

**MILWAUKEE COUNTY  
INTER-OFFICE COMMUNICATION**

Date: October 25, 2023

To: Marcelia Nicholson, Chairwoman, Milwaukee County Board of Supervisors

From: Gordie Bennett, Sustainability Director, Office of Sustainability,  
Department of Administrative Services, Facilities Management Division

Subject: Climate Action 2050 Plan Update

File Type: Informational Report

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This informational report provides updates regarding Milwaukee County’s strategic plan to achieve carbon neutrality in county facilities and operations by 2050 – hereafter referred to as the ‘Climate Action 2050 Plan’, or ‘CA50 Plan.’

**POLICY**

File No. 21-389 commits Milwaukee County to become carbon neutral by 2050 and requests the Sustainability Director to develop and administer a strategic plan to achieve carbon neutrality in Milwaukee County facilities and operations by 2050.

File No. 21-770, referred here as the *CA50 Framework*, provides guiding principles and a roadmap for Milwaukee County to achieve carbon neutral facilities and operations by 2050.

**BACKGROUND**

Development of the Milwaukee County Climate Action 2050 Plan is being guided by the *CA50 Framework*. The planning team consists of the County’s Sustainability Task Force (STF) and Office of Sustainability, with support from consultants Energetics<sup>1</sup>. This capital project (WY0625021) is supported by \$220,000 in Federal American Rescue Plan Act of 2021 funding. Table 1 provides a timeline and milestones for CA50 Plan development as of this writing.

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<sup>1</sup> Formed in 2021 by the Office of the County Executive, the STF is chaired by the Sustainability Director and consists of staff and administrators representing nine county departments. More information about the task force, including its membership and meetings, is available through the [County Legislative Information Center](#).

**Table 1. Climate Action 2050 Plan Timeline & Milestones.**

✓	Sep. 2022:	Kickoff Meeting with Sustainability Task Force
✓	Dec. 2022:	Community Engagement Strategy
✓	July 2023:	Vulnerability Assessment & Emissions Assessment
➤	Dec. 2023:	Draft Climate Action Strategies List
○	Mar. 2024:	Draft Climate Action 2050 Plan
○	May 2024:	Final Climate Action 2050 Plan
○	June 2024:	Presentation of final plan to County Board
<p>✓ Completed      ➤ In-progress      ○ Not yet started</p>		

## PROJECT UPDATES

### Stakeholder Engagement

The *Community Engagement Strategy* describes how the CA50 planning team will conduct comprehensive and meaningful outreach to diverse Milwaukee County stakeholder groups. As of this writing, the planning team has engaged 11 internal groups and 35 external groups with CA50 planning. Engagement has varied from providing information and updates to gathering and incorporating stakeholders' input into planning – see Attachment 1.

As summarized in the *Vulnerability Assessment Report* (see below), the planning team administered an online survey in December 2022 to gauge how climate change is impacting Milwaukee County residents. Although the survey garnered 755 responses, respondents largely identified as White/Caucasian and as residing in more affluent zip codes. To engage underrepresented communities, the planning team held two in-person workshops in the northwest and south sides of Milwaukee during May 2023. Attachment 2 provides a summary of community feedback received during the workshops.

In September 2023, the CA50 planning team hosted webinars for County employees and community members to help shape the Climate Action 2050 Plan. During the webinars, team members provided an overview of the CA50 goals and planning process, and highlighted findings from the Vulnerability Assessment Report (see below description). The team also led a discussion with attendees and answered their questions about the CA50 Plan. Attendees were encouraged to stay apprised of CA50 events and progress by visiting the [CA50 Plan webpage](#) and/or subscribing to the Office of Sustainability [newsletter](#).

### Vulnerability Assessment

In June 2023, CA50 Plan consultants Energetics prepared the *Vulnerability Assessment Report* (Attachment 3) for Milwaukee County. Using outputs from four downscaled global climate models, the consultants identified three primary climate hazards in Milwaukee County: heat waves, flooding, and poor air quality. Under a global high-emissions scenario, Energetics found that average temperatures in the County could

match those of St. Louis, Missouri by the year 2100, with wetter winters and drier summers.

As described in the assessment report, climate change will have direct impacts on Milwaukee County residents and businesses. For example, heat waves could increase demand for air conditioning, leading to power outages and increased heat-related health concerns for residents. Unfortunately, these negative impacts could be compounded by the fact that vulnerable communities do not have the same access to adequate healthcare, transportation, or cooling centers.

Energetics found that some communities in Milwaukee County may be less resilient to climate change. For instance, neighborhoods with high concentrations of impermeable surfaces (buildings, paved roads, and parking lots), and a deficit of tree canopy and open space are more susceptible to heat waves and poor air quality. In general, local communities with less resilient infrastructure also tend to have higher social vulnerability – see pages 48-49 of the assessment report<sup>2</sup>.

The assessment report identifies several park properties located in Milwaukee County that could potentially be affected by 100-year and 500-year floodplains (Hart Park, Kletszch Park, Lincoln Park, and Brown Deer Village Park). Flooding of these or other park properties could make them less accessible and enjoyable for county residents and visitors. This could result in decreased physical activity and social isolation, which can have negative impacts on health and well-being.

The *Vulnerability Assessment Report* helps to bridge Milwaukee County's carbon neutrality policy with its vision to achieve racial equity. Even under a low-emissions scenario, climate change will significantly impact the local quality of life – especially for vulnerable communities. The CA50 planning team will use the report findings to develop strategies and policies to mitigate these impacts and enhance community resilience.

### **Emissions Assessment**

As part of CA50 Plan development, Energetics also completed an assessment of carbon emissions from Milwaukee County operations. The resulting *Emissions Assessment Report* (Attachment 4) reviews and critiques the approach, data sources, assumptions, and methods used in the County's 2019-2021 operational emissions inventories<sup>3</sup>.

Energetics determined that Milwaukee County's inventories generally follow the Local Government Operations Protocol (LGO Protocol)<sup>4</sup>. The consultants suggested

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<sup>2</sup> The *Vulnerability Assessment Report* uses a modified social vulnerability index (SVI) based on a similar product from the U.S. Centers for Disease Control (CDC) and Agency for Toxic Substances and Disease Registry (ATSDR).<sup>6</sup> The modified composite SVI is shown in Figure 2 of the report.

<sup>3</sup> The Office of Sustainability prepared and [shared](#) the inventory of 2019-2021 Milwaukee County operational emissions with the Sustainability Task Force in July 2023. In 2020, the Office presented an inventory of 2016-2018 operational emissions to the County Board – see [File No. 20-318](#).

<sup>4</sup> The [LGO Protocol](#) is the rulebook for accounting for carbon emissions associated with local government operated buildings, vehicles, and other operations.

improvements in the County's data sources that result in minor changes (not material) to emissions estimates. The Office of Sustainability has retroactively applied these changes to the County's past inventories, and the corrected sources/estimates will be used in all future emissions assessments.

### **2022 Emissions Inventory**

Following the LGO Protocol, the Office of Sustainability recently completed an inventory of Scope 1-2 carbon emissions from 2022 Milwaukee County government operations<sup>5</sup>. Consistent with past inventories, the 2022 inventory accounts for emissions from sources for which the County has full operational authority, or has the ability introduce and implement operating policies. Thus, the inventory includes emissions from Milwaukee County Transit System (MCTS) operations but excludes emissions from aviation travel, or from county-owned, leased facilities (e.g., Milwaukee Public Museum, Milwaukee County Historical Society, Marcus Center for Performing Arts).

During 2022, Milwaukee County government operations generated approximately 116,373 metric tons of carbon dioxide equivalent (MTCDE) – a three percent reduction since 2021. The County's total emissions is roughly equivalent to those generated by 25,897 passenger vehicles driven for one year<sup>6</sup>. Consistent with past inventories, Buildings & Facilities represents the largest sector of the County's operational emissions (64 percent of total emissions in 2022), followed by Transit Fleet (30 percent), and Vehicle Fleet (5 percent).

### **Progress Toward Carbon Neutrality**

During 2017, the County Board established that Milwaukee County will support the principles and targets of the Paris Climate Agreement to keep global temperature increases below 2°C (3.8°F)<sup>7</sup>. In 2021, the U.S. government recommitted to the Agreement, pledging to reduce national emissions by at least 50 percent by 2030, relative to 2005. Thus, 2005 emissions serve as a useful baseline for tracking Milwaukee County's progress toward achieving carbon neutral operations.

Relative to 2005, Milwaukee County's operational emissions have decreased by approximately 44 percent – see Table 2. As reported in the *CA50 Framework*, three factors may help explain this drop in emissions:

- **Building Portfolio Changes:** Between 2005 and 2018, the County's building portfolio decreased by about 3.2 million square feet (21 percent).
- **More Efficient Buildings & Vehicles:** During the same period, energy and fuel used for County operations (includes MCTS) decreased by 318,391 million Btu (23 percent).

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<sup>5</sup> Scope 1 emissions result from Milwaukee County's use of fossil fuels to operate and maintain County-owned facilities, vehicles, and other equipment. Scope 2 emissions result from the County's use of purchased or acquired electricity, steam, heating, and cooling.

<sup>6</sup> U.S. Environmental Protection Agency (2023). [Greenhouse Gas Equivalencies Calculator](#).

<sup>7</sup> See [File No. 17-506](#).

- Greener Grid: We Energies’ power emissions rates have generally decreased since 2016<sup>8</sup>.

**Table 2. Emissions from Milwaukee County Operations**

Year	Buildings & Facilities	Street Lights & Traffic Signals	Vehicle Fleet	Transit Fleet	Total	% Change vs 2005
2005	155,708	2,214	8,003	43,229	209,154	0%
2016	100,798	1,742	7,659	40,614	150,813	-28%
2017	93,790	1,716	7,062	38,958	141,526	-32%
2018	94,334	1,571	7,501	39,439	142,845	-32%
2019	86,144	1,289	8,442	38,722	134,597	-36%
2020	71,621	946	6,481	32,608	111,656	-47%
2021	77,375	1,015	7,214	34,960	120,564	-42%
2022	74,201	801	6,515	34,856	116,373	-44%

**Related Work by Others**

Milwaukee County is developing the Climate Action 2050 Plan around the same time as several local, regional, and state plans. In June 2023, the City of Milwaukee adopted the Milwaukee Climate and Equity Plan. This plan describes how Milwaukee can achieve zero net community emissions by 2050 while creating family-supporting ‘green’ jobs. More recently, the Southeast Wisconsin Regional Planning Commission and State of Wisconsin have secured federal Climate Pollution Reduction Grant funding to develop regional and statewide climate action plan, respectively. The CA50 planning team will investigate and recommend opportunities to advance Milwaukee County’s climate action priorities while supporting these community plans.

Milwaukee County continues to make strategic investments in energy and fuel efficiency. For example, the Department of Transportation (MCDOT) and MCTS have deployed 15 battery electric buses (BEBs) as part of the new East-West Bus Rapid Transit service. Additionally, County Parks, Facilities Management, and other county agencies are leveraging historic federal funding to improve the energy efficiency of their building portfolios. Efforts like these will help drive down the County’s operational emissions, moving closer to carbon neutrality.

**Plan Completion**

The CA50 planning team is on track to deliver a draft plan for Milwaukee County stakeholders’ feedback by March 2024 - see Table 1. The final Climate Action 2050 Plan will be presented for the review and approval of the County Board in June 2024.

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<sup>8</sup> WEC Energy Group. March 2023. [EPA greenhouse gas reporting and emission rates](#).

Community members and other stakeholders may provide input on the planning process via a [standing survey](#) in English, Spanish, and Hmong. Additionally, stakeholders may direct any questions or concerns about the Climate Action 2050 Plan to the County's Sustainability Director at [sustainability@milwaukeecountywi.gov](mailto:sustainability@milwaukeecountywi.gov).

## **ALIGNMENT TO STRATEGIC PLAN**

The Climate Action 2050 Plan will support Milwaukee County's strategic plan by creating Intentional Inclusion and Investing in Equity. The planning team will develop the plan with Intentional Inclusion of diverse stakeholders, including but not limited to non-English speakers, persons with disabilities, and Black, Indigenous, and other People of Color. In addition, as described in the *CA50 Framework*, the plan will emphasize strategies and actions that provide racial and health equity co-benefits - not just environmental protection or cost savings.

## **FISCAL EFFECT**

The report is informational only and there is no fiscal impact.

## **VIRTUAL MEETING INVITES**

Walt Zalis, [WZalis@Energetics.com](mailto:WZalis@Energetics.com)  
Shannon Lawn, [SLawn@Energetics.com](mailto:SLawn@Energetics.com)  
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## **PREPARED BY**

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## **APPROVED BY**

*Stuart Carron*

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Stuart Carron, Director, Department of Administrative Services, Facilities Management Division

**ATTACHMENTS**

1. Community Engagement to Date 20231025
2. May 2023 Community Workshops Summary
3. Final Vulnerability Assessment CORRECTED 20230731
4. Final Emissions Assessment Report

cc: Kelly Bablitch, Chief of Staff, Milwaukee County Board of Supervisors  
Janelle M. Jensen, Legislative Services Division Manager, Office of the County Clerk