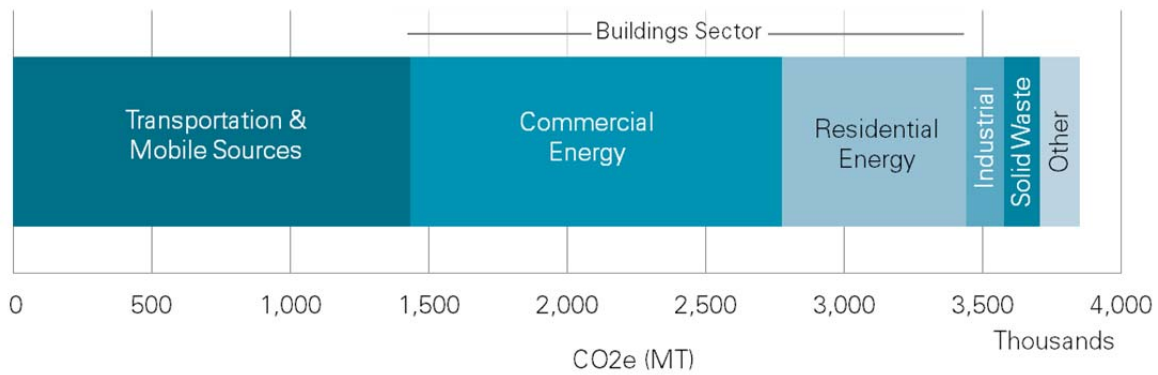


Executive Summary

This Climate Action Plan lays the groundwork for Saint Paul’s path to carbon neutrality by 2050. The City of Saint Paul formalized its commitment to reducing greenhouse gas (GHG) emissions and increasing resiliency by signing the Compact of Mayors agreement in December 2015. The associated GHG inventory shows that commercial and residential energy accounted for just over half of Saint Paul’s 2015 GHG emissions, making the buildings sector a key focus for climate change mitigation.¹ This plan is one section of Saint Paul’s full set of strategies to address climate change in the community. It will be accompanied by additional sections focused on transportation, waste, natural resources, and climate resiliency.



Saint Paul’s 2015 Greenhouse Gas Inventory

This plan was produced as part of the City of Saint Paul’s participation in Xcel Energy’s Partners in Energy, which supports communities in developing local energy plans. Partners in Energy convened a Technical Advisory Group of local energy and building sector experts, whose goal was to assess the technical feasibility of strategies and advise City staff and officials on impact and prioritization. Additional targeted stakeholder outreach was conducted among individual building sectors, and a public engagement forum was held in February 2017 to launch public engagement in the climate planning process.

Saint Paul’s Energy Vision & Goals

At the beginning of the Partners in Energy planning process, the Technical Advisory Group shared their inspirations for Saint Paul’s energy future and imagined a Saint Paul that has

¹ Commercial and residential energy include all direct energy services to buildings (electricity, natural gas, hot water, or chilled water). The commercial energy category includes electricity and gas service to industrial buildings. Additional industrial emissions represent process emissions and emissions from other delivered fuels. The “other” category includes water and wastewater, process and fugitive emissions, and upstream impacts of activities.

achieved its energy goals as a guide to creating a unified vision statement. Essential to the vision statement is the long-term goal of carbon neutrality and strong community engagement.

Summary Energy Vision

By expanding energy efficiency, conservation, and energy recovery, as well as energy storage, renewable energy, and distributed energy, Saint Paul has achieved carbon neutrality in its built environment and fortified its resilience to climate change by the year 2050. Saint Paul has achieved this remarkable goal by intentionally and consistently engaging the public towards locally relevant solutions. All views — especially those of the traditionally underrepresented — have been heard and respected, and all residents, regardless of housing type or income, have benefited from the clean energy economy transition and are safeguarded from adversity.

Guiding Themes

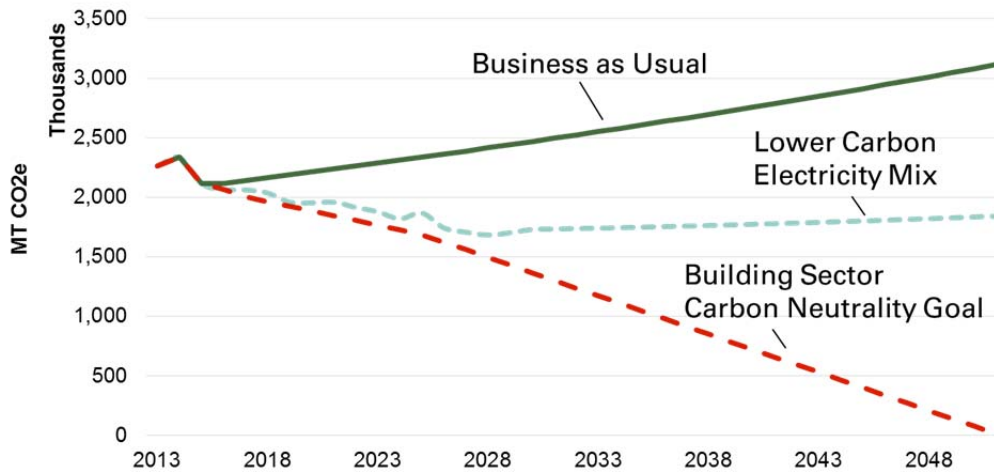
The near-term strategies in this plan were also linked to a number of guiding themes of importance to the City:

- Prioritize conservation, energy efficiency, and energy recovery.
- Prioritize renewable-based distributed generation and energy storage.
- Ensure solutions and opportunities are equitable, particularly in communities and households of color.
- Commit to reducing the energy burden on low- to moderate-income residents.
- Focus on efforts that result in co-benefits (e.g. employment, economic development, other environmental benefits such as water conservation and improved air quality).
- Showcase best practices and innovative solutions.

The Path to Carbon Neutrality

Attaining carbon neutrality in just over 30 years will require aggressive efforts to reduce overall building energy use through efficiency and conservation and convert current energy sources to renewable or carbon-free. The scale of this effort will also depend on how Saint Paul's underlying energy needs are growing and on projections for the carbon intensity of the regional electricity supply. Xcel Energy's current Upper Midwest Resource Plan forecasts significant electricity decarbonization between now and 2030 as the result of planned coal plant retirements and additional renewable energy coming online.² This change alone would bring Saint Paul 40% of the way toward carbon neutrality by 2050.

² By 2030, carbon intensity is projected to reach 521 lbs/megawatt-hours (down from a 2015 value of 1,002 lbs/megawatt-hours). See Xcel Energy's 2016-2030 Resource Plan, Minnesota Public Utilities Commission Docket No. 15-21.



Projected Carbon Emissions under a 1% Business as Usual Growth Scenario

Near-Term Building Sector Priorities

The City identified five near-term priority areas. These priorities were selected because they offer the highest likelihood of early success, reflect necessary foundational groundwork for later stage strategies, or require significant lead time to address.

Inspire a Culture of Energy Stewardship

The goal of this effort is to **inspire a culture shift that transforms the community’s relationship to energy use, tripling the incremental annual savings from residential conservation and renewable energy adoption within 10 years.** Achieving the City’s overall goal of carbon neutrality will begin with those who live, work, and play in Saint Paul embracing the values of energy conservation so that consuming less energy becomes a cultural norm in the city.

Reduce Resident Energy Burden

The goal of this priority area is to, within 10 years, **lower the energy burden so that no Saint Paul household spends more than 4% of household income on energy costs.** Energy burden is defined as the percentage of annual household income spent on energy, and it is felt disproportionately by low-income residents who live in high energy use properties.

Engage Major Institutions on Climate Leadership

The goals of this priority area are to **(1) within three years, win commitments of major institutions to achieve carbon neutrality by 2050 and ensure 80% of institutional buildings are actively benchmarked, and (2) within 10 years, help institutions realize a 35% total GHG reduction, with energy efficiency as a leading strategy.** This work leverages Saint Paul's concentration of public and private institutions and the early action many have taken to reduce carbon emissions.

Engage the Multifamily and Large Commercial Sector

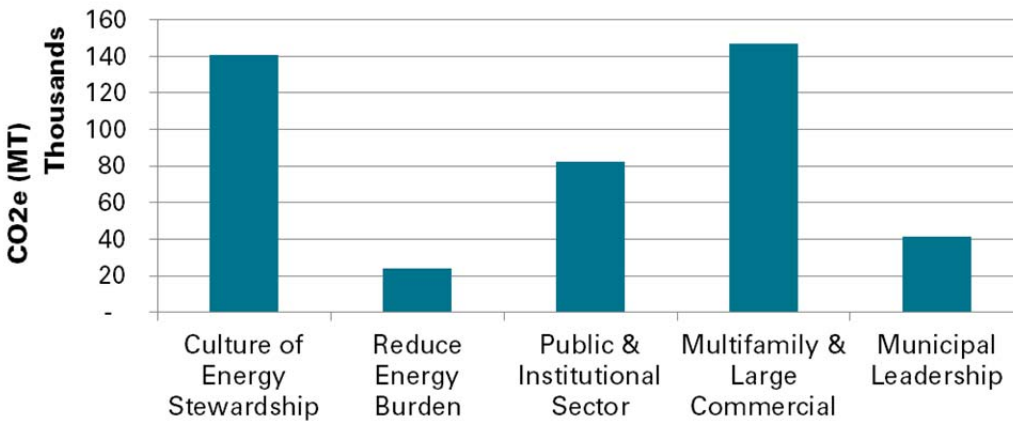
The goal of this priority area is **to adopt multifamily and large commercial sector conservation and renewable energy initiatives that result in an additional 4% annual reduction in GHG emissions for those sectors.** This sector includes a number of the highest energy users in Saint Paul, and the buildings where a large number of Saint Paul residents live.

Inspire through Municipal Leadership

The goal for this focus area is to **achieve carbon neutrality in municipal building operations by 2030.** A specific focus on municipal buildings lets the City lead by example and demonstrate commitment to climate leadership within their own operations. Accomplishing this goal would reduce GHG emissions by an estimated total of 52,000 metric tons below 2015 levels.

Impact of Near-Term Priorities

Combined, the sectors targeted in these five priority areas accounted for 58% of the community-wide electricity use and 74% of community-wide natural gas use in 2015. Within 10 years, the associated strategies will reduce GHG emissions by 435,000 metric tons of carbon dioxide equivalent (MT CO₂e), or 21% below 2015 levels. The carbon savings of each focus area is a result of how much energy the sector is accountable for, the relative use of electricity versus natural gas in that sector, and the relative aggressiveness of each goal.



Projected 10-year Carbon Reductions Below 2015 Levels

Next Steps

This plan lays out a robust set of near-term strategies that will set the city on a path to achieve its carbon reduction goals, along with major Year 1 milestones and metrics for tracking progress. These strategies call for continued public engagement, local leadership, and commitments from large energy users. There will be a sustained and focused campaign to motivate residents to take action and reduce barriers to investments. Strategies to reach underserved communities will need to include additional resources to support Saint Paul’s residents who shoulder the highest energy burden. Other near-term strategies focus on increasing transparency of energy costs, recognizing leading buildings, sharing best practices, increasing knowledge of and access to resources, incentivizing efficiency in new construction, and increasing opportunities for customers to subscribe to renewable energy.

Xcel Energy will continue to support the implementation of this plan through Partners in Energy. Local partners, many of which have a long history of investing in and contributing to Saint Paul’s energy advancement, were critical to the development of this plan and will continue to be critical to its success.