

**EXH. JAP-39
DOCKETS UE-170033/UG-170034
2017 PSE GENERAL RATE CASE
WITNESS: JON A. PILIARIS**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**Docket UE-170033
Docket UG-170034**

**FIFTH EXHIBIT (NONCONFIDENTIAL) TO THE
PREFILED SUPPLEMENTAL DIRECT TESTIMONY OF**

JON A. PILIARIS

ON BEHALF OF PUGET SOUND ENERGY

APRIL 3, 2017

Puget Sound Energy
Tariffed Rate Components

Line No.	Tariff Rate Schedule	Charge	Base Effective Date		Propforma Rates		Proposed Rates Effective December 2017
			A	B	B	C	
1	7	Residential Service					
2	7	Basic Charge (\$ / Month) - One Phase	5/14/2012		\$ 7.49	\$ 9.00	
3	7	Basic Charge (\$ / Month) - Three Phase	5/14/2012		\$ 17.99	\$ 21.60	
4	7						
5	7	Energy Charge (\$ / kWh) - First 600 kWh (Alt)	7/1/2013		\$ 0.085578	\$ 0.091622	
6	7	Energy Charge (\$ / kWh) - Over 600 kWh (Alt)	7/1/2013		\$ 0.104157	\$ 0.111513	
7							
8	24 (08)	General Service (Secondary Voltage, Demand 50 kW and less)					
9	24 (08)	Basic Charge (\$ / Month) - One Phase	5/14/2012		\$ 9.66	\$ 10.25	
10	24 (08)	Basic Charge (\$ / Month) - Three Phase	5/14/2012		\$ 24.55	\$ 26.05	
11	24 (08)						
12	24 (08)	Energy Charge (\$ / kWh) - Oct to Mar - All kWh	7/1/2013		\$ 0.089457	\$ 0.094936	
13	24 (08)	Energy Charge (\$ / kWh) - Apr to Sep - All kWh	7/1/2013		\$ 0.086359	\$ 0.091646	
14							
15	25 (7A) (11)	General Service (Secondary Voltage, Demand > 50 kW and <= 350 kW)					
16	25 (7A) (11)	Basic Charge (\$ / Month)	5/14/2012		\$ 51.67	\$ 54.83	
17	25 (7A) (11)						
18	25 (7A) (11)	Energy Charge (\$ / kWh) - Oct to Mar - First 20,000 kWh	7/1/2013		\$ 0.089583	\$ 0.095068	
19	25 (7A) (11)	Energy Charge (\$ / kWh) - Apr to Sep - First 20,000 kWh	7/1/2013		\$ 0.081430	\$ 0.086416	
20	25 (7A) (11)	Energy Charge (\$ / kWh) - All Over 20,000 kWh	7/1/2013		\$ 0.064072	\$ 0.067995	
21	25 (7A) (11)						
22	25 (7A) (11)	Demand Charge (\$ / kW) - All - First 50 kW	5/14/2012		\$ -	\$ -	
23	25 (7A) (11)	Demand Charge (\$ / kW) - Oct to Mar - Over 50 kW	5/14/2012		\$ 9.01	\$ 9.56	
24	25 (7A) (11)	Demand Charge (\$ / kW) - Apr to Sep - Over 50 kW	5/14/2012		\$ 6.01	\$ 6.38	
25	25 (7A) (11)						
26	25 (7A) (11)	Reactive Power Charge (\$ / kVArh)	5/14/2012		\$ 0.00283	\$ 0.00300	
27							
28	26 (12)	General Service (Secondary Voltage, Demand > 350 kW)					
29	26 (12)	Basic Charge (\$ / Month)	5/14/2012		\$ 104.46	\$ 110.86	
30	26 (12)						
31	26 (12)	Energy Charge (\$ / kWh) - all kWh	1/1/2014		\$ 0.056733	\$ 0.059951	
32	26 (12)						
33	26 (12)	Demand Charge (\$ / kW) - Oct to Mar	1/1/2014		\$ 11.65	\$ 12.48	
34	26 (12)	Demand Charge (\$ / kW) - Apr to Sep	1/1/2014		\$ 7.76	\$ 8.33	
35	26 (12)						
36	26 (12)	Reactive Power Charge (\$ / kVArh)	5/14/2012		\$ 0.00124	\$ 0.00132	
37	26 (12)						
38	26 (12)	Primary Voltage Adjustment					
39	26 (12)	Basic Charge (in addition to Secondary Voltage Rate)	5/14/2012		\$ 235.05	\$ 249.44	
40	26 (12)	Demand Charge (credit per kW to all Demand Rates)	1/1/2014		\$ (0.35)	\$ (0.41)	
41	26 (12)	Energy & Reactive Power Credit (% reduction to all base rates)	1/1/2014		3.45%	3.94%	
42	26 (12)	Effective Basic Charge	5/14/2012		\$ 339.51	\$ 360.30	
43	26 (12)	Effective Demand Charge - Winter	1/1/2014		\$ 11.30	\$ 12.07	
44	26 (12)	Effective Demand Charge - Summer	1/1/2014		\$ 7.41	\$ 7.92	
45	26 (12)	Effective Energy Charge	1/1/2014		\$ 0.054776	\$ 0.057589	
46	26 (12)	Effective Reactive Power Charge	1/1/2014		\$ 0.00120	\$ 0.00127	

Puget Sound Energy
Tariffed Rate Components

Line No.	Tariff Rate Schedule	Charge	Base Effective		Proposed Rates Effective	
			Date	December 2017	December 2017	December 2017
47						
48	29	General Service (Secondary Voltage, Demand > 50 kW and <= 350 kW)				
49	29	Basic Charge (\$ / Month) - One Phase	5/14/2012	\$ 9.56	\$ 10.15	
50	29	Basic Charge (\$ / Month) - Three Phase	5/14/2012	\$ 24.28	\$ 25.77	
51	29					
52	29	Energy Charge (\$ / kWh) - Oct to Mar - First 20,000 kWh	7/1/2013	\$ 0.089583	\$ 0.095068	
53	29	Energy Charge (\$ / kWh) - Oct to Mar - Over 20,000 kWh	7/1/2013	\$ 0.068036	\$ 0.072202	
54	29	Energy Charge (\$ / kWh) - Apr to Sep - First 20,000 kWh	7/1/2013	\$ 0.062076	\$ 0.065877	
55	29	Energy Charge (\$ / kWh) - Apr to Sep - Over 20,000 kWh	7/1/2013	\$ 0.053189	\$ 0.056446	
56	29					
57	29	Demand Charge (\$ / kW) - All - First 50 kW	5/14/2012	\$ -	\$ -	
58	29	Demand Charge (\$ / kW) - Oct to Mar - Over 50 kW	5/14/2012	\$ 8.83	\$ 9.37	
59	29	Demand Charge (\$ / kW) - Apr to Sep - Over 50 kW	5/14/2012	\$ 4.35	\$ 4.62	
60	29					
61	29	Reactive Power Charge (\$ / kVarh)	5/14/2012	\$ 0.00281	\$ 0.00298	
62						
63	31 (10)	General Service (Primary Voltage)				
64	31 (10)	Basic Charge (\$ / Month)	5/14/2012	\$ 339.51	\$ 360.30	
65	31 (10)					
66	31 (10)	Energy Charge (\$ / kWh) - All kWh	1/1/2014	\$ 0.054347	\$ 0.057684	
67	31 (10)					
68	31 (10)	Demand Charge (\$ / kW) - Oct to Mar	1/1/2014	\$ 11.32	\$ 12.01	
69	31 (10)	Demand Charge (\$ / kW) - Apr to Sep	1/1/2014	\$ 7.55	\$ 8.01	
70	31 (10)					
71	31 (10)	Reactive Power Charge (\$ / kVarh)	5/14/2012	\$ 0.00106	\$ 0.00112	
72						
73	35	Seasonal Irrigation & Drainage Service (Primary Voltage)				
74	35	Basic Charge (\$ / Month)	5/14/2012	\$ 339.51	\$ 360.30	
75	35					
76	35	Energy Charge (\$ / kWh) - All kWh	5/14/2012	\$ 0.048598	\$ 0.051573	
77	35					
78	35	Demand Charge (\$ / kW) - Oct to Mar - All kW	5/14/2012	\$ 4.49	\$ 4.76	
79	35	Demand Charge (\$ / kW) - Apr to Sep - All kW	5/14/2012	\$ 2.99	\$ 3.17	
80	35					
81	35	Reactive Power Charge (\$ / kVarh)	5/14/2012	\$ 0.00108	\$ 0.00115	
82						
83	43	Interruptible Service for All Electric Schools (Primary Voltage)				
84	43	Basic Charge (\$ / Month)	5/14/2012	\$ 339.51	\$ 360.30	
85	43					
86	43	Energy Charge (\$ / kWh) - All kWh	7/1/2013	\$ 0.055894	\$ 0.061085	
87	43					
88	43	Demand Charge (\$ / kW) - All kW	5/14/2012	\$ 4.75	\$ 5.04	
89	43					
90	43	Critical Demand Charge (\$ / kW) - All kW (Sch 43 vs. Winter 31)	5/14/2012	\$ 3.89	\$ 6.97	
91	43					
92	43	Reactive Power Charge (\$ / kVarh)	5/14/2012	\$ 0.00300	\$ 0.00318	
93						
94						

Puget Sound Energy
Tariffed Rate Components

Line No.	Tariff Rate Schedule	Charge	Base Effective		Propforma Rates		Proposed Rates Effective December 2017
			Date	Date			
			A	B	C		
95	40	Campus Rate For Large Loads					
96	40	Basic Charge (\$ / Month)					
97	40	Secondary Voltage - Medium Demand	5/14/2012		51.67	\$	54.83
98	40	Secondary Voltage - Large Demand	5/14/2012		104.46	\$	110.86
99	40	Primary Voltage	5/14/2012		339.51	\$	360.30
100	40						
101	40	Prod/Trans Energy Charge (\$ / kWh) - All kWh					
102	40	Secondary Voltage - Medium Demand	7/1/2013		0.056638	\$	0.061274
103	40	Secondary Voltage - Large Demand	7/1/2013		0.056638	\$	0.061274
104	40	Primary Voltage	7/1/2013		0.055191	\$	0.058863
105	40	High Voltage	7/1/2013		0.054413	\$	0.057736
106	40						
107	40	Prod/Trans Non Coincident Demand Charge (\$ / kW) - All kW (Billed Charge to be Adjusted for Coincident Factor on Customer Bill)					
108	40	Secondary Voltage	5/14/2012		4.200000	\$	4.39
109	40	Primary Voltage	5/14/2012		4.100000	\$	4.22
110	40	High Voltage	5/14/2012		4.020000	\$	4.14
111	40						
112	40	Reactive Power Charge (\$ / kWh) - All kWh					
113	40	Secondary Voltage	5/14/2012		0.00124	\$	0.00132
114	40	Primary Voltage	5/14/2012		0.00108	\$	0.00112
115	40						
116	40	Substation O&M Rate			3.8082%		6.0210%
117	40	Substation A&G OH Rate			37%		44%
118	40	Substation A&G Rate			1.4090%		2.6492%
119	40	Overhead Feeder O&M Rate			3.95%		22.96%
120	40	Underground Feeder O&M Rate			3.95%		4.98%
121	40						
122	40	Substation Land Fixed Charge Rate (FCR)			11.5396%		10.6819%
123	40						
124	40	Interim Distribution Charge:					
125	40	Primary Voltage Consumption	5/14/2012		0.016377	\$	0.011911
126	40	Secondary Voltage Consumption (> 350 kW Peak Demand)	5/14/2012		0.011511	\$	0.010038
127	40	Secondary Voltage Consumption (<= 350 kW Peak Demand)	5/14/2012		0.016131	\$	0.015144
128	40						
129	40						
130	40						
131	40	Customer Non Coincident Distribution Charge - (Billed Charge to be Adjusted for Coincident Factor on Customer Bill)					
132	40	Customer 1	5/14/2012		1.68	\$	4.47
133	40	Customer 2	5/14/2012		5.74	\$	7.43
134	40	Customer 3	5/14/2012		1.80	\$	1.50
135	40	Customer 4	5/14/2012		0.83	\$	0.58
136	40	Customer 5	5/14/2012		4.39	\$	2.81
137	40	Customer 6	5/14/2012		0.87	\$	0.44
138	40	Customer 7	5/14/2012		1.86	\$	-
139	40	Customer 8	5/14/2012		1.83	\$	2.59
140	40	Customer 9	5/14/2012		5.81	\$	5.85
141	40	Customer 10	5/14/2012		1.42	\$	1.59
142	40	Customer 11	5/14/2012		2.27	\$	2.02
143	40	Customer 12	5/14/2012		0.63	\$	0.81
144	40	Customer 13	5/14/2012		-	\$	0.71
145	40	Customer 14	5/14/2012		-	\$	4.49
146	40						

Coincident Demand Charge per Registered kW			
Prod/Trans	Prod/Trans		
	Primary Voltage Demand Charge	Secondary Voltage Demand Charge	Distribution Demand Charge
\$	3.66	\$	3.74
\$	3.69	\$	3.77
\$	4.11	\$	4.20
\$	4.11	\$	4.20
\$	4.06	\$	4.14
\$	4.11	\$	4.20
\$	-	\$	-
\$	4.19	\$	2.58
\$	3.77	\$	3.85
\$	3.94	\$	4.03
\$	3.90	\$	3.99
\$	4.00	\$	4.09
\$	3.88	\$	3.96
\$	4.04	\$	4.12

Puget Sound Energy
Tariffed Rate Components

Line No.	Tariff Rate Schedule	Charge	Base Effective		Propforma Rates		Proposed Rates Effective December 2017
			Date				
			A	B	C		
147	46	Interruptible Service (High Voltage)					
148	46	Energy Charge (\$ / kWh) - All kWh	7/1/2013	\$ 0.054413	\$	0.057736	
149	46						
150	46	Demand Charge (\$ / kVa)	5/14/2012	\$	2.09	\$ 2.22	
151	46						
152	46	Minimum Charge - Demand	5/14/2012	\$	25.08	\$ 26.64	
153	46	Minimum Charge - Energy	7/1/2013	\$	0.048972	\$ 0.051962	
154							
155	49	General Service (High Voltage)					
156	49	Energy Charge (\$ / kWh) - All kWh	7/1/2013	\$	0.054413	\$ 0.057736	
157	49						
158	49	Demand Charge (\$ / kVa)	5/14/2012	\$	3.70	\$ 3.93	
159							
160	448 / 458	Power Supplier Choice & Back Up Distribution Service					
161	448 / 458	Primary Voltage					
162	448 / 458	Customer Charge (\$ / Month)	5/14/2012	\$	995.00	\$ 2,145.00	
163	448 / 458	Distribution Charge (\$ / kVa Month)	7/1/2013	\$	1.298	\$ -	
164	448 / 458	High Voltage					
165	448 / 458	Customer Charge (\$ / Month)	5/14/2012	\$	995.00	\$ 2,145.00	
166	448 / 458	Distribution Charge (\$ / kVa Month)	7/1/2013	\$	(0.120)	\$ -	
167							
168	449 / 459	Retail Wheeling Service & Back Up Distribution Service					
169	449 / 459	Primary Voltage					
170	449 / 459	Customer Charge (\$ / Month)	5/14/2012	\$	995.00	\$ 2,145.00	
171	449 / 459	Distribution Charge (\$ / kVa Month)	7/1/2013	\$	1.298	\$ -	
172	449 / 459	High Voltage					
173	449 / 459	Customer Charge (\$ / Month)	5/14/2012	\$	995.00	\$ 2,145.00	
174	449 / 459	Distribution Charge (\$ / kVa Month)	7/1/2013	\$	(0.120)	\$ -	

Puget Sound Energy
Twelve Months ended September 2016
Summary - Rate Spread

Line No.	Voltage Level	Schedule	MWh	A	Proforma Revenue (\$000)	B	Proposed Increase (\$)	C	Percent of Total w/o Schedule 40, 449 & Firm Resale	D	E	F	Proposed Revenue Increase (\$000)	G = B * F	Proposed Revenue (\$000)	H = B + G
1	Residential	7		10,442,426	\$ 1,066,627				55.91%		100%	8.16%	\$ 87,074	\$ 1,153,701		
2																
3	Secondary Voltage															
4	Demand <= 50 kW	8 / 24		2,787,459	\$ 266,944				13.99%		75%	6.12%	\$ 16,344	\$ 283,288		
5	Demand > 50 kW but <= 350 kW	7A / 11 / 25 / 29		2,845,226	\$ 252,923				13.26%		75%	6.12%	\$ 15,485	\$ 268,408		
6	Demand > 350 kW	12 / 26 / 26P		1,867,682	\$ 151,835				7.96%		75%	6.12%	\$ 9,296	\$ 161,131		
7	Total Secondary Voltage			7,500,367	\$ 671,701								\$ 41,126	\$ 712,827		
8																
9	Primary Voltage															
10	General Service / Irrigation	10 / 31 / 35		1,268,987	\$ 101,643				5.33%		75%	6.12%	\$ 6,223	\$ 107,866		
11	Interruptible Total Electric Schools	43		119,660	\$ 10,338				0.54%		100%	8.16%	\$ 844	\$ 11,182		
12	Total Primary Voltage			1,388,647	\$ 111,981								\$ 7,067	\$ 119,048		
13																
14	Campus Rate	40		674,604	\$ 47,837								\$ 4,037	\$ 51,873		
15																
16	Total High Voltage	46 / 49		632,259	\$ 40,360				2.12%		75%	6.12%	\$ 2,471	\$ 42,831		
17																
18	Choice / Retail Wheeling	449 / 459		2,098,104	\$ 7,513								\$ 451	\$ 7,964		
19																
20	Lighting	50-59		77,972	\$ 17,167				0.90%		100%	8.16%	\$ 1,401	\$ 18,569		
21																
22	Total Jurisdictional Retail Sales			22,814,380	\$ 1,963,186								\$ 143,627	\$ 2,106,813		
23																
24	Firm Resale			6,930	\$ 316								\$ 405	\$ 722		
25																
26	Total Sales			22,821,309	\$ 1,963,503	\$ 144,032,066			100.00%				\$ 144,032	\$ 2,107,535		
27																
28																
29	Average Increase Before Schedule 40, Transportation, Firm Resale															
30	Average Increase After Schedule 40, Transportation, Firm Resale															
31	Adjustment to Average Increase for Unequal Allocation of Increase															
32	Average Increase After Schedule 40, Firm Resale adjusted for Unequal Allocation of Inc															

Average Increase Before Schedule 40, Transportation, Firm Resale	7.34%
Average Increase After Schedule 40, Transportation, Firm Resale	7.29%
Adjustment to Average Increase for Unequal Allocation of Increase	1.119352788
Average Increase After Schedule 40, Firm Resale adjusted for Unequal Allocation of Inc	8.16%

**TABLE A. PRESENT AND PROPOSED RATES
PUGET SOUND ENERGY
ESTIMATED EFFECT OF PROPOSED BASE RATE INCREASE
ON REVENUES FROM ELECTRIC SALES
12 MONTHS ENDED SEPTEMBER 2016**

Line No.	Description	Current Sch. No.	Avg. Cust.	MWH	Present Base Revenues (\$000)	Effective December 2017 Proposed		
						Base Revenues (\$000)	Increase (\$000)	Base %
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Residential Service							
1	Residential Service	7	999,942	10,442,426	\$1,066,627	\$1,153,702	\$87,075	8.16%
2	Total Residential Service		999,942	10,442,426	\$1,066,627	\$1,153,702	\$87,075	8.16%
	Secondary Voltage Service							
3	Secondary General Service	8, 24	126,826	2,787,459	\$266,944	\$283,287	\$16,343	6.12%
4	Small Secondary General Service	7A, 11, 25	7,209	2,830,899	\$251,785	\$267,200	\$15,415	6.12%
5	Large Secondary General Service	12, 26, 26P	9,638	1,867,682	\$151,835	\$161,132	\$9,297	6.12%
6	Secondary Irrigation & Pumping Service	29	608	14,327	\$1,138	\$1,207	\$70	6.13%
7	Total Secondary Voltage Service		144,281	7,500,367	\$671,701	\$712,826	\$41,125	6.12%
	Primary Voltage Service							
8	Primary General Service	10, 31	487	1,264,534	\$101,395	\$107,603	\$6,208	6.12%
9	Primary Irrigation & Pumping Service	35	1	4,453	\$248	\$263	\$15	6.12%
10	Primary All Electric Schools	43	159	119,660	\$10,338	\$11,182	\$844	8.16%
11	Total Primary Voltage Service		647	1,388,647	\$111,981	\$119,048	\$7,067	6.31%
12	Campus Rate	40	167	674,604	\$47,837	\$51,873	\$4,037	8.44%
	High Voltage Service							
13	High Voltage Interruptible Service	46	5	64,275	\$4,202	\$4,460	\$257	6.13%
14	High Voltage General Service	49	20	567,984	\$36,158	\$38,372	\$2,214	6.12%
15	Total High Voltage Service		25	632,259	\$40,360	\$42,831	\$2,471	6.12%
16	Retail Wheeling Transportation Service	449, 459	20	2,098,104	\$7,513	\$7,964	\$451	6.00%
17	Street and Area Lighting	50-59	7,227	77,972	\$17,167	\$18,569	\$1,401	8.16%
18	Total Jurisdictional Sales		1,152,308	22,814,380	\$1,963,186	\$2,106,814	\$143,627	7.32%
19	Wholesale for Resale	50-59	8	6,930	\$316	\$722	\$405	128.05%
20	Total Sales		1,152,316	22,821,309	\$1,963,503	\$2,107,535	\$144,033	7.34%

PUGET SOUND ENERGY
12 MONTHS ENDED SEPTEMBER 2016
(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
Residential Rate Design

	Units Actual	Present		Proposed Effective December 2017		
		Price	Dollars	Price	Dollars	
SCHEDULE 7						
Residential Service						
Basic Charge						
Single Phase	11,996,380	\$ 7.49	\$89,852,886	\$ 9.00	\$107,967,420	Cost Based
Three Phase	2,918	\$ 17.99	\$52,495	21.60	\$63,029	Cost Based (Retain 1ph/3ph relationship)
Subtotal	<u>11,999,298</u>		<u>\$89,905,381</u>		<u>\$108,030,449</u>	
Energy Charge						
First 600 kWh	5,973,778,123	\$0.085578	\$511,223,984	\$ 0.091622	\$547,329,499	Adjust for residual
Over 600 kWh	4,254,038,622	\$0.104157	\$443,087,901	0.111513	\$474,380,609	Retain Block 1/ Block 2 Relationship
Subtotal	<u>10,227,816,745</u>		<u>\$954,311,885</u>		<u>\$1,021,710,108</u>	
Temperature Adjustment	242,969,649	\$0.104157	\$25,306,990	0.111513	\$27,094,274	Same as Last Block
Unbilled	(28,359,905)	\$0.102144	(\$2,896,794)	0.110482	(\$3,133,259)	Average Increase
Total	<u><u>10,442,426,489</u></u>		<u><u>\$1,066,627,462</u></u>		<u><u>\$1,153,701,572</u></u>	Target Dollars
						Difference
						<u><u>-\$665</u></u>

PUGET SOUND ENERGY

12 MONTHS ENDED SEPTEMBER 2016

(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
Secondary Voltage Rate Design

	Units		Present		Proposed Effective December 2017	
	Actual	Price	Dollars	Price	Dollars	Dollars
SCHEDULES 8 & 24						
Secondary Voltage General Service						
Basic Charge						
Single Phase	1,066,064	\$ 9.66	\$10,298,178	\$ 10.25	\$10,927,156	Class Average % Increase
Three Phase	455,851	\$ 24.55	\$11,191,142	\$ 26.05	\$11,874,919	Class Average % Increase
Subtotal	1,521,915		\$21,489,320		\$22,802,075	
Energy Charge						
Winter (October to March) kWh	1,448,584,632	\$ 0.089457	\$129,586,035	\$ 0.094936	\$137,522,831	Class Average % Increase, Adjust for Residual
Summer (April to September) kWh	1,297,302,967	\$ 0.086359	\$112,033,787	\$ 0.091646	\$118,892,628	Class Average % Increase
Subtotal	2,745,887,599		\$241,619,822		\$256,415,459	
Temperature Adjustment - Winter	21,337,341	\$ 0.089457	\$1,908,775	\$ 0.094936	\$2,025,682	Class Average % Increase
Temperature Adjustment - Summer	1,211,127	\$ 0.086359	\$104,592	\$ 0.091646	\$110,995	Class Average % Increase
Unbilled	19,022,940	\$ 0.095766	\$1,821,751	\$ 0.101629	\$1,933,282	Class Average % Increase
Total	2,787,459,007		\$266,944,260		\$283,287,945	Target
					\$452	Difference
						6.12%
SCHEDULES 7A, 11 & 25						
Secondary Voltage Small Demand General Service						
Basic Charge	86,508	\$ 51.67	\$4,469,868	\$ 54.83	\$4,743,234	Class Average % Increase
Energy Charges						
First 20,000 kWh (Winter Oct to Mar)	728,310,837	\$ 0.089583	\$65,244,270	\$ 0.095068	\$69,239,055	Class Average % Increase, rounding
First 20,000 kWh (Summer Apr to Sep)	698,873,485	\$ 0.081430	\$56,909,268	\$ 0.086416	\$60,393,851	Class Average % Increase
All additional kWh	1,362,741,884	\$ 0.064072	\$87,313,598	\$ 0.067995	\$92,659,634	Class Average % Increase
Subtotal	2,789,926,206		\$209,467,136		\$222,292,540	
Temperature Adjustment	11,247,064	\$ 0.064072	\$720,622	\$ 0.067995	\$764,744	Class Average % Increase
Unbilled	29,725,507	\$ 0.088942	\$2,643,846	\$ 0.094387	\$2,805,701	Class Average % Increase
Subtotal	2,830,898,777		\$212,831,604		\$225,862,985	
Demand Charges						
Winter Demand over 50 kW	2,191,039	\$ 9.01	\$19,741,257	\$ 9.56	\$20,946,328	Class Average % Increase
Summer Demand over 50 kW	2,131,081	\$ 6.01	\$12,807,795	\$ 6.38	\$13,596,294	Class Average % Increase
Subtotal	4,322,119		\$32,549,052		\$34,542,622	
Reactive Power	683,582,755	\$ 0.00283	\$1,934,539	\$ 0.00300	\$2,050,748	Class Average % Increase
Total			\$251,785,063		\$267,199,589	Target Dollars Sch 25/29
						Difference
						\$268,408,224
						\$1,185
						6.12%

PUGET SOUND ENERGY
12 MONTHS ENDED SEPTEMBER 2016
(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
Secondary Voltage Rate Design

	Units		Present		Proposed Effective December 2017	
	Actual		Price	Dollars	Price	Dollars
SCHEDULES 12 & 26						
Secondary Voltage Large Demand General Service						
Basic Charge	9,614	\$	104.46	\$1,004,278	\$	110.86
All kWh	1,853,076,121	\$	0.056733	\$105,130,568	\$	0.059951
Subtotal	1,853,076,121			\$105,130,568		\$111,093,767
Temperature Adjustment	(231,988)	\$	0.056733	(\$13,161)	\$	0.059951
Unbilled	1,605,471	\$	0.081318	\$130,554	\$	0.086300
Subtotal	1,854,449,604			\$105,247,961		\$111,218,411
Demand Charges						
Winter Demand (Oct to Mar)	2,196,751	\$	11.65	\$25,592,146	\$	12.48
Summer Demand (Apr to Sep)	2,312,126	\$	7.76	\$17,942,095	\$	8.33
Subtotal	4,508,876			\$43,534,241		\$46,675,456
Reactive Power	817,586,142	\$	0.00124	\$1,013,807	\$	0.00132
Total				\$150,800,287		\$160,038,889
						\$161,130,995
						6.12%
						(\$635)
						Target Dollars Sch 26/26P Difference
SCHEDULE 26P						
Secondary Voltage Large Demand General Service						
Basic Charge	24	\$	104.46	\$2,507	\$	110.86
Primary Adder	24	\$	235.05	\$5,641	\$	249.44
Subtotal				\$8,148		\$8,648
Energy Charges						
All kWh	13,232,300	\$	0.056733	\$750,708	\$	0.059951
Primary Discount	13,232,300	\$	(0.001957)	(\$25,896)	\$	(0.002362)
Subtotal	13,232,300			\$724,812		\$762,035
Temperature Adjustment	0	\$	0.056733	\$0	\$	\$0
Unbilled	0	\$	0.078177	\$0	\$	\$0
Subtotal	13,232,300			\$724,812		\$762,035
Demand Charges						
Winter Demand (Oct to Mar)	16,911	\$	11.65	\$197,013	\$	12.48
Summer Demand (Apr to Sep)	14,150	\$	7.76	\$109,804	\$	8.33
Primary Discount	31,061	\$	(0.35)	(\$10,871)	\$	(0.41)
Subtotal	31,061			\$295,946		\$316,184
Reactive Power	4,625,110	\$	0.00124	\$5,735	\$	0.00132
Primary Discount	4,625,110	\$	(0.00004)	(\$185)	\$	(0.00005)
Subtotal				\$5,550		\$5,874
Total				\$1,034,456		\$1,092,741

Adjustments to Secondary Voltage Rates for Delivery at Primary Voltage	
Base Charge Addition Sec Voltage Rate:	\$ 249.44
Demand Credit per kW to all Demand:	3.94% \$ 0.41
Energy Charge Reduction to Base Rates:	3.94% \$ 0.002362
Reactive Power Charge Reduction to Base Rates:	3.94% \$ 0.00005

PUGET SOUND ENERGY
12 MONTHS ENDED SEPTEMBER 2016
(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
Secondary Voltage Rate Design

	Units		Dollars		Proposed Effective December 2017		Class Average % Increase
	Actual	Price	Present	Dollars	Price	Dollars	
SCHEDULE 29							
Secondary Voltage Irrigation & Pumping Service							
Basic Charge							
Single Phase	2,248	\$ 9.56	\$21,491	\$	10.15	\$22,817	Class Average % Increase
Three Phase	5,042	\$ 24.28	\$122,420	\$	25.77	\$129,932	Class Average % Increase
Subtotal	7,290		\$143,911			\$152,749	
Energy Charges							
First 20,000 kWh (Winter Oct to Mar)	1,724,764	\$ 0.089583	\$154,510	\$	0.095068	\$163,970	Class Average % Increase
Over 20,000 kWh (Winter Oct to Mar)	19,062	\$ 0.068036	\$1,297	\$	0.072202	\$1,376	Class Average % Increase
First 20,000 kWh (Summer Apr to Sep)	10,852,548	\$ 0.062076	\$673,683	\$	0.065877	\$714,933	Class Average % Increase
Over 20,000 kWh (Summer Apr to Sep)	368,027	\$ 0.053189	\$19,575	\$	0.056446	\$20,774	Class Average % Increase
Subtotal	12,964,401		\$849,065			\$901,053	
Temperature Adjustment - Winter	0	\$ 0.068036	\$0	\$	0.072202	\$0	
Temperature Adjustment - Summer	(158,747)	\$ 0.053189	(\$8,444)	\$	0.056446	(\$8,961)	
Unbilled	1,521,175	\$ 0.079414	\$120,803	\$	0.084279	\$128,203	Class Average % Increase
Subtotal	14,326,829		\$961,424			\$1,020,295	
Demand Charges							
Winter Demand over 50 kW	1,931	\$ 8.83	\$17,051	\$	9.37	\$18,093	Class Average % Increase
Summer Demand over 50 kW	3,438	\$ 4.35	\$14,955	\$	4.62	\$15,884	Class Average % Increase
Subtotal	5,369		\$32,006			\$33,977	
Reactive Power	144,115	\$ 0.00281	\$405	\$	0.00298	\$429	Class Average % Increase
Total			\$1,137,746			\$1,207,450	

PUGET SOUND ENERGY
12 MONTHS ENDED SEPTEMBER 2016
(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
Primary Voltage Rate Design

	Units Actual	Price	Present Dollars	Proposed Effective December 2017 Price Dollars	
SCHEDULES 10 & 31 Primary Voltage General Service					
Basic Charge	5,842	\$ 339.51	\$1,983,417	\$ 360.30	\$2,104,873 Class Average % Increase
Energy Charges					
All kWh	1,278,724,485	\$ 0.054347	\$69,494,840	\$ 0.057684	\$73,761,943 Class Average % Increase Adjust For Residual
Subtotal	1,278,724,485	\$ 0.054347	\$69,494,840	\$ 0.057684	\$73,761,943
Temperature Adjustment	957,233	\$ 0.054347	\$52,023	\$ 0.057684	\$55,217
Unbilled	(15,147,343)	\$ 0.080183	(\$1,214,559)	\$ 0.085092	(\$1,288,918) Class Average % Increase
Subtotal	1,264,534,374	\$ 0.080183	\$68,332,304	\$ 0.085092	\$72,528,242
Demand Charges					
Winter Demand (Oct to Mar)	1,575,885	\$ 11.32	\$17,839,014	\$ 12.01	\$18,926,374 Class Average % Increase
Summer Demand (Apr to Sep)	1,658,584	\$ 7.55	\$12,522,308	\$ 8.01	\$13,285,256 Class Average % Increase
Subtotal	3,234,468	\$ 9.44	\$30,361,322	\$ 10.01	\$32,211,630
Reactive Power	677,015,089	\$ 0.00106	\$717,656	\$ 0.00112	\$758,257 Class Average % Increase
Total			\$101,394,679	\$107,603,002	\$107,603,002
					Target Dollars Sch 10/31/35 \$107,866,094 Difference (\$302) 6.12%

PUGET SOUND ENERGY
12 MONTHS ENDED SEPTEMBER 2016
(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
Primary Voltage Rate Design

	Units Actual	Present		Proposed Effective December 2017		
		Price	Dollars	Price	Dollars	
SCHEDULE 35						
Primary Voltage General Service						
Basic Charge	12	\$ 339.51	\$4,074	\$ 360.30	\$4,324	Same as Sch 31
Energy Charges						
All kWh	4,443,000	\$0.048598	\$215,921	\$0.051573	\$229,139	Class Average % Increase
Subtotal	4,443,000		\$215,921		\$229,139	
Temperature Adjustment	0	\$0.048598	\$0	\$0.051573	\$0	
Unbilled	9,600	\$0.055746	\$535	\$0.059159	\$568	Class Average % Increase
Subtotal	4,452,600		\$216,456		\$229,707	
Demand Charges						
Winter Demand (Oct to Mar)	204	\$ 4.49	\$916	\$ 4.76	\$971	Class Average % Increase
Summer Demand (Apr to Sep)	8,102	\$ 2.99	\$24,225	\$ 3.17	\$25,683	Class Average % Increase
Subtotal	8,306		\$25,141		\$26,654	
Reactive Power	2,355.612	\$ 0.00108	\$2,544	\$ 0.00115	\$2,709	Class Average % Increase
Total			\$248,215		\$263,394	
SCHEDULE 43						
Primary Voltage Interruptible Schools						
Basic Charge	1,904	\$ 339.51	\$646,427	\$ 360.30	\$686,011	Same as Sch 31
Energy Charges						
All kWh	116,386.804	\$0.055894	\$6,505,324	\$0.061085	\$7,109,488	Apply Residual & Adjust for Rounding
Subtotal	116,386.804		\$6,505,324		\$7,109,488	
Temperature Adjustment	3,836.120	\$0.055894	\$214,416	\$0.061085	\$234,329	Class Average % Increase
Unbilled	(562,522)	\$0.086393	(\$48,598)	\$0.093446	(\$52,565)	Class Average % Increase
Subtotal	119,660.401		\$6,671,142		\$7,291,252	
Demand Charges						
All Demand	604,733	\$ 4.75	\$2,872,482	\$ 5.04	\$3,047,854	Class Average % Increase
Subtotal	604,733		\$2,872,482		\$3,047,854	
Critical Demand	0	\$ 6.57	\$0	\$ 6.97	\$0	Sch 43 vs Sch 31 Winter Demand
Reactive Power	49,257,775	\$ 0.00300	\$147,773	\$ 0.00318	\$156,640	Class Average % Increase
Total			\$10,337,824		\$11,181,757	
						Target Dollars Sch 43
						\$11,181,750
						Difference
						(\$7)
						8.16%

PUGET SOUND ENERGY
12 MONTHS ENDED SEPTEMBER 2016
(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
Campus Rate Design

	Units		Price		Dollars	
	Actual	Proposed	Present	Proposed	Present	Proposed
Demand and Energy Rate Calculation:						
Power Factor Calculation:						
HV Power Factor		95%				
Load Research Loss Factors:						
Schedule 49		1.76%				
Schedule 31		3.71%		1.95%		
Schedule 26		7.88%		6.13%		
Demand Charge Calculation						
	Present Sch 40	\$/kVa	Proposed Sch 49	Proposed Sch 40		
HV Demand	\$ 4.02	\$	3.82	4.14		
PV Demand	\$ 4.11	\$	3.90	4.01		
SV Demand	\$ 4.20	\$	3.99	4.17		
Energy Charge Calculation						
HV Demand	\$ 0.054413		\$ 0.057736	Proposed Sch 40		
PV Demand	\$ 0.055191		\$ 0.057736	\$ 0.057736		
SV Demand	\$ 0.056638		\$ 0.057736	\$ 0.058863		
				\$ 0.061274		

Customer Specific Demand Charges	Coincident Primary Voltage Production & Transmission Charge		Coincident Secondary Voltage Production & Transmission Charge		Coincident Rate	Total Non-Coincident Distribution Charge	Non-Coincident Transformer Charge	Non-Coincident Feeder Charge	Non-Coincident Substation Charge
	Transmission Charge	Voltage Production Charge	Transmission Charge	Voltage Production Charge					
kW - Customer 1	\$ 3.66	\$ 3.74	\$ 3.98	\$ 4.47	89%	\$ 4.47	\$ 1.10	\$ 2.97	\$ 4.27
kW - Customer 2	\$ 3.69	\$ 3.77	\$ 6.68	\$ 7.43	90%	\$ 7.43	\$ 2.50	\$ 4.27	\$ 4.27
kW - Customer 3	\$ 4.11	\$ 4.20	\$ 1.50	\$ 1.50	100%	\$ 1.50	\$ 0.58	\$ 0.92	\$ 0.92
kW - Customer 4	\$ 4.11	\$ 4.20	\$ 0.58	\$ 0.58	100%	\$ 0.58	\$ 0.22	\$ 0.36	\$ 0.36
kW - Customer 5	\$ 4.06	\$ 4.14	\$ 2.77	\$ 2.81	99%	\$ 2.81	\$ 1.98	\$ 0.75	\$ 0.75
kW - Customer 6	\$ 4.11	\$ 4.20	\$ 0.44	\$ 0.44	100%	\$ 0.44	\$ 0.25	\$ 0.19	\$ 0.19
kW - Customer 7	\$ -	\$ -	\$ -	\$ -	0%	\$ -	\$ -	\$ -	\$ -
kW - Customer 8	\$ 4.10	\$ 4.19	\$ 2.58	\$ 2.59	100%	\$ 2.59	\$ 1.41	\$ 1.15	\$ 1.15
kW - Customer 9	\$ 3.77	\$ 3.85	\$ 5.36	\$ 5.85	92%	\$ 5.85	\$ 2.46	\$ 2.57	\$ 2.57
kW - Customer 10	\$ 3.94	\$ 4.03	\$ 1.52	\$ 1.59	96%	\$ 1.59	\$ 0.44	\$ 0.56	\$ 0.56
kW - Customer 11	\$ 3.90	\$ 3.99	\$ 1.92	\$ 2.02	95%	\$ 2.02	\$ 0.52	\$ 0.79	\$ 0.79
kW - Customer 12	\$ 4.00	\$ 4.09	\$ 0.79	\$ 0.81	97%	\$ 0.81	\$ 0.28	\$ 0.31	\$ 0.31
kW - Customer 13	\$ 3.88	\$ 3.96	\$ 0.67	\$ 0.71	94%	\$ 0.71	\$ 0.03	\$ 0.11	\$ 0.11
kW - Customer 14	\$ 4.04	\$ 4.12	\$ 4.41	\$ 4.49	98%	\$ 4.49	\$ 1.96	\$ 2.37	\$ 2.37

Note: Distribution Charge FCR at 7.74% ROR

PUGET SOUND ENERGY
12 MONTHS ENDED SEPTEMBER 2016
(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
High Voltage Rate Design

	Units		Present		Proposed Effective December 2017	
	Actual	Price	Dollars	Price	Dollars	Dollars
SCHEDULE 46						
High Voltage Interruptible Service						
Annual Customer Count	60					
Energy Charge	63,736,318	\$0.054413	\$3,468,084	\$ 0.057736	\$3,679,880	= Sch 49
All kWh	0	\$0.054413	\$0	\$ 0.057736	\$0	
Temperature Adjustment	539,040	\$0.065380	\$35,242	\$ 0.069386	\$37,402	Class Average % Increase
Unbilled			\$3,503,326		\$3,717,282	
Subtotal						
Demand Charge (kVa)	334,461	\$ 2.09	\$699,023	\$ 2.22	\$742,503	Class Average % Increase
Total			\$4,202,349		\$4,459,785	
Annual Energy Minimum Charge	90%	\$0.048972	\$ -	\$ 0.051962		
Annual Demand Charge	12	\$ 25.08	\$ -	\$ 26.64		
SCHEDULE 49						
High Voltage General Service						
Annual Customer Count	240					
Energy Charge	565,213,426	\$0.054413	\$30,754,958	\$ 0.057736	\$32,633,162	Class Average % Increase
All kWh	0	\$0.054413	\$0	\$ 0.057736	\$0	
Temperature Adjustment	2,770,433	\$0.063660	\$176,366	\$ 0.067558	\$187,165	Class Average % Increase
Unbilled			\$30,931,324		\$32,820,327	
Subtotal						
Demand Charge (kVa)	1,412,545	\$ 3.70	\$5,226,417	\$ 3.93	\$5,551,302	Class Average % Increase
Total			\$36,157,741		\$38,371,629	Target Dollars \$42,831,182 Difference (\$232) 6.12%

PUGET SOUND ENERGY
12 MONTHS ENDED SEPTEMBER 2016
(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
Transportation & Wholesale for Resale

	Units		Present		Proposed Effective December 2017	
	Actual	Price	Dollars	Price	Dollars	Dollars
SCHEDULES 449 & 459						
Choice / Retail Wheeling Service	240	\$ 995.00	\$238,800	\$	2,145.00	\$514,800
Basic Charges						COS Basic Charge
Energy Charge	2,109,984,905	\$ -	\$0	\$	-	\$0
All kWh	0	\$ -	\$0	\$	-	\$0
Temperature Adjustment	(11,881,269)	\$ 0.003581	(\$42,547)	\$	0.003796	(\$45,101)
Unbilled						(\$45,101)
Subtotal	2,098,103,637		(\$42,547)			
Primary Voltage Demand Charge (kVa)	183,378	\$ 1.298	\$238,025	\$	-	\$0
High Voltage Demand Charge (kVa)	3,462,662	\$ (0.120)	(\$415,519)	\$	-	\$0
Total	3,646,040		(\$177,494)			\$0
OATT Charges			\$7,494,526			\$7,494,526
Total			<u>\$7,513,285</u>			<u>\$7,964,225</u>
						<u>\$0</u>
						<u>8.57%</u>
						<u>Target Dollars</u>
						<u>Difference</u>
SCHEDULE 005						
Wholesale for Resale	96					
Annual Customer Count						
Energy Charge	6,797,340	\$ 0.035140	\$238,859	\$	0.035140	\$238,859
All kWh	145,693	\$ 0.035140	\$5,120	\$	0.035140	\$5,120
Temperature Adjustment	(13,230)	\$ 0.045657	(\$604)	\$	0.045657	(\$604)
Unbilled						
Subtotal	6,929,803		\$243,375			\$243,375
Demand Charge	13,806	\$ 5.250	\$72,482	\$	5.250	\$72,482
Reactive Power Charge	2,144,520	\$ 0.00025	\$536	\$	0.00025	\$536
Revenue Deficiency						\$405,143
Cost of Service						\$405,143
Total			<u>\$316,393</u>			<u>\$721,536</u>
						<u>\$0</u>
						<u>85.54%</u>
						<u>Target Dollars</u>
						<u>Difference</u>

PUGET SOUND ENERGY
12 MONTHS ENDED SEPTEMBER 2016
(Including Effects of Unbilled Revenue, Unbilled MWh and Weather Normalization)
Area and Street Lighting Rate Design

	Present		Proposed Effective December 2017		kWh		
	Units	Dollars	Original Filing	Supplemental Filing	Delivered	Billed	Change in Unbilled
Lighting Summary							
SCHEDULE 50	144	\$18,514	\$16,354	\$16,328	104,655	179,940	(75,285)
SCHEDULE 51	1,755	\$129,066	\$155,536	\$155,286	473,448	459,949	13,499
SCHEDULE 52	30,201	\$3,091,875	\$2,574,055	\$2,569,922	13,754,188	13,773,730	(19,542)
SCHEDULE 53	29,281	\$11,257,552	\$12,890,196	\$12,869,498	43,416,006	46,174,693	(2,758,687)
SCHEDULE 54	528	\$873,551	\$743,698	\$742,504	8,045,664	8,926,152	(880,488)
SCHEDULES 55 & 56	19,837	\$1,000,299	\$1,143,105	\$1,141,270	3,890,375	3,893,849	(3,474)
SCHEDULE 57	1,310	\$377,189	\$641,063	\$640,034	5,939,077	4,534,791	1,404,286
SCHEDULES 58 & 59	3,662	\$419,051	\$434,386	\$433,689	2,348,937	2,337,952	10,985
All Lighting	86,718	\$17,167,097	\$18,598,393	\$18,568,531	77,972,349	80,281,057	(2,308,707)