

Attachment A

Customer Purchasing Heat Pump Water Heater with Rebate, Years 1-6, Simple Payback

	2020	2021	2022	2023	2024	2025
(1) Participant Bill Reduction <i>Nominal value of utility bill savings</i>	\$ 450.39	\$ 465.56	\$ 482.10	\$ 496.74	\$ 512.07	\$ 530.00
(2) Annual kWh savings of heat pump water heater versus standard electric resistance water heater	3,678	3,678	3,678	3,678	3,678	3,678
(3) O&M <i>Increased in non-electric utility bills due to increased heating load from heat pump water heater</i>	\$ (65.17)	\$ (65.17)	\$ (65.17)	\$ (65.17)	\$ (65.17)	\$ (65.17)
(4) Heat Pump Water Heater Rebate	\$400					
(5) Incremental Capital Cost <i>Additional Cost to Customer for purchase of heat pump water heater</i>	(\$611.45)					
(6) Net Annual Participant Savings (\$) [(1) + (4)] + [(3)+(5)]	\$173.77	\$ 400.39	\$ 416.93	\$ 431.57	\$ 446.90	\$ 464.83
(7) Cumulative Participant Savings (\$)	\$173.77	\$ 574.16	\$ 991.09	\$ 1,422.66	\$ 1,869.56	\$ 2,334.39

As is evident in line (7), the simple payback to the customer for choosing a heat pump water heater over a standard electric resistance water heater is within the first full year with a rebate from Xcel Energy. The Operations and Maintenance (“O&M”) value is only for customers with natural gas space heating systems. The incremental capital cost of the heat pump water heater and the O&M values can be seen in Attachment A to Data Request No. 1-12.

Customer Purchasing Heat Pump Water Heater without Rebate, Years 1-6, Simple Payback

		2020	2021	2022	2023	2024	2025
(1)	Participant Bill Reduction <i>Nominal value of utility bill savings</i>	\$ 450.39	\$ 465.56	\$ 482.10	\$ 496.74	\$ 512.07	\$ 530.00
(2)	Annual kWh savings of heat pump water heater versus standard electric resistance water heater	3,678	3,678	3,678	3,678	3,678	3,678
(3)	O&M <i>Increased in non-electric utility bills due to increased heating load from heat pump water heater</i>	\$ (65.17)	\$ (65.17)	\$ (65.17)	\$ (65.17)	\$ (65.17)	\$ (65.17)
(4)	Heat Pump Water Heater Rebate	\$0					
(5)	Incremental Capital Cost <i>Additional Cost to Customer for purchase of heat pump water heater</i>	(\$611.45)					
(6)	Net Annual Participant Savings (\$) [(1) + (4)] + [(3)+(5)]	(\$226.33)	\$ 400.39	\$ 416.93	\$ 431.57	\$ 446.90	\$ 464.83
(7)	Cumulative Participant Savings (\$)	(\$226.33)	(\$384.46)	\$ 32.47	\$ 464.04	\$ 910.94	\$ 1,375.77

As is evident in line (7), the simple payback to the customer for choosing a heat pump water heater over a standard electric resistance water heater is within the third full year without a rebate from Xcel Energy. The Operations and Maintenance (“O&M”) value is only for customers with natural gas space heating systems. The incremental capital cost of the heat pump water heater and the O&M values can be seen in Attachment A to Data Request No. 1-12.