

WELLINGTON NORTH POWER INC.

Smart Meter Implementation Planning & Smart Meter Deployment

2008

As part of the Ontario Government Smart Meter Initiative (SMI), Wellington North Power Inc. has been working collectively with the Cornerstone Hydro Electric Concept (CHEC) group association and the Ontario Utility Smart Meter (OUSM) group for well over two years. Group representatives met with the Minister of Energy staff in September of 2007 and have since received a directive, which will allow our members to participate in the London Hydro RFP.

The following pages contain a carefully considered process, which identifies generic steps that will be pursued by CHEC members. We feel the structure of this document will allow the Ontario Energy Board to understand the direction Wellington North Power Inc. intend to follow in the development and completion of our smart meter investment plan for current and future rate years.

Wellington North Power Inc., as part of the working group has been actively reviewing all areas of the distribution business which will be affected by Smart Metering.

- Procurement/Vendor Section
- Smart Meter Vendor - Product Testing
- Security and Authentication
- Back Office Integration
- Implementation
- AMR Technology Evaluation
- Change Management
- Customer Presentment
- Meter Disposal

In order to meet the provincial government's mandate of installing a Smart Meter in every Ontario home by December 31, 2010 Wellington North Power Inc. will be in the first phase of the CHEC members to install smart meters through out our service territory. Wellington North Power Inc. is to planning a full deployment of Smart Meters in 2008, to all of our low volume customer in the Residential and General Service < 50 kW classes.

Third party debt will be secured by Wellington North Power Inc. to fund the approximate \$1.2 million dollars of capital investment that will be required to meet the Ontario Government's SMI plan by the end of 2010.

In discussions with vendor and installation companies estimates about two weeks to deploy the smart meters in the Wellington North Power Inc. service area.

Wellington North Power Inc. has included in the tables below a cost breakdown for the capital and operating expenses expected from 2007-2012.

OPERATIONS	Rate Filings		2007		2008		2009		2010		2011		2012	
	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating
Repair of unsafe meter bases (1%)	2	2		\$8,563.32		\$8,563.32								
Costs for Detailed Propagation Studies	D	D	\$2,106.00											
Smart Meter Network Infrastructure														
AMCD Vendor 5	A	J			\$424,120.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMRC Including WAN Costs Vendor 5	B	J			\$10,407.23	\$2,679.81	\$2,679.81	\$2,679.81	\$2,679.81	\$2,679.81	\$2,679.81	\$2,679.81	\$2,679.81	\$2,679.81
AMCC Vendor 5	F	J			\$113,703.32	\$40,602.11	\$40,602.11	\$40,602.11	\$40,602.11	\$40,602.11	\$40,602.11	\$40,602.11	\$40,602.11	\$40,602.11
AMI Miscellaneous (Including Labour For Daily Ops) Vendor 5	D	J			\$11,598.12	\$58,401.00	\$58,401.00	\$58,401.00	\$58,401.00	\$58,401.00	\$58,401.00	\$58,401.00	\$58,401.00	\$58,401.00
Smart Meter Installation Process Vendor 4	C				\$51,495.32									
Adaptor Installation Vendor 4	C				\$5,727.25									
Workforce Management System Vendor 4	D				\$3,805.92									
Capturing of GPS Coordinates Vendor 4	D				\$266.41									
Imaging of All Old Meters Vendor 4	D				\$1,738.04									
Delivery of Customer Notification Package Vendor 4	C				\$1,661.92									
Meter Seals	C				\$1,141.78									
Meter Rings	C				\$16,175.16									
Meter Adaptors	C				\$7,105.00									
Rent for Space for Meter Inventory and Scrapping Process	C				\$27,000.00									
AMI Installation Operational Verification Tools (Temp MDM/R)	D	J			\$15,984.86		\$15,984.86							
Scrapping Process Separation Costs	D				\$10,368.00									
Meter Scrapping/Recycling Process	D				-\$3,524.00									
Staff Training and Department Integration	D	K			\$16,200.00		\$3,240.00							
AMI Warranty Costs (1% Failure Rate)	A				\$4,797.36	\$8,225.64	\$4,797.36	\$8,225.64	\$4,797.36	\$8,225.64	\$4,797.36	\$8,225.64	\$4,797.36	\$8,225.64
Measurement Canada Re-Verification Accrual Account	B	J			\$11,451.26									
AMI Inventory Costs (Meters to Replace Revers Meters)	A				\$39,061.18	\$5,923.59	\$239.87	\$6,788.99	\$239.87	\$5,938.68	\$239.87	\$6,052.38	\$239.87	\$6,168.92
Contingency at 5.0%			\$105.30	\$428.17										
Section Sub Total			\$2,211.30	\$8,991.49			\$5,037.22	\$142,568.86	\$5,037.22	\$124,712.24	\$5,037.22	\$127,099.96	\$5,037.22	\$129,547.37
Total Smart Meter Asset Investment			\$2,211.30	\$8,991.49			\$822,533.20	\$822,495.98	\$832,570.42	\$837,607.65	\$842,644.87	\$847,681.89	\$852,719.12	\$857,756.35
Total Depreciation Amount Based On 15 Years Straight Line			\$147.42				\$110,149.37		\$165,654.06		\$221,494.57		\$277,670.89	
Current Value of Sections Smart Meter Assets			\$2,063.88	\$7,991.49			\$717,383.84		\$666,916.36		\$621,150.28		\$575,048.23	
BILLING / CUSTOMER SERVICE														
CIS Automated Meter Change Package	G				\$8,384.00									
Smart Meter Customer Presentation Tools (Web, IVR)	3	3			\$16,768.00		\$1,522.37		\$1,726.37		\$1,957.70		\$2,220.03	
Smart Meter Entry MDM/R (est Based On OEB 2005 Report)	3	3			\$16,200.00	\$15,984.86	\$15,984.86		\$15,984.86		\$15,984.86		\$15,984.86	
Bill Print Modifications	3	3					\$10,800.00							
Customer Education Packages	3	3			\$7,611.84									
CIS TDU Modifications and MDM/R Integration	3	3			\$16,200.00		\$10,800.00							
Staff Training and Department Integration	3	3			\$16,200.00		\$16,200.00							
Contingency at 5.0%			\$0.00	\$0.00	\$3,258.19	\$799.24	\$875.36	\$875.36	\$1,047.56	\$897.13	\$0.00	\$0.00	\$0.00	\$910.24
Section Sub Total			\$0.00	\$0.00	\$68,422.03	\$16,784.11	\$47,682.43	\$18,382.59	\$0.00	\$21,998.79	\$0.00	\$18,839.69	\$0.00	\$19,115.14
Total Smart Meter Asset Investment			\$0.00	\$0.00	\$68,422.03		\$116,104.46		\$116,104.46		\$116,104.46		\$116,104.46	
Total Depreciation Amount Based On 5 Years Straight Line			\$0.00		\$13,684.41		\$36,905.30		\$60,126.19		\$83,347.08		\$106,567.98	
Current Value of Sections Smart Meter Assets			\$0.00		\$54,737.63		\$79,199.16		\$55,978.27		\$32,757.38		\$9,536.49	
FINANCE / CORPORATE														
Consulting Services	B		\$20,000.00				\$20,000.00							
Legal for AMI Contracts	B		\$20,000.00											
Legal for Installation Contract	B		\$10,000.00											
Legal for Old Meter Recycling Contract	B		\$4,000.00											
AMI Security Audits	B	L	\$2,700.00	\$0.00	\$21,600.00	\$0.00	\$1,000.00	\$21,600.00	\$0.00	\$21,600.00	\$0.00	\$21,600.00	\$0.00	\$21,600.00
Contingency at 5.0%			\$0.00	\$0.00	\$2,080.00		\$1,080.00	\$1,080.00	\$0.00	\$1,080.00	\$0.00	\$1,080.00	\$0.00	\$1,080.00
Section Sub Total			\$56,700.00	\$0.00	\$43,680.00	\$0.00	\$21,000.00	\$22,680.00	\$0.00	\$22,680.00	\$0.00	\$22,680.00	\$0.00	\$22,680.00
Total Smart Meter Asset Investment			\$56,700.00	\$0.00	\$100,380.00		\$121,380.00		\$121,380.00		\$121,380.00		\$121,380.00	
Total Depreciation Amount Based On 15 Years Straight Line			\$3,780.00		\$10,472.00		\$18,564.00		\$26,656.00		\$42,748.00		\$42,840.00	
Current Value of Sections Smart Meter Assets			\$52,920.00		\$89,908.00		\$102,816.00		\$94,724.00		\$78,632.00		\$78,540.00	
Totals														
			\$55,911.30	\$8,991.49	\$932,386.71	\$141,179.59	\$73,719.65	\$183,631.46	\$5,037.22	\$169,391.03	\$5,037.22	\$168,619.65	\$5,037.22	\$171,342.51

Total Capital Budget for AMI Only	\$964,024.87
Average Capital Per Meter for AMI Only	\$273.56
Average Operating Cost Per Meter For AMI Only	\$53.07

Total Capital Budget for Residential SMI	\$1,080,129.33
Average Capital Per Meter for Smart Meter Initiative	\$306.51
Average Operating Cost Per Meter Per Year for SMI	\$59.82

Rate Filing	Category	2007	2008	2009	2010	2011	2012	TOTAL
Smart Meter Unit Costs	A	\$0.00	\$462,307.63	\$5,037.22	\$5,037.22	\$5,037.22	\$5,037.22	\$138.03
Smart Meter Other Unit Costs	B	\$56,700.00	\$54,607.59	\$21,000.00	\$0.00	\$0.00	\$0.00	\$37.54
Smart Meter Installation Costs Per Unit	C	\$0.00	\$168,321.74	\$0.00	\$0.00	\$0.00	\$0.00	\$47.76
Smart Meter Other Costs Per Unit	D	\$2,211.30	\$59,259.22	\$0.00	\$0.00	\$0.00	\$0.00	\$17.44
AMI Computer Hardware Costs	F	\$0.00	\$119,388.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMI Computer Software Costs	G	\$0.00	\$8,803.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other Computer Hardware Costs	H	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Other Computer Software Costs	I	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Incremental AMI O&M Expenses	J	\$0.00	\$115,403.98	\$139,166.86	\$124,712.24	\$127,099.96	\$129,547.37	\$0.00
Incremental AMI Admin Expenses	K	\$0.00	\$0.00	\$3,402.00	\$0.00	\$0.00	\$0.00	\$0.00
Incremental Other O&M Expenses	L	\$0.00	\$0.00	\$32,680.00	\$22,600.00	\$22,600.00	\$22,600.00	\$0.00
Incremental Other Admin Expenses	M	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Utility Safety & Maintenance Capital Budget	2	\$4,991.49	\$8,991.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOU Billing Budget	3	\$0.00	\$76,402.84	\$66,065.03	\$21,998.79	\$18,839.69	\$19,115.14	\$0.00
Grand Total		\$67,902.79	\$1,073,565.30	\$257,351.11	\$174,428.25	\$173,658.87	\$176,379.73	\$0.00
Difference From Above		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Category	2007	2008	2009	2010	2011	2012
A	\$0.00	\$440,369.18	\$4,797.36	\$4,797.36	\$4,797.36	\$4,797.36
B	\$54,000.00	\$52,007.23	\$0.00	\$0.00	\$0.00	\$0.00
C	\$0.00	\$160,306.42	\$0.00	\$0.00	\$0.00	\$0.00
D	\$2,106.00	\$56,437.36	\$0.00	\$0.00	\$0.00	\$0.00
F	\$0.00	\$113,703.32	\$0.00	\$0.00	\$0.00	\$0.00
G	\$0.00	\$8,384.00	\$0.00	\$0.00	\$0.00	\$0.00
H	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
I	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
J	\$0.00	\$0.00	\$109,908.56	\$118,773.56	\$121,047.56	\$123,378.45
K	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
L	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
M	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2	\$0.00	\$8,563.32	\$8,563.32	\$0.00	\$0.00	\$0.00
3	\$0.00	\$56,779.84	\$45,411.84	\$20,951.23	\$17,942.56	\$18,204.89
Sub Total	\$56,106.00	\$987,987.34	\$70,209.20	\$161,324.79	\$160,590.14	\$163,163.34
Contingency	\$2,805.30	\$44,399.37	\$3,510.46	\$8,744.36	\$8,029.51	\$8,159.17
Grand Total	\$58,911.30	\$992,386.71	\$73,719.65	\$169,391.03	\$168,619.65	\$171,342.51
Difference	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

AMI Summary	1	2	3	4	5
AMI Capital	\$498,772.75	\$335,500.00	\$336,484.16	\$400,060.00	\$392,704.23
AMRC Capital	\$24,215.00	\$0.00	\$6,377.81	\$7,952.49	\$8,636.33
AMCC Capital	\$124,348.40	\$0.00	\$46,775.00	\$250,000.00	\$105,280.85
AMI Misc Capital	\$650.00	\$7,000.00	\$35,300.00	\$6.00	\$10,739.00
AMCD Operations Year 1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMCD Operations Year 2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMCD Operations Year 3	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMCD Operations Year 4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMCD Operations Year 5	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMRC Operations Year 1	\$7,200.00	\$0.00	\$610.83	\$2,114.40	\$2,481.31
AMRC Operations Year 2	\$7,200.00	\$0.00	\$610.83	\$2,114.40	\$2,481.31
AMRC Operations Year 3	\$7,200.00	\$0.00	\$610.83	\$2,114.40	\$2,481.31
AMRC Operations Year 4	\$7,200.00	\$0.00	\$610.83	\$2,114.40	\$2,481.31
AMRC Operations Year 5	\$7,200.00	\$0.00	\$610.83	\$2,114.40	\$2,481.31
AMCC Operations Year 1	\$0.00	\$106,158.20	\$12,720.00	\$31,500.00	\$37,594.55
AMCC Operations Year 2	\$11,600.00	\$108,812.16	\$12,720.00	\$36,500.00	\$42,408.04
AMCC Operations Year 3	\$11,600.00	\$111,532.46	\$12,720.00	\$36,500.00	\$43,088.12
AMCC Operations Year 4	\$11,600.00	\$114,320.77	\$12,720.00	\$36,500.00	\$43,785.19
AMCC Operations Year 5	\$11,600.00	\$117,178.79	\$12,720.00	\$36,500.00	\$44,496.70
AMI Misc Operations Year 1	\$55,425.00	\$53,625.00	\$53,625.00	\$53,625.00	\$54,075.00
AMI Misc Operations Year 2	\$56,765.63	\$54,965.63	\$54,965.63	\$54,965.63	\$55,415.63
AMI Misc Operations Year 3	\$58,139.77	\$56,339.77	\$56,339.77	\$56,339.77	\$56,789.77
AMI Misc Operations Year 4	\$59,548.26	\$57,748.26	\$57,748.26	\$57,748.26	\$58,198.26
AMI Misc Operations Year 5	\$60,991.97	\$59,191.97	\$59,191.97	\$59,191.97	\$59,641.97
Total Capital	\$647,986.15	\$342,500.00	\$424,936.97	\$658,018.49	\$518,360.40
Total Operating Costs Over Five Years	\$373,270.62	\$839,873.00	\$348,524.75	\$469,942.62	\$507,902.75
Total	\$1,021,256.77	\$1,182,373.00	\$773,461.72	\$1,127,961.11	\$1,026,263.15
Rank	2	4	1	3	1

Installation Summary	1	2	3	4
Smart Meter Installation	\$47,772.65	\$52,068.84	\$43,201.06	\$47,680.85
Adaptor Installation	\$7,825.50	\$5,334.03	\$2,749.50	\$5,303.01
WFM System	\$0.00	\$3,524.00	\$7,048.00	\$3,524.00
Capturing GPS	\$0.00	\$0.00	\$740.04	\$246.68
Imaging of Old Meters	\$2,431.56	\$740.04	\$1,656.28	\$1,609.29
Delivery of Notification	\$1,515.32	\$1,585.80	\$1,515.32	\$1,538.81
Total Capital	\$59,545.03	\$63,252.71	\$56,910.20	\$59,902.65
Rank	2	3	1	1

Vendor Name:		Initial									
Component		QTY	Up Front Capital Per Unit	AMI Budgetary Numbers							Total Capital and Operating Costs Per Meter
				Total Capital	Year 1 Operating	Year 2 Operating	Year 3 Operating	Year 4 Operating	Year 5 Operating	Total Operating Costs for 5 Years	
Residential Form 2S		3,226	\$128.27	\$407,347.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$115.59
Residential Transformer Rated		19	\$323.85	\$6,153.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.75
Small Commercial Non Demand		67	\$501.14	\$33,576.38	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9.53
Residential Form 12S		212	\$243.85	\$51,696.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$14.67
Total AMCD			\$141.54	\$498,772.75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$141.54
AMRC (Required for QTY of AMCDs)		29	\$450.00	\$13,215.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3.75
Est. WAN Carrier Costs Per AMRC		1	\$0.00	\$0.00	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$1,200.00	\$6,000.00	\$1.70
Miscellaneous AMRC Items Required											
Item 1 Antenna		1	\$3,500.00	\$3,500.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.99
Item 2 Installation of Tower Equipment		1	\$7,500.00	\$7,500.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2.13
Item 3 Rent for AMRC Location		1	\$6.87	\$6.87	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00	\$6,000.00	\$30,000.00	\$8.51
Total AMRC				\$24,215.00	\$7,200.00	\$7,200.00	\$7,200.00	\$7,200.00	\$7,200.00	\$36,000.00	\$17.09
AMCC Hardware											
Item 1 Base Station Network Controller		1	\$28,937.36	\$28,937.36	\$0.00	\$5,800.00	\$5,800.00	\$5,800.00	\$5,800.00	\$23,200.00	\$14.79
Item 2 Base Station Network Server		1	\$49,010.00	\$49,010.00	\$0.00	\$5,800.00	\$5,800.00	\$5,800.00	\$5,800.00	\$23,200.00	\$20.49
AMCC Software											
Item 1 (i.e. License first 1000 endpoints)		1	\$17,400.00	\$17,400.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4.94
Item 2 (i.e. License Per End Point > 1000)		2,524	\$0.46	\$1,161.04	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.33
Item 3 (i.e. 3rd Party Licenses)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Miscellaneous AMCC Items Required											
Item 1 (i.e. Training)		16	\$1,740.00	\$27,840.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7.90
Item 2 (i.e. Support)		1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total AMCC			\$35.29	\$124,348.40	\$0.00	\$11,600.00	\$11,600.00	\$11,600.00	\$11,600.00	\$46,400.00	\$48.45
Additional Items Required for AMI System											
Item 1 Project Management		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Item 2 Propagation Study		1	\$650.00	\$650.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.18
Item 3 Radio License		1	\$0.00	\$0.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$1,800.00	\$9,000.00	\$2.55
Staffing to Manage Network Daily		0.50	\$1.27	\$0.63	\$53,625.00	\$54,965.63	\$56,339.77	\$57,748.26	\$59,191.97	\$281,870.62	\$79.99
Total Additional AMI Items Required			\$0.18	\$650.00	\$53,625.00	\$56,765.63	\$58,139.77	\$59,548.26	\$60,991.97	\$290,870.62	\$82.72
Grand Total for Electric AMI System			\$183.88	\$647,986.15	\$62,625.00	\$75,565.63	\$76,939.77	\$78,348.26	\$79,791.97	\$373,270.62	\$289.800

Vendor Name:		Sensus									
Component		QTY	Up Front Capital Per Unit	AMI Budgetary Numbers							Total Capital and Operating Costs Per Meter
				Total Capital	Year 1 Operating	Year 2 Operating	Year 3 Operating	Year 4 Operating	Year 5 Operating	Total Operating Costs for 5 Years	
Residential Form 2S		3,226	\$80.00	\$258,080.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$73.23
Residential Transformer Rated		19	\$215.00	\$4,085.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.16
Small Commercial Non Demand		67	\$525.00	\$35,175.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.98
Residential Form 12S		212	\$180.00	\$38,160.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10.83
Total AMCD			\$95.20	\$335,500.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$95.20
AMRC (Required for QTY of AMCDs)		2	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Est. WAN Carrier Costs Per AMRC		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Miscellaneous AMRC Items Required											
Item 1 (i.e. Repeaters)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Item 2 (i.e. Mounting Kit)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Item 3 (i.e. Rent for AMRC Location)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total AMRC			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMCC Hardware											
Item 1 (i.e. Server)		1	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Item 2 (i.e. Server)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
AMCC Software											
Item 1 (i.e. License)		0	\$0.00	\$0.00	\$106,158.20	\$108,812.16	\$111,532.46	\$114,320.77	\$117,178.79	\$558,002.38	\$158.343
Item 2 (i.e. 3rd Party Licenses)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Miscellaneous AMCC Items Required											
Item 1 (i.e. Training)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Item 2 (i.e. Support)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total AMCC			\$0.00	\$0.00	\$106,158.20	\$108,812.16	\$111,532.46	\$114,320.77	\$117,178.79	\$558,002.38	\$158.343
Additional Items Required for AMI System											
Item 1 (i.e. Project Management)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Item 2 Installation Tool		2	\$3,500.00	\$7,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2.036
Item 3 (i.e. Radio License)		0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Staffing to Manage Network Daily		0.50	\$1.27	\$0.63	\$53,625.00	\$54,965.63	\$56,339.77	\$57,748.26	\$59,191.97	\$281,870.62	\$79.99
Total Additional AMI Items Required			\$1.99	\$7,000.00	\$53,625.00	\$54,965.63	\$56,339.77	\$57,748.26	\$59,191.97	\$281,870.62	\$82.02
Grand Total for Electric AMI System			\$97.19	\$342,500.00	\$159,783.20	\$163,777.78	\$167,872.23	\$172,069.03	\$176,370.76	\$839,873.00	\$335.570

Vendor Name:			Elster Metering		AMI Budgetary Numbers					Total Capital and Operating Costs Per Meter	
Component	QTY	Up Front Capital Per Unit	Total Capital	Year 1 Operating	Year 2 Operating	Year 3 Operating	Year 4 Operating	Year 5 Operating	Total Operating Costs for 5 Years		
Elster Energy Axis Residential Urban 2S	3,226	\$85.96	\$280,532.96	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$79.81	
Elster Energy Axis Residential Urban Transformer Rated	19	\$115.76	\$2,199.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.62	
Elster Energy Axis Residential Urban Non Demand	67	\$373.49	\$25,023.83	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7.10	
Elster Energy Axis Residential Urban Network	212	\$135.51	\$28,728.12	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8.15	
Smart Synch Residential Rural 2S	0	\$350.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Smart Synch Residential Rural Transformer Rated	0	\$350.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Smart Synch Residential Rural Non Demand	0	\$795.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Smart Synch Residential Rural Network	0	\$350.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Total AMCC		\$65.48	\$336,484.16	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$95.48	
AMRC (Required for QTY of AMCC's)	8	\$799.42	\$6,395.36	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.78	
Est. WAN Carrier Costs For Elster Collectors	0	\$0.00	\$0.00	\$610.83	\$610.83	\$610.83	\$610.83	\$610.83	\$3,054.13	\$0.87	
Est. WAN Carrier Costs For Smart Synch	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Miscellaneous AMCC Items Required											
Item 1 (i.e. Mounting Kit)	8	\$15.00	\$117.47	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.03	
Item 2 (i.e. Mounting Kit)	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Item 3 (i.e. Rent for AMRC Location)	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Total AMRC		\$18.1	\$63,377.81	\$610.83	\$610.83	\$610.83	\$610.83	\$610.83	\$3,054.13	\$2.68	
AMCC Hardware											
Item 1 (i.e. Server)	1	\$9,600.00	\$9,600.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2.72	
Item 2 (i.e. Server)	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
AMCC Software											
Item 1 Elster MAS Software	1	\$32,000.00	\$32,000.00	\$12,720.00	\$12,720.00	\$12,720.00	\$12,720.00	\$12,720.00	\$63,600.00	\$27.13	
Item 2 (1 time per point)	-16,468	\$1.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Item 2 Smart Synch Hosting Fee	0	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Miscellaneous AMCC Items Required											
Item 1 Smart Synch Training	1	\$5,175.00	\$5,175.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.47	
Item 2 (i.e. Support)	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Total AMCC		\$13.27	\$48,775.00	\$12,720.00	\$12,720.00	\$12,720.00	\$12,720.00	\$12,720.00	\$63,600.00	\$31.32	
Additional Items Required for AMI System											
Item 1 (i.e. Project Management)	1	\$33,000.00	\$33,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9.36	
Item 2 Installation Tool for Smart Synch	1	\$2,300.00	\$2,300.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.65	
Item 3 (i.e. Radio License)	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Staffing to Manage Network Daily	0.50	\$1.27	\$0.63	\$53,625.00	\$54,965.63	\$56,339.77	\$57,748.26	\$59,191.97	\$281,870.62	\$79.99	
Total Additional AMI Items Required		\$10.02	\$35,300.00	\$53,625.00	\$54,965.63	\$56,339.77	\$57,748.26	\$59,191.97	\$281,870.62	\$90.00	
Grand Total for Electric AMI System		\$120.58	\$424,936.97	\$68,955.83	\$68,296.45	\$69,670.59	\$71,079.09	\$72,522.79	\$348,524.75	\$219.48	

Vendor Name:			Trilliant Networks		AMI Budgetary Numbers					Total Capital and Operating Costs Per Meter	
Component	QTY	Up Front Capital Per Unit	Total Capital	Year 1 Operating	Year 2 Operating	Year 3 Operating	Year 4 Operating	Year 5 Operating	Total Operating Costs for 5 Years		
Residential Form 2S	3,226	\$100.00	\$322,600.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$91.54	
Residential Transformer Rated	19	\$220.00	\$4,180.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.19	
Small Commercial Non Demand	67	\$540.00	\$36,180.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10.27	
Residential Form 12S	212	\$175.00	\$37,100.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10.53	
Total AMCC		\$113.52	\$400,060.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$113.52	
AMRC (Required for QTY of AMCC's)	12	\$677.00	\$7,924.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2.26	
Est. WAN Carrier Costs Per AMRC	0	\$0.00	\$0.00	\$2,114.40	\$2,114.40	\$2,114.40	\$2,114.40	\$2,114.40	\$10,572.00	\$3.00	
Miscellaneous AMCC Items Required											
Item 1 (i.e. Repeaters)	0	\$250.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Item 2 (i.e. Mounting Kit)	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Item 3 (i.e. Rent for AMRC Location)	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Total AMRC		\$2.26	\$7,952.49	\$2,114.40	\$2,114.40	\$2,114.40	\$2,114.40	\$2,114.40	\$10,572.00	\$5.26	
AMCC Hardware											
Item 1 (i.e. Server Communications Estimate)	1	\$20,000.00	\$20,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5.68	
Item 2 (i.e. Server Database Estimate)	1	\$5,000.00	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.42	
AMCC Software											
Item 1 (i.e. License)	1	\$210,000.00	\$210,000.00	\$31,500.00	\$31,500.00	\$31,500.00	\$31,500.00	\$31,500.00	\$157,500.00	\$104.28	
Item 2 (i.e. 3rd Party Licenses SQL Server 2k)	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Miscellaneous AMCC Items Required											
Item 1 (i.e. Training)	1	\$10,000.00	\$10,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2.84	
Item 2 (i.e. Support)	1	\$5,000.00	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7.09	
Total AMCC		\$70.94	\$250,000.00	\$31,500.00	\$36,500.00	\$36,500.00	\$36,500.00	\$36,500.00	\$177,500.00	\$121.31	
Additional Items Required for AMI System											
Item 1 (i.e. Project Management)	1	\$6.00	\$6.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Item 2 (i.e. Warehousing)	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Item 3 (i.e. Radio License)	3,524	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Staffing to Manage Network Daily	0.50	\$1.27	\$0.63	\$53,625.00	\$54,965.63	\$56,339.77	\$57,748.26	\$59,191.97	\$281,870.62	\$79.99	
Total Additional AMI Items Required		\$0.00	\$6.00	\$53,625.00	\$54,965.63	\$56,339.77	\$57,748.26	\$59,191.97	\$281,870.62	\$79.99	
Grand Total for Electric AMI System		\$106.72	\$658,018.49	\$97,239.40	\$93,580.03	\$94,954.17	\$96,362.66	\$97,806.37	\$469,942.62	\$320.08	

Installation Vendor Pricing

Section	Item	Description	Honeywell		Olameter		OZZ		Average		
			QTY	Price Per Order	Total	Price Per Order	Total	Price Per Order	Total	Price Per Order	Total
1	Installation Services										
	1	Inside Residential	653	\$18.50	\$12,080.50	\$36.05	\$23,540.65	\$23.37	\$15,260.61	\$25.97	\$16,960.59
	2	Outside Residential	2,871	\$11.45	\$32,872.95	\$8.98	\$25,781.58	\$8.75	\$25,121.25	\$9.73	\$27,925.26
	3	Semi-Urban Residential	0	\$18.50	\$0.00	\$9.39	\$0.00	\$17.28	\$0.00	\$0.00	\$0.00
	4	Rural Residential	0	\$21.10	\$0.00	\$18.79	\$0.00	\$25.73	\$0.00	\$0.00	\$0.00
	5	Workforce Management System	3,524	\$0.00	\$0.00	\$1.00	\$3,524.00	\$2.00	\$7,048.00	\$1.00	\$3,524.00
	6	GPS System	3,524	\$0.00	\$0.00	\$0.00	\$0.00	\$0.21	\$740.04	\$0.07	\$246.68
	7	Imaging 100%	3,524	\$0.69	\$2,431.56	\$0.21	\$740.04	\$0.47	\$1,656.28	\$0.46	\$1,609.29
	8	Adaptor Installation	423	\$18.50	\$7,825.50	\$12.61	\$5,334.03	\$6.50	\$2,749.50	\$12.54	\$5,303.01
	9		0		\$0.00		\$0.00		\$0.00	\$0.00	\$0.00
		Section 1 Sub Total			\$55,210.51		\$58,920.30		\$52,575.68		\$55,568.83
2	Smart Meter Inventory Control										
	Provide pricing for items not included Section 1 Pricing										
	1	Vendor Down Time Costs 2%	70.48	\$40.00	\$2,819.20	\$38.97	\$2,746.61	\$40.00	\$2,819.20	\$39.66	\$2,795.00
		Section 2 Sub Total			\$2,819.20		\$2,746.61		\$2,819.20		\$2,795.00
3	Customer Communications										
	Provide pricing for items not included Section 1 Pricing										
	3	Pre-Installation Notification (Canvass)	3,524	\$0.43	\$1,515.32	\$0.45	\$1,585.80	\$0.43	\$1,515.32	\$0.44	\$1,538.81
		Section 3 Sub Total			\$1,515.32		\$1,585.80		\$1,515.32		\$1,538.81
				Total Pricing	\$59,545.03	Total Pricing	\$63,252.71	Total Pricing	\$56,910.20	Total Pricing	\$59,902.65

INVENTORIES		Current Budgeted	Verified Actual
Residential Customer Base		3,456	3,456
General Service (<50kW)		68	68
TOTAL RESIDENTIAL METERS SERVICED		3,524	3,524
General Service (50kW - 200kW)		38	38
General Service (>200kW)		5	5
TOTAL METERS SERVICED		3,567	3,567
Residential Form 2S		3,226	3,226
Residential Transformer Rated		19	19
Small Commercial Non Demand		67	67
Residential Form 12S		212	212
SUB TOTAL METERS TO BE PROCURED		3,524	3,524
Inside Residential		653	653
Outside Residential		2,871	2,871
Semi-Urban Residential		0	0
Rural Residential		0	0
TOTAL METERS TO INSTALL		3,524	3,524

Note: Total Install should balance to number of meters being procured which then balances to customer base

OPERATIONS		Current Budgeted	Verified Actual
Repair of unsafe meter bases (1%)			
Please verify the percentage OR the amount you would like to use for budgeting:			
Percentage		1%	
Amount		\$8,563.32	
Rent for Space for Meter Inventory and Scrapping Process			
Price per Square Foot		\$25	
Square Footage		2000	
Term of Rental		6 months	

BILLING / CUSTOMER SERVICE		Current Budgeted	Verified Actual
Please verify the budgeted dollar amount is within par of what your CIS vendor is suggesting:			
CIS Automated Meter Change Package		\$8,384.00	
Smart Meter Customer Presentation Tools (Web, IVR)		\$16,768.00	

AMI		Current Budgeted	Verified Actual
Staffing to Manage Network Daily			
Annual Salary		\$65,000	
Overhead Burden		65%	