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-10

Gas Plant Iowa Curve Fitting Calculations:
Account 376.20 – Mains – Plastic

July 28, 2022

Account 376.20 Curve Fitting

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	**Exposures (Dollars)**	**Observed Life Table (OLT)**	**Company R3-55**	**PC R2.5-67**	**Company SSD**	**PC SSD**
0.0	1,590,623,115	100.00%	100.00%	100.00%	0.0000	0.0000
0.5	1,510,421,242	99.99%	99.99%	99.96%	0.0000	0.0000
1.5	1,394,194,680	99.86%	99.95%	99.87%	0.0000	0.0000
2.5	1,297,959,492	99.76%	99.92%	99.78%	0.0000	0.0000
3.5	1,209,229,564	99.65%	99.88%	99.68%	0.0000	0.0000
4.5	1,132,716,882	99.55%	99.83%	99.58%	0.0000	0.0000
5.5	1,064,018,936	99.45%	99.77%	99.47%	0.0000	0.0000
6.5	991,989,276	99.34%	99.71%	99.36%	0.0000	0.0000
7.5	928,582,126	99.19%	99.64%	99.23%	0.0000	0.0000
8.5	871,254,526	99.01%	99.55%	99.10%	0.0000	0.0000
9.5	828,223,001	98.83%	99.46%	98.96%	0.0000	0.0000
10.5	790,992,068	98.68%	99.36%	98.82%	0.0000	0.0000
11.5	739,979,369	98.51%	99.24%	98.66%	0.0001	0.0000
12.5	685,511,417	98.32%	99.11%	98.49%	0.0001	0.0000
13.5	634,760,495	98.01%	98.96%	98.32%	0.0001	0.0000
14.5	597,281,374	97.83%	98.80%	98.13%	0.0001	0.0000
15.5	553,657,377	97.66%	98.62%	97.93%	0.0001	0.0000
16.5	516,522,295	97.47%	98.41%	97.73%	0.0001	0.0000
17.5	481,597,518	97.33%	98.19%	97.51%	0.0001	0.0000
18.5	446,444,512	97.16%	97.95%	97.27%	0.0001	0.0000
19.5	399,309,087	96.92%	97.68%	97.03%	0.0001	0.0000
20.5	366,079,688	96.75%	97.39%	96.77%	0.0000	0.0000
21.5	340,704,219	96.62%	97.07%	96.49%	0.0000	0.0000
22.5	308,697,601	96.48%	96.72%	96.20%	0.0000	0.0000
23.5	279,755,945	96.34%	96.33%	95.89%	0.0000	0.0000
24.5	253,319,086	96.22%	95.92%	95.57%	0.0000	0.0000
25.5	227,628,995	96.07%	95.47%	95.23%	0.0000	0.0001
26.5	195,350,951	95.86%	94.99%	94.87%	0.0001	0.0001
27.5	172,851,770	95.74%	94.47%	94.50%	0.0002	0.0002
28.5	141,758,100	95.60%	93.90%	94.10%	0.0003	0.0002
29.5	109,169,981	95.47%	93.29%	93.68%	0.0005	0.0003
30.5	91,448,354	95.28%	92.64%	93.24%	0.0007	0.0004
31.5	77,323,157	95.09%	91.94%	92.79%	0.0010	0.0005
32.5	63,335,501	94.77%	91.19%	92.30%	0.0013	0.0006
33.5	50,576,479	94.45%	90.39%	91.80%	0.0016	0.0007
34.5	42,490,060	93.71%	89.53%	91.26%	0.0017	0.0006
35.5	34,983,222	92.75%	88.62%	90.71%	0.0017	0.0004
36.5	28,939,640	90.80%	87.64%	90.12%	0.0010	0.0000
37.5	25,170,778	88.34%	86.60%	89.52%	0.0003	0.0001
38.5	19,970,469	85.68%	85.49%	88.88%	0.0000	0.0010
39.5	15,681,921	82.48%	84.31%	88.21%	0.0003	0.0033
40.5	9,620,988	79.54%	83.06%	87.51%	0.0012	0.0064
41.5	7,123,413	76.66%	81.72%	86.78%	0.0026	0.0102
42.5	5,571,371	74.49%	80.31%	86.02%	0.0034	0.0133
43.5	4,330,161	74.13%	78.81%	85.22%	0.0022	0.0123
44.5	2,071,687	73.91%	77.22%	84.39%	0.0011	0.0110
45.5	256,645	73.58%	75.54%	83.53%	0.0004	0.0099
46.5	3	73.00%	73.76%	82.62%	0.0001	0.0093

Account 376.20 Curve Fitting

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	**Exposures (Dollars)**	**Observed Life Table (OLT)**	**Company R3-55**	**PC R2.5-67**	**Company SSD**	**PC SSD**
47.5			71.89%	81.68%		
Sum of Squared Differences				[8]	0.0226	0.0811
Up to 1% of Beginning Exposures				[9]	0.0113	0.0055

[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.