

**BEFORE THE WASHINGTON  
UTILITIES & TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY

Respondent.

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DOCKETS UE-220066, UG-220067, and UG-210918 (*Consolidated*)

**DAVID J. GARRETT  
ON BEHALF OF THE  
WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL  
PUBLIC COUNSEL UNIT**

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**EXHIBIT DJG-9**

Electric Plant Iowa Curve Fitting Calculations:  
Account 368.00 – Line Transformers

**July 28, 2022**

[1]	[2]	[3]	[4]	[5]	[6]	[7]
<b>Age (Years)</b>	<b>Exposures (Dollars)</b>	<b>Observed Life Table (OLT)</b>	<b>Company R2-48</b>	<b>PC R1.5-54</b>	<b>Company SSD</b>	<b>PC SSD</b>
0.0	476,971,974	100.00%	100.00%	100.00%	0.0000	0.0000
0.5	462,810,734	99.93%	99.90%	99.84%	0.0000	0.0000
1.5	453,395,231	99.62%	99.69%	99.50%	0.0000	0.0000
2.5	442,138,839	99.14%	99.47%	99.15%	0.0000	0.0000
3.5	426,725,935	98.64%	99.23%	98.79%	0.0000	0.0000
4.5	417,210,023	98.09%	98.97%	98.42%	0.0001	0.0000
5.5	406,829,430	97.54%	98.70%	98.04%	0.0001	0.0000
6.5	396,241,077	96.96%	98.41%	97.64%	0.0002	0.0000
7.5	394,089,402	96.41%	98.10%	97.22%	0.0003	0.0001
8.5	393,573,629	95.65%	97.76%	96.80%	0.0004	0.0001
9.5	386,067,570	95.09%	97.41%	96.36%	0.0005	0.0002
10.5	379,337,322	94.51%	97.03%	95.90%	0.0006	0.0002
11.5	369,877,381	93.94%	96.63%	95.43%	0.0007	0.0002
12.5	359,999,090	93.40%	96.21%	94.95%	0.0008	0.0002
13.5	334,738,424	92.85%	95.76%	94.44%	0.0008	0.0003
14.5	316,606,800	92.27%	95.28%	93.93%	0.0009	0.0003
15.5	305,988,609	91.60%	94.77%	93.39%	0.0010	0.0003
16.5	297,748,473	90.93%	94.24%	92.84%	0.0011	0.0004
17.5	292,086,911	90.26%	93.67%	92.28%	0.0012	0.0004
18.5	284,586,218	89.66%	93.07%	91.69%	0.0012	0.0004
19.5	271,739,774	89.05%	92.44%	91.09%	0.0011	0.0004
20.5	258,080,849	88.44%	91.77%	90.47%	0.0011	0.0004
21.5	245,604,079	87.81%	91.06%	89.82%	0.0011	0.0004
22.5	237,739,980	87.19%	90.32%	89.16%	0.0010	0.0004
23.5	227,610,527	86.55%	89.53%	88.47%	0.0009	0.0004
24.5	218,164,100	85.88%	88.71%	87.77%	0.0008	0.0004
25.5	210,186,811	85.20%	87.84%	87.04%	0.0007	0.0003
26.5	202,213,386	84.50%	86.93%	86.28%	0.0006	0.0003
27.5	193,942,896	83.78%	85.97%	85.50%	0.0005	0.0003
28.5	184,642,090	83.03%	84.96%	84.70%	0.0004	0.0003
29.5	175,409,532	82.26%	83.90%	83.86%	0.0003	0.0003
30.5	162,454,899	81.41%	82.79%	83.00%	0.0002	0.0003
31.5	151,566,076	80.56%	81.63%	82.12%	0.0001	0.0002
32.5	141,418,902	79.71%	80.41%	81.20%	0.0000	0.0002
33.5	129,529,798	78.81%	79.14%	80.25%	0.0000	0.0002
34.5	118,086,272	77.89%	77.81%	79.27%	0.0000	0.0002
35.5	105,891,078	76.84%	76.42%	78.26%	0.0000	0.0002
36.5	94,181,904	75.71%	74.98%	77.22%	0.0001	0.0002
37.5	85,662,815	74.54%	73.47%	76.14%	0.0001	0.0003
38.5	78,135,653	73.34%	71.90%	75.03%	0.0002	0.0003
39.5	69,832,706	72.18%	70.26%	73.89%	0.0004	0.0003
40.5	62,777,175	70.88%	68.57%	72.71%	0.0005	0.0003
41.5	52,127,444	69.70%	66.82%	71.50%	0.0008	0.0003
42.5	42,196,816	68.50%	65.00%	70.25%	0.0012	0.0003
43.5	35,457,642	67.27%	63.13%	68.97%	0.0017	0.0003
44.5	29,437,089	66.11%	61.20%	67.65%	0.0024	0.0002
45.5	25,658,108	64.98%	59.21%	66.29%	0.0033	0.0002
46.5	22,809,711	63.79%	57.17%	64.91%	0.0044	0.0001

[1]	[2]	[3]	[4]	[5]	[6]	[7]
<b>Age (Years)</b>	<b>Exposures (Dollars)</b>	<b>Observed Life Table (OLT)</b>	<b>Company R2-48</b>	<b>PC R1.5-54</b>	<b>Company SSD</b>	<b>PC SSD</b>
47.5	20,028,100	62.50%	55.09%	63.48%	0.0055	0.0001
48.5	19,227,550	61.21%	52.95%	62.03%	0.0068	0.0001
49.5	17,374,054	59.84%	50.78%	60.54%	0.0082	0.0000
50.5	15,821,449	58.46%	48.57%	59.01%	0.0098	0.0000
51.5	12,608,346	53.85%	46.33%	57.46%	0.0056	0.0013
52.5	9,665,353	47.56%	44.08%	55.88%	0.0012	0.0069
53.5	6,433,012	40.03%	41.80%	54.27%	0.0003	0.0203
54.5	5,199,451	37.97%	39.52%	52.64%	0.0002	0.0215
55.5	4,580,671	36.59%	37.25%	50.98%	0.0000	0.0207
56.5	3,649,282	35.21%	34.98%	49.31%	0.0000	0.0199
57.5	2,709,126	33.43%	32.74%	47.61%	0.0000	0.0201
58.5	1,949,494	32.06%	30.52%	45.90%	0.0002	0.0192
59.5	1,277,348	30.76%	28.34%	44.18%	0.0006	0.0180
60.5	622,917	29.43%	26.21%	42.45%	0.0010	0.0170
61.5			24.13%	40.72%		
Sum of Squared Differences				[8]	0.0737	0.1762
Up to 1% of Beginning Exposures				[9]	0.0717	0.0614

[1] Age in years using half-year convention

[2] Dollars exposed to retirement at the beginning of each age interval

[3] Observed life table based on the Company's property records. These numbers form the original survivor curve.

[4] The Company's selected Iowa curve to be fitted to the OLT.

[5] My selected Iowa curve to be fitted to the OLT.

[6] =  $([4] - [3])^2$ . This is the squared difference between each point on the Company's curve and the observed survivor curve.

[7] =  $([5] - [3])^2$ . This is the squared difference between each point on my curve and the observed survivor curve.

[8] = Sum of squared differences. The smallest SSD represents the best mathematical fit.