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-12

Gas Plant Iowa Curve Fitting Calculations:
Account 380.20 – Services – Plastic

July 28, 2022

Account 380.20 Curve Fitting

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	**Exposures (Dollars)**	**Observed Life Table (OLT)**	**Company R2.5-50**	**PC R2-54**	**Company SSD**	**PC SSD**
0.0	1,276,350,051	100.00%	100.00%	100.00%	0.0000	0.0000
0.5	1,219,207,986	99.96%	99.94%	99.91%	0.0000	0.0000
1.5	1,148,455,608	99.77%	99.83%	99.73%	0.0000	0.0000
2.5	1,075,069,582	99.56%	99.70%	99.53%	0.0000	0.0000
3.5	1,006,411,793	99.36%	99.56%	99.32%	0.0000	0.0000
4.5	947,518,454	99.12%	99.41%	99.10%	0.0000	0.0000
5.5	896,058,957	98.88%	99.25%	98.87%	0.0000	0.0000
6.5	836,130,606	98.59%	99.07%	98.62%	0.0000	0.0000
7.5	785,353,675	98.27%	98.88%	98.36%	0.0000	0.0000
8.5	735,589,594	97.96%	98.68%	98.08%	0.0001	0.0000
9.5	699,272,652	97.61%	98.45%	97.78%	0.0001	0.0000
10.5	656,858,292	97.21%	98.21%	97.47%	0.0001	0.0000
11.5	607,716,157	96.73%	97.95%	97.14%	0.0001	0.0000
12.5	560,154,657	96.37%	97.67%	96.79%	0.0002	0.0000
13.5	527,583,233	95.97%	97.37%	96.42%	0.0002	0.0000
14.5	500,019,398	95.56%	97.04%	96.04%	0.0002	0.0000
15.5	483,399,217	95.12%	96.69%	95.63%	0.0002	0.0000
16.5	468,503,566	94.63%	96.32%	95.20%	0.0003	0.0000
17.5	454,248,171	94.17%	95.91%	94.74%	0.0003	0.0000
18.5	440,747,339	93.59%	95.48%	94.27%	0.0004	0.0000
19.5	418,571,146	93.15%	95.01%	93.77%	0.0003	0.0000
20.5	391,552,217	92.70%	94.51%	93.24%	0.0003	0.0000
21.5	346,320,567	92.15%	93.97%	92.69%	0.0003	0.0000
22.5	311,723,309	90.70%	93.40%	92.11%	0.0007	0.0002
23.5	287,018,994	90.06%	92.79%	91.50%	0.0007	0.0002
24.5	264,015,557	89.43%	92.14%	90.86%	0.0007	0.0002
25.5	251,547,748	88.80%	91.44%	90.19%	0.0007	0.0002
26.5	231,655,146	88.24%	90.70%	89.49%	0.0006	0.0002
27.5	208,221,314	87.70%	89.92%	88.76%	0.0005	0.0001
28.5	181,006,442	87.15%	89.08%	87.99%	0.0004	0.0001
29.5	155,120,034	86.55%	88.19%	87.18%	0.0003	0.0000
30.5	133,352,064	85.86%	87.24%	86.34%	0.0002	0.0000
31.5	116,678,919	85.04%	86.24%	85.47%	0.0001	0.0000
32.5	101,421,324	84.07%	85.18%	84.55%	0.0001	0.0000
33.5	87,384,944	82.95%	84.06%	83.60%	0.0001	0.0000
34.5	76,588,294	81.68%	82.87%	82.60%	0.0001	0.0001
35.5	68,555,988	80.24%	81.62%	81.56%	0.0002	0.0002
36.5	61,848,318	78.80%	80.29%	80.48%	0.0002	0.0003
37.5	55,952,781	77.43%	78.89%	79.36%	0.0002	0.0004
38.5	51,053,399	76.18%	77.41%	78.19%	0.0002	0.0004
39.5	45,840,203	75.11%	75.85%	76.97%	0.0001	0.0003
40.5	39,851,936	74.14%	74.21%	75.71%	0.0000	0.0002
41.5	35,778,523	72.63%	72.49%	74.40%	0.0000	0.0003
42.5	31,869,542	71.04%	70.68%	73.04%	0.0000	0.0004
43.5	27,829,709	70.22%	68.78%	71.63%	0.0002	0.0002
44.5	24,200,583	69.32%	66.80%	70.17%	0.0006	0.0001
45.5	22,683,319	68.39%	64.72%	68.67%	0.0013	0.0000
46.5	19,777,286	67.34%	62.57%	67.12%	0.0023	0.0000

Account 380.20 Curve Fitting

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	**Exposures (Dollars)**	**Observed Life Table (OLT)**	**Company R2.5-50**	**PC R2-54**	**Company SSD**	**PC SSD**
47.5	16,752,136	66.38%	60.32%	65.52%	0.0037	0.0001
48.5	20,443,922	65.43%	58.00%	63.87%	0.0055	0.0002
49.5	18,188,370	64.83%	55.61%	62.17%	0.0085	0.0007
50.5	14,572,529	64.29%	53.14%	60.43%	0.0124	0.0015
51.5	12,314,024	63.76%	50.62%	58.65%	0.0173	0.0026
52.5	9,651,861	63.28%	48.06%	56.83%	0.0232	0.0042
53.5	2,142,867	62.88%	45.45%	54.97%	0.0304	0.0063
54.5	783,382	62.78%	42.82%	53.07%	0.0398	0.0094
55.5			40.19%	51.14%		
Sum of Squared Differences				[8]	0.1547	0.0295
Up to 1% of Beginning Exposures				[9]	0.0440	0.0070

[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.