

ON-SITE ENERGY DISCOVERY REPORT

La Crosse Center



Report Date	April 2026
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1. Executive Summary

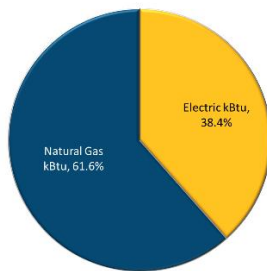
This report incorporates data from the Building Automation System (BAS) internal review and as a reference document for the Energy Conservation Measures (ECM) implemented during the Energy Discovery conducted on April 27, 2026. The La Crosse Center is a 320,000 sq ft convention center and arena located in downtown La Crosse, Wisconsin. The facility operates as a multi-purpose event venue with a utility annual spend of \$385,000. Estimated combined savings across all modeled ECMs total approximately 242,166 kWh/yr and 28,829 therms/yr, with an estimated value of approximately \$52,000.

Eneration recognizes that the La Crosse Center is performing at benchmark levels across key operational metrics with a current Energy Use Intensity (EUI) of 70. The existing solar arrays continue to operate effectively, while staff demonstrate strong engagement in optimizing HVAC scheduling to balance event operations with energy efficiency. The planned boiler and chiller upgrades represent strategic investments in the facility's infrastructure, yielding meaningful energy savings and long-term operational improvements.

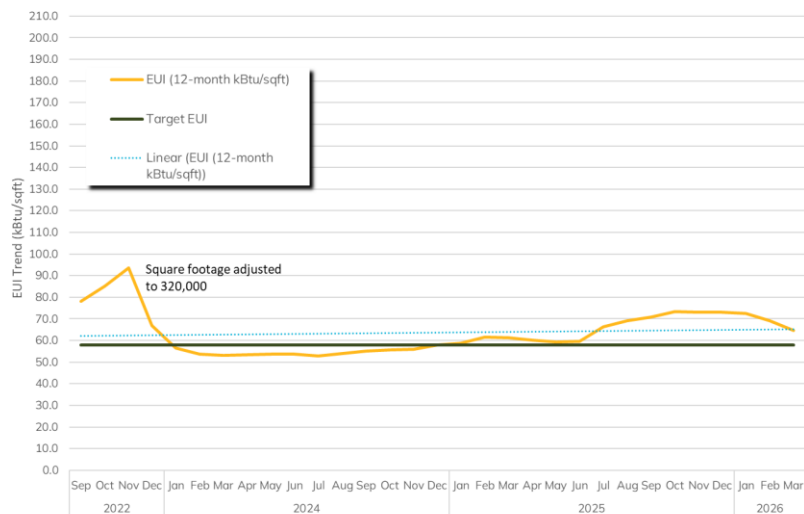
Several energy conservation opportunities have been identified for the La Crosse Center pending further investigation and contractor quotes.

Eneration recommends facility managers and /or energy personnel should periodically review the control settings, schedules, airflow parameters and setpoints documented herein against the current BAS configuration to verify that the ECMs remain active and properly configured. It is also recommended that the facility managers do a periodic review of utility bills to verify savings and minimize efficiency erosion.

Executive Summary Energy Mix



Executive Summary
12 Month EUI Trend





2. Facility Overview

Parameter	Value
Facility Name	La Crosse Center
Address	300 Harborview Plaza, La Crosse, WI 54601
Facility Type	Convention Center / Entertainment Venue
Year Built / Renovated	1980 / Two major renovations (most recent 2020)
ASHRAE 169 Climate Zone	6A — Cold-Humid
Ventilation Standard	ASHRAE 62.1
Electricity Rate	\$0.12/kWh
Natural Gas Rate	\$0.75/therm
HVAC Systems	5 rooftop AHUs (RTUs) + 12 additional AHUs; HHW heating plant; CHW chiller plant (2 chillers); VAV distribution with HW reheat
Venue Features	Arena (8,000 seats), 2 ballrooms, 10 boardrooms, Mississippi River terrace

3. ECM Summary

Scope	kWh/yr	Therms/yr	Est. Value/yr
All Identified ECMs	242,166	28,829	\$52,000
Implemented ECMs (to date)	238,466	23,829	\$46,400
Baseline Annual Usage/Spend	2,400,000	151,000	\$385,000
Implemented Savings %	10%	16%	12%

4. Implemented ECM Master List

All identified Energy Conservation Measures below were implemented by Isabelle Heineck from Trane while Eneration was on site for the Energy Discovery with the approval of the La Crosse Center's Operations Manager Josh Krenz and Building Engineer Matt Stanek. Each ECM listed below contains a description of what was adjusted or recommended, therm reduction, kWh reduction, and estimated savings.

Equipment	Location	ECM	Description	Therm Reduction	kWh Reduction	Est. Savings
RTU-01	North Hall Offices	Occupancy Schedule	From midnight-5pm to 6am-5pm	5,775	63,996	\$12,000
		VAV CFM Adjustment	See VAV Min/Max Report in Appendix			
		Static Pressure Reset	Low SP to 75% of existing max, 0.1 step per 15 min			
		Dehumidification Set Points	Increased from 50% to 60%			
		Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
		Unoccupied temp Set Back	Updated override 60°F min to 78°F max			
RTU-1	South Hall Entrance	Occupancy Schedule	From 7am to 5 pm to unoccupied unless needed	651	8,716	\$1,500
		Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
RTU-02	North Hall	VAV CFM Adjustment	See VAV Min/Max Report in Appendix	2,648	26,052	\$5,000
		Static Pressure Reset	Low SP to 75% of existing max, 0.1 step per 15 min			
		Dehumidification Set Points	Increased from 50% to 60%			
		Unoccupied temp Set Back	Updated override 60°F min to 78°F max			
		Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
RTU-03	North Hall Conferences	Occupancy Schedule	Unoccupied unless space is needed.	1,681	17,480	\$3,300
		VAV CFM Adjustment	See VAV Min/Max Report in Appendix			
		Static Pressure Reset	Low SP to 75% of existing max, 0.1 step per 15 min			
		Dehumidification Set Points	Increased from 50% to 60%			
		Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
		Unoccupied temp Set Back	Updated override 60°F min to 78°F max			
		OAD Enable Setpoint	Increased from 60°F to 70°F			

Equipment	Location	ECM	Description	Therm Reduction	kWh Reduction	Est. Savings
RTU-04	South Hall Ballroom	Occupancy Schedule	Unoccupied unless space is needed.	2,538	26,295	\$5,000
		VAV CFM Adjustment	See VAV Min/Max Report in Appendix			
		Static Pressure Reset	Low SP to 75% of existing max, 0.1 step per 15 min			
		Dehumidification Set Points	Increased from 50% to 60%			
		Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
		Unoccupied temp Set Back	Updated override 60°F min to 78°F max			
		OAD Enable Setpoint	Increased from 60°F to 70°F			
AHU-01	South Hall B	VAV CFM Adjustment	See VAV Min/Max Report in Appendix	2,379	24,652	\$4,700
		Static Pressure Reset	Low SP to 75% of existing max, 0.1 step per 15 min			
		Dehumidification Set Points	Increased from 50% to 60%			
		Unoccupied temp Set Back	Updated override 60°F min to 78°F max			
		OAD Enable Setpoint	Increased from 60°F to 65°F			
		Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
AHU-02	Kitchen	Occupancy Schedule	If OAT +/- 0°F, unit stays occupied	1,370	13,368	\$2,600
		VAV CFM Adjustment	See VAV Min/Max Report in Appendix			
		Unoccupied temp Set Back	Updated override 60°F min to 78°F max			
		Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
AHU-03	South Hall A	VAV CFM Adjustment	See VAV Min/Max Report in Appendix	1,240	16,794	\$2,900
		Dehumidification Set Points	Increased from 50% to 60%			

Equipment	Location	ECM	Description	Therm Reduction	kWh Reduction	Est. Savings
AHU-04	South Hall Ballroom	VAV CFM Adjustment	See VAV Min/Max Report in Appendix	1,277	13,749	\$2,600
		Static Pressure Reset	Low SP to 75% of existing max, 0.1 step per 15 min			
		Dehumidification Set Points	Increased from 50% to 60%			
		Unoccupied temp Set Back	Updated override 60°F min to 78°F max			
		Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
		OAD Enable Setpoint	Increased from 60°F to 65°F			
AHU-05	Locker Room	Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
AHU-06	Locker Room	Cold Weather Occupancy	If OAT +/- 0°F, unit stays occupied			
AHU-10	Boiler Room	Occupancy Schedule	Unit occupied if OAT < 75°F and Boiler Room temp is 65°F with a 5° degree deadband	570	8,389	\$1,400
Chillers	Building	CHW Setpoint	Setpoint at 42F if OAT >75F, 45F if OAT <55F		4,060	\$490
Hot Water Systems	Building	Modify HW System Set back	Adjusted from 0°F to 60°F to -20°F to 60°F	3,000		\$2,200
Data Room	Building	Data Room Temperature	Adjusted setpoint from 68°F to 74°F		18,000	\$2,100
In Floor Heat	Building	Enable Set Point	Lowered enable set point from 50°F to 45°F	700	615	\$600
TOTALS				23,829	242,166	\$46,400

5. Additional Opportunities

In addition to the measures implemented above, below are the recommended ECM opportunities for the La Crosse Center's consideration. The following items represent areas where further energy savings and operational improvements may be achieved. Each opportunity would require additional investigation, engineering analysis, and/or contractor quotes prior to implementation.



Title	AHU-5 and AHU-6 Replacement
Est. Savings	\$3,200/yr
Description	AHU-5 and AHU-6 are constant volume hot deck/cold deck units serving locker rooms and lobby. These are legacy systems that create significant simultaneous heating and cooling. Replacement with a modern VAV system would minimize the simultaneous heating and cooling and improve comfort. This replacement is estimated to save \$1,600 a year for each unit. Additionally, significant debris was observed on the coils in these units. Cleaning of the existing coils and units would improve efficiency and likely increase the heating from these units during cold winter days when the unit has trouble keeping the space comfortable.

Title	CHW Valve Repair
Est. Savings	3,070 kWh/yr 5,000 therms/yr \$4,100/yr
Description	CHW control valve has failed. As a result, the chilled water shut off valve is being used to manually control chilled water to the cooling coil. This creates simultaneous heating and cooling all summer. Replacing the leaking CHW valve eliminates this issue and would improve comfort control in the space.

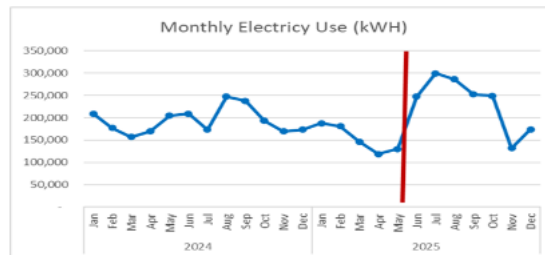
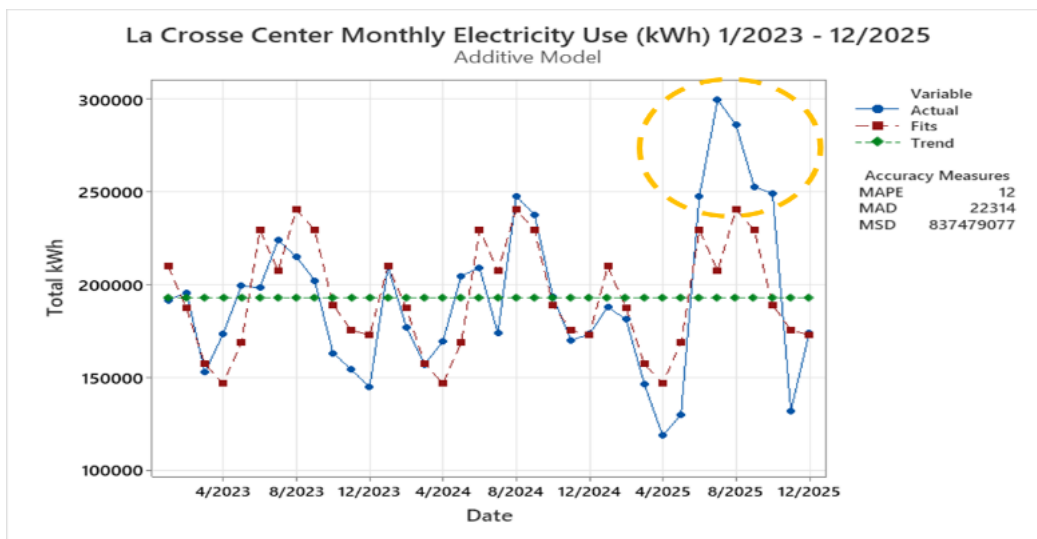
Title	Dishwasher Booster Heater Control
Equipment Refs	Dishwasher Booster Heater — South Kitchen
Est. Savings	15,000 kWh/yr \$1,800/yr combined
Description	Booster heater for the kitchen is always in standby when not in use. The kitchen only operates ~25% of the time. An interlock or timer to de-energize booster heater when dishwasher is not in use eliminates standby losses.

Title	Well Water Heat Pump Feasibility
	Not Recommended
Description	While onsite it was discussed to use well water to create heat for the building. After further investigation this does not seem like a viable option to move forward.

6. Supplemental Site Findings

During the initial energy analysis Eneration identified a significant increase in electricity usage from June through October 2025 that is inconsistent with patterns observed over the previous two years. Weather normalization analysis indicates that climatic conditions do not account for this deviation. The additional electricity consumption during this period is estimated to have resulted in approximately \$19,700 in excess utility charges.

The most probable cause of this increase is attributed to the failure of the small chiller in May 2025, which necessitated continuous operation of the large chiller throughout the affected period. The installation of the new chiller should ensure this situation does not recur during the warmer months going forward.





7. Appendix

VAV Min/Max Report

Area	VAV	AHU/RTU	Existing				Proposed State			
			Cooling Max	Cooling Min	Heating Min	Heating Max	Cooling Max	Cooling Min	Heating Min	Heating Max
Office	VAV-1-08	1	300	110	200	300	300	110	110	200
Office	VAV-1-09	1	200	110	150	200	200	110	110	200
Office	VAV-1-10	1	375	110	200	375	375	110	110	200
Office	VAV-1-11	1	300	110	175	300	300	110	110	200
Office	VAV-1-12	1	1260	800	900	1260	1260	800	800	1260
Subtotal			2,435	1,240	1,c25	2,435	2,435	1,240	1,240	2,0c0
Mezzanine	VAV-3-06	3	1360	700	900	1360	1360	250	250	440
Mezzanine	VAV-3-07	3	1360	700	900	1360	1360	700	700	1225
Mezzanine	VAV-3-08	3	1200	620	700	1200	1200	620	620	1085
Subtotal			3,220	2,020	2,500	3,220	3,220	1,570	1,570	2,750
Ground B	VAV-1-1	1	160	120	120	155	160	120	120	210
Ground B	VAV-1-2	1	2625	790	790	2625	2625	790	790	1340
Ground B	VAV-1-3	1	2100	630	630	2100	2100	630	630	1105
Ground B	VAV-1-4	1	3055	920	920	3055	3055	920	920	1610
Ground B	VAV-1-5	1	425	130	130	425	425	130	130	230
Ground B	VAV-1-6	1	2755	830	830	2755	2755	830	830	1455
Ground B	VAV-1-7	1	2995	900	900	2995	2995	900	900	1575
Ground B	VAV-1-8	1	2995	900	900	2995	2995	900	900	1575
Ground B	VAV-1-9	1	2825	850	850	2825	2825	850	850	1490
Ground B	VAV-1-10	1	2825	850	850	2825	2825	850	850	1490
Ground B	VAV-1-11	1	2950	885	885	2950	2950	885	885	1550
Ground B	VAV-1-12	1	2950	885	885	2950	2950	885	885	1150
Subtotal			28,c00	8,c20	8,c20	28,c55	28,c00	8,c20	8,c20	14,780
S Hall 2nd B	VAV-4-1	4	2000	805	800	1200	2000	805	805	1410
S Hall 2nd B	VAV-4-2	4	2680	805	805	2680	2680	805	805	1410
S Hall 2nd B	VAV-4-3	4	745	225	225	745	745	225	225	395
S Hall 2nd B	VAV-4-4	4	570	170	170	570	570	170	170	300
S Hall 2nd B	VAV-4-5	4	2780	835	835	2780	2780	835	835	1465
S Hall 2nd B	VAV-4-7	4	195	120	120	195	195	120	120	195
S Hall 2nd B	VAV-4-8	4	1610	485	485	1610	1610	485	485	850
S Hall 2nd B	VAV-4-9	4	340	105	140	340	340	105	105	185
S Hall 2nd B	VAV-4-10	4	3575	1075	1075	3575	3575	1075	1075	1885
S Hall 2nd B	VAV-4-11	4	655	200	450	655	655	200	200	350
S Hall 2nd B	VAV-4-12	4	2920	880	880	2920	2920	880	880	1540
S Hall 2nd B	VAV-4-13	4	2920	880	880	2920	2920	880	880	1540
S Hall 2nd B	VAV-4-14	4	390	120	120	390	390	120	120	210
S Hall 2nd B	VAV-4-15	4	385	115	115	385	385	115	115	205
S Hall 2nd B	VAV-4-16	4	960	290	290	960	960	290	290	510
S Hall 2nd B	VAV-4-17	4	555	170	170	555	555	170	170	300
S Hall 2nd B	VAV-4-18	4	550	165	165	550	550	165	165	290
S Hall 2nd B	VAV-4-19	4	540	165	165	540	540	165	165	290
S Hall 2nd B	VAV-4-20	4	960	290	290	960	960	290	290	510
S Hall 2nd B	VAV-4-21	4	590	180	180	590	590	180	180	315
Subtotal			25,220	8,080	8,3c0	25,120	25,220	8,080	8,080	14,155
Arena A	VAV-2-01A	2	3100	1025	1500	3100	3100	1025	1025	1795
Arena A	VAV-2-01B	2	3100	1025	1500	3100	3100	1025	1025	1795
Arena A	VAV-2-02A	2	3100	1025	1800	3100	3100	1025	1025	1795
Arena A	VAV-2-03A	2	1300	550	550	800	1300	550	550	965
Arena A	VAV-2-04	2	2840	940	1500	2840	2840	940	940	1645
Arena B	VAV-2-02A	2	3100	1025	1800	3100	3100	1025	1025	1795
Arena B	VAV-2-02B	2	2400	800	1200	2400	2400	800	800	1400
Arena B	VAV-2-03B	2	2000	550	1200	2000	2000	550	550	965
Arena B	VAV-2-05	2	3000	1500	2000	3000	3000	1500	1500	2625
Arena B	VAV-2-06	2	3040	1500	2000	3040	3040	1500	1500	2625
Arena B	VAV-2-07	2	990	500	700	990	990	500	500	875
Subtotal			27,270	10,440	15,750	27,470	27,270	10,440	10,440	18,280
Concourse B	VAV-1-01	1	230	165	165	230	230	165	165	230
Concourse B	VAV-1-02	1	335	253	253	335	335	253	253	335
Concourse B	VAV-1-03	1	350	200	200	350	350	200	200	350
Concourse B	VAV-1-04	1	420	200	200	420	420	200	200	350
Concourse B	VAV-1-05	1	3200	2750	2750	3200	3200	2750	2750	32000
Concourse B	VAV-1-06	1	2700	2400	2400	2700	2700	2400	2400	2700
Concourse B	VAV-1-12	1	1260	800	900	1260	1260	800	800	1260
Concourse B	VAV-1-13	1	185	135	135	185	185	135	135	185
Subtotal			8,c80	c,203	7,003	8,c80	8,c80	c,203	c,203	37,410
Ballroom A	VAV-4-01	4	3680	2000	2500	3680	3680	2000	2000	3500
Ballroom A	VAV-4-02	4	2300	1000	1500	2300	2300	1000	1000	1750
Ballroom A	VAV-4-03	4	2300	1000	1500	2300	2300	1000	1000	1750
Ballroom A	VAV-4-04	4	2300	1000	1500	2300	2300	1000	1000	1750
Ballroom A	VAV-4-05	4	2300	1000	1500	2300	2300	1000	1000	1750
Ballroom A	VAV-3-01A	3	2500	1500	2000	2500	2500	1500	1500	2500
Ballroom A	VAV-3-01B	3	2500	1500	2000	2500	2500	1500	1500	2500
Ballroom A	VAV-3-02	3	1360	470	600	1360	1360	470	470	825
Ballroom A	VAV-3-03	3	1360	485	600	1360	1360	485	485	850
Ballroom B	VAV-3-04	3	1360	484	600	1360	1360	484	484	847
Ballroom B	VAV-3-05	3	1360	485	600	1360	1360	485	485	850
Ballroom B	VAV-1-07A	1	2700	2400	2400	2700	2700	1600	1600	2700
Ballroom B	VAV-1-07B	1	2700	2400	2400	2700	2700	1600	1600	2700
Subtotal			28,720	15,724	12,700	28,720	28,720	14,124	14,124	24,272
Ballroom C	VAV-4-07	4	2470	1000	1500	2470	2470	1000	1000	1750
Ballroom C	VAV-4-08	4	5000	2500	3500	5000	5000	2500	2500	4375
Ballroom C	VAV-4-09	4	1400	750	900	1400	1400	750	750	1315
Ballroom C	VAV-4-10	4	2500	800	1200	2500	2500	800	800	1400
Subtotal			11370	5050	7100	11370	11370	5050	5050	8840
Total			137,675	58,147	70,728	136,370	137,675	56,097	56,097	122,547
								14,631	14,631	13,823



Disclaimer

The purpose of an Energy Discovery is to identify potential energy saving measures and assess their cost-effectiveness. This investigation does not include comprehensive functional testing of equipment and components; therefore, some deficiencies may have gone unnoticed. Certain deficiencies may become apparent during the implementation or testing of the recommended ECMs in this report. Any deficiencies discovered that significantly impact energy savings should be addressed at the owner’s expense. Any use of information in this report by the La Crosse Center, its agents, or any third parties is the sole responsibility of those parties. Eneration accepts no responsibility, duty of care, or liability for any use by those parties for loss or damages of any kind because of decisions made or actions taken or not taken, based on this document.

The energy savings estimates are based on calculators created by FOE, Eneration, and other entities. Eneration does not guarantee the cost savings or reduction in total.

Acronym List

Acronym	Full Name	Definition
AHU	Air Handling Unit	Equipment that circulates and conditions air as part of an HVAC system
BAS	Building Automation System	Centralized system that controls HVAC and other building systems
CFM	Cubic Feet per Minute	A standard unit used to quantify the volumetric flow rate of air through a system, such as a fan, HVAC duct, or ventilation system.
CHW	Chilled Water	Used for cooling in hydronic systems
EUI	Energy Use Intensity	Quantifies how efficiently a building uses energy by dividing the total energy consumed in a year by the building’s total square footage.
HVAC	Heating, Ventilation, and Air Conditioning	Systems used to regulate temperature, humidity, and indoor air quality.
HHW	Heating Hot Water	Used for heating
kW	Kilowatt	Unit of power equal to 1,000 watts
kWh	Kilowatt-hour	Unit of energy equal to one kilowatt used for one hour
OAD	Outside Air Damper	Regulates the volume of external air entering the HVAC system.
OAT	Outside Air Temperature	The temperature of the air surrounding the building.
RTU	Rooftop Unit	A packaged HVAC unit installed on rooftops
VAV	Variable Air Volume	Terminal unit controlling volume and temperature of air to a specific space.