
NEEDS FOR AND ALTERNATIVES TO (NFAT)

Manitoba Hydro's response to MIPUG Exhibit 21, Question 4

Please also provide the NPV revenue impacts on a similar basis.

Response:

Please see the following.

RESOURCE COSTS (millions)

	NPV of Base DSM to Level 1 DSM
<u>LEVEL 1 INCREMENTAL (BASE DSM TO LEVEL 1 DSM)</u>	
RESIDENTIAL	
Incentive Based	
New Home Program	\$18.0
Home Insulation Program	\$10.3
Water and Energy Saver Program	\$1.5
Lower Income Energy Efficiency Program	\$0.0
Refrigerator Retirement Program	\$7.7
Residential Geothermal Utility Model	\$16.4
Residential LED Lighting Program	\$7.0
Community Geothermal Program	\$102.1
	Subtotal \$163.0
Customer Service Initiatives / Financial Loan Programs	
Power Smart Residential Loan	\$0.0
Residential Earth Power Loan	\$22.7
Power Smart PAYS Financing	\$0.4
Behavioural Program	\$6.7
	Subtotal \$29.9
COMMERCIAL	
Incentive Based	
Commercial Lighting Program	\$86.4
Commercial Custom Measures Program	\$28.3
Commercial Windows Program	\$8.2
Commercial HVAC Program - Chiller	\$1.7
Commercial Refrigeration Program	\$9.4
Commercial Insulation Program	\$5.6
Commercial Earth Power Program	\$60.5
New Buildings Program	\$472.9
Commercial Building Optimization Program	\$3.2
Internal Retrofit Program	\$3.8
Commercial Kitchen Appliance Program	\$0.1
Network Energy Management Program	\$2.0
CO2 Sensors	\$0.3
Power Smart Shops	\$1.9
LED Streetlighting Program	\$46.4
	Subtotal \$730.5
Customer Service Initiatives / Financial Loan Programs	
Power Smart for Business PAYS Financing	\$0.0
	Subtotal \$0.0
INDUSTRIAL	
Performance Optimization Program	\$94.0
	Subtotal \$94.0
CONSERVATION SUBTOTAL	
	\$1,017.3
LOAD DISPLACEMENT & ALTERNATIVE ENERGY	
Bioenergy Optimization Program	\$10.6
LOAD DISPLACEMENT & ALTERNATIVE ENERGY SUBTOTAL	\$10.6
Total Resource Costs	
78 Year NPV	\$1,027.9

Note: Totals may not add up due to rounding.

RESOURCE COSTS (millions)

<u>LEVEL 2 INCREMENTAL (LEVEL 1 DSM TO LEVEL 2 DSM)</u>	NPV of Level 1 DSM to Level 2 DSM	
Conservation Rates		\$29.4
Fuel Switching		\$94.0
Load Displacement		\$457.1
Total Resource Costs	78 Year NPV	\$580.5

Note: Totals may not add up due to rounding.

DOMESTIC REVENUE LOSS (millions)

<u>LEVEL 1 INCREMENTAL (BASE DSM TO LEVEL 1 DSM)</u>	NPV of Base DSM to Level 1 DSM
RESIDENTIAL	
Incentive Based	
New Home Program	\$38.1
Home Insulation Program	\$32.3
Water and Energy Saver Program	\$4.3
Lower Income Energy Efficiency Program	\$0.0
Refrigerator Retirement Program	\$8.1
Residential Geothermal Utility Model	\$16.2
Residential LED Lighting Program	\$5.0
Community Geothermal Program	\$55.6
	Subtotal \$159.7
Customer Service Initiatives / Financial Loan Programs	
Power Smart Residential Loan	\$0.0
Power Smart PAYS Financing	\$3.0
Residential Earth Power Loan	\$0.0
Behavioural Program	\$7.2
	Subtotal \$10.1
COMMERCIAL	
Incentive Based	
Commercial Lighting Program	\$74.7
Commercial Building Envelope - Windows Program	\$17.6
Commercial Building Envelope - Insulation Program	\$15.3
Commercial Earth Power Program	\$106.6
Commercial HVAC Program - Chiller	\$2.8
Commercial HVAC Program - CO2 Sensors	\$0.2
Commercial Custom Measures Program	\$33.3
Commercial Building Optimization Program	\$1.4
New Buildings Program	\$399.9
Commercial Refrigeration Program	\$26.5
Commercial Kitchen Appliance Program	\$1.8
Network Energy Management Program	\$2.4
Power Smart Shops	\$3.3
LED Streetlighting Program	\$7.4
	Subtotal \$693.3
Customer Service Initiatives / Financial Loan Programs	
Power Smart Commercial PAYS Financing Program	\$1.3
	Subtotal \$1.3
INDUSTRIAL	
Performance Optimization Program	\$124.7
	Subtotal \$124.7
CONSERVATION SUBTOTAL	
	\$989.1
LOAD DISPLACEMENT & ALTERNATIVE ENERGY	
Bioenergy Optimization Program	\$0.0
	Subtotal \$0.0
Total Revenue Loss	
78 Year NPV	\$989.1

Note: Totals may not add up due to rounding.

DOMESTIC REVENUE LOSS (millions)

<u>LEVEL 2 INCREMENTAL (LEVEL 1 DSM TO LEVEL 2 DSM)</u>		NPV of Level 1 DSM to Level 2 DSM
Conservation Rates		\$451.2
Fuel Switching		\$366.4
Load Displacement		\$438.3
Total Revenue Loss	78 Year NPV	\$1,255.8

Note: Totals may not add up due to rounding.