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-7

Electric Plant Iowa Curve Fitting Calculations:
Account 366.00 – Underground Conduit

July 28, 2022

Account 366 Curve Fitting

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	Exposures (Dollars)	Observed Life Table (OLT)	Company R3-60	PC R2.5-72	Company SSD	PC SSD
0.0	729,059,452	100.00%	100.00%	100.00%	0.0000	0.0000
0.5	715,919,526	99.99%	99.99%	99.96%	0.0000	0.0000
1.5	679,729,172	99.94%	99.96%	99.88%	0.0000	0.0000
2.5	660,679,493	99.91%	99.93%	99.80%	0.0000	0.0000
3.5	632,566,828	99.88%	99.89%	99.71%	0.0000	0.0000
4.5	607,809,908	99.84%	99.85%	99.61%	0.0000	0.0000
5.5	594,007,012	99.82%	99.80%	99.52%	0.0000	0.0000
6.5	579,443,424	99.80%	99.74%	99.41%	0.0000	0.0000
7.5	574,087,521	99.75%	99.68%	99.30%	0.0000	0.0000
8.5	558,508,759	99.70%	99.61%	99.18%	0.0000	0.0000
9.5	542,476,105	99.66%	99.53%	99.06%	0.0000	0.0000
10.5	528,634,949	99.62%	99.45%	98.92%	0.0000	0.0000
11.5	508,943,719	99.57%	99.35%	98.79%	0.0000	0.0001
12.5	485,421,228	99.53%	99.24%	98.64%	0.0000	0.0001
13.5	466,738,346	99.45%	99.12%	98.48%	0.0000	0.0001
14.5	445,500,240	99.36%	98.99%	98.32%	0.0000	0.0001
15.5	427,459,981	99.26%	98.85%	98.15%	0.0000	0.0001
16.5	409,365,225	99.17%	98.68%	97.96%	0.0000	0.0001
17.5	394,013,392	99.00%	98.51%	97.77%	0.0000	0.0002
18.5	375,182,713	98.83%	98.32%	97.57%	0.0000	0.0002
19.5	347,778,748	98.70%	98.10%	97.36%	0.0000	0.0002
20.5	321,997,650	98.53%	97.87%	97.13%	0.0000	0.0002
21.5	301,330,495	98.39%	97.62%	96.90%	0.0001	0.0002
22.5	283,956,355	98.22%	97.35%	96.65%	0.0001	0.0002
23.5	266,995,788	98.07%	97.05%	96.39%	0.0001	0.0003
24.5	248,168,130	97.72%	96.73%	96.11%	0.0001	0.0003
25.5	231,124,606	97.40%	96.38%	95.82%	0.0001	0.0002
26.5	208,223,705	97.04%	96.01%	95.52%	0.0001	0.0002
27.5	185,024,183	96.74%	95.61%	95.20%	0.0001	0.0002
28.5	166,549,104	96.41%	95.17%	94.87%	0.0002	0.0002
29.5	150,609,884	95.94%	94.71%	94.52%	0.0002	0.0002
30.5	137,050,540	95.30%	94.21%	94.15%	0.0001	0.0001
31.5	121,214,197	94.79%	93.68%	93.76%	0.0001	0.0001
32.5	108,022,185	94.30%	93.11%	93.36%	0.0001	0.0001
33.5	96,181,438	93.81%	92.50%	92.94%	0.0002	0.0001
34.5	84,344,843	93.29%	91.85%	92.50%	0.0002	0.0001
35.5	75,332,359	92.63%	91.16%	92.03%	0.0002	0.0000
36.5	69,750,348	92.09%	90.43%	91.55%	0.0003	0.0000
37.5	63,760,273	91.70%	89.64%	91.05%	0.0004	0.0000
38.5	58,241,690	91.28%	88.81%	90.52%	0.0006	0.0001
39.5	52,476,013	90.99%	87.93%	89.97%	0.0009	0.0001
40.5	46,805,702	90.74%	87.00%	89.40%	0.0014	0.0002
41.5	36,828,588	90.55%	86.01%	88.80%	0.0021	0.0003
42.5	31,409,956	90.43%	84.96%	88.18%	0.0030	0.0005
43.5	25,717,358	90.27%	83.85%	87.52%	0.0041	0.0008
44.5	21,401,326	90.17%	82.68%	86.85%	0.0056	0.0011
45.5	18,540,644	90.02%	81.44%	86.14%	0.0074	0.0015
46.5	15,895,865	89.82%	80.13%	85.41%	0.0094	0.0019

[1]	[2]	[3]	[4]	[5]	[6]	[7]
Age (Years)	Exposures (Dollars)	Observed Life Table (OLT)	Company R3-60	PC R2.5-72	Company SSD	PC SSD
47.5	14,097,988	89.76%	78.75%	84.64%	0.0121	0.0026
48.5	13,063,200	89.70%	77.29%	83.85%	0.0154	0.0034
49.5	12,052,384	89.66%	75.75%	83.02%	0.0193	0.0044
50.5	9,479,762	89.64%	74.14%	82.16%	0.0240	0.0056
51.5	6,593,737	89.58%	72.44%	81.27%	0.0294	0.0069
52.5	4,095,120	89.49%	70.66%	80.34%	0.0354	0.0084
53.5	2,209,253	89.38%	68.80%	79.38%	0.0423	0.0100
54.5	1,401,833	87.89%	66.86%	78.38%	0.0442	0.0090
55.5	665,526	87.14%	64.83%	77.35%	0.0498	0.0096
56.5	429,861	84.93%	62.72%	76.27%	0.0493	0.0075
57.5	139,774	83.48%	60.53%	75.16%	0.0527	0.0069
58.5	10,348	80.40%	58.26%	74.00%	0.0490	0.0041
59.5	729	50.83%	55.93%	72.80%	0.0026	0.0483
60.5	704	50.83%	53.53%	71.57%	0.0007	0.0430
61.5	704	50.83%	51.08%	70.29%	0.0000	0.0379
62.5	704	50.83%	48.58%	68.97%	0.0005	0.0329
63.5	704	50.83%	46.04%	67.61%	0.0023	0.0281
64.5	704	50.83%	43.48%	66.20%	0.0054	0.0236
65.5	667	48.12%	40.91%	64.75%	0.0052	0.0277
66.5	624	45.02%	38.33%	63.26%	0.0045	0.0333
67.5			35.77%	61.73%		

Sum of Squared Differences				[8]	0.4817	0.3639
Up to 1% of Beginning Exposures				[9]	0.1083	0.0267

[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.