

Table A.3.3. MidAm Commercial Electric Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (kWh)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (MWh)
Warehouse	Cooling DX	Cool Roofs	ENERGY STAR Cool Roof - Reflect Material (Reflectivity = 0.55)	Standard Roof	Per Roof Area SqFt	New	0.02	15	\$0.68	93%	0
Warehouse	Cooling DX	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	1,558	5	\$2,929	33%	0
Warehouse	Cooling DX	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	1,024	5	\$3,122	33%	0
Warehouse	Cooling DX	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	2,337	5	\$5,067	6%	0
Warehouse	Cooling DX	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	24	20	\$477	76%	0
Warehouse	Cooling DX	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	24	20	\$477	76%	0
Warehouse	Cooling DX	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	11	20	\$60	62%	40
Warehouse	Cooling DX	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	11	20	\$60	62%	3
Warehouse	Cooling DX	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Warehouse	Cooling DX	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	75%	0
Warehouse	Cooling DX	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.02	30	\$10	75%	0
Warehouse	Cooling DX	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.40	13	\$0.38	9%	56
Warehouse	Cooling DX	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.22	20	\$2	15%	126
Warehouse	Cooling DX	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Warehouse	Cooling DX	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	13%	0
Warehouse	Cooling DX	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	33%	0
Warehouse	Cooling DX	Package Terminal - Air Conditioner	High Efficiency Package Terminal Air Conditioner	Federal Standard Equipment	Per Package Terminal AC	Existing	70	9	\$88	7%	9
Warehouse	Cooling DX	Package Terminal - Air Conditioner	High Efficiency Package Terminal Air Conditioner	Federal Standard Equipment	Per Package Terminal AC	New	70	9	\$88	7%	1
Warehouse	Cooling DX	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.06	7	\$0.30	90%	2,875
Warehouse	Cooling DX	Rooftop DX Unit - Below Standard	Below Standard 9.5 EER, Air-Cooled = 135 and < 240 kBtuh	Below Standard 9.5 EER, Air-Cooled = 135 and < 240 kBtuh	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Warehouse	Cooling DX	Rooftop DX Unit - Below Standard	Below Standard 9.5 EER, Air-Cooled = 135 and < 240 kBtuh	Below Standard 9.5 EER, Air-Cooled = 135 and < 240 kBtuh	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Warehouse	Cooling DX	Rooftop DX Unit - CEE Tier 1	CEE Tier 1 11.5 EER, Air-Cooled = 135 and < 240 kBtuh	Federal Standard 11.0 EER, Air-Cooled = 135 and < 240 kBtuh	Per Building SqFt	Existing	0.01	15	\$0.04	100%	0
Warehouse	Cooling DX	Rooftop DX Unit - CEE Tier 1	CEE Tier 1 11.5 EER, Air-Cooled = 135 and < 240 kBtuh	Federal Standard 11.0 EER, Air-Cooled = 135 and < 240 kBtuh	Per Building SqFt	New	0.01	15	\$0.04	100%	0
Warehouse	Cooling DX	Rooftop DX Unit - CEE Tier 2	CEE Tier 2 12.0 EER, Air-Cooled = 135 and < 240 kBtuh	Federal Standard 11.0 EER, Air-Cooled = 135 and < 240 kBtuh	Per Building SqFt	Existing	0.03	15	\$0.07	100%	748
Warehouse	Cooling DX	Rooftop DX Unit - CEE Tier 2	CEE Tier 2 12.0 EER, Air-Cooled = 135 and < 240 kBtuh	Federal Standard 11.0 EER, Air-Cooled = 135 and < 240 kBtuh	Per Building SqFt	New	0.02	15	\$0.07	100%	0
Warehouse	Cooling DX	Rooftop DX Unit - Standard	Federal Standard 11.0 EER, Air-Cooled = 135 and < 240 kBtuh	Federal Standard 11.0 EER, Air-Cooled = 135 and < 240 kBtuh	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Warehouse	Cooling DX	Rooftop DX Unit - Standard	Federal Standard 11.0 EER, Air-Cooled = 135 and < 240 kBtuh	Federal Standard 11.0 EER, Air-Cooled = 135 and < 240 kBtuh	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Warehouse	Cooling DX	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	233	15	\$138	93%	577

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Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (kWh)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (MWh)
Warehouse	Cooling DX	Tune-up - Air Conditioner	Air Conditioner Maintenance (Tune-up)	Unmaintained Air Conditioner	Per Ton	Existing	21	3	\$48	48%	0
Warehouse	Cooling DX	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.10	25	\$3	53%	0
Warehouse	Cooling DX	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.10	25	\$3	60%	0
Warehouse	Cooling DX	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.10	25	\$27	10%	0
Warehouse	Cooling DX	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.06	25	\$2	12%	0
Warehouse	Cooling DX	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.06	25	\$2	14%	0
Warehouse	Cooling DX	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.32	25	\$42	12%	0
Warehouse	Cooling DX	Window Air Conditioner	CEE TIER 1 = 11.3 EER; 8,000-13,999 Btu	Federal Standard 9.8 EER; 8,000-13,999 Btu	Per Window AC	Existing	111	9	\$406	32%	0
Warehouse	Cooling DX	Window Air Conditioner	CEE TIER 1 = 11.3 EER; 8,000-13,999 Btu	Federal Standard 9.8 EER; 8,000-13,999 Btu	Per Window AC	New	111	9	\$406	32%	0
Warehouse	Cooling DX	Window Air Conditioner	CEE TIER 2 = 11.8 EER; 8,000-13,999 Btu	Federal Standard 9.8 EER; 8,000-13,999 Btu	Per Window AC	Existing	142	9	\$771	33%	0
Warehouse	Cooling DX	Window Air Conditioner	CEE TIER 2 = 11.8 EER; 8,000-13,999 Btu	Federal Standard 9.8 EER; 8,000-13,999 Btu	Per Window AC	New	142	9	\$771	33%	0
Warehouse	Cooling DX	Window Air Conditioner	ENERGY STAR = 10.8 EER; 8,000-13,999 Btu	Federal Standard 9.8 EER; 8,000-13,999 Btu	Per Window AC	Existing	77	9	\$41	26%	39
Warehouse	Cooling DX	Window Air Conditioner	ENERGY STAR = 10.8 EER; 8,000-13,999 Btu	Federal Standard 9.8 EER; 8,000-13,999 Btu	Per Window AC	New	77	9	\$41	26%	2
Warehouse	Ext Lighting	Exterior Lighting - Standard	Standard Exterior Lighting	Standard Exterior Lighting	Per Building SqFt	Existing	0.00	14	\$0.00	100%	0
Warehouse	Ext Lighting	Exterior Lighting - Standard	Standard Exterior Lighting	Standard Exterior Lighting	Per Building SqFt	New	0.00	14	\$0.00	100%	0
Warehouse	Ext Lighting	Lighting - LED Lighting Package	Exterior LED Lighting Package	Standard Lighting	Per Lighting Package	Existing	461	13	\$316	66%	0
Warehouse	Ext Lighting	Lighting - High Intensity Discharge Package	High Efficiency Metal Halide Lighting Packages	Standard HID Lighting	Per Lighting Package	Existing	198	5	-0.9446	62%	116
Warehouse	Ext Lighting	Lighting - Induction Lighting Package	Induction Lighting Package	Standard HID Lighting	Per Lighting Package	Existing	565	13	\$66	67%	820
Warehouse	Fax	Fax - ENERGY STAR	ENERGY STAR Fax	Standard Fax	Per Building SqFt	Existing	0.00	6	\$0.00	100%	172
Warehouse	Fax	Fax - ENERGY STAR	ENERGY STAR Fax	Standard Fax	Per Building SqFt	New	0.00	6	\$0.00	100%	12
Warehouse	Fax	Fax - Standard	Standard Fax	Standard Fax	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Warehouse	Fax	Fax - Standard	Standard Fax	Standard Fax	Per Building SqFt	New	0.00	6	\$0.00	100%	0
Warehouse	Flat Screen Monitors	Monitor - ENERGY STAR Flat Screen	ENERGY STAR Flat Screen Monitor	Standard Flat Screen Monitor	Per Building SqFt	Existing	0.00	4	\$0.00	100%	0
Warehouse	Flat Screen Monitors	Monitor - ENERGY STAR Flat Screen	ENERGY STAR Flat Screen Monitor	Standard Flat Screen Monitor	Per Building SqFt	New	0.00	4	\$0.00	100%	0
Warehouse	Flat Screen Monitors	Monitor - Standard Flat Screen	Standard Flat Screen Monitor	Standard Flat Screen Monitor	Per Building SqFt	Existing	0.00	4	\$0.00	100%	0
Warehouse	Flat Screen Monitors	Monitor - Standard Flat Screen	Standard Flat Screen Monitor	Standard Flat Screen Monitor	Per Building SqFt	New	0.00	4	\$0.00	100%	0
Warehouse	Freezers	Freezer - 2014 Federal Standard	2014 Standard Freezer	Standard Freezer	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Warehouse	Freezers	Freezer - 2014 Federal Standard	2014 Standard Freezer	Standard Freezer	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Warehouse	Freezers	Freezer - Below Standard	Below Standard Freezer	Below Standard Freezer	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Warehouse	Freezers	Freezer - Below Standard	Below Standard Freezer	Below Standard Freezer	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Warehouse	Freezers	Freezer - ENERGY STAR	ENERGY STAR Freezer	Standard Freezer	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Warehouse	Freezers	Freezer - ENERGY STAR	ENERGY STAR Freezer	Standard Freezer	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Warehouse	Freezers	Freezer - Standard	Standard Freezer	Standard Freezer	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Warehouse	Freezers	Freezer - Standard	Standard Freezer	Standard Freezer	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Warehouse	HVAC Aux	ECM Motor	Central Air Conditioner ECM Fan	Standard Motor	Per ECM	Existing	1,699	15	\$200	54%	1,671
Warehouse	HVAC Aux	ECM Motor	Central Air Conditioner ECM Fan	Standard Motor	Per ECM	New	1,074	15	\$200	79%	90
Warehouse	HVAC Aux	ECM Motor	Electric Furnace ECM Fan	Standard Motor	Per ECM	Existing	1,699	15	\$200	4%	114
Warehouse	HVAC Aux	ECM Motor	Electric Furnace ECM Fan	Standard Motor	Per ECM	New	1,074	15	\$200	5%	6
Warehouse	HVAC Aux	ECM Motor	Gas Furnace ECM Fan (CEE Air Handling Ratio < 0.02)	Standard Motor	Per ECM	Existing	1,699	15	\$200	56%	1,716

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Warehouse	HVAC Aux	ECM Motor	Gas Furnace ECM Fan (CEE Air Handling Ratio < 0.02)	Standard Motor	Per ECM	New	1,074	15	\$200	81%	92
Warehouse	HVAC Aux	HVAC Auxillary - Standard Equipment	Standard HVAC Auxillary	Standard HVAC Auxillary	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Warehouse	HVAC Aux	HVAC Auxillary - Standard Equipment	Standard HVAC Auxillary	Standard HVAC Auxillary	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	Existing	75	15	\$274	67%	0
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	New	75	15	\$274	67%	0
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	Existing	2,066	15	\$2,036	0%	1
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	New	518	15	\$2,036	9%	0
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	Existing	518	15	\$678	9%	0
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	New	1,143	15	\$678	1%	0
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	Existing	5,959	15	\$4,197	0%	0
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	New	2,066	15	\$4,197	0%	0
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	Existing	1,143	15	\$1,375	1%	2
Warehouse	HVAC Aux	Motor - Enhanced (Ultra-PE)	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	NEMA Qualifying Standard Motor	Per Motor	New	5,959	15	\$1,375	0%	0
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 1-15 HP	Constant Speed Motor	Per Building	Existing	5,200	15	\$1,151	67%	6,339
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 1-15 HP	Constant Speed Motor	Per Building	New	3,288	15	\$1,151	67%	234
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 125-200 HP	Constant Speed Motor	Per Building	Existing	5,200	15	\$540	1%	58
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 125-200 HP	Constant Speed Motor	Per Building	New	3,288	15	\$540	1%	2
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 20-40 HP	Constant Speed Motor	Per Building	Existing	5,200	15	\$667	4%	408
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 20-40 HP	Constant Speed Motor	Per Building	New	3,288	15	\$667	4%	15
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 250-500 HP	Constant Speed Motor	Per Building	Existing	5,200	15	\$410	0%	22
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 250-500 HP	Constant Speed Motor	Per Building	New	3,288	15	\$410	0%	1
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 50-100 HP	Constant Speed Motor	Per Building	Existing	5,200	15	\$821	1%	129
Warehouse	HVAC Aux	Variable Frequency Drive	Variable Speed Drive Control, 50-100 HP	Constant Speed Motor	Per Building	New	3,288	15	\$821	1%	5
Warehouse	Heat Pump	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.32	7	\$1	90%	0
Warehouse	Heat Pump	Cool Roofs	ENERGY STAR Cool Roof - Reflect Material (Reflectivity = 0.55)	Standard Roof	Per Roof Area SqFt	Existing	0.04	15	\$0.68	93%	0
Warehouse	Heat Pump	Cool Roofs	ENERGY STAR Cool Roof - Reflect Material (Reflectivity = 0.55)	Standard Roof	Per Roof Area SqFt	New	0.02	15	\$0.68	93%	0
Warehouse	Heat Pump	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	9,720	5	\$5,859	33%	0
Warehouse	Heat Pump	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	9,133	5	\$5,859	33%	0
Warehouse	Heat Pump	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	14,580	5	\$4,709	6%	0
Warehouse	Heat Pump	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	296	20	\$477	76%	0
Warehouse	Heat Pump	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	296	20	\$477	76%	0
Warehouse	Heat Pump	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	131	20	\$60	62%	58

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Warehouse	Heat Pump	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	131	20	\$60	62%	3
Warehouse	Heat Pump	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.07	18	\$0.23	38%	0
Warehouse	Heat Pump	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	75%	0
Warehouse	Heat Pump	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.02	30	\$10	75%	0
Warehouse	Heat Pump	Heat Pump - Below Standard	Below Standard Air Source Heat Pump 9.0 EER and 2.8 COP, = 135 and < 240 kBtuh	Below Standard Air Source Heat Pump 9.0 EER and 2.8 COP, = 135 and < 240 kBtuh	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Warehouse	Heat Pump	Heat Pump - Below Standard	Below Standard Air Source Heat Pump 9.0 EER and 2.8 COP, = 135 and < 240 kBtuh	Below Standard Air Source Heat Pump 9.0 EER and 2.8 COP, = 135 and < 240 kBtuh	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Warehouse	Heat Pump	Heat Pump - ENERGY STAR	ENERGY STAR Ground Source Heat Pump 16.2 EER and 3.6 COP, = 135 and < 240 kBtuh	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Per Building SqFt	Existing	0.38	15	\$11	5%	0
Warehouse	Heat Pump	Heat Pump - ENERGY STAR	ENERGY STAR Ground Source Heat Pump 16.2 EER and 3.6 COP, = 135 and < 240 kBtuh	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Per Building SqFt	New	0.34	15	\$7	5%	0
Warehouse	Heat Pump	Heat Pump - High Efficiency	High Efficiency Air Source Heat Pump 11.1 EER and 3.3 COP, = 135 and < 240 kBtuh	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Per Building SqFt	Existing	0.08	15	\$0.10	100%	0
Warehouse	Heat Pump	Heat Pump - High Efficiency	High Efficiency Air Source Heat Pump 11.1 EER and 3.3 COP, = 135 and < 240 kBtuh	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Per Building SqFt	New	0.07	15	\$0.10	100%	0
Warehouse	Heat Pump	Heat Pump - Premium Efficiency	Premium Efficiency Water Source Heat Pump 12.0 EER and 4.2 COP, = 135 and < 240 kBtuh	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Per Building SqFt	Existing	0.57	15	\$0.55	5%	83
Warehouse	Heat Pump	Heat Pump - Premium Efficiency	Premium Efficiency Water Source Heat Pump 12.0 EER and 4.2 COP, = 135 and < 240 kBtuh	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Per Building SqFt	New	0.55	15	\$0.63	5%	10
Warehouse	Heat Pump	Heat Pump - Standard	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Warehouse	Heat Pump	Heat Pump - Standard	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Federal Standard Air Source Heat Pump 10.6 EER and 3.2 COP, = 135 and < 240 kBtuh	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Warehouse	Heat Pump	Heat Pump - Variable Refrigerant Flow System	Variable Refrigerant Flow System (VRF) - Heat Pump	Packaged VAV With Electric Reheat	Per Ton	Existing	513	15	\$540	33%	0
Warehouse	Heat Pump	Heat Pump - Variable Refrigerant Flow System	Variable Refrigerant Flow System (VRF) - Heat Pump	Packaged VAV With Electric Reheat	Per Ton	New	482	15	\$540	81%	0
Warehouse	Heat Pump	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	5.37	13	\$0.38	9%	89
Warehouse	Heat Pump	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	1.40	20	\$2	15%	0
Warehouse	Heat Pump	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.29	25	\$1	29%	0
Warehouse	Heat Pump	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.19	25	\$1	13%	0
Warehouse	Heat Pump	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.58	25	\$1	33%	0
Warehouse	Heat Pump	Package Terminal - Heat Pump	High Efficiency Package Terminal Air Conditioner	Federal Standard Equipment	Per Ton	Existing	70	15	\$150	10%	0
Warehouse	Heat Pump	Package Terminal - Heat Pump	High Efficiency Package Terminal Air Conditioner	Federal Standard Equipment	Per Ton	New	70	15	\$150	10%	0
Warehouse	Heat Pump	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.42	7	\$0.30	90%	0
Warehouse	Heat Pump	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	1,458	15	\$138	93%	433
Warehouse	Heat Pump	Tune-up - Air Source Heat Pump	Air Source Heat Pump Maintenance (Tune-up)	Unmaintained Air Source Heat Pump	Per Ton	Existing	135	3	\$48	48%	0
Warehouse	Heat Pump	Tune-up - Ground Source Heat Pump	Ground Source Heat Pump Maintenance (Tune-up)	Unmaintained Ground Source Heat Pump	Per Ton	Existing	135	3	\$48	48%	0

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Warehouse	Heat Pump	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	1.22	25	\$3	53%	0
Warehouse	Heat Pump	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	1.22	25	\$3	60%	0
Warehouse	Heat Pump	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	1.27	25	\$27	10%	0
Warehouse	Heat Pump	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.78	25	\$2	12%	0
Warehouse	Heat Pump	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.78	25	\$2	14%	0
Warehouse	Heat Pump	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	3.89	25	\$42	12%	0
Warehouse	Lighting	Bi-Level Control, Stairwell Lighting	Bi-Level Stairwell Occupancy Sensor Control, 50% Lighting Power During Unoccupied Time	Continuous Full Power Lighting in Stairways	Per Stairwell Lighting Control	Existing	60	9	\$107	68%	0
Warehouse	Lighting	Bi-Level Control, Stairwell Lighting	Bi-Level Stairwell Occupancy Sensor Control, 50% Lighting Power During Unoccupied Time	Continuous Full Power Lighting in Stairways	Per Stairwell Lighting Control	New	40	9	\$107	68%	0
Warehouse	Lighting	Ceiling Fans	ENERGY STAR Ceiling Fans with Light Kit	Standard Ceiling Fan	Per Ceiling Fan	Existing	98	10	\$119	85%	0
Warehouse	Lighting	Ceiling Fans	ENERGY STAR Ceiling Fans with Light Kit	Standard Ceiling Fan	Per Ceiling Fan	New	98	10	\$119	85%	0
Warehouse	Lighting	Daylighting Controls	Continuous Dimming, Fluorescent Fixtures (Day-Lighting)	No Dimming Controls	Per Applicable SQFT of Dimmable Perimeter Area of Building	Existing	2.12	9	\$1	34%	13,607
Warehouse	Lighting	Daylighting Controls	Continuous Dimming, Fluorescent Fixtures (Day-Lighting)	No Dimming Controls	Per Applicable SQFT of Dimmable Perimeter Area of Building	New	1.42	13	\$1	0%	0
Warehouse	Lighting	Daylighting Controls	Dual Level Switches, Fluorescent Fixtures	No Dimming Controls	Per Applicable SQFT of Dimmable Perimeter Area of Building	Existing	0.87	9	\$0.83	34%	0
Warehouse	Lighting	Daylighting Controls	Dual Level Switches, Fluorescent Fixtures	No Dimming Controls	Per Applicable SQFT of Dimmable Perimeter Area of Building	New	0.58	13	\$0.83	0%	0
Warehouse	Lighting	Exit Sign - LED	LED Exit Signs	CFL Exit Sign	Per Exit Sign	Existing	175	11	\$68	60%	2,602
Warehouse	Lighting	Exit Sign - Photoluminescent	Photoluminescent Exit Sign	LED Exit Sign	Per Exit Sign	Existing	35	13	\$30	93%	809
Warehouse	Lighting	Exit Sign - Photoluminescent	Photoluminescent Exit Sign	LED Exit Sign	Per Exit Sign	New	35	13	\$30	93%	47
Warehouse	Lighting	LED Strip Lighting	LED Strip Lighting (Non-Refrigerated)	Fluorescent	Per Linear Foot of Lighting	Existing	0.56	11	\$2	78%	0
Warehouse	Lighting	LED Strip Lighting	LED Strip Lighting (Non-Refrigerated)	Fluorescent	Per Linear Foot of Lighting	New	0.56	11	\$2	78%	0
Warehouse	Lighting	LightLouver Daylighting System	LightLouver Daylighting System	No Daylight System	Per Linear Feet of Window	Existing	49	9	\$65	40%	0
Warehouse	Lighting	Lighting - CFL Lamp Package	ENERGY STAR CFL	EISA Incandescent	Per Building	Existing	11,367	2	\$69	68%	4,427
Warehouse	Lighting	Lighting - Clock/Timer	Lighting Clock/Timer Commercial grade	No Time Clock	Per Lighting Control	Existing	976	9	\$205	42%	6,335
Warehouse	Lighting	Lighting - Fluorescent High Performance Package	Fluorescent HP Lamps and Ballasts Packages	Standard Lighting	Per Lighting Package	Existing	6,134	13	\$10,680	90%	0
Warehouse	Lighting	Lighting - Fluorescent Reduced Wattage Package	Fluorescent RW Lamps and Ballasts Packages	Standard Lighting	Per Lighting Package	Existing	12,269	13	\$8,974	76%	20,352
Warehouse	Lighting	Lighting - High Bay Fluorescent High Output Package	High Bay Fluorescent HO Packages	Standard HID Lighting	Per Lighting Package	Existing	26,397	15	\$3,512	73%	15,510
Warehouse	Lighting	Lighting - High Bay LED Package	High Bay LED Package	Standard HID Lighting	Per Lighting Package	Existing	17,343	20	\$66,033	94%	0
Warehouse	Lighting	Lighting - High Intensity Discharge Package	High Efficiency Metal Halide Lighting Packages	Standard HID Lighting	Per Lighting Package	Existing	10,709	15	\$3,473	67%	0
Warehouse	Lighting	Lighting - Induction Lighting Package	Induction Lighting Package	Standard HID Lighting	Per Lighting Package	Existing	29,591	20	\$4,871	62%	39,884
Warehouse	Lighting	Lighting - LED Lamp Package	ENERGY STAR LED	EISA Incandescent	Per Lighting Package	Existing	13,694	11	\$3,242	73%	21,967
Warehouse	Lighting	Lighting - LPD Package	LPD Reduction Package 15%	LPD Code	Per Lighting Package	New	14,105	15	\$102	68%	336
Warehouse	Lighting	Lighting - LPD Package	LPD Reduction Package 25%	LPD Code	Per Lighting Package	New	23,508	15	\$2,298	71%	2,131

Table A.3.3. MidAm Commercial Electric Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (kWh)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (MWh)
Warehouse	Lighting	Lighting - Specialty Lamp Package	CFL and LED Specialty Lamp Package	Standard Incandescent	Per Lighting Package	Existing	208	3	\$13	81%	368
Warehouse	Lighting	Lighting - Standard	Standard Lighting	Standard Lighting	Per Building SqFt	Existing	0.00	14	\$0.00	100%	0
Warehouse	Lighting	Lighting - Standard	Standard Lighting	Standard Lighting	Per Building SqFt	New	0.00	14	\$0.00	100%	0
Warehouse	Lighting	Occupancy Sensor - High-Bay	Fixture-Mounted (Control > 150 Watts)	No Sensor	Per Lighting Control	Existing	598	14	\$225	31%	14,040
Warehouse	Lighting	Occupancy Sensor - High-Bay	Fixture-Mounted (Control > 150 Watts)	No Sensor	Per Lighting Control	New	401	14	\$225	31%	549
Warehouse	Lighting	Occupancy Sensor - Wall or Ceiling	Wall or Ceiling-Mounted (Control > 400 Watts)	No Sensor	Per Lighting Control	Existing	27	14	\$225	43%	0
Warehouse	Lighting	Occupancy Sensor - Wall or Ceiling	Wall or Ceiling-Mounted (Control > 400 Watts)	No Sensor	Per Lighting Control	New	18	14	\$225	43%	0
Warehouse	Other	Compressed Air Optimization	Compressed Air - Leak Audit, New Compressors, Improved Controls	No Leak Audit And No New Compressor And No New Controls	Per Compressor HP	Existing	281	10	\$50	2%	0
Warehouse	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Warehouse	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Warehouse	Other	Transformers	Transformers, Three-Phase Low-Voltage Dry-Type CEE Tier 1	Standard Efficiency Transformer NEMA TP-1-2002	Per Transformer	Existing	399	30	\$851	50%	0
Warehouse	Other	Transformers	Transformers, Three-Phase Low-Voltage Dry-Type CEE Tier 1	Standard Efficiency Transformer NEMA TP-1-2002	Per Transformer	New	399	30	\$851	50%	0
Warehouse	Other Plug Load	All-In-One Office Equipment	All-In-One ENERGY STAR Office Equipment	Non-ENERGY STAR Features	Per All-in-One Device	Existing	200	6	\$218	68%	0
Warehouse	Other Plug Load	All-In-One Office Equipment	All-In-One ENERGY STAR Office Equipment	Non-ENERGY STAR Features	Per All-in-One Device	New	200	6	\$218	68%	0
Warehouse	Other Plug Load	Ceiling Fans	ENERGY STAR Ceiling Fans with Light Kit	Standard Ceiling Fan	Per Ceiling Fan	Existing	4.33	10	\$119	85%	0
Warehouse	Other Plug Load	Ceiling Fans	ENERGY STAR Ceiling Fans with Light Kit	Standard Ceiling Fan	Per Ceiling Fan	New	4.33	10	\$119	85%	0
Warehouse	Other Plug Load	Ceiling Fans	ENERGY STAR Ceiling Fans without Light Kit	Standard Ceiling Fan	Per Ceiling Fan	Existing	4.33	10	\$1	85%	16
Warehouse	Other Plug Load	Ceiling Fans	ENERGY STAR Ceiling Fans without Light Kit	Standard Ceiling Fan	Per Ceiling Fan	New	4.33	10	\$1	85%	1
Warehouse	Other Plug Load	Plug Load - Standard Equipment	Standard Plug Load	Standard Plug Load	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Warehouse	Other Plug Load	Plug Load - Standard Equipment	Standard Plug Load	Standard Plug Load	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Warehouse	Other Plug Load	Snow Melt System Control	Snow Melt System Control	Manual Control	Per Snow Melt Control	Existing	79	25	\$2,782	5%	0
Warehouse	Other Plug Load	Snow Melt System Control	Snow Melt System Control	Manual Control	Per Snow Melt Control	New	84	25	\$2,782	0%	0
Warehouse	Other Plug Load	Water Coolers	ENERGY STAR Water Cooler	Non-ENERGY STAR Water Cooler	Per Water Cooler	Existing	42	10	\$5	56%	52
Warehouse	Other Plug Load	Water Coolers	ENERGY STAR Water Cooler	Non-ENERGY STAR Water Cooler	Per Water Cooler	New	45	10	\$5	56%	3
Warehouse	Photo Copiers	Photo Copier - ENERGY STAR	ENERGY STAR Photo Copier	Standard Photo Copier	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Warehouse	Photo Copiers	Photo Copier - ENERGY STAR	ENERGY STAR Photo Copier	Standard Photo Copier	Per Building SqFt	New	0.00	6	\$0.00	100%	0
Warehouse	Photo Copiers	Photo Copiers - Standard	Standard Photo Copier	Standard Photo Copier	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Warehouse	Photo Copiers	Photo Copiers - Standard	Standard Photo Copier	Standard Photo Copier	Per Building SqFt	New	0.00	6	\$0.00	100%	0
Warehouse	Printers	Printers - ENERGY STAR	ENERGY STAR Printers	Standard Printers	Per Building SqFt	Existing	0.00	6	\$0.00	100%	525
Warehouse	Printers	Printers - ENERGY STAR	ENERGY STAR Printers	Standard Printers	Per Building SqFt	New	0.00	6	\$0.00	100%	36
Warehouse	Printers	Printers - Standard	Standard Printers	Standard Printers	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Warehouse	Printers	Printers - Standard	Standard Printers	Standard Printers	Per Building SqFt	New	0.00	6	\$0.00	100%	0
Warehouse	Refrigerators	Refrigerator - 2014 Federal Standard	2014 Standard Refrigerator	Standard Refrigerator	Per Building SqFt	Existing	0.00	13	\$0.01	100%	0

Table A.3.3. MidAm Commercial Electric Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (kWh)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (MWh)
Warehouse	Refrigerators	Refrigerator - 2014 Federal Standard	2014 Standard Refrigerator	Standard Refrigerator	Per Building SqFt	New	0.00	13	\$0.01	100%	0
Warehouse	Refrigerators	Refrigerator - Below Standard	Below Standard Refrigerator	Below Standard Refrigerator	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Warehouse	Refrigerators	Refrigerator - Below Standard	Below Standard Refrigerator	Below Standard Refrigerator	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Warehouse	Refrigerators	Refrigerator - CEE Tier 1	CEE Tier 1 Refrigerator	Standard Refrigerator	Per Building SqFt	Existing	0.00	13	\$0.02	100%	0
Warehouse	Refrigerators	Refrigerator - CEE Tier 1	CEE Tier 1 Refrigerator	Standard Refrigerator	Per Building SqFt	New	0.00	13	\$0.02	100%	0
Warehouse	Refrigerators	Refrigerator - CEE Tier 2	CEE Tier 2 Refrigerator	Standard Refrigerator	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Warehouse	Refrigerators	Refrigerator - CEE Tier 2	CEE Tier 2 Refrigerator	Standard Refrigerator	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Warehouse	Refrigerators	Refrigerator - ENERGY STAR	ENERGY STAR Refrigerator	Standard Refrigerator	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Warehouse	Refrigerators	Refrigerator - ENERGY STAR	ENERGY STAR Refrigerator	Standard Refrigerator	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Warehouse	Refrigerators	Refrigerator - Federal Standard	Standard Refrigerator	Standard Refrigerator	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Warehouse	Refrigerators	Refrigerator - Federal Standard	Standard Refrigerator	Standard Refrigerator	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Warehouse	Servers	Server - ENERGY STAR	ENERGY STAR Server	Standard Server	Per Building SqFt	Existing	0.00	9	\$0.00	100%	217
Warehouse	Servers	Server - ENERGY STAR	ENERGY STAR Server	Standard Server	Per Building SqFt	New	0.00	9	\$0.00	100%	18
Warehouse	Servers	Server - Standard	Standard Server	Standard Server	Per Building SqFt	Existing	0.00	9	\$0.00	100%	0
Warehouse	Servers	Server - Standard	Standard Server	Standard Server	Per Building SqFt	New	0.00	9	\$0.00	100%	0
Warehouse	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	27,633	5	\$2,629	33%	734
Warehouse	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	28,269	5	\$2,929	33%	45
Warehouse	Space Heat	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	41,449	5	\$4,709	6%	199
Warehouse	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	488	20	\$477	76%	0
Warehouse	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	488	20	\$477	76%	0
Warehouse	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	217	20	\$60	62%	49
Warehouse	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	217	20	\$60	62%	3
Warehouse	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.22	18	\$0.23	38%	0
Warehouse	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.74	30	\$10	75%	0
Warehouse	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.76	30	\$10	75%	0
Warehouse	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	16	13	\$0.38	9%	144
Warehouse	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	4.00	20	\$2	15%	133
Warehouse	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.47	25	\$1	29%	0
Warehouse	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.31	25	\$1	13%	0
Warehouse	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.97	25	\$1	33%	0
Warehouse	Space Heat	Space Heat - Standard	Standard Space Heat	Standard Space Heat	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Warehouse	Space Heat	Space Heat - Standard	Standard Space Heat	Standard Space Heat	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Warehouse	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	4,144	15	\$138	93%	634

Table A.3.3. MidAm Commercial Electric Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (kWh)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (MWh)
Warehouse	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	2.01	25	\$3	53%	0
Warehouse	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	2.01	25	\$3	60%	0
Warehouse	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	2.09	25	\$27	10%	0
Warehouse	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	1.28	25	\$2	12%	0
Warehouse	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	1.28	25	\$2	14%	0
Warehouse	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	6.42	25	\$42	12%	0
Warehouse	Vending Machines	Vending Machine - Controller	Refrigerated Vending Machine Controller	No Controls	Per Vending Machine	Existing	1,394	3	\$238	25%	335
Warehouse	Vending Machines	Vending Machine - Controller	Refrigerated Vending Machine Controller	No Controls	Per Vending Machine	New	1,394	3	\$238	25%	17
Warehouse	Vending Machines	Vending Machine - ENERGY STAR	ENERGY STAR Vending Machine	Standard Vending Machine	Per Building SqFt	Existing	0.01	10	\$0.00	100%	834
Warehouse	Vending Machines	Vending Machine - ENERGY STAR	ENERGY STAR Vending Machine	Standard Vending Machine	Per Building SqFt	New	0.01	10	\$0.00	100%	73
Warehouse	Vending Machines	Vending Machine - Standard	Standard Vending Machine	Standard Vending Machine	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Warehouse	Vending Machines	Vending Machine - Standard	Standard Vending Machine	Standard Vending Machine	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Warehouse	Water Heat	Desuperheaters - Air Conditioner	Add-on Desuperheaters to Air Conditioner	No Desuperheater	Per Desuperheater	Existing	151	10	\$600	63%	0
Warehouse	Water Heat	Desuperheaters - Air Source Heat Pump	Add-on Desuperheaters to Air Source Heat Pump	No Desuperheater	Per Desuperheater	Existing	948	10	\$600	2%	12
Warehouse	Water Heat	Desuperheaters - Ground Source Heat Pump	Add-on Desuperheaters to Ground Source Heat Pump	No Desuperheater	Per Desuperheater	Existing	948	10	\$600	0%	0
Warehouse	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	155	11	\$1,067	10%	0
Warehouse	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	155	11	\$1,067	10%	0
Warehouse	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	60	11	\$272	8%	0
Warehouse	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	60	11	\$272	8%	0
Warehouse	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	948	40	\$833	60%	546
Warehouse	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	948	40	\$666	83%	35
Warehouse	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	49	10	\$4	67%	133
Warehouse	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	29	10	\$196	90%	0
Warehouse	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	29	10	\$196	90%	0
Warehouse	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	5.92	13	\$2	56%	26
Warehouse	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	189	7	\$62	5%	8
Warehouse	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	644	4	\$102	35%	191

Table A.3.3. MidAm Commercial Electric Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (kWh)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (MWh)
Warehouse	Water Heat	Water Heating - ENERGY STAR	ENERGY STAR Heat Pump Water Heater EF = 2.0	Standard Water Heater EF = 0.92	Per Building SqFt	Existing	0.06	13	\$0.02	75%	1,147
Warehouse	Water Heat	Water Heating - ENERGY STAR	ENERGY STAR Heat Pump Water Heater EF = 2.0	Standard Water Heater EF = 0.92	Per Building SqFt	New	0.06	13	\$0.02	75%	120
Warehouse	Water Heat	Water Heating - Storage 2015 Standard	2015 Standard Water Heater EF = 0.95	Standard Water Heater EF = 0.92	Per Building SqFt	Existing	0.00	13	\$0.00	100%	19
Warehouse	Water Heat	Water Heating - Storage 2015 Standard	2015 Standard Water Heater EF = 0.95	Standard Water Heater EF = 0.92	Per Building SqFt	New	0.00	13	\$0.00	100%	2
Warehouse	Water Heat	Water Heating - Storage Below Standard	Below Standard Water Heater EF = 0.86	Below Standard Water Heater EF = 0.86	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heating - Storage Below Standard	Below Standard Water Heater EF = 0.86	Below Standard Water Heater EF = 0.86	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heating - Storage Standard	Standard Water Heater EF = 0.92	Standard Water Heater EF = 0.92	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heating - Storage Standard	Standard Water Heater EF = 0.92	Standard Water Heater EF = 0.92	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heating - Tankless	Tankless Water Heater EF = 0.95	Standard Water Heater EF = 0.92	Per Building SqFt	Existing	0.00	13	\$0.00	0%	0
Warehouse	Water Heat	Water Heating - Tankless	Tankless Water Heater EF = 0.95	Standard Water Heater EF = 0.92	Per Building SqFt	New	0.00	13	\$0.00	0%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Convenience	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	Existing	657	10	\$200	9%	0
Convenience	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	New	657	10	\$200	9%	0
Convenience	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	Existing	152	12	\$400	75%	0
Convenience	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	New	152	12	\$400	75%	0
Convenience	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	Existing	69	10	\$2,696	4%	0
Convenience	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	New	71	10	\$2,696	4%	0
Convenience	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Convenience	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Convenience	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	Existing	252	12	\$1,057	25%	0
Convenience	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	New	252	12	\$1,057	25%	0
Convenience	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	Existing	74	12	\$1,165	19%	0
Convenience	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	New	74	12	\$1,165	19%	0
Convenience	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	Existing	533	12	\$2,075	11%	0
Convenience	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	New	533	12	\$2,075	11%	0
Convenience	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Convenience	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Convenience	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.05	7	\$1	90%	0
Convenience	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Convenience	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Convenience	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	1
Convenience	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	0
Convenience	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Convenience	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	88	10	\$5,450	64%	0
Convenience	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	71	10	\$5,450	64%	0
Convenience	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.16	100%	0
Convenience	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.16	100%	0
Convenience	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.08	20	\$0.25	100%	0
Convenience	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.25	100%	0
Convenience	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.09	20	\$0.35	100%	0
Convenience	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.35	100%	0
Convenience	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.10	20	\$0.45	100%	4
Convenience	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.08	20	\$0.45	100%	0
Convenience	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Convenience	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Convenience	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Convenience	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Convenience	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.05	30	\$10	74%	0
Convenience	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.04	30	\$10	74%	0
Convenience	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.51	13	\$0.38	51%	6
Convenience	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	Existing	2,000	13	\$502	3%	0
Convenience	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	New	2,000	13	\$502	3%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Convenience	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.28	20	\$2	15%	0
Convenience	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Convenience	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Convenience	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Convenience	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Convenience	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Convenience	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.08	7	\$0.29	90%	25
Convenience	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	58	15	\$138	76%	0
Convenience	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtu	Existing	0.48	3	\$0.75	48%	0
Convenience	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	47%	0
Convenience	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	52%	0
Convenience	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	9%	0
Convenience	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	20%	0
Convenience	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	23%	0
Convenience	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	20%	0
Convenience	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	5%	0
Convenience	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	5%	0
Convenience	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	4%	0
Convenience	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	4%	0
Convenience	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	142	14	\$442	0%	0
Convenience	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	142	14	\$442	0%	0
Convenience	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	97	14	\$307	0%	0
Convenience	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	97	14	\$307	0%	0
Convenience	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	111	40	\$833	60%	5

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Convenience	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	111	40	\$666	83%	0
Convenience	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	17	10	\$4	63%	0
Convenience	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	Existing	18	5	\$39	8%	0
Convenience	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	New	18	5	\$39	8%	0
Convenience	Water Heat	Low-Flow Spray Heads	1.6 GPM (Code)	Existing Spray Head (2.5 GPM)	Per Spray Head	Existing	27	5	\$30	5%	0
Convenience	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	6.97	10	\$196	90%	0
Convenience	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	6.95	10	\$196	90%	0
Convenience	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.02	13	\$0.03	100%	0
Convenience	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.02	13	\$0.03	100%	0
Convenience	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.00	100%	0
Convenience	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.00	100%	0
Convenience	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Convenience	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Convenience	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.29	100%	0
Convenience	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.29	100%	0
Convenience	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	0.69	13	\$2	52%	0
Convenience	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Convenience	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Convenience	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	22	7	\$62	5%	0
Convenience	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.12	100%	6
Convenience	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.12	100%	0
Convenience	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	75	4	\$102	35%	1
Education	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	Existing	657	10	\$200	14%	0
Education	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	New	657	10	\$200	14%	0
Education	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	Existing	152	12	\$400	35%	13
Education	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	New	152	12	\$400	35%	0
Education	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	Existing	738	10	\$2,696	4%	5
Education	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	New	760	10	\$2,696	4%	0
Education	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Education	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Education	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	Existing	252	12	\$1,057	25%	0
Education	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	New	252	12	\$1,057	25%	0
Education	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	Existing	74	12	\$1,165	49%	0
Education	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	New	74	12	\$1,165	49%	0
Education	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	Existing	533	12	\$2,075	26%	23
Education	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	New	533	12	\$2,075	26%	1
Education	Dryer	Dryer - High Efficiency	High Efficiency Dryer	Standard Dryer	Per Building SqFt	Existing	0.00	12	\$0.07	10%	0
Education	Dryer	Dryer - High Efficiency	High Efficiency Dryer	Standard Dryer	Per Building SqFt	New	0.00	12	\$0.07	10%	0
Education	Dryer	Dryer - Standard	Standard Dryer	Standard Dryer	Per Building SqFt	Existing	0.00	12	\$0.07	100%	0
Education	Dryer	Dryer - Standard	Standard Dryer	Standard Dryer	Per Building SqFt	New	0.00	12	\$0.07	100%	0
Education	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Education	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Education	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.01	20	\$0.08	100%	0
Education	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	New	0.01	20	\$0.08	100%	0
Education	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	Existing	0.02	20	\$0.22	100%	0
Education	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	New	0.02	20	\$0.22	100%	0
Education	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	Existing	0.05	20	\$0.45	100%	0
Education	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	New	0.05	20	\$0.45	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Education	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	Existing	0.07	20	\$0.63	100%	0
Education	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	New	0.07	20	\$0.63	100%	0
Education	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	Existing	0.08	20	\$0.72	100%	913
Education	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	New	0.07	20	\$0.72	100%	71
Education	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Education	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Education	Space Heat	Boiler - Economizer	Economizer	No Economizer	Per Boiler HP	Existing	31	20	\$86	75%	0
Education	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Education	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Education	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.09	20	\$4	49%	0
Education	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	New	0.09	20	\$4	49%	0
Education	Space Heat	Boiler - Pipe Insulation	Code (2" of Insulation)	Existing Insulation (1" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.37	20	\$15	15%	0
Education	Space Heat	Boiler - Turbulators	Boiler Turbulator	No Turbulator	Per Tube	Existing	6.56	20	\$15	55%	0
Education	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	Existing	974	10	\$2,060	64%	52
Education	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	New	935	10	\$2,060	77%	35
Education	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.06	7	\$1	90%	0
Education	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.06	7	\$1	90%	0
Education	Space Heat	Demand Controlled Ventilation	Demand Controlled Ventilation - DCV (Occupancy Sensors / CO2 Sensors)	Constant Ventilation	Per Sensor	Existing	74	15	\$450	60%	2,585
Education	Space Heat	Demand Controlled Ventilation	Demand Controlled Ventilation - DCV (Occupancy Sensors / CO2 Sensors)	Constant Ventilation	Per Sensor	Existing	79	15	\$450	60%	439
Education	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	1,279	5	\$8,259	75%	0
Education	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	1,227	5	\$8,259	75%	0
Education	Space Heat	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	1,279	5	\$14,606	43%	0
Education	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Education	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Education	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	19
Education	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	0
Education	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Education	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	877	10	\$5,450	64%	0
Education	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	936	10	\$5,450	64%	0
Education	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	841	10	\$5,450	64%	2
Education	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	876	10	\$5,450	64%	2
Education	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.11	100%	0
Education	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.11	100%	0
Education	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.08	20	\$0.18	100%	0
Education	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.18	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Education	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.09	20	\$0.24	100%	0
Education	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.08	20	\$0.24	100%	0
Education	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.10	20	\$0.32	100%	58
Education	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.09	20	\$0.32	100%	5
Education	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Education	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Education	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Education	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Education	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	74%	0
Education	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.05	30	\$10	74%	0
Education	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.04	30	\$10	74%	0
Education	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.04	30	\$10	74%	0
Education	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.37	13	\$0.38	9%	0
Education	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.40	13	\$0.38	9%	4
Education	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	Existing	660	13	\$502	3%	0
Education	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	New	660	13	\$502	3%	0
Education	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.28	20	\$2	15%	0
Education	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Education	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Education	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Education	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	Existing	232	15	\$885	0%	0
Education	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	New	223	15	\$857	0%	0
Education	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Education	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Education	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.07	7	\$0.29	90%	2,443
Education	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.08	7	\$0.29	90%	415
Education	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	146	15	\$138	35%	0
Education	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	156	15	\$138	35%	0
Education	Space Heat	Tune-up - Boiler Maintenance	Boiler Maintenance (Tune-up)	Unmaintained Boiler	Per kBtu	Existing	0.64	3	\$0.75	48%	15
Education	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtu	Existing	0.68	3	\$0.75	48%	3
Education	Space Heat	Variable Air-Volume Systems	Install Variable Air-Volume System	Constant Volume System	Per Sqft	Existing	0.06	15	\$3	62%	0
Education	Space Heat	Vent Damper	Automatic Air Flue Damper	No Damper	Per 200 kBtuH Boiler	Existing	103	12	\$318	21%	0
Education	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	53%	0
Education	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	59%	0
Education	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	10%	0
Education	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	12%	0
Education	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	14%	0
Education	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	12%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Education	Water Heat	Clothes Washer	Commercial Ozonating Clothes Washer	Standard Commercial Clothes Washer	Per Clothes Washer	Existing	104	10	\$5,944	10%	0
Education	Water Heat	Clothes Washer	Commercial Ozonating Clothes Washer	Standard Commercial Clothes Washer	Per Clothes Washer	New	104	10	\$5,944	10%	0
Education	Water Heat	Clothes Washer	Residential Grade, Clothes Washer Enhanced Efficiency MEF = 3.10 and WF = 3.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	86	11	\$789	33%	0
Education	Water Heat	Clothes Washer	Residential Grade, Clothes Washer Enhanced Efficiency MEF = 3.10 and WF = 3.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	86	11	\$789	33%	0
Education	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	62	11	\$391	31%	20
Education	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	62	11	\$391	31%	1
Education	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	69	11	\$565	29%	21
Education	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	69	11	\$565	29%	1
Education	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	53	11	\$134	28%	16
Education	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	53	11	\$134	28%	0
Education	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	62%	0
Education	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	62%	0
Education	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	52%	0
Education	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	52%	0
Education	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	103	14	\$442	28%	18
Education	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	103	14	\$442	28%	0
Education	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	70	14	\$307	33%	12
Education	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	70	14	\$307	33%	0
Education	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	96	40	\$833	60%	313
Education	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	95	40	\$666	83%	11

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Education	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	9	10	\$4	63%	0
Education	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	Existing	840	15	\$3,200	0%	0
Education	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	New	840	15	\$3,228	0%	0
Education	Water Heat	Low-Flow Showerheads	2.0 GPM	2.5 GPM Showerhead (Federal Code)	Per Showerhead	Existing	27	10	\$8	38%	0
Education	Water Heat	Low-Flow Showerheads	2.0 GPM	2.5 GPM Showerhead (Federal Code)	Per Showerhead	New	26	10	\$8	38%	0
Education	Water Heat	Low-Flow Showerheads	2.5 GPM Showerhead (Federal Code)	Existing Showerhead (4.5 GPM)	Per Showerhead	Existing	60	10	\$31	15%	0
Education	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	Existing	18	5	\$39	38%	0
Education	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	New	18	5	\$39	38%	0
Education	Water Heat	Low-Flow Spray Heads	1.6 GPM (Code)	Existing Spray Head (2.5 GPM)	Per Spray Head	Existing	27	5	\$30	25%	0
Education	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	2.70	10	\$196	71%	0
Education	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	2.69	10	\$196	71%	0
Education	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.00	100%	0
Education	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.00	100%	0
Education	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Education	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Education	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Education	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Education	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.03	13	\$0.03	100%	0
Education	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.03	13	\$0.03	100%	0
Education	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	1.54	13	\$2	52%	0
Education	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Education	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Education	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	19	7	\$62	5%	0
Education	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.03	13	\$0.01	100%	348
Education	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.03	13	\$0.01	100%	17
Education	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	65	4	\$102	15%	16
Grocery	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	Existing	657	10	\$200	27%	2
Grocery	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	New	657	10	\$200	27%	0
Grocery	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	Existing	305	12	\$400	75%	0
Grocery	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	New	305	12	\$400	75%	0
Grocery	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	Existing	4,750	10	\$2,696	4%	2
Grocery	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	New	4,886	10	\$2,696	4%	0
Grocery	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Grocery	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Grocery	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	Existing	504	12	\$1,057	25%	1
Grocery	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	New	504	12	\$1,057	25%	0
Grocery	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	Existing	148	12	\$1,165	34%	0
Grocery	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	New	148	12	\$1,165	34%	0
Grocery	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	Existing	1,066	12	\$2,075	19%	2
Grocery	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	New	1,066	12	\$2,075	19%	0
Grocery	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Grocery	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Grocery	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.01	20	\$0.10	100%	0
Grocery	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	New	0.01	20	\$0.10	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Grocery	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	Existing	0.03	20	\$0.27	100%	0
Grocery	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	New	0.02	20	\$0.27	100%	0
Grocery	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	Existing	0.05	20	\$0.55	100%	0
Grocery	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	New	0.04	20	\$0.55	100%	0
Grocery	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	Existing	0.07	20	\$0.77	100%	0
Grocery	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	New	0.06	20	\$0.77	100%	0
Grocery	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	Existing	0.08	20	\$0.89	100%	0
Grocery	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	New	0.07	20	\$0.89	100%	0
Grocery	Space Heat	Boiler - Below Standard	Boiler - Below Standard	Below Standard Boiler	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Grocery	Space Heat	Boiler - Below Standard	Boiler - Below Standard	Below Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Grocery	Space Heat	Boiler - Economizer	Economizer	No Economizer	Per Boiler HP	Existing	29	20	\$86	41%	0
Grocery	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Grocery	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Grocery	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.08	20	\$4	49%	0
Grocery	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	New	0.07	20	\$4	49%	0
Grocery	Space Heat	Boiler - Pipe Insulation	Code (2" of Insulation)	Existing Insulation (1" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.33	20	\$15	15%	0
Grocery	Space Heat	Boiler - Turbulators	Boiler Turbulator	No Turbulator	Per Tube	Existing	4.43	20	\$15	55%	0
Grocery	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	Existing	658	10	\$2,060	64%	0
Grocery	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	New	544	10	\$2,060	77%	0
Grocery	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.05	7	\$1	90%	0
Grocery	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.05	7	\$1	90%	0
Grocery	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	864	5	\$5,556	34%	0
Grocery	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	714	5	\$5,556	34%	0
Grocery	Space Heat	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	864	5	\$9,587	55%	0
Grocery	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Grocery	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Grocery	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	7
Grocery	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	0
Grocery	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	10
Grocery	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	590	10	\$5,450	64%	0
Grocery	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	592	10	\$5,450	64%	0
Grocery	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	479	10	\$5,450	64%	0
Grocery	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	489	10	\$5,450	64%	0
Grocery	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.14	100%	0
Grocery	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.14	100%	0
Grocery	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.08	20	\$0.22	100%	0
Grocery	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.22	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Grocery	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.09	20	\$0.30	100%	0
Grocery	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.30	100%	0
Grocery	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.10	20	\$0.39	100%	103
Grocery	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.08	20	\$0.39	100%	7
Grocery	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Grocery	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Grocery	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Grocery	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Grocery	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.05	30	\$10	74%	0
Grocery	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.05	30	\$10	74%	0
Grocery	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.04	30	\$10	74%	0
Grocery	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.04	30	\$10	74%	0
Grocery	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.66	13	\$0.38	9%	28
Grocery	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.66	13	\$0.38	9%	0
Grocery	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	Existing	2,000	13	\$502	3%	24
Grocery	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	New	2,000	13	\$502	3%	1
Grocery	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.28	20	\$2	15%	28
Grocery	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Grocery	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Grocery	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Grocery	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	Existing	205	15	\$790	0%	0
Grocery	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	New	169	15	\$675	0%	0
Grocery	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Grocery	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Grocery	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.08	7	\$0.29	90%	630
Grocery	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.08	7	\$0.29	90%	0
Grocery	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	196	15	\$138	76%	11
Grocery	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	197	15	\$138	76%	0
Grocery	Space Heat	Tune-up - Boiler Maintenance	Boiler Maintenance (Tune-up)	Unmaintained Boiler	Per kBtuH	Existing	0.57	3	\$0.75	48%	0
Grocery	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtuH	Existing	0.56	3	\$0.75	48%	5
Grocery	Space Heat	Vent Damper	Automatic Air Flue Damper	No Damper	Per 200 kBtuH Boiler	Existing	91	12	\$318	21%	0
Grocery	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	31%	0
Grocery	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	35%	0
Grocery	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	6%	0
Grocery	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	41%	0
Grocery	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	46%	0
Grocery	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	40%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Grocery	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	43%	0
Grocery	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	43%	0
Grocery	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	36%	0
Grocery	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	36%	0
Grocery	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	142	14	\$442	12%	3
Grocery	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	142	14	\$442	12%	0
Grocery	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	97	14	\$307	14%	2
Grocery	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	97	14	\$307	14%	0
Grocery	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	149	40	\$833	60%	82
Grocery	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	148	40	\$666	83%	3
Grocery	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	19	10	\$4	63%	0
Grocery	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	Existing	856	15	\$3,295	0%	0
Grocery	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	New	856	15	\$3,410	0%	0
Grocery	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	Existing	18	5	\$39	51%	0
Grocery	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	New	18	5	\$39	51%	0
Grocery	Water Heat	Low-Flow Spray Heads	1.6 GPM (Code)	Existing Spray Head (2.5 GPM)	Per Spray Head	Existing	27	5	\$30	33%	0
Grocery	Water Heat	Refrigeration with Heat Recovery	Heat Recovery from Refrigeration System. Applied to Water Heating Electric End Use	No Heat Recovery	Per sqft	Existing	0.04	16	\$0.91	50%	0
Grocery	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	7.77	10	\$196	90%	0
Grocery	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	7.75	10	\$196	90%	0
Grocery	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.02	13	\$0.00	100%	0
Grocery	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.02	13	\$0.00	100%	0
Grocery	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.00	100%	0
Grocery	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.00	100%	0
Grocery	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Grocery	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Grocery	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.05	100%	0
Grocery	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.05	100%	0
Grocery	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	2.59	13	\$2	52%	0
Grocery	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Grocery	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Grocery	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	29	7	\$62	5%	0
Grocery	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.02	100%	91
Grocery	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.02	100%	5
Grocery	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	101	4	\$102	50%	14
Health	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	Existing	657	10	\$200	14%	0
Health	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	New	657	10	\$200	14%	0
Health	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	Existing	305	12	\$400	50%	0
Health	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	New	305	12	\$400	50%	0
Health	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	Existing	1,632	10	\$2,696	4%	0
Health	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	New	1,682	10	\$2,696	4%	0
Health	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Health	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Health	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	Existing	504	12	\$1,057	25%	0
Health	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	New	504	12	\$1,057	25%	0
Health	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	Existing	148	12	\$1,165	34%	0
Health	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	New	148	12	\$1,165	34%	0
Health	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	Existing	1,066	12	\$2,075	19%	0
Health	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	New	1,066	12	\$2,075	19%	0
Health	Dryer	Dryer - High Efficiency	High Efficiency Dryer	Standard Dryer	Per Building SqFt	Existing	0.00	12	\$0.93	10%	0
Health	Dryer	Dryer - High Efficiency	High Efficiency Dryer	Standard Dryer	Per Building SqFt	New	0.00	12	\$0.93	10%	0
Health	Dryer	Dryer - Standard	Standard Dryer	Standard Dryer	Per Building SqFt	Existing	0.00	12	\$0.93	100%	0
Health	Dryer	Dryer - Standard	Standard Dryer	Standard Dryer	Per Building SqFt	New	0.00	12	\$0.93	100%	0
Health	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Health	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Health	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.01	20	\$0.04	100%	0
Health	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.04	100%	0
Health	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	Existing	0.02	20	\$0.13	100%	0
Health	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	New	0.02	20	\$0.13	100%	0
Health	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	Existing	0.05	20	\$0.27	100%	0
Health	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	New	0.04	20	\$0.27	100%	0
Health	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	Existing	0.06	20	\$0.38	100%	0
Health	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	New	0.05	20	\$0.38	100%	0
Health	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	Existing	0.07	20	\$0.42	100%	170
Health	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	New	0.06	20	\$0.42	100%	10
Health	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Health	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Health	Space Heat	Boiler - Economizer	Economizer	No Economizer	Per Boiler HP	Existing	15	20	\$86	61%	0
Health	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Health	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Health	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.15	20	\$4	49%	0
Health	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	New	0.12	20	\$4	49%	0
Health	Space Heat	Boiler - Pipe Insulation	Code (2" of Insulation)	Existing Insulation (1" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.60	20	\$15	15%	0
Health	Space Heat	Boiler - Turbulators	Boiler Turbulator	No Turbulator	Per Tube	Existing	5.76	20	\$15	55%	48
Health	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	Existing	1,713	10	\$2,060	64%	183
Health	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	New	1,432	10	\$2,060	77%	5
Health	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.05	7	\$1	90%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Health	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.05	7	\$1	90%	0
Health	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	1,124	5	\$13,562	42%	0
Health	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	939	5	\$13,562	42%	0
Health	Space Heat	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	1,124	5	\$24,455	55%	0
Health	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Health	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Health	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	4
Health	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	0
Health	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Health	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	770	10	\$5,450	64%	0
Health	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	844	10	\$5,450	64%	72
Health	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	644	10	\$5,450	64%	0
Health	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	695	10	\$5,450	64%	0
Health	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.06	100%	0
Health	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.06	100%	0
Health	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.10	100%	0
Health	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.10	100%	0
Health	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.08	20	\$0.14	100%	0
Health	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.14	100%	0
Health	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.09	20	\$0.18	100%	68
Health	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.08	20	\$0.18	100%	4
Health	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Health	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Health	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Health	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Health	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	74%	0
Health	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.05	30	\$10	74%	0
Health	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Health	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.04	30	\$10	74%	0
Health	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.44	13	\$0.38	9%	0
Health	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.48	13	\$0.38	9%	19
Health	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	Existing	1,400	13	\$502	3%	0
Health	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	New	1,400	13	\$502	3%	0
Health	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.27	20	\$2	15%	2
Health	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Health	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Health	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Health	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuh Boiler	Existing	370	15	\$313	0%	0
Health	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuh Boiler	New	309	15	\$265	0%	0
Health	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Health	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Health	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.07	7	\$0.29	90%	380
Health	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.08	7	\$0.29	90%	425
Health	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	128	15	\$138	76%	0
Health	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	140	15	\$138	76%	0
Health	Space Heat	Tune-up - Boiler Maintenance	Boiler Maintenance (Tune-up)	Unmaintained Boiler	Per kBtu	Existing	1.02	3	\$0.75	48%	3
Health	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtu	Existing	1.12	3	\$0.75	48%	4
Health	Space Heat	Variable Air-Volume Systems	Install Variable Air-Volume System	Constant Volume System	Per Sqft	Existing	0.06	15	\$3	65%	0
Health	Space Heat	Vent Damper	Automatic Air Flue Damper	No Damper	Per 200 kBtuh Boiler	Existing	164	12	\$318	21%	0
Health	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	53%	0
Health	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	59%	0
Health	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	10%	0
Health	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	12%	0
Health	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	14%	0
Health	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	12%	0
Health	Water Heat	Clothes Washer	Commercial Ozonating Clothes Washer	Standard Commercial Clothes Washer	Per Clothes Washer	Existing	224	10	\$5,944	14%	0
Health	Water Heat	Clothes Washer	Commercial Ozonating Clothes Washer	Standard Commercial Clothes Washer	Per Clothes Washer	New	224	10	\$5,944	14%	0
Health	Water Heat	Clothes Washer	Residential Grade, Clothes Washer Enhanced Efficiency MEF = 3.10 and WF = 3.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	86	11	\$789	33%	0
Health	Water Heat	Clothes Washer	Residential Grade, Clothes Washer Enhanced Efficiency MEF = 3.10 and WF = 3.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	86	11	\$789	33%	0
Health	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	62	11	\$391	31%	7
Health	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	62	11	\$391	31%	0
Health	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	69	11	\$565	29%	7
Health	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	69	11	\$565	29%	0
Health	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	53	11	\$134	28%	4

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Health	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	53	11	\$134	28%	0
Health	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	81%	0
Health	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	81%	0
Health	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	68%	0
Health	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	68%	0
Health	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	239	14	\$442	8%	3
Health	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	239	14	\$442	8%	0
Health	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	163	14	\$307	9%	3
Health	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	163	14	\$307	9%	0
Health	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	309	40	\$833	60%	222
Health	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	308	40	\$666	83%	8
Health	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	11	10	\$4	63%	0
Health	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	Existing	4,455	15	\$3,772	0%	0
Health	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	New	4,455	15	\$3,820	0%	0
Health	Water Heat	Low-Flow Showerheads	2.0 GPM	2.5 GPM Showerhead (Federal Code)	Per Showerhead	Existing	16	10	\$8	21%	0
Health	Water Heat	Low-Flow Showerheads	2.0 GPM	2.5 GPM Showerhead (Federal Code)	Per Showerhead	New	16	10	\$8	21%	0
Health	Water Heat	Low-Flow Showerheads	2.5 GPM Showerhead (Federal Code)	Existing Showerhead (4.5 GPM)	Per Showerhead	Existing	36	10	\$31	9%	25
Health	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	Existing	18	5	\$39	13%	0
Health	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	New	18	5	\$39	13%	0
Health	Water Heat	Low-Flow Spray Heads	1.6 GPM (Code)	Existing Spray Head (2.5 GPM)	Per Spray Head	Existing	27	5	\$30	8%	0
Health	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	3.31	10	\$196	86%	0
Health	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	3.30	10	\$196	86%	0
Health	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.03	13	\$0.00	100%	0
Health	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.03	13	\$0.00	100%	0
Health	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.00	100%	0
Health	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.00	100%	0
Health	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Health	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Health	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.07	13	\$0.07	100%	0
Health	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.07	13	\$0.07	100%	0
Health	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	4.64	13	\$2	52%	0
Health	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Health	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Health	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	61	7	\$62	5%	0
Health	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.07	13	\$0.02	100%	248
Health	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.07	13	\$0.02	100%	13
Health	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	210	4	\$102	75%	17
Large Office	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Large Office	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Large Office	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.03	100%	0
Large Office	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.03	100%	0
Large Office	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	Existing	0.02	20	\$0.08	100%	0
Large Office	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	New	0.02	20	\$0.08	100%	0
Large Office	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	Existing	0.04	20	\$0.18	100%	0
Large Office	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	New	0.03	20	\$0.18	100%	0
Large Office	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	Existing	0.05	20	\$0.25	100%	0
Large Office	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	New	0.05	20	\$0.25	100%	0
Large Office	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	Existing	0.06	20	\$0.29	100%	284
Large Office	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	New	0.05	20	\$0.29	100%	20
Large Office	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Large Office	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Large Office	Space Heat	Boiler - Economizer	Economizer	No Economizer	Per Boiler HP	Existing	45	20	\$86	74%	0
Large Office	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Large Office	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Large Office	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.18	20	\$4	49%	0
Large Office	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	New	0.15	20	\$4	49%	0
Large Office	Space Heat	Boiler - Pipe Insulation	Code (2" of Insulation)	Existing Insulation (1" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.71	20	\$15	15%	0
Large Office	Space Heat	Boiler - Turbulators	Boiler Turbulator	No Turbulator	Per Tube	Existing	16	20	\$15	55%	0
Large Office	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	Existing	2,480	10	\$2,060	64%	93
Large Office	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	New	2,175	10	\$2,060	77%	9
Large Office	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.04	7	\$1	90%	0
Large Office	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.04	7	\$1	90%	0
Large Office	Space Heat	Demand Controlled Ventilation	Demand Controlled Ventilation - DCV (Occupancy Sensors / CO2 Sensors)	Constant Ventilation	Per Sensor	Existing	58	15	\$450	43%	556
Large Office	Space Heat	Demand Controlled Ventilation	Demand Controlled Ventilation - DCV (Occupancy Sensors / CO2 Sensors)	Constant Ventilation	Per Sensor	Existing	62	15	\$450	43%	726
Large Office	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	3,255	5	\$24,507	51%	0
Large Office	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	2,854	5	\$24,507	51%	0
Large Office	Space Heat	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	3,255	5	\$44,782	51%	0
Large Office	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Large Office	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Large Office	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	5
Large Office	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	0
Large Office	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Large Office	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.05	20	\$0.04	100%	0
Large Office	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.04	100%	0
Large Office	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.07	100%	0
Large Office	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.07	100%	0
Large Office	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.10	100%	0
Large Office	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.10	100%	0
Large Office	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.13	100%	138
Large Office	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.13	100%	11
Large Office	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Large Office	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Large Office	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Large Office	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Large Office	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.03	30	\$10	74%	0
Large Office	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	74%	0
Large Office	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Large Office	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Large Office	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.50	13	\$0.38	9%	0
Large Office	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.54	13	\$0.38	9%	41
Large Office	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	Existing	1,040	13	\$502	3%	3
Large Office	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	New	1,040	13	\$502	3%	0
Large Office	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.22	20	\$2	15%	4
Large Office	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Large Office	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Large Office	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Large Office	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtu Boiler	Existing	438	15	\$1,205	0%	0
Large Office	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtu Boiler	New	384	15	\$1,096	0%	0
Large Office	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Large Office	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Large Office	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.06	7	\$0.29	90%	721
Large Office	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.06	7	\$0.29	90%	942
Large Office	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	148	15	\$138	79%	0
Large Office	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	160	15	\$138	79%	0
Large Office	Space Heat	Tune-up - Boiler Maintenance	Boiler Maintenance (Tune-up)	Unmaintained Boiler	Per kBtu	Existing	1.21	3	\$0.75	48%	6
Large Office	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtu	Existing	1.31	3	\$0.75	48%	8
Large Office	Space Heat	Variable Air-Volume Systems	Install Variable Air-Volume System	Constant Volume System	Per Sqft	Existing	0.05	15	\$3	62%	0
Large Office	Space Heat	Vent Damper	Automatic Air Flue Damper	No Damper	Per 200 kBtu Boiler	Existing	195	12	\$318	21%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Large Office	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	62%	0
Large Office	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	69%	0
Large Office	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	11%	0
Large Office	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	1%	0
Large Office	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	1%	0
Large Office	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	1%	0
Large Office	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	86%	0
Large Office	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	86%	0
Large Office	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	72%	0
Large Office	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	72%	0
Large Office	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	1,516	40	\$833	60%	317
Large Office	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	1,513	40	\$666	83%	11
Large Office	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	23	10	\$4	63%	0
Large Office	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuh Boiler	Existing	1,048	15	\$2,880	0%	0
Large Office	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuh Boiler	New	1,048	15	\$2,989	0%	0
Large Office	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	9	10	\$196	81%	0
Large Office	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	9	10	\$196	81%	0
Large Office	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.00	100%	0
Large Office	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.00	100%	0
Large Office	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Large Office	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Large Office	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Large Office	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Large Office	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.03	13	\$0.03	100%	0
Large Office	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.03	13	\$0.03	100%	0
Large Office	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	18	13	\$2	52%	0
Large Office	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Large Office	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Large Office	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	303	7	\$62	5%	0
Large Office	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.03	13	\$0.01	100%	355
Large Office	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.03	13	\$0.01	100%	18
Large Office	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	1,031	4	\$102	35%	39

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Large Retail	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Large Retail	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Large Retail	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.08	100%	0
Large Retail	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.08	100%	0
Large Retail	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	Existing	0.02	20	\$0.23	100%	0
Large Retail	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	New	0.01	20	\$0.23	100%	7
Large Retail	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	Existing	0.04	20	\$0.47	100%	0
Large Retail	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.47	100%	0
Large Retail	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	Existing	0.05	20	\$0.66	100%	361
Large Retail	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	New	0.01	20	\$0.66	100%	0
Large Retail	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	Existing	0.05	20	\$0.75	100%	0
Large Retail	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	New	0.02	20	\$0.75	100%	0
Large Retail	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Large Retail	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Large Retail	Space Heat	Boiler - Economizer	Economizer	No Economizer	Per Boiler HP	Existing	35	20	\$86	75%	0
Large Retail	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Large Retail	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Large Retail	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.06	20	\$4	49%	0
Large Retail	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	New	0.06	20	\$4	49%	0
Large Retail	Space Heat	Boiler - Pipe Insulation	Code (2" of Insulation)	Existing Insulation (1" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.26	20	\$15	15%	0
Large Retail	Space Heat	Boiler - Turbulators	Boiler Turbulator	No Turbulator	Per Tube	Existing	6.25	20	\$15	55%	126
Large Retail	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	Existing	928	10	\$2,060	64%	440
Large Retail	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	New	856	10	\$2,060	77%	15
Large Retail	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.04	7	\$1	90%	0
Large Retail	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.04	7	\$1	90%	0
Large Retail	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	1,219	5	\$9,117	75%	0
Large Retail	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	1,123	5	\$9,117	75%	0
Large Retail	Space Heat	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	1,219	5	\$16,201	85%	0
Large Retail	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Large Retail	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Large Retail	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	23
Large Retail	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	1
Large Retail	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	34
Large Retail	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	835	10	\$5,450	64%	0
Large Retail	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	770	10	\$5,450	64%	0
Large Retail	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.05	20	\$0.11	100%	0
Large Retail	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.11	100%	0
Large Retail	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.05	20	\$0.18	100%	0
Large Retail	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.18	100%	0
Large Retail	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.25	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Large Retail	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.25	100%	0
Large Retail	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.33	100%	364
Large Retail	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.33	100%	28
Large Retail	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Large Retail	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Large Retail	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Large Retail	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Large Retail	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.03	30	\$10	74%	0
Large Retail	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.03	30	\$10	74%	0
Large Retail	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Large Retail	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Large Retail	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.48	13	\$0.38	9%	0
Large Retail	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.50	13	\$0.38	9%	98
Large Retail	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	Existing	1,200	13	\$502	3%	9
Large Retail	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	New	1,200	13	\$502	3%	0
Large Retail	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.20	20	\$2	15%	98
Large Retail	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Large Retail	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Large Retail	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Large Retail	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	Existing	164	15	\$1,100	0%	0
Large Retail	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	New	152	15	\$1,036	0%	0
Large Retail	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Large Retail	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Large Retail	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.05	7	\$0.29	90%	933
Large Retail	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.06	7	\$0.29	90%	2,223
Large Retail	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	278	15	\$138	88%	0
Large Retail	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	293	15	\$138	88%	43
Large Retail	Space Heat	Tune-up - Boiler Maintenance	Boiler Maintenance (Tune-up)	Unmaintained Boiler	Per kBTU	Existing	0.45	3	\$0.75	48%	7
Large Retail	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBTU	Existing	0.48	3	\$0.75	48%	16
Large Retail	Space Heat	Variable Air-Volume Systems	Install Variable Air-Volume System	Constant Volume System	Per Sqft	Existing	0.04	15	\$3	65%	0
Large Retail	Space Heat	Vent Damper	Automatic Air Flue Damper	No Damper	Per 200 kBtuH Boiler	Existing	73	12	\$318	21%	0
Large Retail	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	59%	0
Large Retail	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	66%	0
Large Retail	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	11%	0
Large Retail	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	4%	0
Large Retail	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	5%	0
Large Retail	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	4%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Large Retail	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	14%	0
Large Retail	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	14%	0
Large Retail	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	12%	0
Large Retail	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	12%	0
Large Retail	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	146	14	\$442	1%	1
Large Retail	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	146	14	\$442	1%	0
Large Retail	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	100	14	\$307	1%	1
Large Retail	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	100	14	\$307	1%	0
Large Retail	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	793	40	\$833	60%	724
Large Retail	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	792	40	\$666	83%	26
Large Retail	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	41	10	\$4	63%	0
Large Retail	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	Existing	447	15	\$2,985	0%	0
Large Retail	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	New	447	15	\$3,049	0%	0
Large Retail	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	Existing	18	5	\$39	51%	0
Large Retail	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	New	18	5	\$39	51%	0
Large Retail	Water Heat	Low-Flow Spray Heads	1.6 GPM (Code)	Existing Spray Head (2.5 GPM)	Per Spray Head	Existing	27	5	\$30	33%	0
Large Retail	Water Heat	Refrigeration with Heat Recovery	Heat Recovery from Refrigeration System. Applied to Water Heating Electric End Use	No Heat Recovery	Per sqft	Existing	0.04	16	\$0.91	50%	0
Large Retail	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	16	10	\$196	81%	0
Large Retail	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	16	10	\$196	81%	0
Large Retail	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.02	13	\$0.00	100%	0
Large Retail	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.02	13	\$0.00	100%	0
Large Retail	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.00	100%	0
Large Retail	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.00	100%	0
Large Retail	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Large Retail	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Large Retail	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.04	100%	0
Large Retail	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.04	100%	0
Large Retail	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	9	13	\$2	52%	0
Large Retail	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Large Retail	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Large Retail	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	158	7	\$62	5%	0
Large Retail	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.01	100%	807
Large Retail	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.01	100%	42
Large Retail	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	540	4	\$102	50%	127
Lodging	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	Existing	657	10	\$200	27%	1
Lodging	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	New	657	10	\$200	27%	0
Lodging	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	Existing	305	12	\$400	49%	0
Lodging	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	New	305	12	\$400	49%	0
Lodging	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	Existing	2,460	10	\$2,696	4%	1
Lodging	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	New	2,535	10	\$2,696	4%	0
Lodging	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Lodging	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Lodging	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	Existing	504	12	\$1,057	32%	1
Lodging	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	New	504	12	\$1,057	32%	0
Lodging	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	Existing	148	12	\$1,165	34%	0
Lodging	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	New	148	12	\$1,165	34%	0
Lodging	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	Existing	1,066	12	\$2,075	11%	1
Lodging	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	New	1,066	12	\$2,075	11%	0
Lodging	Dryer	Dryer - High Efficiency	High Efficiency Dryer	Standard Dryer	Per Building SqFt	Existing	0.00	12	\$0.82	10%	0
Lodging	Dryer	Dryer - High Efficiency	High Efficiency Dryer	Standard Dryer	Per Building SqFt	New	0.00	12	\$0.82	10%	0
Lodging	Dryer	Dryer - Standard	Standard Dryer	Standard Dryer	Per Building SqFt	Existing	0.00	12	\$0.82	100%	0
Lodging	Dryer	Dryer - Standard	Standard Dryer	Standard Dryer	Per Building SqFt	New	0.00	12	\$0.82	100%	0
Lodging	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Lodging	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Lodging	Pool Heat	Pool Heater - Standard Equipment	Standard Pool Heater Equipment	Standard Pool Heater Equipment	Per Building SqFt	Existing	0.00	5	\$0.00	100%	0
Lodging	Pool Heat	Pool Heater - Standard Equipment	Standard Pool Heater Equipment	Standard Pool Heater Equipment	Per Building SqFt	New	0.00	5	\$0.00	100%	0
Lodging	Pool Heat	Spa Covers	R-14	No cover	Per Spa Area	Existing	13	6	\$14	33%	0
Lodging	Pool Heat	Spa Covers	R-14	No cover	Per Spa Area	New	13	6	\$14	33%	0
Lodging	Pool Heat	Swimming Pool Covers	Transparent	No Cover	Per Pool Area	Existing	5.20	5	\$1	33%	21
Lodging	Pool Heat	Swimming Pool Covers	Transparent	No Cover	Per Pool Area	New	5.20	5	\$1	33%	1
Lodging	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.01	20	\$0.05	100%	0
Lodging	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	New	0.01	20	\$0.05	100%	0
Lodging	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	Existing	0.02	20	\$0.13	100%	0
Lodging	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	New	0.02	20	\$0.13	100%	0
Lodging	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	Existing	0.05	20	\$0.27	100%	0
Lodging	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	New	0.05	20	\$0.27	100%	0
Lodging	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	Existing	0.06	20	\$0.38	100%	0
Lodging	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	New	0.06	20	\$0.38	100%	0
Lodging	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	Existing	0.07	20	\$0.44	100%	91
Lodging	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	New	0.07	20	\$0.44	100%	6
Lodging	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Lodging	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Lodging	Space Heat	Boiler - Economizer	Economizer	No Economizer	Per Boiler HP	Existing	89	20	\$96	75%	0
Lodging	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Lodging	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Lodging	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.15	20	\$4	49%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Lodging	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	New	0.14	20	\$4	49%	0
Lodging	Space Heat	Boiler - Pipe Insulation	Code (2" of Insulation)	Existing Insulation (1" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.59	20	\$15	15%	0
Lodging	Space Heat	Boiler - Turbulators	Boiler Turbulator	No Turbulator	Per Tube	Existing	6.55	20	\$15	55%	0
Lodging	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	Existing	1,946	10	\$2,060	64%	0
Lodging	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	New	1,854	10	\$2,060	77%	3
Lodging	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.05	7	\$1	90%	0
Lodging	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.06	7	\$1	90%	0
Lodging	Space Heat	Demand Controlled Ventilation	Demand Controlled Ventilation - DCV (Occupancy Sensors / CO2 Sensors)	Constant Ventilation	Per Sensor	Existing	71	15	\$450	16%	62
Lodging	Space Heat	Demand Controlled Ventilation	Demand Controlled Ventilation - DCV (Occupancy Sensors / CO2 Sensors)	Constant Ventilation	Per Sensor	Existing	72	15	\$450	16%	32
Lodging	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	1,277	5	\$14,651	75%	0
Lodging	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	1,216	5	\$14,651	75%	0
Lodging	Space Heat	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	1,277	5	\$26,479	85%	0
Lodging	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Lodging	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Lodging	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	2
Lodging	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	0
Lodging	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Lodging	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	876	10	\$5,450	64%	0
Lodging	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	893	10	\$5,450	64%	0
Lodging	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	834	10	\$5,450	64%	0
Lodging	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	890	10	\$5,450	64%	0
Lodging	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.01	20	\$0.06	100%	0
Lodging	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.01	20	\$0.06	100%	0
Lodging	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.04	20	\$0.10	100%	0
Lodging	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.04	20	\$0.10	100%	0
Lodging	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.14	100%	0
Lodging	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.14	100%	0
Lodging	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.19	100%	35
Lodging	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.19	100%	3
Lodging	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Lodging	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Lodging	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Lodging	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Lodging	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	74%	0
Lodging	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	74%	0
Lodging	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.04	30	\$10	74%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Lodging	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.04	30	\$10	74%	0
Lodging	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.32	13	\$0.38	9%	0
Lodging	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.33	13	\$0.38	9%	0
Lodging	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	Existing	3,504	13	\$502	3%	1
Lodging	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	New	3,504	13	\$502	3%	0
Lodging	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.25	20	\$2	15%	0
Lodging	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Lodging	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Lodging	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Lodging	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtu Boiler	Existing	368	15	\$130	0%	0
Lodging	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtu Boiler	New	350	15	\$124	0%	0
Lodging	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Lodging	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Lodging	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.07	7	\$0.29	90%	216
Lodging	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.07	7	\$0.29	90%	112
Lodging	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	97	15	\$138	0%	0
Lodging	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	99	15	\$138	0%	0
Lodging	Space Heat	Tune-up - Boiler Maintenance	Boiler Maintenance (Tune-up)	Unmaintained Boiler	Per kBtu	Existing	1.02	3	\$0.75	48%	2
Lodging	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtu	Existing	1.04	3	\$0.75	48%	1
Lodging	Space Heat	Vent Damper	Automatic Air Flue Damper	No Damper	Per 200 kBtu Boiler	Existing	163	12	\$318	21%	0
Lodging	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	53%	0
Lodging	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	59%	0
Lodging	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	10%	0
Lodging	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	12%	0
Lodging	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	14%	0
Lodging	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	12%	0
Lodging	Water Heat	Clothes Washer	Commercial Ozonating Clothes Washer	Standard Commercial Clothes Washer	Per Clothes Washer	Existing	315	10	\$5,944	33%	0
Lodging	Water Heat	Clothes Washer	Commercial Ozonating Clothes Washer	Standard Commercial Clothes Washer	Per Clothes Washer	New	314	10	\$5,944	33%	0
Lodging	Water Heat	Clothes Washer	Residential Grade, Clothes Washer Enhanced Efficiency MEF = 3.10 and WF = 3.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	86	11	\$789	56%	0
Lodging	Water Heat	Clothes Washer	Residential Grade, Clothes Washer Enhanced Efficiency MEF = 3.10 and WF = 3.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	86	11	\$789	56%	0
Lodging	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	62	11	\$391	53%	12

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Lodging	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	62	11	\$391	53%	0
Lodging	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	69	11	\$565	50%	18
Lodging	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	69	11	\$565	50%	0
Lodging	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	53	11	\$134	47%	0
Lodging	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	53	11	\$134	47%	0
Lodging	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	62%	0
Lodging	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	62%	0
Lodging	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	52%	0
Lodging	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	52%	0
Lodging	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	299	14	\$442	20%	5
Lodging	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	299	14	\$442	20%	0
Lodging	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	204	14	\$307	24%	4
Lodging	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	204	14	\$307	24%	0
Lodging	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	372	40	\$833	60%	154
Lodging	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	371	40	\$666	83%	6
Lodging	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	8.14	10	\$4	63%	0
Lodging	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	Existing	11,190	15	\$3,955	0%	0
Lodging	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	New	11,190	15	\$3,961	0%	0
Lodging	Water Heat	Low-Flow Showerheads	2.0 GPM	2.5 GPM Showerhead (Federal Code)	Per Showerhead	Existing	14	10	\$8	84%	0
Lodging	Water Heat	Low-Flow Showerheads	2.0 GPM	2.5 GPM Showerhead (Federal Code)	Per Showerhead	New	14	10	\$8	84%	0
Lodging	Water Heat	Low-Flow Showerheads	2.5 GPM Showerhead (Federal Code)	Existing Showerhead (4.5 GPM)	Per Showerhead	Existing	32	10	\$31	34%	94
Lodging	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	Existing	18	5	\$39	38%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Lodging	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	New	18	5	\$39	38%	0
Lodging	Water Heat	Low-Flow Spray Heads	1.6 GPM (Code)	Existing Spray Head (2.5 GPM)	Per Spray Head	Existing	27	5	\$30	25%	0
Lodging	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	3.25	10	\$196	81%	0
Lodging	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	3.25	10	\$196	81%	0
Lodging	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.00	100%	0
Lodging	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.00	100%	0
Lodging	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.02	13	\$0.00	100%	0
Lodging	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.02	13	\$0.00	100%	0
Lodging	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Lodging	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Lodging	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.09	13	\$0.08	100%	0
Lodging	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.09	13	\$0.08	100%	0
Lodging	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	6.26	13	\$2	52%	0
Lodging	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Lodging	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Lodging	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	74	7	\$62	5%	0
Lodging	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.09	13	\$0.03	100%	177
Lodging	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.09	13	\$0.03	100%	9
Lodging	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	253	4	\$102	35%	-35
Other Commercial	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	Existing	657	10	\$200	14%	0
Other Commercial	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	New	657	10	\$200	14%	0
Other Commercial	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	Existing	152	12	\$400	75%	2
Other Commercial	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	New	152	12	\$400	75%	0
Other Commercial	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	Existing	202	10	\$2,696	4%	0
Other Commercial	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	New	208	10	\$2,696	4%	0
Other Commercial	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Other Commercial	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Other Commercial	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	Existing	252	12	\$1,057	18%	1
Other Commercial	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	New	252	12	\$1,057	18%	0
Other Commercial	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	Existing	74	12	\$1,165	15%	0
Other Commercial	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	New	74	12	\$1,165	15%	0
Other Commercial	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	Existing	533	12	\$2,075	11%	2
Other Commercial	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	New	533	12	\$2,075	11%	0
Other Commercial	Dryer	Dryer - High Efficiency	High Efficiency Dryer	Standard Dryer	Per Building SqFt	Existing	0.00	12	\$0.30	10%	0
Other Commercial	Dryer	Dryer - High Efficiency	High Efficiency Dryer	Standard Dryer	Per Building SqFt	New	0.00	12	\$0.30	10%	0
Other Commercial	Dryer	Dryer - Standard	Standard Dryer	Standard Dryer	Per Building SqFt	Existing	0.00	12	\$0.30	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Other Commercial	Dryer	Dryer - Standard	Standard Dryer	Standard Dryer	Per Building SqFt	New	0.00	12	\$0.30	100%	0
Other Commercial	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Other Commercial	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Other Commercial	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.01	20	\$0.08	100%	0
Other Commercial	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.08	100%	0
Other Commercial	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	Existing	0.02	20	\$0.23	100%	0
Other Commercial	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	New	0.02	20	\$0.23	100%	0
Other Commercial	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	Existing	0.04	20	\$0.47	100%	0
Other Commercial	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	New	0.04	20	\$0.47	100%	0
Other Commercial	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	Existing	0.06	20	\$0.66	100%	0
Other Commercial	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	New	0.05	20	\$0.66	100%	0
Other Commercial	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	Existing	0.07	20	\$0.75	100%	0
Other Commercial	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	New	0.06	20	\$0.75	100%	0
Other Commercial	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Other Commercial	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Other Commercial	Space Heat	Boiler - Economizer	Economizer	No Economizer	Per Boiler HP	Existing	7.50	20	\$86	41%	0
Other Commercial	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Other Commercial	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Other Commercial	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.08	20	\$4	49%	0
Other Commercial	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	New	0.07	20	\$4	49%	0
Other Commercial	Space Heat	Boiler - Pipe Insulation	Code (2" of Insulation)	Existing Insulation (1" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.31	20	\$15	15%	0
Other Commercial	Space Heat	Boiler - Turbulators	Boiler Turbulator	No Turbulator	Per Tube	Existing	1.46	20	\$15	55%	0
Other Commercial	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	Existing	435	10	\$2,060	64%	0
Other Commercial	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	New	401	10	\$2,060	77%	0
Other Commercial	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.05	7	\$1	90%	0
Other Commercial	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.05	7	\$1	90%	0
Other Commercial	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	285	5	\$4,375	20%	0
Other Commercial	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	263	5	\$4,375	20%	0
Other Commercial	Space Heat	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	285	5	\$7,393	85%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Other Commercial	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Other Commercial	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Other Commercial	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	74
Other Commercial	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	2
Other Commercial	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	55
Other Commercial	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	195	10	\$5,450	64%	0
Other Commercial	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	206	10	\$5,450	64%	0
Other Commercial	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	179	10	\$5,450	64%	0
Other Commercial	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	180	10	\$5,450	64%	0
Other Commercial	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.11	100%	0
Other Commercial	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.11	100%	0
Other Commercial	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.18	100%	0
Other Commercial	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.18	100%	0
Other Commercial	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.25	100%	0
Other Commercial	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.25	100%	0
Other Commercial	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.08	20	\$0.33	100%	594
Other Commercial	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.33	100%	40
Other Commercial	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Other Commercial	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Other Commercial	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Other Commercial	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Other Commercial	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	74%	0
Other Commercial	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	74%	0
Other Commercial	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Other Commercial	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.04	30	\$10	74%	0
Other Commercial	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.31	13	\$0.38	9%	0
Other Commercial	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.33	13	\$0.38	9%	160

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Other Commercial	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	Existing	1,542	13	\$502	3%	29
Other Commercial	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	New	1,542	13	\$502	3%	1
Other Commercial	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.24	20	\$2	15%	160
Other Commercial	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Other Commercial	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Other Commercial	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Other Commercial	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtu Boiler	Existing	195	15	\$390	0%	0
Other Commercial	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtu Boiler	New	180	15	\$362	0%	0
Other Commercial	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Other Commercial	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Other Commercial	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.06	7	\$0.29	90%	0
Other Commercial	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.07	7	\$0.29	90%	3,637
Other Commercial	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	130	15	\$138	76%	0
Other Commercial	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	137	15	\$138	76%	61
Other Commercial	Space Heat	Tune-up - Boiler Maintenance	Boiler Maintenance (Tune-up)	Unmaintained Boiler	Per kBtu	Existing	0.54	3	\$0.75	48%	0
Other Commercial	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtu	Existing	0.57	3	\$0.75	48%	27
Other Commercial	Space Heat	Variable Air-Volume Systems	Install Variable Air-Volume System	Constant Volume System	Per Sqft	Existing	0.05	15	\$3	65%	0
Other Commercial	Space Heat	Vent Damper	Automatic Air Flue Damper	No Damper	Per 200 kBtu Boiler	Existing	87	12	\$318	21%	0
Other Commercial	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	31%	0
Other Commercial	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	35%	0
Other Commercial	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	6%	0
Other Commercial	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	41%	0
Other Commercial	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	46%	0
Other Commercial	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	40%	0
Other Commercial	Water Heat	Clothes Washer	Commercial Ozonating Clothes Washer	Standard Commercial Clothes Washer	Per Clothes Washer	Existing	49	10	\$5,944	2%	0
Other Commercial	Water Heat	Clothes Washer	Commercial Ozonating Clothes Washer	Standard Commercial Clothes Washer	Per Clothes Washer	New	49	10	\$5,944	2%	0
Other Commercial	Water Heat	Clothes Washer	Residential Grade, Clothes Washer Enhanced Efficiency MEF = 3.10 and WF = 3.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	86	11	\$789	14%	0
Other Commercial	Water Heat	Clothes Washer	Residential Grade, Clothes Washer Enhanced Efficiency MEF = 3.10 and WF = 3.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	86	11	\$789	14%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Other Commercial	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	62	11	\$391	13%	456
Other Commercial	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	62	11	\$391	13%	11
Other Commercial	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	69	11	\$565	13%	451
Other Commercial	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	69	11	\$565	13%	11
Other Commercial	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	53	11	\$134	12%	366
Other Commercial	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	53	11	\$134	12%	9
Other Commercial	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	10%	0
Other Commercial	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	10%	0
Other Commercial	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	8%	0
Other Commercial	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	8%	0
Other Commercial	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	192	14	\$442	0%	3
Other Commercial	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	192	14	\$442	0%	0
Other Commercial	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	131	14	\$307	0%	2
Other Commercial	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	131	14	\$307	0%	0
Other Commercial	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	410	40	\$833	60%	1,160
Other Commercial	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	409	40	\$666	83%	41
Other Commercial	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	12	10	\$4	63%	0
Other Commercial	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	Existing	1,853	15	\$3,695	0%	0
Other Commercial	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuH Boiler	New	1,853	15	\$3,723	0%	0
Other Commercial	Water Heat	Low-Flow Showerheads	2.0 GPM	2.5 GPM Showerhead (Federal Code)	Per Showerhead	Existing	25	10	\$8	13%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Other Commercial	Water Heat	Low-Flow Showerheads	2.0 GPM	2.5 GPM Showerhead (Federal Code)	Per Showerhead	New	25	10	\$8	13%	1
Other Commercial	Water Heat	Low-Flow Showerheads	2.5 GPM Showerhead (Federal Code)	Existing Showerhead (4.5 GPM)	Per Showerhead	Existing	57	10	\$31	5%	0
Other Commercial	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	Existing	18	5	\$39	8%	0
Other Commercial	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	New	18	5	\$39	8%	0
Other Commercial	Water Heat	Low-Flow Spray Heads	1.6 GPM (Code)	Existing Spray Head (2.5 GPM)	Per Spray Head	Existing	27	5	\$30	5%	0
Other Commercial	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	5.13	10	\$196	90%	0
Other Commercial	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	5.12	10	\$196	90%	0
Other Commercial	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.02	13	\$0.01	100%	0
Other Commercial	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.02	13	\$0.01	100%	0
Other Commercial	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.00	100%	0
Other Commercial	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.00	100%	0
Other Commercial	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Other Commercial	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Other Commercial	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.05	13	\$0.13	100%	0
Other Commercial	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.05	13	\$0.13	100%	0
Other Commercial	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	2.56	13	\$2	52%	0
Other Commercial	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Other Commercial	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Other Commercial	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	82	7	\$62	5%	0
Other Commercial	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.06	13	\$0.05	100%	1,137
Other Commercial	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.06	13	\$0.05	100%	56
Other Commercial	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	279	4	\$102	35%	142
Restaurant	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	Existing	657	10	\$200	41%	0
Restaurant	Cooking	Broiler	Cooking Broiler 34% Efficient	15% Efficient	Per Broiler	New	657	10	\$200	41%	0
Restaurant	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	Existing	305	12	\$400	75%	6
Restaurant	Cooking	Convection Oven	ENERGY STAR Convection Oven	Standard Oven	Per Convection Oven	New	305	12	\$400	75%	0
Restaurant	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	Existing	3,356	10	\$2,696	13%	99
Restaurant	Cooking	Conveyor Oven	High-Efficiency Model (23% Efficient)	15% Efficient	Per Conveyor Oven	New	3,462	10	\$2,696	13%	3
Restaurant	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	Existing	0.00	12	\$0.00	100%	0
Restaurant	Cooking	Cooking - Standard Equipment	Standard Cooking Equipment	Standard Cooking Equipment	Per Building SqFt	New	0.00	12	\$0.00	100%	0
Restaurant	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	Existing	504	12	\$1,057	32%	74
Restaurant	Cooking	Fryer	ENERGY STAR Fryer	Standard	Per Fryer	New	504	12	\$1,057	32%	2
Restaurant	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	Existing	148	12	\$1,165	56%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Restaurant	Cooking	Griddle	High-Efficiency Griddle (40% Efficient)	Standard Griddle (32% Efficient)	Per Griddle	New	148	12	\$1,165	56%	0
Restaurant	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	Existing	1,066	12	\$2,075	26%	130
Restaurant	Cooking	Steam Cooker	ENERGY STAR Steam Cooker	Standard	Per Steam Cooker	New	1,066	12	\$2,075	26%	4
Restaurant	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Restaurant	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Restaurant	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.04	7	\$1	90%	0
Restaurant	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Restaurant	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Restaurant	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	3
Restaurant	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	0
Restaurant	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Restaurant	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	Existing	99	10	\$5,450	64%	0
Restaurant	Space Heat	Exhaust Hood Makeup Air	Provide Makeup Air Directly at Exhaust Hood Instead of Pulling Conditioned Air	Hood Pulls Conditioned Air (No Make-up Air)	Per Building	New	66	10	\$5,450	64%	0
Restaurant	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.12	100%	0
Restaurant	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.04	20	\$0.12	100%	0
Restaurant	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.19	100%	0
Restaurant	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.04	20	\$0.19	100%	0
Restaurant	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.08	20	\$0.27	100%	0
Restaurant	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.27	100%	0
Restaurant	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.09	20	\$0.36	100%	25
Restaurant	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.36	100%	1
Restaurant	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Restaurant	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Restaurant	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Restaurant	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Restaurant	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	74%	0
Restaurant	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Restaurant	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.38	13	\$0.38	51%	39
Restaurant	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	Existing	1,600	13	\$502	3%	0
Restaurant	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	New	1,600	13	\$502	3%	0
Restaurant	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.25	20	\$2	15%	1
Restaurant	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Restaurant	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Restaurant	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Restaurant	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Restaurant	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Restaurant	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.07	7	\$0.29	90%	151

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Restaurant	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	66	15	\$138	76%	0
Restaurant	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtu	Existing	0.56	3	\$0.75	48%	1
Restaurant	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	6%	0
Restaurant	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	7%	0
Restaurant	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	1%	0
Restaurant	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	74%	0
Restaurant	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	82%	0
Restaurant	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	72%	0
Restaurant	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	29%	0
Restaurant	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	29%	0
Restaurant	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	24%	0
Restaurant	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	24%	0
Restaurant	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	576	14	\$442	52%	204
Restaurant	Water Heat	Dishwasher	High Temp Commercial High Efficiency Dishwasher (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	576	14	\$442	52%	5
Restaurant	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	Existing	393	14	\$307	62%	80
Restaurant	Water Heat	Dishwasher	Low-Temp Commercial Dishwasher (Includes Extra Chemical Cost) - (ENERGY STAR)	Standard High Temp Commercial Dishwasher	Per Dishwasher	New	393	14	\$307	62%	2
Restaurant	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	187	40	\$833	60%	196
Restaurant	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	187	40	\$666	83%	7
Restaurant	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	14	10	\$4	63%	0
Restaurant	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	Existing	18	5	\$39	80%	0
Restaurant	Water Heat	Low-Flow Spray Heads	1.0 GPM	1.6 GPM (Code)	Per Spray Head	New	18	5	\$39	80%	0
Restaurant	Water Heat	Low-Flow Spray Heads	1.6 GPM (Code)	Existing Spray Head (2.5 GPM)	Per Spray Head	Existing	27	5	\$30	52%	0
Restaurant	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	17	10	\$196	71%	0
Restaurant	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	17	10	\$196	71%	0
Restaurant	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.08	13	\$0.03	100%	0
Restaurant	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.08	13	\$0.03	100%	0
Restaurant	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.00	100%	0
Restaurant	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.00	100%	0
Restaurant	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Restaurant	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Restaurant	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.17	13	\$0.31	100%	0
Restaurant	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.17	13	\$0.31	100%	0
Restaurant	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	2.93	13	\$2	52%	0
Restaurant	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Restaurant	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Restaurant	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	37	7	\$62	5%	0
Restaurant	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.18	13	\$0.13	100%	223
Restaurant	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.18	13	\$0.13	100%	11
Restaurant	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	127	4	\$102	80%	55
Small Office	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Small Office	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Small Office	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.04	7	\$1	90%	0
Small Office	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Small Office	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Small Office	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	16
Small Office	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	0
Small Office	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Small Office	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.05	20	\$0.11	100%	0
Small Office	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.11	100%	0
Small Office	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.18	100%	0
Small Office	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.18	100%	0
Small Office	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.24	100%	0
Small Office	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.24	100%	0
Small Office	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.32	100%	103
Small Office	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.32	100%	7
Small Office	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Small Office	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Small Office	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Small Office	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Small Office	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.04	30	\$10	74%	0
Small Office	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Small Office	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.30	13	\$0.38	51%	160
Small Office	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	Existing	1,040	13	\$502	3%	12
Small Office	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	New	1,040	13	\$502	3%	0
Small Office	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.22	20	\$2	15%	5
Small Office	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Small Office	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Small Office	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Small Office	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Small Office	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Small Office	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.06	7	\$0.29	90%	623
Small Office	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	71	15	\$138	79%	0
Small Office	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtu	Existing	0.54	3	\$0.75	48%	5
Small Office	Space Heat	Variable Air-Volume Systems	Install Variable Air-Volume System	Constant Volume System	Per Sqft	Existing	0.05	15	\$3	62%	0
Small Office	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	9%	0
Small Office	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	10%	0
Small Office	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	2%	0
Small Office	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	70%	0
Small Office	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	78%	0
Small Office	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	68%	0
Small Office	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	29%	0
Small Office	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	29%	0
Small Office	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	24%	0
Small Office	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	24%	0
Small Office	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	133	40	\$833	60%	145
Small Office	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	133	40	\$666	83%	5
Small Office	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	20	10	\$4	63%	0
Small Office	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	8.36	10	\$196	81%	0
Small Office	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	8.34	10	\$196	81%	0
Small Office	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.01	100%	0
Small Office	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.01	100%	0
Small Office	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Small Office	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Small Office	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Small Office	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Small Office	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.03	13	\$0.18	100%	0
Small Office	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.03	13	\$0.18	100%	0
Small Office	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	0.83	13	\$2	52%	0
Small Office	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Small Office	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Small Office	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	26	7	\$62	5%	0
Small Office	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.03	13	\$0.07	100%	162

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Small Office	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.03	13	\$0.07	100%	8
Small Office	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	91	4	\$102	35%	18
Small Retail	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Small Retail	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Small Retail	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.04	7	\$1	90%	0
Small Retail	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Small Retail	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Small Retail	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	12
Small Retail	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	0
Small Retail	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Small Retail	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.05	20	\$0.14	100%	0
Small Retail	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.14	100%	0
Small Retail	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.05	20	\$0.23	100%	0
Small Retail	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.23	100%	0
Small Retail	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.32	100%	0
Small Retail	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.32	100%	0
Small Retail	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.42	100%	79
Small Retail	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.42	100%	6
Small Retail	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Small Retail	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Small Retail	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Small Retail	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Small Retail	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.03	30	\$10	74%	0
Small Retail	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Small Retail	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.35	13	\$0.38	51%	123
Small Retail	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	Existing	1,200	13	\$502	3%	2
Small Retail	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBTU Unit Heater	New	1,200	13	\$502	3%	0
Small Retail	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.20	20	\$2	15%	4
Small Retail	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Small Retail	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Small Retail	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Small Retail	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Small Retail	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Small Retail	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.06	7	\$0.29	90%	478
Small Retail	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	72	15	\$138	88%	0
Small Retail	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBTU	Existing	0.38	3	\$0.75	48%	0
Small Retail	Space Heat	Variable Air-Volume Systems	Install Variable Air-Volume System	Constant Volume System	Per Sqft	Existing	0.04	15	\$3	65%	0
Small Retail	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	9%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Small Retail	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	10%	0
Small Retail	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	2%	0
Small Retail	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	70%	0
Small Retail	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	78%	0
Small Retail	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	68%	0
Small Retail	Water Heat	Clothes Washer	Residential Grade, Clothes Washer Enhanced Efficiency MEF = 3.10 and WF = 3.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	86	11	\$789	5%	0
Small Retail	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	62	11	\$391	4%	0
Small Retail	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 2 MEF = 2.2 and WF = 4.5	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	62	11	\$391	4%	0
Small Retail	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	69	11	\$565	4%	0
Small Retail	Water Heat	Clothes Washer	Residential Grade, Clothes Washer CEE Tier 3 MEF = 2.4 and WF = 4.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	69	11	\$565	4%	0
Small Retail	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	Existing	53	11	\$134	4%	0
Small Retail	Water Heat	Clothes Washer	Residential Grade, Clothes Washer ENERGY STAR MEF = 2.0 and WF = 6.0	Standard Clothes Washer MEF = 1.26 and WF = 9.5 (Federal Standard)	Per Clothes Washer	New	53	11	\$134	4%	0
Small Retail	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	5%	0
Small Retail	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	5%	0
Small Retail	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	4%	0
Small Retail	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	4%	0
Small Retail	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	196	40	\$833	60%	109
Small Retail	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	195	40	\$666	83%	4
Small Retail	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	30	10	\$4	63%	0
Small Retail	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	12	10	\$196	81%	0
Small Retail	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	12	10	\$196	81%	0
Small Retail	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.02	13	\$0.01	100%	0
Small Retail	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.02	13	\$0.01	100%	0
Small Retail	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.00	100%	0
Small Retail	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.00	100%	0
Small Retail	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Small Retail	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Small Retail	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.16	100%	0
Small Retail	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.16	100%	0
Small Retail	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	1.22	13	\$2	52%	0
Small Retail	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Small Retail	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Small Retail	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	39	7	\$62	5%	0
Small Retail	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.04	13	\$0.07	100%	122
Small Retail	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.04	13	\$0.07	100%	6
Small Retail	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	133	4	\$102	35%	13
Warehouse	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Warehouse	Other	Other - Standard	Standard Other Equipment	Standard Other Equipment	Per Building SqFt	New	0.00	10	\$0.00	100%	0
Warehouse	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.06	100%	0
Warehouse	Space Heat	Boiler - 2013 Federal Standard	2013 Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.06	100%	0
Warehouse	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	Existing	0.01	20	\$0.16	100%	0
Warehouse	Space Heat	Boiler - 85% AFUE	Boiler - 85% AFUE	Standard Boiler	Per Building SqFt	New	0.01	20	\$0.16	100%	0
Warehouse	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	Existing	0.03	20	\$0.33	100%	0
Warehouse	Space Heat	Boiler - 90% AFUE	Boiler - 90% AFUE	Standard Boiler	Per Building SqFt	New	0.03	20	\$0.33	100%	0
Warehouse	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	Existing	0.04	20	\$0.48	100%	0
Warehouse	Space Heat	Boiler - 94% AFUE	Boiler - 94% AFUE	Standard Boiler	Per Building SqFt	New	0.04	20	\$0.48	100%	0
Warehouse	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	Existing	0.05	20	\$0.54	100%	185
Warehouse	Space Heat	Boiler - 96% AFUE	Boiler - 96% AFUE	Standard Boiler	Per Building SqFt	New	0.05	20	\$0.54	100%	12
Warehouse	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Warehouse	Space Heat	Boiler - Below Standard	Below Standard Boiler	Below Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Warehouse	Space Heat	Boiler - Economizer	Economizer	No Economizer	Per Boiler HP	Existing	14	20	\$86	75%	0
Warehouse	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Warehouse	Space Heat	Boiler - Federal Standard	Standard Boiler	Standard Boiler	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Warehouse	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.08	20	\$4	49%	0
Warehouse	Space Heat	Boiler - Pipe Insulation	Above Code (3" of Insulation)	Code (2" of Insulation)	Per Linear Foot of Boiler Pipe	New	0.07	20	\$4	49%	0
Warehouse	Space Heat	Boiler - Pipe Insulation	Code (2" of Insulation)	Existing Insulation (1" of Insulation)	Per Linear Foot of Boiler Pipe	Existing	0.31	20	\$15	15%	0
Warehouse	Space Heat	Boiler - Turbulators	Boiler Turbulator	No Turbulator	Per Tube	Existing	3.93	20	\$15	55%	50
Warehouse	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	Existing	585	10	\$2,060	64%	174
Warehouse	Space Heat	Boiler Reset Controls	Boiler Reset Controls	No Boiler Reset Controls	Per Control	New	561	10	\$2,060	77%	6
Warehouse	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.03	7	\$1	90%	0
Warehouse	Space Heat	Commissioning	Commissioning/QI - New Installation	No Commissioning	Per SqFt	New	0.05	7	\$1	90%	0
Warehouse	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	Existing	767	5	\$3,122	75%	0
Warehouse	Space Heat	Direct Digital Control System - Optimization	DDC Optimization	Standard DDC	Per Building	New	737	5	\$3,122	75%	0
Warehouse	Space Heat	Direct Digital Control System-Installation	DDC Retrofit - EMS Upgrade	Pneumatic	Per Building	Existing	767	5	\$5,067	85%	0
Warehouse	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	Existing	20	20	\$477	75%	0
Warehouse	Space Heat	Doors	U-Factor = 0.10	Standard Door (U-Factor = 0.55)	Per Door	New	20	20	\$477	75%	0
Warehouse	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	Existing	9	20	\$60	61%	38
Warehouse	Space Heat	Doors	U-Factor = 0.35	Standard Door (U-Factor = 0.55)	Per Door	New	9	20	\$60	61%	1

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Warehouse	Space Heat	Duct Repair And Sealing	Reduction In Duct Losses to 5%	No Repair or Sealing, 15% duct losses	Per Building SqFt	Existing	0.01	18	\$0.23	38%	0
Warehouse	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.05	20	\$0.08	100%	0
Warehouse	Space Heat	Furnace - 2013 Standard	2013 Standard Furnace	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.08	100%	0
Warehouse	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.13	100%	0
Warehouse	Space Heat	Furnace - 92% AFUE	Furnace - 92% AFUE	Standard Furnace	Per Building SqFt	New	0.05	20	\$0.13	100%	0
Warehouse	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	Existing	0.06	20	\$0.18	100%	0
Warehouse	Space Heat	Furnace - 94% AFUE	Furnace - 94% AFUE	Standard Furnace	Per Building SqFt	New	0.06	20	\$0.18	100%	0
Warehouse	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	Existing	0.07	20	\$0.24	100%	419
Warehouse	Space Heat	Furnace - 96% AFUE	Furnace - 96% AFUE	Standard Furnace	Per Building SqFt	New	0.07	20	\$0.24	100%	32
Warehouse	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	Existing	0.00	10	\$0.00	100%	0
Warehouse	Space Heat	Furnace - Below Standard	Below Standard Furnace	Below Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Warehouse	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	Existing	0.00	20	\$0.00	100%	0
Warehouse	Space Heat	Furnace - Standard	Standard Furnace	Standard Furnace	Per Building SqFt	New	0.00	20	\$0.00	100%	0
Warehouse	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.03	30	\$10	74%	0
Warehouse	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	Existing	0.03	30	\$10	74%	0
Warehouse	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Warehouse	Space Heat	Green Roof	Ecoroof, Vegetated Roof System	Standard Roof	Per Roof Area SqFt	New	0.03	30	\$10	74%	0
Warehouse	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.71	13	\$0.38	9%	0
Warehouse	Space Heat	Infiltration Control	Weather-Stripping	Standard Practice	Per Window SqFt	Existing	0.89	13	\$0.38	9%	113
Warehouse	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	Existing	1,320	13	\$502	3%	2
Warehouse	Space Heat	Infrared Heater	Infrared Heater - Gas Radiant Heating	Standard Unit Heater	Per 1000 kBtu Unit Heater	New	1,320	13	\$502	3%	0
Warehouse	Space Heat	Insulation - Duct	New Duct Insulation (R-8) (Unconditioned Spaces)	No Insulation	Per Surface Area of Duct	Existing	0.21	20	\$2	15%	112
Warehouse	Space Heat	Insulation - Floor	R-30	Average Existing Insulation (R-10)	Per Floor Area SqFt	Existing	0.02	25	\$1	29%	0
Warehouse	Space Heat	Insulation - Roof	R-20ci	Average Existing Insulation (R-10)	Per Roof Area SqFt	Existing	0.01	25	\$1	12%	0
Warehouse	Space Heat	Insulation - Wall	R-13+R-7.5ci	Average Existing Insulation (R-10)	Per Wall Area SqFt	Existing	0.04	25	\$1	32%	0
Warehouse	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtu Boiler	Existing	197	15	\$1,689	0%	0
Warehouse	Space Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtu Boiler	New	189	15	\$1,649	0%	0
Warehouse	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	Existing	0.00	15	\$0.00	100%	0
Warehouse	Space Heat	Other Space Heat - Standard Equipment	Standard Equipment Other Space Heat	Standard Equipment Other Space Heat	Per Building SqFt	New	0.00	15	\$0.00	100%	0
Warehouse	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.05	7	\$0.29	90%	0
Warehouse	Space Heat	Retro-Commissioning	Retro-Commissioning	No Retro-Commissioning	Per SqFt	Existing	0.06	7	\$0.29	90%	2,546
Warehouse	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	175	15	\$138	92%	0
Warehouse	Space Heat	Thermostat Programmable	Setback Thermostat 5-1-1, 5-2 or 7-day	Manual Thermostat	Per Thermostat	Existing	220	15	\$138	92%	52
Warehouse	Space Heat	Tune-up - Boiler Maintenance	Boiler Maintenance (Tune-up)	Unmaintained Boiler	Per kBtu	Existing	0.54	3	\$0.75	48%	61
Warehouse	Space Heat	Tune-up - Furnace Maintenance	Furnace Maintenance (Tune-up)	Unmaintained Furnace	Per kBtu	Existing	0.68	3	\$0.75	48%	22
Warehouse	Space Heat	Vent Damper	Automatic Air Flue Damper	No Damper	Per 200 kBtu Boiler	Existing	87	12	\$318	21%	0
Warehouse	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	Existing	0.08	25	\$3	53%	0
Warehouse	Space Heat	Window - Metal Framing	U-Value = 0.45	U-Value = 0.55 (Code Metal Framing)	Per Window SqFt	New	0.08	25	\$3	59%	0
Warehouse	Space Heat	Window - Metal Framing	U-Value = 0.55 (Code Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.08	25	\$27	10%	0

Table A.3.4. MidAm Commercial Gas Measure Details

Segment	End Use	Measure Name	Measure Description	Baseline Description	Unit Description	Construction Vintage	Savings per Unit (Therm)	Measure Life	Incremental Cost per Unit	Measure Applicability	2023 Economic Potential (Thousand Therms)
Warehouse	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	Existing	0.05	25	\$2	12%	0
Warehouse	Space Heat	Window - Non-Metal Framing	U-Value = 0.30	U-Value = 0.35 (Code Non-Metal Framing)	Per Window SqFt	New	0.05	25	\$2	14%	0
Warehouse	Space Heat	Window - Non-Metal Framing	U-Value = 0.35 (Code Non-Metal Framing)	Existing Windows U = 0.67	Per Window SqFt	Existing	0.27	25	\$42	12%	0
Warehouse	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	4.26	11	\$1,067	10%	0
Warehouse	Water Heat	Dishwasher	Dishwasher Enhanced Efficiency (EF 1.00) 200 kWh/yr and 4.00 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	4.26	11	\$1,067	10%	0
Warehouse	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	Existing	1.88	11	\$272	8%	0
Warehouse	Water Heat	Dishwasher	ENERGY STAR 295 kWh/yr and 4.25 Gallons/Cycle	Federal Standard 355 kWh/yr and 6.5 Gallons/Cycle = 307 kWh/yr and = 5.0 Gallons/Cycle for July 1, 2011 - Dec 31, 2011	Per Dishwasher	New	1.88	11	\$272	8%	0
Warehouse	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	Existing	798	40	\$833	60%	410
Warehouse	Water Heat	Drainwater Heat Recovery	Install Power-Pipe or GFX System	No GFX or Power-Pipe System	Per 40 Gal Water Heater	New	796	40	\$666	83%	15
Warehouse	Water Heat	Faucet Aerator	0.5 GPM	Existing Aerator (3.0 GPM)	Per Aerator	Existing	41	10	\$4	63%	0
Warehouse	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuh Boiler	Existing	279	15	\$2,396	0%	0
Warehouse	Water Heat	Integrated Space Heating and Water Heating	Integrated System	Separate Boiler and Water Heater	Per 200 kBtuh Boiler	New	279	15	\$2,436	0%	0
Warehouse	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	Existing	24	10	\$196	90%	0
Warehouse	Water Heat	Ultrasonic Faucet Control	Install Ultrasonic Faucet Control	No Faucet Control	Per Faucet	New	24	10	\$196	90%	0
Warehouse	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	Existing	0.01	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heater - 0.67 EF	Water Heater - 0.67 EF	Standard Water Heater	Per Building SqFt	New	0.01	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heater - 2015 Standard	2015 Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	Existing	0.00	6	\$0.00	100%	0
Warehouse	Water Heat	Water Heater - Below Standard	Below Standard Water Heater	Below Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	Existing	0.03	13	\$0.03	100%	0
Warehouse	Water Heat	Water Heater - Condensing 0.80 EF	Water Heater - Condensing 0.80 EF	Standard Water Heater	Per Building SqFt	New	0.03	13	\$0.03	100%	0
Warehouse	Water Heat	Water Heater - Pipe Insulation	Hot Water Pipe Insulation (R-4)	No Pipe Insulation	Per Linear Foot	Existing	4.98	13	\$2	52%	0
Warehouse	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	Existing	0.00	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heater - Standard	Standard Water Heater	Standard Water Heater	Per Building SqFt	New	0.00	13	\$0.00	100%	0
Warehouse	Water Heat	Water Heater - Tank Blanket/Insulation	Install Insulation (R-11)	No Tank Insulation	Per Water Heater	Existing	159	7	\$62	5%	0
Warehouse	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	Existing	0.03	13	\$0.01	100%	460
Warehouse	Water Heat	Water Heater - Tankless 0.82 EF	Water Heater - Tankless 0.82 EF	Standard Water Heater	Per Building SqFt	New	0.03	13	\$0.01	100%	24
Warehouse	Water Heat	Water Heater - Thermostat Setback	Install Programmable Thermostat (120 Degrees)	No Thermostat Setback (130 Degrees)	Per Water Heater	Existing	542	4	\$102	35%	50

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Agriculture	Fans	Agricultural Exhaust Fans (Rate 21 CFM/Watt+)	Per Unit	Existing	5%	20	\$0.25	410
Agriculture	Fans	Circulating Fans	Per Unit	Existing	5%	10	\$0.12	420
Agriculture	Fans	High Volume Low Speed Fans	Per Unit	Existing	47%	25	\$1	0
Agriculture	Fans	High-Efficiency Ventilation System	Per Unit	Existing	6%	10	\$1	0
Agriculture	HVAC	Energy-Efficient Dehumidifier	Per Unit	Existing	2%	15	\$0.85	163
Agriculture	HVAC	Heat Reclaimer	Per Unit	Existing	42%	15	\$0.13	120
Agriculture	HVAC	Heat Recovery Ventilators	Per Unit	Existing	4%	10	\$0.35	344
Agriculture	HVAC	Infrared Film for Greenhouses	Per Unit	Existing	11%	4	\$0.20	5
Agriculture	HVAC	Programmable Ventilation Controller	Per Unit	Existing	0%	10	\$0.11	8
Agriculture	HVAC	Scroll Compressor	Per Unit	Existing	8%	15	\$0.80	21
Agriculture	Motors Other	Automatic Milker Takeoff	Per Unit	Existing	3%	15	\$0.60	14
Agriculture	Motors Other	VFDs on Small Milking Machines	Per Unit	Existing	3%	15	\$0.66	15
Agriculture	Motors Other	Variable Speed Drives for Dairy Vacuum Pumps	Per Unit	Existing	37%	15	\$0.13	175
Agriculture	Other	Block Heater Timer	Per Unit	Existing	3%	10	\$0.03	78
Agriculture	Other	Grain bin aeration control systems	Per Unit	Existing	2%	20	\$0.13	69
Agriculture	Other	Greenhouse Heat Curtain	Per Unit	Existing	17%	5	\$0.04	6
Agriculture	Other	High Efficiency Stock tank	Per Unit	Existing	4%	10	\$0.33	102
Agriculture	Other	Livestock Waterers	Per Unit	Existing	11%	10	\$0.26	315
Agriculture	Process Heat	Crate Heating Pads	Per Unit	Existing	18%	15	\$0.14	670
Agriculture	Process Heat	Grain dryers	Per Unit	Existing	24%	20	\$6	0
Agriculture	Process Heat	Heat Lamp Setback (Microzone)	Per Unit	Existing	0%	15	\$0.17	17
Agriculture	Process Heat	Heat Lamp/Heating Pad Controller	Per Unit	Existing	2%	15	\$0.10	67
Agriculture	Process Heat	Heat Lamps	Per Unit	Existing	3%	10	\$0.01	131
Agriculture	Process Refrig and Cooling	Milk Precooler - Dairy Plate Cooler	Per Unit	Existing	3%	15	\$0.52	3
Agriculture	Pumps	Low Pressure Irrigation	Per Unit	Existing	50%	10	\$0.78	0
Chemical Mfg	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Chemical Mfg	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Chemical Mfg	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	214
Chemical Mfg	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	212
Chemical Mfg	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	518
Chemical Mfg	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	8,096
Chemical Mfg	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Chemical Mfg	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	36
Chemical Mfg	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	1,551
Chemical Mfg	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	170
Chemical Mfg	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	1,144
Chemical Mfg	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	546
Chemical Mfg	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	1,052
Chemical Mfg	HVAC	Clean Room: Change Filter Strategy	Per Unit	Existing	40%	1	\$0.00	2,786
Chemical Mfg	HVAC	Clean Room: Chiller Optimize	Per Unit	Existing	15%	10	\$0.08	2,734
Chemical Mfg	HVAC	Clean Room: Clean Room HVAC	Per Unit	Existing	9%	20	\$0.16	1,806
Chemical Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Chemical Mfg	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Chemical Mfg	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Chemical Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	911
Chemical Mfg	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	319
Chemical Mfg	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Chemical Mfg	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	2,529
Chemical Mfg	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Chemical Mfg	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Chemical Mfg	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	9,526
Chemical Mfg	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Chemical Mfg	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	1,490
Chemical Mfg	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Chemical Mfg	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Chemical Mfg	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	530
Chemical Mfg	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	486
Chemical Mfg	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	1,173
Chemical Mfg	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	4,324
Chemical Mfg	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Chemical Mfg	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	2,451
Chemical Mfg	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	81
Chemical Mfg	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	1,318
Chemical Mfg	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	384
Chemical Mfg	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	2,310
Chemical Mfg	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Chemical Mfg	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	38
Chemical Mfg	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	14,197
Chemical Mfg	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	16,477
Chemical Mfg	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	2,575
Chemical Mfg	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	13,212
Chemical Mfg	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	5,384
Chemical Mfg	Process Refrig and Cooling	Defrost Control System	Per Unit	Existing	7%	15	\$0.08	2,846
Chemical Mfg	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	1,655
Chemical Mfg	Process Refrig and Cooling	Evaporator Fan Controller	Per Unit	Existing	5%	16	\$0.08	2,033
Chemical Mfg	Process Refrig and Cooling	Freezer-Cooler Replacement Gaskets	Per Unit	Existing	4%	4	\$0.08	108
Chemical Mfg	Process Refrig and Cooling	Insulation for Bare Suction Lines	Per Unit	Existing	1%	10	\$0.96	0
Chemical Mfg	Process Refrig and Cooling	Mechanical Subcoolers	Per Unit	Existing	0%	15	\$0.35	230
Chemical Mfg	Process Refrig and Cooling	Strip Curtains for Walk-Ins	Per Unit	Existing	4%	4	\$0.18	245
Chemical Mfg	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	290
Chemical Mfg	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	3,818
Chemical Mfg	Process Refrig and Cooling	Variable Speed Compressor Systems	Per Unit	Existing	10%	15	\$0.22	4,104
Chemical Mfg	Process Refrig and Cooling	Walk-in PSC to ECM	Per Unit	Existing	5%	10	\$0.48	41
Chemical Mfg	Process Refrig and Cooling	Walk-in Shaded Pole to ECM	Per Unit	Existing	7%	10	\$0.48	36
Chemical Mfg	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Chemical Mfg	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Chemical Mfg	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	501
Chemical Mfg	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	497
Chemical Mfg	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	1,174
Chemical Mfg	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	18,298
Chemical Mfg	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Chemical Mfg	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	82
Chemical Mfg	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	2,792
Chemical Mfg	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	648
Electrical Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Electrical Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Electrical Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	6
Electrical Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	6
Electrical Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	15
Electrical Equipment Mfg	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	235
Electrical Equipment Mfg	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Electrical Equipment Mfg	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	1
Electrical Equipment Mfg	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	45
Electrical Equipment Mfg	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	5

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Electrical Equipment Mfg	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	33
Electrical Equipment Mfg	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	57
Electrical Equipment Mfg	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	113
Electrical Equipment Mfg	HVAC	Clean Room: Change Filter Strategy	Per Unit	Existing	40%	1	\$0.00	297
Electrical Equipment Mfg	HVAC	Clean Room: Chiller Optimize	Per Unit	Existing	15%	10	\$0.08	291
Electrical Equipment Mfg	HVAC	Clean Room: Clean Room HVAC	Per Unit	Existing	9%	20	\$0.16	192
Electrical Equipment Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Electrical Equipment Mfg	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Electrical Equipment Mfg	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Electrical Equipment Mfg	HVAC	Solidstate Chiller	Per Unit	Existing	90%	10	\$0.50	1,146
Electrical Equipment Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	97
Electrical Equipment Mfg	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	45
Electrical Equipment Mfg	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Electrical Equipment Mfg	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	359
Electrical Equipment Mfg	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Electrical Equipment Mfg	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Electrical Equipment Mfg	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	1,352
Electrical Equipment Mfg	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Electrical Equipment Mfg	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	211
Electrical Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Electrical Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Electrical Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	16
Electrical Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	14
Electrical Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	34
Electrical Equipment Mfg	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	127
Electrical Equipment Mfg	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Electrical Equipment Mfg	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	72
Electrical Equipment Mfg	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	2
Electrical Equipment Mfg	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	39
Electrical Equipment Mfg	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	11
Electrical Equipment Mfg	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	67
Electrical Equipment Mfg	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Electrical Equipment Mfg	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	3
Electrical Equipment Mfg	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	376
Electrical Equipment Mfg	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	486
Electrical Equipment Mfg	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	69
Electrical Equipment Mfg	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	353
Electrical Equipment Mfg	Process Other	Elec Chip Fab: Eliminate Exhaust	Per Unit	Existing	5%	10	\$0.18	66
Electrical Equipment Mfg	Process Other	Elec Chip Fab: Exhaust Injector	Per Unit	Existing	100%	10	\$0.45	551
Electrical Equipment Mfg	Process Other	Elec Chip Fab: Reduce Gas Pressure	Per Unit	Existing	10%	10	\$0.00	0
Electrical Equipment Mfg	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	117
Electrical Equipment Mfg	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	36
Electrical Equipment Mfg	Process Refrig and Cooling	Floating Head Pressure Controller	Per Unit	Existing	9%	15	\$0.07	107
Electrical Equipment Mfg	Process Refrig and Cooling	Floating Suction Pressure Controller	Per Unit	Existing	1%	15	\$0.07	17
Electrical Equipment Mfg	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	8
Electrical Equipment Mfg	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	78
Electrical Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Electrical Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Electrical Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	14
Electrical Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	14
Electrical Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	33
Electrical Equipment Mfg	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	531

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Electrical Equipment Mfg	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Electrical Equipment Mfg	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	2
Electrical Equipment Mfg	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	78
Electrical Equipment Mfg	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	19
Fabricated Metal Products	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Fabricated Metal Products	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Fabricated Metal Products	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	45
Fabricated Metal Products	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	40
Fabricated Metal Products	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	98
Fabricated Metal Products	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Fabricated Metal Products	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	7
Fabricated Metal Products	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	294
Fabricated Metal Products	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	32
Fabricated Metal Products	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	217
Fabricated Metal Products	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	185
Fabricated Metal Products	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	357
Fabricated Metal Products	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Fabricated Metal Products	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Fabricated Metal Products	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Fabricated Metal Products	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	309
Fabricated Metal Products	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	152
Fabricated Metal Products	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Fabricated Metal Products	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	1,202
Fabricated Metal Products	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Fabricated Metal Products	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Fabricated Metal Products	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	4,529
Fabricated Metal Products	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Fabricated Metal Products	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	708
Fabricated Metal Products	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Fabricated Metal Products	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Fabricated Metal Products	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	128
Fabricated Metal Products	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	115
Fabricated Metal Products	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	276
Fabricated Metal Products	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Fabricated Metal Products	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	573
Fabricated Metal Products	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	19
Fabricated Metal Products	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	308
Fabricated Metal Products	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	90
Fabricated Metal Products	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	555
Fabricated Metal Products	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Fabricated Metal Products	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	9
Fabricated Metal Products	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	1,190
Fabricated Metal Products	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	217
Fabricated Metal Products	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	1,115
Fabricated Metal Products	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	581
Fabricated Metal Products	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	179
Fabricated Metal Products	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	31
Fabricated Metal Products	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	391
Fabricated Metal Products	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Fabricated Metal Products	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Fabricated Metal Products	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	84
Fabricated Metal Products	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	74

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Fabricated Metal Products	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	174
Fabricated Metal Products	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Fabricated Metal Products	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	13
Fabricated Metal Products	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	470
Fabricated Metal Products	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	102
Food Mfg	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Food Mfg	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Food Mfg	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	131
Food Mfg	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	129
Food Mfg	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	317
Food Mfg	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	4,831
Food Mfg	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Food Mfg	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	30
Food Mfg	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	949
Food Mfg	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	105
Food Mfg	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	700
Food Mfg	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	1,009
Food Mfg	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	1,944
Food Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Food Mfg	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Food Mfg	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Food Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	1,683
Food Mfg	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	774
Food Mfg	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Food Mfg	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	6,136
Food Mfg	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Food Mfg	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Food Mfg	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	23,115
Food Mfg	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Food Mfg	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	3,615
Food Mfg	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Food Mfg	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Food Mfg	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	725
Food Mfg	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	665
Food Mfg	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	1,604
Food Mfg	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	5,915
Food Mfg	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Food Mfg	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	3,353
Food Mfg	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	154
Food Mfg	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	1,804
Food Mfg	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	525
Food Mfg	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	3,279
Food Mfg	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Food Mfg	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	83
Food Mfg	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	3,416
Food Mfg	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	4,415
Food Mfg	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	624
Food Mfg	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	3,207
Food Mfg	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	16,545
Food Mfg	Process Refrig and Cooling	Defrost Control System	Per Unit	Existing	7%	15	\$0.08	20,775
Food Mfg	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	5,106
Food Mfg	Process Refrig and Cooling	Evaporator Fan Controller	Per Unit	Existing	5%	16	\$0.08	16,054

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Food Mfg	Process Refrig and Cooling	Floating Head Pressure Controller	Per Unit	Existing	9%	15	\$0.07	30,641
Food Mfg	Process Refrig and Cooling	Floating Suction Pressure Controller	Per Unit	Existing	1%	15	\$0.07	4,603
Food Mfg	Process Refrig and Cooling	Freezer-Cooler Replacement Gaskets	Per Unit	Existing	4%	4	\$0.08	1,121
Food Mfg	Process Refrig and Cooling	Insulation for Bare Suction Lines	Per Unit	Existing	1%	10	\$0.96	0
Food Mfg	Process Refrig and Cooling	Mechanical Subcoolers	Per Unit	Existing	0%	15	\$0.35	398
Food Mfg	Process Refrig and Cooling	Strip Curtains for Walk-Ins	Per Unit	Existing	4%	4	\$0.18	2,550
Food Mfg	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	1,006
Food Mfg	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	12,347
Food Mfg	Process Refrig and Cooling	Variable Speed Compressor Systems	Per Unit	Existing	10%	15	\$0.22	29,310
Food Mfg	Process Refrig and Cooling	Walk-in PSC to ECM	Per Unit	Existing	5%	10	\$0.48	426
Food Mfg	Process Refrig and Cooling	Walk-in Shaded Pole to ECM	Per Unit	Existing	7%	10	\$0.48	1,180
Food Mfg	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Food Mfg	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Food Mfg	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	291
Food Mfg	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	288
Food Mfg	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	681
Food Mfg	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	10,943
Food Mfg	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Food Mfg	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	67
Food Mfg	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	1,620
Food Mfg	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	397
Furniture Mfg	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Furniture Mfg	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Furniture Mfg	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	18
Furniture Mfg	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	16
Furniture Mfg	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	39
Furniture Mfg	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Furniture Mfg	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	2
Furniture Mfg	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	118
Furniture Mfg	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	13
Furniture Mfg	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	87
Furniture Mfg	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	118
Furniture Mfg	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	227
Furniture Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Furniture Mfg	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Furniture Mfg	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Furniture Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	197
Furniture Mfg	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	109
Furniture Mfg	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Furniture Mfg	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	868
Furniture Mfg	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Furniture Mfg	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Furniture Mfg	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	3,269
Furniture Mfg	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Furniture Mfg	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	511
Furniture Mfg	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Furniture Mfg	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Furniture Mfg	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	49
Furniture Mfg	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	44
Furniture Mfg	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	106
Furniture Mfg	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Furniture Mfg	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	230

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Furniture Mfg	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	5
Furniture Mfg	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	124
Furniture Mfg	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	36
Furniture Mfg	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	222
Furniture Mfg	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Furniture Mfg	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	7
Furniture Mfg	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	491
Furniture Mfg	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	89
Furniture Mfg	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	459
Furniture Mfg	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	20
Furniture Mfg	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	6
Furniture Mfg	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	10
Furniture Mfg	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	13
Furniture Mfg	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Furniture Mfg	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Furniture Mfg	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	34
Furniture Mfg	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	30
Furniture Mfg	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	70
Furniture Mfg	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Furniture Mfg	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	3
Furniture Mfg	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	179
Furniture Mfg	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	41
Industrial Machinery	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Industrial Machinery	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Industrial Machinery	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	229
Industrial Machinery	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	227
Industrial Machinery	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	555
Industrial Machinery	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	8,315
Industrial Machinery	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Industrial Machinery	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	56
Industrial Machinery	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	1,662
Industrial Machinery	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	181
Industrial Machinery	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	1,227
Industrial Machinery	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	2,477
Industrial Machinery	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	4,900
Industrial Machinery	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Industrial Machinery	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Industrial Machinery	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Industrial Machinery	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	4,205
Industrial Machinery	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	1,428
Industrial Machinery	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Industrial Machinery	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	11,323
Industrial Machinery	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Industrial Machinery	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Industrial Machinery	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	42,657
Industrial Machinery	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Industrial Machinery	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	6,671
Industrial Machinery	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Industrial Machinery	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Industrial Machinery	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	699
Industrial Machinery	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	642
Industrial Machinery	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	1,551

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Industrial Machinery	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	5,710
Industrial Machinery	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Industrial Machinery	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	3,241
Industrial Machinery	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	158
Industrial Machinery	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	1,742
Industrial Machinery	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	507
Industrial Machinery	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	3,142
Industrial Machinery	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Industrial Machinery	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	67
Industrial Machinery	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	6,731
Industrial Machinery	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	8,516
Industrial Machinery	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	1,228
Industrial Machinery	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	6,309
Industrial Machinery	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	3,507
Industrial Machinery	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	1,074
Industrial Machinery	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	162
Industrial Machinery	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	2,370
Industrial Machinery	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Industrial Machinery	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Industrial Machinery	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	424
Industrial Machinery	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	421
Industrial Machinery	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	994
Industrial Machinery	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	15,599
Industrial Machinery	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Industrial Machinery	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	104
Industrial Machinery	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	2,365
Industrial Machinery	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	576
Instruments	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Instruments	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Instruments	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	2
Instruments	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	2
Instruments	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	4
Instruments	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Instruments	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	0
Instruments	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	12
Instruments	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	1
Instruments	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	9
Instruments	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	34
Instruments	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	65
Instruments	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Instruments	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Instruments	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Instruments	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	56
Instruments	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	12
Instruments	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Instruments	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	97
Instruments	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Instruments	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Instruments	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	364
Instruments	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Instruments	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	57
Instruments	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Instruments	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Instruments	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	4
Instruments	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	3
Instruments	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	8
Instruments	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Instruments	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	16
Instruments	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	0
Instruments	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	9
Instruments	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	2
Instruments	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	15
Instruments	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Instruments	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	2
Instruments	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	10
Instruments	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	2
Instruments	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	9
Instruments	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	22
Instruments	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	7
Instruments	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	4
Instruments	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	15
Instruments	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Instruments	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Instruments	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	3
Instruments	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	3
Instruments	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	6
Instruments	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Instruments	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	0
Instruments	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	16
Instruments	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	4
Mining	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Mining	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Mining	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	312
Mining	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	287
Mining	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	692
Mining	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	2,550
Mining	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Mining	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	1,446
Mining	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	33
Mining	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	777
Mining	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	226
Mining	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	1,375
Mining	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Mining	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Mining	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	4
Mining	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	4
Mining	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	9
Mining	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Mining	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	0
Mining	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	23
Mining	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	5
Miscellaneous Mfg	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Miscellaneous Mfg	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Miscellaneous Mfg	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	20

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Miscellaneous Mfg	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	19
Miscellaneous Mfg	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	48
Miscellaneous Mfg	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	714
Miscellaneous Mfg	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Miscellaneous Mfg	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	2
Miscellaneous Mfg	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	143
Miscellaneous Mfg	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	16
Miscellaneous Mfg	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	105
Miscellaneous Mfg	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	294
Miscellaneous Mfg	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	567
Miscellaneous Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Miscellaneous Mfg	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Miscellaneous Mfg	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Miscellaneous Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	491
Miscellaneous Mfg	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	174
Miscellaneous Mfg	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Miscellaneous Mfg	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	1,382
Miscellaneous Mfg	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Miscellaneous Mfg	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Miscellaneous Mfg	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	5,205
Miscellaneous Mfg	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Miscellaneous Mfg	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	814
Miscellaneous Mfg	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Miscellaneous Mfg	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Miscellaneous Mfg	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	85
Miscellaneous Mfg	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	78
Miscellaneous Mfg	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	188
Miscellaneous Mfg	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	701
Miscellaneous Mfg	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Miscellaneous Mfg	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	394
Miscellaneous Mfg	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	9
Miscellaneous Mfg	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	212
Miscellaneous Mfg	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	62
Miscellaneous Mfg	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	382
Miscellaneous Mfg	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Miscellaneous Mfg	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	11
Miscellaneous Mfg	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	468
Miscellaneous Mfg	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	593
Miscellaneous Mfg	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	85
Miscellaneous Mfg	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	439
Miscellaneous Mfg	Process Other	Cleaners: Professional Wet Cleaning	Per Unit	Existing	29%	15	\$7	0
Miscellaneous Mfg	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	337
Miscellaneous Mfg	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	35
Miscellaneous Mfg	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	18
Miscellaneous Mfg	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	74
Miscellaneous Mfg	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Miscellaneous Mfg	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Miscellaneous Mfg	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	11
Miscellaneous Mfg	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	11
Miscellaneous Mfg	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	27
Miscellaneous Mfg	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	421
Miscellaneous Mfg	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Miscellaneous Mfg	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	1
Miscellaneous Mfg	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	64
Miscellaneous Mfg	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	16
Nonmetallic Mineral Products	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Nonmetallic Mineral Products	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Nonmetallic Mineral Products	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	113
Nonmetallic Mineral Products	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	112
Nonmetallic Mineral Products	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	274
Nonmetallic Mineral Products	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	4,099
Nonmetallic Mineral Products	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Nonmetallic Mineral Products	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	13
Nonmetallic Mineral Products	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	819
Nonmetallic Mineral Products	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	89
Nonmetallic Mineral Products	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	604
Nonmetallic Mineral Products	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	284
Nonmetallic Mineral Products	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	547
Nonmetallic Mineral Products	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Nonmetallic Mineral Products	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Nonmetallic Mineral Products	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Nonmetallic Mineral Products	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	474
Nonmetallic Mineral Products	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	203
Nonmetallic Mineral Products	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Nonmetallic Mineral Products	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	1,613
Nonmetallic Mineral Products	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Nonmetallic Mineral Products	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Nonmetallic Mineral Products	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	6,076
Nonmetallic Mineral Products	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Nonmetallic Mineral Products	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	950
Nonmetallic Mineral Products	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Nonmetallic Mineral Products	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Nonmetallic Mineral Products	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	345
Nonmetallic Mineral Products	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	317
Nonmetallic Mineral Products	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	764
Nonmetallic Mineral Products	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	2,815
Nonmetallic Mineral Products	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Nonmetallic Mineral Products	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	1,597
Nonmetallic Mineral Products	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	37
Nonmetallic Mineral Products	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	859
Nonmetallic Mineral Products	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	250
Nonmetallic Mineral Products	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	1,548
Nonmetallic Mineral Products	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Nonmetallic Mineral Products	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	22
Nonmetallic Mineral Products	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	3,317
Nonmetallic Mineral Products	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	4,197
Nonmetallic Mineral Products	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	605
Nonmetallic Mineral Products	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	3,109
Nonmetallic Mineral Products	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	755
Nonmetallic Mineral Products	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	427
Nonmetallic Mineral Products	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	75
Nonmetallic Mineral Products	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	915
Nonmetallic Mineral Products	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Nonmetallic Mineral Products	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Nonmetallic Mineral Products	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	209
Nonmetallic Mineral Products	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	208
Nonmetallic Mineral Products	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	490
Nonmetallic Mineral Products	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	7,690
Nonmetallic Mineral Products	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Nonmetallic Mineral Products	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	24
Nonmetallic Mineral Products	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	1,166
Nonmetallic Mineral Products	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	284
Paper Mfg	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Paper Mfg	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Paper Mfg	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	109
Paper Mfg	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	108
Paper Mfg	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	272
Paper Mfg	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	3,938
Paper Mfg	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Paper Mfg	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	26
Paper Mfg	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	1,940
Paper Mfg	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	86
Paper Mfg	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	601
Paper Mfg	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	107
Paper Mfg	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	211
Paper Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Paper Mfg	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Paper Mfg	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Paper Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	181
Paper Mfg	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	86
Paper Mfg	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Paper Mfg	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	682
Paper Mfg	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Paper Mfg	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Paper Mfg	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	2,569
Paper Mfg	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Paper Mfg	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	402
Paper Mfg	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Paper Mfg	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Paper Mfg	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	246
Paper Mfg	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	220
Paper Mfg	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	531
Paper Mfg	Motors Other	Material Handling	Per Unit	Existing	13%	10	\$0.64	0
Paper Mfg	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Paper Mfg	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	1,110
Paper Mfg	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	54
Paper Mfg	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	597
Paper Mfg	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	174
Paper Mfg	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	1,071
Paper Mfg	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Paper Mfg	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	8
Paper Mfg	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	659
Paper Mfg	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	839
Paper Mfg	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	120
Paper Mfg	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	618
Paper Mfg	Process Other	Efficient Agitator	Per Unit	Existing	50%	10	\$0.08	199

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Paper Mfg	Process Other	Effluent Treatment System	Per Unit	Existing	15%	10	\$0.07	40
Paper Mfg	Process Other	Mech Pulp: Premium Process	Per Unit	Existing	0%	5	\$0.11	1
Paper Mfg	Process Other	Mech Pulp: Refiner Plate Improvement	Per Unit	Existing	0%	1	\$0.03	4
Paper Mfg	Process Other	Mech Pulp: Refiner Replacement	Per Unit	Existing	10%	12	\$0.58	66
Paper Mfg	Process Other	Paper: Efficient Pulp Screen	Per Unit	Existing	15%	10	\$0.18	56
Paper Mfg	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	590
Paper Mfg	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	101
Paper Mfg	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	32
Paper Mfg	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	218
Paper Mfg	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Paper Mfg	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Paper Mfg	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	188
Paper Mfg	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	186
Paper Mfg	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	440
Paper Mfg	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	6,673
Paper Mfg	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Paper Mfg	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	44
Paper Mfg	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	1,046
Paper Mfg	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	247
Plastics Rubber Products	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Plastics Rubber Products	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Plastics Rubber Products	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	102
Plastics Rubber Products	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	90
Plastics Rubber Products	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	220
Plastics Rubber Products	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Plastics Rubber Products	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	10
Plastics Rubber Products	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	658
Plastics Rubber Products	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	72
Plastics Rubber Products	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	486
Plastics Rubber Products	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	430
Plastics Rubber Products	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	828
Plastics Rubber Products	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Plastics Rubber Products	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Plastics Rubber Products	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Plastics Rubber Products	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	717
Plastics Rubber Products	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	300
Plastics Rubber Products	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Plastics Rubber Products	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	2,380
Plastics Rubber Products	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Plastics Rubber Products	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Plastics Rubber Products	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	8,965
Plastics Rubber Products	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Plastics Rubber Products	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	1,402
Plastics Rubber Products	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Plastics Rubber Products	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Plastics Rubber Products	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	287
Plastics Rubber Products	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	256
Plastics Rubber Products	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	619
Plastics Rubber Products	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Plastics Rubber Products	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	1,283
Plastics Rubber Products	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	29
Plastics Rubber Products	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	701

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Plastics Rubber Products	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	201
Plastics Rubber Products	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	1,244
Plastics Rubber Products	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Plastics Rubber Products	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	24
Plastics Rubber Products	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	2,665
Plastics Rubber Products	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	484
Plastics Rubber Products	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	2,498
Plastics Rubber Products	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	2,300
Plastics Rubber Products	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	709
Plastics Rubber Products	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	124
Plastics Rubber Products	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	1,548
Plastics Rubber Products	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Plastics Rubber Products	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Plastics Rubber Products	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	187
Plastics Rubber Products	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	165
Plastics Rubber Products	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	390
Plastics Rubber Products	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Plastics Rubber Products	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	19
Plastics Rubber Products	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	1,053
Plastics Rubber Products	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	228
Primary Metal Mfg	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Primary Metal Mfg	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Primary Metal Mfg	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	463
Primary Metal Mfg	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	459
Primary Metal Mfg	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	1,122
Primary Metal Mfg	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	17,494
Primary Metal Mfg	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Primary Metal Mfg	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	99
Primary Metal Mfg	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	3,360
Primary Metal Mfg	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	367
Primary Metal Mfg	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	2,478
Primary Metal Mfg	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	1,113
Primary Metal Mfg	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	2,146
Primary Metal Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Primary Metal Mfg	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Primary Metal Mfg	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Primary Metal Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	1,858
Primary Metal Mfg	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	953
Primary Metal Mfg	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Primary Metal Mfg	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	7,560
Primary Metal Mfg	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Primary Metal Mfg	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Primary Metal Mfg	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	28,479
Primary Metal Mfg	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Primary Metal Mfg	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	4,453
Primary Metal Mfg	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Primary Metal Mfg	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Primary Metal Mfg	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	2,057
Primary Metal Mfg	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	1,888
Primary Metal Mfg	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	4,556
Primary Metal Mfg	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	16,795
Primary Metal Mfg	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Primary Metal Mfg	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	9,522
Primary Metal Mfg	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	400
Primary Metal Mfg	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	5,121
Primary Metal Mfg	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	1,491
Primary Metal Mfg	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	8,979
Primary Metal Mfg	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Primary Metal Mfg	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	64
Primary Metal Mfg	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	11,140
Primary Metal Mfg	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	14,560
Primary Metal Mfg	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	2,037
Primary Metal Mfg	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	10,468
Primary Metal Mfg	Process Heat	New Arc Furnace	Per Unit	Existing	45%	10	\$0.09	48,853
Primary Metal Mfg	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	328
Primary Metal Mfg	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	471
Primary Metal Mfg	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	82
Primary Metal Mfg	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	994
Primary Metal Mfg	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Primary Metal Mfg	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Primary Metal Mfg	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	268
Primary Metal Mfg	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	266
Primary Metal Mfg	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	627
Primary Metal Mfg	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	10,296
Primary Metal Mfg	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Primary Metal Mfg	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	59
Primary Metal Mfg	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	1,492
Primary Metal Mfg	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	366
Printing Related Support	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Printing Related Support	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Printing Related Support	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	88
Printing Related Support	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	78
Printing Related Support	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	190
Printing Related Support	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Printing Related Support	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	9
Printing Related Support	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	569
Printing Related Support	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	62
Printing Related Support	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	420
Printing Related Support	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	629
Printing Related Support	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	1,212
Printing Related Support	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Printing Related Support	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Printing Related Support	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Printing Related Support	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	1,049
Printing Related Support	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	355
Printing Related Support	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Printing Related Support	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	2,815
Printing Related Support	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Printing Related Support	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Printing Related Support	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	10,603
Printing Related Support	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Printing Related Support	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	1,658
Printing Related Support	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Printing Related Support	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Printing Related Support	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	246
Printing Related Support	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	220
Printing Related Support	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	531
Printing Related Support	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Printing Related Support	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	1,110
Printing Related Support	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	25
Printing Related Support	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	598
Printing Related Support	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	174
Printing Related Support	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	1,077
Printing Related Support	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Printing Related Support	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	34
Printing Related Support	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	2,306
Printing Related Support	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	421
Printing Related Support	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	2,162
Printing Related Support	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	832
Printing Related Support	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	105
Printing Related Support	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	219
Printing Related Support	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Printing Related Support	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Printing Related Support	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	163
Printing Related Support	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	144
Printing Related Support	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	341
Printing Related Support	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Printing Related Support	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	17
Printing Related Support	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	911
Printing Related Support	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	197
Street Lighting	Lighting	LED Traffic Light - Amber (20 Watts)	Per Unit	Existing	0%	8	\$6	0
Street Lighting	Lighting	LED Traffic Light - Don't Walk 12"	Per Unit	Existing	29%	8	\$0.10	18,385
Street Lighting	Lighting	LED Traffic Light - Don't Walk 8"	Per Unit	Existing	13%	8	\$0.23	5,361
Street Lighting	Lighting	LED Traffic Light - Green 10" or 12"	Per Unit	Existing	12%	8	\$0.22	5,563
Street Lighting	Lighting	LED Traffic Light - Green 8"	Per Unit	Existing	5%	8	\$0.51	0
Street Lighting	Lighting	LED Traffic Light - Green Arrow	Per Unit	Existing	2%	8	\$1	0
Street Lighting	Lighting	LED Traffic Light - Red 10" or 12"	Per Unit	Existing	16%	8	\$0.08	11,654
Street Lighting	Lighting	LED Traffic Light - Red 8"	Per Unit	Existing	7%	8	\$0.17	3,626
Street Lighting	Lighting	LED Traffic Light - Red Arrow (7 Watts)	Per Unit	Existing	7%	8	\$0.18	3,376
Street Lighting	Lighting	Streetlight - HPS 100W to LED 62W	Per Unit	Existing	9%	8	\$1	0
Street Lighting	Lighting	Streetlight - HPS 150W to LED 113W	Per Unit	Existing	7%	8	\$1	0
Street Lighting	Lighting	Streetlight - HPS 200W to LED 120W	Per Unit	Existing	9%	8	\$0.68	0
Street Lighting	Lighting	Streetlight - HPS 250W to LED 150W	Per Unit	Existing	8%	8	\$0.61	0
Street Lighting	Lighting	Streetlight - HPS 400W to LED 225W	Per Unit	Existing	9%	8	\$0.36	0
Street Lighting	Lighting	Streetlight - HPS 70W to LED 42W	Per Unit	Existing	9%	8	\$1	0
Transportation Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Transportation Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Transportation Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	23
Transportation Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	23
Transportation Equipment Mfg	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	55
Transportation Equipment Mfg	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	830
Transportation Equipment Mfg	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Transportation Equipment Mfg	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	6
Transportation Equipment Mfg	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	166
Transportation Equipment Mfg	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	18
Transportation Equipment Mfg	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	122

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Transportation Equipment Mfg	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	302
Transportation Equipment Mfg	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	583
Transportation Equipment Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Transportation Equipment Mfg	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Transportation Equipment Mfg	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Transportation Equipment Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	504
Transportation Equipment Mfg	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	202
Transportation Equipment Mfg	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Transportation Equipment Mfg	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	1,598
Transportation Equipment Mfg	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Transportation Equipment Mfg	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Transportation Equipment Mfg	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	6,020
Transportation Equipment Mfg	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Transportation Equipment Mfg	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	941
Transportation Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Transportation Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Transportation Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	55
Transportation Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	51
Transportation Equipment Mfg	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	122
Transportation Equipment Mfg	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	449
Transportation Equipment Mfg	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Transportation Equipment Mfg	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	255
Transportation Equipment Mfg	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	12
Transportation Equipment Mfg	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	137
Transportation Equipment Mfg	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	40
Transportation Equipment Mfg	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	247
Transportation Equipment Mfg	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Transportation Equipment Mfg	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	14
Transportation Equipment Mfg	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	1,356
Transportation Equipment Mfg	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	1,716
Transportation Equipment Mfg	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	247
Transportation Equipment Mfg	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	1,271
Transportation Equipment Mfg	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	379
Transportation Equipment Mfg	Process Refrig and Cooling	Desuperheaters	Per Unit	Existing	3%	14	\$0.60	119
Transportation Equipment Mfg	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	37
Transportation Equipment Mfg	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	252
Transportation Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Transportation Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Transportation Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	51
Transportation Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	51
Transportation Equipment Mfg	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	120
Transportation Equipment Mfg	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	1,880
Transportation Equipment Mfg	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Transportation Equipment Mfg	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	13
Transportation Equipment Mfg	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	285
Transportation Equipment Mfg	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	69
Wood Product Mfg	Fans	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Wood Product Mfg	Fans	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Wood Product Mfg	Fans	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	39
Wood Product Mfg	Fans	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	38
Wood Product Mfg	Fans	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	94
Wood Product Mfg	Fans	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	1,403

Table A.3.5. MidAm Industrial Electric Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year KWh Saved	2023 Economic Potential (MWh)
Wood Product Mfg	Fans	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Wood Product Mfg	Fans	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	9
Wood Product Mfg	Fans	Premium Fan	Per Unit	Existing	20%	10	\$0.18	281
Wood Product Mfg	Fans	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	31
Wood Product Mfg	Fans	Variable Speed Drive Control	Per Unit	Existing	14%	10	\$0.18	207
Wood Product Mfg	HVAC	Chiller Air Cooled	Per Unit	Existing	4%	20	\$0.19	55
Wood Product Mfg	HVAC	Chiller Water-Cooled	Per Unit	Existing	9%	20	\$0.19	109
Wood Product Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$4	0
Wood Product Mfg	HVAC	Heat Pump - Ground Source	Per Unit	Existing	32%	15	\$11	0
Wood Product Mfg	HVAC	Package Terminal	Per Unit	Existing	0%	9	\$1	0
Wood Product Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.36	93
Wood Product Mfg	Lighting	Exit Sign - LED	Per Unit	Existing	2%	11	\$0.42	68
Wood Product Mfg	Lighting	Exit Sign - Photoluminescent	Per Unit	Existing	0%	13	\$0.85	0
Wood Product Mfg	Lighting	Lighting - CFL Packages	Per Unit	Existing	8%	2	\$0.00	543
Wood Product Mfg	Lighting	Lighting - Fluorescent High Performance Packages	Per Unit	Existing	4%	7	\$2	0
Wood Product Mfg	Lighting	Lighting - Fluorescent Reduced Wattage Packages	Per Unit	Existing	9%	5	\$0.90	0
Wood Product Mfg	Lighting	Lighting - High Bay Fluorescent High Output Packages	Per Unit	Existing	49%	6	\$0.09	2,046
Wood Product Mfg	Lighting	Lighting - High Intensity Discharge Packages	Per Unit	Existing	10%	5	\$0.46	0
Wood Product Mfg	Lighting	Lighting - LED Lamp Packages	Per Unit	Existing	10%	11	\$0.22	320
Wood Product Mfg	Motors Other	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Wood Product Mfg	Motors Other	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Wood Product Mfg	Motors Other	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	101
Wood Product Mfg	Motors Other	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	93
Wood Product Mfg	Motors Other	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	225
Wood Product Mfg	Motors Other	Material Handling	Per Unit	Existing	5%	10	\$0.46	832
Wood Product Mfg	Motors Other	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Wood Product Mfg	Motors Other	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	470
Wood Product Mfg	Motors Other	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	22
Wood Product Mfg	Motors Other	Replace Pneumatic Conveyor	Per Unit	Existing	29%	10	\$0.01	5,538
Wood Product Mfg	Motors Other	Switch from Belt drive to Direct Drive	Per Unit	Existing	8%	12	\$0.21	253
Wood Product Mfg	Motors Other	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	73
Wood Product Mfg	Motors Other	Variable Speed Drive Control	Per Unit	Existing	13%	10	\$0.20	454
Wood Product Mfg	Other	Power Quality-Improving Appliances	Per Unit	Existing	0%	20	\$2	0
Wood Product Mfg	Other	Transformers	Per Unit	Existing	2%	30	\$0.09	7
Wood Product Mfg	Process AirComp	Air Compressor Optimization	Per Unit	Existing	21%	10	\$0.09	1,173
Wood Product Mfg	Process AirComp	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	1,429
Wood Product Mfg	Process AirComp	Motor Management Plan	Per Unit	Existing	3%	10	\$0.07	213
Wood Product Mfg	Process AirComp	VFD Controlled Compressor	Per Unit	Existing	22%	15	\$0.49	1,096
Wood Product Mfg	Process Refrig and Cooling	Chiller - Water Piping Loop with VSD Control	Per Unit	Existing	9%	15	\$0.27	113
Wood Product Mfg	Process Refrig and Cooling	Synchronous Belts	Per Unit	Existing	1%	10	\$0.21	19
Wood Product Mfg	Process Refrig and Cooling	VFD on Cooling Tower Fans	Per Unit	Existing	6%	15	\$0.08	125
Wood Product Mfg	Pumps	Enhanced (Ultra-PE) Motor 1-15 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Wood Product Mfg	Pumps	Enhanced (Ultra-PE) Motor 125-200 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$1	0
Wood Product Mfg	Pumps	Enhanced (Ultra-PE) Motor 20-40 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.79	68
Wood Product Mfg	Pumps	Enhanced (Ultra-PE) Motor 250-500 HP, 1200-3600 RPM	Per Unit	Existing	0%	15	\$0.30	68
Wood Product Mfg	Pumps	Enhanced (Ultra-PE) Motor 50-100 HP, 1200-3600 RPM	Per Unit	Existing	1%	15	\$0.19	160
Wood Product Mfg	Pumps	Integrated Plant Energy Management	Per Unit	Existing	50%	11	\$0.19	2,634
Wood Product Mfg	Pumps	Motor Early Retirement	Per Unit	Existing	3%	10	\$4	0
Wood Product Mfg	Pumps	Motor Rewind	Per Unit	Existing	1%	10	\$0.30	17
Wood Product Mfg	Pumps	Pump System Optimization	Per Unit	Existing	12%	12	\$0.25	382
Wood Product Mfg	Pumps	Variable Speed Drive Control	Per Unit	Existing	4%	10	\$0.21	97

Table A.3.5. MidAm Industrial Gas Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year Therm Saved	2023 Economic Potential (Thousand Therms)
Agriculture	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Agriculture	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	7
Agriculture	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	4
Agriculture	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	1
Agriculture	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	1
Agriculture	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	8
Agriculture	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	56
Agriculture	Indirect Boiler	Efficient Burners	Per Unit	Existing	22%	15	\$0.17	104
Agriculture	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	35
Agriculture	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	18
Agriculture	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	13
Agriculture	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	12
Agriculture	Process Heat	Efficient Drying	Per Unit	Existing	15%	20	\$4	77
Agriculture	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	5
Agriculture	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	142
Agriculture	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Agriculture	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Chemical Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Chemical Mfg	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	2
Chemical Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	1
Chemical Mfg	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Chemical Mfg	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	2
Chemical Mfg	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	8
Chemical Mfg	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	58
Chemical Mfg	Indirect Boiler	Efficient Burners	Per Unit	Existing	22%	15	\$0.17	108
Chemical Mfg	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	37
Chemical Mfg	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	19
Chemical Mfg	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	14
Chemical Mfg	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	12
Chemical Mfg	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	6
Chemical Mfg	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	71
Chemical Mfg	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Chemical Mfg	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Chemical Mfg	Process Heat	Thermal Oxidizer Upgrades	Per Unit	Existing	43%	15	\$2	125
Electrical Equipment Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Electrical Equipment Mfg	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	0
Electrical Equipment Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	0
Electrical Equipment Mfg	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Electrical Equipment Mfg	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Electrical Equipment Mfg	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Electrical Equipment Mfg	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	0
Electrical Equipment Mfg	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0
Electrical Equipment Mfg	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Electrical Equipment Mfg	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Electrical Equipment Mfg	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Electrical Equipment Mfg	Process Heat	Efficient Process Furnaces	Per Unit	Existing	7%	25	\$1	0
Electrical Equipment Mfg	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	0
Electrical Equipment Mfg	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	1
Electrical Equipment Mfg	Process Heat	Optimized Furnace Operations	Per Unit	Existing	6%	15	\$0.41	0
Electrical Equipment Mfg	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Electrical Equipment Mfg	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0

Table A.3.5. MidAm Industrial Gas Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year Therm Saved	2023 Economic Potential (Thousand Therms)
Fabricated Metal Products	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Fabricated Metal Products	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	1
Fabricated Metal Products	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	1
Fabricated Metal Products	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Fabricated Metal Products	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Fabricated Metal Products	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Fabricated Metal Products	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	1
Fabricated Metal Products	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	1
Fabricated Metal Products	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Fabricated Metal Products	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Fabricated Metal Products	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Fabricated Metal Products	Process Heat	Efficient Process Furnaces	Per Unit	Existing	7%	25	\$1	1
Fabricated Metal Products	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	1
Fabricated Metal Products	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	6
Fabricated Metal Products	Process Heat	Optimized Furnace Operations	Per Unit	Existing	6%	16	\$0.41	1
Fabricated Metal Products	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Fabricated Metal Products	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Food Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Food Mfg	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	9
Food Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	5
Food Mfg	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	1
Food Mfg	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	2
Food Mfg	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	11
Food Mfg	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	72
Food Mfg	Indirect Boiler	Efficient Burners	Per Unit	Existing	22%	15	\$0.17	135
Food Mfg	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	46
Food Mfg	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	23
Food Mfg	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	17
Food Mfg	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	16
Food Mfg	Process Heat	Efficient Drying	Per Unit	Existing	15%	20	\$4	100
Food Mfg	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	7
Food Mfg	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	184
Food Mfg	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Food Mfg	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Furniture Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Furniture Mfg	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	0
Furniture Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	0
Furniture Mfg	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Furniture Mfg	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Furniture Mfg	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Furniture Mfg	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	0
Furniture Mfg	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0
Furniture Mfg	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Furniture Mfg	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Furniture Mfg	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Furniture Mfg	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	0
Furniture Mfg	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	0
Furniture Mfg	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Furniture Mfg	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Industrial Machinery	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Industrial Machinery	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	15

Table A.3.5. MidAm Industrial Gas Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year Therm Saved	2023 Economic Potential (Thousand Therms)
Industrial Machinery	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	9
Industrial Machinery	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	1
Industrial Machinery	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Industrial Machinery	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	1
Industrial Machinery	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	7
Industrial Machinery	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	5
Industrial Machinery	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	2
Industrial Machinery	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	2
Industrial Machinery	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	2
Industrial Machinery	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	1
Industrial Machinery	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	15
Industrial Machinery	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Industrial Machinery	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Instruments	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Instruments	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	0
Instruments	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	0
Instruments	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Instruments	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Instruments	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Instruments	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	0
Instruments	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0
Instruments	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Instruments	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Instruments	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Instruments	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	0
Instruments	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	0
Instruments	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Instruments	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Miscellaneous Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Miscellaneous Mfg	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	2
Miscellaneous Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	1
Miscellaneous Mfg	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Miscellaneous Mfg	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Miscellaneous Mfg	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Miscellaneous Mfg	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	0
Miscellaneous Mfg	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0
Miscellaneous Mfg	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Miscellaneous Mfg	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Miscellaneous Mfg	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Miscellaneous Mfg	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	0
Miscellaneous Mfg	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	1
Miscellaneous Mfg	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Miscellaneous Mfg	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Nonmetallic Mineral Products	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Nonmetallic Mineral Products	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	0
Nonmetallic Mineral Products	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	0
Nonmetallic Mineral Products	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Nonmetallic Mineral Products	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Nonmetallic Mineral Products	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Nonmetallic Mineral Products	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	0
Nonmetallic Mineral Products	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0

Table A.3.5. MidAm Industrial Gas Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year Therm Saved	2023 Economic Potential (Thousand Therms)
Nonmetallic Mineral Products	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Nonmetallic Mineral Products	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Nonmetallic Mineral Products	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Nonmetallic Mineral Products	Process Heat	Efficient Process Furnaces	Per Unit	Existing	7%	25	\$1	3
Nonmetallic Mineral Products	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	0
Nonmetallic Mineral Products	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	4
Nonmetallic Mineral Products	Process Heat	Optimized Furnace Operations	Per Unit	Existing	6%	17	\$0.41	3
Nonmetallic Mineral Products	Process Heat	Oxyfuel	Per Unit	Existing	15%	21	\$1	9
Nonmetallic Mineral Products	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Nonmetallic Mineral Products	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Paper Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Paper Mfg	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	0
Paper Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	0
Paper Mfg	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Paper Mfg	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Paper Mfg	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Paper Mfg	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	1
Paper Mfg	Indirect Boiler	Efficient Burners	Per Unit	Existing	22%	15	\$0.17	1
Paper Mfg	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0
Paper Mfg	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Paper Mfg	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Paper Mfg	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Paper Mfg	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	0
Paper Mfg	Process Heat	High Efficiency Pulping	Per Unit	Existing	16%	20	\$0.01	1
Paper Mfg	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	1
Paper Mfg	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Paper Mfg	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Plastics Rubber Products	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Plastics Rubber Products	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	1
Plastics Rubber Products	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	0
Plastics Rubber Products	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Plastics Rubber Products	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Plastics Rubber Products	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Plastics Rubber Products	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	1
Plastics Rubber Products	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	1
Plastics Rubber Products	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Plastics Rubber Products	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Plastics Rubber Products	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Plastics Rubber Products	Process Heat	Efficient Process Furnaces	Per Unit	Existing	7%	25	\$1	1
Plastics Rubber Products	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	0
Plastics Rubber Products	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	3
Plastics Rubber Products	Process Heat	Optimized Furnace Operations	Per Unit	Existing	6%	18	\$0.41	0
Plastics Rubber Products	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Plastics Rubber Products	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Primary Metal Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Primary Metal Mfg	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	1
Primary Metal Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	0
Primary Metal Mfg	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Primary Metal Mfg	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Primary Metal Mfg	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Primary Metal Mfg	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	1

Table A.3.5. MidAm Industrial Gas Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year Therm Saved	2023 Economic Potential (Thousand Therms)
Primary Metal Mfg	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0
Primary Metal Mfg	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Primary Metal Mfg	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Primary Metal Mfg	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Primary Metal Mfg	Process Heat	Efficient Process Furnaces	Per Unit	Existing	7%	25	\$1	9
Primary Metal Mfg	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	1
Primary Metal Mfg	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	26
Primary Metal Mfg	Process Heat	Optimized Furnace Operations	Per Unit	Existing	6%	19	\$0.41	9
Primary Metal Mfg	Process Heat	Oxyfuel	Per Unit	Existing	15%	22	\$1	4
Primary Metal Mfg	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Primary Metal Mfg	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Printing Related Support	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Printing Related Support	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	1
Printing Related Support	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	1
Printing Related Support	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Printing Related Support	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Printing Related Support	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Printing Related Support	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	1
Printing Related Support	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0
Printing Related Support	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Printing Related Support	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Printing Related Support	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Printing Related Support	Process Heat	Efficient Drying	Per Unit	Existing	15%	20	\$4	5
Printing Related Support	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	1
Printing Related Support	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	8
Printing Related Support	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Printing Related Support	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Transportation Equipment Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Transportation Equipment Mfg	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	1
Transportation Equipment Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	1
Transportation Equipment Mfg	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Transportation Equipment Mfg	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Transportation Equipment Mfg	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Transportation Equipment Mfg	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	0
Transportation Equipment Mfg	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0
Transportation Equipment Mfg	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0
Transportation Equipment Mfg	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Transportation Equipment Mfg	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Transportation Equipment Mfg	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	0
Transportation Equipment Mfg	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	1
Transportation Equipment Mfg	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Transportation Equipment Mfg	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0
Wood Product Mfg	HVAC	Duct Repair And Sealing	Per Unit	Existing	3%	18	\$20	0
Wood Product Mfg	HVAC	Efficient Furnace	Per Unit	Existing	17%	20	\$2	0
Wood Product Mfg	HVAC	Thermostat Programmable	Per Unit	Existing	3%	15	\$0.62	0
Wood Product Mfg	HVAC	Waste Heat Recovery	Per Unit	Existing	5%	15	\$2	0
Wood Product Mfg	Indirect Boiler	Blowdown Steam Heat Recovery	Per Unit	Existing	1%	15	\$2	0
Wood Product Mfg	Indirect Boiler	Economizer	Per Unit	Existing	6%	20	\$6	0
Wood Product Mfg	Indirect Boiler	Efficient Boiler	Per Unit	Existing	12%	20	\$1	0
Wood Product Mfg	Indirect Boiler	Improved Boiler Insulation	Per Unit	Existing	8%	15	\$6	0
Wood Product Mfg	Indirect Boiler	Improved Boiler Load Control	Per Unit	Existing	4%	15	\$1	0

Table A.3.5. MidAm Industrial Gas Measure Details

Segment	End Use	Measure Name	Unit Description	Construction Vintage	Percent Savings	Measure Life	Cost per Base Year Therm Saved	2023 Economic Potential (Thousand Therms)
Wood Product Mfg	Indirect Boiler	Improved Boiler Process Control	Per Unit	Existing	3%	15	\$1	0
Wood Product Mfg	Indirect Boiler	Upgrade Burner Efficiency	Per Unit	Existing	8%	20	\$1	0
Wood Product Mfg	Process Heat	Efficient Drying	Per Unit	Existing	15%	20	\$4	2
Wood Product Mfg	Process Heat	Heat Recovery / Economizer	Per Unit	Existing	3%	15	\$2	0
Wood Product Mfg	Process Heat	Improved Controls	Per Unit	Existing	30%	15	\$0.48	1
Wood Product Mfg	Process Heat	Steam Trap Maintenance	Per Unit	Existing	13%	2	\$4	0
Wood Product Mfg	Process Heat	Steam Trap Replacement	Per Unit	Existing	15%	2	\$5	0