

Agenda

Environmental Concerns Committee

City of Kalamazoo



Wednesday, August 21, 2024

4:30 PM

City Commission Chambers – 241 West South Street

A. CALL TO ORDER/ROLL CALL

B. ADOPTION OF AGENDA

(Action: Motion to approve the agenda)

C. APPROVAL OF MINUTES

1. Approval of the minutes from the Environmental Concerns Committee meeting on July 17, 2024 (Action: Motion to approve)

D. COMMUNICATIONS

1. Announcements from sitting committee members.
2. Introduction of Loraine Smith, applicant for the final open position on the ECC.

E. PUBLIC COMMENTS

1. Check for phone lines for public comments.
2. Comments from folks in attendance.

F. NEW BUSINESS

1. PM 2.5 Update Presentation given by Erica Shuff and John Olson of the Air Quality Division at Michigan's Department of Environment, Great Lakes, and Energy.
 - a. Presentation PowerPoint

G. UNFINISHED BUSINESS

1. Discuss roles of current subcommittees and placement of new members to subcommittees.
 - a. Draft a mission and vision statement for each subcommittee.
 - b. Motion to place Stephen Romenelli on the Waste Subcommittee.
2. Sustainability Plan Update
 - a. Solar Purchase Agreement with Consumer's Energy.

Endorsement of Solar Purchase Plan by ICLEI-USA.

H. REPORTS

1. NFP Review Board - Bobby
Air and Water Quality - Bobby
Wildlife and Natural Resource Protection - Tressa
Planning Commission - Rachel
Tree Committee - Thomas
Asylum Lake Policy & Management Council - Sharon
Parks & Rec Advisory Board - Robb
Kalamazoo River Watershed Council - David
Odor Task Force - David B.(quarterly)
 - a.

I. ADJOURNMENT

1. Final Committee Comments.
2. Final Check of Phone Lines for Public Comments.



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: PM 2.5 Update Presentation given by Erica Shuff and John Olson of the Air Quality Division at Michigan's Department of Environment, Great Lakes, and Energy.

SUMMARY:

BACKGROUND:

RECOMMENDATION:



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: Presentation PowerPoint

SUMMARY:

BACKGROUND:

RECOMMENDATION:



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

PM 2.5 Updates

John Olson and Erica Shuff

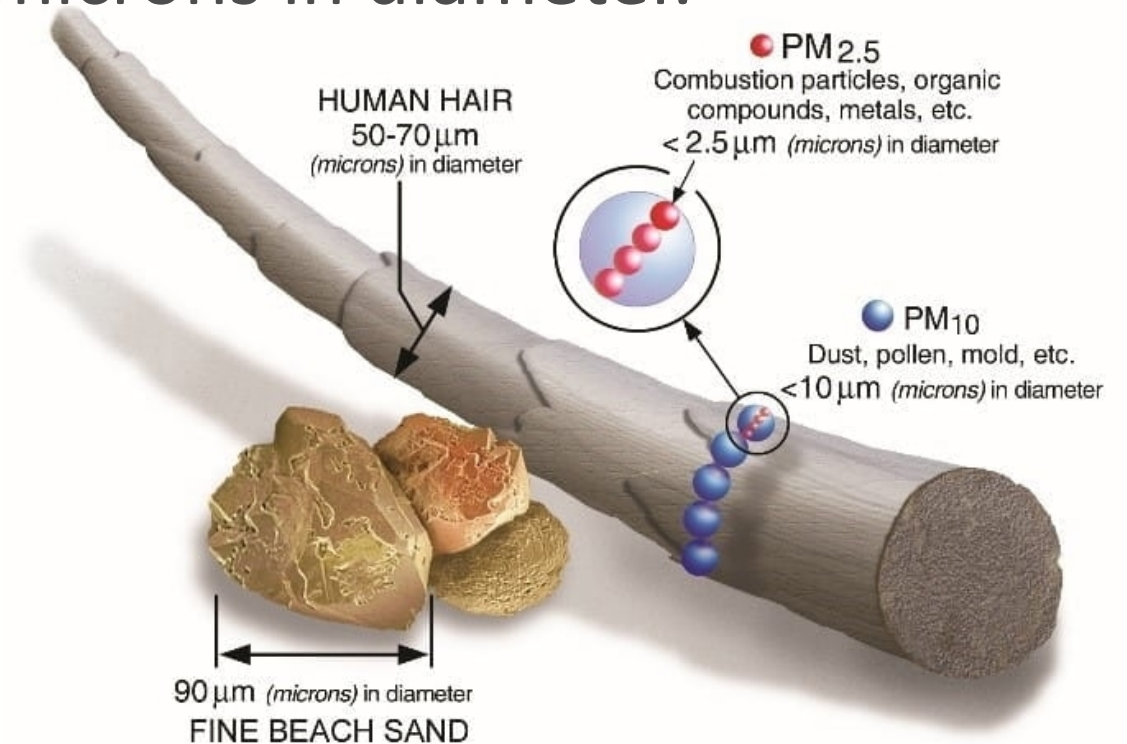
State Implementation Plan (SIP) Development Unit

Air Quality Division

Michigan Department of Environment, Great Lakes, and Energy

What is PM2.5?

- Fine particulate matter is also called PM2.5. It refers to small particles that are less than 2.5 microns in diameter.
- PM can be emitted by:
 - Smokestacks
 - Fires
 - Automobiles



What's New?

- In February 2024, the United States Environmental Protection Agency (USEPA) revised the annual primary standard for PM_{2.5}.
- The revised standard was lowered from a level of 12 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 9 $\mu\text{g}/\text{m}^3$.

Who Should Be Concerned About PM2.5 Exposure?

Sensitive Groups



Long- and short-term exposure can lead to:

- Asthma attacks
- Missed days of school or work
- Heart attacks
- Emergency room visits
- Premature death.

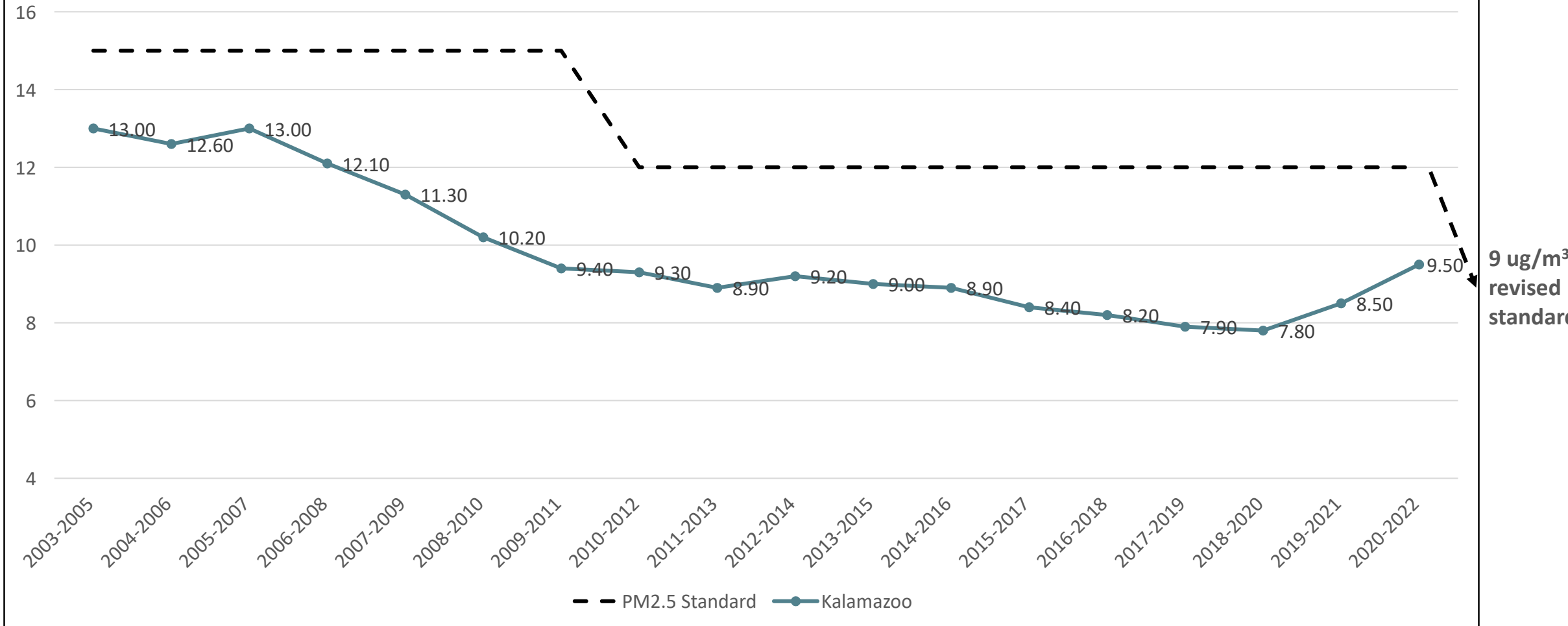
Why Lower the PM2.5 Standard?

- USEPA continues to look at the standard and all available health-based science to ensure health risks are minimized for the most vulnerable populations.
- In the most recent round of analysis, USEPA found that risks may be present at lower pollution levels than previously believed.

Does the New Standard Mean the Air is Unhealthy?

- The EPA adjusted the PM2.5 standard in accordance with findings from scientific advisory committees (such as CASAC) that indicated lower ambient air concentrations of fine particulate matter may also negatively impact sensitive population groups.
 - This does not mean that the air quality has worsened... nor have emissions increased!

Three Year Annual PM2.5 Average for the Kalamazoo Monitor



What's Next?



Designations

- EGLE will work with USEPA to recommend area designations:
 - Attainment
 - Nonattainment
 - Unclassifiable

Designations



Designations will take into consideration:

- Air quality data
- Core-based statistical areas (CBSAs)
- Emissions data
- Meteorology
- Geography
- Jurisdictional boundaries



We will also take **environmental justice areas** into consideration

Designations Timing

- February 7, 2025: EGLE must submit recommended designations within 1 year of the promulgation of the revised standard.
- February 7, 2026: The USEPA issues designations within 2 years of the promulgation of the revised standard (the USEPA has an option for a 1-year extension).

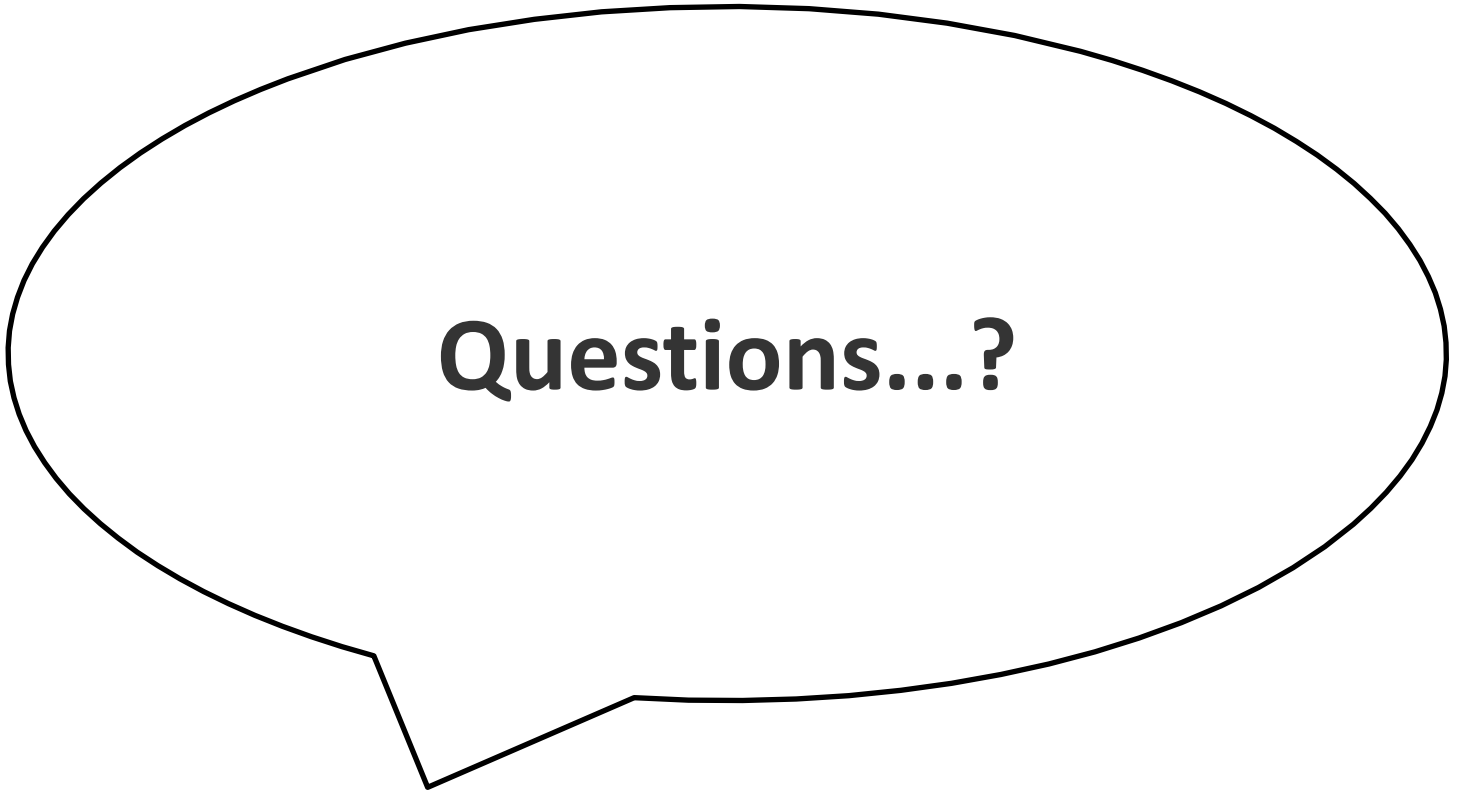
Stay Up-to-Date, Get Involved!

Sources of Information

- EGLE website/calendar
 - [Calendar \(michigan.gov\)](#)
- Subscribe to EGLE's GovDelivery
 - [EGLE GovDelivery](#)
- Message your community group leaders or AQD staff for information on future public engagement/outreach sessions & comment periods!

Engagement Opportunities

- Voice questions/concerns and give input during public engagement forums held by EGLE/AQD staff.
- Participate in public comment periods.
 - Details posted to EGLE's public notice page and sent out through the GovDelivery service in advance.
 - [Air Quality Public Notice \(michigan.gov\)](#)
- Communicate with AQD staff through email with questions about PM2.5 designations, attainment planning process, etc.



Questions...?



Erica Shuff

Email: shuffe@michigan.gov

John Olson

Email: olsonj12@michigan.gov

Michigan Department of
Environment, Great Lakes, and Energy

800-662-9278
Michigan.gov/EGLE

Follow us at: Michigan.gov/EGLEConnect



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: Discuss roles of current subcommittees and placement of new members to subcommittees.

SUMMARY:

BACKGROUND:

RECOMMENDATION:



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: Draft a mission and vision statement for each subcommittee.

SUMMARY:

Draft a mission and vision statement for each subcommittee.

BACKGROUND:

RECOMMENDATION:



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: Motion to place Stephen Romenelli on the Waste Subcommittee.

SUMMARY:

BACKGROUND:

RECOMMENDATION:



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: Sustainability Plan Update

SUMMARY:

BACKGROUND:

RECOMMENDATION:



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: Solar Purchase Agreement with Consumer's Energy.

SUMMARY:

BACKGROUND:

RECOMMENDATION:

Power your organization with renewable, Michigan-made energy.

Meet your sustainability goals
and decarbonize your business.



Advantages to organizations and the environment

- ✓ Meet your customers' and investors' sustainability expectations
- ✓ Easily meet leadership's carbon reduction goals
- ✓ Improve brand reputation
- ✓ Contribute to the local community
- ✓ Get ahead of regulatory requirements
- ✓ Decrease cost of capital
- ✓ Protect the planet

In 2022 enrolled businesses have achieved¹:



170,279 metric tons of CO₂ offset



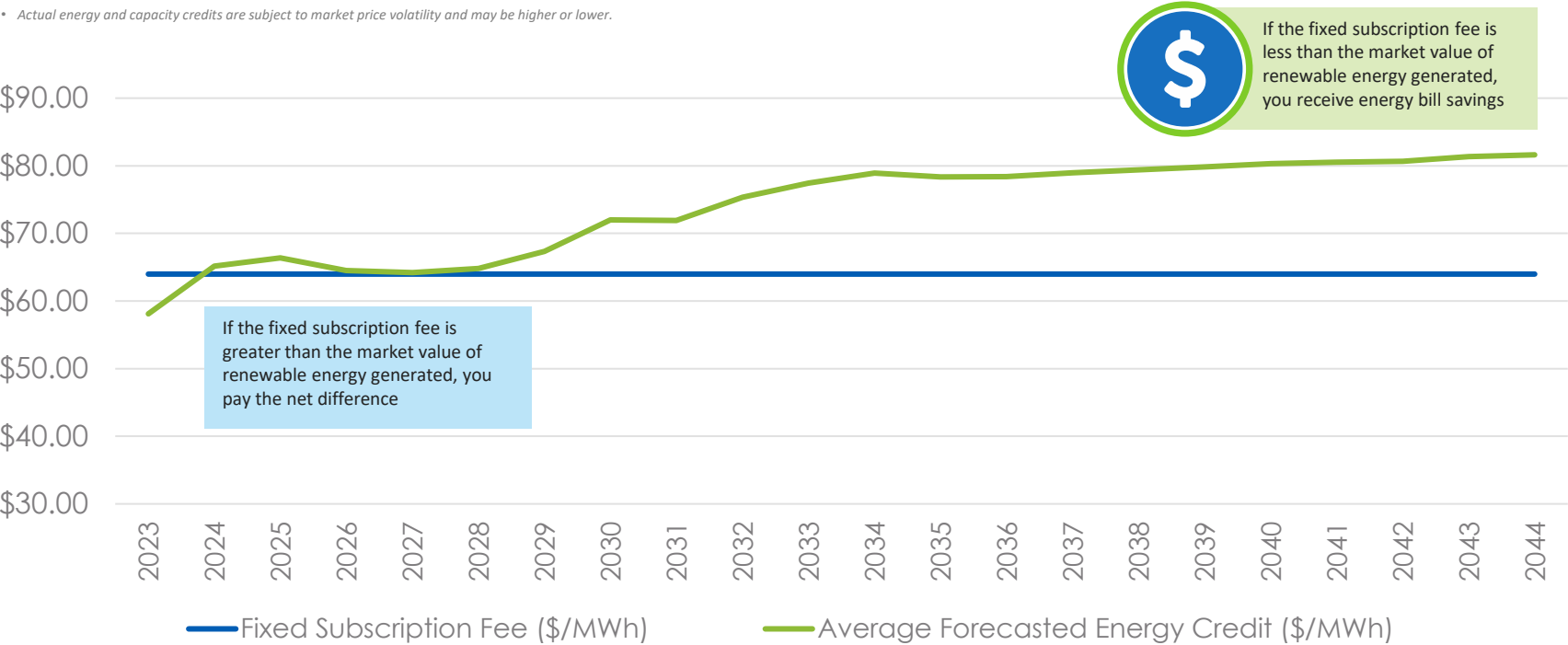
+\$5 Million in reduced energy bills

A Simple Renewable Energy Program process



Impact of energy market pricing

- Based on an estimated subscription fee of \$64/MWh. This fee may change once new projects are awarded.
- Forecasted energy and capacity market prices are based on market intelligence as of Dec 2022.
- Capacity credits are based on resources being valued at 75% CONE.
- Actual energy and capacity credits are subject to market price volatility and may be higher or lower.



Your participation – 100% Subscription Level

Subscription Percentage: 100%	20 Years	15 Years	10 Years
kWh Subscribed (annually)	46,934,825	46,934,825	46,934,825
kWh Subscribed (contract term)	938,696,500	704,022,375	469,348,250
Subscription Payments (Present Value)	(\$31,735,840)	(\$27,295,927)	(\$21,059,983)
Estimated Energy & Capacity Credits (Present Value)	\$37,534,139	\$31,070,420	\$23,016,703
Net Savings or Premium Present Value	\$5,798,298	\$3,774,493	\$1,956,720
Carbon Avoided (Metric Tons)	391,436	293,577	195,718

Entire City of
Kalamazoo

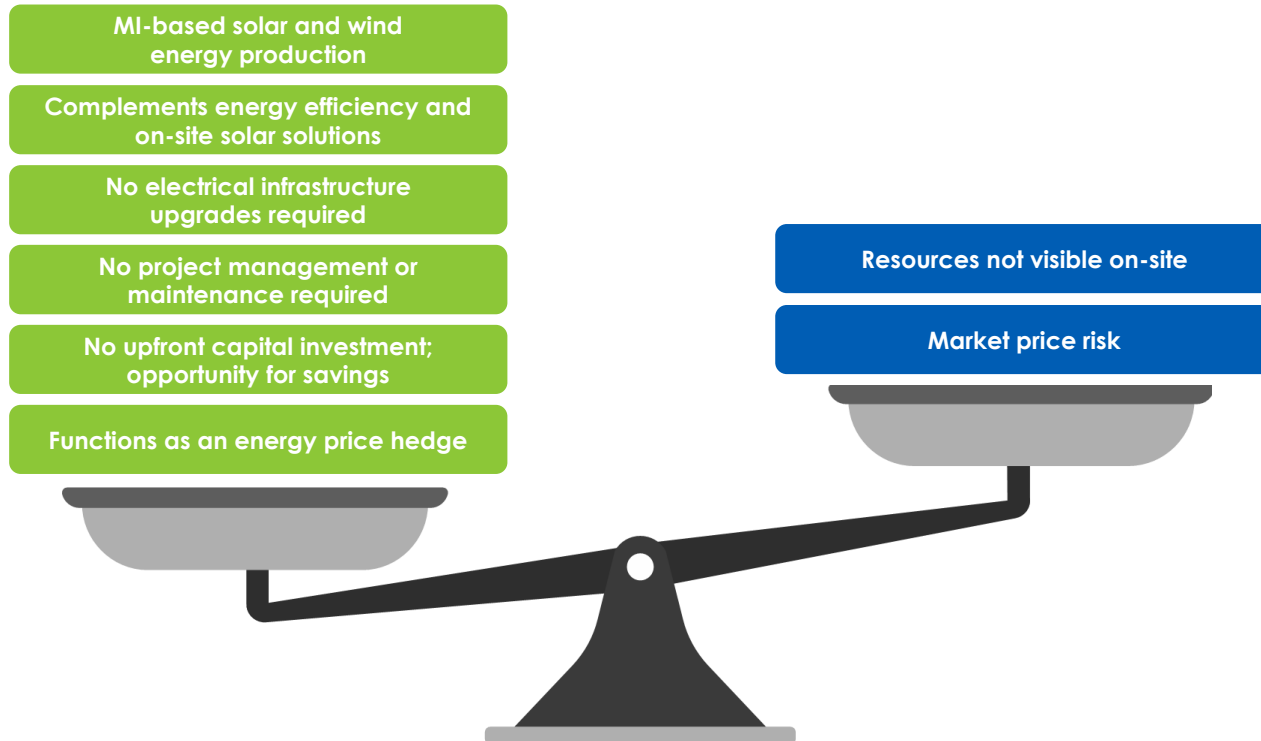


Subscription Percentage: 100%	20 Years	15 Years	10 Years
kWh Subscribed (annually)	23,691,700	23,691,700	23,691,700
kWh Subscribed (contract term)	473,834,000	355,375,500	236,917,000
Subscription Payments (Present Value)	(\$16,019,576)	(\$13,778,402)	(\$10,630,631)
Estimated Energy & Capacity Credits (Present Value)	\$18,946,434	\$15,683,686	\$11,618,342
Net Savings or Premium Present Value	\$2,926,858	\$1,905,284	\$987,711
Carbon Avoided (Metric Tons)	197,589	148,192	98,794

City Of
Kalamazoo
Wastewater
Treatment
Plant



The benefits of our Renewable Energy Program outweigh the risks



Impact to your business

SUBSCRIPTION IS ADDED TO YOUR UTILITY BILL:

No changes will be made to your bill until the new renewable energy resource is operational. Once online, the monthly net premium/credit will begin.

You can expect to see some additional line-items added to your bill:

- Subscription Fee - Fixed fee (\$/kWh) based on the resource or resources you are subscribed
- Energy Credit - Value (\$/kWh) of renewable energy generated and sold onto the grid
- Capacity Credit - Value (\$/kWh) of capacity of the resources you are subscribed

PROGRAM SUPPORT:

On an annual basis, we provide participants with energy market forecast updates to help you manage your energy costs and adjust for any changes in energy consumption that could impact your utility budget.

May Energy Bill		Invoice:
Account Summary		
Last Month's Account Balance		
Payment on May 10, 2022		
Balance Forward		
Total amount due will be deducted from your designated account on the due date.		
Payments applied after May 12, 2022 are not included.		
Electric Charges		
On-Peak Billing Demand KW		
Trans. On-Peak Billing Demand		
On-Peak Energy		
Off-Peak Energy		
PSCR		
System Access		
Max Demand kW		
FCM Incentive		
Power Plant Securitization		
Power Factor Credit		
Low-Income Assist Fund		
Electric Charges		
Energy Subscription		
Energy Credit		
Capacity Credit		
Total Electric		
State Sales Tax		
Total Energy Charges		
Amount Due:		
by June 03, 2022		
If you pay after the due date, a 2% late payment charge will be added to your next bill.		

2024 Enrollment

- Submit your contract now to reserve your spot in the program when the next resource comes online. Timing is important as customers are enrolled on a first come first serve basis.
- Since the program is expanding based on increased customer demand, there may be a waiting period before your enrollment begins.
- Contracts need to be returned by September 30th each year to ensure new resources are sized appropriately to meet your needs.

Large Customer Renewable Energy Program Financial Analysis - Model Inputs

Customer: City of Kalamazoo Wastewater
 Estimated Annual Subscription Volume (kWh): 46,934,825 Subscription Level: 100%
 Estimated Subscription Fee: \$0.064 Not to Exceed Estimated Fixed Subscription Fee

Financial Analysis - Estimated Yearly, Financial Impact of Enrollment

Year	Year	kWh Subscribed	Subscription Cost	Savings (Energy & Capacity Credits)	Annual Net Savings/(Premium)	Net Savings/(Premium) \$/kWh	Metric Tons of CO2 Avoided
1	2028	46,934,825	\$3,002,627	\$3,043,766	\$41,139	\$0.00088	19,572
2	2029	46,934,825	\$3,002,627	\$3,119,542	\$116,914	\$0.00249	19,572
3	2030	46,934,825	\$3,002,627	\$3,255,478	\$252,851	\$0.00539	19,572
4	2031	46,934,825	\$3,002,627	\$3,302,974	\$300,347	\$0.00640	19,572
5	2032	46,934,825	\$3,002,627	\$3,253,779	\$251,151	\$0.00535	19,572
6	2033	46,934,825	\$3,002,627	\$3,279,632	\$277,005	\$0.00590	19,572
7	2034	46,934,825	\$3,002,627	\$3,337,769	\$335,142	\$0.00714	19,572
8	2035	46,934,825	\$3,002,627	\$3,413,525	\$410,898	\$0.00875	19,572
9	2036	46,934,825	\$3,002,627	\$3,497,393	\$494,766	\$0.01054	19,572
10	2037	46,934,825	\$3,002,627	\$3,599,715	\$597,088	\$0.01272	19,572
11	2038	46,934,825	\$3,002,627	\$3,699,648	\$697,021	\$0.01485	19,572
12	2039	46,934,825	\$3,002,627	\$3,801,986	\$799,359	\$0.01703	19,572
13	2040	46,934,825	\$3,002,627	\$3,897,276	\$894,649	\$0.01906	19,572
14	2041	46,934,825	\$3,002,627	\$3,985,722	\$983,095	\$0.02095	19,572
15	2042	46,934,825	\$3,002,627	\$4,067,241	\$1,064,614	\$0.02268	19,572
16	2043	46,934,825	\$3,002,627	\$4,174,735	\$1,172,108	\$0.02497	19,572
17	2044	46,934,825	\$3,002,627	\$4,265,348	\$1,262,721	\$0.02690	19,572
18	2045	46,934,825	\$3,002,627	\$4,381,622	\$1,378,994	\$0.02938	19,572
19	2046	46,934,825	\$3,002,627	\$4,505,759	\$1,503,132	\$0.03203	19,572
20	2047	46,934,825	\$3,002,627	\$4,603,340	\$1,600,713	\$0.03411	19,572

Financial Summary - Estimated, Financial Impact of Contract Term Options (In Present Value)

Contract Term Length	kWh Subscribed	Subscription Cost	Savings (Energy & Capacity Credits)	Term Net Savings/(Premium)	Net Savings/(Premium) \$/kWh	Metric Tons of CO2 Avoided
20 years	938,696,500	(\$31,735,840)	\$37,534,139	\$5,798,298	\$0.00618	391,436
15 Years	704,022,375	(\$27,295,927)	\$31,070,420	\$3,774,493	\$0.00536	293,577
10 Years	469,348,250	(\$21,059,983)	\$23,016,703	\$1,956,720	\$0.00417	195,718

City of Kalamazoo
– all accounts

Large Customer Renewable Energy Program Financial Analysis - Model Inputs

Customer: City Of Kalamazoo Wastewater Treatment Plant
 Estimated Annual Subscription Volume (kWh): 23,691,700 Subscription Level: 100%
 Estimated Subscription Fee: \$0.064 Not to Exceed Estimated Fixed Subscription Fee

Financial Analysis - Estimated Yearly, Financial Impact of Enrollment

Year	Year	kWh Subscribed	Subscription Cost	Savings (Energy & Capacity Credits)	Annual Net Savings/(Premium)	Net Savings/(Premium) \$/kWh	Metric Tons of CO2 Avoided
1	2028	23,691,700	\$1,515,662	\$1,536,428	\$20,766	\$0.00088	9,879
2	2029	23,691,700	\$1,515,662	\$1,574,678	\$59,016	\$0.00249	9,879
3	2030	23,691,700	\$1,515,662	\$1,643,296	\$127,634	\$0.00539	9,879
4	2031	23,691,700	\$1,515,662	\$1,667,271	\$151,609	\$0.00640	9,879
5	2032	23,691,700	\$1,515,662	\$1,642,438	\$126,776	\$0.00535	9,879
6	2033	23,691,700	\$1,515,662	\$1,655,489	\$139,826	\$0.00590	9,879
7	2034	23,691,700	\$1,515,662	\$1,684,835	\$169,173	\$0.00714	9,879
8	2035	23,691,700	\$1,515,662	\$1,723,075	\$207,412	\$0.00875	9,879
9	2036	23,691,700	\$1,515,662	\$1,765,410	\$249,747	\$0.01054	9,879
10	2037	23,691,700	\$1,515,662	\$1,817,060	\$301,397	\$0.01272	9,879
11	2038	23,691,700	\$1,515,662	\$1,867,504	\$351,841	\$0.01485	9,879
12	2039	23,691,700	\$1,515,662	\$1,919,162	\$403,499	\$0.01703	9,879
13	2040	23,691,700	\$1,515,662	\$1,967,262	\$451,600	\$0.01906	9,879
14	2041	23,691,700	\$1,515,662	\$2,011,908	\$496,245	\$0.02095	9,879
15	2042	23,691,700	\$1,515,662	\$2,053,057	\$537,394	\$0.02268	9,879
16	2043	23,691,700	\$1,515,662	\$2,107,317	\$591,655	\$0.02497	9,879
17	2044	23,691,700	\$1,515,662	\$2,153,057	\$637,395	\$0.02690	9,879
18	2045	23,691,700	\$1,515,662	\$2,211,749	\$696,087	\$0.02938	9,879
19	2046	23,691,700	\$1,515,662	\$2,274,411	\$758,749	\$0.03203	9,879
20	2047	23,691,700	\$1,515,662	\$2,323,668	\$808,006	\$0.03411	9,879

Financial Summary - Estimated, Financial Impact of Contract Term Options (In Present Value)

Contract Term Length	kWh Subscribed	Subscription Cost	Savings (Energy & Capacity Credits)	Term Net Savings/(Premium)	Net Savings/(Premium) \$/kWh	Metric Tons of CO2 Avoided
20 years	473,834,000	(\$16,019,576)	\$18,946,434	\$2,926,858	\$0.00618	197,589
15 Years	355,375,500	(\$13,778,402)	\$15,683,686	\$1,905,284	\$0.00536	148,192
10 Years	236,917,000	(\$10,630,631)	\$11,618,342	\$987,711	\$0.00417	98,794

City of Kalamazoo
Wastewater
Treatment Plant

Our Renewable Energy Program is the right fit:



Local

Support **NEW**
renewable resources
in Michigan



Flexible

Customizable to suit
your sustainability
goals



Cost-effective

No upfront costs



Turnkey

Fully managed
renewable resources
on your behalf



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: Endorsement of Solar Purchase Plan by ICLEI-USA.

SUMMARY:

BACKGROUND:

RECOMMENDATION:

From:
Eli Yewdall
ICLEI- Local Governments for Sustainability USA
1536 Wynkoop Street Suite 901
Denver, CO 80202

To:
Kalamazoo City Commission
241 South St.
Kalamazoo, MI 49007

Dear Commissioners:

I am writing this letter in support of the City of Kalamazoo's participation in the Consumers Energy Renewable Energy Program for electricity, for the following reasons:

- Rapidly adding new renewable energy generation is a key local, national, and global decarbonization strategy, as noted in ICLEI's [Analysis of Pathways to Achieve Science Based Targets](#).
- Fixed price programs like that proposed by Consumers Energy provide predictability that supports steady growth of renewable generation, while also providing predictability for customers like the City of Kalamazoo.
- Consumers Energy has indicated that new solar generation will be built in Michigan to supply the usage of customers in the program. This is strong evidence of additionality, a key requirement in ICLEI's [Renewable Energy Credit Guidance](#).

Sincerely,



Eli Yewdall
Zero Emissions Team Lead - ICLEI USA
eli.yewdall@iclei.org



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: Reports from subcommittee members.

SUMMARY:

BACKGROUND:

RECOMMENDATION:



Environmental Concerns Committee Staff Report

City of Kalamazoo

TO: The Environmental Concerns Committee

FROM: Justin Gish, Sustainability Coordinator

DATE: August 21, 2024

SUBJECT: NFP Review Board - Bobby
Air and Water Quality - Bobby
Wildlife and Natural Resource Protection - Tressa
Planning Commission - Rachel
Tree Committee - Thomas
Asylum Lake Policy & Management Council - Sharon
Parks & Rec Advisory Board - Robb
Kalamazoo River Watershed Council - David
Odor Task Force - David B.(quarterly)

SUMMARY:

BACKGROUND:

RECOMMENDATION: