



Commissioner Chris Trubac  
Barbara Andersen  
Nichole Biber  
Fred Cowles  
Sarah Mullkoff  
Claire Nowicki  
Matthew Lincoln  
Brenda Gray

THE ENVIRONMENTAL AFFAIRS COMMISSION WILL MEET ON APRIL 24, 2024 AT 5:30 PM IN CONFERENCE ROOM D AND E OF THE HUMAN SERVICES BUILDING, 5303 S. CEDAR, LANSING.

## Agenda

Call to Order

Approval of Draft Minutes

Additions to the Agenda

Limited Public Comment

1. Energy Audit Implementation
  - a. Phase 1 and Phase 2 Implementation Plans – *Progress Update*
  - b. 2025 Capital Improvement Projects
    - i. *Presentation – Glenn Canning, Facilities Department Director*
2. Sustainability Action Plan – *Update and Discussion (Materials Pending)*
3. Manager Activities Summary

Announcements

Public Comment

Adjournment

# ENVIRONMENTAL AFFAIRS COMMISSION

February 28, 2024

Draft Minutes

Members Present:, Biber, Cowles, Mullkoff, Nowicki, Trubac, Gray

Members Absent: Andersen, Lincoln,

Others Present: Morgan Feldpausch, Elaine Fischhoff, Tim , Rod,

The meeting was called to order by Chair Trubac at 5:30 p.m. in Conference Room D and E of the Human Services Building, 5303 S. Cedar Street, Lansing Michigan.

## Approval of Draft Minutes

The minutes were approved.

## Additions to the Agenda

None.

## Limited Public Comment

None.

### 1. Ingham County Parks Department

The commission heard an update on developments within the Ingham County Parks Department. The parks department has purchased electric vehicles and is allocating money towards the purchase of electric powered landscaping equipment. They are also developing trails with the Trails and Parks Millage. All new projects are having native plant restorations included. There is also work underway to remove invasive plants and develop "No Mow Zones". The Parks are also completing a Lighting Study, which will consist of a county wide audit on lighting systems within the park in an effort to be more eco-friendly. Additionally, education through new signage and Burchfield summer classes will take place.

### 2. Materials Management Plan - Discussion

Morgan Feldpausch discussed the Material Management Plan, which will replace the County's solid waste management plan in accordance with new law. CAA stands for County Approval Agency which appoints the DPA (Designated Planning Agency) and the MMPC (Materials Management Planning Committee).

Neighboring counties are developing individual county plans. Concerns for developing multi county plans include coordinating approval between all county boards and if the multi county group is unable to agree or the process is stalled, the final decisions on the plan would be determined by EGLE. The MMP will involve much more coordination and planning than the previous solid waste management plan.

The Commission discussed how the MMP will consume considerable time to develop and manage. Fred Cowles expressed concern on the workload overwhelming the other duties of the Environmental Sustainability Manager and taking away from other tasks. The MMP comes with grant funding which may allow for additional financing for management.

While the Materials Management encompasses a spectrum of environmental topics and needs, at this stage the discussion is regarding whether to have the county fill the roll of CAA and begin recommendations for a DPA.

Motion to recommend for the County Board of Commissioners to accept the role of County Approval Agency and to pursue a single county planning approach to the Materials Management Planning process.

MOVED BY MULLKOFF, SUPPORTED BY COWELS

MOTION TO RECOMMEND FOR THE COUNTY BOARD OF COMMISSIONERS TO ACCEPT THE ROLE OF COUNTY APPROVAL AGENCY AND TO PURSUE A SINGLE COUNTY PLANNING APPROACH TO THE MATERIALS MANAGEMENT PLANNING PROCESS.

THE MOTION CARRIED UNANIMOUSLY

3. Manager Activities Summary

Morgan gave an update on the activities from the past month. Materials are being reviewed for a Community Enhancement Grant and other grants to assist with development of the Sustainability Action Plan. Development was completed for the SAP Request for Proposals (RFP).

4. Equitable Mobility Powering Opportunities for Workplace Electrification Readiness Project

Morgan discussed a resolution discussing authorizing Ingham Counties Participation in the Equitable Mobility Powering Opportunities for Workplace Electrification Readiness Project. This would grant Ingham County 10 free hours to develop sustainable transportation options and participate in the program.

MOVED BY COWELS, SUPPORTED BY MULLKOFF

TO RECOMMEND THAT THE BOARD OF COMMISSIONERS APPROVE THE RESOLUTION AUTHORIZING INGHAM COUNTY'S PARTICIPATION IN THE EQUITABLE MOBILITY POWERING OPPORTUNITIES FOR WORKPLAE ELECTRIFICATION READINESS PROJECT

THE MOTION CARRIED UNANIMOUSLY

Announcements

Nichole Biber mentioned that there are showings for a movie about paddleboarding to raise awareness on the issue of Line 5.

Chris Trubac mentioned that he received a new induction cooktop and that grants are now available for them.

Public Comment

Elaine Fischhoff – impressed with the parks department updates towards sustainability. She is impressed with the work of this commission to date.

Adjournment

The meeting was adjourned by Chair Trubac at 6:39 pm.

**Bureau Veritas Ingham County Ashrae Level II + Net Zero Energy Audit  
Recommendation Implementation Plan  
Phase 1 - 2023**

Building - Project Number	Implementation Level (%)	Managing Entity	Work Order Number	Status	Project Description	Projected Initial Investment (\$)	Estimated Annual Savings			Total GHG Savings (MtCO2/Yr)	Estimated Annual Cost Savings (\$)
							Natural Gas (Therms)	Electricity (kWh)	Water (kGal)		
BP - WSB - 1	100%	Parks	NA	Complete	External Air Leakage Control	\$347	192	300	0	1	\$210
CH & HILL - 5	100%	Facilities	59266 / 57105	Complete	Low Flow Faucet Aerators	\$3,441	211	0	21	1.12	\$327
CH & HILL - 7 (HILL)	100%	Facilities	59323	Complete	Chilled Water Reset Control	\$830	0	23866	0	16.61	\$3,270
CH & HILL - 8 (HILL)	100%	Facilities	57109	Complete	Low Flow Shower Heads	\$148	44	0	4	0.23	\$64
DO - 1	100%	Facilities	57110	Complete	Low Flow Faucet Aerators	\$90	0	710	5	0	\$185
DO - 2	60%	Facilities	59376	Complete	Upgrade Lighting to LED and Install Controls	\$10,250	0	20877	0	12.6	\$3,720
DO - 3	100%	Facilities	59318	Complete	Retrofit Toilets to Dual-Flush	\$638	0	0	9	0	\$140
ICFC - 1	100%	Facilities	57114	Complete	Low Flow Shower Heads	\$420	270	0	18	1	\$350
ICFC - 4	100%	Facilities	59320	Complete	Retrofit Toilets to Dual-Flush	\$766	0	0	15	0	\$106
ICFC - 5	90%	Facilities	57115	Complete	Low Flow Faucet Aerators	\$2,119	71.1	0	9	0	\$119
FCHC - 3	100%	Facilities	57116	Complete	Low Flow Faucet Aerators	\$808	99	0	12	1	\$302
FCHC - 4	100%	Facilities	57117	Complete	External Air Leakage Control	\$1,707	390	748	0	3	\$355
FG - MA - 1	100%	Fairgrounds	NA	Pending	Upgrade Lighting to LED	\$401	0	2235	0	1	\$492
FG - MA - 2	100%	Fairgrounds	NA	Pending	Low Flow Faucet Aerators	\$90	166	1	1	0	\$48
HSB - 2	100%	Facilities	57120	Complete	Low Flow Shower Heads	\$148	1	0	7	0	\$110
LLP - SMB - 1	100%	Parks	NA	Complete	Low Flow Faucet Aerators	\$30	111	0	6	0.59	\$348
LLP - SMB - 3	100%	Parks	NA	Complete	External Air Leakage Control	\$869	226	0	0	1.2	\$178
VMGP - 4	100%	Facilities	59325	Complete	Low Flow Faucet Aerators	\$538	0	0	19	0	\$175
YC - 1	100%	Facilities	57125	Complete	Low Flow Shower Heads	\$148	168	0	26	1	\$385
YC - 2	100%	Facilities	57126	Complete	Low Flow Faucet Aerators	\$150	46	0	8	0	\$119
<b>Total</b>						<b>\$23,938</b>	<b>1995.1</b>	<b>48737</b>	<b>160</b>	<b>40.35</b>	<b>\$11,003</b>

**Existing Annual Consumption Comparison**

	Estimated Annual Consumption			Carbon Footprint (MtCO2/Yr)
	Natural Gas (Therms)	Electricity (kWh)	Water (kGal)	
Baseline Total	167766	7152641	6363	7703
Phase 1 Implementation Total	1995.1	48737	160	40.35
Reduction	1.19%	0.68%	2.51%	0.52%

**Bureau Veritas Ingham County Ashrae Level II + Net Zero Energy Audit  
Recommendation Implementation Plan  
Phase 2 - 2024**

Building - Project Number	Implementation Level (%)	Managing Entity	Work Order Number	Status	Project Description	Projected Initial Investment (\$)	Estimated Annual Savings			Total GHG Savings (MtCO2/Yr)	Estimated Annual Cost Savings (\$)
							Natural Gas (Therms)	Electricity (kWh)	Water (kGal)		
AS - 2	100%	Facilities	Subsumed	Completed	Re-Commission Building and Its Control Systems	\$9,214	246	548	0	2	\$253
BP - OL - 1	0%	Parks	NA	* In Progress	Upgrade Lighting to LED	\$0	0	0	0	0	\$0
CH & HILL - 1 (CH)	100%	Facilities	Subsumed	New	Upgrade Insulation	\$4,822	1100	1011	0	6.37	\$740
CH & HILL - 2 (CH & HILL)	50%	Facilities	NA / 63188	NA / Delayed	Install Variable Frequency Drives	\$7,530	0	5736	0	18	\$786
CH & HILL - 3 (CH)	100%	Facilities	63319	In Progress	Install Energy Savers on Vending Machines	\$223.00	0	1610	0	0.85	\$221.00
CH & HILL - 4 (CH & HILL)	100%	Facilities	Subsumed / 63189	In Progress / In Progress	Clean Air Handling Unit Fan Coils	\$17,500	8179	3257	0	45.12	\$4,920
CH & HILL - 6 (CH & HILL)	25%	Facilities	59316 / NA	Completed / NA	Retrofit Toilets to Dual-Flush	\$671	0	0	8.25	0	\$83
HSB - 1	100%	Facilities	59324	New	Exhaust Fan Timers	\$324	3536	60438	0	55	10307
HSB - 3	100%	Facilities	57119	Pending	Low Flow Faucet Aerators	\$1,675	337	0	61	2	\$1,172
HSB - 4	100%	Facilities	59321	New	External Air Leakage Control	\$5,450	3058	5520	0	20	\$2,647
HSB - 5	15%	Facilities	Subsumed	In Progress	Upgrade Lighting to LED and Install Automatic Controls	\$12,697.20	0	36722.7	0	21.9	\$5,788.95
ICFC - 2	60%	Facilities	59319	New	Upgrade Lighting to LED and Install Automatic Controls	\$12,163	0	32748.6	0	17.4	\$5,738
FCHC - 1	100%	Facilities	Subsumed	In Progress	Retrofit Toilets to Dual-Flush	\$1,532	0	0	27	0	\$534
HIP - OL - 1	0%	Parks	NA	* In Progress	Upgrade Lighting to LED	\$0	0	0	0	0	\$0
LLP - BS - 2	0%	Parks	NA	* In Progress	Upgrade Lighting to LED	\$0	0	0	0	0	\$0
VMGP - 5	100%	Facilities	59326	New	Exhaust Fan Timers	\$324	0	4713	0	5	\$1,158
<b>Total</b>						<b>\$74,124</b>	<b>16456</b>	<b>152304.3</b>	<b>96.25</b>	<b>193.64</b>	<b>\$34,348</b>

**Existing Annual Consumption Comparison**

	Estimated Annual Consumption			Carbon Footprint (MtCO2/Yr)
	Natural Gas (Therms)	Electricity (kWh)	Water (kGal)	
Baseline Total	167766	7152641	6363	7703
Phase 2 Implementation				
<b>Total</b>	<b>16456</b>	<b>152304.3</b>	<b>96.25</b>	<b>193.64</b>
<b>Reduction</b>	<b>9.81%</b>	<b>2.13%</b>	<b>1.51%</b>	<b>2.51%</b>

Notes:

\* \$80,000 2024 CIP was requested for a lighting feasibility study for all County parks (beyond the scope of the energy audit and projects listed above).

**Bureau Veritas Ingham County Ashrae Level II + Net Zero Energy Audit  
Recommendation Implementation Plan  
Phase 3 - 2025**

Building - Project Number	Implementation Level	Managing Entity	Funding Source	Project Description	Projected Initial Investment	Estimated Annual Savings			Total GHG Savings	Estimated Annual Cost Savings
						Natural Gas (Therms)	Electricity (kWh)	Water (kGal)		
CH & HILL - 9 (CH & HILL)	100%	Facilities	CIP	Upgrade Lighting to LED and Install Controls	\$50,213	0	73494	0	38.82	\$12,818
DO - 2	40%	Facilities	CIP	Upgrade Lighting to LED and Install Controls	\$6,834	0	13918	0	8.4	\$2,480
DO - 4	100%	Facilities	CIP	Replace Existing Air Conditioners with Energy Star Units	\$3,961	0	2157	0	1	\$338
ICFC - 2	40%	Facilities	CIP	Upgrade Lighting to LED and Install Controls	\$8,108	0	21832.4	0	11.6	\$3,825
ICFC - 3	100%	Facilities	CIP	Upgrade Electric Heating System to Heat Pumps	\$9,040	0	13288	0	7	\$2,022
FCHC - 2	100%	Facilities	CEM Grant	Upgrade Lighting to LED and Install Controls	\$31,005	0	48197	0	29	\$9,104
FCHC - 5	100%	Facilities	CEM Grant	Re-Commission Building and its Control Systems	\$16,362	1768	8615	0	15	\$2,314
FCHC - 6	100%	Facilities	CEM Grant	Reduce HVAC Hours of Operation	\$30,714	2701	15043	0	23	\$3,816
LLP - BS - 1	100%	Parks	NA	Upgrade Lighting to LED	\$127	0	376	0	0	\$236
VMGP - 3	100%	Facilities	CIP	External Air Leakage Control	\$6,952	0	17202	0	58	\$12,708
<b>Total</b>					<b>\$163,316</b>	<b>4469</b>	<b>214122.4</b>	<b>0</b>	<b>191.82</b>	<b>\$49,661</b>

	Existing Annual Consumption Comparison			Carbon Footprint (MtCO2/Yr)
	Natural Gas (Therms)	Electricity (kWh)	Water (kGal)	
Baseline Total	167766	7152641	6363	7703
Phase 3 Implementation				
Total	4469	214122.4	0	191.82
Reduction	2.66%	2.99%	0.00%	2.49%

# **Ashrae Level II + Net Zero Energy Audit Recommended Energy Conservation Measures Phased Implementation Plan Narrative**

This narrative is intended to be supplemental, please refer to the corresponding Phase 1, 2, and 3 Energy Audit Implementation Plan documents for project-specific information. A comparison to existing annual energy and water consumption (included in the Net-Zero Audit Roll-Up Report), is included in these documents as well in an effort to demonstrate the overall effects of implementation of these phases.

## **Phase 1: Narrative**

**Timeframe:** 2023

**Average Initial Investment Cost:** \$1,197

**Total Number of Projects:** 20

**Total Number of Facilities Included:** 9

**Estimated Carbon Footprint Reduction:** 0.52%

Projects were selected for this phase from the provided lists of recommended energy conservation measures for individual facilities included in the Ashrae Level II + Net Zero Energy Audit completed in 2022 by Bureau Veritas. Staff worked directly with the three facility managing departments to determine the framework for selection and evaluation of projects. Detailed information about all individual projects (buildings, costs, savings, etc.), can be found in the corresponding Phase 1 Energy Audit Implementation Plan document. Phase 1 project selection primarily considered the timeline for implementation, the projected initial investment cost, estimated environmental savings, and interdepartmental considerations such as the age of the equipment, on-going/up-coming projects, etc. Projects listed are considered the “low hanging fruit” level projects because they are able to be completed within the 2023 year and within the corresponding departments’ existing budget. The vast majority of projects have been implemented 100% as recommended in the corresponding list of recommended energy conservation measures. Projects listed with a less than 100% implementation level have been completed in part due to individual project concerns (intended equipment usage requirements for example) or as part of pilot test projects in efforts to evaluate practical feasibility of implementation.

## **Phase 2: Narrative**

**Timeline:** 2024

**Average Initial Investment Cost:** \$4,633

**Total Number of Projects:** 16

**Total Number of Facilities Included:** 10

**Estimated Carbon Footprint Reduction:** 2.51%

Projects were selected for this phase from the provided lists of recommended energy conservation measures for individual facilities included in the Ashrae Level II + Net Zero Energy Audit completed in 2022 by Bureau Veritas. Staff worked directly with the two facility managing departments to determine the framework for selection and evaluation of projects.

Phase 2 project selection again considered the timeline for implementation, the projected initial investment cost, interdepartmental considerations, and environmental savings. In this phase, interdepartmental considerations included heavy focus on planned/upcoming department projects that are already expected to take place within the timeframe (equipment replacement, for example). While projects that can be completed within the corresponding departments’ existing budget were included as resources allowed, heavy emphasis was placed on projects that were able to be incorporated into or added independently as a Capital Improvement Project (CIP) Request for the 2024 year. Three total CIP’s that relate to individual recommendations included with the energy audit were submitted independently in 2023 for implementation in 2024.

The majority of projects will be implemented 100% as recommended in the corresponding list of recommended energy conservation measures. Projects listed with a less than 100% implementation level will be completed in part due to individual project concerns (intended equipment usage requirements, for example), as part of pilot test projects in efforts to evaluate practical feasibility of implementation of projects, or funding limitations. Three total projects included in this phase are listed with a “0%” implementation level; these projects are in a pre-implementation state and are detailed further on the corresponding Phase 2 Energy Audit Implementation Plan document.

### **Phase 3: Narrative**

**Timeframe:** 2025

**Average Initial Investment Cost:** \$16,328

**Total Number of Projects:** 10

**Total Number of Facilities Included:** 6

**Estimated Carbon Footprint Reduction:** 2.49%

Projects were selected for this phase from the provided lists of recommended energy conservation measures for individual facilities included in the Ashrae Level II + Net Zero Energy Audit completed in 2022 by Bureau Veritas. Staff worked directly with the two facility managing departments to determine the framework for selection and evaluation of projects. Detailed information about all individual projects (buildings, costs, savings, etc.), can be found in the corresponding Phase 3 Energy Audit Implementation Plan document. Phase 3 project selection again primarily considered the timeline for implementation, the projected initial investment cost, estimated environmental savings, and interdepartmental considerations such as the age of the equipment, on-going/upcoming projects, etc. In this phase, interdepartmental considerations included heavy focus on planned/upcoming department projects that are already expected to take place within the timeframe (equipment replacement, for example) as well as department capacity for implementation of projects. Approximately 60% of projects selected for this phase will be incorporated into or added independently as a Capital Improvement Project (CIP) Request for the 2024 year. The remaining 30% of projects selected for this phase, the Forest Community Health Center projects, were selected for the County’s Community Energy Management (CEM) Grant application and the implementation of these projects will be dependent upon the grant award. The County is in the process of preparing this grant application and anticipates submission in the coming weeks.

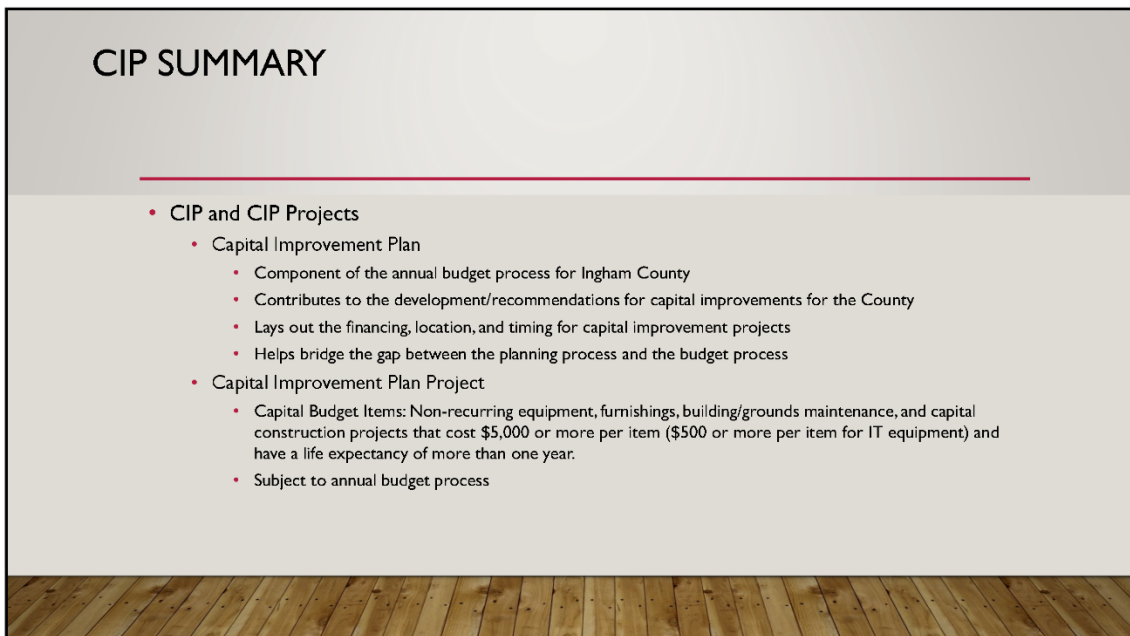
The majority of projects will be implemented 100% as recommended in the corresponding list of recommended energy conservation measures. Projects listed with a less than 100% implementation level will be completed in part due to funding limitations.

As projects develop and circumstances change throughout county operations, changes to this phase are likely to occur and opportunities will be evaluated as they become available.





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## CIP SUMMARY

- CIP and CIP Projects
  - Capital Improvement Plan
    - Component of the annual budget process for Ingham County
    - Contributes to the development/recommendations for capital improvements for the County
    - Lays out the financing, location, and timing for capital improvement projects
    - Helps bridge the gap between the planning process and the budget process
  - Capital Improvement Plan Project
    - Capital Budget Items: Non-recurring equipment, furnishings, building/grounds maintenance, and capital construction projects that cost \$5,000 or more per item (\$500 or more per item for IT equipment) and have a life expectancy of more than one year.
    - Subject to annual budget process

## CIP PROCESS

- **REQUEST:** Competitive request process among County departments
  - Departments develop and submit Capital Budget Request(s)
    - Identify the essential details of proposed projects
- **REVIEW:** Internal review panel evaluates project requests and develops a recommended annual budget
  - Review panel consists of the Controller's Office, Budget Office, Facilities, Purchasing, and Innovation & Technology Departments, as well as the Environmental Sustainability Manager
  - Determines whether individual projects get incorporated into the Controller's recommended annual budget
  - Funds are limited and inconsistent - not all proposed projects receive funding
- **RECOMMENDED FOR FUNDING:** The recommended annual budget is presented to the appropriate liaison committees
- **FUNDING:** The recommended annual budget is presented to and considered for adoption by the Board of Commissioners

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## 2023 ENERGY CONSERVATION MEASURES

- “Low Hanging Fruit” Projects
  - No CIP request made - Completed with the departments' existing budget
- Consideration factors:
  - Timeline for implementation
  - Projected initial investment cost
  - Estimated environmental savings
  - Interdepartmental considerations
    - Age of the equipment, on-going/upcoming projects, etc.

**Bureau Veritas Ingham County Ashrae Level II + Net Zero Energy Audit Recommendation Implementation Plan**

**Phase 1 - 2023**

Building - Project Number	Project Description	Projected Initial Investment
		(\$)
BP - WSB - 1	External Air Leakage Control	\$347
CH & HILL - 5	Low Flow Faucet Aerators	\$3,441
CH & HILL - 7 (HILL)	Chilled Water Reset Control	\$830
CH & HILL - 8 (HILL)	Low Flow Shower Heads	\$148
DO - 1	Low Flow Faucet Aerators	\$90
DO - 2	Upgrade Lighting to LED and Install Controls	\$10,250
DO - 3	Retrofit Toilets to Dual-Flush	\$638
ICFC - 1	Low Flow Shower Heads	\$420
ICFC - 4	Retrofit Toilets to Dual-Flush	\$766
ICFC - 5	Low Flow Faucet Aerators	\$2,119
FCHC - 3	Low Flow Faucet Aerators	\$808
FCHC - 4	External Air Leakage Control	\$1,707
FG - MA - 1	Upgrade Lighting to LED	\$401
FG - MA - 2	Low Flow Faucet Aerators	\$90
HSB - 2	Low Flow Shower Heads	\$148
LLP - SMB - 1	Low Flow Faucet Aerators	\$30
LLP - SMB - 3	External Air Leakage Control	\$869
VMGP - 4	Low Flow Faucet Aerators	\$538
YC - 1	Low Flow Shower Heads	\$148
YC - 2	Low Flow Faucet Aerators	\$150
<b>Total</b>		<b>\$23,938</b>

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## 2024 ENERGY CONSERVATION MEASURES

- “Low hanging fruit” Projects
  - Completed with the departments’ existing budget
- Capital Budget Requests
  - Indicated with a “★”
- Consideration factors:
  - Timeline for implementation
  - Projected initial investment cost
  - Interdepartmental considerations
    - Planned/upcoming department projects that are already expected to take place within the timeframe
  - Environmental savings

**Bureau Veritas Ingham County Ashrae Level II + Net Zero Energy Audit Recommendation Implementation Plan Phase 2 - 2024**

Building - Project Number	Project Description	Projected Initial Investment (\$)
AS - 2	Re-Commission Building and Its Control Systems	\$9,214 ★
BP - OL - 1	Upgrade Lighting to LED	\$0
CH & HILL - 1 (CH)	Upgrade Insulation	\$4,822
CH & HILL - 2 (CH & HILL)	Install Variable Frequency Drives	\$7,530 ★
CH & HILL - 3 (CH)	Install Energy Savers on Vending Machines	\$223.00
CH & HILL - 4 (CH & HILL)	Clean Air Handling Unit Fan Coils	\$17,500 ★
CH & HILL - 6 (CH & HILL)	Retrofit Toilets to Dual-Flush	\$671
HSB - 1	Exhaust Fan Timers	\$324
HSB - 3	Low Flow Faucet Aerators	\$1,675
HSB - 4	External Air Leakage Control	\$5,450
HSB - 5	Upgrade Lighting to LED and Install Automatic Controls	\$12,697.20
ICFC - 2	Upgrade Lighting to LED and Install Automatic Controls	\$12,163 ★
FCHC - 1	Retrofit Toilets to Dual-Flush	\$1,532
HIP - OL - 1	Upgrade Lighting to LED	\$0
LLP - BS - 2	Upgrade Lighting to LED	\$0
VMGP - 5	Exhaust Fan Timers	\$324
<b>Total</b>		<b>\$74,124</b>

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## 2024 ENERGY CONSERVATION MEASURES

**2024 CAPITAL BUDGET REQUEST FORM**

DEPARTMENT: \_\_\_\_\_

RANK	PROJECT NAME	PROJECT TYPE	NEW/RENEW
13	Energy audit projects from ASHRAE LEVEL II and NET ZERO AUDIT		New

ESTIMATED CAPITAL COST OF PROJECT: \$50,000

NEW OPERATING COSTS: \_\_\_\_\_

TOTAL PROJECT COST: \_\_\_\_\_

SOURCES OF FUNDING (DESCRIBE): \_\_\_\_\_

TOTAL SOURCES: \_\_\_\_\_

BRIEF DESCRIPTION OF PROJECT: Energy Auditors will work on energy savings project at several central, Mass Co. locations variable speed frequency drives, coil cleaning and savings status.

**2024 CAPITAL BUDGET - ADOPTED**

DEPARTMENT	FUNDED AMOUNT	GENERAL FUND	EQUIP. REVOLV. FUND	OTHER	DESCRIPTION OF OTHER
<b>MAJOR PROJECTS</b>					
Facilities - VMC Carpet Replacement	315,000			315,000	Public Improvement Fund
Facilities - Drain Commissioners Office New Roof	65,000			65,000	Public Improvement Fund
Facilities - Drain Commissioners Office Garage Walls	40,000			40,000	Public Improvement Fund
Facilities - Fenwick Labort Units in Data Center	315,000			315,000	Public Improvement Fund
Facilities - Courtroom 7 Jury Room Remodel Feasibility Study	15,000	15,000			
Facilities - Energy Audit Projects from ASHRAE LEVEL II & Net Zero	50,000	50,000			
Facilities - Drain Office Garage Walls To Might be duplicate.	40,000	40,000			
Facilities - Building Risk Assessment	25,000	25,000			
Facilities - Annex Bldg Demolition	750,000			750,000	JIM Fund Balance
ICCFD - Youth Center Land Acquisition	750,000			750,000	
<b>TOTAL MAJOR PROJECTS</b>	<b>1,615,000</b>	<b>130,000</b>	<b>0</b>	<b>1,485,000</b>	
<b>MAINTENANCE &amp; IMPROVEMENTS</b>					
Facilities - Gym Lights ICFC	12,000	12,000			
Facilities - HSD Parking Lot Lights	18,000	18,000			
Facilities - Ingham Academy Carpet Replacement	124,000			124,000	Public Improvement Fund
<b>TOTAL MAINTENANCE &amp; IMPROVEMENT</b>	<b>154,000</b>	<b>30,000</b>	<b>0</b>	<b>124,000</b>	

2024 Capital Budget Requests

2024 Adopted Budget

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## 2025 ENERGY CONSERVATION MEASURES

- Capital Budget Requests
  - Indicated with a "★"
- Grant Projects
  - Community Energy Management Grant
- Consideration factors:
  - Timeline for implementation
  - Projected initial investment cost
  - Estimated environmental savings
  - Interdepartmental considerations such as the age of the equipment, on-going/upcoming projects, etc. In this phase
    - Heavy focus on:
      - Planned/upcoming department projects that are already expected to take place within the timeframe
      - Department capacity for implementation of projects

Bureau Veritas Ingham County Ashrae Level II + Net Zero Energy Audit Recommendation Implementation Plan		
Phase 3 - 2025		
Building - Project Number	Project Description	Projected Initial Investment
		(\$)
CH & HILL - 9 (CH & HILL)	Upgrade Lighting to LED and Install Controls	\$50,213 ★
DO - 2	Upgrade Lighting to LED and Install Controls	\$6,834 ★
DO - 4	Replace Existing Air Conditioners with Energy Star Units	\$3,961 ★
ICFC - 2	Upgrade Lighting to LED and Install Controls	\$8,108 ★
ICFC - 3	Upgrade Electric Heating System to Heat Pumps	\$9,040 ★
FCHC - 2	Upgrade Lighting to LED and Install Controls	\$31,005
FCHC - 5	Re-Commission Building and its Control Systems	\$16,362
FCHC - 6	Reduce HVAC Hours of Operation	\$30,714
LLP - BS - 1	Upgrade Lighting to LED	\$127
VMGP - 3	External Air Leakage Control	\$6,952 ★
<b>Total</b>		<b>\$163,316</b>

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## 2025 Energy Conservation Measures

2025 CAPITAL BUDGET REQUEST FORM

DEPARTMENT

RANK	PROJECT NAME	PROJECT TYPE	NEW/RENEW
A	energy audit projects phase 3	energy savings initiative	new

	2025
ESTIMATED CAPITAL COST OF PROJECT	\$100,000.00
NEW OPERATING COSTS <i>This will generate \$20,000 and annual cost savings</i>	cost savings
TOTAL PROJECT COST	\$100,000.00
SOURCES OF FUNDING (DESCRIBE)	General Fund
TOTAL SOURCES	\$100,000.00

BRIEF DESCRIPTION OF PROJECT

LINE	DESCRIPTION	QTY	UNIT	EST. COST	EST. SAVINGS	EST. NET COST
001	Energy Audit	1	Project	\$100,000	\$0	\$100,000



### COMMUNITY ENERGY MANAGEMENT PROGRAM

9. Provide a concise overview of the proposed project.

The project will be to implement three energy conservation measures as recommended in the County's recently completed Ashrae Level II + Net Zero Energy Audit at the County's Forest Community Health Center (located at 2316 S Cedar St, Lansing, MI 48910). These projects are the 2<sup>nd</sup>, 3<sup>rd</sup> and 6<sup>th</sup> recommended energy conservation measures within the Ashrae Level II + Net Zero Energy Audit Forest Community Health Center Building Report (detailed in the Executive Summary and Appendix F: Lighting Schedule sections of the report).

**EST FOR PROPOSALS**  
 Date: **October 5, 2023**  
 Intent: **January 26, 2024**

Rolling until **June 30, 2024**

- Upgrade interior lighting and will install automatic lighting controls. Currently, the majority of the make-up of the facilities interior lighting is linear fluorescent technology controlled by light switches; this project will upgrade lighting technology to more energy efficient LED, converting approximately 84% of linear fluorescent lighting units to LED lightings units (which is expected to result in 47,025 kWh annual savings). This project will also replace approximately 94% of the existing manual light switch controls to automatic sensor controls. The completion of this project is expected to save 29 MTCO2 per year.
- Re-commission the buildings energy management systems and its controls. The goal of the re-commissioning is to ensure that the equipment in these facilities are performing as per the desired or the designed standards – to ensure that all the sensors, equipment, and control systems are working as per the design conditions at peak efficiency. The completion of this project is expected to save 15 MTCO2 per year.
- Reduce HVAC hours of operation. This project will include the installation of twenty centrally controlled thermostats for the building in order to optimize temperature control and minimize energy consumption. The completion of this project is expected to save 23 MTCO2 per year.

2025 Capital Budget Requests

2025 CEM Grant Application

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## BEYOND IMPLEMENTATION: MEASUREMENT AND EVALUATION

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- Need to establish a system of measurement for County facilities energy and water usage
  - Quantify impact
  - Assess effectiveness
  - Performance tracking
- Challenges
  - Capacity
  - Funding
  - New system/process for Ingham County

← CEM Grant Reporting Requirements

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## BEYOND IMPLEMENTATION: MEASUREMENT AND EVALUATION – CURRENT EFFORTS

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- CLC Fellowship Program:
  - Data Management Systems Evaluation Project
    - Summary: Evaluation of available systems designed to inventory and analyze data related to energy usage and water usage that are compatible with government operations.
    - Goals:
      - Summary and comparison guide of available options for systems
      - Potential entry of limited/sample data - dependent upon system selection/approval and timeline
  - Next Project Steps:
    - System selection
    - Data entry
      - Historical
      - Current
      - Future

↑ Potential to leverage for CEM Grant reporting requirements

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Ingham County  
Environmental Affairs Commission (EAC)  
Environmental Sustainability Manager Activities Summary  
February - April 2024

#### Materials Management Planning (MMP)

- Presented MMP information at the Ingham County Board of Health (BOH) March meeting in efforts to facilitate a joint recommendation in regard to the County's approach to planning with the Environmental Affairs Commission (EAC).
- Based on recommendation received from the EAC and the BOH: Collaborated with the Health Department to developed a *Resolution of Intent to Prepare a Materials Management Plan* for Ingham County. Presented MMP topic and the resolution to the Human Services Committee. This resolution has now been passed by the Board of Commissioners.
- Coordinated, conducted, and scheduled necessary conversations with the Board Office and County Attorney, to initiate and plan for pre-planning activities addressed in the resolution (developing communication materials to meet the adjacent county collaboration requirements, initiating the Materials Management Planning Committee appointment process, etc.).
- Performed additional research regarding the materials management planning process and communicated with adjacent counties to share information on local MMP development processes.
- Participated in EGLE's MMP Q&A Session and the Michigan Recycling Coalitions (MRC) Mid-Michigan Regional Meeting.

#### Sustainability Action Plan

- Coordinated with the Board Office to complete and submit the required first quarter report for the Community Enhancement Grant (received by the County for the development of the County's Sustainability Action Plan).
- Completed the development of the project's Request for Proposals (RFP). Worked with Purchasing Department to finalize the RFP, including review of the evaluation criteria, timeline, and verification of the vendor distribution list. This RFP was issued on April 10, 2024. Proposals are due May 14, 2024 at 11 am.
- Working to develop an addendum in response to questions about the project/the RFP.

#### Energy Audit Implementation

- Communicated and collaborated with Departments (Facilities, Parks, and Fairgrounds) in order to update Phase 1, 2, and 3 implementation plans for energy conservation measures recommended in the County's energy audit.
- Further perused participation in the Catalyst Leadership Circle (CLC) Fellowship program. Worked with Glenn Canning, Ingham County Facilities Director, and CLC program staff to re-develop project description/scope.
- Further pursued the Community Energy Management Program Grant by continuing to coordinate and conduct meetings with the Ingham County Facilities team to develop the County's grant project and application.

#### Additional/Misc.

- Participated in the March Catalyst Leadership Circle Convening, Michigan Vehicle Technology Transition Impact Project (MiVTTP) – Lansing Listening Session, and other relevant meetings/programs.
- Developed the *Resolution Authorizing Ingham County's Participation in the Equitable Mobility Powering Opportunities for Workplace Electrification Readiness Project* and attended the March 4, 2024 Human Services Committee meeting. This resolution has now been passed by the Board of Commissioners. Coordinated with the Board Office and County Attorney's Office to facilitate the submission of the program pledge.
- Researched and coordinated presentations and information for upcoming Environmental Affairs Commission Meetings.
- Answered inquiries from Environmental Affairs Commission members regarding various topics.