



Portland General Electric Company
Legal Department
121 SW Salmon Street • Portland, Oregon 97204
(503) 464-8926 • Facsimile (503) 464-2200

Douglas C. Tingey
Associate General Counsel

June 30, 2014

Via Electronic Filing and U.S. Mail

Oregon Public Utility Commission
Attention: Filing Center
P.O. Box 1088
Salem OR 97308-1088

Re: UM 1679 – Portland General Electric Company’s Detailed Depreciation Study of Electric Utility Properties

Attention Filing Center:

Enclosed for filing in the above-referenced docket are an original and five copies of the:

- **Stipulation; and**
- **Joint Testimony in Support of Stipulation (UM 1679/ Staff – CUB – PGE/100).**

The affidavits in support of the Joint Testimony will be provided at a later date. These documents are also being filed by electronic mail with the Filing Center and electronically served upon the UM 1679 service list.

Thank you in advance for your assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. Tingey", is written over the typed name.

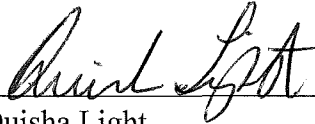
Douglas C. Tingey
Associate General Counsel

DCT:qal
Enclosures
cc: Service List-UM 1679

CERTIFICATE OF SERVICE

I hereby certify that I served the **JOINT PARTIES' STIPULATION AND JOINT TESTIMONY IN SUPPORT OF STIPULATION**, in Docket No. **UM 1679**, by electronic mail to those parties whose email addresses appear on the attached service list for OPUC Docket No. UM 1679.

DATED at Portland, Oregon, this 30th day of June, 2014.



Quisha Light
Regulatory Paralegal
Portland General Electric Company
121 SW Salmon St., 1WTC1301
Portland, OR 97204
(503) 464-8866 (Telephone)
(503) 464-2200 (Fax)
quisha.light@pgn.com

SERVICE LIST –

OPUC DOCKET #UM 1679

OPUC Dockets CITIZENS' UTILITY BOARD OF OREGON dockets@oregoncub.org	Ming Peng PUBLIC UTILITY COMMISSION ming.peng@state.or.us
Robert Jenks CITIZENS' UTILITY BOARD OF OREGON bob@oregoncub.org	Michael T. Weirich PUC STAFF- DEPARTMENT OF JUSTICE Michael.weirich@state.or.us
G. Catriona Mccracken CITIZENS' UTILITY BOARD OF OREGON catriona@oregoncub.org	

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1679

In the Matter of

PORTLAND GENERAL ELECTRIC
COMPANY

Detailed Depreciation Study of Electric
Utility Properties.

STIPULATION

This Stipulation (“Stipulation”) is between Portland General Electric Company (“PGE”), Staff of the Public Utility Commission of Oregon (“Staff”), and the Citizens’ Utility Board of Oregon (“CUB”) (collectively, the “Stipulating Parties”).

On December 5, 2013, PGE filed with Oregon Public Utility Commission (“Commission”) the results of a detailed depreciation study of its utility properties as of December 31, 2012, which included proposed depreciation lives, curves, and net salvage rates (collectively the “parameters”) and depreciation rates for PGE’s generation, transmission, distribution, general plant, and intangible assets. Based on the December 31, 2012, plant balances, the change in depreciation parameters proposed by PGE would have resulted in an annual depreciation decrease of approximately \$2.2 million, not including PGE’s new Tucannon River Wind Farm and Port Westward II generating facilities. In addition, PGE filed proposed depreciation parameters to be used for the Tucannon River Wind Farm and Port Westward II generation facilities.

On February 13, 2014, PGE filed an application for a general rate revision, Docket UE 283, to be effective January 1, 2015. The depreciation rates that will be used in Docket UE 283 are the rates set in this docket.

On May 22, 2014, PGE, Staff and CUB participated in a Settlement Conference at the Commission's office in Salem, Oregon. The discussions resulted in a compromise settlement of the Parties. Exhibit "102, Table1" to this stipulation, attached hereto, sets forth the detailed account-by-account depreciation parameters and rates that parties agree should be adopted by the Commission.

PGE, Staff and CUB request that the Commission issue orders in this docket implementing the terms of this Stipulation. As a compromise position on the issues in controversy, the Parties have agreed to depreciation parameters and rates that would result in a decrease of approximately \$11.5 million on an annual basis from that originally proposed in this docket based on plant data at December 31, 2012. Applying the stipulated depreciation parameters, including those applicable to new generation facilities, to PGE's 2015 test year in docket UE 283 results in the revenue requirement changes summarized in Exhibit "102, Table1".

TERMS OF STIPULATION

1. This Stipulation resolves all issues regarding PGE's application seeking a change in depreciation rates applicable to its plant.
2. The Parties agree that the changes shown in Exhibit "103, Table2" to this Stipulation should be made for the identified lives, curves, net salvage value, and rates. With the exception of the parameters set forth in Exhibit "103, Table2" to this Stipulation, the parameters should remain as filed in PGE's Study.
3. Exhibit "102, Table1" to the Stipulation is a complete list of all PGE depreciation parameters for all plant accounts by location.
4. As part of this settlement the Parties agree that PGE should use the Average Service Life depreciation procedure for all new generating plants placed in service after

December 31, 2012. Regarding the new generating plants that will come on line between 2013 and 2016 that are currently in development the list for these new plants is shown on Exhibit “102, Table1, Note 1.” PGE will continue to use the straight-line, Equal Life Group method for all existing assets and accounts. This approach and resulting depreciation parameters and rates are included in the parameters listed in Exhibit “103, Table2”.

5. PGE will make a compliance filing by submitting the depreciation technical update filing to OPUC no later than one year after a new generating facility comes on-line that will consist of an attestation by the CFO that PGE is using the Average Service Life for the new generating plant(s) as well as sample accounting entries that demonstrate its use.

6. The revised depreciation parameters described above and set forth in Exhibit “102, Table1” are reasonable and should be adopted.

7. The revised depreciation rates shall be implemented on the effective date of PGE’s pending general rate request in Docket UE 283.

8. No later than the end of 2018, PGE shall file with the Commission another detailed depreciation study of its utility property. The depreciation parameters detailed in Stipulation Exhibit 102, Table1 will be utilized until the effective date of the next depreciation study.

9. The Stipulating Parties recommend and request that the Commission approve the adjustments described herein as appropriate and reasonable resolutions of all issues in this docket.

10. The Stipulating Parties agree that this Stipulation is in the public interest and will result in rates that are fair, just and reasonable and, if approved, will meet the standard in ORS 756.040.

11. The Stipulating Parties agree that this Stipulation represents a compromise in the positions of the parties. Without the written consent of all parties, evidence of conduct or statements, including but not limited to term sheets or other documents created solely for use in settlement conferences in this docket, are confidential and not admissible in the instant or any subsequent proceeding, unless independently discoverable or offered for other purposes allowed under ORS 40.190.

12. The Stipulating Parties have negotiated this Comprehensive Settlement as an integrated document. If the Commission rejects all or any material part of this Stipulation, or adds any material condition to any final order that is not consistent with this Stipulation, each Stipulating Party reserves its right to: (i) withdraw from the Stipulation, upon written notice to the Commission and other Parties within five (5) business days of service of the final order that rejects this Stipulation, in whole or material part, or adds such material condition; (ii) pursuant to OAR 860-001-0350(9), to present evidence and argument on the record in support of the Stipulation, including the right to cross-examine witnesses, introduce evidence as deemed appropriate to respond fully to issues presented, and raise issues that are incorporated in the settlement embodied in this Stipulation; and (iii) pursuant to ORS 756.561 and OAR 860-001-0720, to seek rehearing or reconsideration or to appeal the Commission order under ORS 756.610. Nothing in this paragraph provides any Party the right to withdraw from this Stipulation as a result of the Commission's resolution of issues that this Stipulation does not resolve.

13. This Stipulation will be offered into the record in this proceeding as evidence pursuant to OAR 860-01-0350(7). The Stipulating Parties agree to support this Stipulation throughout this proceeding and in any appeal, provide witnesses to support this Stipulation (if

specifically required by the Commission), and recommend that the Commission issue an order adopting the settlements contained herein. The Stipulating Parties also agree to cooperate in drafting and submitting an explanatory brief and written testimony per OAR 860-001-0350(7), unless such requirement is waived. By entering into this Stipulation, no Stipulating Party shall be deemed to have approved, admitted or consented to the facts, principles, methods or theories employed by any other Party in arriving at the terms of this Stipulation. Except as provided in this Stipulation, no Stipulating Party shall be deemed to have agreed that any provision of this Stipulation is appropriate for resolving issues in any other proceeding.

14. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

DATED this 30th day of June, 2014.



PORTLAND GENERAL ELECTRIC
COMPANY

STAFF OF THE PUBLIC UTILITY
COMMISSION OF OREGON

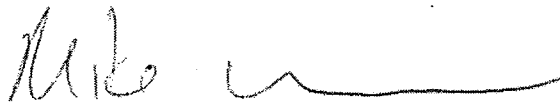
CITIZENS' UTILITY BOARD
OF OREGON

adopting the settlements contained herein. The Stipulating Parties also agree to cooperate in drafting and submitting an explanatory brief and written testimony per OAR 860-001-0350(7), unless such requirement is waived. By entering into this Stipulation, no Stipulating Party shall be deemed to have approved, admitted or consented to the facts, principles, methods or theories employed by any other Party in arriving at the terms of this Stipulation. Except as provided in this Stipulation, no Stipulating Party shall be deemed to have agreed that any provision of this Stipulation is appropriate for resolving issues in any other proceeding.

14. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

DATED this 27th day of June, 2014.

PORTLAND GENERAL ELECTRIC
COMPANY


STAFF OF THE PUBLIC UTILITY
COMMISSION OF OREGON
(Attorney)

CITIZENS' UTILITY BOARD
OF OREGON

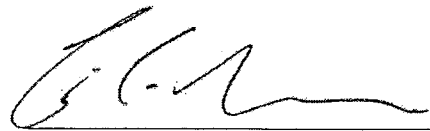
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DATED this 27th day of June, 2014.

PORTLAND GENERAL ELECTRIC
COMPANY

STAFF OF THE PUBLIC UTILITY
COMMISSION OF OREGON



CITIZENS' UTILITY BOARD
OF OREGON

PORTLAND GENERAL ELECTRIC
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AT DECEMBER 31, 2012 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)=(6)/(7)	
						AMOUNT (7)	RATE (8)=(7)/(4)		
STEAM PRODUCTION PLANT									
311.00	BOARDMAN STRUCTURES AND IMPROVEMENTS	90 - S1.5 *	(1)	103,163,606.77	76,864,082	27,331,161	3,287,441 **	3.19	8.0
312.00	BOILER PLANT EQUIPMENT	65 - R3 *	(1)	227,278,716.19	143,601,262	85,950,241	10,459,682 **	4.60	8.0
312.00	BOARDMAN DECOMMISSIONING ACCRUAL			0.00	27,346,614	17,406,389	2,175,804 **	-	8.0
312.01	RAIL CARS	26 - S0 *	0	9,758,265.28	7,667,449	2,090,816	261,352 **	2.68	8.0
314.00	TURBOGENERATOR UNITS	60 - S0.5 *	(1)	90,135,378.46	56,819,219	34,217,513	4,164,520 **	4.62	8.0
315.00	ACCESSORY ELECTRIC EQUIPMENT	60 - R2.5 *	(1)	23,582,186.18	17,351,696	6,466,312	778,811 **	3.30	8.0
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	55 - R1 *	(1)	5,803,273.23	3,970,515	1,890,791	229,095 **	3.95	8.0
	TOTAL BOARDMAN			459,721,426.11	333,620,837	175,353,223	21,356,704	4.65	8.0
COLSTRIP									
311.00	STRUCTURES AND IMPROVEMENTS	90 - S1.5 *	(5)	115,308,214.32	94,985,340	26,088,285	958,829	0.83	27.2
312.00	BOILER PLANT EQUIPMENT	65 - R3 *	(5)	216,919,862.50	169,869,621	57,896,235	2,175,748	1.00	26.6
314.00	TURBOGENERATOR UNITS	60 - S0.5 *	(5)	75,365,578.58	40,157,331	38,976,526	1,644,217	2.18	23.7
315.00	ACCESSORY ELECTRIC EQUIPMENT	60 - R2.5 *	(5)	23,556,967.88	18,545,900	6,188,916	256,139	1.09	24.2
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	55 - R1 *	(5)	6,346,149.23	4,741,026	1,922,431	84,395	1.33	22.8
	TOTAL COLSTRIP			437,496,772.51	328,299,217	131,072,393	5,119,328	1.17	25.6
	TOTAL STEAM PRODUCTION PLANT			897,218,198.62	661,920,054	306,425,616	26,476,032	2.95	11.6
HYDRAULIC PRODUCTION PLANT									
331.00	STRUCTURES AND IMPROVEMENTS								
	FARADAY	100 - R2.5 *	(50)	6,479,397.20	1,212,225	8,506,871	224,988	3.47	37.8
	NORTH FORK	100 - R2.5 *	(115)	8,260,817.28	1,580,450	16,180,307	420,381	5.09	38.5
	OAK GROVE	100 - R2.5 *	(50)	3,398,112.29	1,458,859	3,638,309	99,796	2.94	36.5
	OAK GROVE - TIMOTHY LAKE	100 - R2.5 *	(50)	2,252,149.83	810,067	2,568,158	66,267	2.94	38.8
	PELTON	100 - R2.5 *	(110)	5,645,635.78	1,872,777	9,983,058	263,270	4.66	37.9
	RIVER MILL	100 - R2.5 *	(80)	2,753,573.44	888,480	4,067,952	115,450	4.19	35.2
	ROUND BUTTE	100 - R2.5 *	(75)	9,696,059.00	2,341,042	14,627,061	385,957	3.98	37.9
	SULLIVAN	100 - R2.5 *	(30)	9,437,850.41	1,478,588	10,790,618	499,841	5.30	21.6
	TOTAL STRUCTURES AND IMPROVEMENTS			47,923,595.23	11,642,487	70,362,334	2,075,950	4.33	33.9
332.00	RESERVOIRS, DAMS AND WATERWAYS								
	FARADAY	100 - R3 *	(50)	24,223,754.94	11,961,626	24,374,007	625,247	2.58	39.0
	NORTH FORK	100 - R3 *	(115)	22,104,599.29	15,651,253	31,873,636	849,138	3.84	37.5
	OAK GROVE	100 - R3 *	(50)	14,728,506.43	14,428,936	7,663,824	193,663	1.31	39.6
	OAK GROVE - TIMOTHY LAKE	100 - R3 *	(50)	4,740,064.79	5,207,421	1,902,676	52,696	1.11	36.1
	PELTON	100 - R3 *	(110)	10,223,106.37	8,252,401	13,216,122	362,037	3.54	36.5
	RIVER MILL	100 - R3 *	(80)	52,789,060.05	8,988,578	86,031,730	2,145,074	4.06	40.1
	ROUND BUTTE	100 - R3 *	(75)	103,758,407.21	25,289,701	156,287,512	3,895,851	3.75	40.1
	SULLIVAN	100 - R3 *	(30)	23,381,331.65	4,831,799	25,563,932	1,160,692	4.96	22.0
	TOTAL RESERVOIRS, DAMS AND WATERWAYS			255,948,830.73	94,611,715	346,913,439	9,284,398	3.63	37.4

PORTLAND GENERAL ELECTRIC
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AT DECEMBER 31, 2012 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)=(6)/(7)	
						AMOUNT (7)	RATE (8)=(7)/(4)		
333.00	WATER WHEELS, TURBINES AND GENERATORS								
	FARADAY	90 - S1 *	(50)	6,608,291.00	2,914,660	6,997,777	189,402	2.87	36.9
	NORTH FORK	90 - S1 *	(110)	6,887,358.20	4,808,993	9,654,459	279,711	4.06	34.5
	OAK GROVE	90 - S1 *	(50)	6,438,763.32	2,695,592	6,962,553	188,685	2.93	36.9
	PELTON	90 - S1 *	(100)	3,964,266.18	4,137,997	3,790,535	115,856	2.92	32.7
	RIVER MILL	90 - S1 *	(80)	5,666,409.59	2,183,139	8,016,398	215,831	3.81	37.1
	ROUND BUTTE	90 - S1 *	(70)	13,170,715.97	7,767,838	14,622,379	392,371	2.98	37.3
	SULLIVAN	90 - S1 *	(30)	9,206,560.54	3,018,905	8,949,624	415,581	4.51	21.5
	TOTAL WATER WHEELS, TURBINES AND GENERATORS			51,942,364.80	27,527,125	58,993,725	1,797,437	3.46	32.8
334.00	ACCESSORY ELECTRIC EQUIPMENT								
	FARADAY	60 - R2.5 *	(30)	2,300,700.84	1,009,001	1,981,911	62,329	2.71	31.8
	NORTH FORK	60 - R2.5 *	(75)	949,835.89	505,575	1,156,637	39,264	4.13	29.5
	OAK GROVE	60 - R2.5 *	(30)	2,372,228.34	748,450	2,335,447	71,867	3.03	32.5
	PELTON	60 - R2.5 *	(75)	2,231,610.73	690,153	3,215,166	99,259	4.45	32.4
	RIVER MILL	60 - R2.5 *	(45)	2,528,354.14	843,022	2,823,092	86,091	3.41	32.8
	ROUND BUTTE	60 - R2.5 *	(35)	1,909,870.89	736,560	1,841,765	54,801	2.87	33.6
	SULLIVAN	60 - R2.5 *	(25)	4,270,652.93	674,739	4,663,577	221,169	5.18	21.1
	TOTAL ACCESSORY ELECTRIC EQUIPMENT			16,563,253.76	5,207,500	18,017,595	634,780	3.83	28.4
335.00	MISCELLANEOUS PLANT EQUIPMENT								
	FARADAY	55 - R0.5 *	(15)	227,707.67	86,861	175,003	7,484	3.29	23.4
	NORTH FORK	55 - R0.5 *	(50)	453,549.96	248,429	431,896	16,764	3.70	25.8
	OAK GROVE	55 - R0.5 *	(5)	90,217.98	41,306	53,423	2,055	2.28	26.0
	OAK GROVE - TIMOTHY LAKE	55 - R0.5 *	(5)	2,761.24	1,393	1,506	63	2.28	23.9
	PELTON	55 - R0.5 *	(40)	180,729.78	126,495	126,527	5,606	3.10	22.6
	RIVER MILL	55 - R0.5 *	(30)	20,116.12	4,868	21,283	774	3.85	27.5
	ROUND BUTTE	55 - R0.5 *	(30)	769,105.69	275,231	724,606	28,737	3.74	25.2
	SULLIVAN	55 - R0.5 *	(25)	109,225.68	18,312	118,221	6,437	5.89	18.4
	TOTAL MISCELLANEOUS PLANT EQUIPMENT			1,853,414.12	802,894	1,652,465	67,920	3.66	24.3
336.00	ROADS, RAILROADS, AND BRIDGES								
	FARADAY	80 - R1.5 *	(15)	1,976,298.06	567,848	1,704,895	49,998	2.53	34.1
	NORTH FORK	80 - R1.5 *	(50)	1,662,876.54	527,674	1,966,641	61,300	3.69	32.1
	OAK GROVE	80 - R1.5 *	(5)	2,215,114.33	2,153,069	172,801	5,323	0.24	32.5
	OAK GROVE - TIMOTHY LAKE	80 - R1.5 *	(5)	107,015.18	18,308	94,058	2,810	2.63	33.5
	PELTON	80 - R1.5 *	(40)	2,151,532.99	694,407	2,317,740	68,183	3.17	34.0
	RIVER MILL	80 - R1.5 *	(30)	458,019.14	114,105	481,320	14,109	3.08	34.1
	ROUND BUTTE	80 - R1.5 *	(30)	1,192,102.68	393,917	1,155,817	36,749	3.08	31.5
	TOTAL ROADS, RAILROADS, AND BRIDGES			9,762,958.92	4,469,327	7,893,272	238,472	2.44	33.1
	TOTAL HYDRAULIC PRODUCTION PLANT			383,994,417.56	144,261,048	503,832,830	14,098,957	3.67	35.7

PORTLAND GENERAL ELECTRIC
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						AMOUNT (7)	RATE (8)=(7)/(4)		
OTHER PRODUCTION PLANT									
341.00	STRUCTURES AND IMPROVEMENTS								
	BEAVER - CT	70 - R2 *	(8)	31,384,599.71	27,842,665	6,052,703	369,866	1.18	16.4
	COYOTE SPRINGS - CT	70 - R2 *	(8)	10,792,758.11	6,593,674	5,062,505	203,418	1.88	24.9
	PORT WESTWARD - CT	70 - R2 *	(10)	40,951,570.86	4,719,732	40,326,996	1,246,251	3.04	32.4
	TOTAL STRUCTURES AND IMPROVEMENTS			83,128,928.68	39,156,071	51,442,204	1,819,535	2.19	28.3
341.01	STRUCTURES AND IMPROVEMENTS - WIND	40 - R4	(9)	32,813,735.10	4,812,435	30,954,537	910,651	2.78	34.0
342.00	FUEL HOLDERS, PRODUCERS AND ACCESSORIES								
	BEAVER - CT	50 - R3 *	(8)	51,221,330.42	48,220,046	7,098,991	475,497	0.93	14.9
	BEAVER UNIT 8 - CT	50 - R3 *	(8)	1,301.12	765	640	38	2.92	16.8
	COYOTE SPRINGS - CT	50 - R3 *	(8)	35,792,019.04	21,039,639	17,615,742	743,942	2.08	23.7
	PORT WESTWARD - CT	50 - R3 *	(10)	9,462,372.34	4,494,496	5,914,114	182,391	1.93	32.4
	KB PIPELINE	50 - R3 *	(8)	19,373,076.01	15,258,576	5,664,346	347,713	1.79	16.3
	TOTAL FUEL HOLDERS, PRODUCERS AND ACCESSORIES			115,850,098.93	89,013,522	36,293,833	1,749,581	1.51	20.7
344.00	GENERATORS								
	BEAVER - CT	45 - R1 *	(8)	92,274,545.94	57,013,831	42,642,679	2,863,947	3.10	14.9
	BEAVER UNIT 8 - CT	45 - R1 *	(8)	3,829,309.44	2,091,118	2,044,536	135,042	3.53	15.1
	COYOTE SPRINGS - CT	45 - R1 *	(8)	123,550,931.60	49,065,311	84,369,695	4,270,941	3.46	19.8
	PORT WESTWARD - CT	45 - R1 *	(10)	188,072,933.42	31,102,803	175,777,424	7,200,621	3.83	24.4
	TOTAL GENERATORS			407,727,720.40	139,273,063	304,834,334	14,470,551	3.55	21.1
344.01	GENERATORS - WIND	30 - R3	(9)	860,382,974.39	127,377,520	810,439,922	35,197,604	4.09	23.0
345.00	ACCESSORY ELECTRIC EQUIPMENT								
	DISPATCH GENERATION	40 - R2.5	(6)	7,166,364.41	1,356,275	6,240,072	218,737	3.05	28.5
	BEAVER - CT	40 - R2.5 *	(6)	12,901,411.46	11,380,180	2,295,316	168,732	1.31	13.6
	BEAVER UNIT 8 - CT	40 - R2.5 *	(6)	75,508.20	17,759	62,280	3,845	5.09	16.2
	COYOTE SPRINGS - CT	40 - R2.5 *	(6)	11,549,937.95	7,022,985	5,219,949	263,497	2.28	19.8
	PORT WESTWARD - CT	40 - R2.5 *	(6)	8,909,074.88	1,965,498	7,478,122	275,599	3.09	27.1
	TOTAL ACCESSORY ELECTRIC EQUIPMENT			40,602,296.90	21,742,697	21,295,739	930,410	2.29	22.9
345.01	ACCESSORY ELECTRIC EQUIPMENT - WIND	30 - R2.5	(6)	24,958,049.06	2,866,156	23,589,376	1,063,450	4.26	22.2
346.00	MISCELLANEOUS PLANT EQUIPMENT								
	BEAVER - CT	55 - R2 *	(2)	4,303,163.78	3,422,973	966,254	61,121	1.42	15.8
	COYOTE SPRINGS - CT	55 - R2 *	(2)	2,060,507.64	1,207,375	894,343	38,090	1.85	23.5
	PORT WESTWARD - CT	55 - R2 *	(2)	2,876,766.10	404,039	2,530,263	83,999	2.92	30.1
	KB PIPELINE	55 - R2 *	(2)	78,841.79	64,122	16,297	1,024	1.30	15.9
	TOTAL MISCELLANEOUS PLANT EQUIPMENT			9,319,279.31	5,098,509	4,407,157	184,234	1.98	23.9
346.01	MISCELLANEOUS PLANT EQUIPMENT - WIND	35 - R2.5	(2)	847,553.98	132,834	731,671	29,059	3.43	25.2
	TOTAL OTHER PRODUCTION PLANT			1,575,630,636.75	429,472,806	1,283,988,773	56,355,075	3.58	22.8
	TOTAL PRODUCTION			2,856,843,252.93	1,235,653,908	2,094,247,219	96,930,064		

PORTLAND GENERAL ELECTRIC
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AT DECEMBER 31, 2012 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)=(6)/(7)	
						AMOUNT (7)	RATE (8)=(7)/(4)		
TRANSMISSION PLANT									
352.00	STRUCTURES AND IMPROVEMENTS	60 - R2.5	(15)	17,407,069.85	6,797,117	13,221,013	353,866	2.03	37.4
353.00	STATION EQUIPMENT	55 - R2	(15)	241,319,092.06	82,698,466	194,818,490	5,630,960	2.33	34.6
354.00	TOWERS AND FIXTURES	70 - R3	(10)	46,808,291.56	21,550,183	29,938,938	866,584	1.85	34.5
355.00	POLES AND FIXTURES	50 - R1.5	(50)	20,460,355.74	9,396,543	21,293,991	669,961	3.27	31.8
356.00	OVERHEAD CONDUCTORS AND DEVICES	60 - R2.5	(30)	74,129,949.12	57,901,127	38,467,807	918,417	1.24	41.9
359.00	ROADS AND TRAILS	60 - R4	0	339,371.32	146,519	192,853	6,680	1.97	28.9
TOTAL TRANSMISSION PLANT				400,464,129.65	178,489,955	297,933,092	8,446,468	2.11	35.3
DISTRIBUTION PLANT									
361.00	STRUCTURES AND IMPROVEMENTS	70 - R1.5	(25)	36,822,187.13	12,249,928	33,777,806	796,858	2.16	42.4
362.00	STATION EQUIPMENT	54 - S0	(20)	384,524,570.26	120,825,481	340,604,004	11,185,779	2.91	30.4
364.00	POLES, TOWERS AND FIXTURES	48 - R1	(60)	325,204,225.23	233,516,446	286,810,314	10,281,387	3.16	27.9
365.00	OVERHEAD CONDUCTORS AND DEVICES	48 - S0.5	(70)	533,059,150.98	324,305,182	581,895,375	20,060,538	3.76	29.0
366.00	UNDERGROUND CONDUIT	75 - R4	(13)	15,523,586.14	9,517,421	8,024,232	176,763	1.14	45.4
367.00	UNDERGROUND CONDUCTORS AND DEVICES	50 - S1.5	(70)	624,820,668.61	351,739,956	710,455,181	21,951,949	3.51	32.4
368.00	LINE TRANSFORMERS	45 - R3	(20)	306,548,578.44	158,484,717	209,373,577	7,431,903	2.42	28.2
369.01	SERVICES - OVERHEAD	55 - R1.5	(45)	40,361,949.72	37,798,996	20,725,831	658,812	1.63	31.5
369.03	SERVICES - UNDERGROUND	50 - R4	(45)	337,639,570.26	263,527,773	226,049,604	6,287,797	1.86	36.0
370.00	METERS	30 - S1.5	(8)	5,613,935.18	594,883	5,468,167	284,811	5.07	19.2
370.01	METERS - AMI	16 - S2.5	(8)	112,581,575.01	20,848,101	100,940,000	8,356,515	7.42	12.1
370.02	METERS - RETAINED	16 - L0.5	(8)	7,523,316.60	1,781,367	6,343,815	867,815	11.54	7.3
371.00	INSTALLATIONS ON CUSTOMERS' PREMISES	30 - R4	0	376,133.46	253,970	122,163	7,254	1.93	16.8
373.01	CIRCUITS - OTHER	46 - S0.5	(30)	21,175,639.91	15,125,414	12,402,918	451,214	2.13	27.5
373.02	FIXTURES, ORNAMENTAL POSTS AND DEVICES	28 - L1	(30)	28,661,421.75	27,473,507	9,786,341	611,172	2.13	16.0
373.07	SENTINEL LIGHTING EQUIPMENT	29 - L0.5	(30)	8,483,865.88	9,442,510	1,586,516	99,584	1.17	15.9
TOTAL DISTRIBUTION PLANT				2,788,920,374.56	1,587,285,652	2,554,365,844	89,510,151	3.21	28.5
GENERAL PLANT									
390.00	STRUCTURES AND IMPROVEMENTS	40 - R0.5	(5)	50,907,101.98	22,999,361	30,453,096	1,475,457	2.90	20.6
390.10	STRUCTURES AND IMPROVEMENTS - LEASE								
	CSS	SQUARE	0	6,709.18	2,976	3,733	622	9.27	6.0
	EASTPORT	SQUARE	0	58,032.12	54,037	3,995	1,019	1.76	3.9
	ERC TUALATIN	SQUARE	0	276,892.45	172,976	103,916	19,174	6.92	5.4
	HILLSBORO	SQUARE	0	59,238.14	53,297	5,941	5,942	10.03	1.0
	SALEM	SQUARE	0	84,421.47	51,711	32,710	13,516	16.01	2.4
	WILSONVILLE	SQUARE	0	155,328.32	101,221	54,107	24,048	15.48	2.2
	WTC	SQUARE	0	19,375,468.37	5,536,920	13,838,548	450,037	2.32	30.7
	TOTAL STRUCTURES AND IMPROVEMENTS			20,016,090.05	5,973,138	14,042,950	514,358	2.57	27.3
	OFFICE FURNITURE AND EQUIPMENT								
391.10	FURNITURE AND EQUIPMENT	15 - SQ	0	16,154,320.04	5,067,207	11,087,113	1,777,770	11.00	6.2
391.20	COMPUTERS AND EQUIPMENT	5 - SQ	0	50,495,108.71	21,120,607	29,374,501	10,624,019	21.04	2.8
	TOTAL OFFICE FURNITURE AND EQUIPMENT			66,649,428.75	26,187,814	40,461,614	12,401,789	18.61	3.3

PORTLAND GENERAL ELECTRIC
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AT DECEMBER 31, 2012 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)=(6)/(7)	
						AMOUNT (7)	RATE (8)=(7)/(4)		
TRANSPORTATION EQUIPMENT									
392.04	HEAVY DUTY TRUCKS	19 - S2	10	10,310,358.99	7,478,261	1,801,062	127,752	1.24	14.1
392.05	MEDIUM DUTY TRUCKS	15 - S1.5	10	13,096,541.35	7,837,401	3,949,487	460,131	3.51	8.6
392.06	LIGHT DUTY TRUCKS	12 - L2	10	8,585,404.78	5,761,784	1,965,081	327,645	3.82	6.0
392.08	TRAILERS	25 - S0	10	5,035,199.33	2,414,441	2,117,238	149,698	2.97	14.1
392.09	AUTOS	11 - S1.5	10	1,174,746.91	422,708	634,565	106,935	9.10	5.9
392.10	HELICOPTER	20 - S4	10	2,703,076.25	564,801	1,867,967	122,655	4.54	15.2
	TOTAL TRANSPORTATION EQUIPMENT			40,905,327.61	24,479,396	12,335,400	1,294,816	3.17	9.5
393.00	STORES EQUIPMENT	20 - SQ	0	2,851,685.89	1,067,992	1,783,694	154,588	5.42	11.5
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	20 - SQ	0	11,124,758.65	4,201,984	6,922,774	840,771	7.56	8.2
395.00	LABORATORY EQUIPMENT	17 - SQ	0	9,949,815.67	2,780,784	7,169,032	918,162	9.23	7.8
POWER OPERATED EQUIPMENT									
396.01	MAN LIFT	14 - S1.5	5	25,760,291.28	13,170,098	11,302,179	1,477,363	5.74	7.7
396.02	DIGGER	15 - S3	5	8,491,374.37	4,659,141	3,407,665	328,124	3.86	10.4
396.03	CRANE	20 - L3	5	4,868,443.43	3,235,875	1,389,147	102,937	2.11	13.5
396.07	CONSTRUCTION EQUIPMENT	20 - L1	5	5,660,187.07	3,479,017	1,917,161	174,793	3.08	11.0
	TOTAL POWER OPERATED EQUIPMENT			44,800,296.15	24,544,130	18,016,152	2,083,217	4.65	8.6
COMMUNICATION EQUIPMENT									
397.01	LINE EQUIPMENT	15 - SQ	0	1,833,384.98	544,039	1,289,346	116,397	6.35	11.1
397.03	RADIO, MICROWAVE AND TERMINAL EQUIPMENT	15 - SQ	0	69,486,640.99	31,953,470	37,533,171	5,863,891	8.44	6.4
397.06	MOBILE RADIO EQUIPMENT	15 - SQ	0	598,856.17	303,999	294,857	25,475	4.25	11.6
397.07	TELEPHONE EQUIPMENT	15 - SQ	0	688,064.05	439,897	248,167	49,235	7.16	5.0
	TOTAL COMMUNICATION EQUIPMENT			72,606,946.19	33,241,405	39,365,541	6,054,998	8.34	6.5
398.00	MISCELLANEOUS EQUIPMENT	20 - SQ	0	129,175.32	93,653	35,522	2,261	1.75	15.7
	TOTAL GENERAL PLANT			319,940,626.26	145,569,658	170,585,775	25,740,417	8.05	6.6
	TOTAL DEPRECIABLE PLANT			6,366,168,383.40	3,146,999,173	5,117,131,930	220,627,100	3.47	23.2
NONDEPRECIABLE / ACCOUNTS NOT STUDIED									
302.00				144,231,675.68	28,535,297				
303.00				212,946,637.54	122,646,130				
310.00				4,160,671.10					
317.00				24,903,797.00	5,327,284				
330.00				6,047,625.51	1,341,061				
332.00	BULL RUN			0.00	683,971				

PORTLAND GENERAL ELECTRIC
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AT DECEMBER 31, 2012 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)=(6)/(7)
						AMOUNT (7)	RATE (8)=(7)/(4)	
337.00			4,276.00					
340.00			48,946.01	275,794				
347.00			2,213,947.65					
350.00			11,230,107.76	(6,753)				
360.00			20,358,924.85	(1,115)				
370.03			0.00	(8,218)				
374.00			460,131.00					
389.00			7,195,880.64	(3,616)				
392.01			0.00	241,194				
399.00			64,488.00					
TOTAL NONDEPRECIABLE / NOT STUDIED			433,867,108.74	159,031,030				
TOTAL ELECTRIC PLANT			<u>6,800,035,492.14</u>	<u>3,306,030,202</u>	<u>5,117,131,930</u>	<u>220,627,100</u>		

* Curve shown is interim survivor curve. Each facility in the account is assigned an individual probable retirement year.
** Annual depreciation expense based on method previously approved by the OPUC in Order No. 10-478.

Notes:

1.) Accrual rates for facilities to be placed in service after December 31, 2012 using the ASLVG procedure are as follows.

	Rate	Survivor Curve	Net Salvage Percent	Remaining Life	Using ELG Procedure	
					Rate	Remaining Life
Port Westward II						
341.00	2.52	70 - R2 *	(7)	42.5	3.22	33.2
342.00	2.57	50 - R3 *	(7)	41.7	2.87	37.3
344.00	2.93	45 - R1 *	(7)	36.5	5.61	19.1
345.00	2.85	40 - R2.5 *	(6)	37.2	3.76	28.2
346.00	2.50	55 - R2 *	(2)	40.8	3.40	30.0
Carty						
341.00	2.52	70 - R2 *	(6)	42.1	3.15	33.6
342.00	2.57	50 - R3 *	(6)	41.3	2.85	37.2
344.00	2.93	45 - R1 *	(6)	36.2	5.30	20.0
346.00	2.52	55 - R2 *	(2)	40.5	3.34	30.5
Tucannon River						
341.01	2.82	40 - R4 *	(12)	39.8	2.99	37.4
344.01	3.74	30 - R3 *	(12)	30.0	4.44	25.2
345.01	3.54	30 - R2.5 *	(6)	29.9	4.81	22.0
346.01	2.94	35 - R2.5 *	(2)	34.7	4.00	25.5
Sunway 1						
344.00	4.85	25 - S2.5 *	(2)	17.2	5.20	16.0
Sunway 2						
344.00	5.53	25 - S2.5 *	(2)	14.1	5.73	13.7
Sunway 3						
344.00	5.44	25 - S2.5 *	(2)	15.8	5.62	15.3

PORTLAND GENERAL ELECTRIC
 COMPARISON OF ESTIMATED SURVIVOR CURVES, NET SALVAGE
 AND CALCULATED ANNUAL DEPRECIATION RATES

ACCOUNT (1)	ORIGINAL COST AS OF DECEMBER 31, 2012 (2)	2012 PGE PROPOSED PARAMETERS		2012 STAFF PRESETTLEMENT PARAMETERS		05-22-14 SETTLEMENT PARAMETERS	
		SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	SURVIVOR CURVE (19)	NET SALVAGE PERCENT (20)	SURVIVOR CURVE (19)	NET SALVAGE PERCENT (20)
STEAM PRODUCTION PLANT							
311.00	STRUCTURES AND IMPROVEMENTS						
	BOARDMAN 103,163,607	90 - S1.5 *	(1)	90 - S1.5 *	(1)	90 - S1.5 *	(1)
	COLSTRIP 115,308,214	90 - S1.5 *	(5)	90 - S1.5 *	(5)	90 - S1.5 *	(5)
	TOTAL STRUCTURES AND IM 218,471,821						
312.00	BOILER PLANT EQUIPMENT						
	BOARDMAN 227,278,716	65 - R3 *	(1)	65 - R3 *	(1)	65 - R3 *	(1)
	COLSTRIP 216,919,921	65 - R3 *	(5)	65 - R3 *	(5)	65 - R3 *	(5)
	TOTAL BOILER PLANT EQUIP 444,198,637						
312.01	RAIL CARS 9,758,265	26 - S0	0	26 - S0	0	26 - S0	0
314.00	TURBOGENERATOR UNITS						
	BOARDMAN 90,135,378	60 - S0.5 *	(1)	60 - S0.5 *	(1)	60 - S0.5 *	(1)
	COLSTRIP 75,365,521	60 - S0.5 *	(5)	60 - S0.5 *	(5)	60 - S0.5 *	(5)
	TOTAL TURBOGENERATOR L 165,500,899						
315.00	ACCESSORY ELECTRIC EQUIPMENT						
	BOARDMAN 23,582,186	60 - R2.5 *	(1)	60 - R2.5 *	(1)	60 - R2.5 *	(1)
	COLSTRIP 23,556,968	60 - R2.5 *	(5)	60 - R2.5 *	(5)	60 - R2.5 *	(5)
	TOTAL ACCESSORY ELECTR 47,139,154						
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT						
	BOARDMAN 5,803,273	55 - R1 *	(1)	55 - R1 *	(1)	55 - R1 *	(1)
	COLSTRIP 6,346,149	55 - R1 *	(5)	55 - R1 *	(5)	55 - R1 *	(5)
	TOTAL MISCELLANEOUS POW 12,149,422						
	TOTAL STEAM PRODUCTION PL 897,218,199						
HYDRAULIC PRODUCTION PLANT							
331.00	STRUCTURES AND IMPROVEMENTS						
	FARADAY 6,479,397	100 - R2.5 *	(60)	100 - R2.5 *	(25)	100 - R2.5 *	(50)
	NORTH FORK 8,260,817	100 - R2.5 *	(196)	100 - R2.5 *	(80)	100 - R2.5 *	(115)
	OAK GROVE 3,398,112	100 - R2.5 *	(68)	100 - R2.5 *	(28)	100 - R2.5 *	(50)
	OAK GROVE - TIMOTHY L 2,252,150	100 - R2.5 *	(68)	100 - R2.5 *	(28)	100 - R2.5 *	(50)
	PELTON 5,645,636	100 - R2.5 *	(183)	100 - R2.5 *	(75)	100 - R2.5 *	(110)
	RIVER MILL 2,753,573	100 - R2.5 *	(105)	100 - R2.5 *	(43)	100 - R2.5 *	(80)
	ROUND BUTTE 9,696,059	100 - R2.5 *	(89)	100 - R2.5 *	(36)	100 - R2.5 *	(75)
	SULLIVAN 9,437,850	100 - R2.5 *	(31)	100 - R2.5 *	(13)	100 - R2.5 *	(30)
	TOTAL STRUCTURES AND IM 47,923,595	average=	(100)	average=	(41)	average=	(70)
332.00	RESERVOIRS, DAMS AND WATERWAYS						
	FARADAY 24,223,755	100 - R3 *	(60)	100 - R3 *	(36)	100 - R3 *	(50)
	NORTH FORK 22,104,599	100 - R3 *	(196)	100 - R3 *	(118)	100 - R3 *	(115)
	OAK GROVE 14,728,506	100 - R3 *	(68)	100 - R3 *	(41)	100 - R3 *	(50)
	OAK GROVE - TIMOTHY L 4,740,065	100 - R3 *	(68)	100 - R3 *	(41)	100 - R3 *	(50)
	PELTON 10,223,106	100 - R3 *	(183)	100 - R3 *	(110)	100 - R3 *	(110)
	RIVER MILL 52,789,060	100 - R3 *	(105)	100 - R3 *	(63)	100 - R3 *	(80)
	ROUND BUTTE 103,758,407	100 - R3 *	(89)	100 - R3 *	(53)	100 - R3 *	(75)
	SULLIVAN 23,381,332	100 - R3 *	(31)	100 - R3 *	(19)	100 - R3 *	(30)
	TOTAL RESERVOIRS, DAMS / 255,948,831	average=	(100)	average=	(60)	average=	(70)
333.00	WATER WHEELS, TURBINES AND GENERATORS						
	FARADAY 6,608,291	90 - S1 *	(60)	90 - S1 *	(13)	90 - S1 *	(50)
	NORTH FORK 6,887,358	90 - S1 *	(196)	90 - S1 *	(41)	90 - S1 *	(110)
	OAK GROVE 6,438,763	90 - S1 *	(68)	90 - S1 *	(14)	90 - S1 *	(50)
		90 - S1 *	(183)	90 - S1 *	(39)	90 - S1 *	(100)

	PELTON	3,964,266	90 - S1 *	(105)	90 - S1 *	(22)	90 - S1 *	(80)
	RIVER MILL	5,666,410	90 - S1 *	(89)	90 - S1 *	(19)	90 - S1 *	(70)
	ROUND BUTTE	13,170,716	90 - S1 *	(31)	90 - S1 *	(7)	90 - S1 *	(30)
	SULLIVAN	9,206,561	average=	(105)	average=	(22)	average=	(70)
	TOTAL WATER WHEELS, TUR	51,942,365						
334.00	ACCESSORY ELECTRIC EQUIPMENT							
	FARADAY	2,300,701	60 - R2.5 *	(60)	60 - R2.5 *	(23)	60 - R2.5 *	(30)
	NORTH FORK	949,836	60 - R2.5 *	(196)	60 - R2.5 *	(75)	60 - R2.5 *	(75)
	OAK GROVE	2,372,228	60 - R2.5 *	(68)	60 - R2.5 *	(26)	60 - R2.5 *	(30)
	PELTON	2,231,611	60 - R2.5 *	(183)	60 - R2.5 *	(70)	60 - R2.5 *	(75)
	RIVER MILL	2,528,354	60 - R2.5 *	(105)	60 - R2.5 *	(40)	60 - R2.5 *	(45)
	ROUND BUTTE	1,909,871	60 - R2.5 *	(89)	60 - R2.5 *	(34)	60 - R2.5 *	(35)
	SULLIVAN	4,270,653	60 - R2.5 *	(31)	60 - R2.5 *	(12)	60 - R2.5 *	(25)
	TOTAL ACCESSORY ELECTR	16,563,254	average=	(105)	average=	(40)	average=	(45)
335.00	MISCELLANEOUS PLANT EQUIPMENT							
	FARADAY	227,708	55 - R0.5 *	(60)	55 - R0.5 *	(3)	55 - R0.5 *	(15)
	NORTH FORK	453,550	55 - R0.5 *	(196)	55 - R0.5 *	(10)	55 - R0.5 *	(50)
	OAK GROVE	90,218	55 - R0.5 *	(68)	55 - R0.5 *	(3)	55 - R0.5 *	(5)
	OAK GROVE - TIMOTHY L	2,761	55 - R0.5 *	(68)	55 - R0.5 *	(3)	55 - R0.5 *	(5)
	PELTON	180,730	55 - R0.5 *	(183)	55 - R0.5 *	(9)	55 - R0.5 *	(40)
	RIVER MILL	20,116	55 - R0.5 *	(105)	55 - R0.5 *	(5)	55 - R0.5 *	(30)
	ROUND BUTTE	769,106	55 - R0.5 *	(89)	55 - R0.5 *	(4)	55 - R0.5 *	(30)
	SULLIVAN	109,226	55 - R0.5 *	(31)	55 - R0.5 *	(2)	55 - R0.5 *	(25)
	TOTAL MISCELLANEOUS PLA	1,853,414	average=	(106)	average=	(5)	average=	(25)
336.00	ROADS, RAILROADS, AND BRIDGES							
	FARADAY	1,976,298	80 - R1.5 *	(60)	80 - R1.5 *	(1)	80 - R1.5 *	(15)
	NORTH FORK	1,662,877	80 - R1.5 *	(196)	80 - R1.5 *	(4)	80 - R1.5 *	(50)
	OAK GROVE	2,215,114	80 - R1.5 *	(68)	80 - R1.5 *	(1)	80 - R1.5 *	(5)
	OAK GROVE - TIMOTHY L	107,015	80 - R1.5 *	(68)	80 - R1.5 *	(1)	80 - R1.5 *	(5)
	PELTON	2,151,533	80 - R1.5 *	(183)	80 - R1.5 *	(3)	80 - R1.5 *	(40)
	RIVER MILL	458,019	80 - R1.5 *	(105)	80 - R1.5 *	(2)	80 - R1.5 *	(30)
	ROUND BUTTE	1,192,103	80 - R1.5 *	(89)	80 - R1.5 *	(2)	80 - R1.5 *	(30)
	TOTAL ROADS, RAILROADS,	9,762,959	average=	(110)	average=	(2)	average=	(25)
	TOTAL HYDRAULIC PRODUCTIC	383,994,418						
	OTHER PRODUCTION PLANT							
341.00	STRUCTURES AND IMPROVEMENTS							
	BEAVER - CT	31,384,600	70 - R3 *	(8)	70 - R2 *	(8)	70 - R2 *	(8)
	COYOTE SPRINGS - CT	10,792,758	70 - R3 *	(8)	70 - R2 *	(8)	70 - R2 *	(8)
	PORT WESTWARD - CT	40,951,571	70 - R3 *	(10)	70 - R2 *	(10)	70 - R2 *	(10)
	TOTAL STRUCTURES AND IM	83,128,929						
341.01	STRUCTURES AND IMPROVE	32,813,735	40 - R4 *	(9)	40 - R4	(9)	40 - R4	(9)
342.00	FUEL HOLDERS, PRODUCERS AND ACCESSORIES							
	BEAVER - CT	51,221,330	45 - R3 *	(8)	50 - R3 *	(8)	50 - R3 *	(8)
	BEAVER UNIT 8 - CT	1,301	45 - R3 *	(8)	50 - R3 *	(8)	50 - R3 *	(8)
	COYOTE SPRINGS - CT	35,792,019	45 - R3 *	(8)	50 - R3 *	(8)	50 - R3 *	(8)
	PORT WESTWARD - CT	9,462,372	45 - R3 *	(10)	50 - R3 *	(10)	50 - R3 *	(10)
	KB PIPELINE	19,373,076	45 - R3 *	(8)	50 - R3 *	(8)	50 - R3 *	(8)
	TOTAL FUEL HOLDERS, PROI	115,850,099						
344.00	GENERATORS							
	BEAVER - CT	92,274,546	35 - R2 *	(8)	45 - R1 *	(8)	45 - R1 *	(8)
	BEAVER UNIT 8 - CT	3,829,309	35 - R2 *	(8)	45 - R1 *	(8)	45 - R1 *	(8)
	COYOTE SPRINGS - CT	123,550,932	35 - R2 *	(8)	45 - R1 *	(8)	45 - R1 *	(8)
	PORT WESTWARD - CT	188,072,933	35 - R2 *	(10)	45 - R1 *	(10)	45 - R1 *	(10)
	TOTAL GENERATORS	407,727,720						
344.01	GENERATORS - WIND	860,382,974	30 - R3 *	(9)	30 - R3	(9)	30 - R3	(9)
345.00	ACCESSORY ELECTRIC EQUIPMENT							
	DISPATCH GENERATION	7,166,364	40 - R2.5	(5)	40 - R2.5	(6)	40 - R2.5	(6)
	BEAVER - CT	12,901,411	40 - R2.5 *	(8)	40 - R2.5 *	(6)	40 - R2.5 *	(6)
	BEAVER UNIT 8 - CT	75,508	40 - R2.5 *	(8)	40 - R2.5 *	(6)	40 - R2.5 *	(6)

	COYOTE SPRINGS - CT	11,549,938	40 - R2.5 *	(8)	40 - R2.5 *	(6)	40 - R2.5 *	(6)
	PORT WESTWARD - CT	8,909,075	40 - R2.5 *	(10)	40 - R2.5 *	(6)	40 - R2.5 *	(6)
	TOTAL ACCESSORY ELECTR	40,602,297						
345.01	ACCESSORY ELECTRIC EQU	24,958,049	30 - R2.5 *	(9)	30 - R2.5	(6)	30 - R2.5	(6)
346.00	MISCELLANEOUS PLANT EQUIPMENT							
	BEAVER - CT	4,303,164	55 - R2 *	(8)	55 - R2 *	(2)	55 - R2 *	(2)
	COYOTE SPRINGS - CT	2,060,508	55 - R2 *	(8)	55 - R2 *	(2)	55 - R2 *	(2)
	PORT WESTWARD - CT	2,876,766	55 - R2 *	(10)	55 - R2 *	(2)	55 - R2 *	(2)
	KB PIPELINE	78,842	55 - R2 *	(8)	55 - R2 *	(2)	55 - R2 *	(2)
	TOTAL MISCELLANEOUS PLA	9,319,279						
346.01	MISCELLANEOUS PLANT EQU	847,554	35 - R2.5 *	(9)	35 - R2.5	(2)	35 - R2.5	(2)
	TOTAL OTHER PRODUCTION PL	1,575,630,637						
	TOTAL PRODUCTION	2,856,843,253						
	TRANSMISSION PLANT							
352.00	STRUCTURES AND IMPROVE	17,407,070	60 - R2.5	(15)	60 - R2.5	(15)	60 - R2.5	(15)
353.00	STATION EQUIPMENT	241,319,092	52 - R2	(15)	55 - R2	(15)	55 - R2	(15)
354.00	TOWERS AND FIXTURES	46,808,292	70 - R3	(25)	70 - R3	(10)	70 - R3	(10)
355.00	POLES AND FIXTURES	20,460,356	48 - R1	(80)	50 - R1.5	(50)	50 - R1.5	(50)
356.00	OVERHEAD CONDUCTORS A	74,129,949	60 - R2.5	(35)	60 - R2.5	(30)	60 - R2.5	(30)
359.00	ROADS AND TRAILS	339,371	60 - R4	0	60 - R4	0	60 - R4	0
	TOTAL TRANSMISSION PLANT	400,464,130						
	DISTRIBUTION PLANT							
361.00	STRUCTURES AND IMPROVE	36,822,187	65 - R2	(25)	70 - R1.5	(25)	70 - R1.5	(25)
362.00	STATION EQUIPMENT	384,524,570	54 - S0	(20)	54 - S0	(20)	54 - S0	(20)
364.00	POLES, TOWERS AND FIXTURES	325,204,225	43 - R1	(65)	48 - R1	(50)	48 - R1	(60)
365.00	OVERHEAD CONDUCTORS A	533,059,151	46 - S0.5	(75)	48 - S0.5	(60)	48 - S0.5	(70)
366.00	UNDERGROUND CONDUIT	15,523,586	75 - R4	(15)	75 - R4	(13)	75 - R4	(13)
367.00	UNDERGROUND CONDUCTORS	624,820,669	50 - S1.5	(70)	50 - S1.5	(70)	50 - S1.5	(70)
368.00	LINE TRANSFORMERS	306,548,578	45 - R3	(20)	45 - R3	(20)	45 - R3	(20)
369.01	SERVICES - OVERHEAD	40,361,950	50 - S0	(45)	55 - R1.5	(45)	55 - R1.5	(45)
369.03	SERVICES - UNDERGROUND	337,639,570	50 - R4	(45)	50 - R4	(45)	50 - R4	(45)
370.00	METERS	5,613,935	28 - S1.5	(10)	30 - S1.5	(8)	30 - S1.5	(8)
370.01	METERS - AMI	112,581,575	15 - S2.5	(10)	18 - S2.5	(8)	16 - S2.5	(8)
370.02	METERS - RETAINED	7,523,317	16 - L0.5	(10)	16 - L0.5	(8)	16 - L0.5	(8)
371.00	INSTALLATIONS ON CUSTOM	376,133	30 - R4	0	30 - R4	0	30 - R4	0
373.01	CIRCUITS - OTHER	21,175,640	46 - S0.5	(60)	46 - S0.5	(30)	46 - S0.5	(30)
373.02	FIXTURES, ORNAMENTAL PO	28,661,422	28 - L1	(60)	28 - L1	(30)	28 - L1	(30)
373.07	SENTINEL LIGHTING EQUIPM	8,483,866	29 - L0.5	(60)	29 - L0.5	(30)	29 - L0.5	(30)
	TOTAL DISTRIBUTION PLANT	2,788,920,374.56						
	GENERAL PLANT							
390.00	STRUCTURES AND IMPROVE	50,907,102	40 - R0.5	(5)	40 - R0.5	(5)	40 - R0.5	(5)
390.10	STRUCTURES AND IMPROVEMENTS - LEASE							
	CSS	6,709	SQUARE	0	SQUARE	0	SQUARE	0
	EASTPORT	58,032	SQUARE	0	SQUARE	0	SQUARE	0
	ERC TUALATIN	276,892	SQUARE	0	SQUARE	0	SQUARE	0
	HILLSBORO	59,238	SQUARE	0	SQUARE	0	SQUARE	0
	SALEM	84,421	SQUARE	0	SQUARE	0	SQUARE	0
	WILSONVILLE	155,328	SQUARE	0	SQUARE	0	SQUARE	0
	WTC	19,375,468	SQUARE	0	SQUARE	0	SQUARE	0
	TOTAL STRUCTURES AND IM	20,016,090						
	OFFICE FURNITURE AND EQUIPMENT							
391.10	FURNITURE AND EQUIPMENT	16,154,320	15 - SQ	0	15 - SQ	0	15 - SQ	0
391.20	COMPUTERS AND EQUIPMENT	50,495,109	5 - SQ	0	5 - SQ	0	5 - SQ	0

TOTAL OFFICE FURNITURE A	66,649,429							
TRANSPORTATION EQUIPMENT								
392.04	HEAVY DUTY TRUCKS	10,310,359	19 - S2	10	19 - S2	10	19 - S2	10
392.05	MEDIUM DUTY TRUCKS	13,096,541	15 - S1.5	10	15 - S1.5	10	15 - S1.5	10
392.06	LIGHT DUTY TRUCKS	8,585,405	12 - L2	10	12 - L2	10	12 - L2	10
392.08	TRAILERS	5,035,199	25 - S0	10	25 - S0	10	25 - S0	10
392.09	AUTOS	1,174,747	11 - S1.5	10	11 - S1.5	10	11 - S1.5	10
392.10	HELICOPTER	2,703,076	20 - S4	10	20 - S4	10	20 - S4	10
	TOTAL TRANSPORTATION EC	40,905,328						
393.00	STORES EQUIPMENT	2,851,686	20 - SQ	0	20 - SQ	0	20 - SQ	0
394.00	TOOLS, SHOP AND GARAGE	11,124,759	20 - SQ	0	20 - SQ	0	20 - SQ	0
395.00	LABORATORY EQUIPMENT	9,949,816	15 - SQ	0	17 - SQ	0	17 - SQ	0
POWER OPERATED EQUIPMENT								
396.01	MAN LIFT	25,760,291	14 - S1.5	5	14 - S1.5	5	14 - S1.5	5
396.02	DIGGER	8,491,374	15 - S3	5	15 - S3	5	15 - S3	5
396.03	CRANE	4,868,443	20 - L3	5	20 - L3	5	20 - L3	5
396.07	CONSTRUCTION EQUIPM	5,680,187	20 - L1	5	20 - L1	5	20 - L1	5
	TOTAL POWER OPERATED E	44,800,296						
COMMUNICATION EQUIPMENT								
397.01	LINE EQUIPMENT	1,833,385	15 - SQ	0	15 - SQ	0	15 - SQ	0
397.03	RADIO, MICROWAVE ANC	69,486,641	15 - SQ	0	15 - SQ	0	15 - SQ	0
397.06	MOBILE RADIO EQUIPME	598,856	15 - SQ	0	15 - SQ	0	15 - SQ	0
397.07	TELEPHONE EQUIPMENT	688,064	15 - SQ	0	15 - SQ	0	15 - SQ	0
	TOTAL COMMUNICATION EQI	72,606,946						
398.00	MISCELLANEOUS EQUIPMEN	129,175	20 - SQ	0	20 - SQ	0	20 - SQ	0
	TOTAL GENERAL PLANT	319,940,626						
	TOTAL DEPRECIABLE PLANT	6,366,168,383						

**BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON**

UM 1679

PORTLAND GENERAL ELECTRIC COMPANY

Joint Testimony in Support of Stipulation

*Ming Peng
Jaime McGovern
John J. Spanos*

June 30, 2014

Table of Contents

I. Introduction..... 2

II. Summary of Proceedings..... 3

a. Depreciation Study Results 3

b. Stipulated Results..... 3

c. ASL/VG versus ELG 13

List of Exhibits..... 16

I. Introduction

1 **Q. Please state your names and positions.**

2 A. My name is Ming Peng. I am a Senior Economist for the Public Utility Commission of
3 Oregon (Commission). My business address is 3930 Fairview Industrial Dr. SE, Salem,
4 Oregon 97302.

5 My name is Jaime McGovern. I am the Senior Utility Analyst for the Citizens' Utility
6 Board of Oregon (CUB). My business address is 610 SW Broadway, Suite 400, Portland,
7 Oregon 97205

8 My name is John J. Spanos. I am Senior Vice President at Gannett Fleming, Inc. My
9 business address is 207 Senate Avenue, Camp Hill, Pennsylvania 17011. I represent PGE in
10 this docket.

11 Our qualification statements are found in Exhibits 106, 107 and 108, respectively at the
12 end of this testimony.

13 **Q. What is the purpose of your testimony?**

14 A. Our testimony addresses the depreciation study submitted by PGE to the Commission in
15 December 2013. The purpose of our testimony is to describe our analysis and support of the
16 Stipulation reached between PGE, Public Utility Commission of Oregon (OPUC) Staff and
17 CUB, collectively referred to the "Stipulating Parties". The adjustments discussed in the
18 Stipulation are reasonable and will yield fair and equitable rates if adopted by the
19 Commission in its final order in this docket.

20

1 **Q. What precipitated this proceeding?**

2 A. Pursuant to OPUC Order No. 10-355, issued September 13, 2010, PGE is required to file a
3 detailed depreciation study within five years of the Order's issue date. In compliance with
4 the order, PGE filed a new depreciation study on December 5, 2013. All assets in the study
5 are included at December 31, 2012 in traditional FERC classification of generation,
6 transmission, distribution and general plant assets.

7

1 **II. Summary of Proceedings**

A. **Depreciation Study Results**

2 **Q. Please summarize PGE's depreciation study proposal.**

3 A. PGE's depreciation study recommended revisions in depreciation lives, curves, and net
4 salvage rates for all plant accounts.

5 In this filing and also in compliance with the OPUC Order No. 10-355, PGE requested
6 that the Commission prescribe the depreciation rates derived from, and included with, the
7 Iowa curve and life combinations in the stipulation, and that the rates be fixed until the
8 effective date of the next depreciation study. The prescription of depreciation rates is the
9 industry standard.

10 The depreciation rates initially proposed in UM 1679 would have resulted in an annual
11 depreciation expense decrease of approximately \$2.2 million. This difference was based
12 upon a comparison of 2012 depreciation expense using filed depreciation study rates to 2012
13 depreciation expense using previously approved depreciation parameters. Both depreciation
14 estimates incorporated estimated plant in-service balances at December 31, 2012.

B. Stipulated Results

15 **Q. Did Staff and CUB independently review the depreciation study?**

16 A. Yes. Both Staff's and CUB's review was independent and comprehensive. Staff developed
17 a set of proposed Iowa Curves, average service lives, and net salvage rates for each of the
18 plant accounts.

19 **Q. Did Staff and CUB suggest adjustments to PGE's proposal?**

20 A. Yes. Staff performed an independent review of PGE's depreciation statistics and
21 recommended depreciation parameters for numerous depreciation groups. Staff proposed

1 two types of adjustments. The first type of adjustment concerns Iowa curves and projected
2 average service lives. The second type of adjustment concerns net salvage rates.¹ CUB
3 also analyzed PGE’s depreciation study.

4 **Q. Were the Stipulating Parties able to resolve the study differences for the electric plant**
5 **accounts?**

6 A. Yes, the differences were resolved in a settlement meeting held on May 22, 2014. The
7 Stipulating Parties recommend that the Commission adopt the position outlined in the
8 attached Stipulation provided in Exhibit 101. The Stipulation discusses the changes in the
9 Staff Settlement Proposal to which the parties agreed at the settlement meeting and also
10 provides a table that details the straight line, remaining life, equal life group (ELG), and
11 average service life/vintage group (ASL/VG) depreciation rates derived for each
12 depreciation group, and new plants respectively. Exhibits 102 illustrate the ELG procedure
13 for all existing assets. Exhibit 104 illustrates the ASL/VG procedure for Tucannon River
14 wind farm and Port Westward 2 (the two new plants), PGE solar facilities, and Carty. The
15 parties agree that the Company will adopt ASL/VG for all new generation facilities going
16 forward.

17 **Q. What is the final impact on estimated depreciation expense in UE 283 docket due to**
18 **settlement discussions?**

19 A. The net annual difference in depreciation expense when comparing the final settlement
20 position to the depreciation study as-filed is a reduction of approximately \$11.5 million for
21 existing assets (\$11.3 million in rate case) and a reduction of \$8.2 million for the new plants
22 (on an annualized basis) in Exhibit 105.

¹ Net salvage is the difference between gross salvage and cost of removal. Net salvage is positive when gross salvage exceeds the cost of removal and reduces the revenue requirement. Conversely, net salvage is negative when cost of removal exceeds gross salvage and increases the revenue requirement.

1 **Q. Please describe the analyses that PGE, Staff and CUB performed regarding PGE's**
2 **depreciation study.**

3 A. The Stipulating Parties considered Iowa curves, average service and remaining lives as well
4 as net salvage rates. In order to get a better understanding of the characteristics of the plants,
5 PGE and Staff visited multiple PGE locations: Trojan Transmission Substation; Beaver
6 plant; both Port Westward generating plants; Pelton, Round Butte, Faraday, North Fork and
7 River Mill hydro facilities; and the Baldock solar plant. The visits were led by PGE
8 engineers that included a discussion of projected life and salvage rate of the assets.

9 The Stipulating Parties held a workshop on March 20, 2014 in Salem to review and
10 discuss the parameters of PGE's filing.

11 **Q. How did PGE, Staff and CUB analyze Iowa Curves and Average Service Lives?**

12 A. Both PGE and Staff utilized the actuarial retirement rate methodology to analyze historical
13 retirement data to help determine Iowa curves and average service lives for each
14 depreciation group. The following table shows the depreciation groups for which the Staff
15 analyses produced differing results from PGE, and the final position agreed to by the parties
16 in settlement discussions.

UM 1679 – Settlement Adjustments to Depreciation Study* Parameters
 May 22, 2014

Account Description	ACCOUNT	AS FILED DEPR STUDY		SETTLEMENT AGREEMENT	
	FERC Account #	Survivor Curve- Projection Life	Net Salvage Percent	Survivor Curve Projection Life	Net Salvage Percent
HYDRAULIC PRODUCTION PLANT					
Structures & Improvements	331.00*	100-R2.5	(100)	100-R2.5	(70)
Reservoirs, Dams & Waterways	332.00*	100-R3	(100)	100-R3	(70)
Water Wheels, Turbines & Generators	333.00*	90-S1	(105)	90-S1	(70)
Accessory Electric Equipment	334.00*	60-R2.5	(105)	60-R2.5	(45)
Miscellaneous Plant Equipment	335.00*	55-R0.5	(106)	55-R0.5	(25)
Roads, Railroads, & Bridges	336.00*	80-R1.5	(110)	80-R1.5	(25)
OTHER PRODUCTION PLANT					
Structures & Improvements	341.00	70-R3	(9)	70-R2	(9)
Fuel Holders, Producers & Accessories	342.00	45-R3	(8)	50-R3	(8)
Generators	344.00	35-R2	(9)	45-R1	(9)
Accessory Electric Equipment	345.00	40-R2.5	(8)	40-R2.5	(6)
Accessory Electric Equipment - Wind	345.01	30-R2.5	(9)	30-R2.5	(6)
Miscellaneous Plant Equipment	346.00	55-R2	(9)	55-R2	(2)
Miscellaneous Plant Equipment - Wind	346.01	35-R2.5	(9)	35-R2.5	(2)
TRANSMISSION PLANT					
Station Equipment	353.00	52-R2	(15)	55-R2	(15)
Towers & Fixtures	354.00	70-R3	(25)	70-R3	(10)
Poles & Fixtures	355.00	48-R1	(80)	50-R1.5	(50)
Overhead Conductors & Devices	356.00	60-R2.5	(35)	60-R2.5	(30)
DISTRIBUTION PLANT					
Structures & Improvements	361.00	65-R2	(25)	70-R1.5	(25)
Poles, Towers & Fixtures	364.00	43-R1	(65)	48-R1	(60)
Overhead Conductors & Devices	365.00	46-S0.5	(75)	48-S0.5	(70)
Underground Conduit	366.00	75-R4	(15)	75-R4	(13)
Services - Overhead	369.01	50-S0	(45)	55-R1.5	(45)
Meters	370.00	28-S1.5	(10)	30-S1.5	(8)
Meters - AMI	370.01	15-S2.5	(10)	16-S2.5	(8)
Meters - Retained	370.02	16-L0.5	(10)	16-L0.5	(8)
Circuits - Other	373.01	46-S0.5	(60)	46-S0.5	(30)
Fixtures, Ornamental Posts & Devices	373.02	28-L1	(60)	28-L1	(30)
Sentinel Lighting Equipment	373.07	29-L0.5	(60)	29-L0.5	(30)
GENERAL PLANT					
Laboratory Equipment	395.00	15-SQ	0	17-SQ	0

*The above table reflects Hydro Net Salvage accounts as an average of all plants, in the attached Exhibit 102 Table1; the net salvage is broken out by specific Hydro plants. The above table reflects only the Other Production accounts where changes occurred and are averaged, In the attached Exhibit 102 Table 1 the parameters are broken out by specific Other Production plant.

1 The Staff position for most FERC 300 level accounts that differed from PGE's filing
2 were reasonably close to those requested by PGE, and PGE accepted Staff's position in
3 those cases. When PGE did not agree with Staff's initial recommendations, Staff and PGE
4 discussed their differences in order to establish the most appropriate life parameters for each
5 account as shown above.

6 For example, PGE proposed in the filed depreciation study a life of 43-R1 for Account
7 364.00, Poles, Towers and Fixtures. The Staff position for Account 364 was a 55-R1
8 survivor curve. In settlement discussions, PGE emphasized significant statistical support for
9 specified industry ranges for this type of asset and the potential for future changes for
10 distribution poles. After this discussion, the Stipulating parties agreed to utilize a 48-R1
11 curve which reflected all the critical factors for life expectancies for PGE's distribution
12 poles. The Stipulating parties held similar discussions regarding each of the other accounts
13 to establish most reasonable life estimates.

14 **Q. How did Staff determine curve-lives?**

15 A. Staff's Iowa survivor curve-projection life selection was based on PGE's raw data and data
16 from other electric companies nationwide. The curve-life statistic is the minimum sum of the
17 normalized squared deviations. Normalization is done by dividing each deviation by the
18 corresponding observed balance.

19 Staff's proposal recommended several changes to PGE's proposed curve-life
20 combination for depreciable property groups. The recommended changes were made in the
21 average service life or dispersion curve (or both) for the FERC account categories in the
22 Steam Production Plant, Hydraulic Production Plant, Other Production Plant, Transmission
23 Plant, Distribution Plant, and General Plant.

1 After the asset valuation/analysis on survivor curves, Staff recommended the new
2 curve-life that would better fit historical indications and similar assets by other utilities have
3 life characteristics to justify the average service life.

4 The Staff's curve-life positions were not only based on statistical models specific to
5 PGE's raw data, but also the considerations of the curve-life data from other electric utility
6 companies, as well as the input from site visits.

7 **Q. Could you provide an example of how the Stipulating parties agreed upon the curve-**
8 **life adjustment?**

9 A. Yes. Consider the Distribution Plant Account 370.01 Meters – AMI. It is a good example
10 of the curve-life adjustment process. The current approved curve-life combination for
11 Account 370.01 is R3-18. The PGE Study recommendation was S2.5-15 while Staff's
12 position was S2.5-18. Staff recommended retaining its existing average life of 18 years
13 because the average battery life is about 18-20 years. Given the short time these meters have
14 been in service, an actuarial analysis would not fully describe the full life characteristics of
15 this account. Given these considerations and the curve-life estimates utilized by other
16 utilities, the Stipulating Parties recommend a curve-life combination of S2.5-16 (16 year of
17 average service life and S2.5 type of dispersion) until more mortality information is
18 available.

19 **Q. How did the Stipulating parties determine net salvage rates?**

20 A. In order to determine net salvage rates for its generation facilities, PGE relied primarily
21 upon site specific decommissioning studies, historical retirement data and input from in-
22 house engineering personnel.

1 Staff analyzed the net salvage rates submitted by PGE, and examined the asset
2 retirement activities by comparing year-by-year, 3-year and 5-year moving averages, as well
3 as the most recent 5 and 10 year averages. Staff used information gained during visits to
4 power plants, to evaluate asset retirement patterns and estimate net salvage rates.

5 For non-generation FERC 300 level accounts, both Staff and PGE utilized the statistical
6 methods of overall averages, and rolling and shrinking band analyses to study historical data
7 to help estimate net salvage characteristics. In addition, PGE consulted with in-house
8 engineering personnel to help determine future net salvage trends.

9 **Q. Please, describe the net salvage rates for hydro generation?**

10 A. The net salvage rates for the hydro generation accounts resulted from site specific
11 decommissioning studies performed at each of the hydro facilities in 2009. The end of the
12 current license period was utilized for inflation purposes since that would be the earliest
13 potential date at which the projects would be shut down in the event the decision would be
14 made not to pursue a license renewal.

15 Staff objected to the results of the decommissioning studies since the net salvage
16 estimates were outside the range of most estimates utilized by other utilities coupled with
17 the uncertainty of the ultimate decommissioning timing. PGE countered with the argument
18 that a site specific estimate was much more reliable than statistics of net salvage rates
19 approved for other utilities. As a compromise position, the parties agreed to discount the
20 expected inflation estimate to reflect the uncertainty of when facilities would be shut down.

21

1 **Q. What would be an illustration of this compromise?**

2 A. Please see the table below showing the average net salvage by account for all PGE hydro
3 plants; see the site specific net salvage for Faraday, North Fork, Oak Grove, Pelton, River
4 Mill, Round Butte, Sullivan is detailed in Exhibit 102.

	ACCOUNT	PGE Filed	Settled
	FERC	Net Salvage	Net Salvage
HYDRAULIC PRODUCTION PLANT	Account #	Percent	Percent
Structures & Improvements	331.00	(100)	(70)
Reservoirs, Dams & Waterways	332.00	(100)	(70)
Water Wheels, Turbines & Generators	333.00	(105)	(70)
Accessory Electric Equipment	334.00	(105)	(45)
Miscellaneous Plant Equipment	335.00	(106)	(25)
Roads, Railroads, & Bridges	336.00	(110)	(25)

5

6 **Q. How were net salvage rates set for other types assets?**

7 A. The net salvage rates for the other production accounts resulted from site specific
8 decommissioning studies performed in 2003. The resulting net salvage rate requested in the
9 Depreciation Study ranged from -5% to -10%. Staff recommended a net salvage rate
10 consistent with PGE except for Accounts 345, Accessory Electric Equipment and Account
11 346, Miscellaneous Power Plant Equipment. The Staff recommended net salvage range for
12 these accounts was 0% to -6% with the 0% net salvage relating to the wind facilities. The
13 parties agreed that the net salvage component for these type of assets should be the same
14 regardless of the type of generating facility, therefore, a compromise of -6% for all assets in
15 Account 345 and 345.01 and a net salvage percent of -2% for all assets in Account 346 and
16 346.01.

17

1 **Q. How were net salvage rates adjusted for transmission assets?**

2 A. For Account 35400, Transmission Towers, PGE recommended a net salvage rate of -25%,
3 based upon the average of net salvage rates used by other utilities. PGE believes that
4 industry experience was more pertinent for this account, since very few retirements have
5 been recorded upon which to base a statistical estimate. Staff recommended a net salvage
6 rate of 0%, based upon judgment due to the lack of historical data. The parties agreed on a
7 net salvage rate of -10% for this depreciation study. The compromise net salvage rate is less
8 negative than the rate currently prescribed by the Commission. The agreement of a less
9 negative net salvage percent than currently prescribed reflects that short term plan that only
10 components of towers are expected to be retired in the next few years. Therefore, net salvage
11 experience and industry trends will be analyzed in the next depreciation study to determine
12 if an adjustment is necessary at that time.

13 For Account 355, Transmission Poles and Fixtures, PGE recommended a net salvage
14 rate of -80%, based upon historical data, current expectations from field personnel and the
15 estimates of others. Staff recommended a net salvage rate of -50% which reflected the
16 recent downward trend from recent years. The parties agreed to utilize a net salvage rate of
17 -50% for this study, based upon the average of other utilities and the lack of recent activity.

18 For Account 35600, Transmission Overhead Conductor and Devices, PGE
19 recommended a reduction in the currently approved net salvage rate to -35% because there
20 has been very little retirement activity in the past 10 years. The recommended net salvage
21 estimate was based largely upon net salvage experience prior to 2003 and the estimates
22 within the industry for overhead conductor. Staff recommended a net salvage rate of -27%,

1 which is similar to PGE's average net salvage for all years as well as the estimates of other
2 utilities. The parties agreed to a compromise position of -30% for this depreciation study.

3 **Q. How were net salvage rates adjusted for distribution assets?**

4 A. For Account 364, Distribution Poles, Towers and Fixtures, PGE recommended a net salvage
5 rate of 65%, based upon the overall historical analyses for the period, 1971-2013 and a
6 general knowledge of the effort required to remove distribution poles. Staff recommended a
7 net salvage rate of -50%, based upon the recent trend for less net salvage. The parties
8 agreed upon a net salvage rate of -60% for this depreciation study.

9 For Account 36500, Distribution Overhead Conductors and Devices, PGE
10 recommended a net salvage rate of -75%, based upon the historical data for the period,
11 1971-2013. Staff recommended a net salvage rate of -57% which reflects statistical results
12 in recent years only. The parties agreed upon a net salvage rate of -70%, which puts a
13 greater emphasis on the overall net salvage statistics.

14 For Account 366, Distribution Underground Conduit, PGE recommended a net salvage
15 rate of -15%, based upon net salvage statistics across the overall period, 1971-2013 in its net
16 salvage data base. Staff recommended a net salvage rate of -11%. Since the Staff and PGE
17 net salvage recommendation are similar for this account, the parties agreed to a net salvage
18 rate of -13% for this study which reflects the most recent 5 year period. For all subaccounts
19 in Account 370, Meters, PGE recommended a net salvage rate of -10%, based upon overall
20 historical net salvage data and the expectations of future costs for the new meter asset
21 classes. Staff recommended a net salvage rate of -8%, based upon its analyses. The parties
22 agreed the Staff net salvage position of -8% for this depreciation study would be used to
23 reflect the combined new technology.

1 For all subaccounts in Account 373, Street Lighting, PGE recommended a net salvage
2 rate of -60%, based upon historical net salvage data, the current prescribed net salvage
3 percent and the expectations of future costs. Staff recommended a net salvage rate of -27%,
4 based upon the recent 5 year trend. The parties agreed to compromise on a net salvage
5 position of -35% for this depreciation study which would reflect recent trends and the
6 estimates some of the other comparable utilities.

7 **C. ASL/VG versus ELG**

8 **Q. Are all current PGE assets depreciated using the ELG procedure?**

9 A. Yes. The currently approved rates reflect the utilization of the Equal Life Group (ELG)
10 procedure.

11 **Q. Did Staff suggest a change to PGE's procedure for the depreciation rate calculation?**

12 A. Yes. PGE has been using the Equal Life Group (ELG) Procedure to calculate depreciation
13 rates since 1978. Staff recommended using Average Service Life (ASL, i.e. VG, Vintage
14 Group) procedure to calculate depreciation rates. Staff's recommendation is consistent with
15 the following statement set forth by NARUC, " In comparison with the VG procedure, the
16 ELG procedure results in annual accruals that are higher during the early years of a vintage's
17 life, thereby causing an increase in depreciation expense and revenue requirements during
18 these years" (Public Utility Depreciation Practices, National Association of Regulatory
19 Utility Commissioners p.176). Staff also considered NARUC's discussion that "the use of
20 the ELG procedure has not been approved by the Federal Energy Regulatory Commission
21 (FERC) for use in the gas, oil, and electric industries." (p.172)

22 **Q. Does PGE agree with Staff's proposed change in depreciation methodology?**

23 A. No. PGE argued in its data response of OPUC_DR_006 that "attempting to switch from the
24 ELG procedure to the Vintage Group/Broad Group procedure will result in an unnecessary

1 reduction of \$32.2 million in annual depreciation expense. Not only does the switch in
2 procedure cause a major swing in annual depreciation expense, but future depreciation
3 expense will also be unnecessarily higher.”

4 **Q. Were Staff, CUB and PGE able to resolve the procedural differences for the**
5 **depreciation rate calculations?**

6 A. Yes. Depreciation has a significant effect on the revenue requirement of a utility, and
7 depreciation expense represents a large percentage of total operating expenses. Therefore,
8 for settlement purpose, Staff proposed a “hybrid procedure” that is the combination of ELG
9 and VG procedures to calculate depreciation rates. The “hybrid procedure” is described
10 below:

11 (1) For existing plant facilities as of December 31, 2012, PGE will continue to use the ELG
12 procedure to calculate depreciation rates.

13 (2) For all new generating plants placed in service after the year 2012, PGE will use
14 Average Service Life procedure to calculate depreciation rates through the depreciation
15 compliance filing. Using the Average Service Life procedure for all new generating plants
16 will reduce the immediate impact on both depreciation expense and revenue requirements.

17 After considerable discussion and an understanding of the acceptance of the ELG
18 procedure, the parties agreed to maintain the ELG procedure for all current assets and future
19 assets at the existing facilities. However, the parties did compromise to utilize the ASL/VG
20 procedure for all new generating facilities that will be built after December 2012. Currently
21 known new generating plants that are scheduled to be placed in service between 2013 and
22 2016 are listed in Exhibit 102 Table1, Note 1. Parties agreed to submit a “Technical
23 Update” or compliance filing to the OPUC one year after each of the facilities listed in

1 - Exhibit 102 Table1, Note 1, is placed in-service, showing plant dollars placed in-service,
2 accounts, and parameters utilized are that agreed to in the Settlement.

3 **Q. Please summarize your recommendations to the Commission.**

4 A. We recommend that the Commission approve the Stipulation. We also recommend that the
5 Commission order the Company to implement the depreciation, amortization and net
6 salvage rates proposed in the Stipulation as of the effective date of the General Rate Case
7 UE 283. For the portion of 2014 prior to the effective date in UE 215, the Company shall
8 use current depreciation, amortization and net salvage rates.

9 **Q. What does PGE propose as the effective date for implementing the new depreciation**
10 **rates?**

11 A. PGE proposes that the new depreciation rates be made effective coincident with the effective
12 dates of the General Rate Case UE 283.

13 **Q. Does this conclude your testimony?**

14 A. Yes.

List of Exhibits

<u>PGE Exhibit</u>	<u>Description</u>
101	UM 1679 Stipulation
102	Table 1. Settlement Results-Table1 with additional new plant information
103	Table 2. Adjustment-Parameter Comparison
104	Table 3. New Plants ELG vs VG \$ Comparison
105	Table 4. UE283 Rate Case \$ Impact
106	Staff Witness Qualification – Ming Peng
107	CUB Witness Qualification – Jaime McGovern
108	PGE Witness Qualification – John Spanos

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1679

In the Matter of

PORTLAND GENERAL ELECTRIC
COMPANY

Detailed Depreciation Study of Electric
Utility Properties.

STIPULATION

This Stipulation (“Stipulation”) is between Portland General Electric Company (“PGE”), Staff of the Public Utility Commission of Oregon (“Staff”), and the Citizens’ Utility Board of Oregon (“CUB”) (collectively, the “Stipulating Parties”).

On December 5, 2013, PGE filed with Oregon Public Utility Commission (“Commission”) the results of a detailed depreciation study of its utility properties as of December 31, 2012, which included proposed depreciation lives, curves, and net salvage rates (collectively the “parameters”) and depreciation rates for PGE’s generation, transmission, distribution, general plant, and intangible assets. Based on the December 31, 2012, plant balances, the change in depreciation parameters proposed by PGE would have resulted in an annual depreciation decrease of approximately \$2.2 million, not including PGE’s new Tucannon River Wind Farm and Port Westward II generating facilities. In addition, PGE filed proposed depreciation parameters to be used for the Tucannon River Wind Farm and Port Westward II generation facilities.

On February 13, 2014, PGE filed an application for a general rate revision, Docket UE 283, to be effective January 1, 2015. The depreciation rates that will be used in Docket UE 283 are the rates set in this docket.

On May 22, 2014, PGE, Staff and CUB participated in a Settlement Conference at the Commission's office in Salem, Oregon. The discussions resulted in a compromise settlement of the Parties. Exhibit "102, Table1" to this stipulation, attached hereto, sets forth the detailed account-by-account depreciation parameters and rates that parties agree should be adopted by the Commission.

PGE, Staff and CUB request that the Commission issue orders in this docket implementing the terms of this Stipulation. As a compromise position on the issues in controversy, the Parties have agreed to depreciation parameters and rates that would result in a decrease of approximately \$11.5 million on an annual basis from that originally proposed in this docket based on plant data at December 31, 2012. Applying the stipulated depreciation parameters, including those applicable to new generation facilities, to PGE's 2015 test year in docket UE 283 results in the revenue requirement changes summarized in Exhibit "102, Table1".

TERMS OF STIPULATION

1. This Stipulation resolves all issues regarding PGE's application seeking a change in depreciation rates applicable to its plant.
2. The Parties agree that the changes shown in Exhibit "103, Table2" to this Stipulation should be made for the identified lives, curves, net salvage value, and rates. With the exception of the parameters set forth in Exhibit "103, Table2" to this Stipulation, the parameters should remain as filed in PGE's Study.
3. Exhibit "102, Table1" to the Stipulation is a complete list of all PGE depreciation parameters for all plant accounts by location.
4. As part of this settlement the Parties agree that PGE should use the Average Service Life depreciation procedure for all new generating plants placed in service after

December 31, 2012. Regarding the new generating plants that will come on line between 2013 and 2016 that are currently in development the list for these new plants is shown on Exhibit “102, Table1, Note 1.” PGE will continue to use the straight-line, Equal Life Group method for all existing assets and accounts. This approach and resulting depreciation parameters and rates are included in the parameters listed in Exhibit “103, Table2”.

5. PGE will make a compliance filing by submitting the depreciation technical update filing to OPUC no later than one year after a new generating facility comes on-line that will consist of an attestation by the CFO that PGE is using the Average Service Life for the new generating plant(s) as well as sample accounting entries that demonstrate its use.

6. The revised depreciation parameters described above and set forth in Exhibit “102, Table1” are reasonable and should be adopted.

7. The revised depreciation rates shall be implemented on the effective date of PGE’s pending general rate request in Docket UE 283.

8. No later than the end of 2018, PGE shall file with the Commission another detailed depreciation study of its utility property. The depreciation parameters detailed in Stipulation Exhibit 102, Table1 will be utilized until the effective date of the next depreciation study.

9. The Stipulating Parties recommend and request that the Commission approve the adjustments described herein as appropriate and reasonable resolutions of all issues in this docket.

10. The Stipulating Parties agree that this Stipulation is in the public interest and will result in rates that are fair, just and reasonable and, if approved, will meet the standard in ORS 756.040.

11. The Stipulating Parties agree that this Stipulation represents a compromise in the positions of the parties. Without the written consent of all parties, evidence of conduct or statements, including but not limited to term sheets or other documents created solely for use in settlement conferences in this docket, are confidential and not admissible in the instant or any subsequent proceeding, unless independently discoverable or offered for other purposes allowed under ORS 40.190.

12. The Stipulating Parties have negotiated this Comprehensive Settlement as an integrated document. If the Commission rejects all or any material part of this Stipulation, or adds any material condition to any final order that is not consistent with this Stipulation, each Stipulating Party reserves its right to: (i) withdraw from the Stipulation, upon written notice to the Commission and other Parties within five (5) business days of service of the final order that rejects this Stipulation, in whole or material part, or adds such material condition; (ii) pursuant to OAR 860-001-0350(9), to present evidence and argument on the record in support of the Stipulation, including the right to cross-examine witnesses, introduce evidence as deemed appropriate to respond fully to issues presented, and raise issues that are incorporated in the settlement embodied in this Stipulation; and (iii) pursuant to ORS 756.561 and OAR 860-001-0720, to seek rehearing or reconsideration or to appeal the Commission order under ORS 756.610. Nothing in this paragraph provides any Party the right to withdraw from this Stipulation as a result of the Commission's resolution of issues that this Stipulation does not resolve.

13. This Stipulation will be offered into the record in this proceeding as evidence pursuant to OAR 860-01-0350(7). The Stipulating Parties agree to support this Stipulation throughout this proceeding and in any appeal, provide witnesses to support this Stipulation (if

specifically required by the Commission), and recommend that the Commission issue an order adopting the settlements contained herein. The Stipulating Parties also agree to cooperate in drafting and submitting an explanatory brief and written testimony per OAR 860-001-0350(7), unless such requirement is waived. By entering into this Stipulation, no Stipulating Party shall be deemed to have approved, admitted or consented to the facts, principles, methods or theories employed by any other Party in arriving at the terms of this Stipulation. Except as provided in this Stipulation, no Stipulating Party shall be deemed to have agreed that any provision of this Stipulation is appropriate for resolving issues in any other proceeding.

14. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

DATED this 30th day of June, 2014.



PORTLAND GENERAL ELECTRIC
COMPANY

STAFF OF THE PUBLIC UTILITY
COMMISSION OF OREGON


CITIZENS' UTILITY BOARD
OF OREGON

adopting the settlements contained herein. The Stipulating Parties also agree to cooperate in drafting and submitting an explanatory brief and written testimony per OAR 860-001-0350(7), unless such requirement is waived. By entering into this Stipulation, no Stipulating Party shall be deemed to have approved, admitted or consented to the facts, principles, methods or theories employed by any other Party in arriving at the terms of this Stipulation. Except as provided in this Stipulation, no Stipulating Party shall be deemed to have agreed that any provision of this Stipulation is appropriate for resolving issues in any other proceeding.

14. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

DATED this 27th day of June, 2014.

PORTLAND GENERAL ELECTRIC
COMPANY



STAFF OF THE PUBLIC UTILITY
COMMISSION OF OREGON
(Attorney)

CITIZENS' UTILITY BOARD
OF OREGON

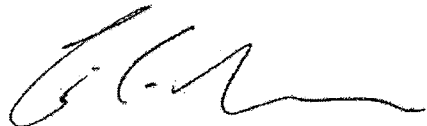
deemed to have approved, admitted or consented to the facts, principles, methods or theories employed by any other Party in arriving at the terms of this Stipulation. Except as provided in this Stipulation, no Stipulating Party shall be deemed to have agreed that any provision of this Stipulation is appropriate for resolving issues in any other proceeding.

14. This Stipulation may be signed in any number of counterparts, each of which will be an original for all purposes, but all of which taken together will constitute one and the same agreement.

DATED this 27th day of June, 2014.

PORTLAND GENERAL ELECTRIC
COMPANY

STAFF OF THE PUBLIC UTILITY
COMMISSION OF OREGON



CITIZENS' UTILITY BOARD
OF OREGON

PORTLAND GENERAL ELECTRIC
 TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED
 ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AT DECEMBER 31, 2012	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE	
						AMOUNT	RATE		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)	
STEAM PRODUCTION PLANT									
BOARDMAN									
311.00	STRUCTURES AND IMPROVEMENTS	90 - S1.5 *	(1)	103,163,606.77	76,864,082	27,331,161	3,287,441 **	3.19	8.0
312.00	BOILER PLANT EQUIPMENT	65 - R3 *	(1)	227,278,716.19	143,601,262	85,950,241	10,459,682 **	4.60	8.0
312.00	BOARDMAN DECOMMISSIONING ACCRUAL			0.00	27,346,614	17,406,389	2,175,804 **	-	8.0
312.01	RAIL CARS	26 - S0 *	0	9,758,265.28	7,667,449	2,090,816	261,352 **	2.68	8.0
314.00	TURBOGENERATOR UNITS	60 - S0.5 *	(1)	90,135,378.46	56,819,219	34,217,513	4,164,520 **	4.62	8.0
315.00	ACCESSORY ELECTRIC EQUIPMENT	60 - R2.5 *	(1)	23,582,186.18	17,351,696	6,466,312	778,811 **	3.30	8.0
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	55 - R1 *	(1)	5,803,273.23	3,970,515	1,890,791	229,095 **	3.95	8.0
	TOTAL BOARDMAN			459,721,426.11	333,620,837	175,353,223	21,356,704	4.65	8.0
COLSTRIP									
311.00	STRUCTURES AND IMPROVEMENTS	90 - S1.5 *	(5)	115,308,214.32	94,985,340	26,088,285	958,829	0.83	27.2
312.00	BOILER PLANT EQUIPMENT	65 - R3 *	(5)	216,919,862.50	169,869,621	57,896,235	2,175,748	1.00	26.6
314.00	TURBOGENERATOR UNITS	60 - S0.5 *	(5)	75,365,578.58	40,157,331	38,976,526	1,644,217	2.18	23.7
315.00	ACCESSORY ELECTRIC EQUIPMENT	60 - R2.5 *	(5)	23,556,967.88	18,545,900	6,188,916	256,139	1.09	24.2
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	55 - R1 *	(5)	6,346,149.23	4,741,026	1,922,431	84,395	1.33	22.8
	TOTAL COLSTRIP			437,496,772.51	328,299,217	131,072,393	5,119,328	1.17	25.6
	TOTAL STEAM PRODUCTION PLANT			897,218,198.62	661,920,054	306,425,616	26,476,032	2.95	11.6
HYDRAULIC PRODUCTION PLANT									
331.00	STRUCTURES AND IMPROVEMENTS								
	FARADAY	100 - R2.5 *	(50)	6,479,397.20	1,212,225	8,506,871	224,988	3.47	37.8
	NORTH FORK	100 - R2.5 *	(115)	8,260,817.28	1,580,450	16,180,307	420,381	5.09	38.5
	OAK GROVE	100 - R2.5 *	(50)	3,398,112.29	1,458,859	3,638,309	99,796	2.94	36.5
	OAK GROVE - TIMOTHY LAKE	100 - R2.5 *	(50)	2,252,149.83	810,067	2,568,158	66,267	2.94	38.8
	PELTON	100 - R2.5 *	(110)	5,645,635.78	1,872,777	9,983,058	263,270	4.66	37.9
	RIVER MILL	100 - R2.5 *	(80)	2,753,573.44	888,480	4,067,952	115,450	4.19	35.2
	ROUND BUTTE	100 - R2.5 *	(75)	9,696,059.00	2,341,042	14,627,061	385,957	3.98	37.9
	SULLIVAN	100 - R2.5 *	(30)	9,437,850.41	1,478,588	10,790,618	499,841	5.30	21.6
	TOTAL STRUCTURES AND IMPROVEMENTS			47,923,595.23	11,642,487	70,362,334	2,075,950	4.33	33.9
332.00	RESERVOIRS, DAMS AND WATERWAYS								
	FARADAY	100 - R3 *	(50)	24,223,754.94	11,961,626	24,374,007	625,247	2.58	39.0
	NORTH FORK	100 - R3 *	(115)	22,104,599.29	15,651,253	31,873,636	849,138	3.84	37.5
	OAK GROVE	100 - R3 *	(50)	14,728,506.43	14,428,936	7,663,824	193,663	1.31	39.6
	OAK GROVE - TIMOTHY LAKE	100 - R3 *	(50)	4,740,064.79	5,207,421	1,902,676	52,696	1.11	36.1
	PELTON	100 - R3 *	(110)	10,223,106.37	8,252,401	13,216,122	362,037	3.54	36.5
	RIVER MILL	100 - R3 *	(80)	52,789,060.05	8,988,578	86,031,730	2,145,074	4.06	40.1
	ROUND BUTTE	100 - R3 *	(75)	103,758,407.21	25,289,701	156,287,512	3,895,851	3.75	40.1
	SULLIVAN	100 - R3 *	(30)	23,381,331.65	4,831,799	25,563,932	1,160,692	4.96	22.0
	TOTAL RESERVOIRS, DAMS AND WATERWAYS			255,948,830.73	94,611,715	346,913,439	9,284,398	3.63	37.4

PORTLAND GENERAL ELECTRIC
 TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

	ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AT DECEMBER 31, 2012 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)=(6)/(7)
							AMOUNT (7)	RATE (8)=(7)/(4)	
333.00	WATER WHEELS, TURBINES AND GENERATORS								
	FARADAY	90 - S1 *	(50)	6,608,291.00	2,914,660	6,997,777	189,402	2.87	36.9
	NORTH FORK	90 - S1 *	(110)	6,887,358.20	4,808,993	9,654,459	279,711	4.06	34.5
	OAK GROVE	90 - S1 *	(50)	6,438,763.32	2,695,592	6,962,553	188,685	2.93	36.9
	PELTON	90 - S1 *	(100)	3,964,266.18	4,137,997	3,790,535	115,856	2.92	32.7
	RIVER MILL	90 - S1 *	(80)	5,666,409.59	2,183,139	8,016,398	215,831	3.81	37.1
	ROUND BUTTE	90 - S1 *	(70)	13,170,715.97	7,767,838	14,622,379	392,371	2.98	37.3
	SULLIVAN	90 - S1 *	(30)	9,206,560.54	3,018,905	8,949,624	415,581	4.51	21.5
	TOTAL WATER WHEELS, TURBINES AND GENERATORS			51,942,364.80	27,527,125	58,993,725	1,797,437	3.46	32.8
334.00	ACCESSORY ELECTRIC EQUIPMENT								
	FARADAY	60 - R2.5 *	(30)	2,300,700.84	1,009,001	1,981,911	62,329	2.71	31.8
	NORTH FORK	60 - R2.5 *	(75)	949,835.89	505,575	1,156,637	39,264	4.13	29.5
	OAK GROVE	60 - R2.5 *	(30)	2,372,228.34	748,450	2,335,447	71,867	3.03	32.5
	PELTON	60 - R2.5 *	(75)	2,231,610.73	690,153	3,215,166	99,259	4.45	32.4
	RIVER MILL	60 - R2.5 *	(45)	2,528,354.14	843,022	2,823,092	86,091	3.41	32.8
	ROUND BUTTE	60 - R2.5 *	(35)	1,909,870.89	736,560	1,841,765	54,801	2.87	33.6
	SULLIVAN	60 - R2.5 *	(25)	4,270,652.93	674,739	4,663,577	221,169	5.18	21.1
	TOTAL ACCESSORY ELECTRIC EQUIPMENT			16,563,253.76	5,207,500	18,017,595	634,780	3.83	28.4
335.00	MISCELLANEOUS PLANT EQUIPMENT								
	FARADAY	55 - R0.5 *	(15)	227,707.67	86,861	175,003	7,484	3.29	23.4
	NORTH FORK	55 - R0.5 *	(50)	453,549.96	248,429	431,896	16,764	3.70	25.8
	OAK GROVE	55 - R0.5 *	(5)	90,217.98	41,306	53,423	2,055	2.28	26.0
	OAK GROVE - TIMOTHY LAKE	55 - R0.5 *	(5)	2,761.24	1,393	1,506	63	2.28	23.9
	PELTON	55 - R0.5 *	(40)	180,729.78	126,495	126,527	5,606	3.10	22.6
	RIVER MILL	55 - R0.5 *	(30)	20,116.12	4,868	21,283	774	3.85	27.5
	ROUND BUTTE	55 - R0.5 *	(30)	769,105.69	275,231	724,606	28,737	3.74	25.2
	SULLIVAN	55 - R0.5 *	(25)	109,225.68	18,312	118,221	6,437	5.89	18.4
	TOTAL MISCELLANEOUS PLANT EQUIPMENT			1,853,414.12	802,894	1,652,465	67,920	3.66	24.3
336.00	ROADS, RAILROADS, AND BRIDGES								
	FARADAY	80 - R1.5 *	(15)	1,976,298.06	567,848	1,704,895	49,998	2.53	34.1
	NORTH FORK	80 - R1.5 *	(50)	1,662,876.54	527,674	1,966,641	61,300	3.69	32.1
	OAK GROVE	80 - R1.5 *	(5)	2,215,114.33	2,153,069	172,801	5,323	0.24	32.5
	OAK GROVE - TIMOTHY LAKE	80 - R1.5 *	(5)	107,015.18	18,308	94,058	2,810	2.63	33.5
	PELTON	80 - R1.5 *	(40)	2,151,532.99	694,407	2,317,740	68,183	3.17	34.0
	RIVER MILL	80 - R1.5 *	(30)	458,019.14	114,105	481,320	14,109	3.08	34.1
	ROUND BUTTE	80 - R1.5 *	(30)	1,192,102.68	393,917	1,155,817	36,749	3.08	31.5
	TOTAL ROADS, RAILROADS, AND BRIDGES			9,762,958.92	4,469,327	7,893,272	238,472	2.44	33.1
	TOTAL HYDRAULIC PRODUCTION PLANT			383,994,417.56	144,261,048	503,832,830	14,098,957	3.67	35.7

PORTLAND GENERAL ELECTRIC
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AT DECEMBER 31, 2012 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)=(6)/(7)	
						AMOUNT (7)	RATE (8)=(7)/(4)		
OTHER PRODUCTION PLANT									
341.00	STRUCTURES AND IMPROVEMENTS								
	BEAVER - CT	70 - R2 *	(8)	31,384,599.71	27,842,665	6,052,703	369,866	1.18	16.4
	COYOTE SPRINGS - CT	70 - R2 *	(8)	10,792,758.11	6,593,674	5,062,505	203,418	1.88	24.9
	PORT WESTWARD - CT	70 - R2 *	(10)	40,951,570.86	4,719,732	40,326,996	1,246,251	3.04	32.4
	TOTAL STRUCTURES AND IMPROVEMENTS			83,128,928.68	39,156,071	51,442,204	1,819,535	2.19	28.3
341.01	STRUCTURES AND IMPROVEMENTS - WIND	40 - R4	(9)	32,813,735.10	4,812,435	30,954,537	910,651	2.78	34.0
342.00	FUEL HOLDERS, PRODUCERS AND ACCESSORIES								
	BEAVER - CT	50 - R3 *	(8)	51,221,330.42	48,220,046	7,098,991	475,497	0.93	14.9
	BEAVER UNIT 8 - CT	50 - R3 *	(8)	1,301.12	765	640	38	2.92	16.8
	COYOTE SPRINGS - CT	50 - R3 *	(8)	35,792,019.04	21,039,639	17,615,742	743,942	2.08	23.7
	PORT WESTWARD - CT	50 - R3 *	(10)	9,462,372.34	4,494,496	5,914,114	182,391	1.93	32.4
	KB PIPELINE	50 - R3 *	(8)	19,373,076.01	15,258,576	5,664,346	347,713	1.79	16.3
	TOTAL FUEL HOLDERS, PRODUCERS AND ACCESSORIES			115,850,098.93	89,013,522	36,293,833	1,749,581	1.51	20.7
344.00	GENERATORS								
	BEAVER - CT	45 - R1 *	(8)	92,274,545.94	57,013,831	42,642,679	2,863,947	3.10	14.9
	BEAVER UNIT 8 - CT	45 - R1 *	(8)	3,829,309.44	2,091,118	2,044,536	135,042	3.53	15.1
	COYOTE SPRINGS - CT	45 - R1 *	(8)	123,550,931.60	49,065,311	84,369,695	4,270,941	3.46	19.8
	PORT WESTWARD - CT	45 - R1 *	(10)	188,072,933.42	31,102,803	175,777,424	7,200,621	3.83	24.4
	TOTAL GENERATORS			407,727,720.40	139,273,063	304,834,334	14,470,551	3.55	21.1
344.01	GENERATORS - WIND	30 - R3	(9)	860,382,974.39	127,377,520	810,439,922	35,197,604	4.09	23.0
345.00	ACCESSORY ELECTRIC EQUIPMENT								
	DISPATCH GENERATION	40 - R2.5	(6)	7,166,364.41	1,356,275	6,240,072	218,737	3.05	28.5
	BEAVER - CT	40 - R2.5 *	(6)	12,901,411.46	11,380,180	2,295,316	168,732	1.31	13.6
	BEAVER UNIT 8 - CT	40 - R2.5 *	(6)	75,508.20	17,759	62,280	3,845	5.09	16.2
	COYOTE SPRINGS - CT	40 - R2.5 *	(6)	11,549,937.95	7,022,985	5,219,949	263,497	2.28	19.8
	PORT WESTWARD - CT	40 - R2.5 *	(6)	8,909,074.88	1,965,498	7,478,122	275,599	3.09	27.1
	TOTAL ACCESSORY ELECTRIC EQUIPMENT			40,602,296.90	21,742,697	21,295,739	930,410	2.29	22.9
345.01	ACCESSORY ELECTRIC EQUIPMENT - WIND	30 - R2.5	(6)	24,958,049.06	2,866,156	23,589,376	1,063,450	4.26	22.2
346.00	MISCELLANEOUS PLANT EQUIPMENT								
	BEAVER - CT	55 - R2 *	(2)	4,303,163.78	3,422,973	966,254	61,121	1.42	15.8
	COYOTE SPRINGS - CT	55 - R2 *	(2)	2,060,507.64	1,207,375	894,343	38,090	1.85	23.5
	PORT WESTWARD - CT	55 - R2 *	(2)	2,876,766.10	404,039	2,530,263	83,999	2.92	30.1
	KB PIPELINE	55 - R2 *	(2)	78,841.79	64,122	16,297	1,024	1.30	15.9
	TOTAL MISCELLANEOUS PLANT EQUIPMENT			9,319,279.31	5,098,509	4,407,157	184,234	1.98	23.9
346.01	MISCELLANEOUS PLANT EQUIPMENT - WIND	35 - R2.5	(2)	847,553.98	132,834	731,671	29,059	3.43	25.2
	TOTAL OTHER PRODUCTION PLANT			1,575,630,636.75	429,472,806	1,283,988,773	56,355,075	3.58	22.8
	TOTAL PRODUCTION			2,856,843,252.93	1,235,653,908	2,094,247,219	96,930,064		

PORTLAND GENERAL ELECTRIC
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AT DECEMBER 31, 2012 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)=(6)/(7)	
						AMOUNT (7)	RATE (8)=(7)/(4)		
TRANSMISSION PLANT									
352.00	STRUCTURES AND IMPROVEMENTS	60 - R2.5	(15)	17,407,069.85	6,797,117	13,221,013	353,866	2.03	37.4
353.00	STATION EQUIPMENT	55 - R2	(15)	241,319,092.06	82,698,466	194,818,490	5,630,960	2.33	34.6
354.00	TOWERS AND FIXTURES	70 - R3	(10)	46,808,291.56	21,550,183	29,938,938	866,584	1.85	34.5
355.00	POLES AND FIXTURES	50 - R1.5	(50)	20,460,355.74	9,396,543	21,293,991	669,961	3.27	31.8
356.00	OVERHEAD CONDUCTORS AND DEVICES	60 - R2.5	(30)	74,129,949.12	57,901,127	38,467,807	918,417	1.24	41.9
359.00	ROADS AND TRAILS	60 - R4	0	339,371.32	146,519	192,853	6,680	1.97	28.9
TOTAL TRANSMISSION PLANT				400,464,129.65	178,489,955	297,933,092	8,446,468	2.11	35.3
DISTRIBUTION PLANT									
361.00	STRUCTURES AND IMPROVEMENTS	70 - R1.5	(25)	36,822,187.13	12,249,928	33,777,806	796,858	2.16	42.4
362.00	STATION EQUIPMENT	54 - S0	(20)	384,524,570.26	120,825,481	340,604,004	11,185,779	2.91	30.4
364.00	POLES, TOWERS AND FIXTURES	48 - R1	(60)	325,204,225.23	233,516,446	286,810,314	10,281,387	3.16	27.9
365.00	OVERHEAD CONDUCTORS AND DEVICES	48 - S0.5	(70)	533,059,150.98	324,305,182	581,895,375	20,060,538	3.76	29.0
366.00	UNDERGROUND CONDUIT	75 - R4	(13)	15,523,586.14	9,517,421	8,024,232	176,763	1.14	45.4
367.00	UNDERGROUND CONDUCTORS AND DEVICES	50 - S1.5	(70)	624,820,668.61	351,739,956	710,455,181	21,951,949	3.51	32.4
368.00	LINE TRANSFORMERS	45 - R3	(20)	306,548,578.44	158,484,717	209,373,577	7,431,903	2.42	28.2
369.01	SERVICES - OVERHEAD	55 - R1.5	(45)	40,361,949.72	37,798,996	20,725,831	658,812	1.63	31.5
369.03	SERVICES - UNDERGROUND	50 - R4	(45)	337,639,570.26	263,527,773	226,049,604	6,287,797	1.86	36.0
370.00	METERS	30 - S1.5	(8)	5,613,935.18	594,883	5,468,167	284,811	5.07	19.2
370.01	METERS - AMI	16 - S2.5	(8)	112,581,575.01	20,648,101	100,940,000	8,356,515	7.42	12.1
370.02	METERS - RETAINED	16 - L0.5	(8)	7,523,316.60	1,781,367	6,343,815	867,815	11.54	7.3
371.00	INSTALLATIONS ON CUSTOMERS' PREMISES	30 - R4	0	376,133.46	253,970	122,163	7,254	1.93	16.8
373.01	CIRCUITS - OTHER	46 - S0.5	(30)	21,175,639.91	15,125,414	12,402,918	451,214	2.13	27.5
373.02	FIXTURES, ORNAMENTAL POSTS AND DEVICES	28 - L1	(30)	28,661,421.75	27,473,507	9,786,341	611,172	2.13	16.0
373.07	SENTINEL LIGHTING EQUIPMENT	29 - L0.5	(30)	8,483,865.88	9,442,510	1,586,516	99,584	1.17	15.9
TOTAL DISTRIBUTION PLANT				2,788,920,374.56	1,587,285,652	2,554,365,844	89,510,151	3.21	28.5
GENERAL PLANT									
390.00	STRUCTURES AND IMPROVEMENTS	40 - R0.5	(5)	50,907,101.98	22,999,361	30,453,096	1,475,457	2.90	20.6
390.10	STRUCTURES AND IMPROVEMENTS - LEASE								
	CSS	SQUARE	0	6,709.18	2,976	3,733	622	9.27	6.0
	EASTPORT	SQUARE	0	58,032.12	54,037	3,995	1,019	1.76	3.9
	ERC TUALATIN	SQUARE	0	276,892.45	172,976	103,916	19,174	6.92	5.4
	HILLSBORO	SQUARE	0	59,238.14	53,297	5,941	5,942	10.03	1.0
	SALEM	SQUARE	0	84,421.47	51,711	32,710	13,516	16.01	2.4
	WILSONVILLE	SQUARE	0	155,328.32	101,221	54,107	24,048	15.48	2.2
	WTC	SQUARE	0	19,375,468.37	5,536,920	13,838,548	450,037	2.32	30.7
	TOTAL STRUCTURES AND IMPROVEMENTS			20,016,090.05	5,973,138	14,042,950	514,358	2.57	27.3
	OFFICE FURNITURE AND EQUIPMENT								
391.10	FURNITURE AND EQUIPMENT	15 - SQ	0	16,154,320.04	5,067,207	11,087,113	1,777,770	11.00	6.2
391.20	COMPUTERS AND EQUIPMENT	5 - SQ	0	50,495,108.71	21,120,607	29,374,501	10,624,019	21.04	2.8
	TOTAL OFFICE FURNITURE AND EQUIPMENT			66,649,428.75	26,187,814	40,461,614	12,401,789	18.61	3.3

PORTLAND GENERAL ELECTRIC
 TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AT DECEMBER 31, 2012	BOOK RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE	
						AMOUNT	RATE		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)	
TRANSPORTATION EQUIPMENT									
392.04	HEAVY DUTY TRUCKS	19 - S2	10	10,310,358.99	7,478,261	1,801,062	127,752	1.24	14.1
392.05	MEDIUM DUTY TRUCKS	15 - S1.5	10	13,096,541.35	7,837,401	3,949,487	460,131	3.51	8.6
392.06	LIGHT DUTY TRUCKS	12 - L2	10	8,585,404.78	5,761,784	1,965,081	327,645	3.82	6.0
392.08	TRAILERS	25 - S0	10	5,035,199.33	2,414,441	2,117,238	149,698	2.97	14.1
392.09	AUTOS	11 - S1.5	10	1,174,746.91	422,708	634,565	108,935	9.10	5.9
392.10	HELICOPTER	20 - S4	10	2,703,076.25	564,801	1,867,967	122,655	4.54	15.2
	TOTAL TRANSPORTATION EQUIPMENT			40,905,327.61	24,479,396	12,335,400	1,294,816	3.17	9.5
393.00	STORES EQUIPMENT	20 - SQ	0	2,851,685.89	1,067,992	1,783,694	154,588	5.42	11.5
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	20 - SQ	0	11,124,758.65	4,201,984	6,922,774	840,771	7.56	8.2
395.00	LABORATORY EQUIPMENT	17 - SQ	0	9,949,815.67	2,780,784	7,169,032	918,162	9.23	7.8
POWER OPERATED EQUIPMENT									
396.01	MAN LIFT	14 - S1.5	5	25,760,291.28	13,170,098	11,302,179	1,477,363	5.74	7.7
396.02	DIGGER	15 - S3	5	8,491,374.37	4,659,141	3,407,665	328,124	3.86	10.4
396.03	CRANE	20 - L3	5	4,868,443.43	3,235,875	1,389,147	102,937	2.11	13.5
396.07	CONSTRUCTION EQUIPMENT	20 - L1	5	5,680,187.07	3,479,017	1,917,161	174,793	3.08	11.0
	TOTAL POWER OPERATED EQUIPMENT			44,800,296.15	24,544,130	18,016,152	2,083,217	4.65	8.6
COMMUNICATION EQUIPMENT									
397.01	LINE EQUIPMENT	15 - SQ	0	1,833,384.98	544,039	1,289,346	116,397	6.35	11.1
397.03	RADIO, MICROWAVE AND TERMINAL EQUIPMENT	15 - SQ	0	69,486,640.99	31,953,470	37,533,171	5,863,891	8.44	6.4
397.06	MOBILE RADIO EQUIPMENT	15 - SQ	0	598,856.17	303,999	294,857	25,475	4.25	11.6
397.07	TELEPHONE EQUIPMENT	15 - SQ	0	688,064.05	439,897	248,167	49,235	7.16	5.0
	TOTAL COMMUNICATION EQUIPMENT			72,606,946.19	33,241,405	39,365,541	6,054,998	8.34	6.5
398.00	MISCELLANEOUS EQUIPMENT	20 - SQ	0	129,175.32	93,653	35,522	2,261	1.75	15.7
	TOTAL GENERAL PLANT			319,940,626.26	145,569,658	170,585,775	25,740,417	8.05	6.6
	TOTAL DEPRECIABLE PLANT			6,366,168,383.40	3,146,999,173	5,117,131,930	220,627,100	3.47	23.2
NONDEPRECIABLE / ACCOUNTS NOT STUDIED									
302.00				144,231,675.68	28,535,297				
303.00				212,946,637.54	122,646,130				
310.00				4,160,671.10					
317.00				24,903,797.00	5,327,284				
330.00				6,047,625.51	1,341,061				
332.00	BULL RUN			0.00	683,971				

PORTLAND GENERAL ELECTRIC
TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE, ORIGINAL COST, BOOK RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AT DECEMBER 31, 2012

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AT DECEMBER 31, 2012 (4)	BOOK RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)=(6)/(7)
						AMOUNT (7)	RATE (8)=(7)/(4)	
337.00			4,276.00					
340.00			48,946.01	275,794				
347.00			2,213,947.65					
350.00			11,230,107.76	(6,753)				
360.00			20,358,924.85	(1,115)				
370.03			0.00	(8,218)				
374.00			460,131.00					
389.00			7,195,880.64	(3,616)				
392.01			0.00	241,194				
399.00			64,488.00					
TOTAL NONDEPRECIABLE / NOT STUDIED			433,867,108.74	159,031,030				
TOTAL ELECTRIC PLANT			6,800,035,492.14	3,306,030,202	5,117,131,930	220,627,100		

* Curve shown is interim survivor curve. Each facility in the account is assigned an individual probable retirement year.
** Annual depreciation expense based on method previously approved by the OPUC in Order No. 10-478.

Notes:

- 1.) Accrual rates for facilities to be placed in service after December 31, 2012 using the ASLVG procedure are as follows.

	Rate	Survivor Curve	Net Salvage Percent	Remaining Life	Using ELG Procedure	
					Rate	Remaining Life
Port Westward II						
341.00	2.52	70 - R2 *	(7)	42.5	3.22	33.2
342.00	2.57	50 - R3 *	(7)	41.7	2.87	37.3
344.00	2.93	45 - R1 *	(7)	36.5	5.61	19.1
345.00	2.85	40 - R2.5 *	(6)	37.2	3.76	28.2
346.00	2.50	55 - R2 *	(2)	40.8	3.40	30.0
Carty						
341.00	2.52	70 - R2 *	(6)	42.1	3.15	33.6
342.00	2.57	50 - R3 *	(6)	41.3	2.85	37.2
344.00	2.93	45 - R1 *	(6)	36.2	5.30	20.0
346.00	2.52	55 - R2 *	(2)	40.5	3.34	30.5
Tucannon River						
341.01	2.82	40 - R4 *	(12)	39.8	2.99	37.4
344.01	3.74	30 - R3 *	(12)	30.0	4.44	25.2
345.01	3.54	30 - R2.5 *	(6)	29.9	4.81	22.0
346.01	2.94	35 - R2.5 *	(2)	34.7	4.00	25.5
Sunway 1						
344.00	4.85	25 - S2.5 *	(2)	17.2	5.20	16.0
Sunway 2						
344.00	5.53	25 - S2.5 *	(2)	14.1	5.73	13.7
Sunway 3						
344.00	5.44	25 - S2.5 *	(2)	15.8	5.62	15.3

PORTLAND GENERAL ELECTRIC
 COMPARISON OF ESTIMATED SURVIVOR CURVES, NET SALVAGE
 AND CALCULATED ANNUAL DEPRECIATION RATES

ACCOUNT (1)	ORIGINAL COST AS OF DECEMBER 31, 2012 (2)	2012 PGE PROPOSED PARAMETERS		2012 STAFF PRESETTLEMENT PARAMETERS		05-22-14 SETTLEMENT PARAMETERS	
		SURVIVOR CURVE (3)	NET SALVAGE PERCENT (4)	SURVIVOR CURVE (19)	NET SALVAGE PERCENT (20)	SURVIVOR CURVE (19)	NET SALVAGE PERCENT (20)
STEAM PRODUCTION PLANT							
311.00	STRUCTURES AND IMPROVEMENTS						
	BOARDMAN	103,163,607	90 - S1.5 * (1)	90 - S1.5 * (1)	90 - S1.5 * (1)	90 - S1.5 * (1)	90 - S1.5 * (1)
	COLSTRIP	115,308,214	90 - S1.5 * (5)	90 - S1.5 * (5)	90 - S1.5 * (5)	90 - S1.5 * (5)	90 - S1.5 * (5)
	TOTAL STRUCTURES AND IM	218,471,821					
312.00	BOILER PLANT EQUIPMENT						
	BOARDMAN	227,278,716	65 - R3 * (1)	65 - R3 * (1)	65 - R3 * (1)	65 - R3 * (1)	65 - R3 * (1)
	COLSTRIP	216,919,921	65 - R3 * (5)	65 - R3 * (5)	65 - R3 * (5)	65 - R3 * (5)	65 - R3 * (5)
	TOTAL BOILER PLANT EQUIP	444,198,637					
312.01	RAIL CARS	9,758,265	26 - S0 0	26 - S0 0	26 - S0 0	26 - S0 0	26 - S0 0
314.00	TURBOGENERATOR UNITS						
	BOARDMAN	90,135,378	60 - S0.5 * (1)	60 - S0.5 * (1)	60 - S0.5 * (1)	60 - S0.5 * (1)	60 - S0.5 * (1)
	COLSTRIP	75,365,521	60 - S0.5 * (5)	60 - S0.5 * (5)	60 - S0.5 * (5)	60 - S0.5 * (5)	60 - S0.5 * (5)
	TOTAL TURBOGENERATOR L	165,500,899					
315.00	ACCESSORY ELECTRIC EQUIPMENT						
	BOARDMAN	23,582,186	60 - R2.5 * (1)	60 - R2.5 * (1)	60 - R2.5 * (1)	60 - R2.5 * (1)	60 - R2.5 * (1)
	COLSTRIP	23,556,968	60 - R2.5 * (5)	60 - R2.5 * (5)	60 - R2.5 * (5)	60 - R2.5 * (5)	60 - R2.5 * (5)
	TOTAL ACCESSORY ELECTR	47,139,154					
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT						
	BOARDMAN	5,803,273	55 - R1 * (1)	55 - R1 * (1)	55 - R1 * (1)	55 - R1 * (1)	55 - R1 * (1)
	COLSTRIP	6,346,149	55 - R1 * (5)	55 - R1 * (5)	55 - R1 * (5)	55 - R1 * (5)	55 - R1 * (5)
	TOTAL MISCELLANEOUS POW	12,149,422					
	TOTAL STEAM PRODUCTION PL	897,218,199					
HYDRAULIC PRODUCTION PLANT							
331.00	STRUCTURES AND IMPROVEMENTS						
	FARADAY	6,479,397	100 - R2.5 * (60)	100 - R2.5 * (25)	100 - R2.5 * (25)	100 - R2.5 * (50)	100 - R2.5 * (50)
	NORTH FORK	8,260,817	100 - R2.5 * (196)	100 - R2.5 * (80)	100 - R2.5 * (80)	100 - R2.5 * (115)	100 - R2.5 * (115)
	OAK GROVE	3,398,112	100 - R2.5 * (68)	100 - R2.5 * (28)	100 - R2.5 * (28)	100 - R2.5 * (50)	100 - R2.5 * (50)
	OAK GROVE - TIMOTHY L	2,252,150	100 - R2.5 * (68)	100 - R2.5 * (28)	100 - R2.5 * (28)	100 - R2.5 * (50)	100 - R2.5 * (50)
	PELTON	5,645,636	100 - R2.5 * (183)	100 - R2.5 * (75)	100 - R2.5 * (75)	100 - R2.5 * (110)	100 - R2.5 * (110)
	RIVER MILL	2,753,573	100 - R2.5 * (105)	100 - R2.5 * (43)	100 - R2.5 * (43)	100 - R2.5 * (80)	100 - R2.5 * (80)
	ROUND BUTTE	9,696,059	100 - R2.5 * (89)	100 - R2.5 * (36)	100 - R2.5 * (36)	100 - R2.5 * (75)	100 - R2.5 * (75)
	SULLIVAN	9,437,850	100 - R2.5 * (31)	100 - R2.5 * (13)	100 - R2.5 * (13)	100 - R2.5 * (30)	100 - R2.5 * (30)
	TOTAL STRUCTURES AND IM	47,923,595	average= (100)	average= (41)	average= (41)	average= (70)	average= (70)
332.00	RESERVOIRS, DAMS AND WATERWAYS						
	FARADAY	24,223,755	100 - R3 * (60)	100 - R3 * (36)	100 - R3 * (36)	100 - R3 * (50)	100 - R3 * (50)
	NORTH FORK	22,104,599	100 - R3 * (196)	100 - R3 * (118)	100 - R3 * (118)	100 - R3 * (115)	100 - R3 * (115)
	OAK GROVE	14,728,506	100 - R3 * (68)	100 - R3 * (41)	100 - R3 * (41)	100 - R3 * (50)	100 - R3 * (50)
	OAK GROVE - TIMOTHY L	4,740,065	100 - R3 * (68)	100 - R3 * (41)	100 - R3 * (41)	100 - R3 * (50)	100 - R3 * (50)
	PELTON	10,223,106	100 - R3 * (183)	100 - R3 * (110)	100 - R3 * (110)	100 - R3 * (110)	100 - R3 * (110)
	RIVER MILL	52,789,060	100 - R3 * (105)	100 - R3 * (63)	100 - R3 * (63)	100 - R3 * (80)	100 - R3 * (80)
	ROUND BUTTE	103,758,407	100 - R3 * (89)	100 - R3 * (53)	100 - R3 * (53)	100 - R3 * (75)	100 - R3 * (75)
	SULLIVAN	23,381,332	100 - R3 * (31)	100 - R3 * (19)	100 - R3 * (19)	100 - R3 * (30)	100 - R3 * (30)
	TOTAL RESERVOIRS, DAMS /	255,948,831	average= (100)	average= (60)	average= (60)	average= (70)	average= (70)
333.00	WATER WHEELS, TURBINES AND GENERATORS						
	FARADAY	6,608,291	90 - S1 * (60)	90 - S1 * (13)	90 - S1 * (13)	90 - S1 * (50)	90 - S1 * (50)
	NORTH FORK	6,887,358	90 - S1 * (196)	90 - S1 * (41)	90 - S1 * (41)	90 - S1 * (110)	90 - S1 * (110)
	OAK GROVE	6,438,763	90 - S1 * (68)	90 - S1 * (14)	90 - S1 * (14)	90 - S1 * (50)	90 - S1 * (50)
	OAK GROVE	6,438,763	90 - S1 * (183)	90 - S1 * (39)	90 - S1 * (39)	90 - S1 * (100)	90 - S1 * (100)

	PELTON	3,964,266	90 - S1 * (105)	90 - S1 * (22)	90 - S1 * (80)
	RIVER MILL	5,666,410	90 - S1 * (89)	90 - S1 * (19)	90 - S1 * (70)
	ROUND BUTTE	13,170,716	90 - S1 * (31)	90 - S1 * (7)	90 - S1 * (30)
	SULLIVAN	9,206,561	average= (105)	average= (22)	average= (70)
	TOTAL WATER WHEELS, TUR	51,942,365			
334.00	ACCESSORY ELECTRIC EQUIPMENT				
	FARADAY	2,300,701	60 - R2.5 * (60)	60 - R2.5 * (23)	60 - R2.5 * (30)
	NORTH FORK	949,836	60 - R2.5 * (196)	60 - R2.5 * (75)	60 - R2.5 * (75)
	OAK GROVE	2,372,228	60 - R2.5 * (68)	60 - R2.5 * (26)	60 - R2.5 * (30)
	PELTON	2,231,611	60 - R2.5 * (183)	60 - R2.5 * (70)	60 - R2.5 * (75)
	RIVER MILL	2,528,354	60 - R2.5 * (105)	60 - R2.5 * (40)	60 - R2.5 * (45)
	ROUND BUTTE	1,909,871	60 - R2.5 * (89)	60 - R2.5 * (34)	60 - R2.5 * (35)
	SULLIVAN	4,270,653	60 - R2.5 * (31)	60 - R2.5 * (12)	60 - R2.5 * (25)
	TOTAL ACCESSORY ELECTR	16,563,254	average= (105)	average= (40)	average= (45)
335.00	MISCELLANEOUS PLANT EQUIPMENT				
	FARADAY	227,708	55 - R0.5 * (60)	55 - R0.5 * (3)	55 - R0.5 * (15)
	NORTH FORK	453,550	55 - R0.5 * (196)	55 - R0.5 * (10)	55 - R0.5 * (50)
	OAK GROVE	90,218	55 - R0.5 * (68)	55 - R0.5 * (3)	55 - R0.5 * (5)
	OAK GROVE - TIMOTHY L	2,761	55 - R0.5 * (68)	55 - R0.5 * (3)	55 - R0.5 * (5)
	PELTON	180,730	55 - R0.5 * (183)	55 - R0.5 * (9)	55 - R0.5 * (40)
	RIVER MILL	20,116	55 - R0.5 * (105)	55 - R0.5 * (5)	55 - R0.5 * (30)
	ROUND BUTTE	769,106	55 - R0.5 * (89)	55 - R0.5 * (4)	55 - R0.5 * (30)
	SULLIVAN	109,226	55 - R0.5 * (31)	55 - R0.5 * (2)	55 - R0.5 * (25)
	TOTAL MISCELLANEOUS PLA	1,853,414	average= (106)	average= (5)	average= (25)
336.00	ROADS, RAILROADS, AND BRIDGES				
	FARADAY	1,976,298	80 - R1.5 * (60)	80 - R1.5 * (1)	80 - R1.5 * (15)
	NORTH FORK	1,662,877	80 - R1.5 * (196)	80 - R1.5 * (4)	80 - R1.5 * (50)
	OAK GROVE	2,215,114	80 - R1.5 * (68)	80 - R1.5 * (1)	80 - R1.5 * (5)
	OAK GROVE - TIMOTHY L	107,015	80 - R1.5 * (68)	80 - R1.5 * (1)	80 - R1.5 * (5)
	PELTON	2,151,533	80 - R1.5 * (183)	80 - R1.5 * (3)	80 - R1.5 * (40)
	RIVER MILL	458,019	80 - R1.5 * (105)	80 - R1.5 * (2)	80 - R1.5 * (30)
	ROUND BUTTE	1,192,103	80 - R1.5 * (89)	80 - R1.5 * (2)	80 - R1.5 * (30)
	TOTAL ROADS, RAILROADS,	9,762,959	average= (110)	average= (2)	average= (25)
	TOTAL HYDRAULIC PRODUCTIC	383,994,418			
	OTHER PRODUCTION PLANT				
341.00	STRUCTURES AND IMPROVEMENTS				
	BEAVER - CT	31,384,600	70 - R3 * (8)	70 - R2 * (8)	70 - R2 * (8)
	COYOTE SPRINGS - CT	10,792,758	70 - R3 * (8)	70 - R2 * (8)	70 - R2 * (8)
	PORT WESTWARD - CT	40,951,571	70 - R3 * (10)	70 - R2 * (10)	70 - R2 * (10)
	TOTAL STRUCTURES AND IM	83,128,929			
341.01	STRUCTURES AND IMPROVE	32,813,735	40 - R4 * (9)	40 - R4 (9)	40 - R4 (9)
342.00	FUEL HOLDERS, PRODUCERS AND ACCESSORIES				
	BEAVER - CT	51,221,330	45 - R3 * (8)	50 - R3 * (8)	50 - R3 * (8)
	BEAVER UNIT 8 - CT	1,301	45 - R3 * (8)	50 - R3 * (8)	50 - R3 * (8)
	COYOTE SPRINGS - CT	35,792,019	45 - R3 * (8)	50 - R3 * (8)	50 - R3 * (8)
	PORT WESTWARD - CT	9,462,372	45 - R3 * (10)	50 - R3 * (10)	50 - R3 * (10)
	KB PIPELINE	19,373,076	45 - R3 * (8)	50 - R3 * (8)	50 - R3 * (8)
	TOTAL FUEL HOLDERS, PROI	115,850,099			
344.00	GENERATORS				
	BEAVER - CT	92,274,546	35 - R2 * (8)	45 - R1 * (8)	45 - R1 * (8)
	BEAVER UNIT 8 - CT	3,829,309	35 - R2 * (8)	45 - R1 * (8)	45 - R1 * (8)
	COYOTE SPRINGS - CT	123,550,932	35 - R2 * (8)	45 - R1 * (8)	45 - R1 * (8)
	PORT WESTWARD - CT	188,072,933	35 - R2 * (10)	45 - R1 * (10)	45 - R1 * (10)
	TOTAL GENERATORS	407,727,720			
344.01	GENERATORS - WIND	860,382,974	30 - R3 * (9)	30 - R3 (9)	30 - R3 (9)
345.00	ACCESSORY ELECTRIC EQUIPMENT				
	DISPATCH GENERATION	7,166,364	40 - R2.5 (5)	40 - R2.5 (6)	40 - R2.5 (6)
	BEAVER - CT	12,901,411	40 - R2.5 * (8)	40 - R2.5 * (6)	40 - R2.5 * (6)
	BEAVER UNIT 8 - CT	75,508	40 - R2.5 * (8)	40 - R2.5 * (6)	40 - R2.5 * (6)

	COYOTE SPRINGS - CT	11,549,938	40 - R2.5 *	(8)	40 - R2.5 *	(6)	40 - R2.5 *	(6)
	PORT WESTWARD - CT	8,909,075	40 - R2.5 *	(10)	40 - R2.5 *	(6)	40 - R2.5 *	(6)
	TOTAL ACCESSORY ELECTR	40,602,297						
345.01	ACCESSORY ELECTRIC EQU	24,958,049	30 - R2.5 *	(9)	30 - R2.5	(6)	30 - R2.5	(6)
346.00	MISCELLANEOUS PLANT EQUIPMENT							
	BEAVER - CT	4,303,164	55 - R2 *	(8)	55 - R2 *	(2)	55 - R2 *	(2)
	COYOTE SPRINGS - CT	2,060,508	55 - R2 *	(8)	55 - R2 *	(2)	55 - R2 *	(2)
	PORT WESTWARD - CT	2,876,766	55 - R2 *	(10)	55 - R2 *	(2)	55 - R2 *	(2)
	KB PIPELINE	78,842	55 - R2 *	(8)	55 - R2 *	(2)	55 - R2 *	(2)
	TOTAL MISCELLANEOUS PLA	9,319,279						
346.01	MISCELLANEOUS PLANT EQU	847,554	35 - R2.5 *	(9)	35 - R2.5	(2)	35 - R2.5	(2)
	TOTAL OTHER PRODUCTION PL	1,575,630,637						
	TOTAL PRODUCTION	2,856,843,253						
TRANSMISSION PLANT								
352.00	STRUCTURES AND IMPROVE	17,407,070	60 - R2.5	(15)	60 - R2.5	(15)	60 - R2.5	(15)
353.00	STATION EQUIPMENT	241,319,092	52 - R2	(15)	55 - R2	(15)	55 - R2	(15)
354.00	TOWERS AND FIXTURES	46,808,292	70 - R3	(25)	70 - R3	(10)	70 - R3	(10)
355.00	POLES AND FIXTURES	20,460,356	48 - R1	(80)	50 - R1.5	(50)	50 - R1.5	(50)
356.00	OVERHEAD CONDUCTORS A	74,129,949	60 - R2.5	(35)	60 - R2.5	(30)	60 - R2.5	(30)
359.00	ROADS AND TRAILS	339,371	60 - R4	0	60 - R4	0	60 - R4	0
	TOTAL TRANSMISSION PLANT	400,464,130						
DISTRIBUTION PLANT								
361.00	STRUCTURES AND IMPROVE	36,822,187	65 - R2	(25)	70 - R1.5	(25)	70 - R1.5	(25)
362.00	STATION EQUIPMENT	384,524,570	54 - S0	(20)	54 - S0	(20)	54 - S0	(20)
364.00	POLES, TOWERS AND FIXTURES	325,204,225	43 - R1	(65)	48 - R1	(50)	48 - R1	(60)
365.00	OVERHEAD CONDUCTORS A	533,059,151	46 - S0.5	(75)	48 - S0.5	(60)	48 - S0.5	(70)
366.00	UNDERGROUND CONDUIT	15,523,586	75 - R4	(15)	75 - R4	(13)	75 - R4	(13)
367.00	UNDERGROUND CONDUCTORS	624,820,669	50 - S1.5	(70)	50 - S1.5	(70)	50 - S1.5	(70)
368.00	LINE TRANSFORMERS	306,548,578	45 - R3	(20)	45 - R3	(20)	45 - R3	(20)
369.01	SERVICES - OVERHEAD	40,361,950	50 - S0	(45)	55 - R1.5	(45)	55 - R1.5	(45)
369.03	SERVICES - UNDERGROUND	337,639,570	50 - R4	(45)	50 - R4	(45)	50 - R4	(45)
370.00	METERS	5,613,935	28 - S1.5	(10)	30 - S1.5	(8)	30 - S1.5	(8)
370.01	METERS - AMI	112,581,575	15 - S2.5	(10)	18 - S2.5	(8)	16 - S2.5	(8)
370.02	METERS - RETAINED	7,523,317	16 - L0.5	(10)	16 - L0.5	(8)	16 - L0.5	(8)
371.00	INSTALLATIONS ON CUSTOM	376,133	30 - R4	0	30 - R4	0	30 - R4	0
373.01	CIRCUITS - OTHER	21,175,640	46 - S0.5	(60)	46 - S0.5	(30)	46 - S0.5	(30)
373.02	FIXTURES, ORNAMENTAL PO	28,661,422	28 - L1	(60)	28 - L1	(30)	28 - L1	(30)
373.07	SENTINEL LIGHTING EQUIPM	8,483,866	29 - L0.5	(60)	29 - L0.5	(30)	29 - L0.5	(30)
	TOTAL DISTRIBUTION PLANT	2,788,920,374.56						
GENERAL PLANT								
390.00	STRUCTURES AND IMPROVE	50,907,102	40 - R0.5	(5)	40 - R0.5	(5)	40 - R0.5	(5)
390.10	STRUCTURES AND IMPROVEMENTS - LEASE							
	CSS	6,709	SQUARE	0	SQUARE	0	SQUARE	0
	EASTPORT	58,032	SQUARE	0	SQUARE	0	SQUARE	0
	ERC TUALATIN	276,892	SQUARE	0	SQUARE	0	SQUARE	0
	HILLSBORO	59,238	SQUARE	0	SQUARE	0	SQUARE	0
	SALEM	84,421	SQUARE	0	SQUARE	0	SQUARE	0
	WILSONVILLE	155,328	SQUARE	0	SQUARE	0	SQUARE	0
	WTC	19,375,468	SQUARE	0	SQUARE	0	SQUARE	0
	TOTAL STRUCTURES AND IM	20,016,090						
	OFFICE FURNITURE AND EQUIPMENT							
391.10	FURNITURE AND EQUIPM	16,154,320	15 - SQ	0	15 - SQ	0	15 - SQ	0
391.20	COMPUTERS AND EQUIP	50,495,109	5 - SQ	0	5 - SQ	0	5 - SQ	0

TOTAL OFFICE FURNITURE A	66,649,429						
TRANSPORTATION EQUIPMENT							
392.04	HEAVY DUTY TRUCKS	10,310,359	19 - S2	10	19 - S2	10	19 - S2 10
392.05	MEDIUM DUTY TRUCKS	13,096,541	15 - S1.5	10	15 - S1.5	10	15 - S1.5 10
392.06	LIGHT DUTY TRUCKS	8,585,405	12 - L2	10	12 - L2	10	12 - L2 10
392.08	TRAILERS	5,035,199	25 - S0	10	25 - S0	10	25 - S0 10
392.09	AUTOS	1,174,747	11 - S1.5	10	11 - S1.5	10	11 - S1.5 10
392.10	HELICOPTER	2,703,076	20 - S4	10	20 - S4	10	20 - S4 10
	TOTAL TRANSPORTATION EC	40,905,328					
393.00	STORES EQUIPMENT	2,851,686	20 - SQ	0	20 - SQ	0	20 - SQ 0
394.00	TOOLS, SHOP AND GARAGE	11,124,759	20 - SQ	0	20 - SQ	0	20 - SQ 0
395.00	LABORATORY EQUIPMENT	9,949,816	15 - SQ	0	17 - SQ	0	17 - SQ 0
POWER OPERATED EQUIPMENT							
396.01	MAN LIFT	25,760,291	14 - S1.5	5	14 - S1.5	5	14 - S1.5 5
396.02	DIGGER	8,491,374	15 - S3	5	15 - S3	5	15 - S3 5
396.03	CRANE	4,868,443	20 - L3	5	20 - L3	5	20 - L3 5
396.07	CONSTRUCTION EQUIPM	5,680,187	20 - L1	5	20 - L1	5	20 - L1 5
	TOTAL POWER OPERATED E	44,800,296					
COMMUNICATION EQUIPMENT							
397.01	LINE EQUIPMENT	1,833,385	15 - SQ	0	15 - SQ	0	15 - SQ 0
397.03	RADIO, MICROWAVE ANC	69,486,641	15 - SQ	0	15 - SQ	0	15 - SQ 0
397.06	MOBILE RADIO EQUIPME	598,856	15 - SQ	0	15 - SQ	0	15 - SQ 0
397.07	TELEPHONE EQUIPMENT	688,064	15 - SQ	0	15 - SQ	0	15 - SQ 0
	TOTAL COMMUNICATION EQI	72,606,946					
398.00	MISCELLANEOUS EQUIPMEN	129,175	20 - SQ	0	20 - SQ	0	20 - SQ 0
	TOTAL GENERAL PLANT	319,940,626					
	TOTAL DEPRECIABLE PLANT	6,366,168,383					

5/22/2014 - Per UM 1679 Settlement Agreement.

ACCT	LOC	Survivor Curve	SALVAGE	12/31/2014 PLANT BAL	2015 Additions	12/31/2014 RESERVE	Settle UM1679 ASL/VG	2015 Expense	
34100	PW2	70-R2	-0.07	30,939,284	-	-	2.360%	772,883	
34102	PW2	70-R2	-0.07	1,745,220	-	-	2.360%	43,597	
34200	PW2	50-R3	-0.07	7,288,916	-	-	2.400%	185,134	
34211	PW2	50-R3	-0.07	178,087	-	-	2.400%	4,523	
34400	PW2	45-R1	-0.07	257,527,318	-	-	2.740%	7,456,086	
34500	PW2	40-R2.5	-0.06	10,717,358	-	-	2.680%	300,747	
34600	PW2	55-R2	-0.02	3,548,982	-	-	2.450%	87,700	
Settle UM1679 ELG									
35200	PW2	60-R2.5	-0.15	381,006	-	-	2.680%	11,599	
35300	PW2	55-R2	-0.15	3,608,406	-	-	2.890%	118,350	
35600	PW2	60-R2.5	-0.30	4,608,349	-	-	2.390%	141,623	
393	PW2	20-SQ	0.00	107,253	-	-	8.670%	8,938	
394	PW2	20-SQ	0.00	138,459	-	-	12.150%	15,917	
39701	PW2	15-SQ	0.00	192,999	-	-	9.030%	16,724	
39703	PW2	15-SQ	0.00	2,245,524	-	-	15.620%	326,698	
				323,227,160					9,490,520

Settled under ASL/VG Rates for Production accounts, ELG for non-production accounts

4/22/2014 - As filed in OPUC update.

ACCT	LOC	Survivor Curve	SALVAGE	12/31/2014 PLANT BAL	2015 Additions	12/31/2014 RESERVE	Study UM1679 ELG	2015 Expense	
34100	PW2	70-R2	-0.07	30,939,284	-	-	2.430%	795,553	
34102	PW2	70-R2	-0.07	1,745,220	-	-	2.430%	44,875	
34200	PW2	45-R3	-0.07	7,288,916	-	-	2.830%	217,875	
34211	PW2	45-R3	-0.07	178,087	-	-	2.830%	5,323	
34400	PW2	35-R2	-0.07	257,527,318	-	-	4.480%	12,094,477	
34500	PW2	40-R2.5	-0.07	10,717,358	-	-	3.540%	399,430	
34600	PW2	55-R2	-0.07	3,548,982	-	-	3.330%	124,542	
35200	PW2	60-R2.5	-0.15	381,006	-	-	2.680%	11,599	
35300	PW2	52-R2	-0.15	3,608,406	-	-	3.090%	126,424	
35600	PW2	60-R2.5	-0.35	4,608,349	-	-	2.420%	148,896	
393	PW2	20-SQ	0.00	107,253	-	-	8.670%	8,938	
394	PW2	20-SQ	0.00	138,459	-	-	12.150%	15,917	
39701	PW2	15-SQ	0.00	192,999	-	-	9.030%	16,724	
39703	PW2	15-SQ	0.00	2,245,524	-	-	15.620%	326,698	
				323,227,160					14,337,273

Study Filed with ELG rates

PW2 (4,846,753) Total reduction in annualized depreciation based on Settlement for UM1679

Tucannon (3,374,796) Total reduction in annualized depreciation based on Settlement for UM1679

Total (8,221,549) Total reduction in annualized depreciation based on Settlement for UM1679

UM 1679 Portland General Electric

SUMMARY OF 2015 GRC IMPACT

Depreciation Expense

	2015 GRC Filed Exhibit 303	2015 Depr Settlement	2015 GRC Filed less Depr Settlement
Steam	29.8	29.8	-
Hydro	18.9	15.6	(3.3)
Other Production	53.4	52.7	(0.7)
Total Production:	102.1	98.1	(4.0)
Transmission:	9.8	8.4	(1.4)
Distribution:	101.1	95.6	(5.5)
General:	32.5	32.1	(0.4)
Total Changes:	245.5	234.2	(11.3)
Tucannon	26.6	23.2	(3.4)
PW2	14.3	9.5	(4.8)
New Plants **: 	40.9	32.7	(8.2)
TOTAL:	286.4	266.9	(19.5)

** The Tucannon and PW2 amounts are from the update PGE submitted at the end of April

Rate Base

Tucannon	1.70
PW2	2.40
New Plants:	4.1

*The total variance between settlement and study was a reduction of \$(11.5)M. However, after applying the settled depreciation parameters to the 2015 GRC, the variance becomes a reduction of \$(11.3)M. This difference is mostly due to account 353 - "Station Equipment" at Boardman. Instead of using the settled depreciation parameters, PGE uses the end life of 12/2020 consistent with Schedule 145.

WITNESS QUALIFICATIONS STATEMENT

NAME: MING PENG (Ms.)
EMPLOYER: PUBLIC UTILITY COMMISSION OF OREGON
TITLE: SENIOR ECONOMIST
ADDRESS: 3930 FAIRVIEW INDUSTRIAL DR. SE, SALEM, OR 97302

EDUCATION & TRAINING:

Master of Science, Agricultural Economics
University of Idaho, Moscow

Bachelor of Science, Statistics
People's University of China, Beijing

Certified Rate of Return Analyst (CRRRA)
Society of Utility and Regulatory Financial Analysts

Depreciation studies - the Society of
Depreciation Professionals

NARUC Annual Regulatory Studies Program
Michigan State University, East Lansing

EXPERIENCE:

SENIOR ECONOMIST (1999 – present)
I am employed by the Public Utility Commission of Oregon ("PUC") as a Senior Economist in the Energy Division and am appearing here on behalf of the Staff of the PUC ("Staff"). I have been an analyst at the PUC since January 1999, working in a wide area of topics and testifying in various formal state hearings, with my current responsibility focusing on the review of energy utility depreciation rates. I have a Bachelor's degree in Statistics and Master's degree in Agricultural Economics. Further, I passed the Certified Rate of Return Analyst (CRRRA) exam, and awarded as a CRRRA by Society of Utility and Regulatory Financial Analysts in June 10, 2002.

WITNESS QUALIFICATION STATEMENT

NAME: Jaime McGovern

EMPLOYER: Citizens' Utility Board of Oregon

TITLE: Senior Utility Analyst

ADDRESS: 610 SW Broadway, Suite 400
Portland, OR 97205

EDUCATION: PhD, Economics
W.P. Carey School of Business
Arizona State University

Masters of Science, Economics
Arizona State University

Bachelors of Arts, Economics and Mathematics
Arizona State University

EXPERIENCE: Provided testimony or comments in a number of OPUC dockets, including UE 262, UE 283, UM 1633, and UM 1654. Worked as Utility Analyst at the Oregon Public Utility Commission from 2006-2008, providing advice on rate cases, analysis in meetings with the Bonneville Power Administration and performing benchmarking studies regarding telecom and electric competition in the state of Oregon.

Economics professor at Mesa Community College and the State University of New York from 2004–2010.

WITNESS QUALIFICATIONS STATEMENT

NAME: JOHN J. SPANOS

EMPLOYER: GANNETT FLEMING VALUATION AND RATE CONSULTANTS,
LLC

TITLE: SENIOR VICE PRESIDENT

ADDRESS: 207 Senate Avenue, Camp Hill, Pennsylvania 17011

EDUCATION AND TRAINING Bachelor of Science degree in Industrial Management and Mathematics
from Carnegie-Mellon University

Master of Business Administration from York College of Pennsylvania

Completed courses conducted by Depreciation Programs, Inc.:
“Techniques of Life Analysis,” “Techniques of Salvage and Depreciation
Analysis,” “Forecasting Life and Salvage,” “Modeling and Life Analysis
Using Simulation,” and “Managing a Depreciation Study.”

Completed “Introduction to Public Utility Accounting” program
conducted by the American Gas Association.

President – Society of Depreciation Professionals – 2012
Certified Depreciation Professional

WORK EXPERIENCE Gannett Fleming Valuation and Rate Consultants, LLC
Sr. Vice President - 2012-present
Vice President – 2000-2012
Manager, Depreciation and Valuation Studies – 1999-2000
Supervisor of Depreciation Studies – 1996-1999
Depreciation Analyst – 1986-1996