Chicago Metropolitan Agency for Planning

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MEMORANDUM

To: CMAP Board

From: Bill Barnes, Deputy, Regional Policy and Implementation (RPI)

Date: October 29, 2025

Subject: Update on the Comprehensive Climate Action Plan for Greater Chicago

Action Requested: Information and discussion

The project team will update the CMAP Board on the development of the Comprehensive Climate Action Plan (CAP) for Greater Chicago, funded by the U.S. Environmental Protection Agency's (USEPA) Climate Pollution Reduction Grant. This memo reviews the purpose, scope, and timeline of the plan and highlights key findings during the planning process.

At the October meeting, the team will provide a summary of the plan before submitting to USEPA in December and a public release in early 2026.

1. Plan overview

The CAP is being developed through a partnership between CMAP, the Northwestern Indiana Regional Planning Commission, and the Metropolitan Mayors Caucus, with support from U.S. Environmental Protection Agency's Climate Pollution Reduction Grant program.

The plan's purpose is straightforward but ambitious: to provide the region with a clear, practical roadmap for reducing greenhouse gas emissions in line with international and regional climate goals. In line with the grant requirements, the plan addresses all major emission sources across a 13-county area spanning Illinois, Indiana, and Wisconsin (Greater Chicago region).

Developed between January 2024 and November 2025, the plan followed a stakeholder-driven process organized around seven core tasks:

- Establish guiding principles
- Create a greenhouse gas emissions inventory
- Set emissions reduction targets
- Identify strategies to reduce emissions
- Model how strategies impact emissions
- Estimate air quality and public health benefits

- Develop the draft Plan

Stakeholder engagement informed every stage of the planning process. The project team drew on the expertise of implementers, technical experts, and community representatives to identify effective, equitable, and actionable strategies. A project steering committee, four sector-specific working groups, and CMAP's Climate Committee provided leadership and additional guidance. To ensure inclusive participation, community-based organizations received compensation for their time and input.

Because the study area spans multiple jurisdictions, the plan will not be formally adopted but will serve as a resource and framework to guide and inform planning and investment at the regional and local government levels, while also identifying areas for state and/or federal action.

Following submission to the U.S. EPA by December 1, 2025, we will work with the CMAP Board, MPO Policy Committee, and working committees to confirm implementation priorities for the CMAP region and engage stakeholders needed to make them a reality.

2. Key plan components

The plan brings together extensive data, modeling, and stakeholder input to guide regional action. It includes a summary of current greenhouse gas emissions and trends, economy-wide scenarios that outline pathways to deep reductions by 2050, and sector-specific targets showing where the greatest progress can be made. The plan also identifies key climate action strategies, quantifies their benefits for air quality and public health, and reflects insights from broad community engagement—highlighting local priorities and opportunities for collaboration. The following highlights some of the key components in the plan.

2.1. Emissions summary

The Greater Chicago region produces roughly 152 million metric tons of carbon dioxide equivalent (MMT CO_2e) each year. If considered a state, it would rank as the 11th highest emitter in the U.S. Fortunately, regional emissions have already fallen 20 percent since 2005.

Most emissions come from three sectors:

- **Industry** (36%): reflecting the region's concentration of steelmaking, refining, and manufacturing.
- **Buildings** (35%): driven largely by fossil-fuel-based heating in homes and businesses.
- **Transportation** (26%): primarily gasoline and diesel use for passenger and freight travel.

Smaller but important shares come from waste, agriculture, and water and wastewater systems, while forests and wetlands remove about 2 percent of total regional emissions through carbon sequestration. The data also reveal significant local variation: while Cook County produces the most total emissions, industrial counties in northwest Indiana have the highest emissions per person. These patterns highlight how development patterns,

transportation assets, and business clusters shape the region's emissions landscape—and the need for strategies tailored to each county's unique profile.

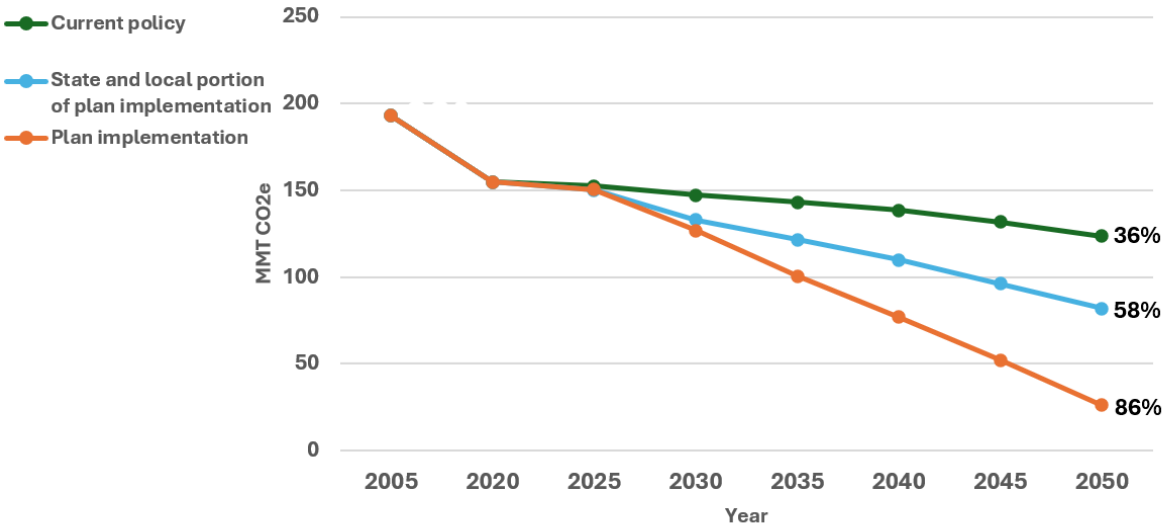
2.2. Economy-wide scenarios

Based on the assessment of select strategies, the modeling shows that the greater Chicago region can achieve the steering committee's target by reducing total emissions by 48 percent below 2005 levels by 2035 and 86 percent by 2050. This will require cutting an additional 128.61 MMT CO2e of annual emissions by 2050—an average of 4.29 MMT CO2e per year.

To support these goals, the plan evaluates three policy scenarios (Figure 1):

- **Current policy scenario:** Reflects existing federal and state policies — such as Illinois' Climate and Equitable Jobs Act (CEJA) — and would reduce emissions 26 percent by 2035 and 36 percent by 2050.
- **Plan implementation scenario:** Shows what is possible through full regional adoption of more than 30 modeled strategies across seven sectors, achieving 48 percent by 2035 and 86 percent by 2050.
- **State and local scenario:** Focuses on actions considered in the plan implementation scenario that can be led without new federal policy, still achieving 58 percent reductions by 2050.

Figure 1. Economy-wide emissions by scenario in MMT CO2e (2005-2050)



Source: CMAP and E3, 2025.

2.3. Sector targets

After developing economy-wide scenarios for the Greater Chicago region, the project team estimated sector-specific emissions reduction targets for the plan implementation scenario. Rather than assigning targets to each sector upfront, these targets were derived from the

results of the economy-wide modeling. This approach recognizes that not all sectors can decarbonize at the same pace — some will achieve deeper reductions sooner, while others will require more time and investment to transition.

The modeling shows that achieving the plan's overall target will depend on major progress in a few key sectors:

- Buildings and transportation deliver the steepest declines, reaching roughly 90–95 percent reductions by 2050, driven by efficiency improvements, electrification, and a cleaner power grid.
- Industry emissions fall by about 77 percent, reflecting significant technological advances and cleaner fuels, but also the difficulty of decarbonizing certain processes.
- Waste, water and wastewater, and agriculture together account for a smaller share of total emissions and show more modest declines.
- Natural carbon sequestration—through forests, wetlands, and soils—increase 75 percent by 2050, strengthening the region's resilience to climate impacts.

2.4. Priority strategies

The plan identifies dozens of strategies across the sectors, but those with the capacity to achieve the most meaningful reductions are:

- **Clean the grid:** Deliver 100% clean electricity through Illinois' CEJA and comparable standards in Indiana and Wisconsin.
- **Modernize grid infrastructure:** Build transmission and storage to power electrification and data center growth.
- **Upgrade buildings:** Retrofit and enforce performance standards on existing buildings to cut energy use.
- **Switch to clean heat:** Transition homes and businesses off natural gas.
- **Reimagine mobility:** Invest in efficient transit and active transportation networks.
- **Electrify transportation:** Expand EV infrastructure and fleet conversion.
- **Decarbonize industry:** Drive low-carbon manufacturing through efficiency, electrification, and clean fuels.
- **Restore natural systems:** Reforest, restore wetlands, and improve soil health to store carbon and reduce flooding.

2.5. Air quality and public health improvements

Clean air is essential to human and environmental health, and many of the same activities that drive greenhouse gas emissions — power generation, transportation, and industry — also release harmful air pollutants. The major sources of GHG emissions in our region are also the leading contributors to poor air quality.

Most of the region fails to meet federal air quality standards: Eleven of the 13 counties in the plan area do not meet the U.S. EPA's ozone standards, and portions of the region may soon be out of compliance with new particulate matter (PM2.5) limits.

Implementing the plan's climate strategies would significantly improve air quality and public health across Greater Chicago. As major emission sources transition to clean energy, the release of nitrogen dioxide, sulfur dioxide, and ammonia would decline by up to 59 percent by 2050, while fine particulate matter and volatile organic compounds would fall by 14–17 percent (Table 1).

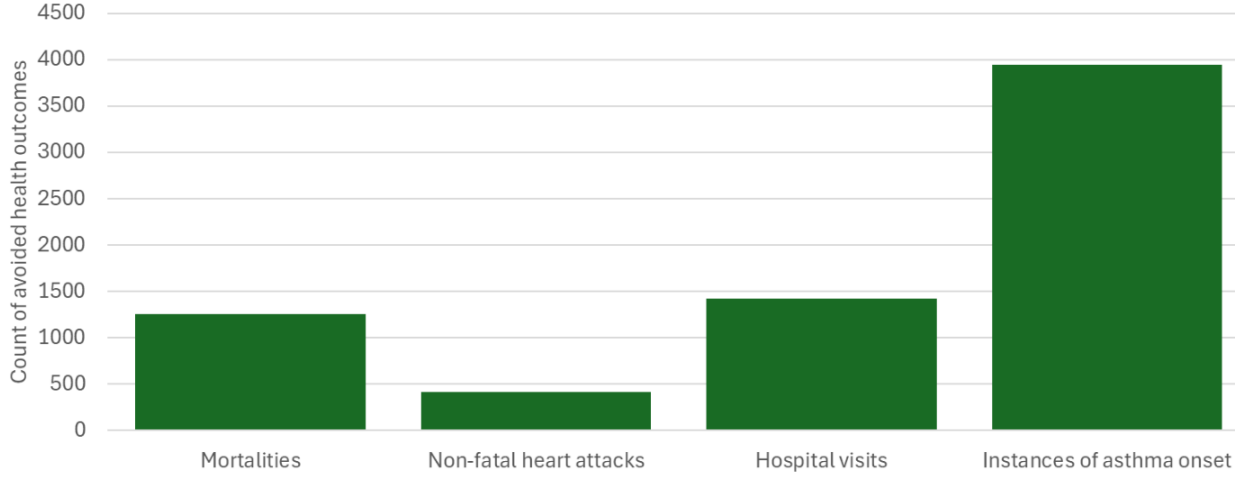
These improvements have major health and economic benefits (Figure 2). Under the plan implementation scenario, the region could avoid 1,200 premature deaths each year, prevent nearly 4,000 new asthma cases, and save $2.5–$4 billion annually in health care costs and lost productivity by 2050. In total, more than one million pollution-related health events could be prevented across the region.

Table 1. Criteria pollutant reduction estimates under plan implementation, by year

Pollutant	2035	2050
Fine particulate matter (PM2.5)	-6%	-17%
Sulfur dioxide (SO2)	-17%	-59%
Nitrogen oxides (NOx)	-19%	-48%
Volatile organic compounds (VOCs)	-8%	-14%

Source: CMAP and E3, 2025.

Figure 2. Annual avoided health outcomes in 2050 under the plan implementation scenario



Source: CMAP and E3, 2025.

2.6. Community priorities

Public engagement for the plan set the stage for its future implementation by identifying community priorities, highlighting the benefits of greenhouse gas emission reductions, and building capacity for ongoing collaboration in climate action. Engagement activities explored how climate change affects communities across the region, the barriers to and opportunities from reducing emissions, and the ways in which these strategies can deliver broader local benefits. Recognizing that the impacts of climate change and pollution are not experienced

equally, outreach efforts prioritized input from low-income and disinvested communities, which often face greater exposure to climate risks and fewer resources to participate in the clean energy transition.

Across all engagement activities, several key themes emerged:

- **Alignment with community priorities:** Residents emphasized that decarbonization efforts should advance existing local goals, such as improving air quality, expanding transportation options, and increasing trees and green space.
- **Balancing immediate needs:** Many participants noted that day-to-day challenges, such as affording rent and accessing fresh food, take precedence over climate concerns.
- **Rising climate impacts:** Increasing incidents of flooding, heat, and poor air quality are growing concerns for public health and safety.
- **Transportation access:** Limited transit, walking, and biking options constrain residents' ability to participate in emissions-reducing activities.
- **Utility costs:** Many respondents reported difficulty paying gas, electricity, and water bills.
- **Financial barriers:** Upfront costs limit residents' ability to shift to electric appliances and vehicles.