

DRAFT Strategies for Discussion

Buildings & Energy Working Group

July 10, 2012

Goals

1. Achieve **15% energy efficiency in residential buildings** from the growth baseline by 2025.
(123,000 mt)
2. Achieve **20% energy efficiency in commercial buildings** from the growth baseline by 2025.
(429,000 mt)
3. Increase **electricity from renewables from 1.5% to 5%** of the total consumed by 2025.
(54,000 mt)¹

Cross-Cutting Strategies

1. **Launch a City initiative to make Minneapolis the most energy-efficient city in America.** As most of the energy in Minneapolis is consumed by businesses, and the usage of businesses are relatively concentrated, the effort could focus on efforts large businesses/properties could undertake to reduce their energy usage. Research shows that the most effective energy efficiency programs are effective 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 the goal.
2. **Ensure that City facilities are models of energy-efficiency.** The City will investigate opportunities in street lighting, traffic signals and parking ramps (to accelerate transition to LED traffic lights). The water treatment plant is a large energy user, and opportunities for increasing efficiency will be continuously reviewed.
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 to apply to commercial construction.
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 able to be targeted towards certain kinds of buildings that showed high promise for targeted efforts on energy efficiency, such as restaurants.

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 electricity came from renewable sources.

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 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, review ratios required for project financing (gap financing to overall project cost) to minimize any disruption to affordable housing construction.
6. **Determine the feasibility of establishing conservation-based pricing or structuring of franchise fees.** 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.
7. **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.
8. **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.
9. **Support the implementation of the University of Minnesota’s Climate Action Plan.** 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. Minneapolis will support the University’s efforts to reduce emissions where possible.

Residential Buildings Strategies

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 Strategies

1. **Identify opportunities to increase conservation efforts within the downtown district heating and cooling system.** 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.
2. **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.
3. **Continue to host an annual Energy Reduction Challenge ("Kilowatt Crackdown") for Commercial Buildings in conjunction with 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.
4. **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.
5. **Explore implementation of a commercial asset rating program, such as DOE'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.
6. **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 Strategies

1. **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.
2. **Explore implementation of an industrial asset rating program, such as DOE'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. In the case of industrial buildings, this would only apply to the energy performance of the building itself, not the processing going on inside.

Renewable Energy Strategies

1. **Continue to identify barriers to distributed renewable energy installation.** Changes may be necessary at the legislative level or the State PUC 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.
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.