

**Exh. JL-20r**  
**Dockets UE-190529/UG-190530 and**  
**UE-190274/UG-190275 (*consolidated*)**  
**Witness: Jing Liu**

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION,**

**Complainant,**

**v.**

**PUGET SOUND ENERGY,**

**Respondent.**

**DOCKETS UE-190529  
and UG-190530 (*consolidated*)**

**In the Matter of the Petition of**

**PUGET SOUND ENERGY**

**For an Order Authorizing Deferral  
Accounting and Ratemaking Treatment  
for Short-life UT/Technology Investment**

**DOCKETS UE-190274 and  
UG-190275 (*consolidated*)**

**REVISED EXHIBIT TO TESTIMONY OF**

**Jing Liu**

**STAFF OF  
WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION**

***Attrition Base and Growth Factor Comparison***

**November 22, 2019**

***Revised December 17, 2019***

## Comparison of PSE's and UTC Staff's Attrition Analysis Electric

Gross Plant	PSE Attrition Base Excluding AMI and GTZ	PSE Growth Factor	Escalation From Test Year	Staff Attrition Base Excluding AMI and GTZ	Staff Growth Factor	Escalation From Test Year	Reasons for Staff's Recommended Growth Factor
Production	4,226,607,969	1.50%	146,729,337	4,219,025,238	0.14%	47,336,151	use linear function
Transmission	1,537,389,479	5.32%	184,130,453	1,537,389,479	4.60%	162,337,596	use linear function
Distribution	3,863,263,017	3.44%	376,884,699	3,862,712,861	3.08%	350,272,520	use linear function
Intangible Plant	349,416,086	16.16%	97,266,452	332,198,531	5.90%	43,127,370	use linear function; exclude EIM in data set
General Plant	515,670,959	6.04%	142,966,217	515,670,959	4.43%	124,533,538	use linear function
<b>Total Gross Plant</b>	<b>10,492,347,510</b>	<b>9.03%</b>	<b>947,977,158</b>	<b>10,466,997,068</b>	<b>6.95%</b>	<b>727,607,176</b>	

Expenses	PSE Attrition Base Excluding AMI and GTZ	PSE Growth Factor	Escalation From Test Year	Staff Attrition Base Excluding AMI and GTZ	Staff Growth Factor	Escalation From Test Year	Reasons for Staff's Recommended Growth Factor
Other Power Supply Expenses	127,132,038	2.21%	6,639,861	108,277,181	2.21%	5,655,108	use exponential function (better fit)
Transmission Expense	24,319,869	2.32%	1,338,190	24,319,869	2.82%	1,630,784	use exponential function (better fit)
Distribution Expense	83,321,444	2.32%	4,584,726	83,321,444	1.81%	3,562,601	no pattern; use compound average growth rate
Customer Account Expenses	46,156,575	2.45%	2,683,847	46,157,950	2.40%	2,630,569	use exponential function (better fit)
Customer Service Expenses	4,015,681	2.45%	233,498	4,015,681	6.56%	641,588	use linear function (2012-2018)
Conservation Amortization	-	-	-	-	-	-	
Admin & General Expense	124,099,219	3.02%	8,913,512	124,099,544	3.02%	8,913,535	use exponential function (better fit)
Depreciation	293,675,965	-	106,267,566	293,061,809	-	100,474,920	
Amortization	68,843,929	-	23,358,322	63,174,646	-	14,269,341	
Amortiz Of Property Gain/Loss	43,150,399	-	-	43,150,399	-	-	
Other Operating Expenses	12,818,325	2.51%	764,747	9,465,484	0.00%	-	no pattern
Asc 815	-	-	-	-	-	-	
Taxes Other Than F.I.T.	57,992,756	0.87%	1,182,732	57,998,985	0.87%	1,182,859	use exponential function (better fit)
Federal Income Taxes	84,094,421	-	(14,430,610)	86,144,382	-	(6,927,691)	
Deferred Income Taxes	(51,808,801)	-	(7,170,363)	(51,808,801)	-	(5,813,958)	
<b>Total Operating Rev. Deduct.</b>	<b>917,811,822</b>	<b>14.64%</b>	<b>134,366,028</b>	<b>891,378,572</b>	<b>14.16%</b>	<b>126,219,657</b>	
O&M Expense	\$ 409,044,826	5.96%	24,393,634	\$ 390,191,669	5.90%	23,034,186	

## Comparison of PSE's and UTC Staff's Attrition Analysis Natural Gas

Gross Plant	PSE Attrition Base Excluding AMI and GTZ	PSE Growth Factor	Escalation From Test Year Before Adding CRM, AMI and GTZ	Staff Attrition Base Excluding AMI and GTZ	Staff Growth Factor	Escalation From Test Year Before Adding AMI and GTZ	Reasons for Staff's Recommended Growth Factor
Production	76,474,409	1.33%	(5,709,370)	76,474,409	1.45%	(5,554,549)	use linear function
Transmission	-		-	-		-	
Distribution	3,610,012,706	5.22%	473,698,917	3,577,778,905	3.68%	395,903,387	use linear function; exclude LNG from dataset
Intangible Plant	122,934,181	15.11%	29,959,842	122,820,858	8.34%	13,563,455	use linear function
General Plant	173,600,530	2.90%	51,500,825	173,600,530	2.14%	48,437,977	use linear function
<b>Total Gross Plant</b>	<b>3,983,021,826</b>	<b>13.79%</b>	<b>549,450,214</b>	<b>3,950,674,702</b>	<b>11.45%</b>	<b>452,350,270</b>	

Expenses	PSE Attrition Base Excluding AMI and GTZ	PSE Growth Factor	Escalation From Test Year Before Adding CRM, AMI and GTZ	Staff Attrition Base Excluding AMI and GTZ	Staff Growth Factor	Escalation From Test Year Before Adding AMI and GTZ	Reasons for Staff's Recommended Growth Factor
Other Power Supply Expenses	6,061,389	5.59%	820,560	6,059,691	5.59%	820,330	use exponential function (curve)
Transmission Expense	2,111		-	2,111		-	
Distribution Expense	60,697,625	0.93%	1,325,694	60,697,625	0.93%	1,325,694	use exponential function (better fit)
Customer Account Expenses	28,149,920	1.09%	723,482	28,150,071	0.78%	517,265	poor model fit; use compound average growth rate
Customer Service Expenses	1,763,236	1.09%	45,317	1,763,236	2.32%	96,732	poor model fit; use compound average growth rate
Conservation Amortization	-		-	-		-	
Admin & General Expense	59,108,615	2.02%	2,817,750	59,028,745	2.02%	2,813,943	use exponential function (better fit)
Depreciation	108,591,776		26,520,777	107,879,353		23,160,361	
Amortization	26,117,570		13,538,136	26,117,570		9,414,173	
Amortization of Property Loss	-		-	-		-	
Other Operating Expenses	15,193,512	1.45%	519,479	13,480,873	0.00%	-	no pattern
Taxes Other Than F.I.T.	24,100,589	3.15%	1,807,182	24,101,717	3.15%	1,807,267	use exponential function (better fit)
Federal Income Taxes	5,694,740		12,906,301	4,873,210		14,739,033	
Deferred Income Taxes	523,320		(20,022,516)	523,320		(19,227,359)	
<b>Total Operating Rev. Deduct.</b>	<b>336,004,403</b>	<b>12.20%</b>	<b>41,002,162</b>	<b>332,677,524</b>	<b>10.66%</b>	<b>35,467,438</b>	
O&M	\$ 155,782,896	3.68%	\$ 5,732,804	\$ 155,701,480	3.58%	\$ 5,573,964	

**Staff Note:**

The dark blue shading indicates the primary change. The attrition deficiency number is from Staff's revised attrition analysis.

The light blue shading indicates the changes due to linked formula.