

BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON

In the Matter of PACIFICORP)	UE 323
)	
PacifiCorp 2018 Transition Adjustment Mechanism)	CROSS-EXAMINATION EXHIBITS AND LIST OF TESTIMONY AND EXHIBITS OF CALPINE ENERGY SOLUTIONS, LLC

Calpine Energy Solutions LLC (“Calpine Solutions”) hereby submits its cross-examination exhibits in this proceeding, and provides a list of all testimony and exhibits proposed for admission into the record.

Calpine Solutions has previously filed opening and rebuttal testimony of Kevin C. Higgins in this proceeding, which are Calpine Solutions/100 through Calpine Solutions/105 and Calpine Solutions/200 through Calpine Solutions/202, respectively.

Additionally, concurrent with this filing, Calpine Solutions is filing a motion to strike a portion of PacifiCorp’s proposed surrebuttal testimony, and in the alternative if the motion to strike is denied, the proposed additional rebuttal testimony of Kevin C. Higgins, which if admitted would be Calpine Solutions/300 through Calpine Solutions/301.

Calpine Solutions may offer two cross examination exhibits. These exhibits have been labeled Calpine Solutions/400 and Calpine Solutions/401, and are attached to this filing.

A complete list of Calpine Solutions’ list of all testimony and exhibits proposed for admission into the record is as follows:

Pre-Filed Testimony and Exhibits

Testimony/Exhibit	Description	Date Filed or Submitted
Calpine Solutions/100	Opening Testimony of Kevin C. Higgins	June 9, 2017
Calpine Solutions/101	OPUC Status Report – Oregon Electric Industry Restructuring (July 2016)	June 9, 2017
Calpine Solutions/102	PacifiCorp Responses to Data Requests Referenced in Testimony	June 9, 2017
Calpine Solutions/103	Non-Confidential Excerpt from PacifiCorp Response to Calpine Solutions Data Request 1.7	June 9, 2017
Calpine Solutions/104	Calpine Solutions Adjustment to Sample Schedule 296 Consumer Opt-Out Charges for Schedules 30 - S and 48 - P	June 9, 2017
Calpine Solutions/105	Oregon Fixed Generation Costs 2006-2015 with Incremental Generation Investment Removed	June 9, 2017
Calpine Solutions/200	Rebuttal Testimony of Kevin C. Higgins	August 2, 2017
Redacted and Confidential Calpine Solutions/201	PacifiCorp Response to Calpine Solutions Data Request 6.1	August 2, 2017
Calpine Solutions/202	PacifiCorp Response to Calpine Solutions Data Request 1.3	August 2, 2017
Calpine Solutions/300 (offered only if motion to strike is denied)	Proposed Additional Rebuttal Testimony of Kevin C. Higgins	August 24, 2017
Calpine Solutions/301 (offered only if motion to strike is denied)	Additional Fixed Generation Cost Calculations in Support of Additional Rebuttal Testimony	August 24, 2017

Hearing Exhibits

Testimony/Exhibit	Description	Date Filed or Submitted
Calpine Solutions/400	PacifiCorp's Response to Calpine Solutions Data Request 1.8	August 25, 2016
Calpine Solutions/401	PacifiCorp's Response and 1st Revised Response to Calpine Solutions Data Request 3.1	August 25, 2016

Calpine Solutions also reserves the right to move for admission of any additional material provided in discovery after the time of this filing.

DATED this 24th day of August, 2017.

RICHARDSON ADAMS, PLLC

/s/ Gregory M. Adams

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Calpine Energy Solutions Data Request 1.8

Please refer to the Direct Testimony of Michael Wilding, pp. 36-37:

- (a) Please provide all work papers in support of Exhibit PAC/110 in Excel format with formulas intact.
- (b) For each year shown in Exhibit PAC/110, please break out rate base by all of its constituent components (i.e., plant in service, accumulated depreciation, ADIT, etc.).
- (c) For each year shown in Exhibit PAC/110, please identify all new generation additions to rate base in excess of \$1,000,000 and identify the amount of plant in service for each item.
- (d) Please restate Exhibit PAC/100 by excluding all additions to rate base (and all incremental costs associated said additions) that occurred after 2006.
- (e) Please restate Exhibit PAC/100 by excluding all additions to rate base (and all incremental costs associated said additions) that occurred after 2010.

Response to Calpine Energy Solutions Data Request 1.8

- (a) Please refer to the concurrent work papers that accompanied the Direct Testimony of Company witness, Michael G. Wilding. Specifically, the non-confidential folder entitled “Work Papers for Exhibit 110 NON-CONF.”
- (b) Please refer to the concurrent work papers that accompanied Mr. Wilding’s Direct Testimony. Specifically, the non-confidential folder entitled “Work Papers for Exhibit 110 NON-CONF.” A break out of rate base by its constituent components is provided in the “COS Oregon Functionalization Model” files for each year on the tab entitled “FuncStudy.”
- (c) Please refer to Attachment Calpine Energy Solutions 1.8.
- (d) The Company assumes that the reference to “Exhibit PAC/100” is intended to reference Exhibit PAC/110. Based on the foregoing assumption, the Company responds as follows:

The Company objects to this request as overly broad and burdensome, and unlikely to lead to the discovery of admissible evidence. The requested information is not readily available.

- (e) The Company assumes that the reference to “Exhibit PAC/100” is intended to reference Exhibit PAC/110. Based on the foregoing assumption, the Company

responds as follows:

The Company objects to this request as overly broad and burdensome, and unlikely to lead to the discovery of admissible evidence. The requested information is not readily available.

PacifiCorp - UE323														
Calpine Energy Solutions DR 1.8c														
2006-2016 New Generation Plant Additions (Generation Function only)														
Project Definition	Project Description	Function	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Grand Total
OLSP/2011/C/050	Lake Side 2 Build	Other Production				333,778,390					640,672,616	1,218,684	(4,058)	641,887,243
OCLS/2008/C/001	Chehalis Plant Acquisition (from Account 102)	Other Production												333,778,390
OLSP/2005/C/001	Lake Side Capital Build	Other Production	260	323,067,334	4,080,788	89,759	(486)							327,237,655
WMAR/2006/C/001	Marengo Wind Project (140.4 MW)	Other Production		238,339,163	117,623	106,563		384,105						238,947,454
WDWP/2009/C/001	Dunlap 111 MW Phase I Wind Project	Other Production					232,073,519	356,670	(23,295)					232,406,895
WHPL/2008/C/001	High Plains Wind Plant Project (99 MW)	Other Production				218,762,879	62,903	14,237	8,219					218,848,239
WGRP/2007/C/001	Glenrock Wind Plant (99 MW)	Other Production			202,025,156	(1,510,714)	43,841	(38,579)						200,519,704
WGHP/2006/C/001	Goodnoe Hills Wind Project (94 MW)	Other Production			183,751,191	(4,441,966)	404,945	(41,764)		(394,594)				179,277,812
WLJP/2006/C/001	Leaning Juniper 1 Wind Plant (101 MW)	Other Production	175,434,259	280,217	1,115,590	560,188	14,013							177,404,267
OCCK/2004/C/001	Currant Creek Power Project	Other Production	176,643,838	(1,081,574)	39,007	2,088		7,969						175,611,328
WMAR/2007/C/002	Marengo II Wind Expansion (70.2 MW)	Other Production			124,972,998	525,805	(896)	101,454						125,599,362
WSMH/2007/C/002	Seven Mile Hill Network WBS (99 MW)	Other Production			124,656,846	(1,255,382)	190,634	(62,226)	100					123,529,971
WGRP/2008/C/004	Glenrock III Wind Plant Project (39 MW)	Other Production				86,840,843	1,237							86,842,080
WSMH/2007/C/001	Seven Mile Hill Wind Plant (99 MW)	Other Production			67,868,333	7,400,836	9,653							75,278,821
WMP/2008/C/001	McFadden Ridge Wind Project (88.5 MW)	Other Production				56,209,316	26,693		1,395					56,237,404
WSMH/2008/C/003	Seven Mile Hill II Wind Plant (19.5 MW)	Other Production			41,391,245	(86,424)	18,180							41,323,002
SBLU/2006/C/100	Blundell Bottoming Cycle (Blundell Geothermal Unit 2)	Steam Production		22,165,654	2,403,332	1,697,939	(11,821)							26,255,103
			352,078,357	582,770,794	752,422,108	698,680,119	232,832,416	721,867	(13,581)	(394,594)	640,672,616	1,218,684	(4,058)	3,260,984,729

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Calpine Energy Solutions Data Request 3.1

Calpine Energy Solutions Data Request 3.1

Follow up to PacifiCorp Response to Calpine Energy Solutions 1.8(c):

- (a) For each of the facilities shown in Attachment Calpine Energy Solutions 1.8(c) please provide net contribution to rate base of that facility (i.e., taking into account plant in service, ADIT, accumulated depreciation) for each year of the table.
- (b) For each year shown in the table, please provide the net addition to rate base (i.e., taking into account plant in service, ADIT, accumulated depreciation) made in that year for generation investments of \$1,000,000 or less.
- (c) For each year shown in the table, please provide the *cumulative* net addition to rate base (i.e., taking into account plant in service, ADIT, accumulated depreciation) for generation investments of \$1,000,000 or less made starting in 2006.
- (d) Please provide the information in Attachment Calpine Energy Solutions 1.8(c) for environmental upgrades at generation facilities.
- (e) For each of the environmental upgrades provided in part (d), please provide the net contribution to rate base of that upgrade (i.e., taking into account plant in service, ADIT, accumulated depreciation) for each year of the table.

Response to Calpine Energy Solutions Data Request 3.1

The Company objects to this request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Without waiving these objections, the Company responds as follows:

- (a) Please refer to Attachment Calpine Energy Solutions 3.1 -1, which provides the net contribution to rate base of the facilities provided in the Company's response to Calpine Energy Solutions Data Request 1.8; specifically Attachment Calpine Energy Solution 1.8(c). The attachment takes into account plant in service and accumulated depreciation for each year. This attachment does not take into account accumulated deferred income tax (ADIT) at this time. This response will be supplemented when the ADIT portion is complete.
- (b) Please refer to Attachment Calpine Energy Solutions 3.1 -2, which provides the net additions shown in the table to rate base, made in that year, for generation investments less than a \$1 million. The attachment does not take into account ADIT at this time. The Company will supplement this response when the ADIT portion is complete.

Despite PacifiCorp's diligent efforts, certain information protected from disclosure by the attorney-client privilege or other applicable privileges or law may have been included in its responses to these data requests. PacifiCorp did not intend to waive any applicable privileges or rights by the inadvertent disclosure of protected information, and PacifiCorp reserves its right to request the return or destruction of any privileged or protected materials that may have been inadvertently disclosed. Please inform PacifiCorp immediately if you become aware of any inadvertently disclosed information.

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- (c) Please refer to Attachment Calpine Energy Solutions 3.1 -2, which provides for each year shown in the table for the *cumulative* net addition to rate base (i.e., taking into account plant in service and accumulated depreciation) for generation investments of \$1 million or less made starting in 2006. The attachment does not take into account ADIT at this time. The Company will supplement this response when the ADIT portion is complete.
- (d) Please refer to Confidential Attachment Calpine 3.1 -3.
- (e) For each of the environmental upgrades provided in subpart (d), please refer to Attachment Calpine Energy Solutions 3.1 -4, which provides the net contribution to rate base of that upgrade (taking into account plant in service and accumulated depreciation) for each year of the table. The attachment does not take into account ADIT at this time. The Company will supplement this response when the ADIT portion is complete.

Confidential information is designated as Protected Information under Order No. 16-128 and may only be disclosed to qualified persons as defined in that order.

Despite PacifiCorp's diligent efforts, certain information protected from disclosure by the attorney-client privilege or other applicable privileges or law may have been included in its responses to these data requests. PacifiCorp did not intend to waive any applicable privileges or rights by the inadvertent disclosure of protected information, and PacifiCorp reserves its right to request the return or destruction of any privileged or protected materials that may have been inadvertently disclosed. Please inform PacifiCorp immediately if you become aware of any inadvertently disclosed information.

Calpine Energy Solutions Data Request 3.1

Follow up to PacifiCorp Response to Calpine Energy Solutions 1.8(c):

- (a) For each of the facilities shown in Attachment Calpine Energy Solutions 1.8(c) please provide net contribution to rate base of that facility (i.e., taking into account plant in service, ADIT, accumulated depreciation) for each year of the table.
- (b) For each year shown in the table, please provide the net addition to rate base (i.e., taking into account plant in service, ADIT, accumulated depreciation) made in that year for generation investments of \$1,000,000 or less.
- (c) For each year shown in the table, please provide the *cumulative* net addition to rate base (i.e., taking into account plant in service, ADIT, accumulated depreciation) for generation investments of \$1,000,000 or less made starting in 2006.
- (d) Please provide the information in Attachment Calpine Energy Solutions 1.8(c) for environmental upgrades at generation facilities.
- (e) For each of the environmental upgrades provided in part (d), please provide the net contribution to rate base of that upgrade (i.e., taking into account plant in service, ADIT, accumulated depreciation) for each year of the table.

1st Revised Response to Calpine Energy Solutions Data Request 3.1

The Company continues to object to this request as overly broad, unduly burdensome, and not reasonably calculated to lead to the discovery of admissible evidence. Without waiving these objections, the Company responds as follows:

The Company discovered an error in the original Attachment Calpine Solutions 3.1-2 provided with the Company's response dated June 15, 2017. In the original Attachment Calpine Solutions 3.1-2, some of the >\$1m projects were not filtered out. This resulted in a \$47 million overstatement. Please refer to Attachment Calpine Energy Solutions 3.1-2 1st Revised which replaces the original attachment in its entirety.

As with the original attachment, the revised version does not take into account ADIT at this time. The Company has attempted to calculate ADIT per the request. However, upon further review, the Company has determined that calculating ADIT would require a significant amount of time and effort and would take an additional 6-8 weeks of calculations. PacifiCorp does not track ADIT by facility and recalculation of ADIT by facility requires an analysis of the applicable tax rules at any given time. Accordingly, PacifiCorp renews its objection to the ADIT portion of the data request as unduly burdensome. PacifiCorp proposed providing the information for 2015 and 2016, the

period subsequent to the last change in applicable tax laws. However, counsel for Calpine Solutions has stated that a subset of the information is not useful.