

**SMART GRID DEFERRED REVENUE REQUIREMENT SUPPORTING CALCULATIONS**

## Smart Grid Accounts

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Smart Grid - FDIR Software	-	-	216,577.40	221,875.00	221,875.00	221,875.00	221,875.00	221,875.00	221,875.00	221,875.00
Smart Grid - FDIR Software - acc amort	-	-	(43,315.48)	(87,690.48)	(132,065.48)	(176,440.48)	(220,815.48)	(221,875.00)	(221,875.00)	(221,875.00)
Smart Grid - Scada Monitoring Devices	-	-	27,483.83	46,769.20	46,769.20	46,769.20	46,769.20	46,769.20	46,769.20	46,769.20
Smart Grid - Scada Monitoring Devices - acc amort	-	-	(1,099.35)	(2,970.11)	(4,840.87)	(6,711.63)	(8,582.39)	(10,453.15)	(12,323.91)	(14,194.67)
<b>Total Net Fixed Assets</b>	-	-	199,646.40	177,983.61	131,737.85	85,492.09	39,246.33	36,316.05	34,445.29	32,574.53
<b>Net Book Value</b>										
Opening Balance	-	-	-	199,646.40	177,983.61	131,737.85	85,492.09	39,246.33	36,316.05	34,445.29
Closing Balance	-	-	199,646.40	177,983.61	131,737.85	85,492.09	39,246.33	36,316.05	34,445.29	32,574.53
<b>Average Net Book Value</b>	-	-	99,823.20	188,815.01	154,860.73	108,614.97	62,369.21	37,781.19	35,380.67	33,509.91
<b>Working Capital</b>										
Smart Grid - OM&A - Demonstration Projects	-	-	-	-	-	-	-	-	-	-
Smart Grid - OM&A - Grid 20/20 data plan	-	-	1,228.00	1,939.00	1,584.00	-	-	-	-	-
Smart Grid - OM&A - Survalent support costs	-	-	-	-	-	-	-	-	-	-
Smart Grid - OM&A - Studies and Planning Exercises	5,000.00	15,000.00	18,540.00	15,000.00	15,000.00	-	-	-	-	-
Smart Grid - OM&A - Education and Training	0.00	16,722.05	1,000.00	1,250.44	1,250.00	-	-	-	-	-
Total Operating Expenses	5,000.00	31,722.05	20,768.00	18,189.44	17,834.00	-	-	-	-	-
Working Capital Factor (OEB approved in 2013 COS)	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%
Working Capital Allowance	650.00	4,123.87	2,699.84	2,364.63	2,318.42	-	-	-	-	-
<b>Smart Grid Rate Base</b>	650.00	4,123.87	102,523.04	191,179.63	157,179.15	108,614.97	62,369.21	37,781.19	35,380.67	33,509.91

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
<b>Capital Structure (inputs detailed below)</b>											
Deemed Short Term Debt	26.00	164.95	4,100.92	7,647.19	6,287.17	4,344.60	2,494.77	1,511.25	1,415.23	1,340.40	
Deemed Long Term Debt	364.00	2,309.37	57,412.90	107,060.59	88,020.32	60,824.38	34,926.76	21,157.47	19,813.18	18,765.55	
Equity	260.00	1,649.55	41,009.22	76,471.85	62,871.66	43,445.99	24,947.68	15,112.48	14,152.27	13,403.96	
Total Capitalization	650.00	4,123.87	102,523.04	191,179.63	157,179.15	108,614.97	62,369.21	37,781.19	35,380.67	33,509.91	
<b>Return on</b>											
Deemed Short Term Debt	0.54	3.41	84.89	158.30	130.14	89.93	51.64	31.28	29.30	27.75	
Deemed Long Term Debt	14.34	90.99	2,262.07	4,218.19	3,468.00	2,396.48	1,376.11	833.60	780.64	739.36	
Equity	23.35	148.13	3,682.63	6,867.17	5,645.88	3,901.45	2,240.30	1,357.10	1,270.87	1,203.68	
<b>Account 1534 - Return on Capital</b>	<b>38</b>	<b>243</b>	<b>6,030</b>	<b>11,244</b>	<b>9,244</b>	<b>6,388</b>	<b>3,668</b>	<b>2,222</b>	<b>2,081</b>	<b>1,971</b>	<b>43,128</b> a
<b>Account 1535 - Smart Grid OM&amp;A</b>	<b>5,000</b>	<b>31,722</b>	<b>20,768</b>	<b>18,189</b>	<b>17,834</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>93,513</b> b
<b>Amortization Expense</b>											
Smart Grid - FDIR Software (S.L. 5 yrs)	-	-	43,315.48	44,375.00	44,375.00	44,375.00	44,375.00	1,059.52	-	-	
Smart Grid - Scada Monitoring Devices (S.L. 25 yrs)	-	-	1,099.35	1,870.76	1,870.76	1,870.76	1,870.76	1,870.76	1,870.76	1,870.76	
<b>Account 1534 - Amortization</b>	<b>-</b>	<b>-</b>	<b>44,415</b>	<b>46,246</b>	<b>46,246</b>	<b>46,246</b>	<b>46,246</b>	<b>2,930</b>	<b>1,871</b>	<b>1,871</b>	<b>236,070</b> c
Revenue Requirement before Taxes/PILS	5,038.23	31,964.58	71,212.42	75,678.86	73,323.78	52,633.62	49,913.82	5,152.27	3,951.57	3,841.54	
<b>Calculation of Taxable Income</b>											
Operating Expenses	5,000.00	31,722.05	20,768.00	18,189.44	17,834.00	-	-	-	-	-	
Amortization Expense	-	-	44,414.83	46,245.76	46,245.76	46,245.76	46,245.76	2,930.28	1,870.76	1,870.76	
Interest Expense	14.88	94.40	2,346.96	4,376.48	3,598.15	2,486.41	1,427.76	864.89	809.93	767.11	
Net Income for Taxes/PILS	23.35	148.13	3,682.63	6,867.17	5,645.88	3,901.45	2,240.30	1,357.10	1,270.87	1,203.68	
<b>Account 1534 - Grossed-up PILs (calculation below)</b>	<b>8</b>	<b>53</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8,208</b>	<b>12,327</b>	<b>-</b>	<b>-</b>	<b>23</b>	<b>20,619</b> d
<b>Account 1534 Total</b>	<b>47</b>	<b>296</b>	<b>50,444</b>	<b>57,489</b>	<b>55,490</b>	<b>60,841</b>	<b>62,241</b>	<b>5,152</b>	<b>3,952</b>	<b>3,864</b>	<b>299,816</b> a+b+d
<b>Revenue Requirement, including Grossed-up Taxes/PILs</b>	<b>5,047</b>	<b>32,018</b>	<b>71,212</b>	<b>75,679</b>	<b>73,324</b>	<b>60,841</b>	<b>62,241</b>	<b>5,152</b>	<b>3,952</b>	<b>3,864</b>	<b>393,330</b> a+b+c+d

<b>PILs Calculation:</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Net Income	23.35	148.13	3,682.63	6,867.17	5,645.88	3,901.45	2,240.30	1,357.10	1,270.87	1,203.68
Add back: Amortization	-	-	44,414.83	46,245.76	46,245.76	46,245.76	46,245.76	2,930.28	1,870.76	1,870.76
Less: CCA - FDIR Software (see worksheets)	-	-	(59,558.79)	(87,817.08)	(40,974.53)	(18,438.54)	(8,297.00)	(3,734.00)	(1,680.00)	(756.00)
Less: CCA - Scada Monitoring Devices (see worksheets)	-	-	(1,099.35)	(2,882.17)	(3,423.01)	(3,149.17)	(2,897.00)	(2,665.00)	(2,452.00)	(2,256.00)
Taxable Income	23.35	148.13	(12,560.68)	(37,586.32)	7,494.10	28,559.50	37,292.06	(2,111.62)	(990.37)	62.44
Less: tax loss carryforward/carryback	-	-	-	-	(7,494.10)	(5,794.86)	(3,101.99)			
	23.35	148.13	(12,560.68)	(37,586.32)	-	22,764.64	34,190.08	(2,111.62)	(990.37)	62.44
Tax Rate	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%
PILS Payable	6.19	39.25	(3,328.58)	(9,960.37)	-	6,032.63	9,060.37	(559.58)	(262.45)	16.55
Tax Rate	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%	26.5%
<b>Gross Up PILS</b>	<b>8.42</b>	<b>53.41</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8,207.66</b>	<b>12,327.03</b>	<b>-</b>	<b>-</b>	<b>22.51</b>

**Supporting Information**

<b>Capital Structure</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Deemed Short-term Debt Capitalization	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Deemed Long-term Debt Capitalization	56%	56%	56%	56%	56%	56%	56%	56%	56%	56%
Deemed Equity Capitalization	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Cost of Capital Parameters</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
Short-term Debt Rate	2.07%	2.07%	2.07%	2.07%	2.07%	2.07%	2.07%	2.07%	2.07%	2.07%
Long-term Debt Rate	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%	3.94%
Return on Equity	8.98%	8.98%	8.98%	8.98%	8.98%	8.98%	8.98%	8.98%	8.98%	8.98%
WACC	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%	5.88%

\*Bluewater specific LTD rate approved in 2013 COS rate application was 3.94%