

**Unitil Energy Systems, Inc.**  
**PUC 308.11 - F-1 Rate of Return**  
12 Months Ending December 31, 2016

**Schedule 1: Calculation of Per Books Rate of Return**

<u>Cost of Service</u>	<u>Rolling 12 Months</u>	<u>Rate Base</u>	<u>Period End</u>
Electric Service Revenue	\$ 130,274,271	Utility Plant in Service	\$ 294,443,220
Other Operating Revenue	1,912,985	Less: Reserve for Depreciation & Amortization	106,174,178
<b>Total Operating Revenue</b>	<b>132,187,256</b>	<b>Net Utility Plant</b>	<b>188,269,043</b>
<i>Operating Expenses:</i>		<i>Plus:</i>	
Purchased Power	44,186,335	M&S Inventories	1,552,875
Transmission	27,717,022	Cash Working Capital	2,665,955
Distribution	8,719,304	Prepayments	5,449,767
Cust. Accounting & Service	6,213,869		
Admin. & General	9,605,696	<i>Less:</i>	
Depreciation	9,728,469	Deferred Income Taxes	45,505,035
Amortization	4,347,962	Customer Advances	552,389
Taxes-Other Than Income	5,908,910	Customer Deposits	925,740
State & Federal Income Taxes - Adjusted	3,808,669		
Int on Customer Deposits	28,803	<b>Total Rate Base</b>	<b>\$ 150,954,476</b>
<b>Total Operating Expenses</b>	<b>120,265,038</b>	Utility Operating Income - Current Cost of Capital	\$ 12,408,458
<b>Net Operating Income</b>	<b>\$ 11,922,218</b>	Utility Operating Income - Adjusted	\$ 11,239,023
Less: Flow-Through Oper. Inc. (Exc. Lost Base Rev.)	683,195	<b>Operating Income Deficiency (Surplus)</b>	<b>\$ 1,169,435</b>
<b>Net Operating Income - Adjusted</b>	<b>\$ 11,239,023</b>	Income Tax Gross-Up	\$ 760,708
		<b>Revenue Deficiency (Surplus)</b>	<b>\$ 1,930,143</b>
		<b>Return on Rate Base - Actual</b>	<b>7.45%</b>
		<b>Return on Rate Base - Current Cost of Capital</b>	<b>8.22%</b>
		<b>ROE - Actual</b>	<b>8.11%</b>

**Schedule 2: Current Cost of Capital**

	<u>Amount</u>	<u>Percent</u>	<u>Cost Rate</u>	<u>Weighted</u>
	<u>Outstanding</u>	<u>Total</u>		<u>Cost Rate</u>
Common Equity	\$ 79,155,139	49.89%	9.67%	<b>4.82%</b>
Preferred Stock Equity	\$ 189,300	0.12%	6.00%	<b>0.01%</b>
Long Term Debt	\$ 74,000,000	46.64%	7.14%	<b>3.33%</b>
Short Term Debt (a)	\$ 5,303,664	3.34%	1.77%	<b>0.06%</b>
<b>Total</b>	<b>\$ 158,648,102</b>	<b>100.00%</b>		<b>8.22%</b>

(a) Excluding Accrued Revenue and Power Supply Working Capital