

**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-11

Gas Plant Iowa Curve Fitting Calculations:
Account 376.40 – Mains – Wrapped Steel

July 28, 2022

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	Exposures (Dollars)	Observed Life Table (OLT)	Company R2-60	PC R1.5-68	Company SSD	PC SSD
0.0	518,478,332	100.00%	100.00%	100.00%	0.0000	0.0000
0.5	512,847,419	99.94%	99.92%	99.87%	0.0000	0.0000
1.5	507,496,593	99.64%	99.76%	99.61%	0.0000	0.0000
2.5	496,226,859	99.22%	99.58%	99.33%	0.0000	0.0000
3.5	453,072,133	98.96%	99.40%	99.05%	0.0000	0.0000
4.5	447,905,010	98.63%	99.20%	98.77%	0.0000	0.0000
5.5	423,077,839	98.41%	99.00%	98.47%	0.0000	0.0000
6.5	426,235,021	98.01%	98.78%	98.17%	0.0001	0.0000
7.5	413,991,128	97.64%	98.56%	97.86%	0.0001	0.0000
8.5	406,702,560	97.26%	98.32%	97.53%	0.0001	0.0000
9.5	398,498,149	96.84%	98.06%	97.21%	0.0001	0.0000
10.5	390,445,259	96.63%	97.80%	96.87%	0.0001	0.0000
11.5	343,312,552	96.43%	97.52%	96.52%	0.0001	0.0000
12.5	322,419,854	96.19%	97.22%	96.16%	0.0001	0.0000
13.5	264,205,519	95.80%	96.92%	95.80%	0.0001	0.0000
14.5	220,134,731	95.61%	96.59%	95.42%	0.0001	0.0000
15.5	210,712,525	95.40%	96.25%	95.04%	0.0001	0.0000
16.5	166,544,379	94.98%	95.90%	94.65%	0.0001	0.0000
17.5	159,858,999	94.64%	95.52%	94.24%	0.0001	0.0000
18.5	139,778,970	94.14%	95.13%	93.83%	0.0001	0.0000
19.5	135,437,242	94.05%	94.72%	93.40%	0.0000	0.0000
20.5	119,622,085	93.84%	94.29%	92.97%	0.0000	0.0001
21.5	107,917,507	93.32%	93.84%	92.52%	0.0000	0.0001
22.5	97,806,909	93.00%	93.37%	92.06%	0.0000	0.0001
23.5	89,749,831	92.74%	92.88%	91.60%	0.0000	0.0001
24.5	75,124,098	92.38%	92.37%	91.12%	0.0000	0.0002
25.5	76,409,095	91.89%	91.84%	90.62%	0.0000	0.0002
26.5	78,764,464	91.54%	91.28%	90.12%	0.0000	0.0002
27.5	70,950,469	91.17%	90.69%	89.60%	0.0000	0.0002
28.5	72,086,889	90.79%	90.09%	89.07%	0.0000	0.0003
29.5	69,716,600	90.40%	89.45%	88.53%	0.0001	0.0004
30.5	71,340,109	89.65%	88.79%	87.97%	0.0001	0.0003
31.5	71,130,340	88.90%	88.10%	87.39%	0.0001	0.0002
32.5	68,022,953	87.99%	87.39%	86.81%	0.0000	0.0001
33.5	65,680,640	86.94%	86.64%	86.20%	0.0000	0.0001
34.5	63,054,654	85.68%	85.87%	85.58%	0.0000	0.0000
35.5	62,033,177	84.56%	85.06%	84.95%	0.0000	0.0000
36.5	59,920,223	83.70%	84.22%	84.30%	0.0000	0.0000
37.5	56,592,553	82.92%	83.35%	83.63%	0.0000	0.0001
38.5	54,435,770	82.30%	82.45%	82.94%	0.0000	0.0000
39.5	55,161,709	81.81%	81.51%	82.24%	0.0000	0.0000
40.5	52,328,542	81.54%	80.54%	81.51%	0.0001	0.0000
41.5	49,717,964	81.17%	79.53%	80.77%	0.0003	0.0000
42.5	49,475,602	80.69%	78.48%	80.01%	0.0005	0.0000
43.5	47,204,629	80.37%	77.40%	79.23%	0.0009	0.0001
44.5	46,312,058	80.02%	76.28%	78.43%	0.0014	0.0003
45.5	44,735,251	79.66%	75.12%	77.61%	0.0021	0.0004
46.5	46,464,076	79.30%	73.92%	76.76%	0.0029	0.0006

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	Exposures (Dollars)	Observed Life Table (OLT)	Company R2-60	PC R1.5-68	Company SSD	PC SSD
47.5	48,105,396	79.05%	72.69%	75.90%	0.0040	0.0010
48.5	49,333,745	78.83%	71.41%	75.02%	0.0055	0.0015
49.5	49,728,920	78.67%	70.10%	74.11%	0.0073	0.0021
50.5	45,795,004	78.54%	68.74%	73.18%	0.0096	0.0029
51.5	42,897,593	78.37%	67.35%	72.23%	0.0121	0.0038
52.5	36,360,969	78.20%	65.92%	71.26%	0.0151	0.0048
53.5	31,717,527	78.00%	64.45%	70.27%	0.0184	0.0060
54.5	28,721,149	77.90%	62.94%	69.25%	0.0224	0.0075
55.5	26,578,465	77.78%	61.39%	68.21%	0.0268	0.0092
56.5	22,616,378	77.70%	59.81%	67.15%	0.0320	0.0111
57.5	17,603,068	77.68%	58.20%	66.07%	0.0379	0.0135
58.5	12,816,679	77.67%	56.55%	64.97%	0.0446	0.0161
59.5	9,110,020	77.62%	54.87%	63.84%	0.0517	0.0190
60.5	5,607,739	76.95%	53.17%	62.69%	0.0566	0.0203
61.5	2,733,631	76.84%	51.43%	61.52%	0.0645	0.0235
62.5	2,632,709	76.84%	49.68%	60.34%	0.0738	0.0272
63.5	2,510,480	76.84%	47.90%	59.13%	0.0837	0.0314
64.5			46.11%	57.90%		
Sum of Squared Differences				[8]	0.5762	0.2050
Up to 1% of Beginning Exposures				[9]	0.3542	0.1229

[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.