

Minneapolis Climate Action Plan

Steering Committee Update

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Introduction and Purpose

The Minneapolis Climate Action Plan is entering a new phase. Three working groups have been meeting since early 2012 and have developed a set of recommended greenhouse gas emission reduction strategies which the Steering Committee will now begin to review. This phase will include additional public outreach to solicit feedback on the goals, strategies and composition of the plan. Finally, the Steering Committee (Attachment A) will be asked to make a recommendation on the plan to the Minneapolis City Council. The purpose of this document is to provide an update on the process to members of the Steering Committee and the public and identify the next steps in the process.

Process Summary and the Steering Committee's Role

Three working groups (<u>Attachment B</u>)—Buildings & Energy, Transportation & Land Use, and Waste & Recycling—composed of over forty members representing the public, private, and non-profit sectors, and the community at large, met five times between March and July to identify goals and strategies (<u>Attachment C</u>) the City and its partners can employ to meet adopted emissions reduction targets. Staff supported the groups by providing background information, research and analysis, and guidance. All of the working groups' recommendations were adopted by consensus.

Using the best estimates available, staff estimates that achieving the goals established by the working groups can lead Minneapolis to its greenhouse gas emissions reduction targets of 15 percent by 2015, and 30 percent by 2025 from 2006 levels. Ongoing monitoring of citywide emissions levels and the assessment of success of any implemented program based on the plan will be critical to understand how Minneapolis is progressing.

The Steering Committee will meet in September, October, and December. At the first two meetings, members will review the working groups' recommendations; hear about the public health and environmental justice impacts of the goals and strategies; and discuss potential changes to the list of emission reduction goals and strategies.

After a public outreach and comment period, the Steering Committee will meet a final time to go over the feedback received from the community. The Committee will then seek consensus on a final document to send on to the City Council.

Impetus for the Plan

There is scientific consensus, as documented by the United States National Academies and the Intergovernmental Panel on Climate Change, that human sources of greenhouse gases (GHGs) such as carbon dioxide and methane are causing unprecedented and severe changes in global and local climate systems. To avoid the most serious impacts to the environment, human health, and the economy, significant reductions in GHG emissions will be necessary. This will require bold action from local governments and communities up to national and international levels.

In 1989, Minneapolis joined the City of Saint Paul in an effort to be among the first cities in the world to develop comprehensive plans to reduce GHG emissions. In 2003, Minneapolis incorporated a citywide greenhouse gas emissions reduction target into the City's Sustainability Indicators. In 2012 that target was updated. The goal of the City of Minneapolis is to reduce citywide greenhouse gas emissions by 15 percent by 2015 and 30 percent by 2025 using 2006 as a baseline.

Greenhouse Gas Emissions Inventory

In May 2012, the City of Minneapolis published a report showing the results from an inventory of greenhouse gas emissions released within Minneapolis' geographic boundary plus additional emissions from outside the boundary associated with activities in the city (such as the consumption of electricity). The inventory was completed for the years 2006 through 2010. The City Council's emissions reduction targets are based on this inventory.

Between 2006 and 2010, GHG emissions in Minneapolis fell 13.4 percent, from 5.9 million metric tons of carbon dioxide equivalent to 5.1 million metric tons. Nearly half of this reduction was the result of Xcel Energy using cleaner energy sources (natural gas and renewables) to produce electricity for the grid. Community wide consumption of electricity and natural gas declined between 2006 and 2010 by 1.4 and 6.7 percent, respectively. Poor economic conditions and warmer winter temperatures almost certainly account for some of this trend.

The largest sources of GHG emissions in Minneapolis are energy use in commercial and residential buildings (65 percent of the total) and transportation (29 percent). Waste—including landfilling, incineration, and wastewater treatment—accounts for 3.8 percent of 2010 GHG emissions.

View the complete Minneapolis Greenhouse Gas Emissions Inventory at: http://tinyurl.com/mpls-ghg

Goals and Strategy Areas

Following are summaries of the goals and strategies developed by the three working groups. A complete list of strategies can be found in <u>Attachment C</u>.

Buildings & Energy

Goals

- Achieve 15 percent energy efficiency in residential buildings from the growth baseline by 2025.
- Achieve 20 percent energy efficiency in commercial buildings from the growth baseline by 2025.
- Increase electricity from local renewables from 1.5 to 5 percent of the total consumed by 2025.

Strategies

To accomplish these goals, the Buildings & Energy working group developed emissions reduction strategies in the following areas:

Cross-cutting strategies include building a partnership to prioritize energy efficiency, developing new energy efficiency financing tools, updating building codes, and identifying opportunities to expand district heating and cooling systems. The City of Minneapolis can lead innovation through reducing the impact of its own buildings and wisely leveraging its role in setting policy, regulation, and as a financial partner in many projects.

Residential building strategies focus on improving energy efficiency in our homes. A key initiative is the expansion of Minneapolis' highly successful Community Energy Services program, to help residents improve

the affordability and energy efficiency of their home. The combined actions of thousands of Minneapolis renters, landlords, and homeowners could greatly reduce community wide GHG emissions.

Commercial buildings are responsible for a great deal more GHG emissions than their residential counterparts, and many of the largest buildings are already investing in efficiency improvements. Reducing emissions in this area means continuing the good work already underway, and ensuring energy costs are a part of market decision making (i.e., establishing a building energy disclosure policy).

A relatively small number of **industrial buildings** are responsible for a significant proportion of total energy usage (and therefore GHG emissions) in the city. The City of Minneapolis will need to be an active partner in improving the efficiency of these buildings and the processes going on inside their walls.

The role of **renewable energy** must continue to grow. The City's experience in this area will help identify existing barriers to distributed energy generation and bulk renewable energy purchasing.

Transportation & Land Use

Goals

- Reduce automobile vehicle miles traveled in Minneapolis while improving accessibility, increasing transportation choices and promoting and accommodating growth.
- **Support livable, walkable, and growing neighborhoods** that meet the needs of all Minneapolis residents.
- Increase the share of Minneapolis residents and workers choosing non-auto modes for commuting and other trips.
- Through local action and federal and state legislation, **support a transition to cleaner fuels and more efficient vehicles**.

Strategies

To accomplish these goals, the Transportation & Land Use working group developed emissions reduction strategies in the following areas:

Planning and land use strategies emphasize growing the city on well-connected corridors and ensuring that neighborhoods are designed so that residents can easily walk or bike to take care of their daily needs. Zoning and other regulations should allow for green buildings and communities, matching practice to City policies. Finally, infrastructure investments and planning must be truly collaborative: with different agencies and partners involved in projects like roadway design or transit planning, good communication is imperative to making decisions that support the City's sustainability goals for the coming decades, including GHG emissions reduction.

Transit and car sharing help reduce emissions by reducing total vehicle miles traveled (VMT) and congestion levels. The strategies in this area support the build-out of local and regional transit lines, securing funds for transit operations, and making car sharing services more affordable and accessible.

Active transportation strategies are designed to get people walking and cycling more. They include expanding our bicycle network, improving bicycle parking, and creating safe routes to school and complete

streets. Shifting trips from cars to a non-motorized mode can also have far-reaching impacts beyond emissions reduction, including improving air quality, public health, and safety.

Improving **parking management** can reduce congestion, support other modes, and make the best use of valuable public right-of-way. Strategies in this area focus on establishing market prices for parking, evaluating appropriate parking requirements for new developments, giving drivers more information about parking services, and establishing guidance on public curb space.

Transportation Demand Management & Intelligent Transportation Systems strategies look for ways to derive better efficiency from the existing transportation network. Less congestion and idling means fewer pollutants in the air. Strategies include real-time commute information for drivers, advisory speed limits and other dynamic signage on highways, expanding telecommuting and other alternative work arrangements, and emissions-sensitive analyses of traffic signal timing.

Cleaner fuels can have a remarkable impact on emissions reduction. Though the City has limited control over vehicle fuel type, it should take every opportunity to promote the switch to fuels with a smaller GHG impact. And with a large fleet of its own, the City should continue to lead the way to cleaner transportation.

Other strategies include a continued switchover to LED streetlights, supporting innovative automobile technologies, and working with the Metropolitan Airports Commission to reduce the emissions impact of MSP International Airport.

Waste & Recycling

Goals

- Achieve a zero percent growth rate in the total waste stream from 2010 levels.
- Recycle 50 percent of the waste stream (commercial and residential) in Minneapolis by 2025.
- Increase organics collection to 15 percent of the waste stream by 2025.
- Support Metropolitan Council Environmental Service's goal to reduce energy use by 25 percent below 2006 levels by 2015.
- Increase awareness of the lifecycle impacts of products to address GHGs occurring outside the community.

Strategies

To accomplish these goals, the Waste & Recycling working group developed emissions reduction strategies in the following areas:

Strategies to **reduce waste** include promoting the reuse and repair of products, expanding green building programs, and increasing public education about the impact of waste. Getting more individuals, businesses, and construction projects to reuse materials and resources will help shrink the waste stream and its associated emissions.

Strategies to **increase recycling** include the implementation of single-sort household collection, expanding the types of materials accepted by the recycling program, and studying the pricing system to incentivize recycling. Non-residential strategies include enforcing commercial recycling requirements, improving multi-

family housing recycling rates through outreach, and ensuring construction debris does not end up at landfills or the Hennepin Energy Recovery Center (HERC).

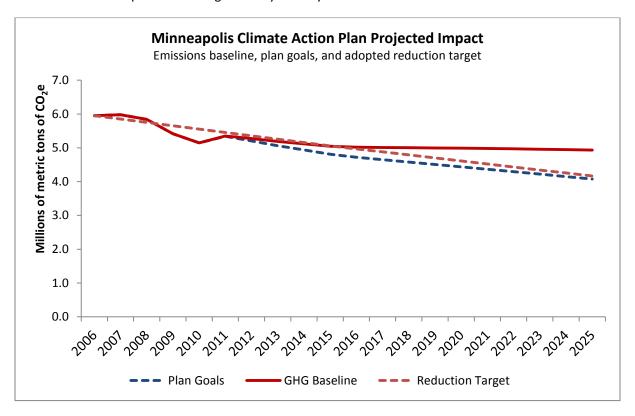
Strategies for **increasing organics collection** will help divert compostable organic material from the waste stream. Strategies include evaluating expansion of residential organics collection, working with major organic waste sources (hospitals, schools, restaurants, etc.), and supporting local composting.

Addressing product lifecycle impacts at the City level means educating consumers about the emissions impacts of different products and foods through direct outreach as well as leveraging existing sustainability efforts like Homegrown Minneapolis.

Reducing wastewater treatment impacts addresses a small but important segment of Minneapolis' emissions. Metropolitan Council Environmental Services has an energy use reduction goal that Minneapolis can support and track for emissions impacts. We can reduce the overall amount of wastewater by getting high efficiency fixtures into more homes and buildings, and by exploring the use of greywater systems in City and partners' facilities.

Projected Impact

Using the best available data on future activities and change factors, a baseline of greenhouse gas emissions was developed relevant to each working group's focus area (Buildings, Transportation and Waste). This baseline represents what might happen assuming the existing level of action (status quo) to address greenhouse gas emissions. The greenhouse gas emissions impact of each working group's adopted goals was also estimated through 2025 using the best available data. These estimates show that the recommended goals identified by the Climate Action Plan working groups have the potential to reduce greenhouse gas emissions in Minneapolis to the targets set by the City Council.



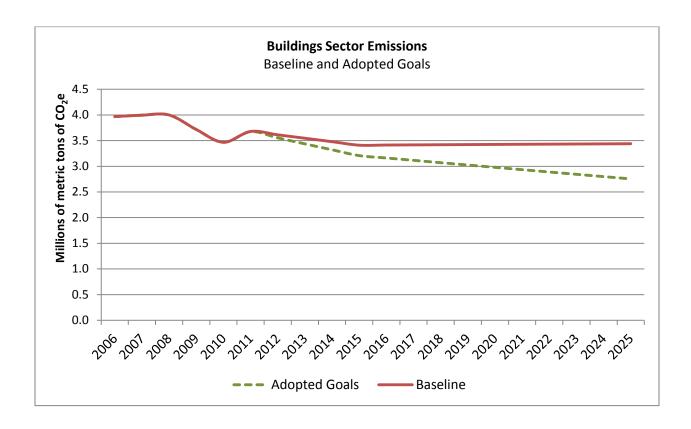
What follows is a summary of the assumptions used to develop the baseline emissions projection for each working group focus area and the estimated impact of meeting the adopted goals. Each working group developed and vetted the assumptions used to develop the baseline, taking into consideration things like projected population and business growth, historic energy consumption patterns, energy efficiency improvements, and efficiency activities already underway.

Buildings & Energy

The assumptions used to develop the baseline (status quo) emissions projection for buildings sector emissions included:

- The projected greenhouse gas emissions coefficient for electricity provided by Xcel Energy through 2025
- A modest rate of growth in energy use (0.5 percent annual growth in electricity use, zero percent annual growth in natural gas use).
- Similar rates of fuel consumption at facilities like HERC and the University of Minnesota steam plant.

Achieving the goals adopted by the Working Group would reduce greenhouse gas emissions from the buildings sector by 685,000 metric tons in 2030 from the baseline. Emissions reduction in the buildings sector would make up 80 percent of the total emissions reduction identified by the three working groups.

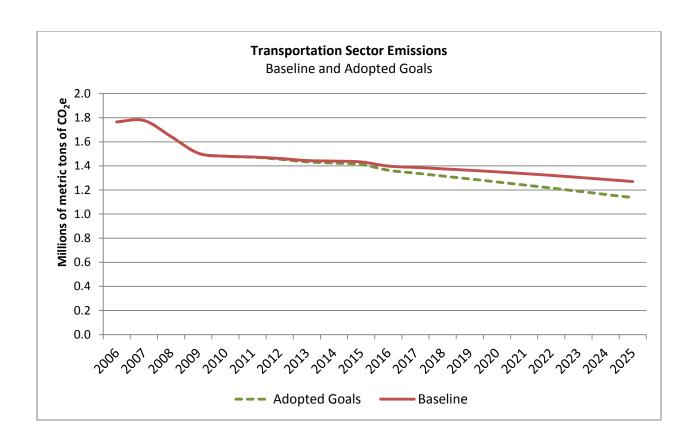


Transportation & Land Use

The assumptions used to develop the baseline (status quo) emissions projection for transportation and land use sector emissions included:

- VMT growth consistent with the Metropolitan Council's traffic model for Minneapolis (0.3 percent annually through 2030).
- Proposed CAFE standards 2017-2025 are adopted.
- Existing state mandates for biofuels in gasoline and diesel remain in place, and future changes take effect.

Achieving the goals adopted by the working group would reduce greenhouse gas emissions from the transportation sector by 160,000 metric tons in 2030 from the baseline. Emissions reduction in the transportation sector would make up 19 percent of the total emissions reduction identified by the three working groups.

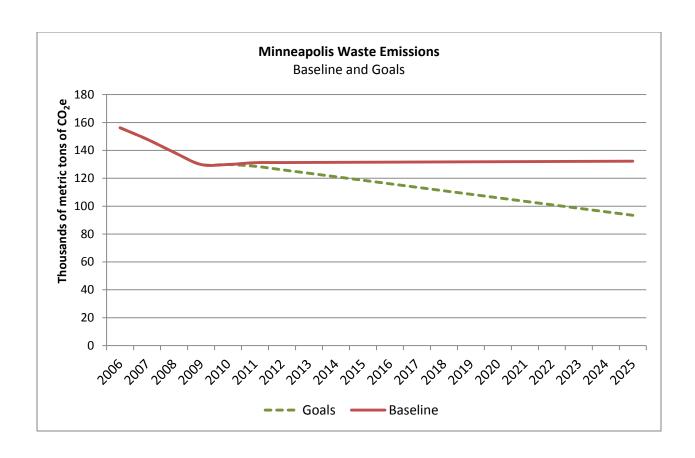


Waste & Recycling

The assumptions used to develop the baseline (status quo) emissions projection for the waste sector emissions included:

- An annual growth in the total tonnage of the waste stream of 1.2 percent, consistent with Hennepin County's baseline assumption in their Solid Waste Master Plan.
- An increase in the recycling rate (currently 32.5 percent) to 40 percent of the total waste stream by 2025.
- An increase in the organics collection rate (currently 3.7 percent) to 6 percent of the total waste stream by 2025.
- A stable level of wastewater flows from the city and similar energy use per gallon at the treatment plant.

Achieving the goals adopted by the working group would reduce greenhouse gas emissions from the waste sector by 8,781 metric tons in 2030 from the baseline. Emissions reduction in the waste sector would make up 1 percent of the total emissions reduction identified by the three working groups.



Attachment A: Steering Committee

Ross	Abbey	Transportation & Land Use Working Group Rep (CEAC)
Louis	Alemayehu	Environmental Justice Advocates of Minnesota
Ryan	Anderson	Buildings & Energy Working Group Rep (RLA Advisors)
John	Dybvig	City of Minneapolis
Lea	Foushee	Environmental Justice Working Group Rep
Meredith	Fox	Minneapolis Public Schools
Robin	Garwood	City of Minneapolis
J. Drake	Hamilton	Fresh Energy
David	Johnson	City of Minneapolis
Julie	Ketchum	Waste & Recycling Working Group Rep (Waste Management)
Cecilia	Martinez	Environmental Justice Working Group Rep
Carl	Michaud	Hennepin County Environmental Services
Karen	Monahan	Sierra Club
Kelly	Muellman	Minnesota Department of Health
Carl	Nelson	Buildings & Energy Working Group Rep (Center for Energy & Environment)
Loren	Olson	City of Minneapolis
Erica	Prosser	City of Minneapolis
Brian	Ross	Transportation & Land Use Working Group Rep (CR Planning)
Amy	Short	University of Minnesota Sustainability
Sarah	Sponheim	Waste & Recycling Working Group Rep (CEAC)
David	Thornton	Minnesota Pollution Control Agency

Attachment B: Working Groups

Each working group met once per month, in April, May, June, and July of 2012. On March 9, 2012, all working group members were invited to a joint kickoff meeting to learn about goals, process, and expected outcomes.

Buildings & Energy Working Group

Dullulligs & L	LICIBY WOLKI	ing Group
Paul	Adelmann	Xcel Energy
Ryan	Anderson	RLA Advisors
Mumtaz	Anwar	City of Minneapolis
Gretchen	Camp	Minneapolis Citizens Environmental Advisory Committee
Rick	Carter	LHB Architects
Andrew	Dahl	Ackerberg Group (alternate)
Peter	Dahl	Sebesta Blomberg
John	Dybvig	City of Minneapolis
Patrick	Hanlon	City of Minneapolis
JoAnna	Hicks	Ackerberg Group
Lauren	Huynh	The Weidt Group
Matt	Johnson	Minneapolis Chamber of Commerce
Andrew	Leith	Hennepin County
JB	Matthews	Minneapolis BOMA
Brian	Millberg	City of Minneapolis
Carl	Nelson	Center for Energy and the Environment
Aly	Pennucci	City of Minneapolis
Shane	Stennes	University of Minnesota Sustainability
Richard	Strong	Center for Sustainable Building Research
Al	Swintek	Centerpoint Energy

Waste & Recycling Working Group

Madalyn	Cioci	MPCA
Tony	Hainault	Hennepin County
Charlie	Hall	Minneapolis Refuse, Inc.
Dave	Herberholz	City of Minneapolis
Jeff	Jenks	City of Minneapolis
Julie	Ketchum	Waste Management
Thor	Nelson	Aspen Waste
John	ONeal	Allied Waste
Sarah	Sponheim	Minneapolis Citizens Environmental Advisory Committee

Transportation & Land Use Working Group

Ross	Abbey	Minneapolis Citizens Environmental Advisory Committee
Carol	Anderson	Hennepin County
Joe	Bernard	City of Minneapolis
Simon	Blenski	City of Minneapolis
Gina	Ciganik	Aeon
Denise	Engen	Metropolitan Council
Brian	Isaacson	MNDOT
Nick	Mason	Minneapolis Bicycle Advisory Committee
Don	Pflaum	City of Minneapolis
Andrew	Rankin	Minneapolis Downtown TMO
Brian	Ross	Minneapolis Citizens Environmental Advisory Committee

Environmental Justice Working Group

Louis	Alemayehu	Environmental Justice Advocates of Minnesota
Lea	Foushee	North American Water Office
Sam	Grant	Afro-Eco
Valerie	Larsen	Minneapolis American Indian Center
Juan	Linares	Community Economic Organization
Cecilia	Martinez	Center for Earth, Energy and Democracy
Shauen	Pearce	Fellowship of Reconciliation
David	Pellow	University of Minnesota
Beverly	Propes	
Barbara	Robertson	Mille Lacs Urban Tribal Office

Attachment C: Proposed Emissions Reduction Strategies

Buildings & Energy

Goals

- 1. Achieve 15 percent energy efficiency in residential buildings from the growth baseline by 2025.
- 2. Achieve 20 percent energy efficiency in commercial buildings from the growth baseline by 2025.
- 3. Increase electricity from local renewables from 1.5 to 5 percent of the total consumed by 2025.

Cross-Cutting Strategies

- Launch a City initiative to make Minneapolis the most energy-efficient city in America. Most of the
 energy in Minneapolis is consumed by businesses. Focus on efforts that large businesses/properties
 could undertake to reduce their energy usage. Research shows that the most effective energy efficiency
 programs succeed because they have committed leadership from the top. The City can use its leadership
 position to bring top City leaders to the table and affirm their commitment to working together to
 achieve this goal.
- 2. Ensure that City facilities are models of energy-efficiency and renewable energy technology. The City will investigate opportunities in buildings, street lighting, traffic signals and parking ramps to constantly increase energy efficiency. The water treatment plant is a large energy user, and opportunities for increasing efficiency will be continuously reviewed. The City will continue to identify opportunities for renewable energy deployment on City facilities to reduce long-term operating costs and demonstrate new technologies.
- 3. Support the State's adoption of the latest International Energy Conservation Code (IECC) and International Green Construction Code (IGCC) and adopt the IGCC locally. The IECC and IGCC will change the building code to promote more energy efficient and durable new construction. If the IGCC is adopted at the state level as an appendix chapter, Minneapolis will need to adopt it locally before it can be in force.
- 4. **Incentivize energy efficiency in private buildings during every interaction with the City.** City departments could promote energy efficiency efforts to anyone interacting with the City for regulatory purposes (moving beyond compliance). This may be targeted towards certain kinds of buildings that showed high promise for targeted efforts on energy efficiency, such as restaurants.
- 5. Require City-financed projects to meet an energy efficiency standard, like Sustainable Buildings 2030. The State of Minnesota has adopted a requirement that all State bonded projects meet the SB2030 standards. This requires progressively better energy performance from new projects. Similar

¹ The percent of Minneapolis' electricity consumption that is coming from renewables is calculated based on generation sources above and beyond Xcel Energy's average grid mixture. Sources like Wind Source and local, distributed generation would be counted towards the goal. In 2010, 19% of the fuel sources used by Xcel to generate grid electricity came from renewable sources.

requirements include St. Paul's Sustainable Building Policy. Alternatively, or in combination, the city could require projects to complete Xcel Energy's Energy Design Assistance program. In conjunction, the City should review the ratios required for project financing (gap financing to overall project cost) to minimize any disruption to affordable housing construction that may be caused by implementing additional requirements.

- 6. Explore opportunities to restructure the mechanical permit fee schedule and other fee schedules to incentivize energy efficient products and renewable energy. Mechanical permit fees for products like furnaces are currently based on a percentage of the total value of the work being performed. More energy efficient products are typically more expensive than less efficient products, increasing the permit fee, which could be a disincentive to contractors and building owners to install more efficient equipment. With Regulatory Services staff and stakeholders, explore changes to the permit fee structure (ideally revenue neutral) that would incentivize the installation of more energy efficient equipment or renewable-supportive building design (e.g., "solar ready" buildings).
- 7. Determine the feasibility of establishing conservation-based pricing or structuring of franchise fees and using the franchise agreement to support renewables. During the update of franchise agreements with utilities, Minneapolis should explore options to encourage energy conservation through utility fee structure or the price passed on to customers. Examples could include structuring fees based on usage per customer or reducing fees if utilities meet energy efficiency/CIP goals. Franchise negotiations also provide an opportunity to plan for better integration of distributed solar PV into the grid (e.g., by linking up to the distribution system currently in place in many City rights-of-way).
- 8. Evaluate and expand incentives granted for high energy performance. Density bonuses are currently available to developments in the downtown zoning districts achieving high energy performance and can be used as an amenity for a planned unit development to obtain approvals for alternatives to the zoning regulations. These bonuses could be extended to areas outside of downtown and/or incorporated into other incentive programs. Extend these incentives to buildings that incorporate or are designed to allow for easy installation of significant renewable energy systems.
- 9. Develop tools to finance energy efficiency and renewable energy retrofits for commercial and residential buildings that have low barriers to entry and limited risk for local government. Property-assessed, on-bill and other financing tools could provide low-interest financing opportunities for homeowners and commercial properties and avoid issues like opportunity costs, high interest rates or high barriers to entry. Working through a process led by the State of Minnesota, identify tools that the City or another regional entity can develop to provide more opportunities for energy efficiency and renewable energy financing.
- 10. Support the implementation of the University of Minnesota's Climate Action Plan and encourage other government entities to take action. The University of Minnesota's Minneapolis campus is a major user of electricity and natural gas. The University has adopted aggressive targets for reducing greenhouse gas emissions from their operations, including achieving net zero emissions by 2050. Whenever possible, Minneapolis will support the University's efforts to reduce emissions. Other government entities, like Hennepin County, have adopted targets for emissions reduction but have not yet developed a plan. Minneapolis should support these efforts and collaborate on implementation.

- 11. Monitor new technologies and regularly reassess strategies. Encourage implementation when feasible. There are many new technologies that could hold promise for energy efficiency and reducing emissions. Real-time pricing coupled with smarter appliances could reduce costs for electricity consumers and emissions. Advanced energy management technology could reduce wasted energy.
- 12. Identify opportunities to increase conservation efforts within the downtown district heating and cooling system and make the system more efficient using technologies like combined heat and power. The downtown district heating and cooling system, in total, represents one of the single largest loads in the City. Operated by NRG, the City is a major user, with connected loads including the Convention Center. Because customers on this system do not have access to utility conservation programs, there is an opportunity for the city to help increase the efficiency of the customers on this system. There may also be opportunities to make the district heating itself more efficient, for example, natural gas fired plants could be retrofitted to include combined heat and power generation. The City should work with Hennepin County and NRG to determine where these retrofits might make sense.
- 13. Identify opportunities to expand the use of district heating systems to new and existing buildings. The downtown district heating and cooling system provides an efficient alternative to individual building heating and cooling systems. Explore barriers to expansion into existing and new buildings in downtown. Identify opportunities for expanded district heating and cooling outside downtown with new or existing systems.

Residential Buildings

- 1. Help 75% of Minneapolis homeowners participate in whole-house efficiency retrofit programs by 2025. The City of Minneapolis has provided initial support for CEE's Community Energy Services (CES) program, which has served about 4,800 Minneapolis owner-occupied homeowners, or a little over 5% of the target population. The City could continue to help recruit homeowners into the program, and set a goal of 75% of homeowners participating in CES or similar whole-house retrofit program.
- 2. Create time-of-sale and time-of-rent energy label disclosure. New homeowners and potential tenants are a target group to promote energy upgrades, as they can be more receptive to needed upgrades, especially when financing is available. Tenants could also use an asset rating label to make comparisons about energy performance and cost between units or buildings. Minneapolis currently requires a home inspection prior to any Minneapolis home being put on the market, called the Truth-in-Housing program. The City could "green the Truth-in-Housing program" by including the collection of data sufficient to generate an energy label. In order to be cost-effective, data collection would need to be as limited as possible, while providing useful information to the homeowner. The Center for Energy and Environment has developed such a label that is particularly relevant for Minneapolis housing stock that is currently being used in the Community Energy Services residential program, and could be expanded for use in the Truth-in-Housing program. A label for multi-family structures does not yet exist.
- 3. Connect and collaborate with other residential energy efficiency efforts. This includes:

- Helping to promote and work with on-line energy efficiency efforts that build teams and help to
 increase energy efficiency awareness and actions, including the Minnesota Energy Challenge, and
 OPOWER's new Facebook application.
- Promoting appliance trade-ins through City events.
- Promoting the use of energy benchmarking in Minneapolis multifamily buildings, as through the Minnesota Energy Scorecards program: www.energyscorecardsmn.com

Commercial Buildings

- Continue to host an annual Energy Reduction Challenge ("Kilowatt Crackdown") for Commercial Buildings in conjunction with the Building Managers and Owners Association (BOMA) and other partners. BOMA has developed a program, called the Kilowatt Crackdown, which local chapters can implement. Building owners track their energy use, through the EnergySTAR Portfolio Manager tool, over the course of a year or two. This is compared to a benchmark of the previous year, and the buildings with the highest energy reduction receive awards.
- 2. **Implement a Building Energy Disclosure policy for medium and large commercial buildings.** A disclosure policy for commercial buildings that requires publication of data annually will help increase the impact of energy use information in the marketplace, driving further energy efficiency improvements.
- 3. Explore implementation of a commercial asset rating program, such as the Department of Energy's Commercial Building Energy Asset Rating. Asset ratings provide a tool to evaluate the physical characteristics and as-built energy efficiency of buildings. An asset rating can also identify areas where improvements are needed.
- 4. **Develop "green lease" model language that allows building owners and tenants to share the energy savings from building capital improvements.** Tenants and building owners often have a split incentive when it comes to energy efficiency improvements since tenants frequently pay the energy bills. New model language could make more capital improvements likely.

Industrial Buildings

Continue to support a loan program to help businesses including industrial companies to become more
energy efficient and expand their businesses. A relatively small number of Minneapolis industrial
customers are responsible for a large proportion of total energy usage in the City. Focusing efforts to
increase the energy efficiency of these businesses can have a large impact, as well as increase the
competitiveness of Minneapolis businesses and support job growth.

Renewable Energy

1. **Continue to identify barriers to distributed renewable energy installation.** Changes may be necessary at the municipal and state government levels and state legislature to address issues of cost-effectiveness in solar installations, particularly in commercial building applications. This could include interconnection

- charges, demand charges and exploration of concepts like feed-in tariffs. The City should continue intergovernmental relations efforts to reduce these barriers.
- 2. Investigate the feasibility of large-scale renewable energy purchasing for the municipal government and/or residents. The City routinely receives unsolicited requests to invest in bulk purchasing of renewable energy. Establish a proactive review process for these requests and/or explore an RFP process for bulk purchasing.

Transportation & Land Use

Goals

- 1. **Reduce automobile vehicle miles traveled in Minneapolis** while improving accessibility, increasing transportation choices and promoting and accommodating growth.
- 2. Support **livable, walkable, and growing neighborhoods** that meet the needs of all Minneapolis residents.
- 3. Increase the share of Minneapolis residents and workers choosing **non-auto modes** for commuting and other trips.
- 4. Through local action and federal and state legislation, support a transition to cleaner fuels and more efficient vehicles.

Planning & Land Use

- 1. Improve inter-departmental and inter-agency collaboration on transportation issues, and track progress. City policy already instructs staff to work across departments on transportation and land use issues; it also recommends both formal and informal collaboration between the City and partners like the Metropolitan Council and Hennepin County. Add accountability to this policy direction by regularly reporting to the public and policymakers on the successes of recent collaborations, and challenges that may be hindering these partnerships.
- 2. Plan for and encourage "complete neighborhoods." Residents of complete neighborhoods can safely and conveniently walk to obtain most of the basic goods and services they need on a daily basis. Explore changes to the zoning code to provide maximum flexibility for diverse commercial uses. This could include providing height or density bonuses for leasable ground floor commercial spaces. This could also include "market development" strategies which would remove barriers for small-scale retail and essential services like daycare centers.
- 3. Focus growth in and along land use features designated in *The Minneapolis Plan for Sustainable Growth*. While supporting growth throughout the city, follow the adopted Comprehensive Plan to guide future development toward areas with multi-modal transportation access. This means focusing growth along community and commercial corridors, in transit station areas, activity centers, and growth centers such as Downtown.
- 4. Review the zoning code to identify impediments & incentives to the construction and retrofit of green buildings. Further study may highlight opportunities to "green" the zoning code including:

- a. Exempt greenhouses from maximum height calculation on multi-story structures.
- b. Exempt additional wall insulation from FAR and setback calculations.
- c. Allow boiler rooms on the roof of buildings.
- d. Incentives in zoning to increase energy efficient construction, renovation and operation of buildings.
- e. Incentivizing the inclusion of car-sharing as part of new developments.

Transit & Car Sharing

- 1. **Support the Metropolitan Council's goal of doubling regional transit ridership by 2030.** Through land use and transportation infrastructure decisions, communications and collaboration with partners, the City should support the Metropolitan Council in achieving the 2030 goal.
- 2. Support the build-out and upgrade of regional and local transit lines. The City should support and implement local and regional transit improvements consistent with Access Minneapolis and other plans to reduce VMT and provide more transportation options. Regional transit facilities in the planning or construction phase include Central Corridor LRT, Southwest LRT, Bottineau and 35-W Bus Rapid Transit (BRT). Local improvements to the Primary Transit Network (PTN) include potential streetcar and arterial BRT lines.
- 3. Advocate for an increase to the dedicated funding stream for transit construction and operations at the state level and regional level. The current funding level for transit projects through the Counties Transit Improvement Board (CTIB) utilizes a quarter-cent sales tax to fund transit improvements. The original legislation proposed a half-cent sales tax. Increasing the amount that counties can opt-in to use would speed development of regional transit projects.
- 4. Work with Metro Transit and property owners to improve capacity and use of transit during special events. Many attendees of major events at the Metro Dome, Target Field, the Convention Center and other locations in Minneapolis use transit, but the City should continue to work to increase the use of transit and non-auto modes for these events.
- 5. **Complete the downtown east-west transit spine improvements.** The Access Minneapolis Plan calls for the upgrade of transit service in the vicinity of 7th Street. This corridor is the second-busiest in terms of weekday boardings in downtown. This improvement may be similar to the Marq2 project, which improved travel times and provided dynamic signage to improve user experience and convenience.
- 6. **Expand car-sharing services to on-street spaces.** Parking staff will soon begin the process to bring car-sharing services to on-street spaces in the city. Continue to expand these services as demand and feasibility permit.
- 7. Make car-sharing convenient and affordable by reducing sales tax on car-sharing products to the minimum rate. Currently, car-sharing transactions in Minneapolis appear to be taxed at a higher rate (~12 percent) than the general sales tax rate for Minneapolis (7.775 percent). Consider separating car-sharing services from regular rental car service in terms of special sales tax rates.

Active Transportation

- 1. Achieve the City's adopted targets for bicycle mode share and bicycle counts and adopt a stretch goal of 15 percent for 2025. The City has adopted targets for bicycle mode share of 6 percent by 2012 and 7 percent by 2014. In addition, the City has adopted a target to increased cyclists in annual counts by 60 percent over 2008 by 2014. Consider a mode share goal for 2025 of 15%.
- Construct 30 miles of on-street, protected bike facilities (cycle tracks) by 2020 to allow safe and
 efficient travel for all types of cyclists. Bicycles are a zero-emissions form of transport. Addressing the
 perception of safety of on-street bicycle facilities will attract more cyclists to Minneapolis' network of
 facilities and help to meet mode share goals.
- 3. Revisit minimum bicycle parking requirements to support the City's bicycle mode share targets. The City is investing in on- and off-street bicycle facilities, and has set targets for bicycle use. Providing sufficient parking that is convenient and safe will be a key in meeting these goals. Existing standards, such as the Association of Pedestrian and Bicycle Professional parking guide and the City's adopted workplace access and parking guidelines could be reviewed for consistency with current code. Bicycle parking demand may also vary more based on geography than auto parking. More data on local parking demand is needed.
- 4. Support implementation of the Pedestrian Master Plan and Bicycle Master Plan. When walking and biking are safe, efficient, and comfortable, the benefits are felt community-wide and reduce dependence on automobiles. Monitoring and following up on the Pedestrian and Bicycle Master Plans' recommendations will be integral to meeting greenhouse gas reduction goals across the transportation and land use sectors.
- 5. Allow special service districts to levy a surcharge on parking meters to fund streetscape improvements. District advisory boards can opt to apply a streetscape improvement surcharge to on-street parking, the revenue from which would be used for streetscaping or other improvements that make walking, cycling, or taking transit more attractive.
- 6. **Continue "Safe Routes to School" efforts.** The City's Safe Routes to Schools effort encourages children to adopt healthy habits of walking and biking. This is done by improving safety near schools through infrastructure projects, as well as fostering a culture of walking and biking in the schools through educational programs.
- 7. **Adopt a Complete Streets policy.** A Complete Streets policy will demonstrate a commitment to providing adequate pedestrian, transit and bicycle facilities during every road improvement project. While the City already has adopted many elements of Complete Streets work, such as Bicycle and Pedestrian Master Plan and a multi-modal transportation plan, such a policy may be necessary to best position the City to receive outside funding.

Parking Management

- 1. **Investigate demand-based parking pricing strategies for metered areas.** The city's new parking meters allow for variable pricing. Vary pricing on metered streets, with a goal of achieving one empty spot per block, in order to reduce "cruising" for spots and improve traffic flow.
- 2. **Continue to adjust minimum parking requirements to better promote alternative modes of transportation.** For example, developers of multi-family housing currently qualify for a 10 percent reduction in required parking stalls if the parcel is within 300 feet of a transit stop, even though one-quarter mile (1,320 feet) is commonly accepted as the distance an average rider will walk to a bus stop.
- 3. Support the development of new information technology to reduce "cruising" for parking and make more efficient use of curb & ramp space. Parking staff are developing new approaches, such as a mobile phone app, which will provide more information to drivers on the location of vacant parking spaces. These types of applications can reduce cruising for parking, which can be a significant source of congestion in certain parts of the city at certain times.
- 4. **Support the development of a citywide framework for curb space use.** Parking staff will be developing a framework plan to understand how to best use curb space, both for parking, valet services, delivery vehicles, active transportation and other uses. Climate Action Plan goals for increasing active transportation and reducing VMT should be considered during this process.
- 5. **Require or incent parking "unbundling".** Adopt requirements or incentives for developers that parking be separated from commercial space and residential units in lease and sale agreements.

Transportation Demand Management & Intelligent Transportation Systems

- 1. Support the Downtown Transportation Management Organization's goal to reduce 4.8 million drive alone trips by 2015. The Downtown TMO helps commuters get into downtown with less reliance on the single-occupancy vehicle. Supporting their goals include increasing bicycling, transit and rideshare use.
- 2. Explore changes to signal timing to reduce idling, improve traffic flow and accommodate non-auto modes. City staff are currently reviewing signal timing on a citywide basis to increase network efficiency. Potential changes to reduce emissions could include "green waves", either for cars or cyclists, depending on the roadway and changing lights to flashing red/yellow late at night and early in the morning.
- 3. Support the expansion of congestion pricing, dynamic signage and other traffic management techniques on regional highways. Demand-based pricing can help reduce congestion while encouraging carpooling and transit use. Other techniques that have proven beneficial are dynamic signage which can help reroute drivers and rapid response to crashes.
- 4. **Encourage large employers to embrace alternative work arrangements for employees.** Results-Only Workplace Environments (ROWE), variable work schedules, telecommuting, and teleconferencing all have the potential to reduce overall trips or spread trips from rush hour into less-congested times. The

City can collaborate with the downtown TMO, Downtown Council, and other organizations to provide businesses with information and expertise on these practices.

Clean Fuels

- Explore regulatory incentives to increasing electric vehicle charging infrastructure. The inclusion of
 electric vehicle charging could be incentivized through the zoning code or other city regulations for large
 multi-family and commercial buildings. As technology and adoption rates of electric vehicles change, the
 city should revisit these incentives and consider requirements for EV charging in parking code for multifamily and commercial buildings as appropriate based on demand.
- Provide electric vehicle charging stations at City-owned facilities where feasible. Continue to
 investigate the feasibility of vehicle charging stations at public facilities as funding allows. Closely
 monitor electric vehicle technology to ensure investments are appropriate.
- 3. Increase the fuel efficiency of the city's licensed taxi and car service fleet. The City's current requirement for taxi vehicles is to achieve 23 mpg or better in city driving. As the City updates this policy, consider increasing the minimum mpg requirement. Given that taxis are high-mileage vehicles, better fuel efficiency can pay off more quickly than in other applications.
- 4. **Support the proposed Federal fuel efficiency improvements.** On-road vehicle fuel efficiency has a significant impact on the transportation sector emissions in Minneapolis. Changes to the Federal CAFÉ standards will increase the fuel efficiency of vehicles on the road.
- 5. **Support increased fuel efficiency in public fleets.** Minneapolis has adopted a green fleets policy which calls for fuel efficiency improvements in City-owned vehicles and equipment. Support the efforts of entities like the Metropolitan Council and the State of Minnesota to improve the fuel efficiency of their fleets. In particular, hybrid or fully electric buses have the added benefits of reducing noise pollution and localized air pollutants like particulates in high-traffic areas.
- 6. **Support state efforts to adopt a low-carbon fuel standard.** As outlined in the Minnesota Climate Change Advisory report, support the adoption of a statewide Low-Carbon Fuel Standard, with a goal of reducing the lifecycle carbon intensity of transportation by 12% by 2025 from 2007 levels.
- 7. Support the development of alternative jet fuels and ensure MSP is prepared for their increased use. Most emissions attributable to MSP are produced by jet aircraft. Domestic and foreign airlines have successfully trialed a variety of biofuels, which have been approved for use in commercial flights since July 2011. As production chains mature, MAC and its airline partners will need to be sure MSP facilities are adequately prepared to store and dispense biofuel-blended jet fuel. Minneapolis should also support future regulatory actions designed to accelerate the switch to cleaner-burning jet fuels.

Other Strategies

1. **Continue to shift to LED streetlights.** Streetlights are the second largest energy user in the City enterprise, after water treatment. Replacing conventional bulbs with LEDs can net up to a 50 to 60

percent reduction in energy use and have the potential to reduce maintenance costs. As capital costs come down, continue to replace older bulbs with more efficient LEDs, with a long term goal of citywide LED use.

- 2. **Support continuing efficiency efforts at the Minneapolis-St Paul International Airport.** Increasing vehicle fuel efficiency has led to a reduction in greenhouse gas emissions from the airport. Investigate additional partnership opportunities to support the Metropolitan Airports Commission in meeting the state greenhouse gas reduction targets.
- 3. Assist the Metropolitan Airports Commission in making MSP the nation's "greenest" airport. MAC's Stewards of Tomorrow's Airport Resources program identifies numerous projects that could reduce the airport's emissions, ranging from on-site clean energy production to grey water recycling and storm water reclamation. The airport's constant flow of travelers also make it an excellent location for demonstrating green technologies and educating the public about the causes and impacts of climate change.
- 4. Encourage the Metropolitan Airports Commission to expand its use of renewable energy resources. MAC is exploring investment in renewable energy sources like wind (from off-site sources), solar, and geothermal. The City has a great deal of experience in this area, particularly with solar photovoltaic and thermal technologies. Staff should share expertise and key lessons as MAC undertakes similar initiatives. Examples from other airports, like Denver International, show that large open spaces with unobstructed solar access can provide good opportunities for solar generation.
- 5. Encourage the State of Minnesota to permit the testing of self-driving vehicles on public roadways. In the long term, autonomous vehicles have the potential to reduce the total number of vehicles on the road, increase fuel efficiency and increase safety for cyclists and pedestrians, all of which could have a positive climate impact. Permitting the testing of these vehicles will signal to industry that Minnesota is eager to explore this new technology, and could bring economic benefits.

Waste & Recycling

Goals

- 1. Achieve a zero percent growth rate in the total waste stream from 2010 levels.
- 2. Recycle 50 percent of the waste stream (commercial and residential) in Minneapolis by 2025.
- 3. Increase organics collection to 15 percent of the waste stream by 2025.
- 4. Support Metropolitan Council Environmental Service's goal to **reduce energy use by 25 percent** below 2006 levels by 2015.
- 5. **Increase awareness of the lifecycle impacts of products** to address GHGs occurring outside the community.

Reducing Waste

1. Identify consumer products and packaging that are neither recyclable nor compostable and engage companies, consumers and retailers in a campaign to reduce the disposal of such products and packaging

- through reuse efforts, switch to alternative materials, or make changes to the supply chain. In addition, the City should participate in and support the efforts of the MPCA Product Stewardship Council.
- Identify and promote reuse and repair businesses and opportunities which can reduce the disposal of
 used goods. Evaluate existing ordinances and remove barriers for reuse and repair opportunities.
 Connect with the State's reuse network. Examples include "fix-it clinics" or promoting existing
 businesses with a reuse focus.
- 3. Work with Hennepin County and other partner organizations to encourage businesses and residents to purchase reused and reusable goods (Choose to Reuse campaign).
- 4. Expand Green Building programs (such as a requirement for city-financed new construction and renovation projects) to promote a reduction in construction and demolition waste.
- 5. Expand neighborhood and backyard organic composting through community initiatives and advocate for updated composting rules at a state level.
- 6. Develop innovative marketing and behavioral strategies. Examples could include clearly labeling residential garbage carts "Trash for Incineration", behavioral strategies to reduce food waste like signage and reducing tray use, and supporting County efforts for expanded outreach to commercial and multifamily properties.
- 7. Undertake a public education campaign to inform residents about opt-out opportunities for material like phone books and junk mail. Additionally, explore requiring that businesses like phone directories operate as an opt-in service in Minneapolis.
- 8. Work with Hennepin County, regional groups and the State of Minnesota to develop better data collection tools and sources, especially for commercial and multifamily waste data.
- 9. Require City-financed development projects to meet a green building standard (see Buildings & Energy Cross-Cutting Strategy 5) that includes a waste reduction and/or recycling standard. Projects that receive State money must meet Minnesota Green Communities standards, which include rules about construction and debris waste and recycling infrastructure. The City of Minneapolis should follow suit in order to support its existing waste reduction and recycling goals, and to reduce GHG emissions.

Increasing Recycling

- 1. Support implementation of a single-sort recycling program for curbside pickup.
- 2. Continue to expand the types of materials accepted by the City's recycling program.
- 3. Complete a comprehensive assessment of pricing incentives and penalties for residential waste and recycling services and identify strategies, such as volume-based variable-rate pricing, that could increase recycling and reduce waste.
- 4. Enforce the commercial recycling ordinance and undertake an educational campaign to expand recycling options in multi-family housing.
- 5. Identify financial and other barriers to recycling in multi-family buildings (different priorities between property management company and tenants, lack of knowledge of costs, etc)

- 6. Work with the County to increase the rate of recycling of construction and demolition debris in the city.
- 7. Support state adoption of the new International Green Construction Code (IGCC) and adopt the IGCC locally (see Buildings & Energy Cross-Cutting Strategy 3). The IGCC includes requirements for diverting construction and debris waste and incorporating recycling infrastructure in the design of projects. If the IGCC is adopted at the state level as an appendix chapter, Minneapolis will need to adopt it locally before it can be in force.

Increasing Organics Collection

- 1. Identify major organic waste producers (food service, schools, hospitals, etc) and conduct a targeted campaign to increase organics recycling. Identify corridors (Nicollet Avenue, for example) with a critical mass of large producers that might make organized collection more feasible. Consider an ordinance requiring large producers to divert organics.
- 2. Based on the results of pilot programs and through a detailed study, determine the feasibility and costs of expanding the collection of source-separated organics at residential properties citywide.
- 3. Support more options for the local processing of organic waste at both large and small scales.
- 4. Make City worksites a model for organics composting by developing a collection program for city-owned and (where possible) city leased buildings.

Addressing Product Lifecycle Impacts

- 1. Work with Homegrown Minneapolis to incorporate more information on food choice impacts, particularly as it relates to greenhouse gas emissions.
- 2. Develop educational materials that illustrate the emissions impacts of common products or behaviors, and include these materials in city utility bills.

Reducing Wastewater Treatment Impacts

- 1. Work with the Metropolitan Council to achieve their energy use goals and track associated impacts on GHG emissions from Minneapolis contribution to wastewater flows.
- 2. Achieve a 75% participation rate in the Community Energy Services program for eligible Minneapolis properties, which includes low-flow water fixture information and installations.
- 3. Explore options for expanding the use of greywater systems and water conservation measures in public and private buildings. This could be included in the local adoption of the new state building codes as an elective or promoted in city-financed projects.