total	(sec)	Sch 23 (sec) (	(pri)	Sch 28 (sec) (	(pri)	Sch 30 (sec)	30 (pri)	(sec)	Sch 48T (pri)	(trn)	Sch 41	Sch 51, 53, 54
2 2 3	Net Power Cost Revenue Requirement Net Power Cost Collection for Schedules not included in COS Study* Net Power Cost for Schedules Included in COS Study	\$378,255 \$2,003 \$376,252												
23	Generation Allocation Factors from $\text{GRC}^\dagger$	100.00%	42.38%	8.58%	0.01%	15.79%	0.14%	9.46%	0.68%	4.35%	11.11%	5.58%	1.78%	0.12%
₽.	10 11 Functionalized Net Power Cost Revenue Requirement- (Target) 12	\$376,252	\$159,472	\$32,301	\$32	\$59,424	\$530	\$35,583	\$2,575	\$16,359	\$41,810 \$21,002	\$21,002	\$6,711	\$453
l														

 $^{\dagger}$  Generation rate spread allocation factors approved in UE 263.

\$2,00	Total not in study	
(\$1)	Employee Discount	
↔	Schedule 52	
\$5	Schedule 51 (partial)	
\$1	Schedule 50	
\$2	Schedule 15	
\$4	Schedule 47 Transmission	
\$1,0	Schedule 47 Primary	
	OW:	ule as follow:

	\$1,057	\$439	\$213	\$167	\$241	\$13	(\$128)	\$2,003
	Schedule 47 Primary	Schedule 47 Transmission	Schedule 15	Schedule 50	Schedule 51 (partial)	Schedule 52	Employee Discount	Total not in study
*Revenues by rate schedule as follow:								

# PACIFIC POWER STATE OF OREGON TAM Schedule 201 Net Power Costs Present and Proposed Rates and Revenues Forecast 12 Months Ending December 31, 2015

		Present Scheo		Proposed Schedu	
Rate Schedule	Forecast Energy	Rates	Revenues	Rates	Revenues
Schedule 4, Residential					
First Block kWh (0-1,000) Second Block kWh (> 1,000)	3,883,205,889 1,369,857,893	2.567 ¢ 3.506 ¢	\$99,681,895 \$48,027,218	2.771 ¢ 3.785 ¢	\$107,603,635 \$51,849,121
Second Block kwii (> 1,000)	5,253,063,782	3.500 ¢	\$147,709,113	3.765 ¢	\$159,452,756
				Change	\$11,743,643
Employee Discount	44.004.005	0.555	#200 L2 C	2.551	****
First Block kWh (0-1,000) Second Block kWh (> 1,000)	11,224,236 5,284,001	2.567 ¢ 3.506 ¢	\$288,126 \$185,257	2.771 ¢ 3.785 ¢	\$311,024 \$199,999
	16,508,237	·	\$473,383	·	\$511,023
Discount			-\$118,346	Change	-\$127,756 -\$9,410
Schedule 23, Small General Service					
Secondary Voltage					
1st 3,000 kWh, per kWh All additional kWh, per kWh	858,905,405 261,095,125	2.956 ¢ 2.192 ¢	\$25,389,244 \$5,723,205	3.069 ¢ 2.276 ¢	\$26,359,807 \$5,942,525
Ali additional kwn, per kwn	1,120,000,530	2.192 ¢	\$31,112,449	2.276 ¢	\$3,942,323
	1,120,000,000		931,112,119	Change	\$1,189,883
Primary Voltage	793,337	2.863 ¢	\$22,713	2.972 ¢	\$23,578
1st 3,000 kWh, per kWh All additional kWh, per kWh	351,760	2.125 ¢	\$7,475	2.206 ¢	\$7,760
,,,	1,145,097		\$30,188		\$31,338
				Change	\$1,150
Schedule 28, General Service 31-200kW					
Secondary Voltage					
1st 20,000 kWh, per kWh	1,417,022,170	2.878 ¢	\$40,781,898	3.002 ¢	\$42,539,006
All additional kWh, per kWh	578,403,411 1,995,425,581	2.799 ¢	\$16,189,511 \$56,971,409	2.920 ¢	\$16,889,380 \$59,428,386
	1,773,423,361		\$30,971,409	Change	\$2,456,977
Primary Voltage					
1st 20,000 kWh, per kWh All additional kWh, per kWh	9,729,736 8,862,021	2.744 ¢ 2.670 ¢	\$266,984 \$236,616	2.890 ¢ 2.812 ¢	\$281,189 \$249,200
711 additional k vv ii, per k vv ii	18,591,757	2.070 ¢	\$503,600	2.012 ¢	\$530,389
				Change	\$26,789
Schedule 30, General Service 201-999kW Secondary Voltage					
1st 20,000 kWh, per kWh	181,232,803	3.056 ¢	\$5,538,474	3.209 ¢	\$5,815,761
All additional kWh, per kWh	1,069,918,078	2.650 ¢	\$28,352,829	2.782 ¢	\$29,765,121
	1,251,150,881		\$33,891,303	Chango	\$35,580,882
Primary Voltage				Change	\$1,689,579
1st 20,000 kWh, per kWh	12,315,369	3.020 ¢	\$371,924	3.173 ¢	\$390,767
All additional kWh, per kWh	79,611,926	2.611 ¢	\$2,078,667	2.743 ¢	\$2,183,755
	91,927,295		\$2,450,591	Change	\$2,574,522 \$123,931
Schedule 41, Agricultural Pumping Service Secondary Voltage					
Winter, 1st 100 kWh/kW, per kWh	2,801,050	4.015 ¢	\$112,462	4.287 ¢	\$120,081
Winter, All additional kWh, per kWh	2,404,049	2.735 ¢	\$65,751	2.920 ¢	\$70,198
Summer, All kWh, per kWh	222,923,263 228,128,362	2.735 ¢	\$6,096,951 \$6,275,164	2.920 ¢	\$6,509,359 \$6,699,638
	220,120,302		\$0,273,104	Change	\$424,474
Primary Voltage	0.454	2.000	0250		****
Winter, 1st 100 kWh/kW, per kWh Winter, All additional kWh, per kWh	9,461 54,112	3.888 ¢ 2.649 ¢	\$368 \$1,433	4.151 ¢ 2.828 ¢	\$393 \$1,530
Summer, All kWh, per kWh	336,328	2.649 ¢	\$8,909	2.828 ¢	\$9,511
	399,901		\$10,710	Change	\$11,434 \$724
				Change	\$724
Schedule 47, Large General Service, Partial Req Primary Voltage	uirements 1,000kW and over				
On-Peak, per on-peak kWh	29,898,944	2.612 ¢	\$780,960	2.624 ¢	\$784,548
Off-Peak, per off-peak kWh	10,575,978	2.562 ¢	\$270,957	2.574 ¢	\$272,226
	40,474,922		\$1,051,917	Change	\$1,056,774 \$4,857
Transmission Voltage	0.151.501	2 122	#201 T22		
On-Peak, per on-peak kWh Off-Peak, per off-peak kWh	9,154,521 8,827,144	2.422 ¢ 2.372 ¢	\$221,722 \$209,380	2.464 ¢ 2.414 ¢	\$225,567 \$213,087
on read, per on-peak kill	17,981,665	2.312 ¥	\$431,102	2.717 \$	\$438,654
				Change	\$7,552

# PACIFIC POWER STATE OF OREGON TAM Schedule 201 Net Power Costs Present and Proposed Rates and Revenues Forecast 12 Months Ending December 31, 2015

Rate Schedule	_		edule 201	Proposed Schedu	
	Forecast Energy	Rates	Revenues	Rates	Revenues
Schedule 48, Large General Service, 1,000kW	and aver				
Schedule 48, Large General Service, 1,000k w Secondary Voltage	and over				
On-Peak, per on-peak kWh	374.571.539	2.713 ¢	\$10,162,126	2.830 ¢	\$10,600,37
Off-Peak, per off-peak kWh	207,227,176	2.663 ¢	\$5,518,460	2.780 ¢	\$5,760,91
on roun, per on peak aven	581,798,715	2.003 ¢	\$15,680,586	2.700 \$	\$16,361,29
	301,750,713		\$15,000,500	Change	\$680,70
Primary Voltage				Change	φοσο,7ο
On-Peak, per on-peak kWh	989,936,084	2.612 ¢	\$25,857,131	2.624 ¢	\$25,975,92
Off-Peak, per off-peak kWh	615,177,886	2.562 ¢	\$15,760,857	2.574 ¢	\$15,834,67
	1,605,113,970		\$41,617,988		\$41,810,60
				Change	\$192,61
Transmission Voltage					
On-Peak, per on-peak kWh	489,470,136	2.422 ¢	\$11,854,967	2.464 ¢	\$12,060,54
Off-Peak, per off-peak kWh	370,356,398	2.372 ¢	\$8,784,854	2.414 ¢	\$8,940,403
	859,826,534		\$20,639,821		\$21,000,94
				Change	\$361,120
Schedule 15, Outdoor Area Lighting Service					
Secondary Voltage					
All kWh, per kWh	9,214,471	2.191 ¢	\$202,223	2.314 ¢	\$213,320
	9,214,471		\$202,223		\$213,32
				Change	\$11,10
Schedule 50, Mercury Vapor Street Lighting S	Service				
Secondary Voltage	9.769.221	1.001	¢150.050	1.002 4	\$167.14
All kWh, per kWh	8,768,231	1.801 ¢	\$158,050	1.902 ¢	\$167,14
	8,768,231		\$158,050	CI.	\$167,14
				Change	\$9,098
Schedule 51, Street Lighting Service, Compan	v Owned System				
	y o med bystem				
Secondary Voltage		2.843 ¢	\$549 189	3.002 ¢	\$579.56
	19,318,686	2.843 ¢	\$549,189 \$549,189	3.002 ¢	
Secondary Voltage		2.843 ¢	\$549,189 \$549,189		\$579,563
Secondary Voltage	19,318,686	2.843 ¢		3.002 ¢ Change	\$579,563
Secondary Voltage All kWh, per kWh	19,318,686 19,318,686	2.843 ¢			\$579,563
Secondary Voltage All kWh, per kWh Schedule 52, Street Lighting Service, Compan	19,318,686 19,318,686	2.843 ¢			\$579,563
Secondary Voltage All kWh, per kWh Schedule 52, Street Lighting Service, Compan	19,318,686 19,318,686	2.843 ¢			\$579,563 \$30,374
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage	19,318,686 19,318,686 y-Owned System		\$549,189	Change	\$579,563 \$30,374 \$12,988
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage	19,318,686 19,318,686 y-Owned System		\$549,189 \$12,299	Change 2.300 ¢	\$579,562 \$30,374 \$12,988 \$12,988
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage	19,318,686 19,318,686 y-Owned System		\$549,189 \$12,299	Change	\$579,562 \$30,374 \$12,988 \$12,988
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh	19,318,686 19,318,686 19,00 wned System 564,686 564,686		\$549,189 \$12,299	Change 2.300 ¢	\$579,56: \$579,56: \$30,374 \$12,98! \$12,98!
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consums Secondary Voltage	19,318,686 19,318,686 19,00 wned System 564,686 564,686	2.178 ¢	\$549,189 \$12,299	Change	\$579,562 \$30,374 \$12,988 \$12,988
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume	19,318,686 19,318,686 19,00 wned System 564,686 564,686		\$549,189 \$12,299	Change 2.300 ¢	\$579,56: \$30,374 \$12,981 \$12,981 \$689
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consums Secondary Voltage	19,318,686 19,318,686 29-Owned System  564,686  564,686  er-Owned System	2.178 ¢	\$549,189 \$12,299 \$12,299	Change	\$579,562 \$30,374 \$12,988 \$12,988
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consums Secondary Voltage	19,318,686 19,318,686 29-Owned System 564,686 564,686 er-Owned System	2.178 ¢	\$12,299 \$12,299 \$12,299	Change	\$579,56: \$30,374 \$12,981 \$12,981 \$689
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh	19,318,686 19,318,686 29-Owned System 564,686 564,686 er-Owned System	2.178 ¢	\$12,299 \$12,299 \$12,299	Change  2.300 ¢  Change  0.981 ¢	\$579,56: \$30,374 \$12,98: \$12,98: \$68: \$93,37: \$93,37:
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh  Schedule 54, Recreational Field Lighting	19,318,686 19,318,686 29-Owned System 564,686 564,686 er-Owned System	2.178 ¢	\$12,299 \$12,299 \$12,299	Change  2.300 ¢  Change  0.981 ¢	\$579,56: \$30,374 \$12,98: \$12,98: \$68: \$93,37: \$93,37:
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Company Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh  Schedule 54, Recreational Field Lighting Secondary Voltage Secondary Voltage	19,318,686 19,318,686 19,318,686 2564,686 564,686 er-Owned System 9,518,024 9,518,024	2.178 ¢	\$12,299 \$12,299 \$12,299 \$88,422 \$88,422	Change  2.300 ¢  Change  0.981 ¢  Change	\$579,56: \$30,37: \$12,98! \$12,98! \$68! \$93,37: \$93,37: \$4,94!
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh	19,318,686 19,318,686 19,318,686 254,686 564,686 28-Cowned System 9,518,024 9,518,024 1,245,594	2.178 ¢	\$12,299 \$12,299 \$12,299 \$88,422 \$88,422	Change  2.300 ¢  Change  0.981 ¢	\$579,56. \$30,37. \$12,98. \$12,98. \$68. \$93,37. \$4,94.
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Company Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh  Schedule 54, Recreational Field Lighting Secondary Voltage Secondary Voltage	19,318,686 19,318,686 19,318,686 2564,686 564,686 er-Owned System 9,518,024 9,518,024	2.178 ¢	\$12,299 \$12,299 \$12,299 \$88,422 \$88,422	Change  2.300 ¢  Change  0.981 ¢  Change	\$579,56: \$30,37- \$12,98! \$12,98! \$68! \$93,37: \$93,37: \$4,94!
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh  Schedule 54, Recreational Field Lighting Secondary Voltage Secondary Voltage	19,318,686 19,318,686 19,318,686 254,686 564,686 28-Cowned System 9,518,024 9,518,024 1,245,594	2.178 ¢	\$12,299 \$12,299 \$12,299 \$88,422 \$88,422	Change  2.300 ¢  Change  0.981 ¢  Change	\$579,56: \$30,37- \$12,98! \$12,98! \$68! \$93,37: \$93,37: \$4,94!
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh  Schedule 54, Recreational Field Lighting Secondary Voltage All kWh, per kWh	19,318,686 19,318,686 19,318,686 254,686 564,686 28-Cowned System 9,518,024 9,518,024 1,245,594	2.178 ¢	\$12,299 \$12,299 \$12,299 \$88,422 \$88,422 \$19,954	Change  2.300 ¢  Change  0.981 ¢  Change	\$579,56: \$30,37: \$12,98! \$12,98! \$68! \$93,37: \$4,94! \$21,07: \$21,07: \$1,12:
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh  Schedule 54, Recreational Field Lighting Secondary Voltage All kWh, per kWh	19,318,686 19,318,686 19,318,686 254,686 564,686 28-Cowned System 9,518,024 9,518,024 1,245,594	2.178 ¢	\$12,299 \$12,299 \$12,299 \$88,422 \$88,422 \$19,954 \$19,954	Change  2.300 ¢  Change  0.981 ¢  Change	\$579,56: \$30,37: \$12,98: \$12,98: \$68: \$93,37: \$4,94: \$21,07: \$21,07: \$1,12
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh  Schedule 54, Recreational Field Lighting Secondary Voltage All kWh, per kWh  Total before Employee Discount Employee Discount	19,318,686 19,318,686 19,318,686  solver-Owned System  9,518,024 9,518,024 1,245,594 1,245,594	2.178 ¢	\$12,299 \$12,299 \$12,299 \$88,422 \$88,422 \$19,954 \$19,954 \$19,954	Change  2.300 ¢  Change  0.981 ¢  Change	\$579,56: \$30,37: \$12,98: \$12,98: \$689: \$93,37: \$4,949: \$21,07: \$1,12 \$378,367,414 -\$127,75:
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Compan Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh  Schedule 54, Recreational Field Lighting Secondary Voltage All kWh, per kWh  Total before Employee Discount Employee Discount	19,318,686 19,318,686 19,318,686 254,686 564,686 28-Cowned System 9,518,024 9,518,024 1,245,594	2.178 ¢	\$12,299 \$12,299 \$12,299 \$88,422 \$88,422 \$19,954 \$19,954	Change  2.300 ¢  Change  0.981 ¢  Change  1.692 ¢  Change	\$579,56: \$30,37: \$12,98! \$12,98! \$12,98! \$93,37: \$93,37: \$4,94: \$21,07: \$21,07: \$1,12 \$378,367,410 \$127,75:
Secondary Voltage All kWh, per kWh  Schedule 52, Street Lighting Service, Company Secondary Voltage All kWh, per kWh  Schedule 53, Street Lighting Service, Consume Secondary Voltage All kWh, per kWh  Schedule 54, Recreational Field Lighting Secondary Voltage Secondary Voltage	19,318,686 19,318,686 19,318,686  solver-Owned System  9,518,024 9,518,024 1,245,594 1,245,594	2.178 ¢	\$12,299 \$12,299 \$12,299 \$88,422 \$88,422 \$19,954 \$19,954 \$19,954	Change  2.300 ¢  Change  0.981 ¢  Change	\$579,56: \$30,37: \$12,98: \$12,98: \$68: \$93,37: \$4,94: \$21,07: \$21,07: \$1,12

# PACIFIC POWER STATE OF OREGON TAM Schedule 205 - TAM Adjustment for Other Revenues Proposed Rates and Revenues Forecast 12 Months Ending December 31, 2015

Rate Schedule	Forecast Energy	Proposed Sched Rates	ule 205 Revenues
	1 diceast Energy	ruios	revenues
Schedule 4, Residential First Block kWh (0-1,000)	2 992 205 990	0.005 4	-\$194,16
Second Block kWh (> 1,000)	3,883,205,889 1,369,857,893	-0.005 ¢ -0.006 ¢	-\$194,16
,,,,,	5,253,063,782		-\$276,35
Employee Discount			
First Block kWh (0-1,000) Second Block kWh (> 1,000)	11,224,236 5,284,001	-0.005 ¢ -0.006 ¢	-\$56 -\$31
Discount	16,508,237		-\$87 \$22
Schedule 23, Small General Service			
Secondary Voltage	959 005 405	0.005 4	-\$42,94
1st 3,000 kWh, per kWh All additional kWh, per kWh	858,905,405 261,095,125	-0.005 ¢ -0.004 ¢	-\$42,94 -\$10,44
711 additional KWH, per KWH	1,120,000,530	-0.004 ¢	-\$53,38
Primary Voltage	702 227	-0.005 ¢	-\$4
1st 3,000 kWh, per kWh All additional kWh, per kWh	793,337 351,760	-0.003 ¢	-\$4
The deditional avvil, per avvil	1,145,097	0.001 \$	-\$5
Schedule 28, General Service 31-200kW			
Secondary Voltage		0.005	****
1st 20,000 kWh, per kWh All additional kWh, per kWh	1,417,022,170 578,403,411	-0.005 ¢ -0.005 ¢	-\$70,85 -\$28,92
7 ii additional k vi ii, pei k vi ii	1,995,425,581	-0.003 ¢	-\$99,77
rimary Voltage	0.700.704	0.005	-\$48
1st 20,000 kWh, per kWh All additional kWh, per kWh	9,729,736 8,862,021	-0.005 ¢ -0.005 ¢	-\$4
The additional array, per array	18,591,757	0.000 \$	-\$92
Schedule 30, General Service 201-999kW			
Secondary Voltage	191 222 902	0.005 4	-\$9,06
1st 20,000 kWh, per kWh All additional kWh, per kWh	181,232,803 1,069,918,078	-0.005 ¢ -0.005 ¢	-\$9,00
The additional aven, per aven	1,251,150,881	0.005 Ç	-\$62,55
Primary Voltage			
1st 20,000 kWh, per kWh	12,315,369	-0.005 ¢ -0.005 ¢	-\$6: -\$3,98
All additional kWh, per kWh	79,611,926 91,927,295	-0.003 ¢	-\$4,59
Schedule 41, Agricultural Pumping Service			
Secondary Voltage Winter, 1st 100 kWh/kW, per kWh	2,801,050	-0.007 ¢	-\$19
Winter, All additional kWh, per kWh	2,404,049	-0.005 ¢	-\$12
Summer, All kWh, per kWh	222,923,263 228,128,362	-0.005 ¢	-\$11,14 -\$11,46
rimary Voltage	., ., .,		
Winter, 1st 100 kWh/kW, per kWh	9,461	-0.007 ¢	-1
Winter, All additional kWh, per kWh	54,112	-0.005 ¢	-:
Summer, All kWh, per kWh	336,328 399,901	-0.005 ¢	-\$: -\$2
chedule 47, Large General Service, Partial Requ	uirements 1,000kW and over		
Primary Voltage	20.000.044	0.004	<b>61.</b>
On-Peak, per on-peak kWh Off-Peak, per off-peak kWh	29,898,944 10,575,978	-0.004 ¢ -0.004 ¢	-\$1,19 -\$4
	40,474,922		-\$1,61
Fransmission Voltage On-Peak, per on-peak kWh	9,154,521	-0.004 ¢	-\$36
Off-Peak, per off-peak kWh	8,827,144	-0.004 ¢	-\$35
	17,981,665		-\$71

# PACIFIC POWER STATE OF OREGON TAM Schedule 205 - TAM Adjustment for Other Revenues Proposed Rates and Revenues Forecast 12 Months Ending December 31, 2015

D. 61.11		_	Proposed Schedi	
Rate Schedule		Forecast Energy	Rates	Revenues
Schedule 48, Lar Secondary Voltag	rge General Service, 1,000kW	and over		
	eak, per on-peak kWh	374,571,539	-0.005 ¢	-\$18,72
	eak, per off-peak kWh	207,227,176	-0.005 ¢	-\$10,36
		581,798,715		-\$29,09
Primary Voltage				
	eak, per on-peak kWh	989,936,084	-0.004 ¢	-\$39,59
Off-P	eak, per off-peak kWh	615,177,886	-0.004 ¢	-\$24,60
		1,605,113,970		-\$64,20
Fransmission Vol				
	eak, per on-peak kWh	489,470,136	-0.004 ¢	-\$19,5
OII-P	eak, per off-peak kWh	370,356,398 859,826,534	-0.004 ¢	-\$14,8 -\$34,3
01.11.45.0				
Schedule 15, Out Secondary Voltag	tdoor Area Lighting Service			
	Wh, per kWh	9,214,471	-0.004 ¢	-\$1
		9,214,471		-\$1
Schedule 50, Mei Secondary Voltag	rcury Vapor Street Lighting	Service		
	Wh, per kWh	8,768,231	-0.003 ¢	-\$1
		8,768,231	,	-\$1
	eet Lighting Service, Compan	ny-Owned System		
Secondary Voltag		19,318,686	-0.005 ¢	-\$20
Secondary Voltag	ge		-0.005 ¢	-\$2i
Secondary Voltag All kV	ge	19,318,686 19,318,686	-0.005 ¢	-\$2i -\$2i
Secondary Voltag All kV Schedule 52, Stre Secondary Voltag	ge Wh, per kWh eeet Lighting Service, Compan	19,318,686 19,318,686		-\$2i -\$2i
Secondary Voltag All kV Schedule 52, Stre Secondary Voltag	ge Wh, per kWh eet Lighting Service, Compan	19,318,686 19,318,686 ay-Owned System	-0.005 ¢	-\$2\ -\$.
Secondary Voltag All kV Schedule 52, Stre Secondary Voltag	ge Wh, per kWh eeet Lighting Service, Compan	19,318,686 19,318,686		-\$2 -\$
Secondary Voltag All kv Schedule 52, Stre Secondary Voltag All kv	ge Wh, per kWh eeet Lighting Service, Compan	19,318,686 19,318,686 2y-Owned System 564,686 564,686		-\$2 -\$
Schedule 52, Str Schedule 52, Str Secondary Voltag All kV Schedule 53, Stre Secondary Voltag	te Wh, per kWh  eet Lighting Service, Compan te Wh, per kWh  eet Lighting Service, Consum te	19,318,686 19,318,686 19-Owned System 564,686 564,686	-0.004 ¢	-\$2i -\$.
Schedule 52, Stre Schedule 53, Stre Schedule 53, Stre Schedule 53, Stre Schedule 53, Stre Scendary Voltag	ge Wh, per kWh  eet Lighting Service, Compan ge Wh, per kWh  eet Lighting Service, Consum	19,318,686 19,318,686 2y-Owned System 564,686 564,686		-\$2 -\$ -\$
Schedule 52, Stre Schedule 53, Stre Schedule 53, Stre Schedule 53, Stre Schedule 53, Stre Scendary Voltag	te Wh, per kWh  eet Lighting Service, Compan te Wh, per kWh  eet Lighting Service, Consum te	19,318,686 19,318,686 19,000 System 564,686 564,686 er-Owned System	-0.004 ¢	-\$2 -\$ -\$
Secondary Voltag All kV Schedule 52, Stre Secondary Voltag All kV Schedule 53, Stre Secondary Voltag All kV	te Wh, per kWh  eet Lighting Service, Compan te Wh, per kWh  eet Lighting Service, Consum te	19,318,686 19,318,686 19,000 System 564,686 564,686 er-Owned System	-0.004 ¢	-\$2( -\$. -\$.
Schedule 52, Str Secondary Voltag All kV Schedule 53, Stre Secondary Voltag All kV Schedule 54, Rec Secondary Voltag	tee Wh, per kWh  eet Lighting Service, Compan tee Wh, per kWh  eet Lighting Service, Consum tee Wh, per kWh  eet Lighting Service, Consum tee Wh, per kWh	19,318,686 19,318,686 19,318,686 2564,686 564,686 eer-Owned System 9,518,024 9,518,024	-0.004 ¢	-\$2: -\$. -\$.
Schedule 52, Str Secondary Voltag All kV Schedule 53, Stre Secondary Voltag All kV Schedule 54, Rec Secondary Voltag	ge Wh, per kWh  eet Lighting Service, Compan ge Wh, per kWh  eet Lighting Service, Consum ge Wh, per kWh  creational Field Lighting	19,318,686 19,318,686 19,318,686 19,000	-0.004 ¢	-\$2i -\$: -\$! -\$!
Schedule 52, Str Schedule 52, Str Secondary Voltag All kV Schedule 53, Stre Secondary Voltag All kV Schedule 54, Rec Secondary Voltag	tee Wh, per kWh  eet Lighting Service, Compan tee Wh, per kWh  eet Lighting Service, Consum tee Wh, per kWh  eet Lighting Service, Consum tee Wh, per kWh	19,318,686 19,318,686 19,318,686 2564,686 564,686 eer-Owned System 9,518,024 9,518,024	-0.004 ¢	-\$2 -\$ -\$ -\$1 -\$1
Schedule 52, Stresscondary Voltag All kV Schedule 53, Stresscondary Voltag All kV Schedule 54, Rec	ge Wh, per kWh  eet Lighting Service, Compan ge Wh, per kWh  eet Lighting Service, Consum ge Wh, per kWh  creational Field Lighting ge Wh, per kWh	19,318,686 19,318,686 19,318,686 19,000	-0.004 ¢	-\$2 -\$ -\$ -\$1 -\$1
Secondary Voltag All kV Schedule 52, Stre Secondary Voltag All kV Schedule 53, Strt Secondary Voltag All kV Schedule 54, Rec Secondary Voltag All kV Total before Emp	geet Lighting Service, Compangeet Wh, per kWh  eet Lighting Service, Compangeet Wh, per kWh  eet Lighting Service, Consumgeet Wh, per kWh  creational Field Lighting to the Wh, per kWh  ployee Discount	19,318,686 19,318,686 19,318,686 19,000	-0.004 ¢	-\$21 -\$: -\$: -\$! -\$:
Schedule 52, Streen Secondary Voltage All kV Schedule 53, Streen Secondary Voltage All kV Schedule 54, Rec Secondary Voltage All kV Schedule 54, Rec Secondary Voltage All kV Total before Employee Discou	geet Lighting Service, Compangeet Wh, per kWh  eet Lighting Service, Compangeet Wh, per kWh  eet Lighting Service, Consumgeet Wh, per kWh  creational Field Lighting to the Wh, per kWh  ployee Discount	19,318,686 19,318,686 19,318,686 19,000	-0.004 ¢	-\$2( -\$2( -\$2( -\$1) -\$1) -\$1) -\$1 -\$1 -\$1 -\$1 -\$1 -\$1 -\$1 -\$1 -\$1 -\$1
Schedule 52, Stree Secondary Voltag All kV Schedule 53, Stree Secondary Voltag All kV Schedule 54, Rec Secondary Voltag All kV Total before Employee Discou	geet Lighting Service, Compangeet Wh, per kWh  eet Lighting Service, Compangeet Wh, per kWh  eet Lighting Service, Consumgeet Wh, per kWh  creational Field Lighting to the Wh, per kWh  ployee Discount	19,318,686 19,318,686 19,318,686  sy-Owned System  564,686 564,686  er-Owned System  9,518,024 9,518,024 1,245,594 1,245,594	-0.004 ¢	-\$21 -\$. -\$. -\$. -\$. -\$. -\$. -\$.

Docket No. UE \_\_\_ Exhibit PAC/302 Witness: Judith M. Ridenour BEFORE THE PUBLIC UTILITY COMMISSION **OF OREGON PACIFICORP** Exhibit Accompanying Direct Testimony of Judith M. Ridenour **Proposed Tariffs** 

**April 2014** 

Exhibit PAC/302
Ridenour/1
OREGON
SCHEDULE 201

NET POWER COSTS COST-BASED SUPPLY SERVICE

Page 1

#### Available

In all territory served by the Company in the State of Oregon.

# **Applicable**

To Residential Consumers and Nonresidential Consumers who have elected to take Cost-Based Supply Service under this schedule or under Schedules 210, 211, 212, 213 or 247. This service may be taken only in conjunction with the applicable Delivery Service Schedule. Also applicable to Nonresidential Consumers who, based on the announcement date defined in OAR 860-038-270, do not elect to receive standard offer service under Schedule 220 or direct access service under the applicable tariff. In addition, applicable to some Large Nonresidential Consumers on Schedule 400 whose special contracts require prices under the Company's previously applicable Schedule 48T. For Consumers on Schedule 400 who were served on previously applicable Schedule 48T prices under their special contract, this service, in conjunction with Delivery Service Schedule 48, supersedes previous Schedule 48T.

Nonresidential Consumers who had chosen either service under Schedule 220 or who chose to receive direct access service under the applicable tariff may qualify to return to Cost-Based Supply Service under this Schedule after meeting the Returning Service Requirements and making a Returning Service Payment as specified in this Schedule.

### **Monthly Billing**

The Monthly Billing shall be the Energy Charge, as specified below by Delivery Service Schedule.

Delivery Service Schedule No.			Deliv	very Voltage		
4	Per kWh	0-1000 kWh > 1000 kWh	<b>Secondary</b> 2.771¢ 3.785¢	Primary	Transmission	(I) (I)
5	month of approxin	0-1000 kWh > 1000 kWh and 5, the kilowatt-hour blocks nately 30.42 days. Residential ble kilowatt-hour based upon the	kilowatt-hour bl	ocks shall be	prorated	(I) (I)
23	First 3,000 kWh, p		3.069¢ 2.276¢	2.972¢ 2.206¢		(l) (l)
28	First 20,000 kWh, All additional kWh	•	3.002¢ 2.920¢	2.890¢ 2.812¢		(I) (I)
30	First 20,000 kWh, All additional kWh	•	3.209¢ 2.782¢	3.173¢ 2.743¢		(I) (I)
41	Winter, first 100 k Winter, all addition Summer, all kWh,	nal kWh, per kWh	4.287¢ 2.920¢ 2.920¢	4.151¢ 2.828¢ 2.828¢		(I) (I) (I)

For Schedule 41, Winter is defined as service rendered from December 1 through March 31, Summer is defined as service rendered April 1 through November 30.

(continued)

P.U.C. OR No. 36

Fifth Revision of Sheet No. 201-1

Advice No. 14-006

Canceling Fourth Revision of Sheet No. 201-1 Effective for service on and after January 1, 2015

Effective for service on an

Issued April 1, 2014 R. Bryce Dalley, Vice President, Regulation

Delivery Voltage



# NET POWER COSTS COST-BASED SUPPLY SERVICE

Page 2

(I)

#### **Monthly Billing (continued)**

Delivery Service Schedule No.	Secondary <u>-</u>	Primary	Transmission	
47/48 Per kWh On-Peak	2.830¢	2.624¢	2.464¢	(I)
Per kWh, Off-Peak	2.780¢	2.574¢	2.414¢	(I)

For Schedule 47 and Schedule 48, On-Peak hours are from 6:00 a.m. to 10:00 p.m. Monday through Saturday excluding NERC holidays. Off-Peak hours are remaining hours.

Due to the expansions of Daylight Saving Time (DST) as adopted under Section 110 of the U.S. Energy Policy Act of 2005, the time periods shown above will begin and end one hour later for the period between the second Sunday in March and the first Sunday in April and for the period between the last Sunday in October and the first Sunday in November.

52	For dusk to dawn operation, per kWh	2.300¢	(I)
	For dusk to midnight operation, per kWh	2.300¢	(I)

54 Per kWh 1.692¢

15	Type of Luminaire	Nominal Rating	Monthly kWh	RatePer Luminaire	
	Mercury Vapor	7,000	76	\$ 1.76	(I)
	Mercury Vapor	21,000	172	\$ 3.98	(I)
	Mercury Vapor	55,000	412	\$ 9.53	(I)
	High Pressure Sodium	5,800	31	\$ 0.72	(I)
	High Pressure Sodium	22,000	85	\$ 1.97	(I)
	High Pressure Sodium	50,000	176	\$ 4.07	(I)

### 50 A. Company-owned Overhead System

Street lights supported on distribution type wood poles: Mercury Vapor Lamps.

Nominal Lumen Rating	<u>7,000</u> (Monthly 76 kWh)	<u>21,000</u> (Monthly 172 kWh)	<u>55,000</u> (Monthly 412 kWh)	
Horizontal, per lamp	\$1.45 \$1.45	\$3.27 \$3.27	\$7.84	(I)
Vertical, per lamp	\$1.45	\$3.27		(1)

Street lights supported on distribution type metal poles: Mercury Vapor Lamps.

Nominal Lumen Rating	<u>7,000</u>	<u>21,000</u>	<u>55,000</u>	
(Mor	nthly 76 kWh)	(Monthly 172 kWh)	(Monthly 412 kWh)	
On 26-foot poles, horizontal, per lamp	\$1.45			(1)
On 26-foot poles, vertical, per lamp	\$1.45			(I)
On 30-foot poles, horizontal, per lamp		\$3.27		(I)
On 30-foot poles, vertical, per lamp		\$3.27		(1) (1)
On 33-foot poles, horizontal, per lamp			\$7.84	(1)
			•	(1)

(continued)



NET POWER COSTS COST-BASED SUPPLY SERVICE

Page 3

## **Monthly Billing (continued)**

### **Delivery Service Schedule No.**

# 50 B. Company-owned Underground System

	Nominal Lumen Rating		7,000 (Monthly 76 kV	21,0 Vh) (Monthly	<u>)00</u> 172 kWh) (Mont	55,000 thly 412 kWh)
	On 26-foot poles, horizontal, per la On 26-foot poles, vertical, per la On 30-foot poles, horizontal, per la On 30-foot poles, vertical, per la On 33-foot poles, horizontal, per la On 33-foot pole	amp er lamp amp	\$1.45 \$1.45	\$3.2 \$3.2	77	(I) (I) (I) (I) \$7.84
51	Types of Luminaire	Nominal rati	ng Watts M	lonthly kWh	n Rate Per Lu	<u>ıminaire</u>
	LED	4,000	100 (comp)		\$0.57	(I)
	LED	6,200	150 (comp)		\$0.81	
	LED	13,000	250 (comp)		\$1.53	
	LED	16,800	400 (comp)		\$2.07	
	High Pressure Sodium	5,800	70	31	\$0.93	
	High Pressure Sodium	9,500	100	44	\$1.32	
	High Pressure Sodium	16,000	150	64	\$1.92	
	High Pressure Sodium	22,000	200	85	\$2.55	
	High Pressure Sodium	27,500	250	115	\$3.45	
	High Pressure Sodium	50,000	400	176	\$5.28	
	Metal Halide	12,000	175	68	\$2.04	
	Metal Halide	19,500	250	94	\$2.82	(1)
53	Types of Luminaire	Nominal rati	na Watte Ma	anthly kWh	Rate Per Lu	ıminaire
33	High Pressure Sodium	5,800	70	31	\$0.30	
	High Pressure Sodium	9,500	100	44	\$0.43	(I)
	High Pressure Sodium	16,000	150	64	\$0.43 \$0.63	
	High Pressure Sodium	22,000	200	85	\$0.83	
	High Pressure Sodium	27,500	250	115	\$1.13	
	High Pressure Sodium	50,000	400	176	\$1.73	
	Metal Halide	9,000	100	39	\$0.38	
	Metal Halide	12,000	175	68	\$0.38 \$0.67	
		,			•	
	Metal Halide	19,500	250 400	94 149	\$0.92 \$1.46	
	Metal Halide	32,000			•	1
	Metal Halide	107,800	1,000	354	\$3.47	(1)
	Non-Listed Luminaire, per kWh	ı		0.981¢		(I)

(continued)



#### TAM ADJUSTMENT FOR OTHER REVENUES

Page 1

# Purpose

This schedule adjusts rates for Other Revenues as authorized by Order No. 10-363.

## **Applicable**

To all Residential Consumers and Nonresidential Consumers.

### **Energy Charge**

The adjustment rate is listed below by Delivery Service Schedule and Direct Access Delivery Service Schedule.

Delive	ery Service Sched	ule No.		livery Voltage	
4	Per kWh	0-1000 kWh > 1000 kWh	<b>Secondary</b> (0.005)¢ (0.006)¢	Primary	Transmission (R) (R)
5	month of approxi	0-1000 kWh > 1000 kWh and 5, the kilowatt-hour blo mately 30.42 days. Reside nole kilowatt-hour based up 10 for details).	ential kilowatt-hour	olocks shall be	e prorated
23, 72	3 First 3,000 kWh, All additional kW		(0.005)¢ (0.004)¢	(0.005)¢ (0.004)¢	(R) (R)
28, 72	8 First 20,000 kWh All additional kW	•	(0.005)¢ (0.005)¢	(0.005)¢ (0.005)¢	(R) (R)
30, 73	0 First 20,000 kWh All additional kW	•	(0.005)¢ (0.005)¢	(0.005)¢ (0.005)¢	(R) (R)
41, 74	1 Winter, first 100 l Winter, all addition Summer, all kWh	onal kWh, per kWh	(0.007)¢ (0.005)¢ (0.005)¢	(0.007)¢ (0.005)¢ (0.005)¢	(R) (R) (R)

For Schedule 41, Winter is defined as service rendered from December 1 through March 31, Summer is defined as service rendered April 1 through November 30.

(continued)

Advice No. 14-006

Delivery Voltage



#### TAM ADJUSTMENT FOR OTHER REVENUES

Page 2

Energy Charge (continued)
---------------------------

Delivery Service Schedule No.	Secondary	Primary	Transmission	
47/48 Per kWh On-Peak	(0.005)¢	(0.004)¢	(0.004)¢	(R)
747/748 Per kWh, Off-Peak	(0.005)¢	(0.004)¢	(0.004)¢	(R)

For Schedule 47 and Schedule 48, On-Peak hours are from 6:00 a.m. to 10:00 p.m. Monday through Saturday excluding NERC holidays. Off-Peak hours are remaining hours.

Due to the expansions of Daylight Saving Time (DST) as adopted under Section 110 of the U.S. Energy Policy Act of 2005, the time periods shown above will begin and end one hour later for the period between the second Sunday in March and the first Sunday in April and for the period between the last Sunday in October and the first Sunday in November.

52, 752 For dusk to dawn operation, per kWh	(0.004)¢	(R)
For dusk to midnight operation, per kWh	(0.004)¢	(R)

54,754 Per kWh (0.003)¢ (R)

15	Type of Luminaire	Nominal Rating	Monthly kWh	RatePer Luminaire	
	Mercury Vapor	7,000	76	\$0.00	
	Mercury Vapor	21,000	172	(\$0.01)	(R)
	Mercury Vapor	55,000	412	(\$0.02)	(R)
	High Pressure Sodium	5,800	31	\$0.00	
	High Pressure Sodium	22,000	85	\$0.00	
	High Pressure Sodium	50,000	176	(\$0.01)	(R)

#### 50 A. Company-owned Overhead System

Street lights supported on distribution type wood poles: Mercury Vapor Lamps.

Nominal Lumen Rating	<u>7,000</u> (Monthly 76 kWh)	<u>21,000</u> (Monthly 172 kWh)	<u>55,000</u> (Monthly 412 kWh)	
Horizontal, per lamp	\$0.00	(\$0.01)	(\$0.01)	(R)
Vertical, per lamp	\$0.00	(\$0.01)		(R)

Street lights supported on distribution type metal poles: Mercury Vapor Lamps.

Nominal Lumen Rating	7,000	<u>21,000</u>	<u>55,000</u>	
(Mon	thly 76 kWh)	(Monthly 172 kWh)	(Monthly 412 kWh)	
On 26-foot poles, horizontal, per lamp	\$0.00			
On 26-foot poles, vertical, per lamp	\$0.00			
On 30-foot poles, horizontal, per lamp		(\$0.01)		(R)
On 30-foot poles, vertical, per lamp		(\$0.01)		(R)
On 33-foot poles, horizontal, per lamp		,	(\$0.01)	(R)

(continued)

Advice No. 14-006



### TAM ADJUSTMENT FOR OTHER REVENUES

Page 3

## **Energy Charge (continued)**

## **Delivery Service Schedule No.**

# 50 B. Company-owned Underground System

Nominal Lumen Rating		<u>7,000</u>	21,0	<u>55,000</u>	
		(Monthly 76 kV	Vh) (Monthly	172 kWh) (Monthly 412 kWl	n)
On 26-foot poles, horizontal, p		\$0.00			
On 26-foot poles, vertical, per		\$0.00			
On 30-foot poles, horizontal, p			(\$0.0	,	(R)
On 30-foot poles, vertical, per	•		(\$0.0		(R)
On 33-foot poles, horizontal, p	er lamp			(\$0.01)	(R)
51, 751 Types of Luminaire	Nominal rati	ng Watts Mo	onthly kWh	Rate Per Luminaire	
LED	4,000	100 (comp)		\$0.00	
LED	6,200	150 (comp)		\$0.00	
LED	13,000	250 (comp)		\$0.00	
LED	16,800	400 (comp)		\$0.00	
High Pressure Sodium	5,800	70	31	\$0.00	
High Pressure Sodium	9,500	100	44	\$0.00	
High Pressure Sodium	16,000	150	64	\$0.00	
High Pressure Sodium	22,000	200	85	\$0.00	
High Pressure Sodium	27,500	250	115	(\$0.01)	(R)
High Pressure Sodium	50,000	400	176	(\$0.01)	(R)
Metal Halide	12,000	175	68	\$0.00	
Metal Halide	19,500	250	94	\$0.00	
53, 753 Types of Luminaire	Nominal rati	ng Watts Mo	onthly kWh	Rate Per Luminaire	
High Pressure Sodium	5,800	70	31	\$0.00	
High Pressure Sodium	9,500	100	44	\$0.00	
High Pressure Sodium	16,000	150	64	\$0.00	
High Pressure Sodium	22,000	200	85	\$0.00	
High Pressure Sodium	27,500	250	115	\$0.00	
High Pressure Sodium	50,000	400	176	\$0.00	
Metal Halide	9,000	100	39	\$0.00	
Metal Halide	12,000	175	68	\$0.00	
Metal Halide	19,500	250	94	\$0.00	
Metal Halide	32,000	400	149	\$0.00	
Metal Halide	107,800	1,000	354	(\$0.01)	(R)
Non-Listed Luminaire, per kWł	h		(0.002)¢		(R)

Advice No. 14-006

Docket No. UE \_\_\_ Exhibit PAC/303 Witness: Judith M. Ridenour

# BEFORE THE PUBLIC UTILITY COMMISSION OF OREGON

# **PACIFICORP**

Exhibit Accompanying Direct Testimony of Judith M. Ridenour

Estimated Effect of Proposed TAM Price Change

**April 2014** 

PACIFIC POWER
ESTIMATED EFFECT OF PROPOSED PRICE CHANGE
ON REVENUES FROM ELECTRIC SALES TO ULTIMATE CONSUMERS
DISTRIBUTED BY RATE SCHEDULES IN OREGON
FORECAST 12 MONTHS ENDING DECEMBER 31, 2015

				•	Presen	Present Revenues (\$000)	00)	Propos	Proposed Revenues (\$000)	(00)		Change	ge		
Line		Sch	No. of		Base		Net	Base		Net	Base Rates	ates	Net Rates	es	Line
No.	Description	No.	Cust	MWh	Rates	Adders	Rates	Rates	Adders	Rates	(\$000)	$\frac{9}{2}$	(\$000)	<b>%</b> 2	No.
	(1)	(2)	(3)	(4)	(5)	(9)	(7)	(8)	(6)	(10)	(11)	(12)	(13)	(14)	
							(5) + (6)			(6) + (8)	(8) - (5)	(11)/(5)	(10) - (7)	(13)/(7)	
	Residential														
1	Residential	4	484,343	5,253,064	\$581,608	\$5,262	\$586,870	\$593,075	\$5,262	\$598,337	\$11,467	2.0%	\$11,467	2.0%	-
2	Total Residential		484,343	5,253,064	\$581,608	\$5,262	\$586,870	\$593,075	\$5,262	\$598,337	\$11,467	2.0%	\$11,467	2.0%	2
	Commercial & Industrial														
3	Gen. Svc. < 31 kW	23	76,950	1,121,146	\$120,156	\$5,130	\$125,286	\$121,294	\$5,130	\$126,424	\$1,138	1.0%	\$1,138	0.9%	3
4	Gen. Svc. 31 - 200 kW	28	10,093	2,014,017	\$177,864	\$3,000	\$180,864	\$180,249	\$3,000	\$183,249	\$2,385	1.3%	\$2,385	1.3%	4
5	Gen. Svc. 201 - 999 kW	30	857	1,343,078	\$105,063	\$961	\$106,024	\$106,810	\$961	\$107,771	\$1,747	1.7%	\$1,747	1.7%	S
9	Large General Service >= 1,000 kW	48	203	3,046,739	\$209,087	(\$6,638)	\$199,449	\$210,194	(\$6,638)	\$200,556	\$1,107	0.5%	\$1,107	0.5%	9
7	Partial Req. Svc. >= 1,000 kW	47	7	61,069	\$6,276	(\$203)	\$6,073	\$6,286	(\$203)	\$6,083	\$10	0.5%	\$10	0.5%	7
∞	Agricultural Pumping Service	41	7,942	228,528	\$25,686	(\$1,256)	\$24,430	\$26,099	(\$1,256)	\$24,843	\$413	1.6%	\$413	1.7%	8
6	Total Commercial & Industrial		96,052	7,814,577	\$644,132	(\$2,005)	\$642,127	\$650,932	(\$2,005)	\$648,927	\$6,800	1.1%	\$6,800	1.1%	6
	Lighting														
10	Outdoor Area Lighting Service	15	6,579	9,214	\$1,164	\$219	\$1,383	\$1,174	\$219	\$1,393	\$10	0.9%	\$10	0.7%	10
=======================================	Street Lighting Service	20	246	8,768	\$956	\$194	\$1,150	\$962	\$194	\$1,159	89	0.9%	89	0.8%	Ξ
12	Street Lighting Service HPS	51	736	19,319	\$3,339	\$710	\$4,049	\$3,369	\$710	\$4,079	\$30	0.9%	\$30	0.7%	12
13	Street Lighting Service	52	26	292	\$73	\$13	98\$	\$73	\$13	98\$	80	0.0%	80	0.0%	13
14	Street Lighting Service	53	249	9,518	\$583	\$120	\$703	8288	\$120	802\$	\$5	0.9%	\$5	0.7%	14
15	Recreational Field Lighting	54	105	1,246	\$102	\$20	\$122	\$103	\$20	\$123	\$1	1.0%	\$1	0.8%	15
16	Total Public Street Lighting		7,941	48,630	\$6,217	\$1,276	\$7,493	\$6,272	\$1,276	\$7,548	\$55	0.9%	\$55	0.7%	16
17	Total Sales before Emp. Disc. & AGA	•	588,336	13,116,271	\$1,231,957	\$4,533	\$1,236,490	\$1,250,279	\$4,533	\$1,254,812	\$18,322	1.5%	\$18,322	1.5%	17
18	Employee Discount				(\$452)	(\$3)	(\$455)	(\$461)	(\$3)	(\$464)	(6\$)		(6\$)		18
19	Total Sales with Emp. Disc		588,336	13,116,271	\$1,231,505	\$4,530	\$1,236,035	\$1,249,818	\$4,530	\$1,254,348	\$18,313	1.5%	\$18,313	1.5%	19
20	AGA Revenue				\$2,439		\$2,439	\$2,439		\$2,439	80		80		20
21	Total Sales		588,336	13,116,271	\$1,233,944	\$4,530	\$1,238,474	\$1,252,257	\$4,530	\$1,256,787	\$18,313	1.5%	\$18,313	1.5%	21

<sup>1</sup> Excludes effects of the Low Income Bill Payment Assistance Charge (Sch. 91), BPA Credit (Sch. 98), Klamath Dam Removal Surcharges (Sch. 199), Public Purpose Charge (Sch. 290) and Energy Conservation Charge (Sch. 297).
<sup>2</sup> Percentages shown for Schedules 48 and 47 reflect the combined rate change for both schedules

Monthly Billing Comparison Delivery Service Schedule 4 + Cost-Based Supply Service Residential Service Pacific Power

Percent	Difference	0.98%	1.36%	1.55%	1.65%	1.71%	1.76%	1.82%	1.86%	1.87%	1.88%	1.89%	1.92%	1.96%	1.99%	2.02%	2.03%	2.05%	2.10%	2.17%	2.20%	2.21%
	Difference	\$0.20	\$0.41	\$0.62	\$0.82	\$1.02	\$1.22	\$1.44	\$1.65	\$1.84	\$1.94	\$2.05	\$2.32	\$2.61	\$2.89	\$3.18	\$3.45	\$3.74	\$4.86	\$7.68	\$10.49	\$13.29
Monthly Billing*	Proposed Price	\$20.69	\$30.64	\$40.60	\$50.55	\$60.51	\$70.44	\$80.40	\$90.36	\$100.30	\$105.28	\$110.26	\$122.85	\$135.44	\$148.04	\$160.64	\$173.23	\$185.81	\$236.18	\$362.11	\$488.03	\$613.95
Monthly	Present Price	\$20.49	\$30.23	\$39.98	\$49.73	\$59.49	\$69.22	\$78.96	\$88.71	\$98.46	\$103.34	\$108.21	\$120.53	\$132.83	\$145.15	\$157.46	\$169.78	\$182.07	\$231.32	\$354.43	\$477.54	\$600.66
	kWh	100	200	300	400	200	009	700	800	006	950	1,000	1,100	1,200	1,300	1,400	1,500	1,600	2,000	3,000	4,000	2,000

<sup>\*</sup> Net rate including Schedules 91, 98, 199, 290 and 297. Note: Assumed average billing cycle length of 30.42 days.

Pacific Power

Monthly Billing Comparison
Delivery Service Schedule 23 + Cost-Based Supply Service
General Service - Secondary Delivery Voltage

ent	ence	Three Phase	0.70%	0.79%	0.85%	0.91%	0.85%	0.95%	0.98%	0.97%	0.91%	0.92%	0.92%	0.92%	0.87%	0.88%	0.89%	0.90%
Percent	Difference	Single Phase	0.80%	0.87%	0.91%	%96:0	0.91%	0.98%	1.00%	%66'0	0.93%	0.93%	0.93%	0.93%	0.88%	%68'0	0.90%	%06:0
	Price	Three Phase	880	\$106	\$132	\$185	\$132	\$238	\$344	\$433	\$460	\$638	\$816	\$66\$	8959	\$1,227	\$1,494	\$1,762
Billing*	Proposed Price	Single Phase	\$71	26\$	\$124	\$176	\$124	\$229	\$335	\$424	\$451	\$629	\$808	986\$	\$951	\$1,218	\$1,486	\$1,753
Monthly Billing*	t Price	Three Phase	879	\$105	\$131	\$184	\$131	\$236	\$340	\$429	\$456	\$632	8809	986\$	\$951	\$1,216	\$1,481	\$1,746
	Present Price	Single Phase	\$70	96\$	\$123	\$175	\$123	\$227	\$332	\$420	\$447	\$624	\$800	£26\$	\$942	\$1,207	\$1,472	\$1,737
		kWh	200	750	1,000	1,500	1,000	2,000	3,000	4,000	4,000	6,000	8,000	10,000	9,000	12,000	15,000	18,000
	kW	Load Size	Ŋ				10				20				30			

\* Net rate including Schedules 91, 199, 290 and 297.

Pacific Power

Monthly Billing Comparison

Delivery Service Schedule 23 + Cost-Based Supply Service

General Service - Primary Delivery Voltage

ent	ence	Three Phase	0.69%	0.78%	0.83%	%06.0	0.83%	0.93%	0.97%	%96:0	0.90%	0.91%	0.91%	0.91%	0.86%	0.87%	0.88%	%68:0
Percent	Difference	Single Phase	0.78%	0.86%	0.89%	0.94%	0.89%	0.97%	0.99%	0.98%	0.92%	0.92%	0.92%	0.92%	0.87%	0.88%	0.89%	%68.0
	l Price	Three Phase	878	\$104	\$130	\$181	\$130	\$232	\$335	\$422	\$449	\$622	962\$	\$970	\$936	\$1,196	\$1,457	\$1,717
Billing*	Proposed Price	Single Phase	69\$	\$95	\$121	\$172	\$121	\$224	\$327	\$413	\$440	\$613	\$787	\$961	\$927	\$1,187	\$1,448	\$1,708
Monthly Billing*	Present Price	Three Phase	878	\$103	\$129	\$179	\$129	\$230	\$332	\$418	\$445	\$617	8189	\$961	\$928	\$1,186	\$1,444	\$1,702
	Presen	Single Phase	69\$	\$94	\$120	\$171	\$120	\$222	\$323	\$409	\$436	809\$	\$780	\$952	\$919	\$1,177	\$1,435	\$1,693
		kWh	200	750	1,000	1,500	1,000	2,000	3,000	4,000	4,000	6,000	8,000	10,000	9,000	12,000	15,000	18,000
	kW	Load Size	8				10				20				30			

\* Net rate including Schedules 91, 199, 290 and 297.

Pacific Power

Monthly Billing Comparison
Delivery Service Schedule 28 + Cost-Based Supply Service
Large General Service - Secondary Delivery Voltage

<sup>\*</sup> Net rate including Schedules 91, 199, 290 and 297.

Pacific Power
Monthly Billing Comparison
Delivery Service Schedule 28 + Cost-Based Supply Service
Large General Service - Primary Delivery Voltage

kW		Monthly Billing*	Billing*	Percent
Load Size	kWh	Present Price	Proposed Price	Difference
15	4,500	\$434	\$441	1.51%
	6,000	\$533	\$542	1.64%
	7,500	\$632	\$642	1.72%
31	9,300	\$870	\$883	1.55%
	12,400	\$1,074	\$1,092	1.68%
	15,500	\$1,278	\$1,301	1.76%
40	12,000	\$1,115	\$1,132	1.56%
	16,000	\$1,378	\$1,401	1.69%
	20,000	\$1,642	\$1,671	1.77%
09	18,000	\$1,662	\$1,688	1.57%
	24,000	\$2,050	\$2,085	1.69%
	30,000	\$2,436	\$2,479	1.77%
80	24,000	\$2,195	\$2,229	1.58%
	32,000	\$2,709	\$2,755	1.70%
	40,000	\$3,223	\$3,281	1.78%
100	30,000	\$2,725	\$2,768	1.58%
	40,000	\$3,368	\$3,425	1.70%
	50,000	\$4,011	\$4,082	1.78%
200	60,000	\$5,339	\$5,425	1.60%
	80,000	\$6,625	\$6,739	1.72%
	100,000	\$7,911	\$8,053	1.79%

<sup>\*</sup> Net rate including Schedules 91, 199, 290 and 297.

Pacific Power

Monthly Billing Comparison
Delivery Service Schedule 30 + Cost-Based Supply Service
Large General Service - Secondary Delivery Voltage

kW		Monthly Billing*	Billing*	Percent
Load Size	kWh	Present Price	Proposed Price	Difference
		•	0 0	,
100	20,000	\$2,552	\$2,583	1.19%
	30,000	\$3,124	\$3,167	1.39%
	50,000	\$4,267	\$4,336	1.63%
200	40,000	\$4,462	\$4,518	1.27%
	000,09	\$5,604	\$5,687	1.48%
	100,000	\$7,890	\$8,025	1.71%
300	60,000	\$6,541	\$6,623	1.27%
	000'06	\$8,255	\$8,377	1.48%
	150,000	\$11,683	\$11,884	1.72%
400	80,000	\$8,501	\$8,610	1.28%
	120,000	\$10,787	\$10,948	1.50%
	200,000	\$15,358	\$15,624	1.73%
200	100,000	\$10,493	\$10,628	1.29%
	150,000	\$13,350	\$13,550	1.50%
	250,000	\$19,064	\$19,395	1.74%
009	120,000	\$12,484	\$12,646	1.29%
	180,000	\$15,913	\$16,153	1.51%
	300,000	\$22,770	\$23,166	1.74%
800	160,000	\$16,467	\$16,681	1.30%
	240,000	\$21,039	\$21,357	1.51%
	400,000	\$30,181	\$30,709	1.75%
1000	200,000	\$20,450	\$20,716	1.30%
	300,000	\$26,164	\$26,561	1.52%
	500,000	\$37,593	\$38,251	1.75%

<sup>\*</sup> Net rate including Schedules 91, 199, 290 and 297.

Pacific Power

Monthly Billing Comparison
Delivery Service Schedule 30 + Cost-Based Supply Service
Large General Service - Primary Delivery Voltage

kW		Monthly Billing*	Billing*	Percent
Load Size	kWh	Present Price	Proposed Price	Difference
100	30 000	\$3.065	\$3 100	1 42%
	30,000	\$3,63	63,130 63,630	1.550
	40,000	620,64	20,00	1.30%
	50,000	\$4,186	\$4,255	1.67%
0	6	1	1 1 1	1
200	00009	\$5,502	\$5,585	1.51%
	80,000	\$6,623	\$6,732	1.65%
	100,000	\$7,743	\$7,878	1.75%
300	000 06	860 8\$	\$8.771	1 51%
	000,000			
	120,000	89,779	\$9,941	1.65%
	150,000	\$11,460	\$11,661	1.75%
400	120,000	\$10,600	\$10,762	1.52%
	160,000	\$12,841	\$13,055	1.66%
	200,000	\$15,082	\$15,348	1.76%
200	150,000	\$13,114	\$13,315	1.53%
	200,000	\$15,916	\$16,182	1.67%
	250,000	\$18,717	\$19,049	1.77%
009	180,000	\$15,628	\$15,868	1.53%
	240,000	\$18,990	\$19,308	1.68%
	300,000	\$22,352	\$22,749	1.78%
800	240,000	\$20,657	\$20,975	1.54%
	320,000	\$25,139	\$25,562	1.68%
	400,000	\$29,621	\$30,149	1.78%
1000	300,000	\$25,685	\$26,082	1.54%
	400,000	\$31,288	\$31,815	1.69%
	500,000	\$36,891	\$37,549	1.78%

<sup>\*</sup> Net rate including Schedules 91, 199, 290 and 297.

Pacific Power
Billing Comparison
Delivery Service Schedule 41 + Cost-Based Supply Service
Agricultural Pumping - Secondary Delivery Voltage

	Annual Load Size	Charge		0.00%	0.00%	0.00%		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Difference	December- March	Monthly Bill		2.10%	2.05%	2.01%		2.10%	2.05%	2.01%	2.10%	2.05%	2.01%	2.10%	2.05%	2.01%
Per	April - November	Monthly Bill		1.94%	1.94%	1.94%		1.94%	1.94%	1.94%	1.94%	1.94%	1.94%	1.94%	1.94%	1.94%
	Annual Load Size	Charge	4	\$159	\$159	\$159		\$314	\$314	\$314	\$1,354	\$1,354	\$1,354	\$3,414	\$3,414	\$3,414
Proposed Price*	December- March	Monthly Bill	•	\$223	\$321	\$516		\$446	\$641	\$1,031	\$2,232	\$3,207	\$5,156	\$6,695	\$9,620	\$15,469
	April - November	Monthly Bill	1	\$195	\$292	\$487		\$390	\$585	\$975	\$1,950	\$2,924	\$4,874	\$5,849	\$8,773	\$14,622
	Annual Load Size	Charge	, ,	\$159	\$159	\$159		\$314	\$314	\$314	\$1,354	\$1,354	\$1,354	\$3,414	\$3,414	\$3,414
Present Price*	December- March	Monthly Bill		\$219	\$314	\$505		\$437	\$628	\$1,011	\$2,186	\$3,142	\$5,055	\$6,558	\$9,427	\$15,164
	April - November	Monthly Bill	,	\$191	\$287	\$478		\$383	\$574	\$956	\$1,913	\$2,869	\$4,781	\$5,738	\$8,607	\$14,344
		kWh	0	2,000	3,000	5,000		4,000	6,000	10,000	20,000	30,000	50,000	60,000	90,000	150,000
	kW	Load Size	Single Phase	10			Three Phase	20			100			300		

\* Net rate including Schedules 91, 98, 199, 290 and 297.

Pacific Power
Billing Comparison
Delivery Service Schedule 41 + Cost-Based Supply Service
Agricultural Pumping - Primary Delivery Voltage

	Annual Load Size Charge	0.00% 0.00% 0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Difference	December- March Monthly Bill	2.05% 2.02% 2.00%	2.04%	2.02%	2.00%	2.04%	2.02%	2.00%	2.04%	2.02%	2.00%
Pe	April - November Monthly Bill	1.93% 1.93% 1.93%	1.93%	1.93%	1.93%	1.93%	1.93%	1.93%	1.93%	1.93%	1.93%
	Annual Load Size Charge	\$159 \$159 \$159	\$314	\$314	\$314	\$1,344	\$1,344	\$1,344	\$3,404	\$3,404	\$3,404
Proposed Price*	December- March Monthly Bill	\$311 \$405 \$500	\$622	\$811	\$1,000	\$3,108	\$4,053	\$4,998	\$9,325	\$12,160	\$14,995
	April - November Monthly Bill	\$283 \$378 \$472	\$567	\$756	\$945	\$2,835	\$3,780	\$4,725	\$8,505	\$11,340	\$14,174
	Annual Load Size Charge	\$159 \$159 \$159	\$314	\$314	\$314	\$1,344	\$1,344	\$1,344	\$3,404	\$3,404	\$3,404
Present Price*	December- March Monthly Bill	\$305 \$397 \$490	609\$	\$795	8980	\$3,046	\$3,973	\$4,900	\$9,139	\$11,920	\$14,701
	April - November Monthly Bill	\$278 \$371 \$464	\$556	\$742	\$927	\$2,781	\$3,708	\$4,635	\$8,343	\$11,124	\$13,906
	kWh	3,000 4,000 5,000	6,000	8,000	10,000	30,000	40,000	50,000	90,000	120,000	150,000
	kW Load Size	Single Phase 10	<u>Three Phase</u>			100			300		

\* Net rate including Schedules 91, 98, 199, 290 and 297.

Pacific Power

Monthly Billing Comparison
Delivery Service Schedule 48 + Cost-Based Supply Service
Large General Service - Secondary Delivery Voltage
1,000 kW and Over

- KWh	Monthly Billing Present Price Proposed Price	ĺ	Percent Difference
	]	Î	Difference
	\$25,522	\$25,868	1.36%
	\$36,474	\$37,050	1.58%
	\$44,687	\$45,437	1.68%
	\$50,596	\$51,288	1.37%
	\$70,709	\$71,863	1.63%
	\$86,450	887,949	1.73%
	\$147,354	3149,430	1.41%
	\$210,315 \$21	\$213,776	1.65%
	\$257,536 \$26	\$262,035	1.75%
	\$293,368	5297,521	1.42%
	\$419,291	\$426,213	1.65%
	\$513,733 \$52	\$522,731	1.75%

On-Peak kWh 64.38% Off-Peak kWh 35.62%

Notes:

<sup>\*</sup> Net rate including Schedules 91, 199 and 290. Schedule 297 included for kWh levels under 730,000.

Pacific Power

Monthly Billing Comparison
Delivery Service Schedule 48 + Cost-Based Supply Service
Large General Service - Primary Delivery Voltage
1,000 kW and Over

kW		Monthly Billing	Billing	Percent
Load Size	kWh	Present Price	Proposed Price	Difference
1,000	300,000	\$24,358	\$24,383	0.10%
	500,000	\$34,709	\$34,750	0.12%
	650,000	\$42,472	\$42,525	0.13%
2,000	000,009	\$48,227	\$48,276	0.10%
	1,000,000	\$67,138	\$67,221	0.12%
	1,300,000	\$81,977	\$82,084	0.13%
6,000	1,800,000	\$139,844	\$139,992	0.11%
	3,000,000	\$199,200	\$199,447	0.12%
	3,900,000	\$243,717	\$244,038	0.13%
12,000	3,600,000	\$278,318	\$278,615	0.11%
	6,000,000	\$397,030	\$397,525	0.12%
	7,800,000	\$486,064	\$486,707	0.13%

Notes:
On-Peak kWh
Off-Peak kWh
38.33%

<sup>\*</sup> Net rate including Schedules 91, 199 and 290. Schedule 297 included for kWh levels under 730,000.

Pacific Power

Monthly Billing Comparison

Delivery Service Schedule 48 + Cost-Based Supply Service

Large General Service - Transmission Delivery Voltage

1,000 kW and Over

kW		Monthly Billing	Billing	Percent
Load Size	kWh	Present Price	Proposed Price	Difference
1,000	500,000	\$34,087	\$34,283	0.57%
	650,000	\$41,258	\$41,513	0.62%
2,000	1,000,000	\$65,483	\$65,874	0.60%
	1,300,000	\$79,139	\$79,648	0.64%
6,000	3,000,000	\$194,408	\$195,582	0.60%
	3,900,000	\$235,377	\$236,904	0.65%
12,000	6,000,000	\$386,653	\$389,001	0.61%
	7,800,000	\$468,591	\$471,644	0.65%
50,000	25,000,000	\$1,604,204	\$1,613,989	0.61%
	32,500,000	\$1,945,612	\$1,958,333	0.65%
Notes:				
On-Peak kWh	%66 95%			

On-Peak kWh 56.93% Off-Peak kWh 43.07%

<sup>\*</sup> Net rate including Schedules 91, 199 and 290. Schedule 297 included for kWh levels under 730,000.