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1750 SW Harbor Way, Suite 450
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October 1, 2021

Via Electronic Filing

Public Utility Commission of Oregon
Attn: Filing Center
201 High St. SE, Suite 100
Salem OR 97301

Re: In the Matter of PORTLAND GENERAL ELECTRIC CO.
Detailed Depreciation Study of Electric Utility Properties.
Docket No. UM 2152

Dear Filing Center:

On September 17, 2021, the Alliance of Western Energy Consumers (“AWEC”) filed the Opening Testimony and Exhibits of Lance D. Kaufman (AWEC/100-110) in the above-referenced docket. It has come to AWEC’s attention that some of the data included on page four of Exhibit AWEC/104 was inadvertently cut off. Accordingly, AWEC is submitting the enclosed errata version of Exhibit AWEC/104, with changes shown in redline. Exhibit AWEC/104 is otherwise unchanged.

Thank you for your assistance. If you have any questions, please do not hesitate to call.

Sincerely,

/s/ Jesse O. Gorsuch
Jesse O. Gorsuch

Enclosure

REVISED 10/1/2021

**BEFORE THE
PUBLIC UTILITY COMMISSION OF OREGON**

UM 2152

In the Matters of)
)
PORTLAND GENERAL ELECTRIC)
COMPANY,)
)
Detailed Depreciation Study of Electric Utility)
Properties.)
_____)

REVISED EXHIBIT AWEC/104

PGE 2012 TO 2019 RESERVE IMBALANCE SUMMARY

UM-2152 PGE 2019 Depreciation Study

Account	Original Cost	Calculated Accrued	Alloc. Book Reserve	Future Book Accruals	Annual Accrual	Remaining Life	Reserve Imbalance	Reserve Imbalance Pct
31100	117,227,390	97,832,964	102,160,808	19,755,678	2,525,322	8	4,327,844	4%
31200	256,228,933	186,809,877	191,047,771	75,430,319	9,552,728	8	4,237,894	2%
31400	72,869,038	57,435,901	50,194,898	25,588,901	3,363,349	8	-7,241,003	-13%
31500	23,503,446	19,950,084	20,506,294	3,937,289	515,725	8	556,210	3%
31600	6,495,791	5,193,984	5,411,803	1,343,820	176,123	8	217,819	4%
33100	84,069,522	36,264,845	27,887,176	102,348,992	3,729,970	27	-8,377,669	-23%
33200	358,769,141	186,527,381	170,500,839	436,974,444	13,877,724	31	-16,026,542	-9%
33300	76,994,706	42,084,396	40,407,390	84,101,715	2,936,786	29	-1,677,006	-4%
33400	31,601,534	12,256,857	9,883,168	41,879,027	1,594,252	26	-2,373,689	-19%
33500	2,953,736	1,934,720	1,471,470	3,563,360	165,803	21	-463,250	-24%
33600	15,391,900	8,530,753	7,331,417	17,803,496	641,985	28	-1,199,336	-14%
34100	176,384,884	52,333,591	58,687,335	124,843,767	3,993,499	31	6,353,744	12%
34101	53,718,221	12,445,614	13,979,337	42,773,387	1,426,585	30	1,533,723	12%
34200	147,256,858	82,039,059	99,279,378	57,176,671	3,023,174	19	17,240,319	21%
34400	1,079,609,902	258,754,787	289,788,000	829,528,291	30,806,408	27	31,033,213	12%
34401	1,320,494,668	370,278,834	420,757,622	974,511,750	39,846,896	24	50,478,788	14%
34402	4,427,436	837,999	-244,508	4,760,493	346,773	14	-1,082,507	-129%
34500	79,335,767	27,843,965	32,608,329	50,340,285	2,125,889	24	4,764,364	17%
34501	41,801,199	12,574,740	12,114,018	32,049,930	1,576,706	20	-460,722	-4%
34600	41,970,601	7,939,805	9,076,099	34,582,306	1,011,840	34	1,136,294	14%
34601	2,110,383	414,720	498,055	1,733,601	57,693	30	83,335	20%
35200	30,274,033	9,623,622	10,495,308	25,833,532	561,186	46	871,686	9%
35300	491,807,390	142,574,689	152,461,350	437,707,519	11,499,569	38	9,886,661	7%
35400	48,824,327	31,383,577	28,284,490	25,422,270	907,266	28	-3,099,087	-10%
35500	83,364,422	34,143,404	48,312,653	76,733,981	2,489,182	31	14,169,249	41%
35600	169,438,107	66,850,073	118,529,590	84,796,138	1,814,594	47	51,679,517	77%
35900	286,332	156,529	182,621	103,711	3,553	29	26,092	17%
36100	46,326,091	17,092,721	18,502,597	39,405,017	906,387	43	1,409,876	8%
36200	559,680,235	171,001,395	172,063,320	499,552,961	14,608,815	34	1,061,925	1%
36300	393,191	190,292	153,981	258,869	34,830	7	-36,311	-19%
36400	420,065,793	175,989,617	251,862,062	357,233,338	14,311,985	25	75,872,445	43%
36500	664,059,809	314,770,465	423,135,365	672,563,319	20,976,771	32	108,364,900	34%
36600	29,515,628	8,345,912	10,876,607	21,590,584	334,458	65	2,530,695	30%
36700	907,226,217	393,377,951	525,453,052	1,016,831,516	25,225,589	40	132,075,101	34%
36800	469,865,715	161,236,054	215,375,023	301,477,264	8,588,138	35	54,138,969	34%
36901	81,320,051	28,047,698	47,251,341	58,464,726	1,744,137	34	19,203,643	68%
36903	414,063,514	191,002,381	299,302,891	238,979,678	5,850,994	41	108,300,510	57%
37000	9,657,144	3,177,412	1,467,083	8,672,918	554,790	16	-1,710,329	-54%
37001	168,652,948	78,573,581	70,653,254	106,432,341	13,498,293	8	-7,920,327	-10%
37002	6,976,675	5,145,959	5,044,542	2,280,966	335,762	7	-101,417	-2%
37100	1,749,713	273,530	304,152	1,445,561	58,028	25	30,622	11%
37301	25,077,571	14,526,627	19,265,150	12,081,813	528,497	23	4,738,523	33%
37302	83,684,633	26,421,605	38,911,879	65,693,913	3,953,547	17	12,490,274	47%
37307	8,491,048	6,351,704	10,562,085	51,725	3,198	16	4,210,381	66%
39000	120,715,527	35,451,282	38,410,129	94,376,951	4,116,427	23	2,958,847	8%
39010	25,372,002	9,577,723	9,883,749	15,488,253	664,356	23	306,026	3%
39110	27,575,297	10,210,537	11,495,053	16,080,244	1,622,109	10	1,284,516	13%
39120	132,932,473	70,559,350	71,660,244	61,272,229	22,880,453	3	1,100,894	2%
39204	26,034,187	7,193,333	8,901,768	13,227,291	1,133,927	12	1,708,435	24%
39205	27,983,974	7,590,772	12,134,378	11,652,000	1,007,460	12	4,543,606	60%
39206	13,283,122	4,296,934	5,240,003	6,050,651	725,094	8	943,069	22%
39208	6,347,528	2,202,831	3,043,068	2,352,331	136,945	17	840,237	38%
39209	2,043,598	715,546	978,168	758,891	96,225	8	262,622	37%
39210	2,764,850	1,306,373	1,270,504	1,079,619	125,178	9	-35,869	-3%
39300	3,877,884	1,455,442	1,478,661	2,399,223	186,677	13	23,219	2%
39400	23,093,382	6,289,457	7,656,948	15,436,434	989,883	16	1,367,491	22%
39500	8,901,074	5,669,697	5,143,832	3,757,242	704,398	5	-525,865	-9%
39601	29,181,884	9,568,310	8,557,908	17,705,788	2,393,290	7	-1,010,402	-11%
39602	3,512,906	2,220,533	1,846,351	1,315,264	302,675	4	-374,182	-17%
39603	4,882,320	2,266,089	2,957,218	1,436,870	104,278	14	691,129	30%

39607	7,053,658	3,188,521	4,139,890	2,208,402	194,594	11	951,369	30%
39701	21,148,863	4,735,165	4,353,078	16,795,785	1,436,883	12	-382,087	-8%
39703	154,202,963	76,486,446	75,242,516	78,960,447	7,976,799	10	-1,243,930	-2%
39706	2,987,372	494,538	397,615	2,589,757	209,578	12	-96,923	-20%
39707	889,801	727,547	755,880	133,921	17,128	8	28,333	4%
39800	1,295,282	184,603	187,686	1,107,596	64,240	17	3,083	2%
Total	9,360,095,592	3,622,932,703	4,307,531,742	7,384,826,372	299,173,396	34	684,599,039	19%

UM 1809 PGE 2015 Depreciation Study

Account	Original Cost	Calculated Accrued	Alloc. Book Reserve	Future Book Accruals	Annual Accrual	Remaining Life	Reserve Imbalance	Reserve Imbalance Pct
31100	222,031,509	170,738,249	184,961,536	42,739,698	5,645,307	8	14,223,287	8%
31200	488,111,982	331,073,023	354,164,188	145,712,145	20,442,426	7	23,091,165	7%
31201	10,039,472	5,668,814	8,451,505	1,587,967	103,622	15	2,782,691	49%
31400	160,183,824	116,502,901	110,521,031	53,459,522	6,471,580	8	-5,981,870	-5%
31500	47,493,367	36,517,876	38,966,078	9,707,329	1,293,130	8	2,448,202	7%
31600	12,704,585	9,046,246	9,810,639	3,210,458	452,789	7	764,393	8%
33100	53,251,268	28,264,484	16,415,282	77,697,421	2,382,667	33	-11,849,202	-42%
33200	333,125,125	147,175,916	117,705,681	476,910,062	13,329,918	36	-29,470,235	-20%
33300	60,671,875	35,923,251	32,513,525	73,728,045	2,328,380	32	-3,409,726	-9%
33400	18,667,254	10,165,414	7,291,756	25,798,619	948,518	27	-2,873,658	-28%
33500	2,098,574	1,744,478	1,038,709	2,719,706	116,341	23	-705,769	-40%
33600	11,060,462	8,200,079	5,580,858	15,434,611	512,902	30	-2,619,221	-32%
34100	116,893,055	38,048,260	44,456,099	80,040,860	2,678,029	30	6,407,839	17%
34101	50,662,253	6,858,867	8,768,323	45,769,214	1,393,194	33	1,909,456	28%
34200	124,564,873	73,244,991	92,446,636	40,203,890	2,050,733	20	19,201,645	26%
34400	664,999,139	178,855,493	176,007,859	532,000,080	24,278,841	22	-2,847,634	-2%
34401	1,307,118,896	252,079,795	242,815,982	1,164,408,636	52,745,072	22	-9,263,813	-4%
34402	1,467,562	44,907	41,740	1,455,173	89,801	16	-3,167	-7%
34500	66,179,843	20,756,632	24,587,049	45,511,705	2,168,384	21	3,830,417	18%
34501	41,297,767	7,094,110	6,478,226	37,965,350	1,767,505	21	-615,884	-9%
34600	13,371,807.43	4,719,053	5,630,367	8,579,819	331,672	26	911,314	19%
34601	1,810,066	239,148	282,978	1,667,029	58,515	28	43,830	18%
35200	19,312,917	6,981,707	7,936,981	14,272,874	344,467	41	955,274	14%
35300	273,812,494	90,601,977	99,144,931	215,739,436	6,334,332	34	8,542,954	9%
35400	46,819,259	27,545,030	24,217,309	27,283,876	881,028	31	-3,327,721	-12%
35500	25,714,210	9,510,682	11,988,605	26,582,710	889,302	30	2,477,923	26%
35600	73,514,807	35,055,676	60,343,434	27,874,334	604,939	46	25,287,758	72%
35900	286,332	141,309	159,587	126,745	3,957	32	18,278	13%
36100	39,801,374	15,232,968	14,627,097	35,124,621	884,126	40	-605,871	-4%
36200	472,305,680	164,254,734	145,636,170	421,130,646	13,465,426	31	-18,618,564	-11%
36300	387,216	76,158	51,298	355,279	32,923	11	-24,860	-33%
36400	349,610,655	177,227,204	253,174,817	271,241,166	10,332,478	26	75,947,613	43%
36500	597,352,192	311,777,527	401,592,869	596,905,858	19,871,601	30	89,815,342	29%
36600	15,385,201	7,291,218	9,995,741	6,927,980	144,328	48	2,704,523	37%
36700	690,312,081	332,613,747	428,571,957	744,958,580	20,951,550	36	95,958,210	29%
36800	357,878,099	142,054,819	182,350,295	229,209,519	7,052,775	32	40,295,476	28%
36901	61,300,423	25,934,440	40,906,305	38,784,245	1,175,241	33	14,971,865	58%
36903	354,770,903	172,128,654	274,949,537	186,252,637	5,106,647	36	102,820,883	60%
37000	5,909,029	2,037,546	779,879	5,720,053	353,212	16	-1,257,667	-62%
37001	136,195,805	50,028,887	41,386,300	108,429,085	11,860,826	9	-8,642,587	-17%
37002	7,301,494	5,008,649	3,414,262	4,617,382	655,312	7	-1,594,387	-32%
37100	376,133	205,884	282,975	93,158	6,448	14	77,091	37%
37301	21,950,397	12,570,762	17,460,094	11,075,422	482,662	23	4,889,332	39%
37302	52,526,977	18,004,132	28,258,893	40,026,177	2,635,333	15	10,254,761	57%
37307	8,491,021	5,987,270	10,386,209	652,118	41,311	16	4,398,939	73%
39000	94,090,980	24,573,626	25,831,389	72,964,140	3,598,550	20	1,257,763	5%
39010	25,372,002	7,069,800	7,097,535	18,274,466	699,128	26	27,735	0%
39110	22,059,425	7,537,113	7,299,101	14,760,324	1,505,944	10	-238,012	-3%
39120	88,303,504	37,365,547	36,391,147	51,912,357	17,115,351	3	-974,400	-3%
39204	16,137,569	5,140,998	7,079,625	8,251,065	527,515	16	1,938,627	38%
39205	14,767,748	6,338,982	8,146,081	5,883,280	609,502	10	1,807,099	29%
39206	10,963,150	4,395,537	5,118,816	5,296,177	626,234	8	723,279	16%
39208	6,382,395	2,118,197	3,024,836	3,038,439	173,768	17	906,639	43%
39209	1,234,095	573,036	514,421	657,970	123,392	5	-58,615	-10%
39210	2,703,076	949,090	856,756	1,711,166	141,474	12	-92,334	-10%
39300	2,830,642	1,384,797	1,410,975	1,419,667	134,666	11	26,178	2%
39400	15,411,226	5,600,747	5,412,448	9,998,778	814,541	12	-188,299	-3%
39500	9,245,947	5,703,754	4,126,837	5,119,110	1,037,204	5	-1,576,917	-28%
39601	25,700,584	11,429,928	13,451,565	9,678,961	1,210,977	8	2,021,637	18%
39602	7,108,489	3,123,816	4,083,549	2,314,091	250,187	9	959,733	31%

REVISED 10/1/2021

AWEC/104
Kaufman/4

39603	4,701,378	2,369,522	3,405,477	825,763	62,930	13	1,035,955	44%
39607	7,386,693	2,703,813	3,708,898	2,939,125	249,934	12	1,005,085	37%
39701	6,771,133	1,403,341	1,014,926	5,756,207	469,727	12	-388,415	-28%
39703	90,674,615	51,144,526	45,187,175	45,487,440	6,141,122	7	-5,957,351	-12%
39706	354,605	67,050	56,797	297,808	24,804	12	-10,253	-15%
39707	848,493	599,760	661,698	186,795	17,716	11	61,938	10%
39800	308,112	31,292	27,915	280,197	15,770	18	-3,377	-11%
Total	7,859,103,311	3,276,857,239	3,730,459,559	6,166,744,566	281,249,986	31	453,602,320	14%

UM-1697 PGE 2012 Depreciation Study

Account	Original Cost	Calculated Accrued	Alloc. Book Reserve	Future Book Accruals	Annual Accrual	Remaining Life	Reserve Imbalance	Reserve Imbalance Pct
31100	218,471,821	140,767,753	171,849,422	53,419,446	4,437,338	12	31,081,669	22%
31200	444,198,579	257,462,872	313,470,883	143,846,476	13,054,638	11	56,008,011	22%
31400	165,500,957	96,478,217	96,976,550	73,194,039	6,095,342	12	498,333	1%
31500	47,139,154	30,312,846	35,897,596	12,655,228	1,087,289	12	5,584,750	18%
31600	12,149,422	7,222,378	8,711,540	3,813,222	332,413	11	1,489,162	21%
33100	47,923,595	25,891,312	11,642,487	84,980,118	2,466,092	34	-14,248,825	-55%
33200	255,948,831	134,357,943	94,611,715	406,165,006	10,859,319	37	-39,746,228	-30%
33300	51,942,365	36,565,760	27,527,125	74,038,104	2,242,510	33	-9,038,635	-25%
33400	16,563,254	8,576,550	5,207,500	25,973,274	907,918	29	-3,369,050	-39%
33500	1,853,414	1,859,391	802,894	3,209,548	132,412	24	-1,056,497	-57%
33600	9,762,959	8,029,871	4,469,327	16,796,894	523,666	32	-3,560,544	-44%
34100	83,128,929	31,195,365	39,156,071	51,442,204	1,699,216	30	7,960,706	26%
34101	32,813,735	3,289,481	4,812,435	30,954,537	910,651	34	1,522,954	46%
34200	115,850,099	68,026,825	89,013,522	36,293,833	1,854,436	20	20,986,697	31%
34400	407,727,720	135,834,324	139,273,063	304,834,334	15,187,169	20	3,438,739	3%
34401	860,382,974	126,608,604	127,377,520	810,439,922	35,197,604	23	768,916	1%
34500	40,602,297	18,063,562	21,742,697	22,070,975	977,756	23	3,679,135	20%
34501	24,958,049	3,138,815	2,866,156	24,338,117	1,097,230	22	-272,659	-9%
34600	9,319,279	3,930,904	5,098,509	5,023,849	214,459	23	1,167,605	30%
34601	847,554	114,591	132,834	790,999	31,455	25	18,243	16%
35200	17,407,070	6,435,281	6,797,117	13,221,013	353,866	37	361,836	6%
35300	241,319,092	78,753,814	82,698,466	194,818,490	6,029,329	32	3,944,652	5%
35400	46,808,292	28,445,112	21,550,183	36,960,181	1,079,228	34	-6,894,929	-24%
35500	20,460,356	8,687,892	9,396,543	27,432,097	988,913	28	708,651	8%
35600	74,129,949	37,722,495	57,901,127	42,174,304	1,021,678	41	20,178,632	53%
35900	339,371	170,855	146,519	192,853	6,680	29	-24,336	-14%
36100	36,822,187	13,254,908	12,249,928	33,777,806	842,106	40	-1,004,980	-8%
36200	384,524,570	140,769,572	120,825,481	340,604,004	11,185,779	30	-19,944,091	-14%
36400	325,204,225	180,730,041	233,516,446	303,070,525	12,242,850	25	52,786,405	29%
36500	533,059,151	282,652,769	324,305,182	608,548,333	22,148,466	27	41,652,413	15%
36600	15,523,586	7,582,953	9,517,421	8,334,703	184,283	45	1,934,468	26%
36700	624,820,669	293,532,001	351,739,956	710,455,181	21,951,949	32	58,207,955	20%
36800	306,548,578	140,293,299	158,484,717	209,373,577	7,431,903	28	18,191,418	13%
36901	40,361,950	24,976,530	37,798,996	20,725,831	708,110	29	12,822,466	51%
36903	337,639,570	176,505,768	263,527,773	226,049,604	6,287,797	36	87,022,005	49%
37000	5,613,935	1,443,335	594,883	5,580,446	318,852	18	-848,452	-59%
37001	112,581,575	22,133,945	20,648,101	103,191,632	9,239,495	11	-1,485,844	-7%
37002	7,523,317	4,481,589	1,781,367	6,494,281	888,856	7	-2,700,222	-60%
37100	376,133	170,832	253,970	122,163	7,254	17	83,138	49%
37301	21,175,640	11,795,771	15,125,414	18,755,610	698,971	27	3,329,643	28%
37302	28,661,422	21,021,083	27,473,507	18,384,767	1,216,886	15	6,452,424	31%
37307	8,483,866	6,550,110	9,442,510	4,131,676	267,170	15	2,892,400	44%
39000	50,907,102	20,398,678	22,999,361	30,453,096	1,475,457	21	2,600,683	13%
39010	20,016,090	5,367,994	5,973,138	14,042,950	514,358	27	605,144	11%
39110	16,154,320	7,115,241	5,067,207	11,087,113	1,777,770	6	-2,048,034	-29%
39120	50,495,109	23,320,434	21,120,607	29,374,501	10,624,019	3	-2,199,827	-9%
39204	10,310,359	4,844,702	7,478,261	1,801,062	127,752	14	2,633,559	54%
39205	13,096,541	5,583,072	7,837,401	3,949,487	460,131	9	2,254,329	40%
39206	8,585,405	4,774,373	5,761,784	1,965,081	327,645	6	987,411	21%
39208	5,035,199	1,886,095	2,414,441	2,117,238	149,698	14	528,346	28%
39209	1,174,747	439,714	422,708	634,565	106,935	6	-17,006	-4%
39210	2,703,076	527,708	564,801	1,867,967	122,655	15	37,093	7%
39300	2,851,686	1,145,844	1,067,992	1,783,694	154,588	12	-77,852	-7%
39400	11,124,759	5,312,497	4,201,984	6,922,774	840,771	8	-1,110,513	-21%
39500	9,949,816	4,889,513	2,780,784	7,169,032	1,422,464	5	-2,108,729	-43%
39601	25,760,291	11,931,900	13,170,098	11,302,179	1,477,363	8	1,238,198	10%
39602	8,491,374	3,686,718	4,659,141	3,407,665	328,124	10	972,423	26%
39603	4,868,443	2,241,589	3,235,875	1,389,147	102,937	13	994,286	44%
39607	5,680,187	2,598,316	3,479,017	1,917,161	174,793	11	880,701	34%

39701	1,833,385	737,613	544,039	1,289,346	116,397	11	-193,574	-26%
39703	69,486,641	41,123,579	31,953,470	37,533,171	5,863,891	6	-9,170,109	-22%
39706	598,856	148,992	303,999	294,857	25,475	12	155,007	104%
39707	688,064	454,326	439,897	248,167	49,235	5	-14,429	-3%
39800	129,175	37,374	93,653	35,522	2,261	16	56,279	151%
Total	6,356,410,118	2,774,403,591	3,111,985,111	5,287,264,977	230,654,053	25	337,581,520	12%