

**BEFORE THE WASHINGTON
UTILITIES & TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY

Respondent.

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**

EXHIBIT DJG-8

Electric Plant Iowa Curve Fitting Calculations:
Account 367.00 – Underground Conduit and Devices

July 28, 2022

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	Exposures (Dollars)	Observed Life Table (OLT)	Company R2.5-38	PC R2-44	Company SSD	PC SSD
0.0	1,132,461,294	100.00%	100.00%	100.00%	0.0000	0.0000
0.5	1,099,396,469	99.89%	99.93%	99.89%	0.0000	0.0000
1.5	1,029,515,839	99.60%	99.77%	99.66%	0.0000	0.0000
2.5	972,863,504	99.30%	99.59%	99.42%	0.0000	0.0000
3.5	902,179,544	98.99%	99.40%	99.15%	0.0000	0.0000
4.5	806,747,497	98.67%	99.18%	98.86%	0.0000	0.0000
5.5	775,813,048	98.33%	98.93%	98.56%	0.0000	0.0000
6.5	750,097,682	97.94%	98.67%	98.23%	0.0001	0.0000
7.5	730,206,657	97.53%	98.37%	97.87%	0.0001	0.0000
8.5	693,541,501	96.93%	98.04%	97.49%	0.0001	0.0000
9.5	664,546,778	96.48%	97.67%	97.09%	0.0001	0.0000
10.5	633,362,155	96.02%	97.27%	96.65%	0.0002	0.0000
11.5	592,968,527	95.45%	96.83%	96.19%	0.0002	0.0001
12.5	562,385,049	94.87%	96.34%	95.69%	0.0002	0.0001
13.5	540,384,559	94.22%	95.80%	95.17%	0.0002	0.0001
14.5	512,468,215	93.60%	95.21%	94.61%	0.0003	0.0001
15.5	485,887,183	92.94%	94.56%	94.01%	0.0003	0.0001
16.5	455,738,251	92.27%	93.86%	93.37%	0.0003	0.0001
17.5	437,493,311	91.59%	93.08%	92.70%	0.0002	0.0001
18.5	410,770,358	90.93%	92.24%	91.98%	0.0002	0.0001
19.5	379,610,122	90.21%	91.33%	91.22%	0.0001	0.0001
20.5	345,217,775	89.45%	90.34%	90.42%	0.0001	0.0001
21.5	333,692,534	88.82%	89.26%	89.57%	0.0000	0.0001
22.5	319,488,278	88.18%	88.09%	88.67%	0.0000	0.0000
23.5	301,847,102	87.52%	86.83%	87.72%	0.0000	0.0000
24.5	283,590,852	86.85%	85.47%	86.71%	0.0002	0.0000
25.5	266,636,316	85.97%	84.00%	85.65%	0.0004	0.0000
26.5	242,303,572	84.85%	82.42%	84.53%	0.0006	0.0000
27.5	218,213,913	83.62%	80.71%	83.35%	0.0008	0.0000
28.5	193,756,707	82.76%	78.89%	82.11%	0.0015	0.0000
29.5	172,035,488	81.93%	76.92%	80.81%	0.0025	0.0001
30.5	151,397,040	80.82%	74.82%	79.43%	0.0036	0.0002
31.5	129,278,099	79.55%	72.58%	78.00%	0.0049	0.0002
32.5	111,342,713	77.13%	70.19%	76.49%	0.0048	0.0000
33.5	95,248,417	75.00%	67.64%	74.91%	0.0054	0.0000
34.5	79,779,083	73.18%	64.95%	73.26%	0.0068	0.0000
35.5	65,424,202	71.25%	62.10%	71.53%	0.0084	0.0000
36.5	57,609,479	69.10%	59.11%	69.73%	0.0100	0.0000
37.5	48,275,627	66.68%	55.99%	67.86%	0.0114	0.0001
38.5	39,445,061	63.72%	52.75%	65.92%	0.0120	0.0005
39.5	30,112,006	60.87%	49.41%	63.90%	0.0131	0.0009
40.5	23,148,853	57.03%	46.00%	61.82%	0.0122	0.0023
41.5	11,179,739	53.57%	42.55%	59.67%	0.0122	0.0037
42.5	7,311,758	48.21%	39.08%	57.45%	0.0083	0.0085
43.5	4,141,406	43.94%	35.64%	55.18%	0.0069	0.0126
44.5	2,684,945	39.16%	32.26%	52.85%	0.0048	0.0188
45.5	724,518	36.47%	28.97%	50.48%	0.0056	0.0196
46.5	439,929	31.11%	25.81%	48.06%	0.0028	0.0287

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	Exposures (Dollars)	Observed Life Table (OLT)	Company R2.5-38	PC R2-44	Company SSD	PC SSD
47.5	118,414	15.81%	22.81%	45.62%	0.0049	0.0889
48.5	53,483	7.23%	19.99%	43.15%	0.0163	0.1290
49.5	14,262	3.00%	17.37%	40.66%	0.0207	0.1419
50.5	877	0.82%	14.96%	38.18%	0.0200	0.1396
51.5	202	0.47%	12.77%	35.70%	0.0151	0.1241
52.5	202	0.47%	10.80%	33.24%	0.0107	0.1074
53.5	202	0.47%	9.03%	30.82%	0.0073	0.0921
54.5	23	0.05%	7.47%	28.44%	0.0055	0.0806
55.5	23	0.05%	6.11%	26.11%	0.0037	0.0679
56.5	23	0.05%	4.93%	23.86%	0.0024	0.0567
57.5	23	0.05%	3.92%	21.68%	0.0015	0.0468
58.5			3.06%	19.58%		
Sum of Squared Differences				[8]	0.2499	1.1727
Up to 1% of Beginning Exposures				[9]	0.1013	0.0058

[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.