BEFORE THE

PUBLIC UTILITY COMMISSION OF OREGON

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In the Matter of PACIFICORP PacifiCorp 2018 Transition Adjustment Mechanism UE 323

CALPINE ENERGY SOLUTIONS, LLC'S MOTION TO STRIKE OR IN THE ALTERNATIVE TO ACCEPT ADDITIONAL REBUTTAL TESTIMONY

EXPEDITED CONSIDERATION REQUESTED

I. INTRODUCTION AND SUMMARY

Calpine Energy Solutions, LLC ("Calpine Solutions") hereby moves the Public Utility Commission of Oregon ("OPUC" or "Commission") to strike the surrebuttal testimony of PacifiCorp witness Michael Wilding (PAC/800) on page 5, lines 8 to 14, and from page 54, line 11, to page 58, line 13, or in the alternative accept into the record Calpine Solutions' additional rebuttal testimony responding to the new argument that should have been included in Mr. Wilding's reply testimony.

As explained below, the portion of Mr. Wilding's surrebuttal testimony at issue responds to an exhibit and testimony submitted by Calpine Solutions' witness, Kevin C. Higgins, two rounds of testimony ago in Calpine Solutions' opening testimony, regarding PacifiCorp's historical data of fixed generation costs. In PacifiCorp's reply testimony, Mr. Wilding made no response to Mr. Higgins characterization of the historical data, and Mr. Wilding instead waited to do so until the surrebuttal testimony. In effect, Mr. Wilding waited until his last round of testimony to file a reply to Mr. Higgins' opening testimony. Absent corrective action by the Commission, Calpine Solutions is now prejudiced by the inability to file written responsive testimony to PacifiCorp's late-filed reply testimony included with its surrebuttal testimony. Accordingly, the above-referenced section of PacifiCorp Exhibit 800 should be stricken and not admitted to the record in this proceeding because it is procedurally improper and prejudicial to Calpine Solutions.

Alternatively, if the Commission declines to strike that portion of Mr. Wilding's surrebuttal testimony, Calpine Solutions respectfully requests that the Commission accept Mr. Higgins' additional rebuttal testimony to ensure that the record is complete with the testimony of the expert witnesses joined on the points in dispute.

II. CERTIFICATION OF ATTEMPT TO CONTACT OTHER PARTIES

PacifiCorp has not yet moved to admit Mr. Wilding's testimony into the record, and therefore this motion to strike that testimony is effectively a motion in limine that provides PacifiCorp an opportunity to file a written response to Calpine Solutions' objection to the testimony, if it chooses. Additionally, the alternative proposal to admit Mr. Higgins' additional rebuttal testimony is being filed the same day as prehearing exhibits are due in this proceeding, providing an opportunity to evaluate that proposed testimony prior to the hearing. Thus, it is not entirely clear that OAR 860-001-0420(6) applies in this circumstance.

However, to the extent parties may wish to file a written response, Calpine Solutions proposes that any written response be filed by Tuesday, August 29, 2017, which is two days before the scheduled hearing and thus provides the Administrative Law Judge ("ALJ") time to evaluate the written responses prior to the hearing. Calpine Solutions has attempted to contact all parties regarding this motion via telephone and/or electronic mail. Staff does not object to expedited processing and takes no position on the substance of the motion. Sierra Club, Industrial Customers of Northwest Utilities, and the Citizens Utility Board take no position. PacifiCorp objects to expedited processing of the motion and the substance of the motion, and emails exchanged with PacifiCorp are attached hereto demonstrating Calpine Solutions' efforts discuss this motion and to resolve PacifiCorp's disagreement. However, absent PacifiCorp's withdrawal of the subject testimony (which would moot the alternative request for additional rebuttal testimony), this matter will require Commission resolution.

III. BACKGROUND

The substantive issue in dispute here is the question of whether it is lawful and reasonable to escalate the fixed generation costs of Company-owned generation resources, reflected in Schedule 200, for 10 full years after a five-year opt-out customer commits not use PacifiCorp's generation resources. The Commission has approved PacifiCorp's escalation of those fixed generation costs for purposes of calculating the consumer opt-out charge in dockets UE 267, UE 296, and UE 307. But Calpine Solutions has consistently argued that it is not reasonable or lawful to do so because basic ratemaking principles dictate that after closing a pool of rate-based generation investments and adding no new investments and obligations, the revenue requirement of that closed pool of generation investments should decline due to the impacts of accumulated depreciation and declining returns on rate base. *See generally* Calpine Solutions/100, Higgins/30-32.

Although the Commission has thus far sided with PacifiCorp's position, in last year's

TAM order,¹ the Commission ordered:

For the next TAM filing, we direct PacifiCorp, dba Pacific Power, to include a historical time series of fixed generation costs included in its direct access opt-out charge, broken down by its components (e.g., capital, O&M) as a check on the reasonableness of its forecasts.

Order No. 16-482 at 23. The Commission had further reasoned, "PacifiCorp explains that the consumer opt-out charge includes other costs that escalate over time and more than offset the impact of accumulated depreciation." *Id*.

The procedural order in this case called for five rounds of testimony: (1) PacifiCorp's

direct testimony, (2) Staff and Intervenors' opening testimony, (3) PacifiCorp's reply testimony,

(4) Staff and Intervenors' rebuttal and cross-answering testimony, and (5) PacifiCorp's surrebuttal testimony.

In its direct testimony, filed on March 31, 2017, PacifiCorp provided a graphical depiction of a "historical time series" of data containing the cost components of Schedule 200 as provided in its Results of Operations Reports since 2006. *See* PAC/100, Wilding/36-37; PAC/110. But, contrary to Calpine Solutions' understanding of the purpose of this exercise, PacifiCorp made no effort to exclude *any* incremental generation investments at any point from 2006 to 2015. *See* Calpine Solutions/100, Higgins/33:17-23.

In discovery, Calpine Solutions attempted to obtain the historical data *excluding* the costs associated with PacifiCorp's incremental generation investments during this historic time period. PacifiCorp acknowledged that its historic time series presented in response to the Commission's directive in Order No. 16-482 included 17 power plants that were added to rate base from 2006

¹ The issue is currently on appeal before the Oregon Court of Appeals from the final order in docket UE 296.

to 2015 and numerous large environmental upgrades added to existing coal plants in order to extend their useful lives. However, PacifiCorp only provided data with certain cost elements of incremental generation removed, stating it was too burdensome to remove the impact of incremental generation investments from all different cost categories in Schedule 200. *See* Calpine Solutions/100, Higgins/34:13 – 35:2.

Thus, in its opening testimony filed on June 9, 2017, Calpine Solutions' witness, Mr. Higgins, used PacifiCorp's incomplete data to attempt to demonstrate the significance of the historical data. Mr. Higgins testified that the general trend from 2008 to 2015 was a significant decline in fixed generation costs if incremental investments were excluded, just as expected from general rate making principles. Calpine Solutions/100, Higgins/35:3-12; *see also id.* at 36:1-8. Mr. Higgins also included a graphical depiction of the results of all data provided by PacifiCorp in Calpine Solutions Exhibit 105.

In its reply testimony, filed on July 11, 2017, PacifiCorp provided no response to Mr. Higgins' characterization of PacifiCorp's historical time series data. *See* PAC/400, Wilding/56 – 59. Mr. Wilding's only response to Mr. Higgins' characterization of the historical time series data was as follows:

In this case, Calpine contends that PacifiCorp's historical fixed generation costs, included in my direct testimony, demonstrate that Schedule 200 costs should decrease in years six through 10. But Calpine can only support this contention by freezing the fixed generation costs in year five and excluding all incremental generation costs after year five.

PAC/400, Wilding/58:18-22. Mr. Wilding went on to assert that it was appropriate to freeze the pool of generation assets in year 10, not year five. *Id.* at 58. He made no assertion that Mr. Higgins had inappropriately presented the limited historical data PacifiCorp provided or misread

UE 323 CALPINE ENERGY SOLUTIONS, LLC'S MOTION TO STRIKE OR IN THE ALTERNATIVE TO ACCEPT ADDITIONAL REBUTTAL TESTIMONY PAGE 5 the general trend that should be observed from that data. No other party challenged Mr. Higgins' characterization of the historical data.

Calpine Solutions was afforded one last round of testimony, its rebuttal testimony, due on August 2, 2017. But Mr. Higgins had no basis to address any divergent views PacifiCorp may have about the historical data because PacifiCorp presented no divergent views on that point in its reply testimony. Thus, Mr. Higgins' rebuttal testimony was confined to a response to Mr. Wildings' assertions in reply testimony but contained no response to any contrary interpretation of the historical data excluding incremental generation investments. Calpine Solutions/200, Higgins/16 - 21.

Finally, on August 11, 2017, PacifiCorp presented a completely new argument regarding the historical evidence in response to Mr. Higgins' opening testimony. PAC/800, Wilding/54:11 – 58:13. In his last round of testimony, Mr. Wilding accuses Mr. Higgins' opening testimony of "cherry picking the data provided by PacifiCorp." PAC/800, Wilding/54:14. Mr. Wilding then goes on to include extensive reply testimony to Mr. Higgins' opening testimony, including, for the first time, a reproduction of Calpine Solutions' Exhibit 105 with Mr. Wilding's insertion of purported escalation trend lines of fixed generation costs over the period from 2006 to 2015. PAC/800, Wilding/56. Contrary to his reply testimony, Mr. Wilding now concludes – for the first time – that PacifiCorp's historical data "demonstrate that even when new generation resources are removed, PacifiCorp's fixed generation costs increase. Thus, the increase in the Consumer Opt-Out Charge in years six through 10 reflects non-incremental fixed generation costs, which is contrary to Calpine Solutions' claims." PAC/800, Wilding/58: 7-10.

IV. MOTION TO STRIKE

The Commission's precedent establishes that a party should file a motion to strike when another party introduces a new argument in its responsive filing and thereby forecloses an opportunity to respond. *See In re Sprint Communications Co.*, Docket No. ARB 830, Order No. 08-486, at Appendix A at 2 (Sept. 30, 2008). That is consistent with the universally applied rule that a party may not raise new arguments in a reply to which the opposing party has no opportunity to respond. *See, e.g., Two Two v. Fujitec America, Inc.*, 355 Or. 319, 325-26, 325 P.3d 707 (2014) (parties may not raise new arguments in reply memorandum at summary judgment); *Fox v. Gov't of Dist. of Columbia*, 794 F.3d 25, 30 (D.C. Cir. 2015) ("[W]here a litigant has forfeited an argument by not raising it in the opening brief, we need not reach it."). The issues should *narrow* as the subsequent rounds of testimony are filed. PacifiCorp cannot introduce a whole new argument in support of its position through its final round of testimony.

PacifiCorp's surrebuttal testimony exceeds the proper scope of surrebuttal because it responds, for the first time, to the arguments Mr. Higgins made in his opening testimony. The time for PacifiCorp to criticize Calpine Solutions' testimony on the meaning and significance of the historical time series data, and Calpine Solutions Exhibit 105 depicting that data, was in the round of testimony that directly followed Calpine Solutions' testimony on that point. Instead, PacifiCorp's reply testimony generally argued that it was appropriate to include incremental generation costs in the consumer opt-out charge for 10 years. Mr. Wilding created a whole new argument in his surrebuttal testimony, that Mr. Higgins cherry picked data, and that even when new generation resources are removed, PacifiCorp's fixed generation costs increase. PAC/800, Wilding/58: 7-10. All of this testimony (PAC/800, Wilding/58:-14 & Wilding/54:11 to 58:13)

responds to Calpine Solutions' first round of testimony.

It is highly prejudicial and violates Calpine Solutions' due process rights for Mr. Wilding to have waited until his final round of testimony, a few weeks before the hearing, to respond to Calpine Solutions' first round of testimony. The purpose of giving intervenors a round of rebuttal testimony in this TAM was to provide them with the opportunity to respond to PacifiCorp's response to any new issues introduced by intervenors. The result of PacifiCorp's actions undermines the Commission's determination that intervenors should have an opportunity to respond to PacifiCorp's reply testimony with an additional round of testimony.

Furthermore, the impropriety of PacifiCorp's actions is even more acute in this case because the Commission itself directed PacifiCorp to provide a historical time series of its fixed generation costs in its *direct* testimony. The evidence speaking to the point was in PacifiCorp's exclusive possession, and the Commission directed PacifiCorp to present it. If PacifiCorp truly believed that its historic evidence demonstrates that fixed generation costs escalate even after removing all costs associated with incremental generation investments and obligations, PacifiCorp should have presented that position in its direct testimony to allow the record to be fully developed on the point. Instead, PacifiCorp made no effort to exclude incremental generation from the presentation in its direct testimony, and made no assertions regarding the historical time series excluding incremental generation until its *third* round of testimony. PacifiCorp's actions are highly prejudicial and its testimony must be stricken.

V. ALTERNATIVE MOTION TO FILE ADDITIONAL REBUTTAL TESTIMONY

If the Commission determines not to strike Mr. Wilding's surrebuttal testimony, the Commission should allow the arguments of the expert witnesses to be joined on the points in dispute by accepting the additional rebuttal testimony of Mr. Higgins on the limited point at issue. In making this request, Calpine Solutions is mindful of the schedule in this proceeding, and has attached the proposed prefiled testimony to this motion to expedite the consideration of the issue.

The Commission's precedent supports allowing for limited responsive prefiled testimony in this circumstance. In *Wah Chang v. PacifiCorp*, ALJ Patrick Power denied a PacifiCorp request to strike Wah Chang's unexpected new argument from its reply testimony but afforded PacifiCorp a right to file limited responsive testimony. *Wah Chang v. PacifiCorp*, ALJ Ruling, UM 1002 (July 27, 2007). PacifiCorp successfully argued that allowing limited response testimony "will accommodate both the Commission's interest in developing arguments and PacifiCorp's due process right to respond." *Id.* The same reasoning applies here. Although PacifiCorp reposed live rebuttal testimony in *Wah Chang*, ALJ Power required that PacifiCorp's rebuttal testimony be prefiled a week before the hearing and provided Wah Chang the opportunity to offer responsive live or written testimony at the hearing, consistent with the timing here.

Additionally, the problem of PacifiCorp raising new arguments in its last round of testimony in TAM proceedings is not a new problem. Indeed, the purpose of providing five rounds of testimony in this proceeding and directing that PacifiCorp address historical time series data in its direct testimony were obvious efforts to prevent the very problem that is now before the Commission.

ALJ Michael Grant has similarly explained that when this occurs in a TAM, the impacted party should request leave to file responsive testimony:

UE 323 CALPINE ENERGY SOLUTIONS, LLC'S MOTION TO STRIKE OR IN THE ALTERNATIVE TO ACCEPT ADDITIONAL REBUTTAL TESTIMONY PAGE 9 To ensure that all parties have the opportunity to present relevant evidence on all disputed matters, however, Staff and intervenors should have the opportunity to request the ability to file additional, issue specific testimony upon a proper showing. That showing would require Staff or intervenors to establish that Pacific Power raised new issues or presented unanticipated evidence in its reply testimony, and that Staff and intervenors would be unable to effectively rebut the issues or evidence on cross examination at hearing. If the Commission grants a request to present additional prefiled testimony, then Pacific Power will be given the opportunity to respond to any filing with the direct testimony of live witnesses at hearing.

PacifiCorp 2013 Transition Adjustment Mechanism, Docket No. UE 245, Prehearing Conference Memorandum at 3 (Mar. 20, 2012). Although this ruling was issued in a TAM where intervenors had only one round of testimony, the reasoning applies equally here because PacifiCorp has deprived Calpine Solutions of the opportunity to use its second round of prefiled testimony to respond to PacifiCorp's new argument.

The applicable standards to accept additional issue-specific testimony are met here. PacifiCorp's witness unquestionably waited until surrebuttal testimony to respond to Mr. Higgins' opening testimony. Moreover, he impugned Mr. Higgins' credibility after the time when Mr. Higgins could respond to defend himself. The damage cannot be repaired on cross examination. To fully respond as he would have in his rebuttal testimony had this dispute been timely put in issue earlier by PacifiCorp, Mr. Higgins' additional rebuttal testimony must include an additional rendition of a graphical depictions of extensive new calculations to further illustrate Mr. Higgins' argument in response to Mr. Wilding's last-minute assertions, as demonstrated in proposed Calpine Solutions Exhibit 301. These graphs demonstrate that, after excluding new incremental generation additions from the calculations, PacifiCorp's fixed generation costs have declined over the overwhelming majority of possible measurement periods starting in 2007 or later and ending in 2015. These graphical depictions cannot be educed through cross examination because the extensive calculations underlying them are not in the record. Additionally, Mr. Higgins' opinion in response to Mr. Wildings' assertions cannot be presented through cross examination of Mr. Wilding. Mr. Higgins will be made available to the hearing if PacifiCorp wishes to cross examine him on the additional rebuttal testimony.

If the portion of PacifiCorp's surrebuttal testimony discussed above will be admitted to the record, the Commission should allow the additional written testimony of Mr. Higgins on PacifiCorp's new argument.

VI. CONCLUSION

Calpine Solutions respectfully requests the Commission to strike the above-referenced surrebuttal testimony PAC/800, Wilding/5:8-14 & Wilding/54:11 to 58:13, or in the alternative accept into the record Calpine Solutions' additional rebuttal testimony responding to the new argument in Mr. Wilding's surrebuttal testimony.

DATED this 24th day of August, 2017.

RICHARDSON ADAMS, PLLC

/s/ Gregory M. Adams

Gregory M. Adams (OSB No. 101779) Peter J. Richardson (OSB No. 066687) 515 N. 27th Street Boise, Idaho 83702 Telephone: (208) 938-2236 Fax: (208) 938-7904 greg@richardsonadams.com peter@richardsonadams.com Attorneys for Calpine Energy Solutions, LLC

UE 323 CALPINE ENERGY SOLUTIONS, LLC'S MOTION TO STRIKE OR IN THE ALTERNATIVE TO ACCEPT ADDITIONAL REBUTTAL TESTIMONY PAGE 11 Attachment 1

Emails Regarding Expedited Treatment

Greg, Thank you for your email. PacifiCorp is not willing to withdraw the testimony to which you object. The testimony properly responds to Calpine's reply testimony; what is improper is Calpine seeking the final round of testimony when PacifiCorp bears the burden of proof. Sincerely, Katherine

Katherine McDowell McDowell Rackner Gibson PC 419 SW 11th Ave, Suite 400 Portland, OR 97205

Direct: (503) 595-3924 Cell: (503) 423-7272 <u>katherine@mrg-law.com</u>

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From: Greg Adams [mailto:Greg@richardsonadams.com]
Sent: Thursday, August 24, 2017 7:57 AM
To: Katherine McDowell <katherine@mrg-law.com>
Cc: McVee, Matthew <Matthew.McVee@pacificorp.com>; Adam Lowney <adam@mrg-law.com>;
Peter Richardson <peter@richardsonadams.com>
Subject: RE: UE 323 Calpine's Motion to Strike or File Additional Testimony

Katherine,

Thanks for your response. We are open to discussing alternative paths forward if PacifiCorp would be willing to withdraw the portion of the Mr. Wilding's testimony I referenced, such as reducing or eliminating our cross examination on that topic. However, if you intend to move to admit that portion of his testimony at the hearing, we need to object. Raising our objection a week in advance of PacifiCorp's motion to admit the testimony is not unreasonable and provides PacifiCorp an opportunity to submit a written response. At the time we filed the cross examination statement, I had not had an opportunity to fully discuss this topic with our witness and my client since Mr. Higgins had to attend a hearing in Ohio late that week, but we have determined earlier this week that a response to Mr. Wilding's assertions requires extensive calculation of historic fixed generation costs over the different time periods – something that cannot be done in cross examination.

Please let me know if you would like to discuss further.

Greg Adams Richardson Adams, PLLC 515 N. 27th Street, 83702 P.O. Box 7218, 83707 Boise, Idaho Voice: 208.938.2236 Facsimile: 208.938.7904

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From: Katherine McDowell [mailto:katherine@mrg-law.com]
Sent: Wednesday, August 23, 2017 7:44 PM
To: Greg Adams <<u>Greg@richardsonadams.com</u>>; MOSER Sommer <<u>sommer.moser@state.or.us</u>>;
Mike Goetz <<u>mike@oregoncub.org</u>>; jec@dvclaw.com; Travis Ritchie
<<u>travis.ritchie@sierraclub.org</u>>; Peter Richardson <<u>peter@richardsonadams.com</u>>
Cc: McVee, Matthew <<u>Matthew.McVee@pacificorp.com</u>>; Adam Lowney <<u>adam@mrg-law.com</u>>
Subject: RE: UE 323 Calpine's Motion to Strike or File Additional Testimony

Greg, PacifiCorp objects to your motion to strike, your alternative motion for additional rebuttal testimony, and your request for expedited treatment. An all-party email informing us that you are filing the motion one week before the hearing and seeking expedited consideration does not satisfy OAR 860-001-0420. Calpine has had the company's surrebuttal testimony for almost two weeks. If there was anything truly new in the testimony, it is difficult to understand your delay in objecting to it. It is procedurally improper to raise your objection now, well after cross-examination statements have been filed and the night before cross-examination exhibits are due. Contrary to what you imply in your email, none of this is consistent with Commission precedent. Calpine has designated 60 minutes of cross examination, and thus has ample ability to explore any possible issues in PacifiCorp's testimony at hearing. Sincerely, Katherine

Katherine McDowell McDowell Rackner Gibson PC 419 SW 11th Ave, Suite 400 Portland, OR 97205

Direct: (503) 595-3924 Cell: (503) 423-7272 <u>katherine@mrg-law.com</u>

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Sent: Wednesday, August 23, 2017 4:38 PM

To: MOSER Sommer <<u>sommer.moser@state.or.us</u>>; Mike Goetz <<u>mike@oregoncub.org</u>>; Katherine McDowell <<u>katherine@mrg-law.com</u>>; jec@dvclaw.com; Travis Ritchie

<<u>travis.ritchie@sierraclub.org</u>>; McVee, Matthew <<u>Matthew.McVee@pacificorp.com</u>>; Adam Lowney <<u>adam@mrg-law.com</u>>

Cc: Peter Richardson peter@richardsonadams.com

Subject: UE 323 Calpine's Motion to Strike or File Additional Testimony

Counsel,

Calpine Solutions plans to file a motion strike the surrebuttal testimony of PacifiCorp witness Michael Wilding (PAC/800) from page 54, line 11, to page 58, line 13, or in the alternative accept into the record Calpine Solutions' additional rebuttal testimony responding to the new argument contained in that portion of Mr. Wilding's testimony, and will provide the proposed testimony with the motion. We would of course agree to cross examination of Mr. Higgins on the points in question even if parties have not reserved cross examination time for him to date. We believe this approach is consistent with past commission rulings on the question.

Given the timing of the request, we will ask that it be processed on an expedited basis with a response due on Tuesday August 29, 2017. We plan to make this filing tomorrow.

Please let me know if you oppose the request for expedited processing or wish to take a position on the motion itself, which I can explain in more detail if you would like to discuss it on the phone.

Greg Adams Richardson Adams, PLLC 515 N. 27th Street, 83702 P.O. Box 7218, 83707 Boise, Idaho Voice: 208.938.2236 Facsimile: 208.938.7904

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Attachment 2

Proposed Calpine Solutions Additional Rebuttal Testimony and Exhibits (Calpine Solutions/300 to 301)

Exhibit Calpine Solutions/300 Witness: Kevin C. Higgins

BEFORE THE PUBLIC UTILITY COMMISSION OF THE STATE OF OREGON

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In the Matter of PacifiCorp, dba Pacific Power 2018 Transition Adjustment Mechanism

Docket No. UE-323

Additional Rebuttal Testimony of Kevin C. Higgins

on behalf of

Calpine Energy Solutions, LLC

August 24, 2017

1		ADDITIONAL REBUTTAL TESTIMONY OF KEVIN C. HIGGINS
2		
3	Intro	oduction
4	Q.	Please state your name and business address.
5	A.	My name is Kevin C. Higgins. My business address is 215 South State
6		Street, Suite 200, Salt Lake City, Utah, 84111.
7	Q.	By whom are you employed and in what capacity?
8	А.	I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies
9		is a private consulting firm specializing in economic and policy analysis
10		applicable to energy production, transportation, and consumption.
11	Q.	Are you the same Kevin C. Higgins who previously filed Opening Testimony
12		and Rebuttal testimony in this proceeding on behalf of Calpine Energy
13		Solutions, LLC ("Calpine Solutions")?
14	A.	Yes, I am.
15		
16	Over	view and Conclusions
17	Q.	What is the purpose of your Additional Rebuttal testimony?
18	A.	My Additional Rebuttal Testimony responds to issues addressed in the
19		Surrebuttal Testimony of PacifiCorp witness Michael G. Wilding that were
20		directed to my Opening Testimony. Specifically I respond to Mr. Wilding's
21		argument that the information presented in my Opening Testimony supports
22		PacifiCorp's contention that the fixed generation costs included in the Consumer

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Q. What are the primary conclusions in your Additional Rebuttal Testimony?

year opt-out program should escalate each year.

Opt-Out Charge for Years 6 through 10 for direct access customers in the five-

The analysis in my Additional Rebuttal Testimony demonstrates that the 4 A. 5 decline in fixed generation costs that I commented upon in my Opening Testimony is not the product of a "cherry-picked" scenario, as alleged by Mr. 6 Wilding, but in fact, represents the pattern that is observed for the majority of 7 possible measurement periods starting in 2007 or later and ending in 2015. 8 9 Indeed, of the eight measurement periods between 2007-2015 and 2014-2015, a decline in fixed generation costs is observed in five of the periods – even when 10 incremental environment upgrade costs are included in the costs; the only two 11 periods in which a noticeable increase occurs is the two periods cited by Mr. 12

13 Wilding to rebut my argument.

Further, the most appropriate scenario for evaluating the change over time in PacifiCorp's fixed generation costs in the context of this case is one in which the incremental cost of environmental upgrades is *removed* from the Company's fixed generation costs, not left in. The analysis in my Opening Testimony and this Additional Rebuttal Testimony demonstrates unambiguously that the Company's fixed generation costs will *not* increase, but rather decline, if the new capital additions including the cost of environmental upgrades are removed.

The issue at hand in this case is the reasonableness of charging departed direct access customers for *increasing* fixed generation costs projected to be incurred some six to ten years *after the customers have left* bundled service. The

1		removal of the cost of environmental upgrades is appropriate for purposes of the
2		analysis in this case because the cost responsibility for such upgrades, which
3		essentially allow coal plants to continue operating in order to provide going-
4		forward service to bundled service customers, cannot reasonably be assigned to
5		customers who departed bundled service six to ten years previously. To accept
6		PacifiCorp's position that escalation of fixed generation costs in the calculation of
7		the Consumer Opt-Out Charge is appropriate can only mean that departed
8		customers are somehow held responsible for the cost of environmental upgrades
9		some six to ten years after leaving bundled service. I contend that such a position
10		is fundamentally unreasonable.
11		
	_	
12	Respo	onse to Mr. Wilding Regarding Schedule 200 Escalation
12 13	<u>Respo</u> Q.	onse to Mr. Wilding Regarding Schedule 200 Escalation What claims does Mr. Wilding make in his surrebuttal testimony that you
13		What claims does Mr. Wilding make in his surrebuttal testimony that you
13 14	Q.	What claims does Mr. Wilding make in his surrebuttal testimony that you are responding to?
13 14 15	Q.	What claims does Mr. Wilding make in his surrebuttal testimony that you are responding to? Mr. Wilding argues that my contention that the Company's fixed
13 14 15 16	Q.	What claims does Mr. Wilding make in his surrebuttal testimony that you are responding to? Mr. Wilding argues that my contention that the Company's fixed generation costs generally decline over time if new generation investment is
13 14 15 16 17	Q.	What claims does Mr. Wilding make in his surrebuttal testimony that you are responding to? Mr. Wilding argues that my contention that the Company's fixed generation costs generally decline over time if new generation investment is removed is incorrect. In my Opening Testimony, I pointed out that over the
 13 14 15 16 17 18 	Q.	What claims does Mr. Wilding make in his surrebuttal testimony that you are responding to? Mr. Wilding argues that my contention that the Company's fixed generation costs generally decline over time if new generation investment is removed is incorrect. In my Opening Testimony, I pointed out that over the period 2008-2015, when incremental capital additions are removed from the
 13 14 15 16 17 18 19 	Q.	What claims does Mr. Wilding make in his surrebuttal testimony that you are responding to? Mr. Wilding argues that my contention that the Company's fixed generation costs generally decline over time if new generation investment is removed is incorrect. In my Opening Testimony, I pointed out that over the period 2008-2015, when incremental capital additions are removed from the Company's costs, PacifiCorp's Oregon-allocated fixed generation costs declined
 13 14 15 16 17 18 19 20 	Q.	What claims does Mr. Wilding make in his surrebuttal testimony that you are responding to? Mr. Wilding argues that my contention that the Company's fixed generation costs generally decline over time if new generation investment is removed is incorrect. In my Opening Testimony, I pointed out that over the period 2008-2015, when incremental capital additions are removed from the Company's costs, PacifiCorp's Oregon-allocated fixed generation costs declined on a per MWh basis, even when new environmental upgrades are <i>included</i> in the

cherry-picking the period of time used in the analysis to produce a favorable
 result for my argument.

Q. What is your response to this characterization of your testimony? 3 A. Mr. Wilding's characterization of my testimony is incorrect. First, the 4 5 scenario in question here – in which incremental capital additions are removed 6 from the Company's costs, but new environmental upgrades are *included*, is not the primary scenario I relied upon in coming to my conclusion that the 7 Company's fixed generation costs generally decline over time if new generation 8 9 investment is removed. The most appropriate scenario in support of my

conclusion is one in which the costs of new environmental upgrades are also
removed from the Company's costs. I will address that issue later in my
discussion.

Second, to address Mr. Wilding's characterization that the decline in fixed 13 14 costs (when new environmental costs remain in the Company's costs) is purely the result of cherry-picking the period of analysis, it is necessary to more 15 rigorously examine the data. In the analysis presented in my Opening Testimony, 16 17 I simply removed all incremental generation investment starting with the Company's first period of analysis (2006). However, to test whether my 18 19 conclusions are biased by the time period selected, as alleged by Mr. Wilding, it is necessary to reconfigure the data such that each period of analysis is treated as a 20 21 standalone measurement period in which the only incremental costs that are 22 removed are those which are incurred *after the start* of the measurement period

1		(rather than over the entirety of the 2006-15 period as I had done in my Opening
2		Testimony).
3		This assessment requires a number of additional calculations, which I
4		present in Exhibit Calpine Solutions/301. The results are summarized on pages 1-
5		2 of that exhibit.
6	Q.	What do the results of Exhibit Calpine Solutions/301 show?
7	А.	The summary pages present the annual change in PacifiCorp's Oregon-
8		allocated fixed generation costs on a per-MWh basis for each possible
9		measurement period ending in 2015 (e.g., 2006-2015, 2007-2015, 2008-2015,
10		etc.). Exhibit Calpine Solutions/301 shows this information for each of the three
11		scenarios I presented in my Opening Testimony: (1) Removal of Major Plant
12		Capital Additions (excluding Environmental Upgrades); (2) Removal of Major
13		and Minor Plant Capital Additions (excluding Environmental Upgrades); and (3)
14		Removal of Major and Minor Plant Capital Additions and Environmental
15		Upgrades. Mr. Wilding makes his cherry-picking allegation about the second
16		scenario.
17		The first row on page 1 of Exhibit Calpine Solutions/301 shows the per-
18		MWh fixed generation cost for each year calculated by PacifiCorp in Exhibit
19		PAC/110. For each measurement period, denoted by the boxes on the page, the
20		cost per MWh in the first year of the measurement period is the same as in
21		PacifiCorp's Exhibit PAC/110, and only the incremental costs subsequent to that
22		initial year are removed. So, for example, for the period 2008-2015, for Scenario
23		2, PacifiCorp's calculated cost per MWh of \$25.98/MWh is reported for 2008.

1		When the cost of Major and Minor Plant Capital Additions (excluding
2		Environmental Upgrades) added subsequent to 2008 is removed, the remaining
3		fixed generation cost in 2015 is \$24.94/MWh. This demonstrates the decline in
4		fixed costs that I reported in my Opening Testimony, except the baseline is
5		modified to reflect only the removal of incremental costs after 2008, the initial
6		year of the measurement period in this example.
7		Further inspection of page 1 of the exhibit shows that for the measurement
8		periods 2007-2015 and 2009-2015, the fixed generation costs for Scenario 2
9		indeed increase as pointed out by Mr. Wilding. However, as also shown in the
10		exhibit, for each subsequent measurement period (e.g., 2010-2015, 2011-2015,
11		etc.), the Scenario 2 fixed generation costs in 2015 decline relative to the initial
12		year, consistent with my observation about the 2008-2015 period. The one
13		exception to this pattern is 2012-2015, for which the costs remained nearly flat.
14	Q.	What conclusion do you draw from this analysis?
15	A.	The analysis demonstrates that the decline in Scenario 2 fixed generation
16		costs that I commented upon in my Opening Testimony is not the product of a
17		"cherry-picked" scenario, but in fact, represents the pattern that is observed for
18		the majority of possible measurement periods. Indeed, of the eight measurement
19		periods between 2007-2015 and 2014-2015, a decline in Scenario 2 costs is
20		observed in five of the periods; the only two periods in which a noticeable
21		increase occurs is the two periods cited by Mr. Wilding to rebut my argument.
22	Q.	What is shown on pages 3 to 18 of Exhibit Calpine Solutions/301?

1	A.	Pages 3 to 18 of the exhibit show the individual results for each standalone
2		measurement period, starting with 2007-2015 and ending with 2014-2015. The
3		results of these standalone cases are summarized on pages 1 and 2 of the exhibit,
4		as I explained above.
5	Q.	Exhibit Calpine Solutions/301 starts with the measurement period 2007-2015.
6		Why didn't you start with 2006-2015?
7	А.	As I explained in my Opening Testimony, the 2006 data are based on the
8		March 2006 Results of Operations whereas the data for all other years are based
9		on December Results of Operations. This suggests that the 2006 data are nearly
10		two years removed from the rest of the time series and therefore are not directly
11		comparable. The jump in average fixed generation costs of 43% from 2006 to
12		2007 as reported in the Company's table is a further indication that 2006 is an
13		anomalous entry that is not useful as a point of reference in this analysis.
14	Q.	You stated earlier that the Scenario 2 results are not the primary basis for
15		your conclusion that the Company's fixed generation costs generally decline
16		over time if new generation investment is removed. Please explain further.
17	А.	As I discussed above, the Scenario 2 analysis does not remove the costs of
18		incremental environmental upgrades. However, the most reasonable basis of
19		analysis for the issues being considered in this case would remove these costs, as I
20		did in Scenario 3. In the case of Scenario 3, the removal of incremental
21		generation costs added after the initial year of the measurement period results in a
22		decline in 2015 fixed costs relative to the initial year in each and every
23		measurement period between 2007-2015 and 2014-2015. This is shown on pages

1		1 and 2 of Exhibit Calpine Solutions/301 by comparing (a) the per-MWh cost for
2		the initial year of each measurement period with (b) the 2015 per-MWh cost with
3		all incremental capital additions (including environmental upgrades) removed.
4		These results are also consistent with the results presented in Exhibit Calpine
5		Solutions/105, page 3, although the results in Exhibit Calpine Solutions/301 are a
6		more analytically rigorous depiction.
7	Q.	Why is Scenario 3, which removes the incremental cost of environmental
8		upgrades, the most reasonable basis for analyzing the issues being considered
9		in this case?
10	A.	The issue at hand is the reasonableness of charging departed direct access
11		customers for <i>increasing</i> fixed generation costs projected to be incurred some six
12		to ten years after the customers have left bundled service. The analysis in my
13		Opening Testimony and this Additional Rebuttal Testimony demonstrates
14		unambiguously that these fixed costs will not increase, but rather decline, if the
15		new capital additions, including the cost of environmental upgrades, are removed.
16		If the costs of environmental upgrades are not removed, the historical analysis in
17		my Additional Rebuttal Testimony demonstrates that these costs still decline
18		under most measurement periods.
19		The removal of the cost of environmental upgrades is appropriate for
20		purposes of the analysis in this case because the cost responsibility for such
21		upgrades, which essentially allow coal plants to continue operating in order to
22		provide going-forward service to bundled service customers, cannot reasonably be
23		assigned to customers who departed bundled service six to ten years previously.

6	Q.	Does this conclude your Additional Rebuttal testimony?
5		position is fundamentally unreasonable.
4		upgrades some six to ten years after leaving bundled service. I believe that such a
3		departed customers are somehow held responsible for the cost of environmental
2		calculation of the Consumer Opt-Out Charge is appropriate can only mean that
1		To accept PacifiCorp's position that escalation of fixed generation costs in the

7 A. Yes, it does.

Docket No. UE 323

EXHIBIT

Calpine Solutions 301

Additional Fixed Generation Cost Calculations in Support of Additional Rebuttal Testimony

Calpine Solutions/301 Higgins/1

Calpine Energy Solutions Adjustments to PacifiCorp Fixed Generation Revenue Requirement

Summary for Multiple Measurement Periods

PacifiCorp Calculated Revenue Requirement (\$/MWh)	2006 14.70	2007 21.03	2008 25.98	2009 25.28	2010 27.47	2011 28.38	2012 27.53	2013 28.93	2014 30.26	2015 29.49
<u>Measurement Period: 2007-2015</u> Calpine Removal of Major Plant Capital Additions:										
Scenario 1 (\$/MWh)	14.70	21.03	25.01	22.40	23.58	24.33	23.82	25.45	26.34	24.95
Calpine Removal of Capital Additions <\$1,000,000: Scenario 2 (\$/MWh)	14.70	21.03	24.89	22.01	22.98	23.54	22.88	24.31	24.94	23.36
Calpine Removal of Steam Plant Environmental Upgrades: Scenario 3 (\$/MWh)	14.70	21.03	24.71	21.60	22.01	21.60	20.33	21.58	21.65	19.88
Measurement Period: 2008-2015										
Calpine Removal of Major Plant Capital Additions: Scenario 1 (\$/MWh) Calpine Removal of Capital Additions <\$1,000,000:	14.70	21.03	25.98	24.39	25.45	26.13	25.46	26.99	27.73	26.31
Scenario 2 (\$/MWh) Calpine Removal of Steam Plant Environmental Upgrades:	14.70	21.03	25.98	24.23	25.08	25.56	24.73	26.06	26.56	24.94
Scenario 3 (\$/MWh)	14.70	21.03	25.98	24.20	24.46	23.97	22.50	23.63	23.62	21.79
Measurement Period: 2009-2015										
Calpine Removal of Major Plant Capital Additions: Scenario 1 (\$/MWh) Calpine Removal of Capital Additions <\$1,000,000:	14.70	21.03	25.98	25.28	27.16	27.79	26.99	28.42	29.10	27.64
Scenario 2 (\$/MWh) Calpine Removal of Steam Plant Environmental Upgrades:	14.70	21.03	25.98	25.28	27.08	27.50	26.51	27.76	28.20	26.54
Scenario 3 (\$/MWh)	14.70	21.03	25.98	25.28	26.53	25.97	24.34	25.38	25.33	23.45
Measurement Period: 2010-2015										
Calpine Removal of Major Plant Capital Additions: Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.56	28.09
Calpine Removal of Capital Additions <\$1,000,000: Scenario 2 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.25	27.20	28.42	28.83	27.15
Calpine Removal of Steam Plant Environmental Upgrades: Scenario 3 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	27.80	26.02	26.97	27.08	25.15

Calpine Solutions/301 Higgins/2

Calpine Energy Solutions Adjustments to PacifiCorp Fixed Generation Revenue Requirement

Summary for Multiple Measurement Periods

PacifiCorp Calculated Revenue Requirement (\$/MWh)	2006 14.70	2007 21.03	2008 25.98	2009 25.28	2010 27.47	2011 28.38	2012 27.53	2013 28.93	2014 30.26	2015 29.49
<u>Measurement Period: 2011-2015</u> Calpine Removal of Major Plant Capital Additions:										
Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.56	28.09
Calpine Removal of Capital Additions <\$1,000,000: Scenario 2 (\$/MWh) Calpine Removal of Steam Plant Environmental Upgrades:	14.70	21.03	25.98	25.28	27.47	28.38	27.45	28.66	29.09	27.40
Scenario 3 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.11	28.02	28.23	26.27
<u>Measurement Period: 2012-2015</u> Calpine Removal of Major Plant Capital Additions:										
Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.56	28.09
Calpine Removal of Capital Additions <\$1,000,000: Scenario 2 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.84	29.28	27.59
Calpine Removal of Steam Plant Environmental Upgrades: Scenario 3 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.84	29.17	27.18
<u>Measurement Period: 2013-2015</u> Calpine Removal of Major Plant Capital Additions:										
Calpine Removal of Major Flain Capital Additions. Scenario 1 (\$/MWh) Calpine Removal of Capital Additions <\$1,000,000:	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.56	28.09
Scenario 2 (\$/MWh) Calpine Removal of Steam Plant Environmental Upgrades:	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.46	27.76
Scenario 3 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.36	27.36
Measurement Period: 2014-2015										
Calpine Removal of Major Plant Capital Additions: Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.48
Calpine Removal of Capital Additions <\$1,000,000: Scenario 2 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.35
Calpine Removal of Steam Plant Environmental Upgrades: Scenario 3 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.14

Measurement Period: 2007-2015

PacifiCorp Calculation: Total Rate Base	2006 719,894,639	2007 1,336,508,766	2008 1,648,371,025	2009 1,713,216,752	2010 1,736,954,242	2011 1,815,681,297	2012 1,794,346,075	2013 1,741,041,460	2014 1,826,116,636	2015 1,739,528,889
Return On Rate Base	64,124,515	109,072,480	133,092,971	140,980,607	144,705,658	145,853,679	138,451,743	133,485,908	138,457,223	130,996,877
Operating & Maintenance Expense	92,140,549	112,008,196	125,482,619	121,104,940	152,130,476	150,819,888	138,323,152	141,947,327	135,214,927	131,405,825
Depreciation Expense	38,586,197	63,647,725	73,558,287	78,272,259	82,673,386	87,223,385	97,979,807	117,977,610	124,957,867	126,319,661
Amortization Expense	5,662,778	9,141,066	9,063,926	8,407,431	9,090,180	8,660,604	7,679,640	8,268,200	8,969,338	8,521,880
Taxes Other Than Income	9,609,011	11,989,900	14,060,167	15,439,056	17,203,839	19,052,597	19,151,857	19,728,897	20,128,593	20,996,832
Federal Income Taxes	10,360,962	22,917,351	(8,228,622)	(47,947,716)	(101,224,567)	(80,071,075)	(52,659,018)	(22,320,370)	(34,470,831)	(13,355,054)
State Income Taxes	1,354,613	4,376,898	429,505	(4,447,668)	(11,062,618)	(8,721,273)	(4,834,371)	(770,019)	(647,970)	412,968
Deferred Income Taxes	(764,258)	10,795,533	68,400,565	87,034,858	125,582,322	104,256,684	72,928,113	37,266,342	65,285,463	37,775,968
Misc Revenue & Expenses	(394,395)	(2,708,250)	(3,682,256)	(2,066,374)	(1,323,121)	(705,446)	(370,209)	(125,422)	(80,155)	(233,471)
Revenue Credits	(3,487,558)	(14,358,942)	(13,512,764)	(24,765,022)	(17,404,366)	(17,533,328)	(16,390,747)	(14,380,891)	(11,649,449)	(9,314,713)
Revenue Requirement (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	433,526,775
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.49
Scenario 1: Calpine Removal of Major Plant Capital Additions: ¹										
Gross Plant in Service	0	0	(106,039,125)	(302,826,929)	(410,730,597)	(444,768,623)	(436,819,247)	(424,476,728)	(511,442,904)	(598,634,761)
Accumulated Depreciation	0	0	4,275,369	15,695,591	30,229,093	47,101,824	62,590,319	76,707,415	94,093,997	114,008,772
Accumulated Deferred Income Taxes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Rate Base	0	0	(101,763,757)	(287,131,338)	(380,501,504)	(397,666,799)	(374,228,927)	(347,769,313)	(417,348,907)	(484,625,989)
Return On Rate Base	0	0	(8,216,621)	(23,628,038)	(31,699,580)	(31,944,574)	(28,875,504)	(26,663,525)	(31,643,636)	(36,495,221)
Operating & Maintenance Expense										
Depreciation Expense	0	0	(4,275,369)	(11,526,459)	(15,266,205)	(16,637,149)	(16,340,074)	(15,878,244)	(16,431,165)	(19,073,175)
Amortization Expense										
Taxes Other Than Income										
Federal Income Taxes	0	0	(2,212,167)	(6,361,395)	(8,534,502)	(8,600,462)	(7,774,174)	(7,178,641)	(8,519,441)	(9,825,636)
State Income Taxes	0	0	(300,597)	(864,408)	(1,159,697)	(1,168,660)	(1,056,381)	(975,458)	(1,157,650)	(1,335,141)
Deferred Income Taxes										
Misc Revenue & Expenses Revenue Credits										
Revenue Credits										
Revenue Requirement (\$)	0	0	(15,004,754)	(42,380,299)	(56,659,985)	(58,350,845)	(54,046,133)	(50,695,868)	(57,751,892)	(66,729,173)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	(0.98)	(2.88)	(3.89)	(4.05)	(3.72)	(3.48)	(3.92)	(4.54)
Revenue Requirement excl. Major Plant Additions (\$)	217,192,412	326.881.959	383.659.644	329.632.072	343.711.205	350,484,871	346,213,835	370.381.715	388,413,114	366,797,602
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scenario 1 (\$/MWh)	14.70	21.03	25.01	22.40	23.58	24.33	23.82	25.45	26.34	24.95

Measurement Period: 2007-2015

PacifiCorp State of Oregon Historical Time Series of Fixed Generation Costs by Component											
2006 2007 2008 2009 2010 2011 2012 2013 2014 2015											
Scenario 2: Calpine Removal of Capital Additions <\$1,000,000: ² Gross Plant in Service Accumulated Depreciation Accumulated Deferred Income Taxes Total Rate Base	0 0 NA 0	0 0 NA 0	(13,855,935) 408,510 NA (13,447,426)	(43,686,174) 1,690,058 NA (41,996,116)	(66,350,971) 3,574,615 NA (62,776,356)	(89,960,551) 6,257,966 NA (83,702,585)	(112,295,584) 9,450,196 NA (102,845,389)	(128,109,447) 14,323,746 NA (113,785,700)	(148,939,468) 22,720,161 NA (126,219,306)	(174,098,634) 32,301,896 NA (141,796,739)	
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense Taxes Other Than Income	0 0	0 0	(1,085,774) (408,510)	(3,455,860) (1,291,700)	(5,229,898) (1,963,452)	(6,723,829) (2,655,493)	(7,935,550) (3,305,371)	(8,723,967) (5,139,457)	(9,570,021) (8,218,008)	(10,678,138) (9,378,520)	
Federal Income Taxes State Income Taxes Deferred Income Taxes Misc Revenue & Expenses Revenue Credits	0 0	0 0	(292,324) (39,722)	(930,424) (126,429)	(1,408,050) (191,331)	(1,810,262) (245,984)	(2,136,494) (290,314)	(2,348,760) (319,158)	(2,576,544) (350,110)	(2,874,883) (390,649)	
Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh)	0 14,779,272 0.00	0 15,543,706 0.00	(1,826,329) 15,342,576 (0.12)	(5,804,413) 14,715,193 (0.39)	(8,792,731) 14,576,188 (0.60)	(11,435,568) 14,403,902 (0.79)	(13,667,729) 14,537,470 (0.94)	(16,531,341) 14,555,494 (1.14)	(20,714,683) 14,744,774 (1.40)	(23,322,190) 14,702,656 (1.59)	
Revenue Requirement excl. Major Plant & <\$1M Additions (\$) MWh @ Input Scenario 2 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	381,833,315 15,342,576 24.89	323,827,659 14,715,193 22.01	334,918,475 14,576,188 22.98	339,049,303 14,403,902 23.54	332,546,105 14,537,470 22.88	353,850,373 14,555,494 24.31	367,698,431 14,744,774 24.94	343,475,412 14,702,656 23.36	
Scenario 3: Calpine Removal of Steam Plant Environmental Upgrades: ³ Gross Plant in Service Accumulated Depreciation Accumulated Deferred Income Taxes Total Rate Base	0 0 NA 0	0 0 NA 0	(21,865,531) 513,731 NA (21,351,800)	(46,397,675) 1,616,496 NA (44,781,179)	(105,767,208) 4,614,431 NA (101,152,778)	(215,388,378) 11,073,995 NA (204,314,383)	(299,212,783) 19,713,286 NA (279,499,497)	(328,495,357) 28,879,768 NA (299,615,589)	(343,618,202) 48,438,828 NA (295,179,374)	(378,530,250) 69,733,811 NA (308,796,439)	
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense Taxes Other Than Income	0 0	0	(1,723,990) (513,731)	(3,685,043) (1,115,531)	(8,427,038) (3,073,396)	(16,412,574) (6,423,603)	(21,566,181) (8,839,503)	(22,971,572) (9,721,169)	(22,380,671) (19,199,353)	(23,254,210) (20,861,733)	
Federal Income Taxes State Income Taxes Deferred Income Taxes Misc Revenue & Expenses Revenue Credits	0 0	0 0	(464,151) (63,070)	(992,127) (134,814)	(2,268,818) (308,295)	(4,418,770) (600,437)	(5,806,280) (788,977)	(6,184,654) (840,392)	(6,025,565) (818,774)	(6,260,749) (850,732)	
Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh)	0 14,779,272 0.00	0 15,543,706 0.00	(2,764,942) 15,342,576 (0.18)	(5,927,514) 14,715,193 (0.40)	(14,077,547) 14,576,188 (0.97)	(27,855,385) 14,403,902 (1.93)	(37,000,941) 14,537,470 (2.55)	(39,717,787) 14,555,494 (2.73)	(48,424,364) 14,744,774 (3.28)	(51,227,423) 14,702,656 (3.48)	
Rev. Req. excl. Major & Minor Plant Adds. & Env Upgrades (\$) MWh @ Input Scanario 3 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	379,068,374 15,342,576 24.71	317,900,145 14,715,193 21.60	320,840,928 14,576,188 22.01	311,193,918 14,403,902 21.60	295,545,165 14,537,470 20.33	314,132,587 14,555,494 21.58	319,274,068 14,744,774 21.65	292,247,989 14,702,656 19.88	

Notes: 1. NA = Data not available at the time of filing.

2. Federal and state income tax calculation assumes 50%/50% debt and equity capital structure components

Data Sources:

1. PacifiCorp Responses to Calpine Solutions Data Request Nos. 1.8 & 5.1.

Measurement Period: 2008-2015

PacifiCorp Calculation: Total Rate Base	2006 719,894,639	2007 1,336,508,766	2008 1,648,371,025	2009 1,713,216,752	2010 1,736,954,242	2011 1,815,681,297	2012 1,794,346,075	2013 1,741,041,460	2014 1,826,116,636	2015 1,739,528,889
Return On Rate Base	64,124,515	109,072,480	133,092,971	140,980,607	144,705,658	145,853,679	138,451,743	133,485,908	138,457,223	130,996,877
Operating & Maintenance Expense	92,140,549	112,008,196	125,482,619	121,104,940	152,130,476	150,819,888	138,323,152	141,947,327	135,214,927	131,405,825
Depreciation Expense	38,586,197	63,647,725	73,558,287	78,272,259	82,673,386	87,223,385	97,979,807	117,977,610	124,957,867	126,319,661
Amortization Expense	5,662,778	9,141,066	9,063,926	8,407,431	9,090,180	8,660,604	7,679,640	8,268,200	8,969,338	8,521,880
Taxes Other Than Income	9,609,011	11,989,900	14,060,167	15,439,056	17,203,839	19,052,597	19,151,857	19,728,897	20,128,593	20,996,832
Federal Income Taxes	10,360,962	22,917,351	(8,228,622)	(47,947,716)	(101,224,567)	(80,071,075)	(52,659,018)	(22,320,370)	(34,470,831)	(13,355,054)
State Income Taxes	1,354,613	4,376,898	429,505	(4,447,668)	(11,062,618)	(8,721,273)	(4,834,371)	(770,019)	(647,970)	412,968
Deferred Income Taxes	(764,258)	10,795,533	68,400,565	87,034,858	125,582,322	104,256,684	72,928,113	37,266,342	65,285,463	37,775,968
Misc Revenue & Expenses	(394,395)	(2,708,250)	(3,682,256)	(2,066,374)	(1,323,121)	(705,446)	(370,209)	(125,422)	(80,155)	(233,471)
Revenue Credits	(3,487,558)	(14,358,942)	(13,512,764)	(24,765,022)	(17,404,366)	(17,533,328)	(16,390,747)	(14,380,891)	(11,649,449)	(9,314,713)
Revenue Requirement (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	433,526,775
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.49
Scenario 1: Calpine Removal of Major Plant Capital Additions: ¹										
Gross Plant in Service	0	0	0	(96,018,524)	(213,576,436)	(246,077,995)	(241,720,851)	(234,867,952)	(319,472,488)	(404,947,312)
Accumulated Depreciation	0	0	0	3,188,196	10,356,553	19,063,449	27,192,734	34,661,042	45,158,844	58,213,923
Accumulated Deferred Income Taxes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Rate Base	0	0	0	(92,830,329)	(203,219,883)	(227,014,547)	(214,528,116)	(200,206,911)	(274,313,644)	(346,733,389)
Return On Rate Base	0	0	0	(7,639,008)	(16,930,248)	(18,236,079)	(16,552,989)	(15,349,894)	(20,798,620)	(26,111,088)
Operating & Maintenance Expense										
Depreciation Expense	0	0	0	(3,188,196)	(7,317,189)	(8,626,184)	(8,473,944)	(8,233,448)	(10,066,088)	(12,651,167)
Amortization Expense										
Taxes Other Than Income										
Federal Income Taxes	0	0	0	(2,056,656)	(4,558,144)	(4,909,713)	(4,456,574)	(4,132,664)	(5,599,628)	(7,029,908)
State Income Taxes	0	0	0	(279,465)	(619,376)	(667,149)	(605,574)	(561,560)	(760,896)	(955,248)
Deferred Income Taxes										
Misc Revenue & Expenses										
Revenue Credits										
Revenue Requirement (\$)	0	0	0	(13,163,325)	(29,424,958)	(32,439,125)	(30,089,082)	(28,277,566)	(37,225,232)	(46,747,410)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	(0.89)	(2.02)	(2.25)	(2.07)	(1.94)	(2.52)	(3.18)
Revenue Requirement excl. Major Plant Additions (\$)	217,192,412	326,881,959	398.664.399	358,849,047	370.946.233	376,396,591	370,170,886	392,800,017	408,939,774	386,779,365
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scenario 1 (\$/MWh)	14.70	21.03	25.98	24.39	25.45	26.13	25.46	26.99	27.73	26.31

Measurement Period: 2008-2015

	Historie	al Time Series	PacifiCorp State of Oreg	on	Component					
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Serveria 2. Coloine Domental of Control Additional of 1 000 000.2	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Scenario 2: Calpine Removal of Capital Additions <\$1,000,000: ² Gross Plant in Service	0	0	0	(16,662,905)	(40,589,204)	(63,998,017)	(86,802,440)	(103,333,620)	(123,855,050)	(148,789,856)
Accumulated Depreciation	0	0	0	497,978	1.682.712	3,593,142	6,092,014	10.050.520	16.944.896	25.043.253
Accumulated Depreciation	NA	NA	NA	497,978 NA	1,002,712 NA	5,595,142 NA	0,092,014 NA	10,050,520 NA	10,944,890 NA	25,045,255 NA
Total Rate Base	0	0	0	(16,164,926)	(38,906,491)	(60,404,875)	(80,710,426)	(93,283,101)	(106,910,154)	(123,746,603)
Return On Rate Base	0	0	0	(1.220.212)	(2.241.200)	(4.952.224)	(())7 (1()	(7.152.020)	(9.105.000)	(0.219.957)
Operating & Maintenance Expense	0	0	0	(1,330,212)	(3,241,300)	(4,852,324)	(6,227,616)	(7,152,029)	(8,105,990)	(9,318,856)
Depreciation Expense	0	0	0	(497,978)	(1,207,981)	(1,897,316)	(2,563,834)	(4,129,921)	(6,769,194)	(7,946,797)
Amortization Expense				(, ,	(),.,	()	() /	() /	(.,,	(, , , , , , , , , , , , , , , , , , ,
Taxes Other Than Income										
Federal Income Taxes	0	0	0	(358,134)	(872,658)	(1,306,395)	(1,676,666)	(1,925,546)	(2,182,382)	(2,508,923)
State Income Taxes	0	0	0	(48,664)	(118,580)	(177,517)	(227,831)	(261,650)	(296,549)	(340,921)
Deferred Income Taxes										
Misc Revenue & Expenses										
Revenue Credits										
Revenue Requirement (\$)	0	0	0	(2,234,989)	(5,440,518)	(8,233,552)	(10,695,948)	(13,469,146)	(17,354,115)	(20,115,496)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	(0.15)	(0.37)	(0.57)	(0.74)	(0.93)	(1.18)	(1.37)
Revenue Requirement excl. Major Plant & <\$1M Additions (\$)	217.192.412	326,881,959	398,664,399	356,614,058	365,505,715	368,163,039	359.474.938	379,330,871	391.585.659	366,663,869
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scenario 2 (\$/MWh)	14.70	21.03	25.98	24.23	25.08	25.56	24.73	26.06	26.56	24.94
Scenario 3: Calpine Removal of Steam Plant Environmental Upgrades: ³										
Gross Plant in Service	0	0	0	(3.753.269)	(65,113,531)	(174,417,878)	(258,983,009)	(289,397,557)	(304,033,426)	(338,591,417)
Accumulated Depreciation	0	0	õ	113,600	2,226,535	7,704,888	15,459,892	23,827,453	41,466,259	60,824,940
Accumulated Deferred Income Taxes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Rate Base	0	0	0	(3,639,669)	(62,886,996)	(166,712,989)	(243,523,117)	(265,570,104)	(262,567,167)	(277,766,478)
Return On Rate Base	0	0	0	(299,508)	(5,239,116)	(13,392,054)	(18,790,244)	(20,361,300)	(19,907,995)	(20,917,469)
Operating & Maintenance Expense	0	0	0	(2)),500)	(3,23),110)	(15,5)2,051)	(10,770,211)	(20,501,500)	(1),)01,))))	(20,717,107)
Depreciation Expense	0	0	0	(113,600)	(2,118,238)	(5,461,001)	(7,894,305)	(8,802,566)	(17,342,028)	(18,987,796)
Amortization Expense				,						,
Taxes Other Than Income										
Federal Income Taxes	0	0	0	(80,637)	(1,410,531)	(3,605,553)	(5,058,912)	(5,481,888)	(5,359,845)	(5,631,626)
State Income Taxes	0	0	0	(10,957)	(191,668)	(489,935)	(687,422)	(744,898)	(728,314)	(765,244)
Deferred Income Taxes										
Misc Revenue & Expenses										
Revenue Credits										
Revenue Requirement (\$)	0	0	0	(504,703)	(8,959,552)	(22,948,544)	(32,430,882)	(35,390,652)	(43,338,181)	(46,302,135)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	(0.03)	(0.61)	(1.59)	(2.23)	(2.43)	(2.94)	(3.15)
Rev. Req. excl. Major & Minor Plant Adds. & Env Upgrades (\$)	217,192,412	326,881,959	398,664,399	356,109,356	356,546,162	345,214,496	327,044,056	343,940,219	348,247,478	320,361,733
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scanario 3 (\$/MWh)	14.70	21.03	25.98	24.20	24.46	23.97	22.50	23.63	23.62	21.79

Notes: 1. NA = Data not available at the time of filing.

2. Federal and state income tax calculation assumes 50%/50% debt and equity capital structure components

Data Sources:

1. PacifiCorp Responses to Calpine Solutions Data Request Nos. 1.8 & 5.1.

Measurement Period: 2009-2015

PacifiCorp Calculation: Total Rate Base	2006 719,894,639	2007 1,336,508,766	2008 1,648,371,025	2009 1,713,216,752	2010 1,736,954,242	2011 1,815,681,297	2012 1,794,346,075	2013 1,741,041,460	2014 1,826,116,636	2015 1,739,528,889
Return On Rate Base	64,124,515	109,072,480	133,092,971	140,980,607	144,705,658	145,853,679	138,451,743	133,485,908	138,457,223	130,996,877
Operating & Maintenance Expense	92,140,549	112,008,196	125,482,619	121,104,940	152,130,476	150,819,888	138,323,152	141,947,327	135,214,927	131,405,825
Depreciation Expense	38,586,197	63,647,725	73,558,287	78,272,259	82,673,386	87,223,385	97,979,807	117,977,610	124,957,867	126,319,661
Amortization Expense	5,662,778	9,141,066	9,063,926	8,407,431	9,090,180	8,660,604	7,679,640	8,268,200	8,969,338	8,521,880
Taxes Other Than Income	9,609,011	11,989,900	14,060,167	15,439,056	17,203,839	19,052,597	19,151,857	19,728,897	20,128,593	20,996,832
Federal Income Taxes	10,360,962	22,917,351	(8,228,622)	(47,947,716)	(101,224,567)	(80,071,075)	(52,659,018)	(22,320,370)	(34,470,831)	(13,355,054)
State Income Taxes	1,354,613	4,376,898	429,505	(4,447,668)	(11,062,618)	(8,721,273)	(4,834,371)	(770,019)	(647,970)	412,968
Deferred Income Taxes	(764,258)	10,795,533	68,400,565	87,034,858	125,582,322	104,256,684	72,928,113	37,266,342	65,285,463	37,775,968
Misc Revenue & Expenses	(394,395)	(2,708,250)	(3,682,256)	(2,066,374)	(1,323,121)	(705,446)	(370,209)	(125,422)	(80,155)	(233,471)
Revenue Credits	(3,487,558)	(14,358,942)	(13,512,764)	(24,765,022)	(17,404,366)	(17,533,328)	(16,390,747)	(14,380,891)	(11,649,449)	(9,314,713)
Revenue Requirement (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	433,526,775
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.49
Scenario 1: Calpine Removal of Major Plant Capital Additions: ¹										
Gross Plant in Service	0	0	0	0	(30,504,074)	(61,578,909)	(60,557,419)	(58,802,043)	(141,213,620)	(225,094,052)
Accumulated Depreciation	0	0	0	0	1,238,461	3,748,196	6,139,030	8,353,654	12,912,662	20,018,007
Accumulated Deferred Income Taxes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Rate Base	0	0	0	0	(29,265,613)	(57,830,713)	(54,418,389)	(50,448,389)	(128,300,958)	(205,076,045)
Return On Rate Base	0	0	0	0	(2,438,118)	(4,645,541)	(4,198,923)	(3,867,886)	(9,727,853)	(15,443,447)
Operating & Maintenance Expense										
Depreciation Expense	0	0	0	0	(1,238,461)	(2,500,083)	(2,458,600)	(2,387,362)	(4,454,960)	(6,989,851)
Amortization Expense										
Taxes Other Than Income										
Federal Income Taxes	0	0	0	0	(656,416)	(1,250,723)	(1,130,479)	(1,041,354)	(2,619,037)	(4,157,851)
State Income Taxes	0	0	0	0	(89,196)	(169,952)	(153,613)	(141,503)	(355,884)	(564,983)
Deferred Income Taxes										
Misc Revenue & Expenses										
Revenue Credits										
Revenue Requirement (\$)	0	0	0	0	(4,422,192)	(8,566,300)	(7,941,615)	(7,438,104)	(17,157,734)	(27,156,132)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	(0.30)	(0.59)	(0.55)	(0.51)	(1.16)	(1.85)
Revenue Requirement excl. Major Plant Additions (\$)	217,192,412	326,881,959	398,664,399	372.012.372	395,948,999	400.269.416	392,318,353	413.639.479	429,007,273	406,370,644
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.16	27.79	26.99	28.42	29.10	27.64

Measurement Period: 2009-2015

PacifiCorp State of Oregon Historical Time Series of Fixed Generation Costs by Component													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
Scenario 2: Calpine Removal of Capital Additions <\$1,000,000: ² Gross Plant in Service Accumulated Depreciation Accumulated Deferred Income Taxes Total Rate Base	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	(8,819,112) 261,563 NA (8,557,549)	(31,980,333) 1,210,869 NA (30,769,465)	(55,363,621) 2,823,724 NA (52,539,897)	(72,779,417) 5,649,402 NA (67,130,016)	(92,920,285) 10,777,322 NA (82,142,963)	(117,578,402) 17,126,533 NA (100,451,869)			
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense Taxes Other Than Income	0	0	0	0	(712,929) (261,563)	(2,471,711) (947,268)	(4,053,978) (1,634,747)	(5,146,868) (2,905,131)	(6,228,127) (5,057,555)	(7,564,624) (6,252,816)			
Federal Income Taxes State Income Taxes Deferred Income Taxes Misc Revenue & Expenses Revenue Credits	0 0	0 0	0 0	0 0	(191,943) (26,082)	(665,461) (90,425)	(1,091,456) (148,311)	(1,385,695) (188,293)	(1,676,803) (227,850)	(2,036,629) (276,744)			
Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh)	0 14,779,272 0.00	0 15,543,706 0.00	0 15,342,576 0.00	0 14,715,193 0.00	(1,192,517) 14,576,188 (0.08)	(4,174,864) 14,403,902 (0.29)	(6,928,492) 14,537,470 (0.48)	(9,625,988) 14,555,494 (0.66)	(13,190,335) 14,744,774 (0.89)	(16,130,813) 14,702,656 (1.10)			
Revenue Requirement excl. Major Plant & <\$1M Additions (\$) MWh @ Input Scenario 2 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	398,664,399 15,342,576 25.98	372,012,372 14,715,193 25.28	394,756,482 14,576,188 27.08	396,094,552 14,403,902 27.50	385,389,861 14,537,470 26.51	404,013,491 14,555,494 27.76	415,816,937 14,744,774 28.20	390,239,831 14,702,656 26.54			
Scenario 3: Calpine Removal of Steam Plant Environmental Upgrades: ³ Gross Plant in Service Accumulated Depreciation Accumulated Deferred Income Taxes Total Rate Base	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	(57,957,414) 1,901,644 NA (56,055,770)	(167,205,991) 7,159,182 NA (160,046,809)	(251,901,510) 14,709,717 NA (237,191,794)	(282,515,315) 22,890,080 NA (259,625,235)	(297,065,464) 40,136,286 NA (256,929,178)	(331,561,131) 59,098,738 NA (272,462,393)			
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense Taxes Other Than Income Federal Income Taxes State Income Taxes Deferred Income Taxes Misc Revenue & Expenses Revenue Credits	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	(4,670,006) (1,901,644) (1,257,309) (170,847)	(12,856,560) (5,242,719) (3,461,382) (470,344)	(18,301,719) (7,679,969) (4,927,386) (669,550)	(19,905,505) (8,594,261) (5,359,175) (728,223)	(19,480,519) (16,961,102) (5,244,755) (712,675)	(20,518,040) (18,603,463) (5,524,088) (750,632)			
Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh) Dev Dev and Main & Mine Plant Adda & Env Haarda (\$)	0 14,779,272 0.00	0 15,543,706 0.00	0 15,342,576 0.00	0 14,715,193 0.00	(7,999,807) 14,576,188 (0.55)	(22,031,005) 14,403,902 (1.53)	(31,578,623) 14,537,470 (2.17)	(34,587,164) 14,555,494 (2.38) 260,426,227	(42,399,052) 14,744,774 (2.88)	(45,396,222) 14,702,656 (3.09)			
Rev. Req. excl. Major & Minor Plant Adds. & Env Upgrades (\$) MWh @ Input Scanario 3 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	398,664,399 15,342,576 25.98	372,012,372 14,715,193 25.28	386,756,675 14,576,188 26.53	374,063,547 14,403,902 25.97	353,811,238 14,537,470 24.34	369,426,327 14,555,494 25.38	373,417,886 14,744,774 25.33	344,843,609 14,702,656 23.45			

Notes: 1. NA = Data not available at the time of filing.

2. Federal and state income tax calculation assumes 50%/50% debt and equity capital structure components

Data Sources:

1. PacifiCorp Responses to Calpine Solutions Data Request Nos. 1.8 & 5.1.

Measurement Period: 2010-2015

PacifiCorp Calculation: Total Rate Base	2006 719,894,639	2007 1,336,508,766	2008 1,648,371,025	2009 1,713,216,752	2010 1,736,954,242	2011 1,815,681,297	2012 1,794,346,075	2013 1,741,041,460	2014 1,826,116,636	2015 1,739,528,889
Return On Rate Base	64,124,515	109,072,480	133,092,971	140,980,607	144,705,658	145,853,679	138,451,743	133,485,908	138,457,223	130,996,877
Operating & Maintenance Expense	92,140,549	112,008,196	125,482,619	121,104,940	152,130,476	150,819,888	138,323,152	141,947,327	135,214,927	131,405,825
Depreciation Expense	38,586,197	63,647,725	73,558,287	78,272,259	82,673,386	87,223,385	97,979,807	117,977,610	124,957,867	126,319,661
Amortization Expense	5,662,778	9,141,066	9,063,926	8,407,431	9,090,180	8,660,604	7,679,640	8,268,200	8,969,338	8,521,880
Taxes Other Than Income	9,609,011	11,989,900	14,060,167	15,439,056	17,203,839	19,052,597	19,151,857	19,728,897	20,128,593	20,996,832
Federal Income Taxes	10,360,962	22,917,351	(8,228,622)	(47,947,716)	(101,224,567)	(80,071,075)	(52,659,018)	(22,320,370)	(34,470,831)	(13,355,054)
State Income Taxes	1,354,613	4,376,898	429,505	(4,447,668)	(11,062,618)	(8,721,273)	(4,834,371)	(770,019)	(647,970)	412,968
Deferred Income Taxes	(764,258)	10,795,533	68,400,565	87,034,858	125,582,322	104,256,684	72,928,113	37,266,342	65,285,463	37,775,968
Misc Revenue & Expenses	(394,395)	(2,708,250)	(3,682,256)	(2,066,374)	(1,323,121)	(705,446)	(370,209)	(125,422)	(80,155)	(233,471)
Revenue Credits	(3,487,558)	(14,358,942)	(13,512,764)	(24,765,022)	(17,404,366)	(17,533,328)	(16,390,747)	(14,380,891)	(11,649,449)	(9,314,713)
Revenue Requirement (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	433,526,775
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.49
Scenario 1: Calpine Removal of Major Plant Capital Additions: ¹										
Gross Plant in Service	0	0	0	0	0	(95,311)	(185,415)	(128,768)	(81,809,550)	(165,158,656)
Accumulated Depreciation	0	0	0	0	0	3,858	11,293	16,211	2,487,332	7,497,644
Accumulated Deferred Income Taxes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Rate Base	0	0	0	0	0	(91,453)	(174,122)	(112,557)	(79,322,218)	(157,661,013)
Return On Rate Base	0	0	0	0	0	(7,346)	(13,435)	(8,630)	(6,014,257)	(11,872,813)
Operating & Maintenance Expense										
Depreciation Expense	0	0	0	0	0	(3,858)	(7,505)	(5,236)	(2,470,919)	(4,988,064)
Amortization Expense										
Taxes Other Than Income										
Federal Income Taxes	0	0	0	0	0	(1,978)	(3,617)	(2,323)	(1,619,223)	(3,196,526)
State Income Taxes	0	0	0	0	0	(269)	(492)	(316)	(220,026)	(434,355)
Deferred Income Taxes										
Misc Revenue & Expenses										
Revenue Credits										
Revenue Requirement (\$)	0	0	0	0	0	(13,451)	(25,049)	(16,505)	(10,324,424)	(20,491,758)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	0.00	(0.00)	(0.00)	(0.00)	(0.70)	(1.39)
Revenue Requirement excl. Major Plant Additions (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,822,265	400,234,919	421,061,078	435,840,583	413,035,017
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.56	28.09

Measurement Period: 2010-2015

PacifiCorp State of Oregon Historical Time Series of Fixed Generation Costs by Component													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
Scenario 2: Calpine Removal of Capital Additions <\$1,000,000: ² Gross Plant in Service Accumulated Depreciation Accumulated Deferred Income Taxes Total Rate Base	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	(14,204,651) 422,816 NA (13,781,835)	(37,909,315) 1,537,144 NA (36,372,170)	(55,816,235) 3,721,966 NA (52,094,269)	(75,745,820) 7,869,980 NA (67,875,840)	(100,250,325) 13,247,634 NA (87,002,691)			
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense Taxes Other Than Income Federal Income Taxes	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	(1,107,095) (422,816) (298,064)	(2,806,477) (1,121,972) (755,590)	(3,994,075) (2,228,074) (1,075,328)	(5,146,386) (4,101,656) (1,385,565)	(6,551,820) (5,307,262) (1,763,952)			
State Income Taxes Deferred Income Taxes Misc Revenue & Expenses Revenue Credits	0	0	0	0	0	(40,502)	(102,672)	(146,119)	(188,275)	(239,692)			
Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh)	0 14,779,272 0.00	0 15,543,706 0.00	0 15,342,576 0.00	0 14,715,193 0.00	0 14,576,188 0.00	(1,868,477) 14,403,902 (0.13)	(4,786,711) 14,537,470 (0.33)	(7,443,596) 14,555,494 (0.51)	(10,821,882) 14,744,774 (0.73)	(13,862,726) 14,702,656 (0.94)			
Revenue Requirement excl. Major Plant & <\$1M Additions (\$) MWh @ Input Scenario 2 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	398,664,399 15,342,576 25.98	372,012,372 14,715,193 25.28	400,371,190 14,576,188 27.47	406,953,787 14,403,902 28.25	395,448,208 14,537,470 27.20	413,617,482 14,555,494 28.42	425,018,701 14,744,774 28.83	399,172,291 14,702,656 27.15			
Scenario 3: Calpine Removal of Steam Plant Environmental Upgrades: ³ Gross Plant in Service Accumulated Depreciation Accumulated Deferred Income Taxes Total Rate Base	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	(50,387,814) 1,409,792 NA (48,978,022)	(137,195,349) 5,300,643 NA (131,894,707)	(171,036,721) 10,088,026 NA (160,948,695)	(184,198,367) 19,716,470 NA (164,481,898)	(217,684,523) 30,971,265 NA (186,713,258)			
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense Taxes Other Than Income Federal Income Taxes State Income Taxes Deferred Income Taxes	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0	0 0 0 0	(3,934,404) (1,409,792) (1,059,263) (143,936)	(10,176,996) (3,916,339) (2,739,960) (372,315)	(12,339,960) (4,936,532) (3,322,297) (451,445)	(12,471,113) (9,502,794) (3,357,607) (456,243)	(14,060,619) (11,078,446) (3,785,551) (514,394)			
Misc Revenue & Expenses Revenue Credits Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh)	0 14,779,272 0.00	0 15,543,706 0.00	0 15,342,576 0.00	0 14,715,193 0.00	0 14,576,188 0.00	(6,547,395) 14,403,902 (0.45)	(17,205,610) 14,537,470 (1.18)	(21,050,234) 14,555,494 (1.45)	(25,787,757) 14,744,774 (1.75)	(29,439,010) 14,702,656 (2.00)			
Rev. Req. excl. Major & Minor Plant Adds. & Env Upgrades (\$) MWh @ Input Scanario 3 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	398,664,399 15,342,576 25.98	372,012,372 14,715,193 25.28	400,371,190 14,576,188 27.47	400,406,392 14,403,902 27.80	378,242,598 14,537,470 26.02	392,567,248 14,555,494 26.97	399,230,944 14,744,774 27.08	369,733,280 14,702,656 25.15			

Notes: 1. NA = Data not available at the time of filing.

2. Federal and state income tax calculation assumes 50%/50% debt and equity capital structure components

Data Sources:

1. PacifiCorp Responses to Calpine Solutions Data Request Nos. 1.8 & 5.1.

Measurement Period: 2011-2015

PacifiCorp Calculation: Total Rate Base	2006 719,894,639	2007 1,336,508,766	2008 1,648,371,025	2009 1,713,216,752	2010 1,736,954,242	2011 1,815,681,297	2012 1,794,346,075	2013 1,741,041,460	2014 1,826,116,636	2015 1,739,528,889
Return On Rate Base Operating & Maintenance Expense	64,124,515 92,140,549	109,072,480 112,008,196	133,092,971 125,482,619	140,980,607 121,104,940	144,705,658 152,130,476	145,853,679 150,819,888	138,451,743 138,323,152	133,485,908 141,947,327	138,457,223 135,214,927	130,996,877 131,405,825
Depreciation Expense	38,586,197	63,647,725	73,558,287	78,272,259	82,673,386	87,223,385	97,979,807	117,977,610	124,957,867	126,319,661
Amortization Expense	5,662,778	9,141,066	9,063,926	8,407,431	9,090,180	8,660,604	7,679,640	8,268,200	8,969,338	8,521,880
Taxes Other Than Income	9,609,011	11,989,900	14,060,167	15,439,056	17,203,839	19,052,597	19,151,857	19,728,897	20,128,593	20,996,832
Federal Income Taxes	10,360,962	22,917,351	(8,228,622)	(47,947,716)	(101,224,567)	(80,071,075)	(52,659,018)	(22,320,370)	(34,470,831)	(13,355,054)
State Income Taxes	1,354,613	4,376,898	429,505	(4,447,668)	(11,062,618)	(8,721,273)	(4,834,371)	(770,019)	(647,970)	412,968
Deferred Income Taxes	(764,258)	10,795,533	68,400,565	87,034,858	125,582,322	104,256,684	72,928,113	37,266,342	65,285,463	37,775,968
Misc Revenue & Expenses	(394,395)	(2,708,250)	(3,682,256)	(2,066,374)	(1,323,121)	(705,446)	(370,209)	(125,422)	(80,155)	(233,471)
Revenue Credits	(3,487,558)	(14,358,942)	(13,512,764)	(24,765,022)	(17,404,366)	(17,533,328)	(16,390,747)	(14,380,891)	(11,649,449)	(9,314,713)
Revenue Requirement (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	433,526,775
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.49
Scenario 1: Calpine Removal of Major Plant Capital Additions: ¹										
Gross Plant in Service	0	0	0	0	0	0	1,761	53,141	(81,625,375)	(164,972,834)
Accumulated Depreciation	0	0	0	0	0	0	(71)	(2,197)	2,462,568	7,466,478
Accumulated Deferred Income Taxes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Rate Base	0	0	0	0	0	0	1,689	50,944	(79,162,807)	(157,506,357)
Return On Rate Base	0	0	0	0	0	0	130	3,906	(6,002,170)	(11,861,166)
Operating & Maintenance Expense	_									
Depreciation Expense	0	0	0	0	0	0	71	2,128	(2,464,793)	(4,981,883)
Amortization Expense										
Taxes Other Than Income								1.050	(1 (1 (0 (0)	(2.402.204)
Federal Income Taxes	0	0	0	0	0	0	35	1,052	(1,615,969)	(3,193,391)
State Income Taxes	0	0	0	0	0	0	5	143	(219,583)	(433,929)
Deferred Income Taxes										
Misc Revenue & Expenses Revenue Credits										
Revenue Credits										
Revenue Requirement (\$)	0	0	0	0	0	0	242	7,228	(10,302,515)	(20,470,369)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.70)	(1.39)
Revenue Requirement excl. Major Plant Additions (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,260,210	421,084,811	435,862,492	413,056,406
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.56	28.09

Measurement Period: 2011-2015

PacifiCorp State of Oregon Historical Time Series of Fixed Generation Costs by Component													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
Scenario 2: Calpine Removal of Capital Additions <\$1,000,000: ² Gross Plant in Service Accumulated Depreciation Accumulated Deferred Income Taxes Total Rate Base	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	(10,013,639) 294,977 NA (9,718,662)	(28,705,479) 1,428,576 NA (27,276,903)	(48,297,391) 4,037,600 NA (44,259,792)	(72,556,390) 7,885,702 NA (64,670,687)			
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense Taxes Other Than Income	0 0	0 0	0 0	0 0	0 0	0 0	(749,892) (294,977)	(2,091,324) (1,141,899)	(3,355,803) (2,591,230)	(4,870,088) (3,811,989)			
Federal Income Taxes State Income Taxes Deferred Income Taxes Misc Revenue & Expenses Revenue Credits	0 0	0 0	0 0	0 0	0 0	0 0	(201,894) (27,434)	(563,049) (76,509)	(903,485) (122,769)	(1,311,177) (178,167)			
Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh)	0 14,779,272 0.00	0 15,543,706 0.00	0 15,342,576 0.00	0 14,715,193 0.00	0 14,576,188 0.00	0 14,403,902 0.00	(1,274,197) 14,537,470 (0.09)	(3,872,781) 14,555,494 (0.27)	(6,973,288) 14,744,774 (0.47)	(10,171,422) 14,702,656 (0.69)			
Revenue Requirement excl. Major Plant & <\$1M Additions (\$) MWh @ Input Scenario 2 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	398,664,399 15,342,576 25.98	372,012,372 14,715,193 25.28	400,371,190 14,576,188 27.47	408,835,716 14,403,902 28.38	398,986,013 14,537,470 27.45	417,212,030 14,555,494 28.66	428,889,204 14,744,774 29.09	402,884,984 14,702,656 27.40			
Scenario 3: Calpine Removal of Steam Plant Environmental Upgrades; ³ Gross Plant in Service Accumulated Depreciation Accumulated Deferred Income Taxes Total Rate Base	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	0 0 NA 0	(38,241,697) 1,147,732 NA (37,093,965)	(74,867,397) 3,361,264 NA (71,506,133)	(86,831,223) 8,192,294 NA (78,638,929)	(119,446,502) 14,588,224 NA (104,858,278)			
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense Taxes Other Than Income Federal Income Taxes State Income Taxes Deferred Income Taxes Misc Revenue & Expenses	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	(2,862,170) (1,147,732) (770,584) (104,710)	(5,482,386) (2,245,827) (1,476,027) (200,568)	(5,962,449) (4,789,164) (1,605,275) (218,130)	(7,896,452) (6,322,656) (2,125,968) (288,884)			
Revenue Credits Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh)	0 14,779,272 0.00	0 15,543,706 0.00	0 15,342,576 0.00	0 14,715,193 0.00	0 14,576,188 0.00	0 14,403,902 0.00	(4,885,196) 14,537,470 (0.34)	(9,404,807) 14,555,494 (0.65)	(12,575,018) 14,744,774 (0.85)	(16,633,960) 14,702,656 (1.13)			
Rev. Req. excl. Major & Minor Plant Adds. & Env Upgrades (\$) MWh @ Input Scanario 3 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	398,664,399 15,342,576 25.98	372,012,372 14,715,193 25.28	400,371,190 14,576,188 27.47	408,835,716 14,403,902 28.38	394,100,817 14,537,470 27.11	407,807,223 14,555,494 28.02	416,314,186 14,744,774 28.23	386,251,024 14,702,656 26.27			

Notes: 1. NA = Data not available at the time of filing.

2. Federal and state income tax calculation assumes 50%/50% debt and equity capital structure components

Data Sources:

1. PacifiCorp Responses to Calpine Solutions Data Request Nos. 1.8 & 5.1.

Measurement Period: 2012-2015

PacifiCorp Calculation: Total Rate Base	2006 719,894,639	2007 1,336,508,766	2008 1,648,371,025	2009 1,713,216,752	2010 1,736,954,242	2011 1,815,681,297	2012 1,794,346,075	2013 1,741,041,460	2014 1,826,116,636	2015 1,739,528,889
Return On Rate Base	64,124,515	109,072,480	133,092,971	140,980,607	144,705,658	145,853,679	138,451,743	133,485,908	138,457,223	130,996,877
Operating & Maintenance Expense	92,140,549	112,008,196	125,482,619	121,104,940	152,130,476	150,819,888	138,323,152	141,947,327	135,214,927	131,405,825
Depreciation Expense	38,586,197	63,647,725	73,558,287	78,272,259	82,673,386	87,223,385	97,979,807	117,977,610	124,957,867	126,319,661
Amortization Expense	5,662,778	9,141,066	9,063,926	8,407,431	9,090,180	8,660,604	7,679,640	8,268,200	8,969,338	8,521,880
Taxes Other Than Income	9,609,011	11,989,900	14,060,167	15,439,056	17,203,839	19,052,597	19,151,857	19,728,897	20,128,593	20,996,832
Federal Income Taxes	10,360,962	22,917,351	(8,228,622)	(47,947,716)	(101,224,567)	(80,071,075)	(52,659,018)	(22,320,370)	(34,470,831)	(13,355,054)
State Income Taxes	1,354,613	4,376,898	429,505	(4,447,668)	(11,062,618)	(8,721,273)	(4,834,371)	(770,019)	(647,970)	412,968
Deferred Income Taxes	(764,258)	10,795,533	68,400,565	87,034,858	125,582,322	104,256,684	72,928,113	37,266,342	65,285,463	37,775,968
Misc Revenue & Expenses	(394,395)	(2,708,250)	(3,682,256)	(2,066,374)	(1,323,121)	(705,446)	(370,209)	(125,422)	(80,155)	(233,471)
Revenue Credits	(3,487,558)	(14,358,942)	(13,512,764)	(24,765,022)	(17,404,366)	(17,533,328)	(16,390,747)	(14,380,891)	(11,649,449)	(9,314,713)
Revenue Requirement (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	433,526,775
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.49
Scenario 1: Calpine Removal of Major Plant Capital Additions: ¹										
Gross Plant in Service	0	0	0	0	0	0	0	49,718	(81,628,840)	(164,976,330)
Accumulated Depreciation	0	0	0	0	0	0	0	(1,989)	2,462,896	7,466,925
Accumulated Deferred Income Taxes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Rate Base	0	0	0	0	0	0	0	47,730	(79,165,945)	(157,509,405)
Return On Rate Base	0	0	0	0	0	0	0	3,659	(6,002,408)	(11,861,396)
Operating & Maintenance Expense										
Depreciation Expense	0	0	0	0	0	0	0	1,989	(2,464,909)	(4,982,001)
Amortization Expense										
Taxes Other Than Income										
Federal Income Taxes	0	0	0	0	0	0	0	985	(1,616,033)	(3,193,453)
State Income Taxes	0	0	0	0	0	0	0	134	(219,592)	(433,937)
Deferred Income Taxes										
Misc Revenue & Expenses										
Revenue Credits										
Revenue Requirement (\$)	0	0	0	0	0	0	0	6,767	(10,302,942)	(20,470,786)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.70)	(1.39)
Revenue Requirement excl. Major Plant Additions (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,084,350	435,862,065	413,055,989
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.56	28.09

Measurement Period: 2012-2015

PacifiCorp State of Oregon Historical Time Series of Fixed Generation Costs by Component													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
Scenario 2: Calpine Removal of Capital Additions <\$1,000,000: ² Gross Plant in Service Accumulated Depreciation Accumulated Defreed Income Taxes	0 0 NA	0 0 NA	2003 0 NA	2009 0 NA	0 0 NA	0 0 NA	0 0 NA	(9,241,724) 358,971 NA	(28,591,208) 1,855,584 NA	(52,673,949) 4,596,743 NA			
Total Rate Base	0	0	0	0	0	0	0	(8,882,752)	(26,735,624)	(48,077,206)			
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense	0 0	(681,042) (358,971)	(2,027,111) (1,492,142)	(3,620,500) (2,724,562)									
Taxes Other Than Income Federal Income Taxes State Income Taxes Deferred Income Taxes Misc Revenue & Expenses Revenue Credits	0 0	(183,357) (24,915)	(545,761) (74,160)	(974,750) (132,452)									
Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh)	0 14,779,272 0.00	0 15,543,706 0.00	0 15,342,576 0.00	0 14,715,193 0.00	0 14,576,188 0.00	0 14,403,902 0.00	0 14,537,470 0.00	(1,248,286) 14,555,494 (0.09)	(4,139,173) 14,744,774 (0.28)	(7,452,264) 14,702,656 (0.51)			
Revenue Requirement excl. Major Plant & <\$1M Additions (\$) MWh @ Input Scenario 2 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	398,664,399 15,342,576 25.98	372,012,372 14,715,193 25.28	400,371,190 14,576,188 27.47	408,835,716 14,403,902 28.38	400,259,968 14,537,470 27.53	419,836,064 14,555,494 28.84	431,722,892 14,744,774 29.28	405,603,725 14,702,656 27.59			
Scenario 3: Calpine Removal of Steam Plant Environmental Upgrades: ³ Gross Plant in Service Accumulated Depreciation Accumulated Deferred Income Taxes Total Rate Base	0 0 NA 0	(536,070) 14,952 NA (521,118)	(11,574,074) 499,216 NA (11,074,858)	(43,516,234) 2,482,746 NA (41,033,488)									
Return On Rate Base Operating & Maintenance Expense Depreciation Expense Amortization Expense Taxes Other Than Income Federal Income Taxes	0 0	(39,954) (14,952) (10,757)	(839,702) (484,078) (226,074)	(3,090,066) (1,979,065) (831,941)									
State Income Taxes Deferred Income Taxes Misc Revenue & Expenses Revenue Credits	0	0	0	0	0	0	0	(1,462)	(30,720)	(113,047)			
Revenue Requirement (\$) MWh @ Input Revenue Requirement (\$/MWh)	0 14,779,272 0.00	0 15,543,706 0.00	0 15,342,576 0.00	0 14,715,193 0.00	0 14,576,188 0.00	0 14,403,902 0.00	0 14,537,470 0.00	(67,125) 14,555,494 (0.00)	(1,580,574) 14,744,774 (0.11)	(6,014,119) 14,702,656 (0.41)			
Rev. Req. excl. Major & Minor Plant Adds. & Env Upgrades (\$) MWh @ Input Scanario 3 (\$/MWh)	217,192,412 14,779,272 14.70	326,881,959 15,543,706 21.03	398,664,399 15,342,576 25.98	372,012,372 14,715,193 25.28	400,371,190 14,576,188 27.47	408,835,716 14,403,902 28.38	400,259,968 14,537,470 27.53	419,768,940 14,555,494 28.84	430,142,318 14,744,774 29.17	399,589,606 14,702,656 27.18			

Notes: 1. NA = Data not available at the time of filing.

2. Federal and state income tax calculation assumes 50%/50% debt and equity capital structure components

Data Sources:

1. PacifiCorp Responses to Calpine Solutions Data Request Nos. 1.8 & 5.1.

Measurement Period: 2013-2015

PacifiCorp Calculation: Total Rate Base	2006 719,894,639	2007 1,336,508,766	2008 1,648,371,025	2009 1,713,216,752	2010 1,736,954,242	2011 1,815,681,297	2012 1,794,346,075	2013 1,741,041,460	2014 1,826,116,636	2015 1,739,528,889
Return On Rate Base	64,124,515	109,072,480	133,092,971	140,980,607	144,705,658	145,853,679	138,451,743	133,485,908	138,457,223	130,996,877
Operating & Maintenance Expense	92,140,549	112,008,196	125,482,619	121,104,940	152,130,476	150,819,888	138,323,152	141,947,327	135,214,927	131,405,825
Depreciation Expense	38,586,197	63,647,725	73,558,287	78,272,259	82,673,386	87,223,385	97,979,807	117,977,610	124,957,867	126,319,661
Amortization Expense	5,662,778	9,141,066	9,063,926	8,407,431	9,090,180	8,660,604	7,679,640	8,268,200	8,969,338	8,521,880
Taxes Other Than Income	9,609,011	11,989,900	14,060,167	15,439,056	17,203,839	19,052,597	19,151,857	19,728,897	20,128,593	20,996,832
Federal Income Taxes	10,360,962	22,917,351	(8,228,622)	(47,947,716)	(101,224,567)	(80,071,075)	(52,659,018)	(22,320,370)	(34,470,831)	(13,355,054)
State Income Taxes	1,354,613	4,376,898	429,505	(4,447,668)	(11,062,618)	(8,721,273)	(4,834,371)	(770,019)	(647,970)	412,968
Deferred Income Taxes	(764,258)	10,795,533	68,400,565	87,034,858	125,582,322	104,256,684	72,928,113	37,266,342	65,285,463	37,775,968
Misc Revenue & Expenses	(394,395)	(2,708,250)	(3,682,256)	(2,066,374)	(1,323,121)	(705,446)	(370,209)	(125,422)	(80,155)	(233,471)
Revenue Credits	(3,487,558)	(14,358,942)	(13,512,764)	(24,765,022)	(17,404,366)	(17,533,328)	(16,390,747)	(14,380,891)	(11,649,449)	(9,314,713)
Revenue Requirement (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	433,526,775
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.49
Scenario 1: Calpine Removal of Major Plant Capital Additions: ¹										
Gross Plant in Service	0	0	0	0	0	0	0	0	(81,729,515)	(165,077,906)
Accumulated Depreciation	0	0	0	0	0	0	0	0	2,468,231	7,475,661
Accumulated Deferred Income Taxes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Rate Base	0	0	0	0	0	0	0	0	(79,261,284)	(157,602,246)
Return On Rate Base	0	0	0	0	0	0	0	0	(6,009,637)	(11,868,387)
Operating & Maintenance Expense										
Depreciation Expense	0	0	0	0	0	0	0	0	(2,468,231)	(4,985,353)
Amortization Expense										
Taxes Other Than Income										
Federal Income Taxes	0	0	0	0	0	0	0	0	(1,617,979)	(3,195,335)
State Income Taxes	0	0	0	0	0	0	0	0	(219,856)	(434,193)
Deferred Income Taxes										
Misc Revenue & Expenses										
Revenue Credits										
Revenue Requirement (\$)	0	0	0	0	0	0	0	0	(10,315,703)	(20,483,268)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.70)	(1.39)
Revenue Requirement excl. Major Plant Additions (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	435,849,303	413,043,507
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.56	28.09

Measurement Period: 2013-2015

PacifiCorp State of Oregon Historical Time Series of Fixed Generation Costs by Component													
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015			
Scenario 2: Calpine Removal of Capital Additions <\$1,000,000: ²	2000	2007	2000	2007	2010	2011	2012	2010	2011	2010			
Gross Plant in Service	0	0	0	0	0	0	0	0	(9,877,543)	(33,792,905)			
Accumulated Depreciation	0	0	0	0	0	0	0	0	520,345	2,286,307			
Accumulated Deferred Income Taxes	NA	NA											
Total Rate Base	0	0	0	0	0	0	0	0	(9,357,198)	(31,506,598)			
Return On Rate Base	0	0	0	0	0	0	0	0	(709,468)	(2,372,634)			
Operating & Maintenance Expense													
Depreciation Expense	0	0	0	0	0	0	0	0	(520,345)	(1,761,308)			
Amortization Expense Taxes Other Than Income													
Federal Income Taxes	0	0	0	0	0	0	0	0	(191,011)	(638,786)			
State Income Taxes	0	0	0	0	0	0	0	0	(25,955)	(86,800)			
Deferred Income Taxes									(- , ,	(,			
Misc Revenue & Expenses													
Revenue Credits													
Revenue Requirement (\$)	0	0	0	0	0	0	0	0	(1,446,779)	(4,859,528)			
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656			
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.10)	(0.33)			
Revenue Requirement excl. Major Plant & <\$1M Additions (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	434,402,524	408,183,979			
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656			
Scenario 2 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.46	27.76			
Scenario 3: Calpine Removal of Steam Plant Environmental Upgrades: ³													
Gross Plant in Service	0	0	0	0	0	0	0	0	(10,488,580)	(42,421,031)			
Accumulated Depreciation	0	0	0	0	0	0	0	0	431,395	2,361,165			
Accumulated Deferred Income Taxes	NA	NA											
Total Rate Base	0	0	0	0	0	0	0	0	(10,057,185)	(40,059,867)			
Return On Rate Base	0	0	0	0	0	0	0	0	(762,542)	(3,016,746)			
Operating & Maintenance Expense													
Depreciation Expense	0	0	0	0	0	0	0	0	(431,395)	(1,925,911)			
Amortization Expense													
Taxes Other Than Income	0	0	0	0	0	0	0	0	(205 200)	(012 201)			
Federal Income Taxes State Income Taxes	0	0	0	0	0	0	0	0	(205,300) (27,897)	(812,201) (110,365)			
Deferred Income Taxes	0	0	0	0	0	0	0	0	(27,097)	(110,505)			
Misc Revenue & Expenses													
Revenue Credits													
Revenue Requirement (\$)	0	0	0	0	0	0	0	0	(1,427,133)	(5,865,223)			
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656			
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.10)	(0.40)			
Rev. Req. excl. Major & Minor Plant Adds. & Env Upgrades (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	432,975,390	402,318,756			
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656			
Scanario 3 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	29.36	27.36			

Notes: 1. NA = Data not available at the time of filing.

2. Federal and state income tax calculation assumes 50%/50% debt and equity capital structure components

Data Sources:

1. PacifiCorp Responses to Calpine Solutions Data Request Nos. 1.8 & 5.1.

Measurement Period: 2014-2015

PacifiCorp Calculation: Total Rate Base	2006 719,894,639	2007 1,336,508,766	2008 1,648,371,025	2009 1,713,216,752	2010 1,736,954,242	2011 1,815,681,297	2012 1,794,346,075	2013 1,741,041,460	2014 1,826,116,636	2015 1,739,528,889
Return On Rate Base	64,124,515	109,072,480	133,092,971	140,980,607	144,705,658	145,853,679	138,451,743	133,485,908	138,457,223	130,996,877
Operating & Maintenance Expense	92,140,549	112,008,196	125,482,619	121,104,940	152,130,476	150,819,888	138,323,152	141,947,327	135,214,927	131,405,825
Depreciation Expense	38,586,197	63,647,725	73,558,287	78,272,259	82,673,386	87,223,385	97,979,807	117,977,610	124,957,867	126,319,661
Amortization Expense	5,662,778	9,141,066	9,063,926	8,407,431	9,090,180	8,660,604	7,679,640	8,268,200	8,969,338	8,521,880
Taxes Other Than Income	9,609,011	11,989,900	14,060,167	15,439,056	17,203,839	19,052,597	19,151,857	19,728,897	20,128,593	20,996,832
Federal Income Taxes	10,360,962	22,917,351	(8,228,622)	(47,947,716)	(101,224,567)	(80,071,075)	(52,659,018)	(22,320,370)	(34,470,831)	(13,355,054)
State Income Taxes	1,354,613	4,376,898	429,505	(4,447,668)	(11,062,618)	(8,721,273)	(4,834,371)	(770,019)	(647,970)	412,968
Deferred Income Taxes	(764,258)	10,795,533	68,400,565	87,034,858	125,582,322	104,256,684	72,928,113	37,266,342	65,285,463	37,775,968
Misc Revenue & Expenses	(394,395)	(2,708,250)	(3,682,256)	(2,066,374)	(1,323,121)	(705,446)	(370,209)	(125,422)	(80,155)	(233,471)
Revenue Credits	(3,487,558)	(14,358,942)	(13,512,764)	(24,765,022)	(17,404,366)	(17,533,328)	(16,390,747)	(14,380,891)	(11,649,449)	(9,314,713)
Revenue Requirement (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	433,526,775
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.49
Scenario 1: Calpine Removal of Major Plant Capital Additions: ¹										
Gross Plant in Service	0	0	0	0	0	0	0	0	0	(156,856)
Accumulated Depreciation	0	0	0	0	0	0	0	0	0	4,737
Accumulated Deferred Income Taxes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Rate Base	0	0	0	0	0	0	0	0	0	(152,119)
Return On Rate Base	0	0	0	0	0	0	0	0	0	(11,455)
Operating & Maintenance Expense										
Depreciation Expense	0	0	0	0	0	0	0	0	0	(4,737)
Amortization Expense										
Taxes Other Than Income										
Federal Income Taxes	0	0	0	0	0	0	0	0	0	(3,084)
State Income Taxes	0	0	0	0	0	0	0	0	0	(419)
Deferred Income Taxes										
Misc Revenue & Expenses										
Revenue Credits										
Revenue Requirement (\$)	0	0	0	0	0	0	0	0	0	(19,696)
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.00)
Revenue Requirement excl. Major Plant Additions (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	433,507,079
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656
Scenario 1 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.48

Measurement Period: 2014-2015

PacifiCorp State of Oregon Historical Time Series of Fixed Generation Costs by Component											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
Scenario 2: Calpine Removal of Capital Additions <\$1,000,000: ²	2000	2007	2000	2005	2010	2011	2012	2010	2011	2015	
Gross Plant in Service	0	0	0	0	0	0	0	0	0	(13,861,124)	
Accumulated Depreciation	0	0	0	0	0	0	0	0	0	731,219	
Accumulated Deferred Income Taxes	NA										
Total Rate Base	0	0	0	0	0	0	0	0	0	(13,129,905)	
Return On Rate Base	0	0	0	0	0	0	0	0	0	(988,760)	
Operating & Maintenance Expense											
Depreciation Expense	0	0	0	0	0	0	0	0	0	(731,219)	
Amortization Expense Taxes Other Than Income											
Federal Income Taxes	0	0	0	0	0	0	0	0	0	(266,205)	
State Income Taxes	0	0	0	0	0	0	0	0	0	(36,173)	
Deferred Income Taxes	0	0	0	0	0	0	0	0	0	(50,175)	
Misc Revenue & Expenses											
Revenue Credits											
Revenue Requirement (\$)	0	0	0	0	0	0	0	0	0	(2,022,356)	
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656	
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.14)	
Revenue Requirement excl. Major Plant & <\$1M Additions (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	431,484,723	
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656	
Scenario 2 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.35	
Scenario 3: Calpine Removal of Steam Plant Environmental Upgrades: ³											
Gross Plant in Service	0	0	0	0	0	0	0	0	0	(21,256,246)	
Accumulated Depreciation	0	0	0	0	0	0	0	0	0	1,055,403	
Accumulated Deferred Income Taxes	NA										
Total Rate Base	0	0	0	0	0	0	0	0	0	(20,200,843)	
Return On Rate Base	0	0	0	0	0	0	0	0	0	(1,521,244)	
Operating & Maintenance Expense	0	0	0	0	0	0	0	0	0	(1.055.402)	
Depreciation Expense Amortization Expense	0	0	0	0	0	0	0	0	0	(1,055,403)	
Taxes Other Than Income											
Federal Income Taxes	0	0	0	0	0	0	0	0	0	(409,566)	
State Income Taxes	0	0	0	0	0	0	0	0	0	(55,653)	
Deferred Income Taxes										(,,	
Misc Revenue & Expenses											
Revenue Credits											
Revenue Requirement (\$)	0	0	0	0	0	0	0	0	0	(3,041,865)	
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656	
Revenue Requirement (\$/MWh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	(0.21)	
Rev. Req. excl. Major & Minor Plant Adds. & Env Upgrades (\$)	217,192,412	326,881,959	398,664,399	372,012,372	400,371,190	408,835,716	400,259,968	421,077,583	446,165,007	428,442,858	
MWh @ Input	14,779,272	15,543,706	15,342,576	14,715,193	14,576,188	14,403,902	14,537,470	14,555,494	14,744,774	14,702,656	
Scanario 3 (\$/MWh)	14.70	21.03	25.98	25.28	27.47	28.38	27.53	28.93	30.26	29.14	

Notes: 1. NA = Data not available at the time of filing.

2. Federal and state income tax calculation assumes 50%/50% debt and equity capital structure components

Data Sources:

1. PacifiCorp Responses to Calpine Solutions Data Request Nos. 1.8 & 5.1.