

Deployment	Witness	2005 - Book		2005	2006	2007	2008
		2011	Exp / Cap				
8Remote Electric Turn-on/Shut-off Costs	{Redacted}	\$ 60,670	C	{Redacted}			
3Module Materials - Elec		\$ 253,613	C				
3Module Materials - Gas		\$ 282,999	C				
3Meter Materials - Elec		\$ 94,161	C				
3Meter Materials - Gas		\$ 6,586	C				
4Network Concentrator Materials - Elec		\$ 39,937	C				
4Network Concentrator Materials - Gas		\$ 12,020	C				
12Replacement Labor - Elec		\$ 5,594	E				
12Replacement Labor - Gas		\$ 3,523	E				
8Module Installation - Elec		\$ 173,906	C				
8Module Installation - Gas		\$ 102,191	C				
8Meter Installation - Elec		\$ (9,923)	C				
8Meter Installation - Gas		\$ (783)	C				
9Network Concentrator Installation - Elec		\$ 56,489	C				
10Network Concentrator Installation - Gas		\$ 3,339	C				
10Site Costs (Poles) - One-Time - Gas		\$-	C				
10Site Costs (Other) - One-Time - Gas		\$ 1,268	E				
AWAN Costs - One-Time - Common		\$ 1,000	C				
9WAN Costs - One-Time - Elec		\$ 30,201	C				
10WAN Costs - One-Time - Gas		\$ 695	C				
7Billing Systems - Hardware - Common	Erdozaincy	\$ 18,790	C				
7Billing Systems - Expensed Software - Common	Erdozaincy	\$ 4,000	E				
7Billing Systems - Capitalized Software - Common	Erdozaincy	\$ 3,940	C				
7Billing Systems - Expensed Labor - Common	Erdozaincy	\$ 8,334	E				
7Billing Systems - Capitalized Labor - Common	Erdozaincy	\$ 16,155	C				
7Billing Systems - Hardware - Elec	Erdozaincy	\$-	C				
7Billing Systems - Expensed Software - Elec	Erdozaincy	\$-	E				
7Billing Systems - Capitalized Software - Elec	Erdozaincy	\$ 1,400	C				
7Billing Systems - Expensed Labor - Elec	Erdozaincy	\$ 6,573	E				
7Billing Systems - Capitalized Labor - Elec	{Redacted}	\$ 8,297	C				
6AMI Server - Hardware - Common	{Redacted}	\$ 19,866	C				
6AMI Server - Expensed Software - Common	{Redacted}	\$ 5,814	E				
6AMI Server - Capitalized Software - Common		\$ 4,062	C				
6AMI Server - Expensed Labor - Common		\$ 338	E				
6AMI Server - Capitalized Labor - Common		\$ 18,988	C				
6Other Systems - Hardware - Common		\$ 3,229	C				
6Other Systems - Expensed Software - Common		\$ 225	E				
6Other Systems - Capitalized Software - Common		\$-	C				
6Other Systems - Expensed Labor - Common		\$ 6,688	E				
6Other Systems - Capitalized Labor - Common	{Redacted}	\$ 2,300	C				
4System Controller - Hardware - Elec		\$ 11,975	C				
4System Controller - Expensed Software - Elec		\$ 10,394	E				

4System Controller - Capitalized Software - Elec	\$ 6,905	C
4System Controller - Expensed Labor - Elec	\$-	E
4System Controller - Capitalized Labor - Elec	\$ 1,200	C
4System Controller - Hardware - Gas	\$ 730	C
4System Controller - Expensed Software - Gas	\$ 88	E
4System Controller - Capitalized Software - Gas	\$ 222	C
4System Controller - Expensed Labor - Gas	\$-	E
4System Controller - Capitalized Labor - Gas	\$ 113	C
15Marketing Comms - Media	\$ 18,125	E
15Marketing Comms - Research	\$ 5,000	E
16Marketing Comms - Cust Acquisition	\$ 54,767	E
7Marketing Comms - Rate Protection	\$ 2,000	E
13Customer Data Access - Hardware - Common	\$ 405	C
13Customer Data Access - Expensed Software - Common	\$-	E
13Customer Data Access - Capitalized Software - Common	\$-	C
13Customer Data Access - Expensed Labor - Common	\$ 3,763	E
13Customer Data Access - Capitalized Labor - Common	\$-	C
13Customer Costs - Call Center	\$ 10,060	E
13Customer Costs - Tariffs / Rates	\$ 10,155	E
13Customer Costs - Opt	\$ 2,025	E
14Customer Costs - Exceptions Processing	\$ 6,560	E
1Project Management, Predeployment - Expensed	\$ 15,397	E
1Project Management, Predeployment - Capitalized	\$-	C
1Project Management, Deployment - System Integration	\$ 41,173	C
1Project Management, Deployment - AMI	\$ 31,324	C
2Risk-based allowance - Capital	\$ 105,399	C
2Risk-based allowance - Expense	\$ 23,374	E
Total Deployment	\$ 1,607,641	

<b>On-going O&amp;M</b>	<b>Witness</b>	<b>2005 - 2010</b>	<b>Book Exp / Cap</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
5Site Costs - Recurring - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-
5WAN Costs - Recurring - Common	Vahlstrom	\$ 1,200	E	\$-	\$ 240	\$ 240	\$ 240
5WAN Costs - Recurring - Elec	Vahlstrom	\$ 4,550	E	\$-	\$ 15	\$ 234	\$ 791
5WAN Costs - Recurring - Gas	Vahlstrom	\$ 2,277	E	\$-	\$ 6	\$ 112	\$ 370
12Power Costs - Recurring - Elec	Nguyen	\$ 5,797	E	\$-	\$ 35	\$ 484	\$ 1,231
12Power Costs - Recurring - Gas	Nguyen	\$ 43	E	\$-	\$ 0	\$ 2	\$ 7
5Network Operations Center - Common	Vahlstrom	\$ 13,785	E	\$-	\$ 2,582	\$ 2,667	\$ 2,754
5Network Field O&M - Common	Vahlstrom	\$ 4,029	E	\$-	\$ 646	\$ 667	\$ 689
11Meter / Module QA Sample Testing - Common	Lau	\$ 2,757	E	\$-	\$ 516	\$ 533	\$ 551
7Billing Systems - Maintenance Fees - Common	Erdozaincy	\$ 15,510	E	\$-	\$ 2,830	\$ 3,350	\$ 3,110
7Billing Systems - Recurring Labor - Common	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-
7Billing Systems - Maintenance Fees - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-
7Billing Systems - Recurring Labor - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-

6AMI Server - Maintenance Fees - Common	Louie	\$ 11,420	E	\$-	\$-	\$ 2,855	\$ 2,855
6AMI Server - Recurring Labor - Common	Louie	\$ 9,925	E	\$-	\$ 1,859	\$ 1,920	\$ 1,983
6Other Systems - Maintenance Fees - Common	Louie	\$ 1,232	E	\$-	\$-	\$ 308	\$ 308
6Other Systems - Recurring Labor - Common	Louie	\$ 9,925	E	\$-	\$ 1,859	\$ 1,920	\$ 1,983
5System Controller - Maintenance Fees - Elec	Vahlstrom	\$ 14,908	E	\$-	\$-	\$ 3,727	\$ 3,727
5System Controller - Recurring Labor - Elec	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-
5System Controller - Maintenance Fees - Gas	Vahlstrom	\$ 120	E	\$-	\$-	\$ 30	\$ 30
5System Controller - Recurring Labor - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-
13Customer Data Access - Maintenance Fees - Common	Phillips	\$ 1,291	E	\$-	\$ 525	\$ 307	\$ 153
13Customer Data Access - Recurring Labor - Common	Phillips	\$ 2,892	E	\$-	\$-	\$-	\$ 933
13Customer Costs - Notification	Phillips	\$ 1,718	E	\$-	\$ 10	\$ 33	\$ 222
12Atmospheric Corrosion Testing - Gas	Nguyen	\$ 7,632	E	\$-	\$ 321	\$ 491	\$ 1,294
17Other Employee Related Costs - Common	Meadows	\$ 20,715	E	\$-	\$ 8,126	\$ 2,334	\$ 2,964
Total O&M		\$ 131,727		\$-	\$ 19,570	\$ 22,214	\$ 26,194
<b>Total Costs</b>		\$ 1,739,368		\$ 19,153	\$ 258,619	\$ 231,931	\$ 377,901

**LineAmounts at 100%**

No. Cost Category	Source	2005 - 2011 Reference	2005	2006	2007	2008
1 Project management costs	Corey	\$ 87,895 Exh. 1, Chap	\$ 3,873	\$ 21,041	\$ 14,326	\$ 14,452
2 Risk-based allowance	Corey	\$ 128,773 Exh. 1, Chap	\$-	\$ 46,598	\$ 13,075	\$ 20,705
3 Meters and modules	Vahlstrom	\$ 637,360 Exh. 2, Chap	\$ 130	\$ 20,372	\$ 102,106	\$ 168,424
4 Network materials	Vahlstrom	\$ 83,585 Exh. 2, Chap	\$ 1,853	\$ 27,155	\$ 8,339	\$ 14,207
5 AMI operations	Vahlstrom	\$ 40,869 Exh. 2, Chap	\$-	\$ 3,488	\$ 7,676	\$ 8,600
6 Interface and systems integration	Louie	\$ 94,013 Exh. 2, Chap	\$ 11,059	\$ 46,849	\$ 7,003	\$ 7,129
7 Interval billing system	Erdozaincy	\$ 84,999 Exh. 2, Chap	\$ 2,238	\$ 64,966	\$ 3,600	\$ 3,360
8 Meters / modules installation	Lau	\$ 326,061 Exh. 2, Chap	\$-	\$ 534	\$ 40,284	\$ 80,040
9 Electric network and WAN installation	Lau	\$ 87,232 Exh. 2, Chap	\$-	\$ 1,513	\$ 14,110	\$ 25,145
10 Gas network and other installation	Lau	\$ 5,760 Exh. 2, Chap	\$-	\$ 506	\$ 773	\$ 1,287
11 Meters / modules QA sample testing	Lau	\$ 2,757 Exh. 2, Chap	\$-	\$ 516	\$ 533	\$ 551
12 Meter operations costs	Nguyen	\$ 22,589 Exh. 3, Chap	\$-	\$ 363	\$ 1,303	\$ 3,925
13 Customer contact-related costs	Phillips	\$ 32,309 Exh. 3, Chap	\$-	\$ 9,800	\$ 4,255	\$ 5,470
14 Customer exceptions processing	Sharp	\$ 6,560 Exh. 3, Chap	\$-	\$ 1,007	\$ 1,040	\$ 1,074
15 Marketing and communications	McNicoll	\$ 23,125 Exh. 4, Chap	\$-	\$ 4,055	\$ 3,305	\$ 4,305
16 Customer acquisition	Counihan	\$ 54,767 Exh. 4, Chap	\$-	\$ 1,730	\$ 7,867	\$ 16,263
17 Other employee related costs	Meadows	\$ 20,715 Calculated	\$-	\$ 8,126	\$ 2,334	\$ 2,964
18 Total Costs		\$ 1,739,368	\$ 19,153	\$ 258,619	\$ 231,931	\$ 377,901

Total Benefits (See Benefits Model)

Net Costs over Benefits

Deployment	Witness	2005 -	Book	2009	2010	2011	2012	2013
		2011	Exp / Cap					
8Remote Electric Turn-on/Shut-off Costs	{Redacted}	\$ 60,670	C					
3Module Materials - Elec	{Redacted}	\$ 253,613	C					
3Module Materials - Gas	{Redacted}	\$ 282,999	C					
3Meter Materials - Elec	{Redacted}	\$ 94,161	C					
3Meter Materials - Gas	{Redacted}	\$ 6,586	C					
4Network Concentrator Materials - Elec	{Redacted}	\$ 39,937	C					
4Network Concentrator Materials - Gas	{Redacted}	\$ 12,020	C					
12Replacement Labor - Elec	{Redacted}	\$ 5,594	E					
12Replacement Labor - Gas	{Redacted}	\$ 3,523	E					
8Module Installation - Elec	{Redacted}	\$ 173,906	C					
8Module Installation - Gas	{Redacted}	\$ 102,191	C					
8Meter Installation - Elec	{Redacted}	\$ (9,923)	C					
8Meter Installation - Gas	{Redacted}	\$ (783)	C					
9Network Concentrator Installation - Elec	{Redacted}	\$ 56,489	C					
10Network Concentrator Installation - Gas	{Redacted}	\$ 3,339	C					
10Site Costs (Poles) - One-Time - Gas	{Redacted}	\$-	C					
10Site Costs (Other) - One-Time - Gas	{Redacted}	\$ 1,268	E					
AWAN Costs - One-Time - Common	{Redacted}	\$ 1,000	C					
9WAN Costs - One-Time - Elec	{Redacted}	\$ 30,201	C					
10WAN Costs - One-Time - Gas	{Redacted}	\$ 695	C					
7Billing Systems - Hardware - Common	Erdozaincy	\$ 18,790	C					
7Billing Systems - Expensed Software - Common	Erdozaincy	\$ 4,000	E					
7Billing Systems - Capitalized Software - Common	Erdozaincy	\$ 3,940	C					
7Billing Systems - Expensed Labor - Common	Erdozaincy	\$ 8,334	E					
7Billing Systems - Capitalized Labor - Common	Erdozaincy	\$ 16,155	C					
7Billing Systems - Hardware - Elec	Erdozaincy	\$-	C					
7Billing Systems - Expensed Software - Elec	Erdozaincy	\$-	E					
7Billing Systems - Capitalized Software - Elec	Erdozaincy	\$ 1,400	C					
7Billing Systems - Expensed Labor - Elec	Erdozaincy	\$ 6,573	E					
7Billing Systems - Capitalized Labor - Elec	{Redacted}	\$ 8,297	C					
6AMI Server - Hardware - Common	{Redacted}	\$ 19,866	C					
6AMI Server - Expensed Software - Common	{Redacted}	\$ 5,814	E					
6AMI Server - Capitalized Software - Common	{Redacted}	\$ 4,062	C					
6AMI Server - Expensed Labor - Common	{Redacted}	\$ 338	E					
6AMI Server - Capitalized Labor - Common	{Redacted}	\$ 18,988	C					
6Other Systems - Hardware - Common	{Redacted}	\$ 3,229	C					
6Other Systems - Expensed Software - Common	{Redacted}	\$ 225	E					
6Other Systems - Capitalized Software - Common	{Redacted}	\$-	C					
6Other Systems - Expensed Labor - Common	{Redacted}	\$ 6,688	E					
6Other Systems - Capitalized Labor - Common	{Redacted}	\$ 2,300	C					
4System Controller - Hardware - Elec	{Redacted}	\$ 11,975	C					
4System Controller - Expensed Software - Elec	{Redacted}	\$ 10,394	E					

4System Controller - Capitalized Software - Elec	\$ 6,905	C
4System Controller - Expensed Labor - Elec	\$-	E
4System Controller - Capitalized Labor - Elec	\$ 1,200	C
4System Controller - Hardware - Gas	\$ 730	C
4System Controller - Expensed Software - Gas	\$ 88	E
4System Controller - Capitalized Software - Gas	\$ 222	C
4System Controller - Expensed Labor - Gas	\$-	E
4System Controller - Capitalized Labor - Gas	\$ 113	C
15Marketing Comms - Media	\$ 18,125	E
15Marketing Comms - Research	\$ 5,000	E
16Marketing Comms - Cust Acquisition	\$ 54,767	E
7Marketing Comms - Rate Protection	\$ 2,000	E
13Customer Data Access - Hardware - Common	\$ 405	C
13Customer Data Access - Expensed Software - Common	\$-	E
13Customer Data Access - Capitalized Software - Common	\$-	C
13Customer Data Access - Expensed Labor - Common	\$ 3,763	E
13Customer Data Access - Capitalized Labor - Common	\$-	C
13Customer Costs - Call Center	\$ 10,060	E
13Customer Costs - Tariffs / Rates	\$ 10,155	E
13Customer Costs - Opt	\$ 2,025	E
14Customer Costs - Exceptions Processing	\$ 6,560	E
1Project Management, Predeployment - Expensed	\$ 15,397	E
1Project Management, Predeployment - Capitalized	\$-	C
1Project Management, Deployment - System Integration	\$ 41,173	C
1Project Management, Deployment - AMI	\$ 31,324	C
2Risk-based allowance - Capital	\$ 105,399	C
2Risk-based allowance - Expense	\$ 23,374	E
Total Deployment	\$ 1,607,641	

On-going O&M	Witness	2005 - Book		2009	2010	2011	2012	2013
		2010	Exp / Cap					
5Site Costs - Recurring - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
5WAN Costs - Recurring - Common	Vahlstrom	\$ 1,200	E	\$ 240	\$ 240	\$ 240	\$ 240	\$ 240
5WAN Costs - Recurring - Elec	Vahlstrom	\$ 4,550	E	\$ 1,470	\$ 2,041	\$ 2,341	\$ 2,399	\$ 2,401
5WAN Costs - Recurring - Gas	Vahlstrom	\$ 2,277	E	\$ 725	\$ 1,064	\$ 1,256	\$ 1,310	\$ 1,324
12Power Costs - Recurring - Elec	Nguyen	\$ 5,797	E	\$ 1,833	\$ 2,215	\$ 2,361	\$ 2,397	\$ 2,432
12Power Costs - Recurring - Gas	Nguyen	\$ 43	E	\$ 14	\$ 19	\$ 23	\$ 24	\$ 24
5Network Operations Center - Common	Vahlstrom	\$ 13,785	E	\$ 2,844	\$ 2,938	\$ 2,276	\$ 2,350	\$ 2,427
5Network Field O&M - Common	Vahlstrom	\$ 4,029	E	\$ 853	\$ 1,175	\$ 1,517	\$ 1,567	\$ 1,618
11Meter / Module QA Sample Testing - Common	Lau	\$ 2,757	E	\$ 569	\$ 588	\$-	\$-	\$-
7Billing Systems - Maintenance Fees - Common	Erdozaincy	\$ 15,510	E	\$ 3,110	\$ 3,110	\$ 3,110	\$ 3,110	\$ 3,110
7Billing Systems - Recurring Labor - Common	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Maintenance Fees - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Recurring Labor - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-

6AMI Server - Maintenance Fees - Common	Louie	\$ 11,420	E	\$ 2,855	\$ 2,855	\$ 2,855	\$ 2,855	\$ 2,855
6AMI Server - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 2,048	\$ 2,115	\$ 2,185	\$ 2,256	\$ 2,330
6Other Systems - Maintenance Fees - Common	Louie	\$ 1,232	E	\$ 308	\$ 308	\$ 308	\$ 308	\$ 308
6Other Systems - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 2,048	\$ 2,115	\$ 2,185	\$ 2,256	\$ 2,330
5System Controller - Maintenance Fees - Elec	Vahlstrom	\$ 14,908	E	\$ 3,727	\$ 3,727	\$ 3,727	\$ 3,727	\$ 3,727
5System Controller - Recurring Labor - Elec	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
5System Controller - Maintenance Fees - Gas	Vahlstrom	\$ 120	E	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30
5System Controller - Recurring Labor - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
13Customer Data Access - Maintenance Fees - Common	Phillips	\$ 1,291	E	\$ 153	\$ 153	\$ 153	\$ 153	\$ 153
13Customer Data Access - Recurring Labor - Common	Phillips	\$ 2,892	E	\$ 964	\$ 995	\$ 1,028	\$ 1,062	\$ 1,097
13Customer Costs - Notification	Phillips	\$ 1,718	E	\$ 580	\$ 873	\$ 1,013	\$ 1,051	\$ 1,070
12Atmospheric Corrosion Testing - Gas	Nguyen	\$ 7,632	E	\$ 2,348	\$ 3,179	\$ 3,520	\$ 3,635	\$ 3,754
17Other Employee Related Costs - Common	Meadows	\$ 20,715	E	\$ 3,486	\$ 3,805	\$ 3,111	\$ 2,719	\$ 2,818
Total O&M		\$ 131,727		\$ 30,204	\$ 33,545	\$ 33,237	\$ 33,450	\$ 34,049
<b>Total Costs</b>		<b>\$ 1,739,368</b>		<b>\$ 432,149</b>	<b>\$ 337,358</b>	<b>\$ 133,163</b>	<b>\$ 62,145</b>	<b>\$ 52,740</b>

**LineAmounts at 100%**

No. Cost Category	Source	2005 - 2011 Reference	2009	2010	2011	2012	2013
1 Project management costs	Corey	\$ 87,895 Exh. 1, Chapter 2	\$ 14,582	\$ 14,717	\$ 4,902	\$-	\$-
2 Risk-based allowance	Corey	\$ 128,773 Exh. 1, Chapter 2	\$ 26,906	\$ 18,054	\$ 3,436	\$-	\$-
3 Meters and modules	Vahlstrom	\$ 637,360 Exh. 2, Chapter 1	\$ 178,422	\$ 134,357	\$ 43,621	\$ 11,358	\$ 11,224
4 Network materials	Vahlstrom	\$ 83,585 Exh. 2, Chapter 1	\$ 18,923	\$ 10,557	\$ 2,930	\$ 3,388	\$ 407
5 AMI operations	Vahlstrom	\$ 40,869 Exh. 2, Chapter 1	\$ 9,889	\$ 11,215	\$ 11,386	\$ 11,624	\$ 11,767
6 Interface and systems integration	Louie	\$ 94,013 Exh. 2, Chapter 2	\$ 14,580	\$ 7,393	\$ 7,532	\$ 12,171	\$ 7,823
7 Interval billing system	Erdozaincy	\$ 84,999 Exh. 2, Chapter 3	\$ 7,475	\$ 3,360	\$ 3,110	\$ 5,637	\$ 3,110
8 Meters / modules installation	Lau	\$ 326,061 Exh. 2, Chapter 4	\$ 94,529	\$ 82,676	\$ 27,998	\$-	\$-
9 Electric network and WAN installation	Lau	\$ 87,232 Exh. 2, Chapter 4	\$ 24,419	\$ 18,933	\$ 4,613	\$ 149	\$-
10 Gas network and other installation	Lau	\$ 5,760 Exh. 2, Chapter 4	\$ 1,664	\$ 1,281	\$ 442	\$ 63	\$ 64
11 Meters / modules QA sample testing	Lau	\$ 2,757 Exh. 2, Chapter 4	\$ 569	\$ 588	\$-	\$-	\$-
12 Meter operations costs	Nguyen	\$ 22,589 Exh. 3, Chapter 3	\$ 7,109	\$ 9,889	\$ 11,427	\$ 12,074	\$ 12,550
13 Customer contact-related costs	Phillips	\$ 32,309 Exh. 3, Chapter 4	\$ 6,168	\$ 5,585	\$ 3,226	\$ 2,348	\$ 2,360
14 Customer exceptions processing	Sharp	\$ 6,560 Exh. 3, Chapter 5	\$ 1,109	\$ 1,146	\$ 1,183	\$-	\$-
15 Marketing and communications	McNicoll	\$ 23,125 Exh. 4, Chapter 2	\$ 4,305	\$ 4,405	\$ 2,750	\$ 615	\$ 615
16 Customer acquisition	Counihan	\$ 54,767 Exh. 4, Chapter 3	\$ 18,013	\$ 9,398	\$ 1,496	\$-	\$-
17 Other employee related costs	Meadows	\$ 20,715 Calculated	\$ 3,486	\$ 3,805	\$ 3,111	\$ 2,719	\$ 2,818
18 Total Costs		\$ 1,739,368	\$ 432,149	\$ 337,358	\$ 133,163	\$ 62,145	\$ 52,740

Total Benefits (See Benefits Model)

Net Costs over Benefits

Deployment	Witness	2005 -	Book	2014	2015	2016	2017	2018
		2011	Exp / Cap					
8Remote Electric Turn-on/Shut-off Costs	{Redacted}	\$ 60,670	C					
3Module Materials - Elec		\$ 253,613	C					
3Module Materials - Gas		\$ 282,999	C					
3Meter Materials - Elec		\$ 94,161	C					
3Meter Materials - Gas		\$ 6,586	C					
4Network Concentrator Materials - Elec		\$ 39,937	C					
4Network Concentrator Materials - Gas		\$ 12,020	C					
12Replacement Labor - Elec		\$ 5,594	E					
12Replacement Labor - Gas		\$ 3,523	E					
8Module Installation - Elec		\$ 173,906	C					
8Module Installation - Gas		\$ 102,191	C					
8Meter Installation - Elec		\$ (9,923)	C					
8Meter Installation - Gas		\$ (783)	C					
9Network Concentrator Installation - Elec		\$ 56,489	C					
10Network Concentrator Installation - Gas		\$ 3,339	C					
10Site Costs (Poles) - One-Time - Gas		\$-	C					
10Site Costs (Other) - One-Time - Gas		\$ 1,268	E					
AWAN Costs - One-Time - Common		\$ 1,000	C					
9WAN Costs - One-Time - Elec		\$ 30,201	C					
10WAN Costs - One-Time - Gas		\$ 695	C					
7Billing Systems - Hardware - Common	Erdozaincy	\$ 18,790	C					
7Billing Systems - Expensed Software - Common	Erdozaincy	\$ 4,000	E					
7Billing Systems - Capitalized Software - Common	Erdozaincy	\$ 3,940	C					
7Billing Systems - Expensed Labor - Common	Erdozaincy	\$ 8,334	E					
7Billing Systems - Capitalized Labor - Common	Erdozaincy	\$ 16,155	C					
7Billing Systems - Hardware - Elec	Erdozaincy	\$-	C					
7Billing Systems - Expensed Software - Elec	Erdozaincy	\$-	E					
7Billing Systems - Capitalized Software - Elec	Erdozaincy	\$ 1,400	C					
7Billing Systems - Expensed Labor - Elec	Erdozaincy	\$ 6,573	E					
7Billing Systems - Capitalized Labor - Elec	{Redacted}	\$ 8,297	C					
6AMI Server - Hardware - Common	{Redacted}	\$ 19,866	C					
6AMI Server - Expensed Software - Common	{Redacted}	\$ 5,814	E					
6AMI Server - Capitalized Software - Common		\$ 4,062	C					
6AMI Server - Expensed Labor - Common		\$ 338	E					
6AMI Server - Capitalized Labor - Common		\$ 18,988	C					
6Other Systems - Hardware - Common		\$ 3,229	C					
6Other Systems - Expensed Software - Common		\$ 225	E					
6Other Systems - Capitalized Software - Common		\$-	C					
6Other Systems - Expensed Labor - Common		\$ 6,688	E					
6Other Systems - Capitalized Labor - Common	{Redacted}	\$ 2,300	C					
4System Controller - Hardware - Elec		\$ 11,975	C					
4System Controller - Expensed Software - Elec		\$ 10,394	E					

4System Controller - Capitalized Software - Elec	\$ 6,905	C
4System Controller - Expensed Labor - Elec	\$-	E
4System Controller - Capitalized Labor - Elec	\$ 1,200	C
4System Controller - Hardware - Gas	\$ 730	C
4System Controller - Expensed Software - Gas	\$ 88	E
4System Controller - Capitalized Software - Gas	\$ 222	C
4System Controller - Expensed Labor - Gas	\$-	E
4System Controller - Capitalized Labor - Gas	\$ 113	C
15Marketing Comms - Media	\$ 18,125	E
15Marketing Comms - Research	\$ 5,000	E
16Marketing Comms - Cust Acquisition	\$ 54,767	E
7Marketing Comms - Rate Protection	\$ 2,000	E
13Customer Data Access - Hardware - Common	\$ 405	C
13Customer Data Access - Expensed Software - Common	\$-	E
13Customer Data Access - Capitalized Software - Common	\$-	C
13Customer Data Access - Expensed Labor - Common	\$ 3,763	E
13Customer Data Access - Capitalized Labor - Common	\$-	C
13Customer Costs - Call Center	\$ 10,060	E
13Customer Costs - Tariffs / Rates	\$ 10,155	E
13Customer Costs - Opt	\$ 2,025	E
14Customer Costs - Exceptions Processing	\$ 6,560	E
1Project Management, Predeployment - Expensed	\$ 15,397	E
1Project Management, Predeployment - Capitalized	\$-	C
1Project Management, Deployment - System Integration	\$ 41,173	C
1Project Management, Deployment - AMI	\$ 31,324	C
2Risk-based allowance - Capital	\$ 105,399	C
2Risk-based allowance - Expense	\$ 23,374	E
Total Deployment	\$ 1,607,641	

On-going O&M	Witness	2005 - Book		2014	2015	2016	2017	2018
		2010	Exp / Cap					
5Site Costs - Recurring - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
5WAN Costs - Recurring - Common	Vahlstrom	\$ 1,200	E	\$ 240	\$ 240	\$ 240	\$ 240	\$ 240
5WAN Costs - Recurring - Elec	Vahlstrom	\$ 4,550	E	\$ 2,401	\$ 2,403	\$ 2,405	\$ 2,405	\$ 2,407
5WAN Costs - Recurring - Gas	Vahlstrom	\$ 2,277	E	\$ 1,337	\$ 1,349	\$ 1,361	\$ 1,371	\$ 1,382
12Power Costs - Recurring - Elec	Nguyen	\$ 5,797	E	\$ 2,468	\$ 2,504	\$ 2,540	\$ 2,576	\$ 2,614
12Power Costs - Recurring - Gas	Nguyen	\$ 43	E	\$ 24	\$ 24	\$ 24	\$ 25	\$ 25
5Network Operations Center - Common	Vahlstrom	\$ 13,785	E	\$ 2,507	\$ 2,589	\$ 2,674	\$ 2,762	\$ 2,852
5Network Field O&M - Common	Vahlstrom	\$ 4,029	E	\$ 1,671	\$ 1,726	\$ 1,783	\$ 1,841	\$ 1,902
11Meter / Module QA Sample Testing - Common	Lau	\$ 2,757	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Maintenance Fees - Common	Erdozaincy	\$ 15,510	E	\$ 3,110	\$ 3,110	\$ 3,110	\$ 3,110	\$ 3,110
7Billing Systems - Recurring Labor - Common	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Maintenance Fees - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Recurring Labor - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-



6AMI Server - Maintenance Fees - Common	Louie	\$ 11,420	E	\$ 2,855	\$ 2,855	\$ 2,855	\$ 2,855	\$ 2,855
6AMI Server - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 2,407	\$ 2,486	\$ 2,567	\$ 2,651	\$ 2,738
6Other Systems - Maintenance Fees - Common	Louie	\$ 1,232	E	\$ 308	\$ 308	\$ 308	\$ 308	\$ 308
6Other Systems - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 2,407	\$ 2,486	\$ 2,567	\$ 2,651	\$ 2,738
5System Controller - Maintenance Fees - Elec	Vahlstrom	\$ 14,908	E	\$ 3,727	\$ 3,727	\$ 3,727	\$ 3,727	\$ 3,727
5System Controller - Recurring Labor - Elec	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
5System Controller - Maintenance Fees - Gas	Vahlstrom	\$ 120	E	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30
5System Controller - Recurring Labor - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
13Customer Data Access - Maintenance Fees - Common	Phillips	\$ 1,291	E	\$ 153	\$ 153	\$ 153	\$ 153	\$ 153
13Customer Data Access - Recurring Labor - Common	Phillips	\$ 2,892	E	\$ 1,132	\$ 1,170	\$ 1,208	\$ 1,248	\$ 1,289
13Customer Costs - Notification	Phillips	\$ 1,718	E	\$ 1,088	\$ 1,108	\$ 1,127	\$ 1,147	\$ 1,167
12Atmospheric Corrosion Testing - Gas	Nguyen	\$ 7,632	E	\$ 3,877	\$ 4,005	\$ 4,136	\$ 4,272	\$ 4,412
17Other Employee Related Costs - Common	Meadows	\$ 20,715	E	\$ 2,929	\$ 3,044	\$ 3,163	\$ 3,288	\$ 3,417
Total O&M		\$ 131,727		\$ 34,671	\$ 35,315	\$ 35,978	\$ 36,660	\$ 37,365
<b>Total Costs</b>		\$ 1,739,368		\$ 53,063	\$ 60,059	\$ 54,529	\$ 55,728	\$ 61,225

**LineAmounts at 100%**

No. Cost Category	Source	2005 - 2011 Reference	2014	2015	2016	2017	2018
1 Project management costs	Corey	\$ 87,895 Exh. 1, Chapter 2	\$-	\$-	\$-	\$-	\$-
2 Risk-based allowance	Corey	\$ 128,773 Exh. 1, Chapter 2	\$-	\$-	\$-	\$-	\$-
3 Meters and modules	Vahlstrom	\$ 637,360 Exh. 2, Chapter 1	\$ 10,610	\$ 10,206	\$ 9,621	\$ 9,348	\$ 9,396
4 Network materials	Vahlstrom	\$ 83,585 Exh. 2, Chapter 1	\$ 400	\$ 2,252	\$ 387	\$ 384	\$ 1,547
5 AMI operations	Vahlstrom	\$ 40,869 Exh. 2, Chapter 1	\$ 11,913	\$ 12,065	\$ 12,219	\$ 12,376	\$ 12,539
6 Interface and systems integration	Louie	\$ 94,013 Exh. 2, Chapter 2	\$ 7,976	\$ 10,895	\$ 8,297	\$ 8,466	\$ 10,335
7 Interval billing system	Erdozaincy	\$ 84,999 Exh. 2, Chapter 3	\$ 3,110	\$ 4,662	\$ 3,110	\$ 3,110	\$ 4,063
8 Meters / modules installation	Lau	\$ 326,061 Exh. 2, Chapter 4	\$-	\$ (0)	\$ (0)	\$ (0)	\$ (0)
9 Electric network and WAN installation	Lau	\$ 87,232 Exh. 2, Chapter 4	\$-	\$ 149	\$-	\$-	\$ 149
10 Gas network and other installation	Lau	\$ 5,760 Exh. 2, Chapter 4	\$ 62	\$ 56	\$ 53	\$ 47	\$ 53
11 Meters / modules QA sample testing	Lau	\$ 2,757 Exh. 2, Chapter 4	\$-	\$-	\$-	\$-	\$-
12 Meter operations costs	Nguyen	\$ 22,589 Exh. 3, Chapter 3	\$ 13,031	\$ 13,640	\$ 14,526	\$ 15,495	\$ 16,449
13 Customer contact-related costs	Phillips	\$ 32,309 Exh. 3, Chapter 4	\$ 2,417	\$ 2,476	\$ 2,536	\$ 2,598	\$ 2,662
14 Customer exceptions processing	Sharp	\$ 6,560 Exh. 3, Chapter 5	\$-	\$-	\$-	\$-	\$-
15 Marketing and communications	McNicoll	\$ 23,125 Exh. 4, Chapter 2	\$ 615	\$ 615	\$ 615	\$ 615	\$ 615
16 Customer acquisition	Counihan	\$ 54,767 Exh. 4, Chapter 3	\$-	\$-	\$-	\$-	\$-
17 Other employee related costs	Meadows	\$ 20,715 Calculated	\$ 2,929	\$ 3,044	\$ 3,163	\$ 3,288	\$ 3,417
18 Total Costs		\$ 1,739,368	\$ 53,063	\$ 60,059	\$ 54,529	\$ 55,728	\$ 61,225

Total Benefits (See Benefits Model)

Net Costs over Benefits

Deployment	Witness	2005 -	Book	2019	2020	2021	2022	2023
		2011	Exp / Cap					
8Remote Electric Turn-on/Shut-off Costs	{Redacted}	\$ 60,670	C					
3Module Materials - Elec		\$ 253,613	C					
3Module Materials - Gas		\$ 282,999	C					
3Meter Materials - Elec		\$ 94,161	C					
3Meter Materials - Gas		\$ 6,586	C					
4Network Concentrator Materials - Elec		\$ 39,937	C					
4Network Concentrator Materials - Gas		\$ 12,020	C					
12Replacement Labor - Elec		\$ 5,594	E					
12Replacement Labor - Gas		\$ 3,523	E					
8Module Installation - Elec		\$ 173,906	C					
8Module Installation - Gas		\$ 102,191	C					
8Meter Installation - Elec		\$ (9,923)	C					
8Meter Installation - Gas		\$ (783)	C					
9Network Concentrator Installation - Elec		\$ 56,489	C					
10Network Concentrator Installation - Gas		\$ 3,339	C					
10Site Costs (Poles) - One-Time - Gas		\$-	C					
10Site Costs (Other) - One-Time - Gas		\$ 1,268	E					
AWAN Costs - One-Time - Common		\$ 1,000	C					
9WAN Costs - One-Time - Elec		\$ 30,201	C					
10WAN Costs - One-Time - Gas		\$ 695	C					
7Billing Systems - Hardware - Common	Erdozaincy	\$ 18,790	C					
7Billing Systems - Expensed Software - Common	Erdozaincy	\$ 4,000	E					
7Billing Systems - Capitalized Software - Common	Erdozaincy	\$ 3,940	C					
7Billing Systems - Expensed Labor - Common	Erdozaincy	\$ 8,334	E					
7Billing Systems - Capitalized Labor - Common	Erdozaincy	\$ 16,155	C					
7Billing Systems - Hardware - Elec	Erdozaincy	\$-	C					
7Billing Systems - Expensed Software - Elec	Erdozaincy	\$-	E					
7Billing Systems - Capitalized Software - Elec	Erdozaincy	\$ 1,400	C					
7Billing Systems - Expensed Labor - Elec	Erdozaincy	\$ 6,573	E					
7Billing Systems - Capitalized Labor - Elec	{Redacted}	\$ 8,297	C					
6AMI Server - Hardware - Common	{Redacted}	\$ 19,866	C					
6AMI Server - Expensed Software - Common	{Redacted}	\$ 5,814	E					
6AMI Server - Capitalized Software - Common		\$ 4,062	C					
6AMI Server - Expensed Labor - Common		\$ 338	E					
6AMI Server - Capitalized Labor - Common		\$ 18,988	C					
6Other Systems - Hardware - Common		\$ 3,229	C					
6Other Systems - Expensed Software - Common		\$ 225	E					
6Other Systems - Capitalized Software - Common		\$-	C					
6Other Systems - Expensed Labor - Common		\$ 6,688	E					
6Other Systems - Capitalized Labor - Common	{Redacted}	\$ 2,300	C					
4System Controller - Hardware - Elec		\$ 11,975	C					
4System Controller - Expensed Software - Elec		\$ 10,394	E					

4System Controller - Capitalized Software - Elec	\$ 6,905	C
4System Controller - Expensed Labor - Elec	\$-	E
4System Controller - Capitalized Labor - Elec	\$ 1,200	C
4System Controller - Hardware - Gas	\$ 730	C
4System Controller - Expensed Software - Gas	\$ 88	E
4System Controller - Capitalized Software - Gas	\$ 222	C
4System Controller - Expensed Labor - Gas	\$-	E
4System Controller - Capitalized Labor - Gas	\$ 113	C
15Marketing Comms - Media	\$ 18,125	E
15Marketing Comms - Research	\$ 5,000	E
16Marketing Comms - Cust Acquisition	\$ 54,767	E
7Marketing Comms - Rate Protection	\$ 2,000	E
13Customer Data Access - Hardware - Common	\$ 405	C
13Customer Data Access - Expensed Software - Common	\$-	E
13Customer Data Access - Capitalized Software - Common	\$-	C
13Customer Data Access - Expensed Labor - Common	\$ 3,763	E
13Customer Data Access - Capitalized Labor - Common	\$-	C
13Customer Costs - Call Center	\$ 10,060	E
13Customer Costs - Tariffs / Rates	\$ 10,155	E
13Customer Costs - Opt	\$ 2,025	E
14Customer Costs - Exceptions Processing	\$ 6,560	E
1Project Management, Predeployment - Expensed	\$ 15,397	E
1Project Management, Predeployment - Capitalized	\$-	C
1Project Management, Deployment - System Integration	\$ 41,173	C
1Project Management, Deployment - AMI	\$ 31,324	C
2Risk-based allowance - Capital	\$ 105,399	C
2Risk-based allowance - Expense	\$ 23,374	E
<b>Total Deployment</b>	<b>\$ 1,607,641</b>	

<b>On-going O&amp;M</b>	<b>Witness</b>	<b>2005 - 2010</b>	<b>Book Exp / Cap</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
5Site Costs - Recurring - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
5WAN Costs - Recurring - Common	Vahlstrom	\$ 1,200	E	\$ 240	\$ 240	\$ 240	\$ 240	\$ 240
5WAN Costs - Recurring - Elec	Vahlstrom	\$ 4,550	E	\$ 2,409	\$ 2,409	\$ 2,410	\$ 2,412	\$ 2,412
5WAN Costs - Recurring - Gas	Vahlstrom	\$ 2,277	E	\$ 1,392	\$ 1,402	\$ 1,413	\$ 1,423	\$ 1,433
12Power Costs - Recurring - Elec	Nguyen	\$ 5,797	E	\$ 2,651	\$ 2,689	\$ 2,728	\$ 2,767	\$ 2,807
12Power Costs - Recurring - Gas	Nguyen	\$ 43	E	\$ 25	\$ 25	\$ 25	\$ 26	\$ 26
5Network Operations Center - Common	Vahlstrom	\$ 13,785	E	\$ 2,946	\$ 3,043	\$ 3,142	\$ 3,245	\$ 3,352
5Network Field O&M - Common	Vahlstrom	\$ 4,029	E	\$ 1,964	\$ 2,028	\$ 2,095	\$ 2,164	\$ 2,235
11Meter / Module QA Sample Testing - Common	Lau	\$ 2,757	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Maintenance Fees - Common	Erdozaincy	\$ 15,510	E	\$ 3,110	\$ 3,110	\$ 3,110	\$ 3,110	\$ 3,110
7Billing Systems - Recurring Labor - Common	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Maintenance Fees - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Recurring Labor - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-

6AMI Server - Maintenance Fees - Common	Louie	\$ 11,420	E	\$ 2,855	\$ 2,855	\$ 2,855	\$ 2,855	\$ 2,855
6AMI Server - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 2,828	\$ 2,921	\$ 3,017	\$ 3,116	\$ 3,218
6Other Systems - Maintenance Fees - Common	Louie	\$ 1,232	E	\$ 308	\$ 308	\$ 308	\$ 308	\$ 308
6Other Systems - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 2,828	\$ 2,921	\$ 3,017	\$ 3,116	\$ 3,218
5System Controller - Maintenance Fees - Elec	Vahlstrom	\$ 14,908	E	\$ 3,727	\$ 3,727	\$ 3,727	\$ 3,727	\$ 3,727
5System Controller - Recurring Labor - Elec	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
5System Controller - Maintenance Fees - Gas	Vahlstrom	\$ 120	E	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30
5System Controller - Recurring Labor - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
13Customer Data Access - Maintenance Fees - Common	Phillips	\$ 1,291	E	\$ 153	\$ 153	\$ 153	\$ 153	\$ 153
13Customer Data Access - Recurring Labor - Common	Phillips	\$ 2,892	E	\$ 1,331	\$ 1,374	\$ 1,420	\$ 1,466	\$ 1,514
13Customer Costs - Notification	Phillips	\$ 1,718	E	\$ 1,188	\$ 1,209	\$ 1,230	\$ 1,252	\$ 1,275
12Atmospheric Corrosion Testing - Gas	Nguyen	\$ 7,632	E	\$ 4,556	\$ 4,706	\$ 4,860	\$ 5,020	\$ 5,184
17Other Employee Related Costs - Common	Meadows	\$ 20,715	E	\$ 3,550	\$ 3,688	\$ 3,834	\$ 5,010	\$ 6,293
Total O&M		\$ 131,727		\$ 38,091	\$ 38,838	\$ 39,614	\$ 41,439	\$ 43,389
<b>Total Costs</b>		\$ 1,739,368		\$ 58,592	\$ 59,766	\$ 64,246	\$ 66,912	\$ 73,616

**LineAmounts at 100%**

No. Cost Category	Source	2005 - 2011 Reference	2019	2020	2021	2022	2023
1 Project management costs	Corey	\$ 87,895 Exh. 1, Chapter 2	\$-	\$-	\$-	\$-	\$-
2 Risk-based allowance	Corey	\$ 128,773 Exh. 1, Chapter 2	\$-	\$-	\$-	\$-	\$-
3 Meters and modules	Vahlstrom	\$ 637,360 Exh. 2, Chapter 1	\$ 9,365	\$ 9,147	\$ 9,242	\$ 9,581	\$ 10,214
4 Network materials	Vahlstrom	\$ 83,585 Exh. 2, Chapter 1	\$ 388	\$ 385	\$ 1,120	\$ 387	\$ 390
5 AMI operations	Vahlstrom	\$ 40,869 Exh. 2, Chapter 1	\$ 12,708	\$ 12,879	\$ 13,057	\$ 13,241	\$ 13,429
6 Interface and systems integration	Louie	\$ 94,013 Exh. 2, Chapter 2	\$ 8,819	\$ 9,005	\$ 10,238	\$ 9,394	\$ 9,599
7 Interval billing system	Erdozaincy	\$ 84,999 Exh. 2, Chapter 3	\$ 3,110	\$ 3,110	\$ 3,695	\$ 3,110	\$ 3,110
8 Meters / modules installation	Lau	\$ 326,061 Exh. 2, Chapter 4	\$-	\$ (0)	\$-	\$-	\$-
9 Electric network and WAN installation	Lau	\$ 87,232 Exh. 2, Chapter 4	\$-	\$-	\$ 149	\$-	\$-
10 Gas network and other installation	Lau	\$ 5,760 Exh. 2, Chapter 4	\$ 49	\$ 53	\$ 48	\$ 49	\$ 54
11 Meters / modules QA sample testing	Lau	\$ 2,757 Exh. 2, Chapter 4	\$-	\$-	\$-	\$-	\$-
12 Meter operations costs	Nguyen	\$ 22,589 Exh. 3, Chapter 3	\$ 17,261	\$ 18,089	\$ 19,383	\$ 22,588	\$ 26,902
13 Customer contact-related costs	Phillips	\$ 32,309 Exh. 3, Chapter 4	\$ 2,728	\$ 2,796	\$ 2,865	\$ 2,937	\$ 3,011
14 Customer exceptions processing	Sharp	\$ 6,560 Exh. 3, Chapter 5	\$-	\$-	\$-	\$-	\$-
15 Marketing and communications	McNicoll	\$ 23,125 Exh. 4, Chapter 2	\$ 615	\$ 615	\$ 615	\$ 615	\$ 615
16 Customer acquisition	Counihan	\$ 54,767 Exh. 4, Chapter 3	\$-	\$-	\$-	\$-	\$-
17 Other employee related costs	Meadows	\$ 20,715 Calculated	\$ 3,550	\$ 3,688	\$ 3,834	\$ 5,010	\$ 6,293
18 Total Costs		\$ 1,739,368	\$ 58,592	\$ 59,766	\$ 64,246	\$ 66,912	\$ 73,616

Total Benefits (See Benefits Model)

Net Costs over Benefits

Deployment	Witness	2005 -	Book	2024	2025	2026	2027	2028
		2011	Exp / Cap					
8Remote Electric Turn-on/Shut-off Costs	{Redacted}	\$ 60,670	C					
3Module Materials - Elec		\$ 253,613	C					
3Module Materials - Gas		\$ 282,999	C					
3Meter Materials - Elec		\$ 94,161	C					
3Meter Materials - Gas		\$ 6,586	C					
4Network Concentrator Materials - Elec		\$ 39,937	C					
4Network Concentrator Materials - Gas		\$ 12,020	C					
12Replacement Labor - Elec		\$ 5,594	E					
12Replacement Labor - Gas		\$ 3,523	E					
8Module Installation - Elec		\$ 173,906	C					
8Module Installation - Gas		\$ 102,191	C					
8Meter Installation - Elec		\$ (9,923)	C					
8Meter Installation - Gas		\$ (783)	C					
9Network Concentrator Installation - Elec		\$ 56,489	C					
10Network Concentrator Installation - Gas		\$ 3,339	C					
10Site Costs (Poles) - One-Time - Gas		\$-	C					
10Site Costs (Other) - One-Time - Gas		\$ 1,268	E					
AWAN Costs - One-Time - Common		\$ 1,000	C					
9WAN Costs - One-Time - Elec		\$ 30,201	C					
10WAN Costs - One-Time - Gas		\$ 695	C					
7Billing Systems - Hardware - Common	Erdozaincy	\$ 18,790	C					
7Billing Systems - Expensed Software - Common	Erdozaincy	\$ 4,000	E					
7Billing Systems - Capitalized Software - Common	Erdozaincy	\$ 3,940	C					
7Billing Systems - Expensed Labor - Common	Erdozaincy	\$ 8,334	E					
7Billing Systems - Capitalized Labor - Common	Erdozaincy	\$ 16,155	C					
7Billing Systems - Hardware - Elec	Erdozaincy	\$-	C					
7Billing Systems - Expensed Software - Elec	Erdozaincy	\$-	E					
7Billing Systems - Capitalized Software - Elec	Erdozaincy	\$ 1,400	C					
7Billing Systems - Expensed Labor - Elec	Erdozaincy	\$ 6,573	E					
7Billing Systems - Capitalized Labor - Elec	{Redacted}	\$ 8,297	C					
6AMI Server - Hardware - Common	{Redacted}	\$ 19,866	C					
6AMI Server - Expensed Software - Common	{Redacted}	\$ 5,814	E					
6AMI Server - Capitalized Software - Common		\$ 4,062	C					
6AMI Server - Expensed Labor - Common		\$ 338	E					
6AMI Server - Capitalized Labor - Common		\$ 18,988	C					
6Other Systems - Hardware - Common		\$ 3,229	C					
6Other Systems - Expensed Software - Common		\$ 225	E					
6Other Systems - Capitalized Software - Common		\$-	C					
6Other Systems - Expensed Labor - Common		\$ 6,688	E					
6Other Systems - Capitalized Labor - Common	{Redacted}	\$ 2,300	C					
4System Controller - Hardware - Elec		\$ 11,975	C					
4System Controller - Expensed Software - Elec		\$ 10,394	E					

4System Controller - Capitalized Software - Elec	\$ 6,905	C
4System Controller - Expensed Labor - Elec	\$-	E
4System Controller - Capitalized Labor - Elec	\$ 1,200	C
4System Controller - Hardware - Gas	\$ 730	C
4System Controller - Expensed Software - Gas	\$ 88	E
4System Controller - Capitalized Software - Gas	\$ 222	C
4System Controller - Expensed Labor - Gas	\$-	E
4System Controller - Capitalized Labor - Gas	\$ 113	C
15Marketing Comms - Media	\$ 18,125	E
15Marketing Comms - Research	\$ 5,000	E
16Marketing Comms - Cust Acquisition	\$ 54,767	E
7Marketing Comms - Rate Protection	\$ 2,000	E
13Customer Data Access - Hardware - Common	\$ 405	C
13Customer Data Access - Expensed Software - Common	\$-	E
13Customer Data Access - Capitalized Software - Common	\$-	C
13Customer Data Access - Expensed Labor - Common	\$ 3,763	E
13Customer Data Access - Capitalized Labor - Common	\$-	C
13Customer Costs - Call Center	\$ 10,060	E
13Customer Costs - Tariffs / Rates	\$ 10,155	E
13Customer Costs - Opt	\$ 2,025	E
14Customer Costs - Exceptions Processing	\$ 6,560	E
1Project Management, Predeployment - Expensed	\$ 15,397	E
1Project Management, Predeployment - Capitalized	\$-	C
1Project Management, Deployment - System Integration	\$ 41,173	C
1Project Management, Deployment - AMI	\$ 31,324	C
2Risk-based allowance - Capital	\$ 105,399	C
2Risk-based allowance - Expense	\$ 23,374	E
Total Deployment	\$ 1,607,641	

On-going O&M	Witness	2005 - Book		2024	2025	2026	2027	2028
		2010	Exp / Cap					
5Site Costs - Recurring - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
5WAN Costs - Recurring - Common	Vahlstrom	\$ 1,200	E	\$ 240	\$ 240	\$ 240	\$ 240	\$ 240
5WAN Costs - Recurring - Elec	Vahlstrom	\$ 4,550	E	\$ 2,414	\$ 2,416	\$ 2,416	\$ 2,416	\$ 2,416
5WAN Costs - Recurring - Gas	Vahlstrom	\$ 2,277	E	\$ 1,443	\$ 1,454	\$ 1,459	\$ 1,459	\$ 1,459
12Power Costs - Recurring - Elec	Nguyen	\$ 5,797	E	\$ 2,847	\$ 2,888	\$ 2,929	\$ 2,971	\$ 3,014
12Power Costs - Recurring - Gas	Nguyen	\$ 43	E	\$ 26	\$ 26	\$ 26	\$ 26	\$ 26
5Network Operations Center - Common	Vahlstrom	\$ 13,785	E	\$ 3,462	\$ 3,575	\$ 3,693	\$ 3,814	\$ 3,939
5Network Field O&M - Common	Vahlstrom	\$ 4,029	E	\$ 2,308	\$ 2,384	\$ 2,462	\$ 2,543	\$ 2,626
11Meter / Module QA Sample Testing - Common	Lau	\$ 2,757	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Maintenance Fees - Common	Erdozaincy	\$ 15,510	E	\$ 3,110	\$ 3,110	\$ 3,110	\$ 3,110	\$ 3,110
7Billing Systems - Recurring Labor - Common	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Maintenance Fees - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-
7Billing Systems - Recurring Labor - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-	\$-	\$-

6AMI Server - Maintenance Fees - Common	Louie	\$ 11,420	E	\$ 2,855	\$ 2,855	\$ 2,855	\$ 2,855	\$ 2,855
6AMI Server - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 3,323	\$ 3,432	\$ 3,545	\$ 3,661	\$ 3,781
6Other Systems - Maintenance Fees - Common	Louie	\$ 1,232	E	\$ 308	\$ 308	\$ 308	\$ 308	\$ 308
6Other Systems - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 3,323	\$ 3,432	\$ 3,545	\$ 3,661	\$ 3,781
5System Controller - Maintenance Fees - Elec	Vahlstrom	\$ 14,908	E	\$ 3,727	\$ 3,727	\$ 3,727	\$ 3,727	\$ 3,727
5System Controller - Recurring Labor - Elec	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
5System Controller - Maintenance Fees - Gas	Vahlstrom	\$ 120	E	\$ 30	\$ 30	\$ 30	\$ 30	\$ 30
5System Controller - Recurring Labor - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-	\$-	\$-
13Customer Data Access - Maintenance Fees - Common	Phillips	\$ 1,291	E	\$ 153	\$ 153	\$ 153	\$ 153	\$ 153
13Customer Data Access - Recurring Labor - Common	Phillips	\$ 2,892	E	\$ 1,564	\$ 1,615	\$ 1,668	\$ 1,723	\$ 1,779
13Customer Costs - Notification	Phillips	\$ 1,718	E	\$ 1,267	\$ 1,289	\$ 1,312	\$ 1,336	\$ 1,360
12Atmospheric Corrosion Testing - Gas	Nguyen	\$ 7,632	E	\$ 5,354	\$ 5,530	\$ 5,711	\$ 5,899	\$ 6,092
17Other Employee Related Costs - Common	Meadows	\$ 20,715	E	\$ 7,689	\$ 9,202	\$ 2,710	\$ 2,799	\$ 2,891
Total O&M		\$ 131,727		\$ 45,444	\$ 47,667	\$ 41,900	\$ 42,731	\$ 43,588
<b>Total Costs</b>		\$ 1,739,368		\$ 83,375	\$ 91,244	\$ 42,596	\$ 44,300	\$ 44,292

**LineAmounts at 100%**

No.	Cost Category	Source	2005 - 2011 Reference	2024	2025	2026	2027	2028
1	Project management costs	Corey	\$ 87,895 Exh. 1, Chapter 2	\$-	\$-	\$-	\$-	\$-
2	Risk-based allowance	Corey	\$ 128,773 Exh. 1, Chapter 2	\$-	\$-	\$-	\$-	\$-
3	Meters and modules	Vahlstrom	\$ 637,360 Exh. 2, Chapter 1	\$ 11,153	\$ 12,380	\$-	\$-	\$-
4	Network materials	Vahlstrom	\$ 83,585 Exh. 2, Chapter 1	\$ 866	\$ 396	\$-	\$ 255	\$-
5	AMI operations	Vahlstrom	\$ 40,869 Exh. 2, Chapter 1	\$ 13,624	\$ 13,826	\$ 14,027	\$ 14,228	\$ 14,437
6	Interface and systems integration	Louie	\$ 94,013 Exh. 2, Chapter 2	\$ 10,449	\$ 10,028	\$ 10,253	\$ 10,878	\$ 10,726
7	Interval billing system	Erdozaincy	\$ 84,999 Exh. 2, Chapter 3	\$ 3,469	\$ 3,110	\$ 3,110	\$ 3,331	\$ 3,110
8	Meters / modules installation	Lau	\$ 326,061 Exh. 2, Chapter 4	\$ (0)	\$ (0)	\$-	\$-	\$-
9	Electric network and WAN installation	Lau	\$ 87,232 Exh. 2, Chapter 4	\$ 149	\$-	\$-	\$-	\$-
10	Gas network and other installation	Lau	\$ 5,760 Exh. 2, Chapter 4	\$ 50	\$ 55	\$-	\$-	\$-
11	Meters / modules QA sample testing	Lau	\$ 2,757 Exh. 2, Chapter 4	\$-	\$-	\$-	\$-	\$-
12	Meter operations costs	Nguyen	\$ 22,589 Exh. 3, Chapter 3	\$ 32,255	\$ 38,497	\$ 8,667	\$ 8,896	\$ 9,133
13	Customer contact-related costs	Phillips	\$ 32,309 Exh. 3, Chapter 4	\$ 3,056	\$ 3,134	\$ 3,214	\$ 3,296	\$ 3,381
14	Customer exceptions processing	Sharp	\$ 6,560 Exh. 3, Chapter 5	\$-	\$-	\$-	\$-	\$-
15	Marketing and communications	McNicoll	\$ 23,125 Exh. 4, Chapter 2	\$ 615	\$ 615	\$ 615	\$ 615	\$ 615
16	Customer acquisition	Counihan	\$ 54,767 Exh. 4, Chapter 3	\$-	\$-	\$-	\$-	\$-
17	Other employee related costs	Meadows	\$ 20,715 Calculated	\$ 7,689	\$ 9,202	\$ 2,710	\$ 2,799	\$ 2,891
18	Total Costs		\$ 1,739,368	\$ 83,375	\$ 91,244	\$ 42,596	\$ 44,300	\$ 44,292

Total Benefits (See Benefits Model)

Net Costs over Benefits

Deployment	Witness	2005 -	Book	2029	2030	PVRR
		2011	Exp / Cap			
8Remote Electric Turn-on/Shut-off Costs	{Redacted}	\$ 60,670	C			
3Module Materials - Elec		\$ 253,613	C			
3Module Materials - Gas		\$ 282,999	C			
3Meter Materials - Elec		\$ 94,161	C			
3Meter Materials - Gas		\$ 6,586	C			
4Network Concentrator Materials - Elec		\$ 39,937	C			
4Network Concentrator Materials - Gas		\$ 12,020	C			
12Replacement Labor - Elec		\$ 5,594	E			
12Replacement Labor - Gas		\$ 3,523	E			
8Module Installation - Elec		\$ 173,906	C			
8Module Installation - Gas		\$ 102,191	C			
8Meter Installation - Elec		\$ (9,923)	C			
8Meter Installation - Gas		\$ (783)	C			
9Network Concentrator Installation - Elec		\$ 56,489	C			
10Network Concentrator Installation - Gas		\$ 3,339	C			
10Site Costs (Poles) - One-Time - Gas		\$-	C			
10Site Costs (Other) - One-Time - Gas		\$ 1,268	E			
AWAN Costs - One-Time - Common		\$ 1,000	C			
9WAN Costs - One-Time - Elec		\$ 30,201	C			
10WAN Costs - One-Time - Gas		\$ 695	C			
7Billing Systems - Hardware - Common	Erdozaincy	\$ 18,790	C			
7Billing Systems - Expensed Software - Common	Erdozaincy	\$ 4,000	E			
7Billing Systems - Capitalized Software - Common	Erdozaincy	\$ 3,940	C			
7Billing Systems - Expensed Labor - Common	Erdozaincy	\$ 8,334	E			
7Billing Systems - Capitalized Labor - Common	Erdozaincy	\$ 16,155	C			
7Billing Systems - Hardware - Elec	Erdozaincy	\$-	C			
7Billing Systems - Expensed Software - Elec	Erdozaincy	\$-	E			
7Billing Systems - Capitalized Software - Elec	Erdozaincy	\$ 1,400	C			
7Billing Systems - Expensed Labor - Elec	Erdozaincy	\$ 6,573	E			
7Billing Systems - Capitalized Labor - Elec	{Redacted}	\$ 8,297	C			
6AMI Server - Hardware - Common	{Redacted}	\$ 19,866	C			
6AMI Server - Expensed Software - Common	{Redacted}	\$ 5,814	E			
6AMI Server - Capitalized Software - Common		\$ 4,062	C			
6AMI Server - Expensed Labor - Common		\$ 338	E			
6AMI Server - Capitalized Labor - Common		\$ 18,988	C			
6Other Systems - Hardware - Common		\$ 3,229	C			
6Other Systems - Expensed Software - Common		\$ 225	E			
6Other Systems - Capitalized Software - Common		\$-	C			
6Other Systems - Expensed Labor - Common		\$ 6,688	E			
6Other Systems - Capitalized Labor - Common	{Redacted}	\$ 2,300	C			
4System Controller - Hardware - Elec		\$ 11,975	C			
4System Controller - Expensed Software - Elec		\$ 10,394	E			



4 System Controller - Capitalized Software - Elec	\$ 6,905	C
4 System Controller - Expensed Labor - Elec	\$-	E
4 System Controller - Capitalized Labor - Elec	\$ 1,200	C
4 System Controller - Hardware - Gas	\$ 730	C
4 System Controller - Expensed Software - Gas	\$ 88	E
4 System Controller - Capitalized Software - Gas	\$ 222	C
4 System Controller - Expensed Labor - Gas	\$-	E
4 System Controller - Capitalized Labor - Gas	\$ 113	C
15 Marketing Comms - Media	\$ 18,125	E
15 Marketing Comms - Research	\$ 5,000	E
16 Marketing Comms - Cust Acquisition	\$ 54,767	E
7 Marketing Comms - Rate Protection	\$ 2,000	E
13 Customer Data Access - Hardware - Common	\$ 405	C
13 Customer Data Access - Expensed Software - Common	\$-	E
13 Customer Data Access - Capitalized Software - Common	\$-	C
13 Customer Data Access - Expensed Labor - Common	\$ 3,763	E
13 Customer Data Access - Capitalized Labor - Common	\$-	C
13 Customer Costs - Call Center	\$ 10,060	E
13 Customer Costs - Tariffs / Rates	\$ 10,155	E
13 Customer Costs - Opt	\$ 2,025	E
14 Customer Costs - Exceptions Processing	\$ 6,560	E
1 Project Management, Predeployment - Expensed	\$ 15,397	E
1 Project Management, Predeployment - Capitalized	\$-	C
1 Project Management, Deployment - System Integration	\$ 41,173	C
1 Project Management, Deployment - AMI	\$ 31,324	C
2 Risk-based allowance - Capital	\$ 105,399	C
2 Risk-based allowance - Expense	\$ 23,374	E
<b>Total Deployment</b>	<b>\$ 1,607,641</b>	

<b>On-going O&amp;M</b>	<b>Witness</b>	<b>2005 - 2010</b>	<b>Book Exp / Cap</b>	<b>2029</b>	<b>2030</b>	<b>PVRR</b>
5 Site Costs - Recurring - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-
5 WAN Costs - Recurring - Common	Vahlstrom	\$ 1,200	E	\$ 240	\$ 240	\$ 2,654
5 WAN Costs - Recurring - Elec	Vahlstrom	\$ 4,550	E	\$ 2,416	\$ 2,416	\$ 19,989
5 WAN Costs - Recurring - Gas	Vahlstrom	\$ 2,277	E	\$ 1,459	\$ 1,459	\$ 11,146
12 Power Costs - Recurring - Elec	Nguyen	\$ 5,797	E	\$ 3,057	\$ 3,101	\$ 22,384
12 Power Costs - Recurring - Gas	Nguyen	\$ 43	E	\$ 26	\$ 26	\$ 202
5 Network Operations Center - Common	Vahlstrom	\$ 13,785	E	\$ 4,068	\$ 4,202	\$ 31,039
5 Network Field O&M - Common	Vahlstrom	\$ 4,029	E	\$ 2,712	\$ 2,801	\$ 16,334
11 Meter / Module QA Sample Testing - Common	Lau	\$ 2,757	E	\$-	\$-	\$ 2,297
7 Billing Systems - Maintenance Fees - Common	Erdozaincy	\$ 15,510	E	\$ 3,110	\$ 3,110	\$ 34,341
7 Billing Systems - Recurring Labor - Common	Erdozaincy	\$-	E	\$-	\$-	\$-
7 Billing Systems - Maintenance Fees - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-
7 Billing Systems - Recurring Labor - Elec	Erdozaincy	\$-	E	\$-	\$-	\$-

6AMI Server - Maintenance Fees - Common	Louie	\$ 11,420	E	\$ 2,855	\$ 2,855	\$ 28,824
6AMI Server - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 3,905	\$ 4,033	\$ 27,041
6Other Systems - Maintenance Fees - Common	Louie	\$ 1,232	E	\$ 308	\$ 308	\$ 3,110
6Other Systems - Recurring Labor - Common	Louie	\$ 9,925	E	\$ 3,905	\$ 4,033	\$ 27,041
5System Controller - Maintenance Fees - Elec	Vahlstrom	\$ 14,908	E	\$ 3,727	\$ 3,727	\$ 37,627
5System Controller - Recurring Labor - Elec	Vahlstrom	\$-	E	\$-	\$-	\$-
5System Controller - Maintenance Fees - Gas	Vahlstrom	\$ 120	E	\$ 30	\$ 30	\$ 303
5System Controller - Recurring Labor - Gas	Vahlstrom	\$-	E	\$-	\$-	\$-
13Customer Data Access - Maintenance Fees - Common	Phillips	\$ 1,291	E	\$ 153	\$ 153	\$ 2,189
13Customer Data Access - Recurring Labor - Common	Phillips	\$ 2,892	E	\$ 1,838	\$ 1,898	\$ 11,072
13Customer Costs - Notification	Phillips	\$ 1,718	E	\$ 1,384	\$ 1,408	\$ 9,242
12Atmospheric Corrosion Testing - Gas	Nguyen	\$ 7,632	E	\$ 6,292	\$ 6,498	\$ 36,172
17Other Employee Related Costs - Common	Meadows	\$ 20,715	E	\$ 2,986	\$ 3,085	\$ 43,404
Total O&M		\$ 131,727		\$ 44,473	\$ 45,385	\$ 366,411
<b>Total Costs</b>		\$ 1,739,368		\$ 45,181	\$ 46,631	\$ 2,258,305

Line No.	Cost Category	Source	2005 - 2011 Reference	2029	2030	PVRR
1	Project management costs	Corey	\$ 87,895 Exh. 1, Chapter 2	\$-	\$-	\$ 87,521
2	Risk-based allowance	Corey	\$ 128,773 Exh. 1, Chapter 2	\$-	\$-	\$ 134,981
3	Meters and modules	Vahlstrom	\$ 637,360 Exh. 2, Chapter 1	\$-	\$-	\$ 799,219
4	Network materials	Vahlstrom	\$ 83,585 Exh. 2, Chapter 1	\$-	\$ 157	\$ 98,457
5	AMI operations	Vahlstrom	\$ 40,869 Exh. 2, Chapter 1	\$ 14,652	\$ 14,875	\$ 119,092
6	Interface and systems integration	Louie	\$ 94,013 Exh. 2, Chapter 2	\$ 10,974	\$ 11,471	\$ 155,599
7	Interval billing system	Erdozaincy	\$ 84,999 Exh. 2, Chapter 3	\$ 3,110	\$ 3,246	\$ 109,078
8	Meters / modules installation	Lau	\$ 326,061 Exh. 2, Chapter 4	\$-	\$-	\$ 355,949
9	Electric network and WAN installation	Lau	\$ 87,232 Exh. 2, Chapter 4	\$-	\$-	\$ 99,150
10	Gas network and other installation	Lau	\$ 5,760 Exh. 2, Chapter 4	\$-	\$-	\$ 6,931
11	Meters / modules QA sample testing	Lau	\$ 2,757 Exh. 2, Chapter 4	\$-	\$-	\$ 2,297
12	Meter operations costs	Nguyen	\$ 22,589 Exh. 3, Chapter 3	\$ 9,376	\$ 9,626	\$ 129,255
13	Customer contact-related costs	Phillips	\$ 32,309 Exh. 3, Chapter 4	\$ 3,468	\$ 3,558	\$ 45,535
14	Customer exceptions processing	Sharp	\$ 6,560 Exh. 3, Chapter 5	\$-	\$-	\$ 5,270
15	Marketing and communications	McNicoll	\$ 23,125 Exh. 4, Chapter 2	\$ 615	\$ 615	\$ 22,609
16	Customer acquisition	Counihan	\$ 54,767 Exh. 4, Chapter 3	\$-	\$-	\$ 43,956
17	Other employee related costs	Meadows	\$ 20,715 Calculated	\$ 2,986	\$ 3,085	\$ 43,404
18	Total Costs		\$ 1,739,368	\$ 45,181	\$ 46,631	\$ 2,258,305
	Total Benefits (See Benefits Model)					\$ (2,024,180)
	Net Costs over Benefits					\$ 234,125

{Redacted}

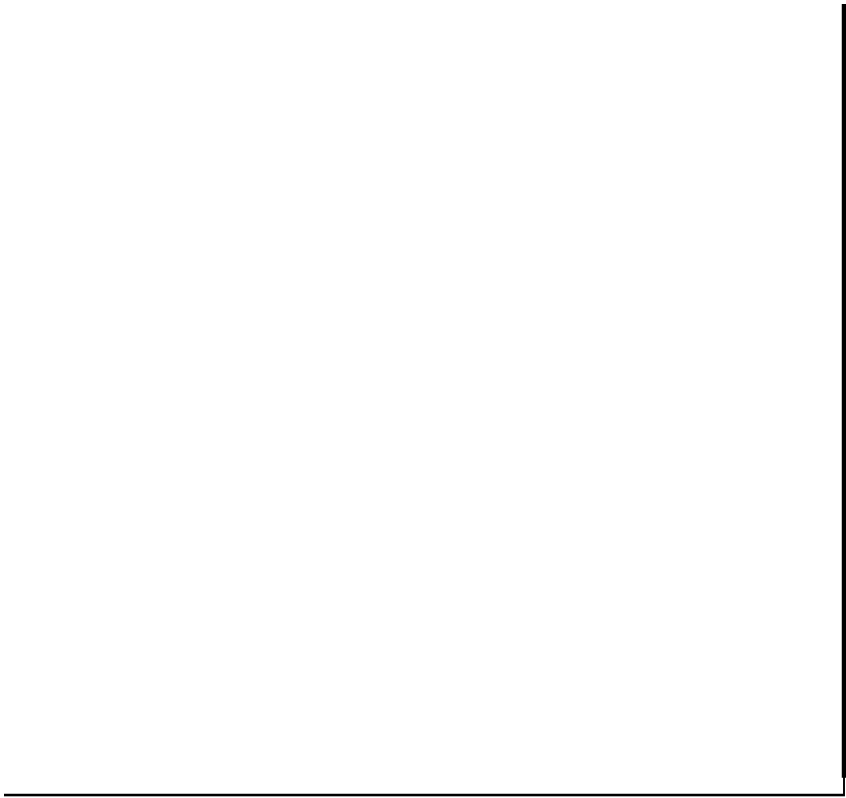
{Redacted}

|

{Redacted}

{Redacted}

{Redacted}



|

{Redacted}

Pacific Gas and Electric Company  
 AMI Project - Costs  
 Workpapers Supporting Exhibit 5, Chapter 1  
 (Updated 10/13/05)

(Redacted)

1				1	2	3	4	5	6	7	8	9	10	11	12	13
2				2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Depreciation &amp; Prop Taxes</b>																
<b>6 Federal Depreciation</b>																
7	Expenditure		7	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
8	24MACRS 20	i	\$0	2005	3.75%	7.22%	6.68%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%
9		j	\$0	2006	[Redacted]											
10		k	\$0	2007	[Redacted]											
11		l	\$0	2008	[Redacted]											
12		m	\$0	2009	[Redacted]											
13		n	\$0	2010	[Redacted]											
14		o	\$0	2011	[Redacted]											
15		p	\$0	2012	[Redacted]											
16		q	\$0	2013	[Redacted]											
17		r	\$0	2014	[Redacted]											
18		s	\$0	2015	[Redacted]											
19		t	\$0	2016	[Redacted]											
20		u	\$0	2017	[Redacted]											
21		v	\$0	2018	[Redacted]											
22		w	\$0	2019	[Redacted]											
23		x	\$0	2020	[Redacted]											
24		y	\$0	2021	[Redacted]											
25		z	\$0	2022	[Redacted]											
26		aa	\$0	2023	[Redacted]											
27		ab	\$0	2024	[Redacted]											
28		ac	\$0	2025	[Redacted]											
29		ad	\$0	2026	[Redacted]											
30		ae	\$0	2027	[Redacted]											
31		af	\$0	2028	[Redacted]											
32		ag	\$0	2029	[Redacted]											
33		ah	\$0	2030	[Redacted]											
34	Test															
35	Remaining Tax Basis			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36	Sub-total: Fed Depreciation			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
37	Sub-total: Fed Write-Off			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38																
<b>39 State Depreciation</b>																
40	ADR-SYD 35	i	\$0	2005	2.86%	5.55%	5.31%	5.15%	4.99%	4.83%	4.67%	4.52%	4.36%	4.20%	4.04%	3.88%
41		j	\$0	2006	[Redacted]											
42		k	\$0	2007	[Redacted]											
43		l	\$0	2008	[Redacted]											
44		m	\$0	2009	[Redacted]											
45		n	\$0	2010	[Redacted]											
46		o	\$0	2011	[Redacted]											
47		p	\$0	2012	[Redacted]											
48		q	\$0	2013	[Redacted]											
49		r	\$0	2014	[Redacted]											
50		s	\$0	2015	[Redacted]											
51		t	\$0	2016	[Redacted]											
52		u	\$0	2017	[Redacted]											
53		v	\$0	2018	[Redacted]											
54		w	\$0	2019	[Redacted]											
55		x	\$0	2020	[Redacted]											
56		y	\$0	2021	[Redacted]											
57		z	\$0	2022	[Redacted]											
58		aa	\$0	2023	[Redacted]											
59		ab	\$0	2024	[Redacted]											
60		ac	\$0	2025	[Redacted]											
61		ad	\$0	2026	[Redacted]											
62		ae	\$0	2027	[Redacted]											
63		af	\$0	2028	[Redacted]											
64		ag	\$0	2029	[Redacted]											
65		ah	\$0	2030	[Redacted]											
66	Test															
67	Remaining Tax Basis			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
68	Sub-total: State Depreciation			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
69	Sub-total: State Write-Off			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
70																
71	Property Tax / Insurance			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
72																
<b>73 Adjustment for Deductibility of Bond Interest</b>																
74	Depreciation			[Redacted]												
75	Book Value of Asset (BOP)			[Redacted]												
76	Bond Interest			[Redacted]												
77				[Redacted]												
<b>78 Cash Flow Recap:</b>																
79	Expenditure			[Redacted]												
80	Federal Tax Benefit			[Redacted]												

Include? (1 = Yes, 0 = No)

Pacific Gas and Electric Company  
 AMI Project - Costs  
 Workpapers Supporting Exhibit 5, Chapter 1  
 (Updated 10/13/05)

(Redacted)

14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	2.23%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3.57%	3.41%	3.25%	3.09%	2.93%	2.77%	2.61%	2.46%	2.30%	2.14%	1.98%	1.82%	1.66%	1.51%	1.35%	1.19%	1.03%	0.87%						

\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

Pacific Gas and Electric Company  
 AMI Project - Costs  
 Workpapers Supporting Exhibit 5, Chapter 1  
 (Updated 10/13/05)

(Redacted)

38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Pacific Gas and Electric Company  
 AMI Project - Costs  
 Workpapers Supporting Exhibit 5, Chapter 1  
 (Updated 10/13/05)

(Redacted)

	1	2	3	4	5	6	7	8	9	10	11	12	13				
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017				
81	State Tax Benefit																
82	Property Tax / Insurance																
83	Property Tax / Insurance Tax Benefit																
84	Net Cash Flow																
85																	
86																	
87	PVRR FACTOR =>	Profile 16	Year 26	Factor 0.010													
88		1.000	0.959	0.881	0.810	0.745	0.684	0.629	0.578	0.532	0.489	0.449	0.413				
89													0.380				
90	<b>Profile</b>	<b>Federal Tax Treatment</b>	<b>State Tax Treatment</b>	<b>Useful Life</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
91	1	Expense	Expense	-	(Redacted)												
92	2	Expense	Expense	15	(Redacted)												
93	3	SL 3	SL 3	-	(Redacted)												
94	4	SL 3	SL 3	15	(Redacted)												
95	5	MACRS 5	ADR-SYD 6	3	(Redacted)												
96	6	MACRS 5	ADR-SYD 6	10	(Redacted)												
97	7	MACRS 5	ADR-SYD 6	15	(Redacted)												
98	8	MACRS 7	ADR-SYD 12	7	(Redacted)												
99	9	SL 15	SL 15	-	(Redacted)												
100	10	MACRS 15	ADR-SYD 24	15	(Redacted)												
101	11	MACRS 20	ADR-SYD 30	15	(Redacted)												
102	12	MACRS 20	ADR-SYD 30	20	(Redacted)												
103	13	MACRS 20	ADR-SYD 30	27	(Redacted)												
104	14	MACRS 20	ADR-SYD 35	15	(Redacted)												
105	15	MACRS 20	ADR-SYD 35	20	(Redacted)												
106	16	MACRS 20	ADR-SYD 35	24	(Redacted)												
107																	
108																	
109	<b>Depreciation Methods / Rates</b>																
110	Expense																
111	SL 3																
112	SL 15																
113	MACRS 3																
114	MACRS 5																
115	MACRS 7																
116	MACRS 10																
117	MACRS 15																
118	MACRS 20																
119	ADR-SYD 6																
120	ADR-SYD 12																
121	ADR-SYD 24																
122	ADR-SYD 30																
123	ADR-SYD 35																
124	200 DB, Swith to SL - 30 yr																
125																	
126																	
127																	
128	year = >																
129	bop																
130	mid-yr																
131	eop																
132																	
133																	
134	inclusion factor																
135																	
136																	
END																	



Pacific Gas and Electric Company  
 AMI Project - Costs  
 Workpapers Supporting Exhibit 5, Chapter 1  
 (Updated 10/13/05)

(Redacted)

14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
0.349	0.321	0.295	0.271	0.249	0.229	0.210	0.193	0.176	0.138	0.086	0.039	0.008											
2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030											

Pacific Gas and Electric Company  
AMI Project - Costs  
Workpapers Supporting Exhibit 5, Chapter 1  
(Updated 10/13/05)

{Redacted}

38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--