

COMPREHENSIVE CLIMATE ACTION PLAN FOR GREATER CHICAGO

Executive Summary



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Greater Chicago stands at a pivotal moment. Climate change is no longer a distant threat — it is here, shaping our weather, our economy, and our communities. Across the region, we are already seeing the costs of inaction: more severe storms and flooding, more intense heat waves, and worsening air quality. These impacts strain infrastructure, damage homes and businesses, raise insurance and energy costs, and threaten human health and economic stability.

At the same time, the global economy is shifting rapidly toward clean energy. Regions that move decisively will be best positioned to attract investment, spur innovation, and create high-quality jobs; those that lag behind will face rising costs and lose competitiveness.

The *Comprehensive Climate Action Plan for Greater Chicago* charts a clear and ambitious path forward — one that reflects not only what is possible, but what is necessary to secure the region's future. It is the first regional framework to address all major greenhouse gas (GHG) sources across a 13-county area spanning Illinois, Indiana, and Wisconsin. Grounded in rigorous data and shaped by partners and community voices, the plan offers a coordinated roadmap for reducing emissions, improving public health, and strengthening economic resilience.

The challenge is immense, and the need for action is urgent. By taking bold, coordinated steps today, Greater Chicago can not only meet its climate responsibilities, but lead the nation in building a clean, inclusive, and competitive economy.

A roadmap for action

This plan gives Greater Chicago a clear, practical roadmap for reducing emissions in line with science-based targets, while reflecting the region's unique economy, infrastructure, and community conditions. It was designed to be useful at the local level. It includes data and examples that local governments, utilities, and community organizations can use to advance their own projects.

It focuses on three fundamentals:

- **Impact:** The plan strategies focus on actions with the greatest potential to cut emissions.
- **Precedent:** The plan builds on the work already underway by local governments, states, utilities, businesses, and community organizations. Where local examples don't yet exist, the plan looks to successful policies and programs in other states to ground its recommendations in what's possible.
- **Influence:** A shared regional framework amplifies local leadership and strengthens our collective voice in shaping state and federal policies.

Guiding principles



The comprehensive climate action plan's steering committee included implementers, subject matter experts, and leaders from impacted communities across a 13-county and 3-state area.

Early in the process, regional agencies, county leaders, and community representatives defined four guiding principles that shape every plan recommendation:

- **Commit to zero:** Embrace transformative strategies that accelerate the region's progress toward the national goal of net zero emissions by 2050 and avoid the worst impacts of climate change.
- **Center people:** Engage underserved and marginalized communities to reduce existing disparities, design strategies to maximize benefits, and advance an inclusive energy transition.
- **Plan for action:** Prioritize actions that move the region toward both short-term goals and long-term climate prosperity. Collaborate with stakeholders to ensure plan recommendations are relevant, realistic, and actionable.
- **Grow a clean economy:** Harness the economic opportunities of climate action to foster innovation, create quality jobs, and position the region as a leader in the clean energy economy.

These principles guided how strategies were selected, modeled, and prioritized, ensuring the plan is both ambitious and achievable.

Understanding our emissions

Greater Chicago produces roughly 152 million metric tons of carbon dioxide equivalent (MMT CO₂e) each year. This gives the region both a responsibility and an opportunity to lead. The good news is that regional emissions have already fallen 20 percent since 2005, which proves that meaningful progress is possible.

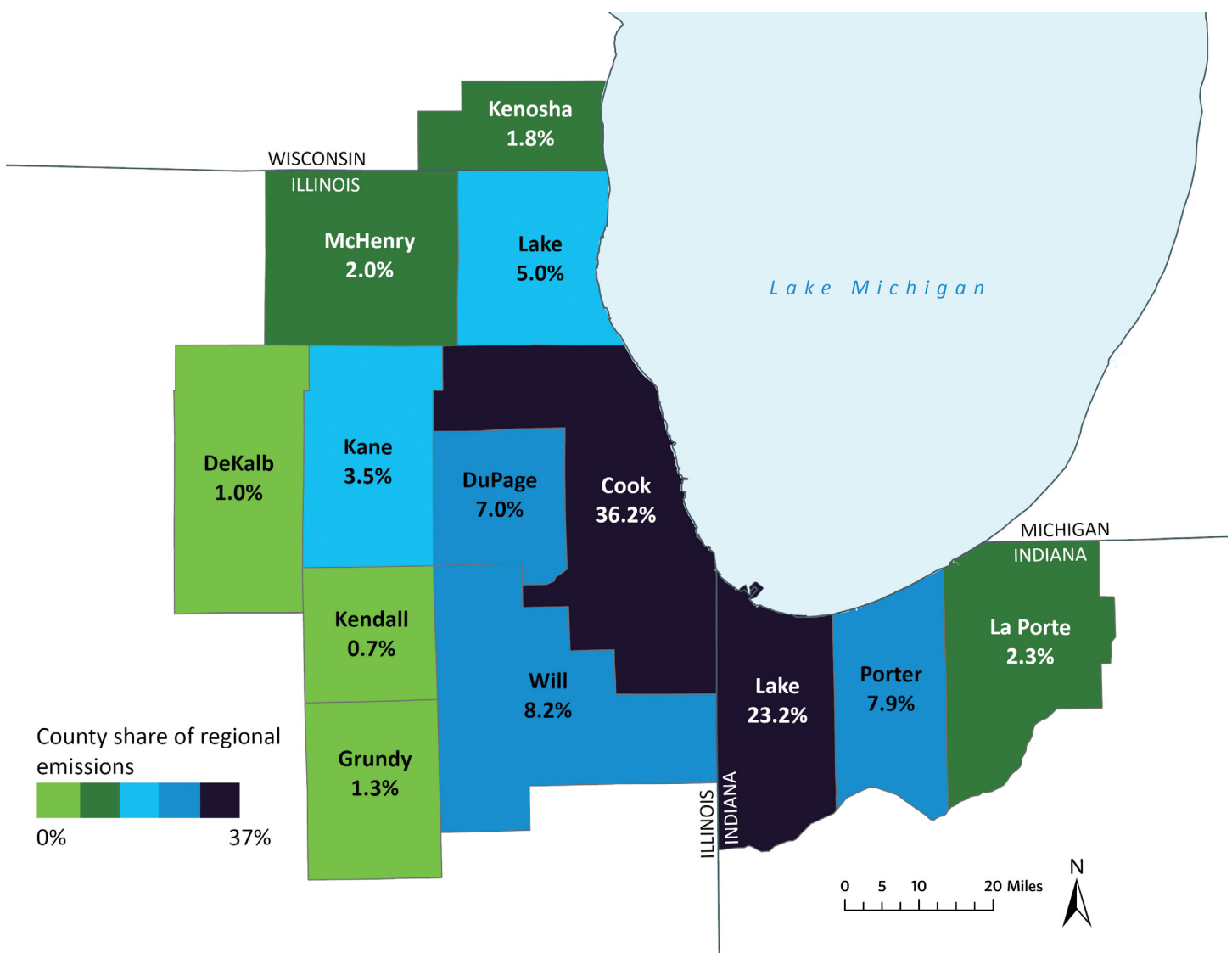
Most emissions come from three sectors:

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

Smaller but important shares come from agriculture, waste, and water and wastewater systems, while trees and wetlands remove about 2 percent of total annual regional emissions through carbon sequestration.

Emissions vary significantly between counties (Figure 1). While Cook County produces the most total emissions, industrial counties in northwest Indiana have the highest emissions per person. This highlights how development patterns, transportation assets, and industry clusters shape the region's emissions landscape — and the need for strategies tailored to each county's unique profile.

Figure 1. Greenhouse gas emissions in the greater Chicago region by county, 2020



Source: CMAP 2020 GHG Inventory, 2024.

The path to 2050

Meeting the climate challenge requires both ambition and a practical understanding of the roles that local, state, and federal partners must play. The plan sets an economywide target to reduce gross GHG emissions 48 percent by 2035 and 86 percent by 2050, compared to 2005 levels.

To demonstrate the action needed to reach these targets, three policy scenarios were developed to illustrate the range of emissions reductions achievable under different levels of policy ambition and coordination:

- **Current policy scenario:** Reflects existing federal and state policies — such as Illinois’ Climate and Equitable Jobs Act (CEJA) — and represents a business-as-usual trajectory, reducing emissions 26 percent by 2035 and 36 percent by 2050.
- **Plan implementation scenario:** Builds on the current policy scenario and demonstrates that the region can meet its economywide GHG reduction target through full adoption of 30+ modeled strategies implemented by federal and state actors across all major emissions sectors, reaching 48 percent by 2035 and 86 percent by 2050.
- **State and local implementation scenario:** Highlights the extent of reductions from a subset of modeled strategies in the plan implementation scenario that can be fully implemented by state and local actors, achieving a 58 percent reduction by 2050.

Together, these trajectories highlight both the urgency of acting now and the necessity of coordinating efforts across all scales of government. Deep emissions reductions are within reach but only if communities, states, and federal partners move forward together.

Climate action is not just an environmental necessity; it is a strategic investment in the region’s economy, public health, and long-term quality of life.



While federal action is necessary, state and local action can achieve a 58 percent reduction in emissions by 2050.

Figure 2. Plan implementation scenario emissions reductions by sector (2020-2050)

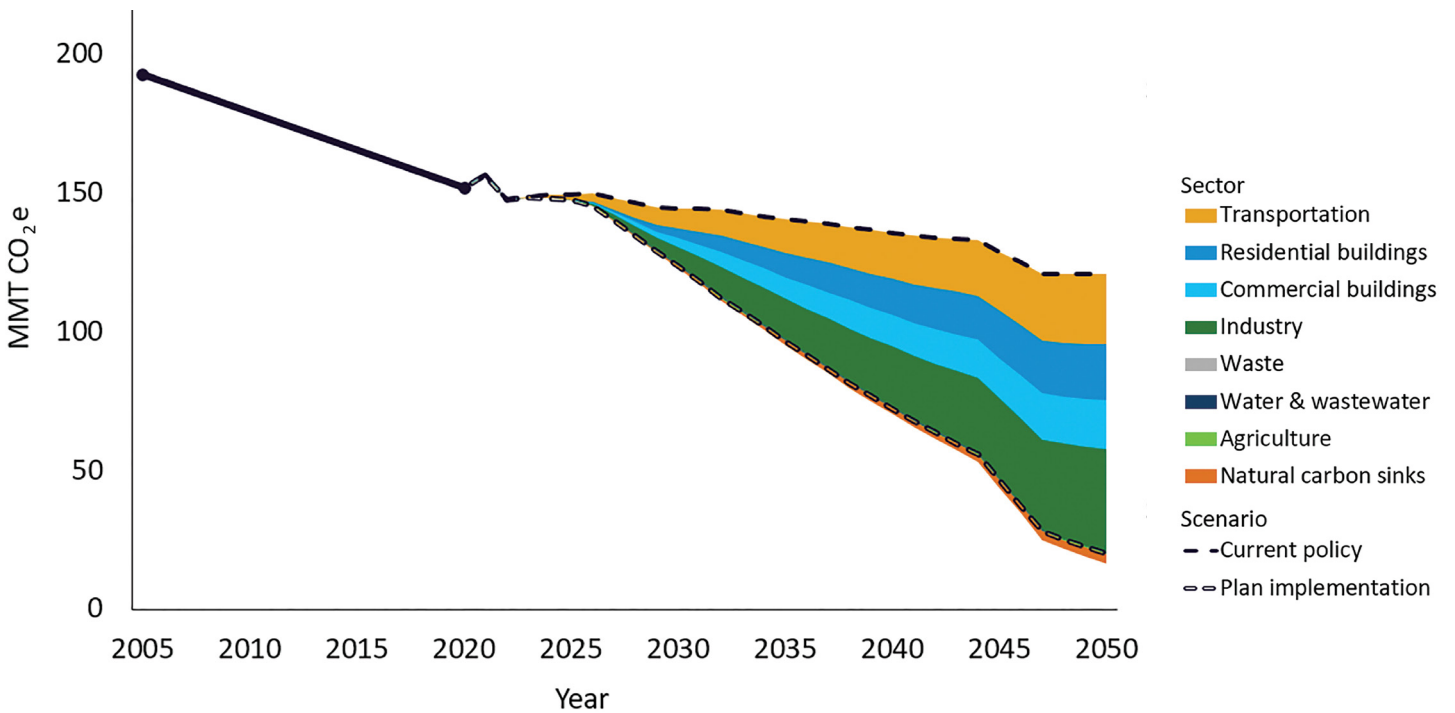
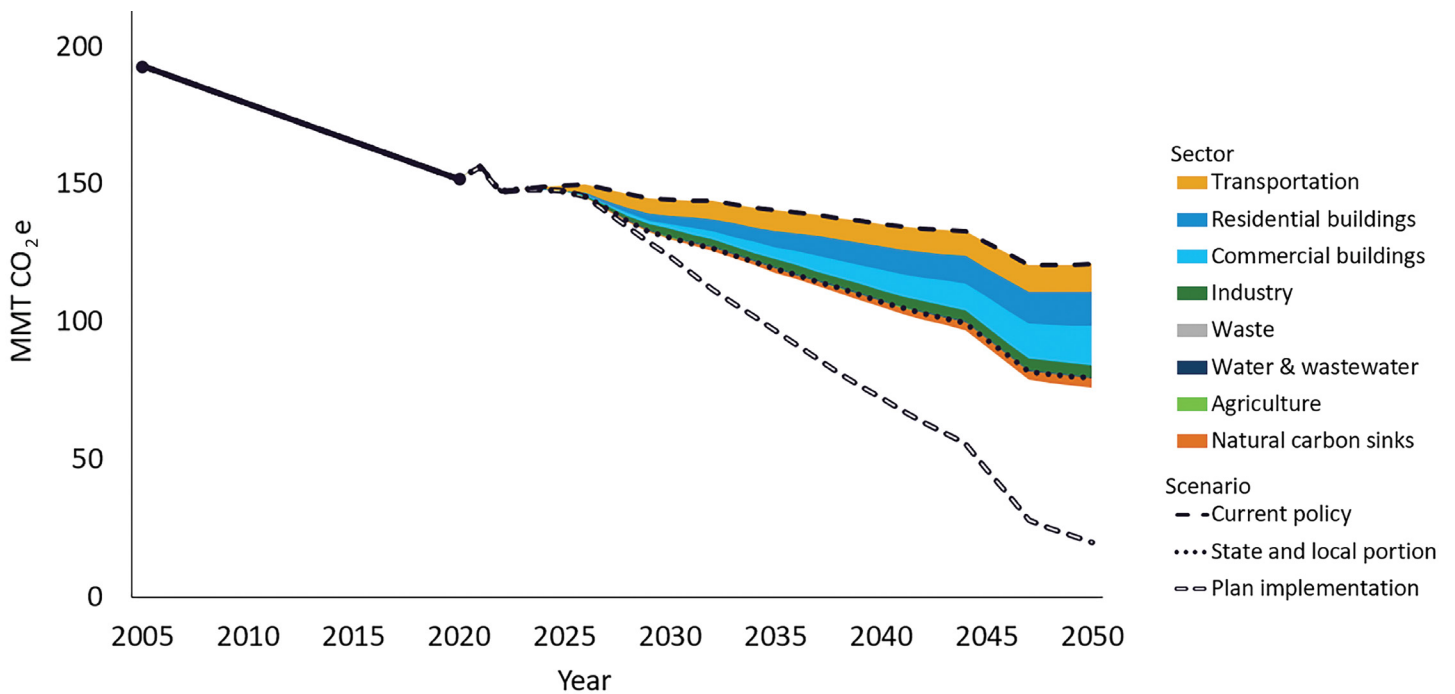


Figure 3. State and local implementation scenario emissions reductions by sector (2020-2050)



Note (for both figures): Agriculture, waste, and water and wastewater emissions reductions are so small that colors do not appear in the chart.

Source (for both figures): CMAP and E3, 2025.

Why it matters

Clean air and healthy people

Greater Chicago consistently ranks among the most polluted metropolitan areas in the U.S. Increased levels of ozone and fine particulate matter (PM2.5) are driven largely by fossil fuel combustion and contribute to higher rates of asthma, respiratory illness, heart disease, and premature death. Across the region, nearly 730,000 adults are estimated to currently live with asthma.ⁱ

Clean air is a priority for many communities across the region. The plan would significantly reduce harmful pollutants — cutting key pollutants by up to half — and could prevent up to 1,250 premature deaths and nearly 4,000 new asthma cases each year.

Avoided climate impacts

Proactive climate action not only reduces emissions — it reduces risk. Rising greenhouse gas concentrations are warming the atmosphere, altering weather patterns, and intensifying extreme events such as heavier rainfall, more frequent flooding, and more severe heat waves. These impacts already affect the region, driving infrastructure damage and higher public costs. Over the last decade, there were six federally declared disasters in Greater Chicago resulting in over \$666.4 million in weather-related disaster costs. Without action, these impacts will intensify, straining public budgets, disrupting transportation and energy systems, and placing the greatest burdens on vulnerable residents.ⁱⁱ

Implementing the strategies in this plan helps avoid the most damaging future climate scenarios. Reducing emissions now will limit the severity of extreme heat and related health impacts, reduce the likelihood and cost of major flood events, protect agricultural productivity, and lessen long-term strain on drinking water supplies. These avoided impacts translate into billions of dollars saved in infrastructure repairs, emergency responses, health costs, and lost economic activity.



Improving air quality could prevent 1,250 premature deaths a year by 2050.



Implementing this plan will add nearly 168,000 new jobs over 25 years.

Economic competitiveness

Climate action is a foundation for long-term economic competitiveness. Modernizing energy systems, electrifying industry and transportation, and scaling clean manufacturing can attract new investment and strengthen existing sectors. Implementing the plan will require nearly doubling the workforce in climate-critical occupations, such as electricians, HVAC technicians, engineers, and construction trades, adding nearly 168,000 new jobs through 2050. Supporting the adoption of efficient and low-carbon technologies by existing industries will lower their operational costs, reduce pollution, and position the region as a leader in advanced manufacturing, logistics, and clean energy innovation.

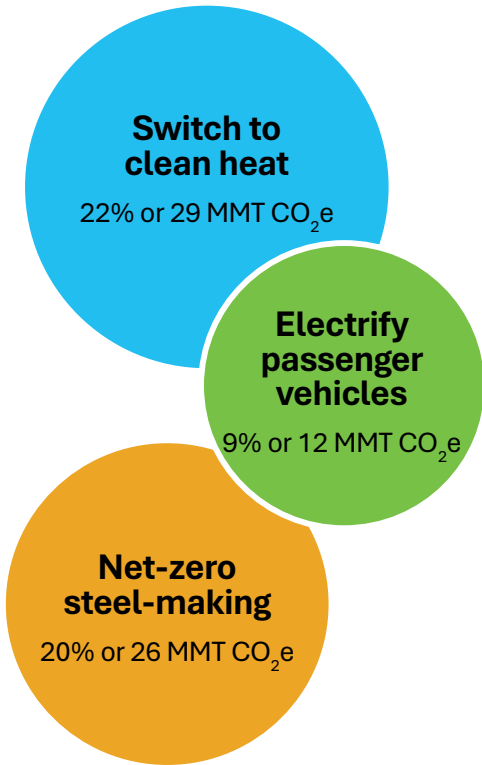
Energy affordability, reliability, and resilience

Lowering energy bills is an important benefit of climate action for residents. Reducing energy waste (especially from burning fuels for heat and transportation), shifting away from price-volatile fuels, and investing in efficiency can help control energy costs over time. Retrofitting buildings, expanding weatherization, and deploying efficient heat pumps can reduce energy use and improve comfort and affordability, especially for lower-income households. Land use strategies that support walkable, compact, and transit-serving communities further reduce energy demand by making it easier to meet daily needs with less driving.

At the same time, modernizing the electric grid and diversifying energy sources strengthens reliability and resilience to outages, extreme weather, and global price shocks. Investments in transit, active transportation, and mixed-use development complement these system upgrades by reducing overall energy use and expanding affordable, low-carbon mobility options. These actions may not eliminate short-term cost pressures, but they reduce exposure to fuel price changes and structural inefficiencies, laying the foundation for long-term affordability, stability, and energy security.

Core actions

Six core actions — which encompass the dozens of strategies identified in this plan — define the region’s path to reaching its economywide target of reducing gross GHG emissions by 86 percent from 2005 levels by 2050.



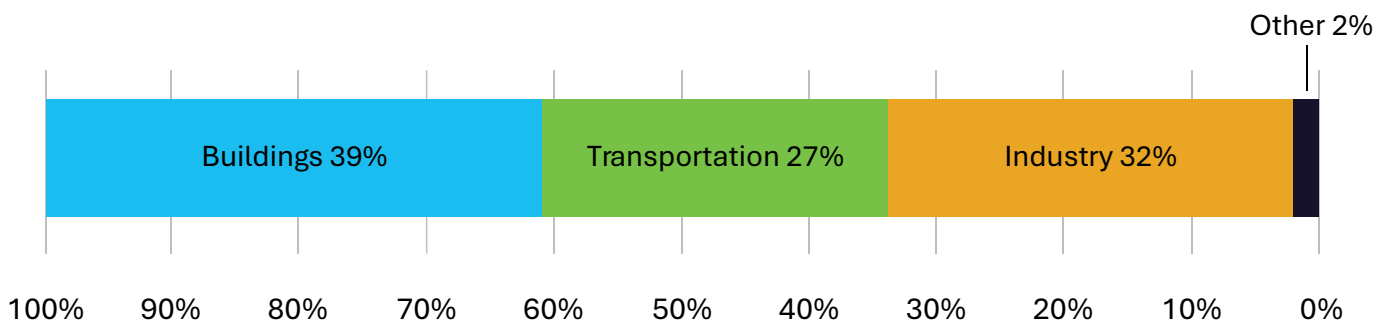
Share of total regional emissions reductions by 2050.

These core actions primarily fall within three sectors — transportation, buildings, and industry — and together account for nearly all of the emissions reductions needed to achieve the region’s goals (Figure 4).

Commercial and residential building decarbonization efforts could achieve 39 percent of the region’s needed emissions reductions (51 MMT CO₂e). Strategies like all-electric new construction, large-scale deployment of heat pumps, and performance standards for existing buildings drive more than 22 percent of the region’s total reductions by advancing clean heating and efficiency.

- 1. Clean and modernize the grid:** Deliver 100 percent clean electricity through CEJA in Illinois and comparable standards in Indiana and Wisconsin. Build transmission and storage to power electrification of buildings, transportation, and industry.
- 2. Improve building efficiency:** Weatherize roughly half of all residences and most commercial buildings, and apply performance standards that cut emissions significantly for nearly half a million of the region’s largest buildings.
- 3. Switch to clean heat:** Transition buildings off natural gas by requiring all-electric new construction, shift most appliance sales to electric by 2035, and install more than three and a half million heat pumps by 2050.
- 4. Reimagine mobility:** Reduce car trips by investing in transit, biking, walking, and compact development that shortens travel distances and expands travel options.
- 5. Electrify vehicles:** Transition passenger, freight, and fleet vehicles to electric and zero-emission technologies supported by robust charging and grid investments.
- 6. Decarbonize industry:** Drive low-carbon manufacturing through efficiency upgrades, process electrification, and clean fuels.

Figure 4. Emissions reductions that can be achieved by each sector by 2050



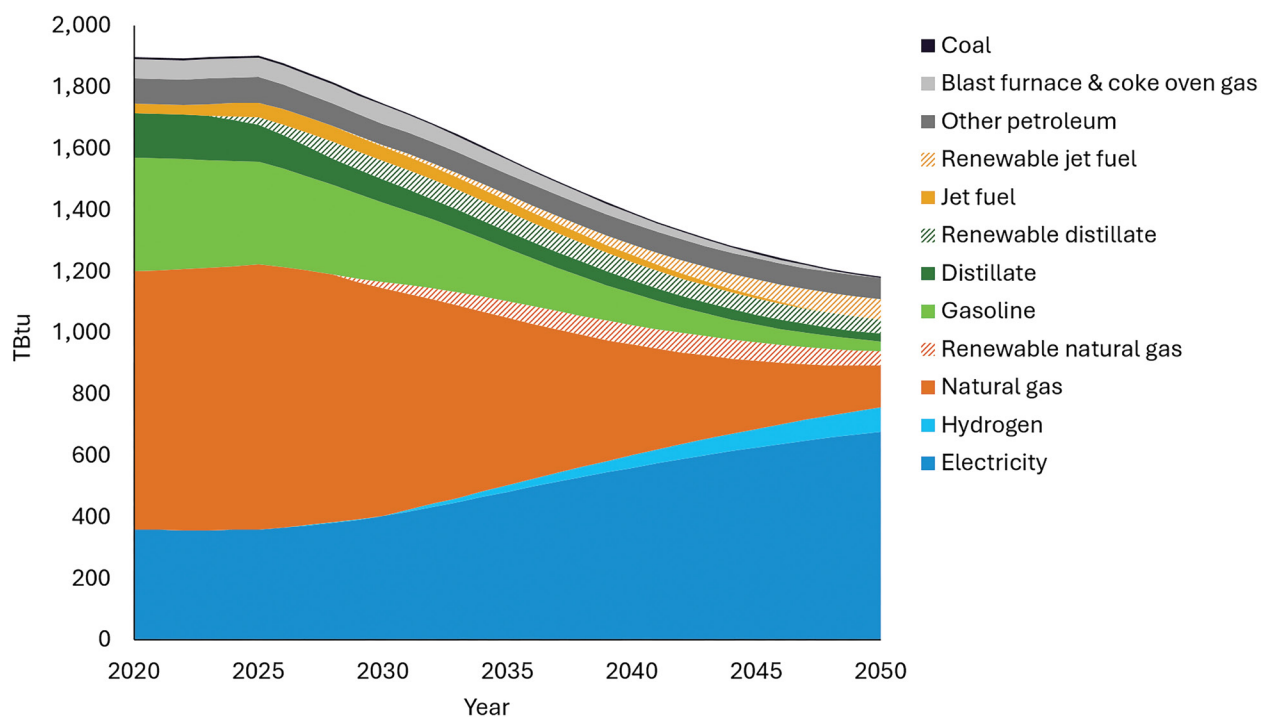
Transportation can deliver approximately 27 percent of the region’s needed reductions (35 MMT CO₂e) by 2050. Electrifying light-duty vehicles alone accounts for 9 percent of overall reductions, complemented by investments in transit, pricing strategies, and land use policies that reduce vehicle miles traveled.

Industry accounts for roughly 32 percent of the region’s needed reductions (41 MMT CO₂e). Shifting to low-carbon manufacturing processes, electrification, and clean fuels are central strategies, with decarbonizing steelmaking and similar high-emitting processes delivering the single largest industrial impact — roughly 20 percent of the region’s overall reductions.

In addition to these core sector strategies, the region must recover and reuse resources to cut emissions and strengthen resilience. Modernizing water, wastewater, and waste systems can reduce water loss, expand water reuse, divert organic materials to reduce landfill methane, and capture energy from waste and wastewater streams. At the same time, restoring and stewarding natural systems is essential to long-term climate stability. Expanding the tree canopy, restoring wetlands and grasslands, and improving soil health across natural and agricultural lands will store carbon, reduce flooding, improve water quality, and cool neighborhoods.

While strategies vary in scale and impact, clean electricity is the foundation of the region’s decarbonization roadmap and reducing energy demand makes that transition achievable (Figure 5). Improving energy efficiency across buildings, industry, and transportation lowers costs, reduces strain on the grid, and makes electrification more attainable. Because the emissions profile of every sector depends on how energy is produced, achieving the region’s reduction targets requires both accelerating the transition to clean electricity and building the modern grid infrastructure needed to deliver it reliably and affordably.

Figure 5. Energy demand by fuel for the plan implementation scenario (2020-2050)



Source: CMAP and E3, 2025.

Challenges

The plan's reduction target will not be achieved easily given the challenges ahead:

- **Shifting federal priorities:** Federal leadership has been pivotal in recent years, yet changing priorities can create uncertainty for long-term planning. The region must build local strategies resilient to those shifts.
- **Infrastructure and permitting constraints:** Major investments in grid upgrades, clean energy, transit and transit-oriented development, building retrofits, and industrial modernization — along with faster permitting and construction timelines — are needed across all levels of government.
- **Workforce capacity:** Delivering the transition will require rapidly scaling a skilled workforce across the trades and technical professions. While the region has strong foundations through CEJA and robust union-industry partnerships, training pipelines and administrative capacity are not yet at the scale needed to meet rising demand.
- **Affordability:** Energy and housing costs are rising, and some climate solutions have higher upfront costs. Targeted incentives and safeguards will be needed to ensure all communities benefit.

While substantial, the challenges to achieving a clean energy transition are not without precedent. Society has undergone major transformations before — incorporating electricity and indoor plumbing to homes, shifting from horses to automobiles, and adapting to the spread of telecommunications — each of which fundamentally reshaped daily life and expanded economic opportunity. These transitions followed a familiar S-curve: slow adoption at first, rapid uptake as technologies matured and prices fell, followed by normalization. Today, renewables, heat pumps, electric vehicles, and battery storage are already entering the uptake part of the curve with reliable technologies and lower prices. The region should embrace this change because, while the scale is significant, history shows the path forward is well established.

Regional leadership

Achieving the plan's economywide target of reducing gross GHG emissions by 48 percent from 2005 levels by 2035 and 86 percent by 2050 will require every level of leadership — federal, state, local, business, and community — pulling in the same direction. Each has a critical role to play. State and local governments hold the most immediate tools: energy codes, land use planning, fleet transitions, and workforce development. Federal and state government actors must sustain policy and investment support, while the private sector drives innovation and deployment.

No single action or actor can deliver the transformation alone. Working together, partners from around the region (and beyond) can build a future where clean energy powers prosperity, communities are healthier and more resilient, and the region leads in climate progress.

Climate change is the defining challenge of our time, but it is also a generational opportunity to reimagine our economy and communities for the better. Realizing the plan will require collaboration across counties, municipalities, businesses, and residents. The path ahead is ambitious, but the rewards are enduring: a region that thrives through innovation, stewardship, and shared purpose.

The Comprehensive Climate Action Plan for Greater Chicago shows that deep decarbonization is both necessary and achievable. It provides the region with the roadmap to deliver measurable results.



Chicago Metropolitan Agency for Planning

The Chicago Metropolitan Agency for Planning (CMAP) is the comprehensive planning organization for the seven counties and 284 communities of northeastern Illinois. The agency and its partners developed and are now implementing ON TO 2050, a long-range plan to help the region implement strategies that address transportation, housing, economic development, open space, the environment, and other quality-of-life issues. Visit cmap.illinois.gov for more information.



Metropolitan Mayors Caucus

The Metropolitan Mayors Caucus is a membership organization of the Chicago region's 275 cities, towns and villages. Founded in 1997, the Caucus pushes past geographical boundaries and local interests to work on public policy issues. The organization provides a forum for metropolitan Chicago's chief elected officials to collaborate on common problems and work toward a common goal of improving the quality of life for the millions of people who call the region home. For more information, visit mayorscaucus.org, and connect with the organization on Facebook, LinkedIn, Instagram, YouTube, and X.



The Northwestern Indiana Regional Planning Commission (NIRPC) is the official council of northwest Indiana governments, organized under Indiana Code 36-7-7.6t to serve the citizens of Lake, Porter, and LaPorte counties. NIRPC brings communities together to address issues of regional concern related to transportation, the environment, and economic development. Learn more at in.gov/nirpc.