



DEPARTMENT OF PUBLIC WORKS

Environmental Sustainability Division

m e m o r a n d u m

TO: Mayor Diane Wolfe Marlin and City Council Members
FROM: William R. Gray, Public Works Director
Scott R. Tess, Environmental Sustainability Manager
DATE: November 27, 2017
SUBJECT: Responses to Mayor and Councilor Questions at Committee of the Whole on November 13

United Nations Climate Conference

The 23rd Conference of Parties (COP23) to the United Nations (UN) Framework Convention on Climate Change convened high-level negotiators, non-state actors, and the general public in a series of pavilions, presentations, and meetings for two weeks in November this year. The purpose of the high level negotiations was to translate the Paris Agreement into concrete actions. However, the broader set of events discussed an expansive range of issues including clean energy, climate resilience, gender, and indigenous rights. But one theme was present throughout all the events; A commitment to stay the course on the Paris Agreement and deliver a climate with under 1.5 degrees Celsius of warming to our children.

The professional association ICLEI Local Governments for Sustainability sponsored seven delegates from across the US including Environmental Sustainability Manager, Scott Tess, to attend COP23. It was a privilege to have exchange with colleagues from around the world and represent the City of Urbana on the international stage. Our aim at COP23 was to share our stories and best practices in halting climate pollution and advancing the clean energy economy. Additionally, the climate conference afforded wonderful opportunities to learn from other cities and build new relationships for future collaboration.

Climate Action Plan

The City of Urbana Climate Action Plan Phase 2 plans pollution reduction activities through 2020. The pollution reduction goals of the plan are to reduce greenhouse gasses 25% by 2020 and 80% by 2050 from a 2007 baseline. These goals were agreed to by City Council resolution in 2012 and are similar in scale to the United States Nationally Determined Contribution in the Paris Agreement of a national 26% reduction by 2025 from a 2005 baseline. Including the purchase of renewable energy credits (RECs) in the municipal electric aggregation program, our greenhouse gas emissions have declined 18% inclusive of a 7% decline unrelated to RECs from 2007 through 2016. 52% of Climate Action Plan activities are completed or continuous, while 34% are in progress.

Current climate pollution reduction activities include:

- Initiating a third round of the Solar Urbana-Champaign bulk solar purchase program
- Developing a public-private partnership to install a 2 megawatt solar array on the City's closed landfill
- Exploring the feasibility of small-scale wind turbines within the City
- Engaging in performance-based contracting to improve energy efficiency of City facilities and street lights
- Exploring the feasibility of a property assessed clean energy program
- Evaluating the planning, zoning, and permitting of solar arrays with the US Department of Energy
- Evaluating the feasibility of solar plus battery with the US Department of Energy

- Providing assistance to other public sector entities exploring solar energy opportunities
- Evaluating feasibility of electric vehicle purchases with the Fleet Division
- Maintenance of existing urban forest by the Arbor Division
- Implementation of bicycle master plan by the Engineering Division

Climate Commitments and Legislative Support Requests

The Sustainability Advisory Commission (SAC) intends to place renewable electricity and carbon neutral pledges on their agenda for consideration. Additionally, SAC Chair Stacy Gloss and Councilor Eric Jakobsson have offered to have additional meetings outside of the Council and Commission with climate advocates. Staff intends facilitate and participate in such meetings as well.

Food Scrap Recycling

Staff has reviewed food scrap programming in other communities. A curbside food scrap collection and composting service would likely require the following:

- Additional staff and \$250,000 in equipment acquisitions at the Landscape Recycling Center
- Doubling or tripling the current U-Cycle fee of \$3.10 per month
- Generating additional markets for finished compost fertilizer product



The Bonn-Fiji Commitment of Local and Regional Leaders to Deliver the Paris Agreement At All Levels

12 November 2017

(As of 9 November, final version to be presented for adoption by acclamation at the Summit)

We, the Local and Regional Leaders meeting at COP23, acknowledge that, with the entry into force of the Paris Agreement in 2016, a new era in global climate action has started, building on the engagement of Parties with all levels of governments worldwide and domestically.

From the Climate Summit of Local and Regional Leaders 2017 in Bonn, Germany, we want to send a strong signal for climate action and are pleased to state our:

- > **Commitments, ambitions and actions**
- > **Calls and positions**
- > **Concrete and joint initiatives**

as contributions to the current international discussions of UNFCCC COP23 and the global climate community.



> Commitments, ambitions and actions

We will raise our climate action ambition and

1. Implement the Paris Agreement goals in our jurisdictions. As of today, 1,019 local and regional governments from 86 countries, representing 804 million people, have reported their emissions reduction targets on the carbonn Climate Registry, which, once achieved, would result in a reduction of 5.6 gigatons of CO₂ equivalent (GtCO₂e) by 2020 and 26.8 GtCO₂e by 2050, compared to levels going as far back as 1990. The aggregate impact of the 7,494 cities and local governments, representing over 680 million people, committed to the Global Covenant of Mayors for Climate & Energy could collectively reduce 1.3 GtCO₂e per year from business as usual in 2030, achieving a cumulative total of 15.64 GtCO₂e between the years 2010 and 2030. Additionally, over 100 states and regions disclosed to CDP, in partnership with The Climate Group in 2017. Together, these governments could reduce GHG emissions by 21.9 GtCO₂e cumulatively (1.2 GtCO₂e annually) by 2050, compared to the IEA Reference Technology Scenario.

2. Affirm our resolve to enhance the resilience of our communities. We underscore the need to assess the direct and indirect impacts of climate change, reduce disaster risks and implement adaptation planning and measures.

3. Commit to cooperate with many more local and regional governments globally.

In doing so, we will accelerate the implementation of the Paris Agreement at all levels of government and strengthen the momentum of our global initiatives like the Global Covenant of Mayors for Climate & Energy and the Under2 Coalition.

4. Commit to work with Parties and identify concrete opportunities for greater climate ambition.

Where applicable, we will establish our own Locally and Regionally Determined Contributions to help national governments achieve and exceed existing Nationally Determined Contributions; we will support enhanced mechanisms for transparent reporting by the Local Governments and Municipal Authorities (LGMA) Constituency; we will communicate opportunities for greater ambition to the 2018 Facilitative Dialogue, when nations first take stock of global progress.

We will commit to holistic and transboundary sustainability action and

5. Implement the Paris Agreement goals in coherence with all elements of the 2030 Agenda for Sustainable Development, in particular the Sustainable Development Goals, the New Urban Agenda, the Sendai Framework on Disaster Risk Reduction and the Addis Ababa Action Agenda on Finance. We aim to do so through a circular, inclusive and shared economy that acts in harmony with nature, and by solidifying the implementation of these global agendas through enhanced policy planning and coordination mechanisms.

6. Encourage governments at all levels to mainstream the Paris Agreement goals into policies within their jurisdiction. Doing so will ensure greater policy coherence, align priorities, minimize contradictory or disconnected processes and maximize synergies between the strategies and plans developed in different policy fields.



7. Join forces with all stakeholders in our communities and territories, leaving no one behind.

Together we will accelerate innovative and transformative solutions, inspired by the outcomes of the 2017 Agadir Climate Chance Summit and OECD Seoul Forum, among other platforms that elevate multi-stakeholder engagement on climate action.

8. Prioritize and expand our support and partnerships across borders and continents, including North-South, North-South-South, city-to-city, region-to-region linkages. We particularly aim to build connections with all levels of government in Small Island Developing States, Least Developed Countries and Africa.

9. Initiate, support and use project preparation facilities, subnational financial hubs of expertise that support the development of bankable projects and pipelines for local infrastructure projects. We aim to enhance access to climate finance from public and private sources, and from various levels, that help bring forward our best climate and sustainability proposals.

10. Enhance the active engagement of the LGMA Constituency in official global climate bodies and Parties. This includes engagement in the work of the UNFCCC Secretariat, the COP Presidencies and their High Level Champions, as well as the relevant UNFCCC negotiation bodies. We will leverage our collaboration with the Parties through a revamped 'Friends of Cities' at the UNFCCC, all in light of an inclusive and renewed United Nations.



Our calls to the Parties of the UNFCCC and the Nations of the UN

In relation to the Nationally Determined Contributions (NDCs), we

1. Urge Parties to conclude the Paris Agreement Implementation Guideline by 2018 and thus reassure the global community that climate action is advancing, evolving and accelerating.

2. Encourage Parties to seize the opportunity of the 'Urban World' by collaborating with all levels of government and by positioning integrated, sustainable urban and territorial development as an important tool to accelerate the implementation of the NDCs.

3. Invite all friendly Parties to demonstrate leadership by strengthening the urban, regional and territorial dimensions of their NDCs. UN-Habitat reports that, as of November 2017, 68% of NDCs have some vision of urban context. We invite Parties to make use of vertical and horizontal integration to connect climate action at and across all levels of government, and to set up inclusive consultations processes domestically with their local and regional governments towards and at the 2018 Facilitative Dialogue.

4. Urge Parties to work with all levels of governments and follow the guidance of the latest scientific findings, including the outcomes of Cities IPCC Conference in March 2018. Doing so will raise the ambition of current NDCs and can incorporate contributions from local and regional governments brought forth by initiatives such as the Global Covenant of Mayors for Climate & Energy and the Under2 Coalition, as appropriate, and present progress to the UNFCCC by 2020 at the latest.



In relation to an inclusive and ambitious global climate architecture, we

5. Call on the global finance community to prioritize capacity building, technology transfer, project preparation, decentralized cooperation and strategic plans and investments for integrated, sustainable urban and territorial development as important pathways for low-emission, high-resilient development. This involves greater mobilization of a wide variety of sources, instruments and channels, including from private finance, in line with the Marrakech Roadmap for Action on Localizing Climate Finance

6. Call on Parties to increase the funding to the UNFCCC finance mechanisms and for innovative, climate friendly solutions and infrastructure. We call on Parties to acknowledge the innovative modalities that local and regional government have adopted to access financing and to strengthen the role of dedicated financing intermediaries for local investment, such as Municipal Development Funds, particularly in climate vulnerable communities.

7. Call upon Parties to recognize the increasing frequency and intensity of climate related hazards and therefore accelerate financing of risk reduction, resilience and adaptation plans that are customized with the priorities of the related communities and respective governments. In particular, we note the importance of protecting oceans and enhancing coastal resilience.

8. Commend the COP Presidencies, their High Level Champions and the UNFCCC Secretariat on the progress achieved through the Marrakech Partnership for Global Climate Action to increase cooperation between nations, local and regional governments and other non-Party stakeholders.

9. Call upon Parties to engage in the UN reform process and leverage the role of local and regional governments and other non-Party stakeholders in the implementation of the global sustainability agendas and within the overall UN development system.

10. Invite all friendly Parties and interested partners to collaborate with our constituency in the implementation of these calls, as well as during other global milestones towards 2020. These milestones include the 3rd UN Environment Assembly, the Global Climate Action Summit 2018, the 2019 UN Climate Summit, the High Level Political Forums under ECOSOC and the UN General Assembly, as well as in the agendas of G7, G20 and One-Belt-One-Road processes.



> Our concrete and joint initiatives

We, the local and regional leaders meeting at COP23, have organized ourselves in networks and partnerships to implement and/or strengthen the following initiatives as our further contributions to the implementation of the Paris Agreement:

City Climate Planner – GBCI, WRI, ICLEI

The City Climate Planner program raises the global talent base of city climate planning professionals through training and professional certifications that form the building blocks of local climate planning and policy development.

Climate Reporting Partnership – ICLEI carbonn Climate Registry, CDP

This new partnership brings together CDP and the carbonn Climate Registry, two of the leading climate reporting platforms in the world, in an effort to build a robust database of self-reported climate commitments, actions and performance tracking by public and private actors.

Coalition for Urban Transitions, including the new Global Urban Leadership Council

The Urban Leadership Council is a group of representatives from city networks, urban think tanks and the private sector aiming to build high-level political commitment to sustainable urban development in rapidly urbanizing countries and provide guidance to the Coalition for Urban Transitions, an initiative overseen by C40, the WRI Ross Center for Sustainable Cities and the New Climate Economy.

Collaboration for multilevel climate governance – NDC Partnership, ICLEI

ICLEI and the NDC Partnership are now working together to design, implement and align climate action strategies across all levels of governments.

CONNECT – PLATFORMA

CONNECT is an innovative methodology that was launched in 2017. It fast-tracks matchmaking between municipal and regional expertise needed in EU partner countries with the existing expertise in Europe's towns and regions. CONNECT carefully crafts and monitors outcomes of peer-to-peer exchanges and skills-based matches that focus on municipalities' key challenges such as climate action.

Covenant of Mayors in Sub-Saharan Africa: Launch of the Political Commitment Document and the recruitment campaign of Sub-Saharan Cities – CEMR

The Covenant of Mayors in Sub-Saharan Africa (CoM SSA), a regional body of the Global Covenant of Mayors for Climate & Energy, is, through its Political Commitment Document, opening the door for more Sub-Saharan cities to commit to the CoM SSA. Participation strengthens city capacity to expand access to sustainable and efficient energy services.

From Action to Transaction: The Africa Subnational Climate Fund – R20

The African Subnational Climate Fund bridges the gap between high infrastructure demands and the low number of bankable projects reaching investors. The fund provides ready-to-invest projects and financing to support the implementation of at least 100 infrastructure projects by 2020.



Front-Line Cities and Islands – ICLEI, GLISPA

Front-Line Cities and Islands is a coalition of coastal cities and islands on the front lines of the impact of climate change, working to build resilience coastal city-to-island partnerships, and designed to increase exposure to innovative resilience strategies and creative financing mechanisms.

Green People's Energy for Africa – BMZ

Green People's Energy for Africa will improve access to reliable, climate-friendly energy and productive use through community-driven, decentralized renewable energy projects. Thereby it will accelerate the transformation and decarbonization of the African energy sector, empowering rural communities and local actors to participate in the energy system and supporting the development of effective national framework conditions.

Global Covenant of Mayors for Climate & Energy

The Global Covenant of Mayors for Climate & Energy formally brings together the Covenant of Mayors and the Compact of Mayors to form the largest global coalition of over 7,400 cities from six continents and 121 countries advancing city-level transitions to low emission & climate resilient economies through voluntary action.

Mobilization of the African civil society at territorial level in the fight against climate change – Climate Chance

This initiative aims to mobilize African cities and regions to respond to climate change-related challenges across the continent, by encouraging their commitments to collective action and through an exchange of good practices to advance implementation of the Paris Agreement.

Municipalities for Climate Innovation Program – Federation of Canadian Municipalities (FCM)

The Municipalities for Climate Innovation Program (MCIP) is a five-year, \$75-million program that helps municipalities prepare for, and adapt to, climate change, and to reduce emissions of greenhouse gases (GHGs). Delivered by the Federation of Canadian Municipalities (FCM) and funded by the Government of Canada, MCIP is available to all municipalities and their partners.

One Planet City Challenge – WWF, ICLEI

By combining a friendly biannual competition, capacity building, technical support and public promotion, the One Planet City Challenge provides a way for cities to engage in long term reporting of their climate performance.

Planners for Climate Action – UN-Habitat

Planners for Climate Action helps ensure urban and regional planners can play a strong role in advancing global climate and sustainability goals. To this end, this initiative will improve urban and regional planning practice and planning education.



RegionsAdapt – nrg4sd

RegionsAdapt is the first global initiative for regional governments to take concrete action, cooperate and report efforts on climate adaptation, focusing on key priority areas such as water resource management, disaster risk reduction, agriculture and biodiversity.

SDG Indicators for Municipalities – DST

SDG Indicators for Municipalities hones the Sustainable Development Goals to craft indicators for the municipal level in Germany, to ensure local governments align and track progress towards global targets.

SuRe Standard – Global Infrastructure Basel (GIB Foundation)

The SuRe Standard is designed to strengthen sustainable and resilient infrastructure development by guiding project owners in accounting for social, environment and governance criteria, while enabling them to communicate benefits to potential investors.

Transformative Urban Mobility Initiative (TUMI) – BMZ

Through TUMI, 11 acclaimed institutions offer technical and financial support for cities' efforts in emerging and developing countries to implement sustainable mobility projects and programs, thereby aiming to advance global climate action and provide better and more equitable transport access to urban inhabitants.

The Urban Leadership Council – C40, WRI Ross Center for Sustainable Cities and the New Climate Economy

The Urban Leadership Council is a group of representatives from city networks, urban think tanks and the private sector aiming to build high-level political commitment to sustainable urban development in rapidly urbanizing countries and provide guidance to the Coalition for Urban Transitions.

West African Economic & Monetary Union (WAEMU) Regional Partnership for Localizing Finance – FMDV

This initiative focuses on West Africa and advocates for fiscal decentralization and innovative financing strategies and mechanisms, while building the case for public and private investments by preparing a pipeline of sustainable local infrastructure projects and matching them with funding sources.

Urban Transitions Alliance – ICLEI, RVR

The Urban Transitions Alliance is a group of industrial and former industrial cities making a shift to become global leaders in sustainable urban development by defining shared challenges, co-creating locally relevant solutions and developing transition action plans.



CLIMATE ACTION PLAN

PHASE 2: 2015-2020

City of Urbana, Illinois



ACKNOWLEDGEMENTS

Urbana Sustainability Advisory Commission

Marya Ryan, *Chair*
Stephen Wald, *Vice-Chair*
Bart Bartels
Todd Rusk
Andrew Stumpf
Rachel Vellenga
Morgan Johnston
Ryan Wolber (former member)

City of Urbana Staff

Scott Tess, *Environmental Sustainability Manager*
Bill Gray, *Director of Public Works*
Elizabeth H. Tyler, FAICP, *Director of Community Development Services*
Kate Brickman, *Administrative Assistant*
Courtney Rushforth, *Recycling Coordinator*
Jason Arrasmith, *Environmental Compliance Officer*

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Urbana Mayor & City Council

Laurel Lunt Prussing, *Mayor*
Charlie Smyth, *Ward 1*
Eric Jakobsson, *Ward 2*
Carol C. Ammons, *Ward 3*
Bill Brown, *Ward 4*
Dennis P. Roberts, *Ward 5*
Michael P. Madigan, *Ward 6*
Diane W. Marlin, *Ward 7*

Comments on the Urbana Climate Action Plan Phase 2 can be made via:

Mail: City of Urbana, 706 S. Glover Ave. Urbana, Illinois 61802

Website: www.urbanaininois.us/sustainability

Discuss Climate Action in Urbana at:

Facebook: www.facebook.com/sustainableurbana

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OUR UNDERSTANDING

- Climate change is happening now.
- Some climate impacts are inevitable.
- Some climate impacts are still avoidable if greenhouse gas pollution is reduced.

OUR VALUES

- We value mitigation of climate change to reduce pollution, save money, and improve quality of life.
- We value adaptation to climate impacts to help protect people and property.

OUR GOALS

- 25% reduction in greenhouse gas emissions by 2020 from a 2007 baseline.
- 80% reduction in greenhouse gas emissions by 2050 from a 2007 baseline.
- Adaptation to climate impacts.

6 GOALS : 23 ACTIONS

THE URBANA CLIMATE ACTION PLAN PHASE 2 RECOMMENDS 23 ACTIONS TO ACHIEVE 6 CLIMATE GOALS:

- 1 REDUCE EMISSIONS FROM ENERGY USE IN THE BUILT ENVIRONMENT**
 - Action 1** Propose an ordinance or policy requiring new City facilities to achieve LEED certification
 - Action 2** Propose an ordinance incentivizing or requiring new homes to achieve the Designed to Earn the ENERGY STAR certification, LEED certification, or Passive House certification
 - Action 3** Propose an ordinance incentivizing or requiring new commercial buildings achieve the Designed to Earn the ENERGY STAR certification, LEED certification, or Passive House certification
 - Action 4** Engage Ameren Illinois to facilitate energy data access for commercial facilities through ENERGY STAR Portfolio Manager web services
 - Action 5** Seek funding for the Urbana Home Energy Performance program*
 - Action 6** Evaluate opportunities to retrofit existing outdoor lighting with more energy efficient lighting

- 2 REDUCE TRANSPORTATION EMISSIONS FROM FOSSIL FUELS**
 - Action 1** Evaluate existing zoning and development codes for possible integration of LEED-ND and other green development standards
 - Action 2:** Reduce single occupancy vehicle mode share from 51.6% to 40%

- 3 INCREASE RENEWABLE ENERGY PURCHASING AND INSTALLATION**
 - Action 1** Purchase Green Power Partnership qualified renewable energy credits in future municipal electric aggregation agreements*
 - Action 2** Purchase Green Power Partnership qualified renewable energy credits and/or the installation of onsite renewable energy for City facilities
 - Action 3** Pursue long term purchase of bundled renewable power and renewable energy credits
 - Action 4** Propose strategies to improve the local onsite renewable energy market
 - Action 5** Propose strategies to increase renewable energy purchasing in the commercial sector*

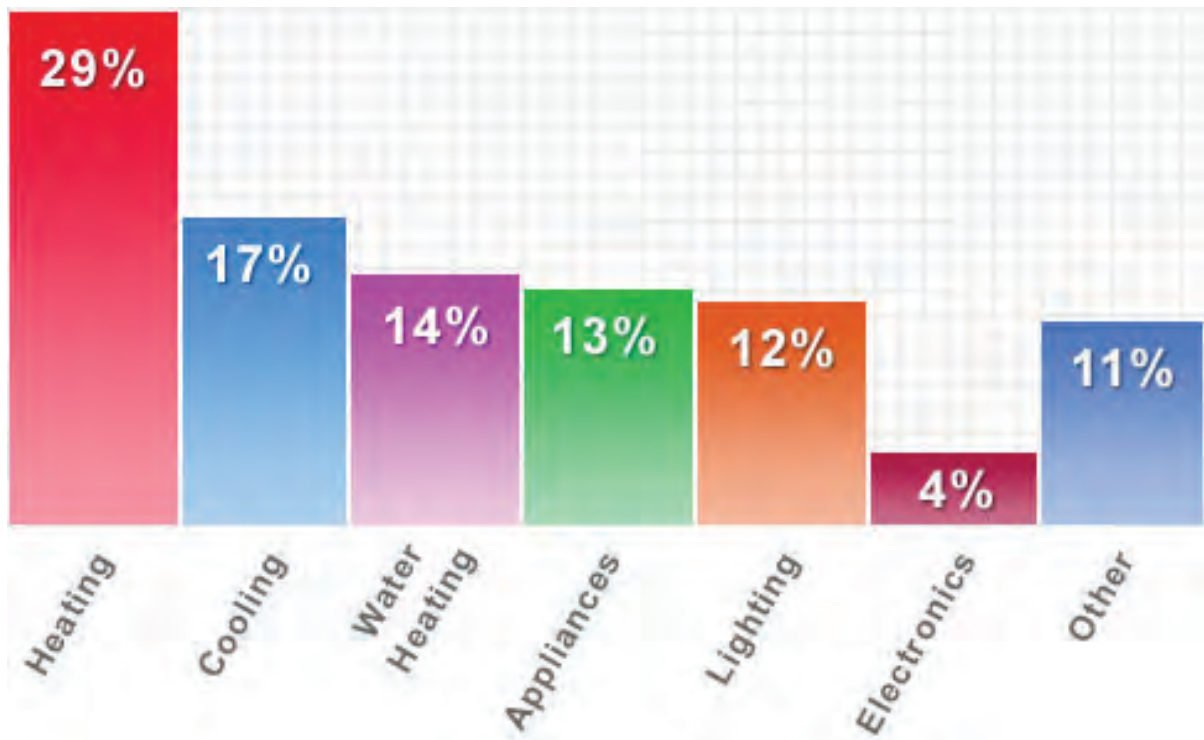
- 4 ADAPT TO CLIMATE CHANGE IMPACTS**
 - Action 1** Engage the Illinois State Water Survey to evaluate an update to design storm standards
 - Action 2** Evaluate funding needed to increase the tree pruning cycle to preserve existing trees
 - Action 3** Incorporate pollinator-supportive plant species in City landscapes
 - Action 4** Reduce tree species, genus, and family preponderance to 5%, 15%, and 30% respectively

- 5 PARTNER TO ENHANCE LOCAL PARTICIPATION IN EXISTING PROGRAMS**
 - Action 1** Partner with existing energy efficiency programs and community groups
 - Action 2** Partner with organizations conducting smart grid education and engagement
 - Action 3** Partner with the Green Power Partnership
 - Action 4** Partner with the local tenant unions

- 6 MONITOR PROGRESS TOWARDS CLIMATE ACTION PLAN GOALS**
 - Action 1** Work with the Sustainability Advisory Commission to inventory greenhouse gas emissions and evaluate emissions reduction strategies every two years
 - Action 2** Work with the Sustainability Advisory Commission to create a new plan to reduce greenhouse gas emissions for the 2020 to 2050 period

2. BACKGROUND

Typical U.S. Household Consumption



Source: www.energystar.gov

2.1 Background

Key Acronyms and Terms

ActOnEnergy a service of the Ameren Illinois Utilities that provides energy saving resources and incentive programs to their customers

CAP Climate Action Plan Phase 1 for the City of Urbana identifying initial strategies to achieve the goal of reducing community-wide greenhouse gas emissions by 25% by the year 2020 and 80% by 2050 from a 2007 baseline

ENERGY STAR a government-backed program helping businesses and individuals protect the environment through energy efficiency measures

ENERGY STAR Portfolio Manager an online tool used to measure and track energy and water consumption and greenhouse gas emissions for buildings

GHG greenhouse gas

Green Power electricity produced from solar, wind, geothermal, biogas, eligible biomass, and low-impact small hydroelectric sources

Green Power Partnership a voluntary U.S. Environmental Protection Agency program supporting the use of green power and purchase of renewable energy credits from green power sources to reduce the environmental impacts associated with conventional electricity use

ICLEI International Council for Local Environmental Initiatives

Illinois Home Performance a program where home and property owners decrease their energy costs and increase the comfort, safety, durability, and value of their homes by working with qualified contractors to take a “whole-home” approach to energy upgrades

kWh a kilowatt hours is a unit of energy equal to 1,000 watt-hours

LEED Leadership in Energy and Environmental Design is a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes and neighborhoods created and maintained by the United States Green Building Council

LEED-ND LEED for Neighborhood Development is a system for rating and certifying green neighborhoods

MTCO_{2e} Metric Tons of CO₂ (Carbon Dioxide) equivalent

Passive House a voluntary building energy efficiency standard requiring no more than 15 kWh/m² per year (4746 btu/ft² per year) in heating and 15 kWh/m² per year cooling energy OR to be designed with a peak heat load of 10W/m²

RECs renewable energy credits are tradable, non-tangible energy commodities in the United States that represent the environmental attributes of 1000 kWh of renewable electricity generation from sources such as wind or solar

RPS a renewable portfolio standard requires some percentage of a state’s electricity generation be derived from renewable sources

Smart Grid a next-generation electrical power system that is typified by the increased use of communications and information technology in the generation, delivery and consumption of electrical energy

Solar Ready means aspects of building design and construction that ease installation of solar photovoltaic and heating systems at some time after the building is constructed

Therms a unit of energy equivalent to 100,000 British thermal units

TIF Tax Increment Financing is a public sector method to finance redevelopment

U-C ENERGY STAR Challenge a competition sponsored by multiple agencies and organizations in the community where buildings in Urbana and Champaign attempt to achieve the greatest energy use reduction in 2014

Urbana Home Energy Performance a 2010-2012 partnership with Ameren Illinois and the City of Urbana to use American Recovery and Reinvestment Act funds to provide enhanced energy efficiency rebates

2.2 Phase 1 of Urbana's Climate Action Plan

In 2012, Urbana approved Phase 1 of the City's Climate Action Plan which laid out activities through the end of 2014. The purpose of Phase 1 was to implement a small number of tried and true initiatives to reduce greenhouse gasses while also evaluating additional initiatives to implement in Phase 2, including climate change adaptation initiatives.

Phase 1 Actions In Progress or Completed:

- (5%) of energy efficiency project costs rebated in City TIF redevelopment program
- (62) buildings registered in U-C ENERGY STAR Challenge for commercial buildings
- (27) participants in green building tour
- (11) responses to energy efficient commercial behaviors survey
- (84,252) Renewable Energy Credits purchased in 2013 through Municipal Electric Aggregation
- (1) meeting with cities, university, and wind energy developer to evaluate bundled power and RECs
- (1) grant application made to fund solar energy market development activities
- (59) responses to energy efficient residential behaviors survey
- (11.8) miles of bicycle infrastructure installed from 2012-2014
- (2) roundabout installation evaluated
- (1) bicycle traffic enforcement and education program established
- (8.5%) of City of Urbana employees participating in 2014 Bike to Work Day Workplace Challenge
- (1) email signature created that highlights available pedestrian/bicycle/bus transportation modes
- (3) bicycles located for City of Urbana employee bike share
- (1) policy established requiring minimum fuel efficiency standards for new City fleet vehicles
- (8) stakeholder participants in energy efficiency in rental properties focus group
- (5) speakers on regional climate impacts and adaptation at Sustainability Advisory Commission meetings
- (5) City Green Team recommendations implemented to improve City environmental performance
- (1) training with Urbana School District teachers on energy and climate issues
- (1) completed greenhouse gas inventory baseline and updated 2013 inventory

Focus Groups and Surveys in Section 5 Appendices

- Energy Efficient Residential Behaviors Survey
- Energy Efficient Commercial Behaviors Survey
- Energy Efficient Transportation Behaviors Survey
- Energy Efficiency in Rental Properties Focus Group Summary
- Energy Efficient Industrial Behaviors Focus Group Summary

2.3 Background

RENEWABLE ENERGY CREDITS OR CERTIFICATES

The purchase of renewable energy credits (RECs) for each kWh used by Urbana residents participating in the City's Municipal Electric Aggregation Program is incorporated into the per kWh price participants pay in the program.

From EPA's Green Power Partnership: Renewable Energy Certificates:

RECs represent the environmental and other non-power attributes of renewable electricity generation and are a component of all renewable electricity products. RECs are measured in single megawatt-hour increments and are created at the point of electric generation. Buyers can select RECs based on the generation resource (e.g., wind, solar, geothermal), when the generation occurred, as well as the location of the renewable generator.

RECs provide key information about the generation of renewable electricity delivered to the utility grid. Since RECs represent only the environmental or non-power attributes of renewable electricity generation, they are not subject to electricity delivery constraints. The information conveyed by a REC allows buyers to make specific environmental claims about how their electricity is produced.

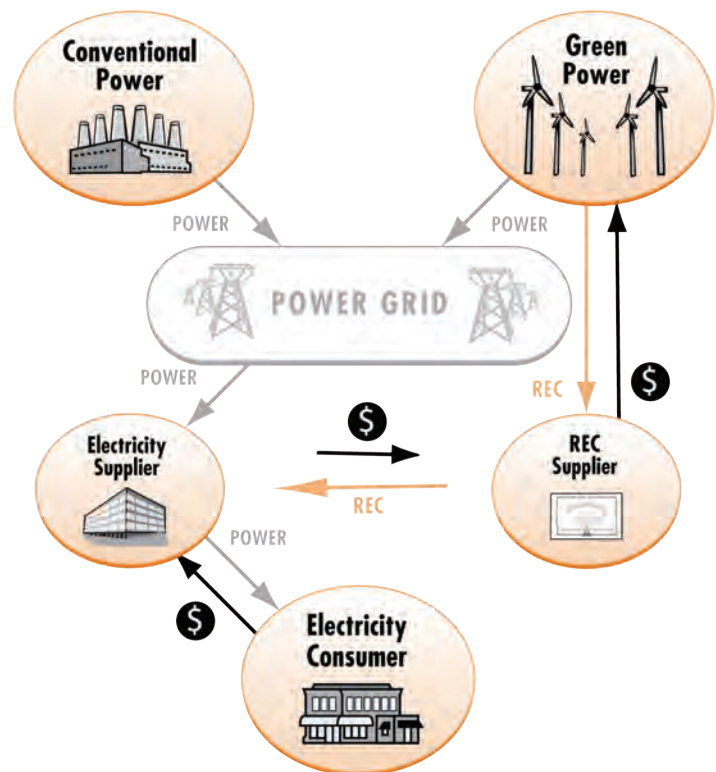
To understand how RECs work, it is helpful to understand how electricity is delivered across the utility grid, as well as what makes renewable electricity generation attractive to individuals and organizational buyers.

Within the United States, electricity demand is met by various types of generation technologies and fuel resources. These electricity generators feed electrons onto the utility grid for delivery to consumers through a complex network of wires and distribution infrastructure. Because the electrons produced from the different technologies and fuel resources are physically the same, it is impossible for individuals or organizations to know what type of generation technology or resource produced the electricity that reaches their particular facility.

RECs help address the issue that the electricity or electrons a consumer receives from their utility does not identify how the electricity was generated. RECs were created to help convey the attributes of electricity generated from renewable resources to buyers. Analogous to the utility delivering the physical electricity through wires, RECs serve as the means to deliver the environmental and non-power attributes of renewable electricity generation to buyers – separate from the physical electricity. (See Figure 1.) All renewable electricity generation can be viewed as having two separate parts:

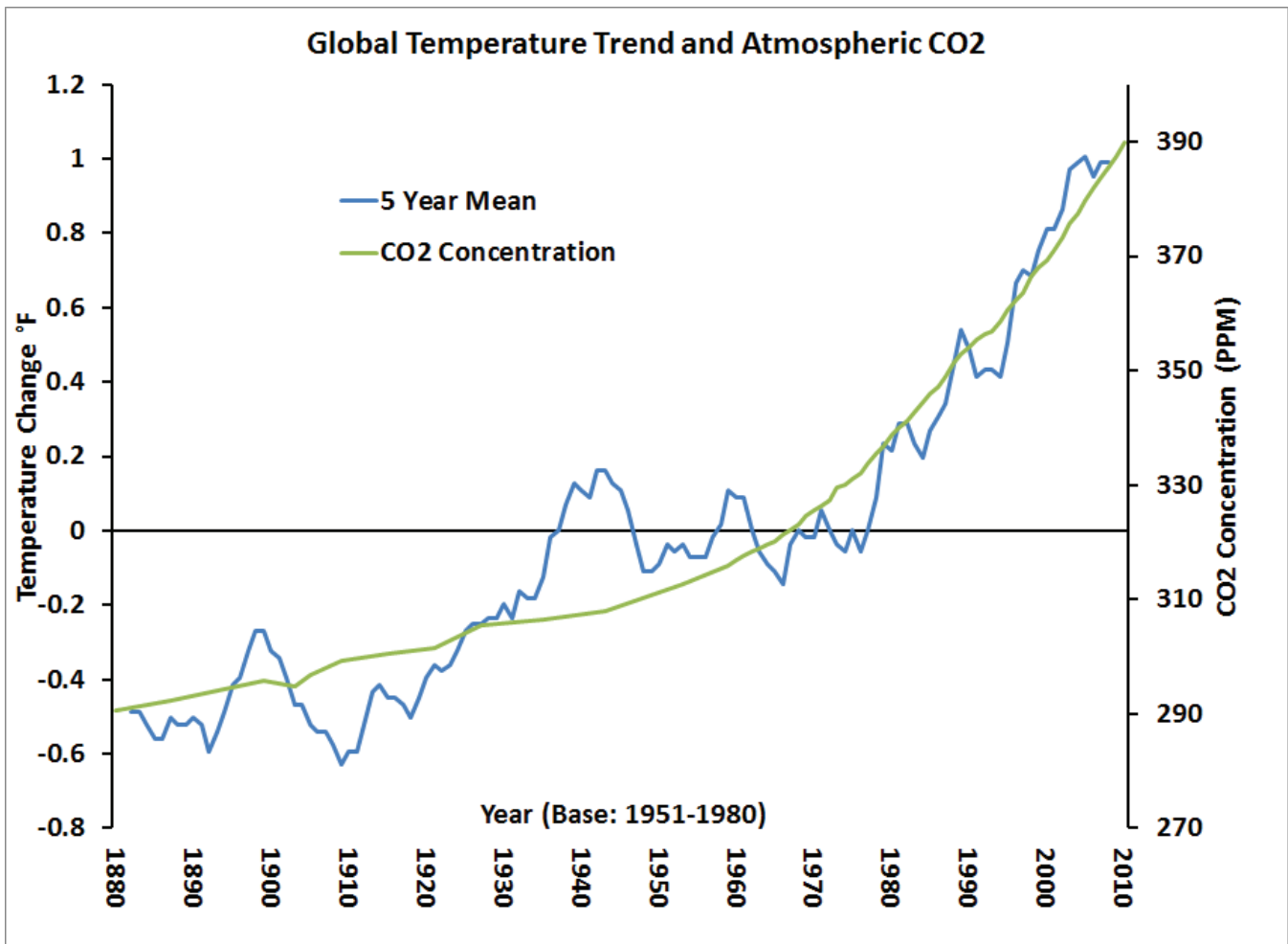
1. The commodity electricity or electrons
2. The environmental and other non-power attributes of generation represented by a REC

Because RECs are monitored and verified, individuals and organizational buyers can buy RECs and be confident that electricity generated on their behalf was done so with renewable energy resources.



Source: Adapted from Guide to Purchasing Green Power, Office of Air, U.S. E.P.A., March 2010.

3. METHODOLOGY, INVENTORY, & PROJECTIONS



Source: Center for Climate and Energy Solutions

3.1 Methodology

CALCULATION METHOD

Greenhouse Gas Protocol:

Urbana, like most cities, uses the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions “developed by ICLEI-Local Governments for Sustainability USA (ICLEI USA) to respond to the expressed needs of local governments in the United States for a standardized methodology for accounting and reporting on GHG emissions associated with individual communities (www.icleiusa.org).”

Greenhouse Gas Modeling Tool:

Following the development of the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, ICLEI developed a new greenhouse gas modeling protocol to match the standards of the new Protocol. ICLEI’s ClearPath program “is an all-in-one suite of online tools to complete GHG inventories, forecasts, and climate action plans at the community-wide or government operations scale (www.icleiusa.org).”

University Related Emissions:

Electricity and natural gas consumption data from University of Illinois buildings in Urbana are not included in the City of Urbana baseline inventory, as the emissions resulting from the sources of this energy and University activities in these buildings are accounted for in the University’s Climate Action Plan (iCAP). Emissions related to the University transportation and solid waste sectors are included in the Urbana Climate Action Plan baseline inventory, as services offered by the City and other non-university jurisdictions (such as improved sustainable transportation infrastructure and higher recycling rates) can positively impact emissions related to these sectors.

Baseline Inventory Adjustments:

The City of Urbana baseline inventory was reassessed for the publication of the Climate Action Plan Phase 2. The reassessment was performed for several reasons. ICLEI’s published a new greenhouse gas accounting protocol for the U.S., ICLEI released a more sophisticated greenhouse gas accounting tool, and the utility company changed the manner in which city-wide data is queried and aggregated from their computer systems.



3.2 INVENTORY

A. 2007 GREENHOUSE GAS EMISSIONS

URBANA'S 2007 BASELINE COMMUNITY GREENHOUSE GAS EMISSIONS REPORT BY SECTOR IN METRIC TONS CO₂EQUIVALENT

Sector	Quantity
Residential energy consumption	145,610
Commercial energy consumption	259,684
Industrial energy consumption	8,658
Transportation energy consumption	110,189
Solid waste landfilled	15,389
Water and Wastewater	325
Total	539,855
Non-Campus Population in 2007	33,968
Per Capita Greenhouse Gas Emissions in 2007	15.89 MT/Resident

B. 2013 GREENHOUSE GAS EMISSIONS

URBANA'S 2013 COMMUNITY GREENHOUSE GAS EMISSIONS REPORT BY SECTOR IN METRIC TONS CO₂EQUIVALENT

Sector	Quantity
Residential energy consumption	76,177
Commercial energy consumption	262,117
Industrial energy consumption	30,481
Transportation energy consumption	107,252
Solid waste landfilled	10,820
Water and Wastewater	353
Total	487,200
Non-Campus Population in 2013	36,665
Per Capita Greenhouse Gas Emissions in 2013	13.29 MT/Resident

*Residential energy consumption above includes reduction provided by REC purchases in 2013 equaling 69,559 MTCO₂e

C. URBANA'S GREENHOUSE GAS EMISSIONS REDUCTION GOALS

Continuous improvement to reach:

25% reduction in greenhouse gas emissions by 2020 or 404,891 Metric Tons CO₂e total

80% reduction in greenhouse gas emissions by 2050 or 107,971 Metric Tons CO₂e total

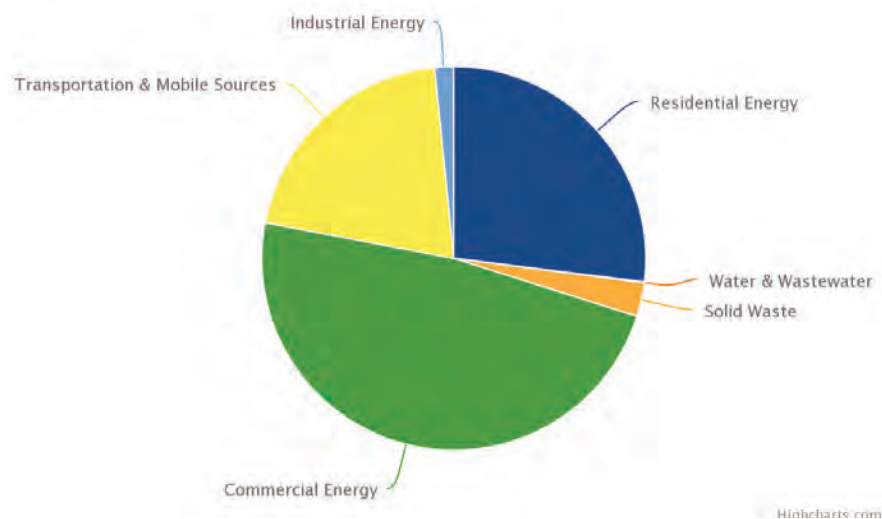
3.2 INVENTORY

D. 2013 GREENHOUSE GAS EMISSIONS COMPARISON TO BASELINE

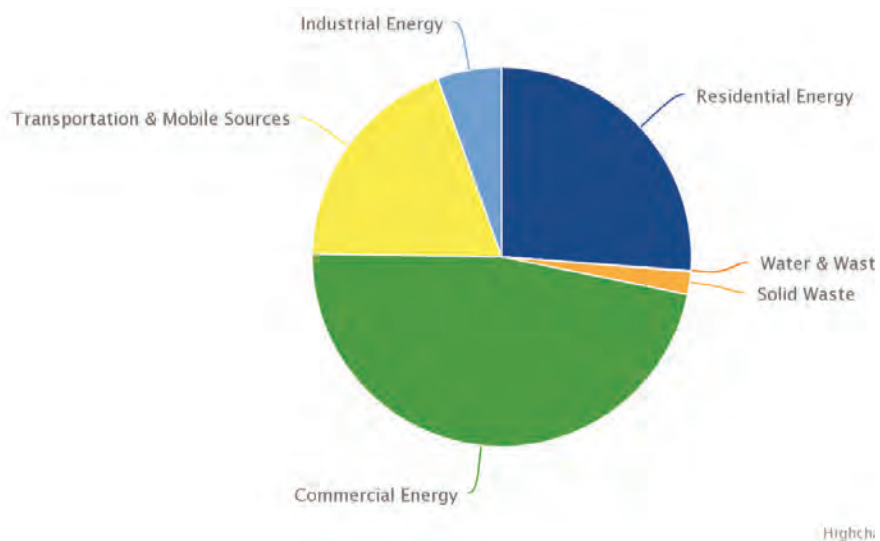
URBANA'S 2007 AND 2013 COMMUNITY GREENHOUSE GAS EMISSIONS REPORT BY SECTOR IN METRIC TONS CO₂

Sector	2007	2013	% Change
Residential energy consumption	145,610	76,177	-47.68%
Commercial energy consumption	259,684	262,117	0.94%
Industrial energy consumption	8,658	30,481	252.06%
Transportation energy consumption	110,189	107,252	-2.67%
Solid waste landfilled	15,389	10,820	-29.69%
Water and Wastewater	325	353	8.62%
Total	539,855	487,200	-9.75%

2007 GHG Emissions by Sector



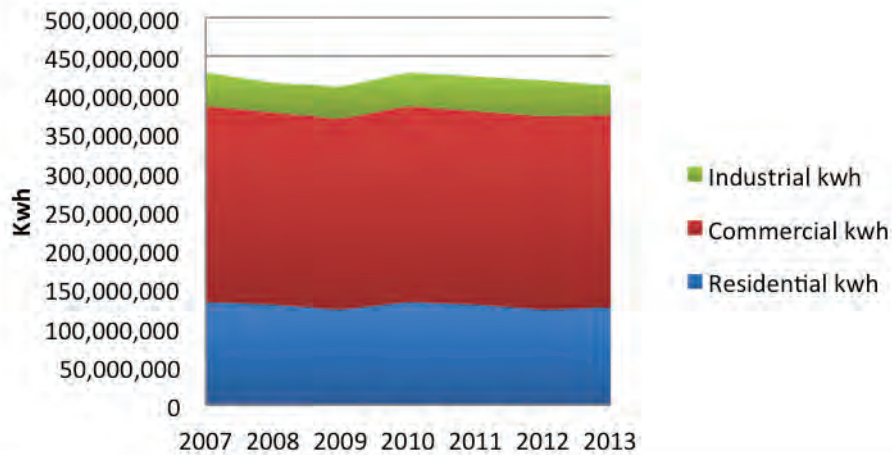
2013 GHG Emissions by Sector



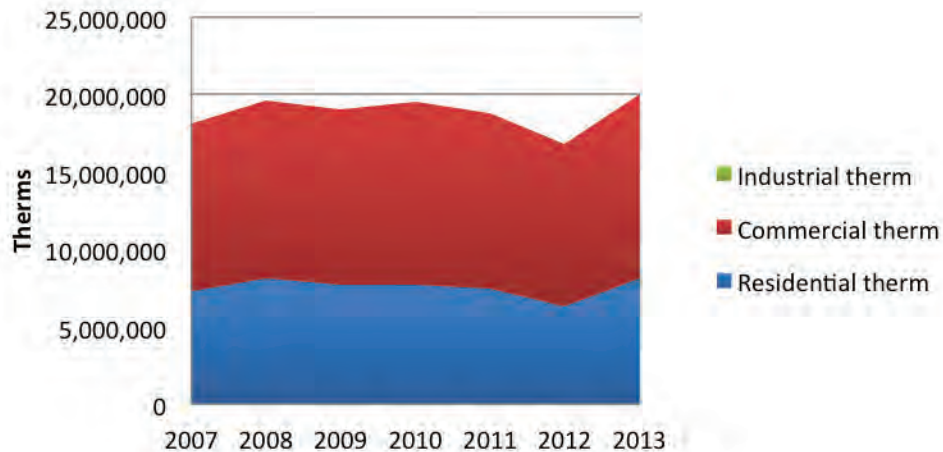
3.2 INVENTORY

E. UTILITY ELECTRICITY AND GAS CONSUMPTION TRENDS

Urbana Electricity Consumption in kWh



Urbana Natural Gas Consumption in Therms

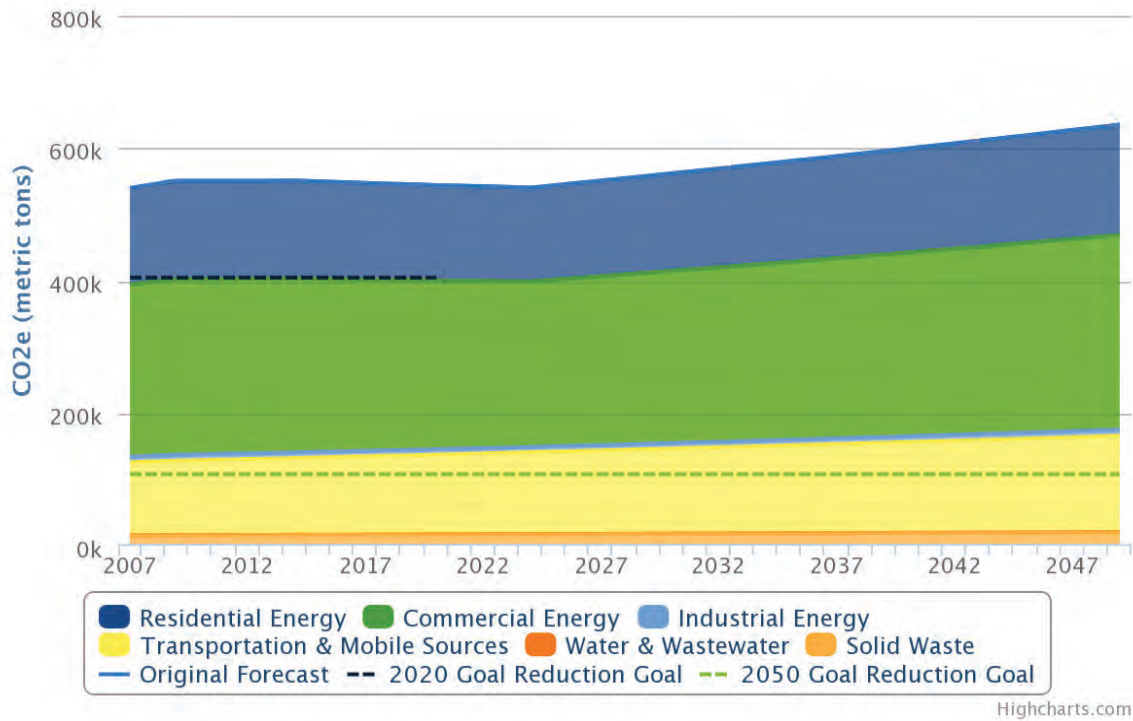


Industrial therms of natural gas are so small relative to other sectors, that they don't show up on the graph.

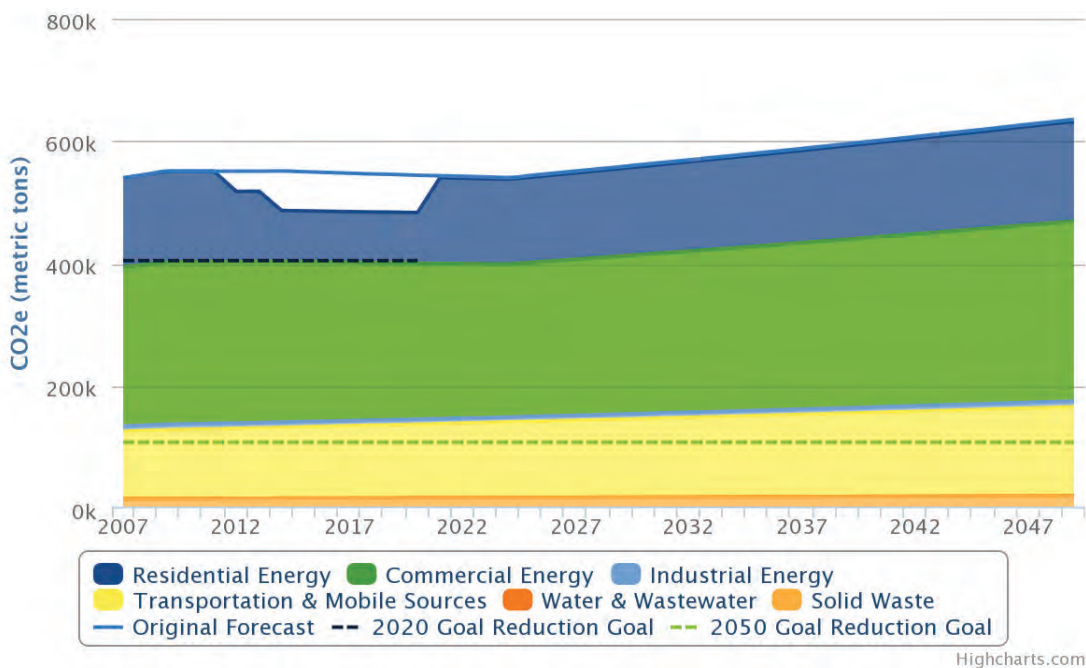
3.3 Projections

A. PLANNING PROJECTIONS

2007 to 2050 GHG Emissions Projection with Renewable Portfolio Standard



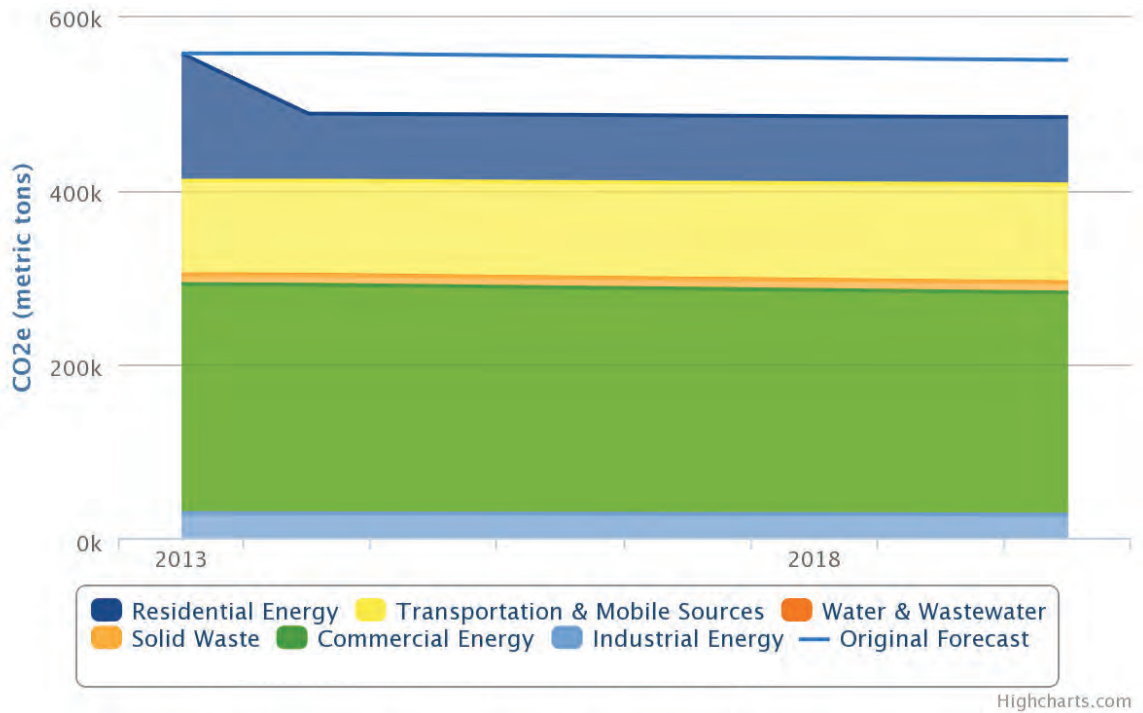
2007 to 2050 GHG Emissions Projection with Renewable Portfolio Standard and RECs through 2020



3.3 Projections

B. PLANNING PROJECTIONS

2013 to 2020 GHG Emissions Projection with Renewable Portfolio Standard and RECs through 2020



Highcharts.com

4. GOALS & ACTIONS



Source: Champaign-Urbana Mass Transit District

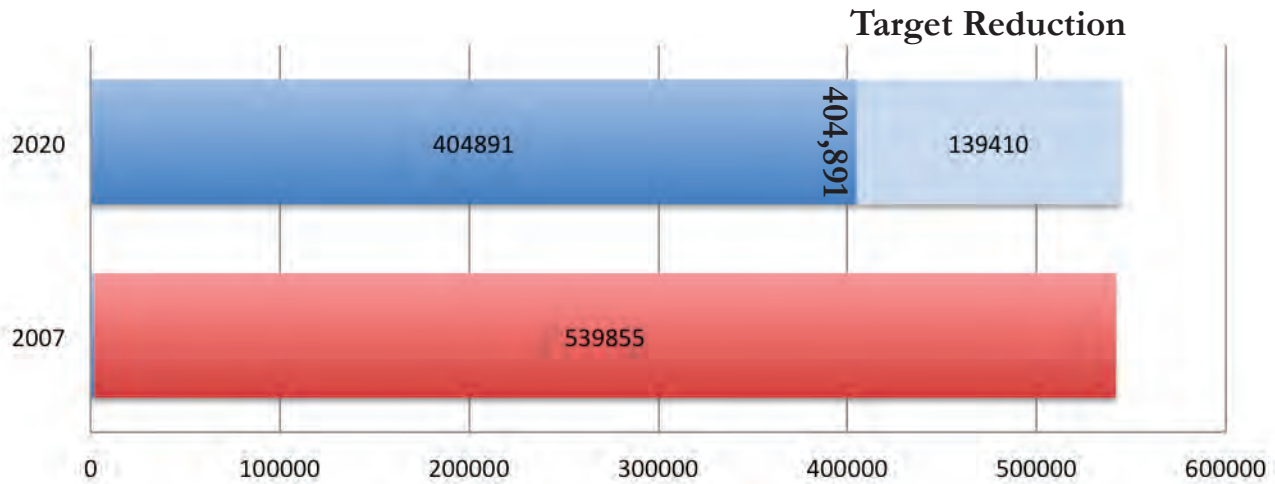
4.1 EMISSIONS REDUCTION GOALS

25% reduction in greenhouse gas emissions by 2020 to 404,891 MTCO₂e total

» 134,964 MTCO₂e reduction

80% reduction in greenhouse gas emissions by 2050 to 107,971 MTCO₂e total









» 431,884 MTCO₂e reduction

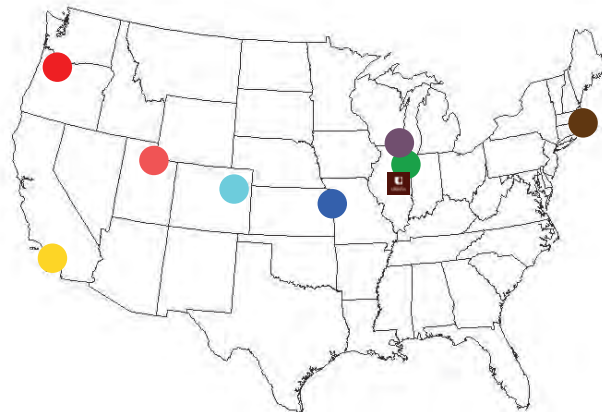


4.1 EMISSIONS REDUCTION GOALS

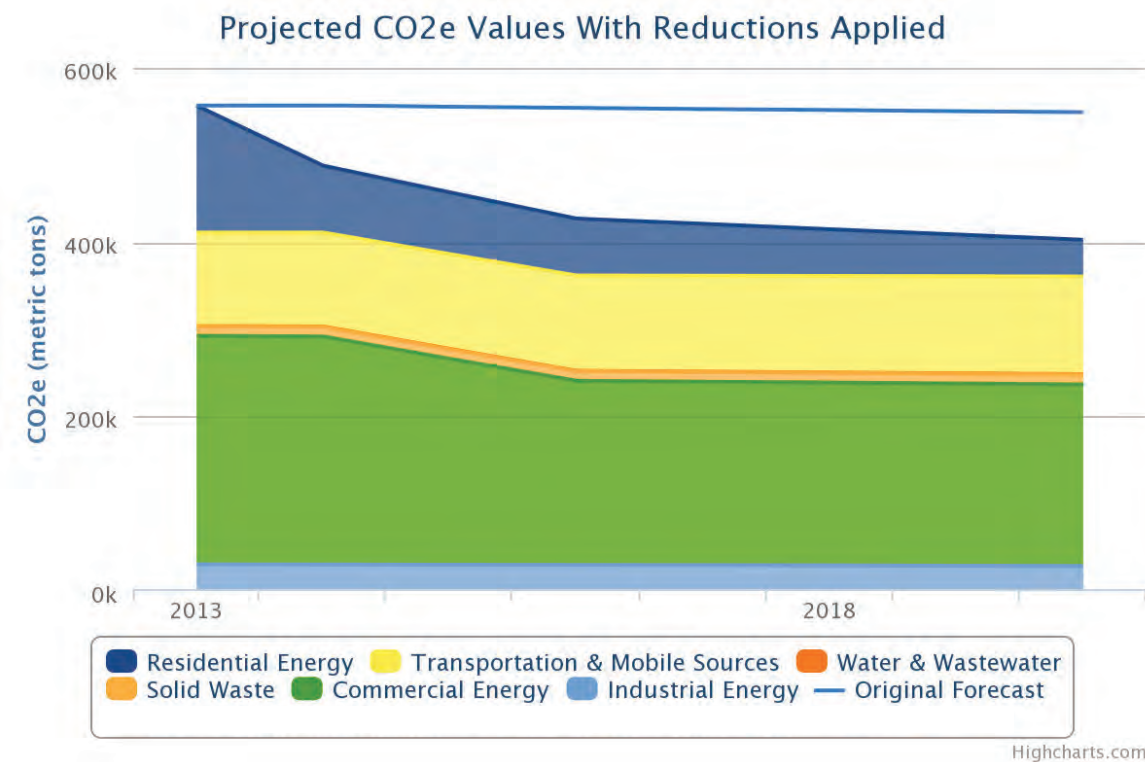
CITY	GOAL	PROGRESS
 Urbana, IL	25% below 2007 levels by 2020	-10% as of 2013*

*Includes accounting for Illinois Renewable Portfolio Standard and purchase of renewable energy credits

CITY	GOAL	PROGRESS
 Portland, OR	40% below 1990 levels by 2030	-6% as of 2010
 Los Angeles, CA	35% below 1990 levels by 2030	-7% as of 2012
 Salt Lake City, UT	80% below 2005 levels by 2040	No data
 Denver, CO	Achieve 1990 levels by 2020	-4% as of 2012
 Kansas City, MO	30% below 2000 levels by 2020	Seeking \$80,000 to conduct inventory
 Evanston, IL	17% below 1990 levels by 2020	-12% as of 2012
 Chicago, IL	25% below 1990 levels by 2020	+2% as of 2010
 Boston, MA	25% below 2005 levels by 2020	-11% as of 2011



4.2 ACTIONS OF SIGNIFICANT IMPACT



The above scenario demonstrates how the 25% reduction in greenhouse gas emissions by 2020 to 404,891 MTCO₂e total can be met by applying the following strategies:

- **Renewable energy credits purchase for all residential electric use from 2014 to 2020**
- **Home Energy Performance program rebates from 2015 to 2020**
- **Energy efficiency and/or renewable energy credits equaling 8% of commercial electric use from 2015-2020**

For a more comprehensive list of greenhouse gas reduction tactics, please refer to page 52-53 of Phase 1 of the Climate Action Plan excerpted in Appendix 5.9.

4.2 ACTIONS OF SIGNIFICANT IMPACT

Renewable Energy Credits Purchase

- Renewable energy credits purchase for all residential electric use from 2014 to 2020 would achieve 45% of our 2020 reduction goal.
- Estimated cost: Zero cost to the City. \$0.0016 per kWh is paid by ratepayers opted into municipal electric aggregation totaling approximately \$134,000.00 per year for our community.

Home Energy Performance Rebates

- Restarting Urbana's Home Energy Performance program from 2015 to 2020 would achieve 28% of our 2020 reduction goal.
- This program offered enhanced rebates for energy efficiency measures undertaken through Ameren ActOnEnergy.
- Estimated cost: \$60,000 per year cost to the City. Additional costs to homeowner participants.

Energy Efficiency and/or RECs in Commercial Sector or Other Sector

- Energy efficiency and/or renewable energy credits equalling 8% of commercial electric use from 2014-2020 would achieve 27% of our 2020 reduction goal.
- Potential commercial sector strategies may include financial incentives, energy benchmarking, or new financing models.
- Estimated cost: Estimated program cost for commercial reduction through financial incentives strategy: \$76,000 per year. Estimated program cost for commercial reduction through benchmarking strategy: \$490,000 per year. Estimated cost for commercial reduction through RECs: \$82,000 per year. Additional costs to business participants.

4.3 GOAL 1: REDUCE EMISSIONS FROM ENERGY USE IN THE BUILT ENVIRONMENT

Action 1: Propose an ordinance or policy requiring new City facilities to achieve LEED Certification

- Such a policy should set a square footage applicability requirement and a minimum level of certification.

Action 2: Propose an ordinance incentivizing or requiring new homes to achieve the Designed to Earn the ENERGY STAR certification, LEED certification, or Passive House certification

- Such a policy should set a square footage applicability requirement and a minimum level of certification.

Action 3: Propose an ordinance incentivizing or requiring new commercial buildings achieve the Designed to Earn the ENERGY STAR certification, LEED certification, or Passive House certification

- Such a policy should set a square footage applicability requirement and a minimum level of certification.
- A 2003 study by KEMA, an energy consulting firm, found that the lowest certification level of LEED incurred an extra cost of no more than 2.5% of total project cost.

Action 4: Engage Ameren Illinois to facilitate energy data access for commercial facilities with ENERGY STAR Portfolio Manager Web Services

- ENERGY STAR Portfolio Manager is used by a quarter million commercial buildings across the country to benchmark, track, and improve building energy performance. It is the program used to receive ENERGY STAR certification for a commercial building.
- Portfolio Manager is set up to transfer utility company energy use digitally into the building owner's account saving an enormous amount of time on data input and easing adoption of energy management.

Action 5: Seek funding for the Urbana Home Energy Performance program *

- The Urbana Home Energy Performance program (2010 to 2012) achieved a very low cost for each MTCO₂e reduced.
- \$5.26 was invested for each MTCO₂e reduced not including the funds spent by Ameren ActOnEnergy.
- \$69.25 was invested for each MTCO₂e reduced including the funds spent by Ameren ActOnEnergy.

Action 6: Evaluate opportunities to retrofit existing outdoor lighting with more energy efficient lighting



Source: U.S. Environmental Protection Agency

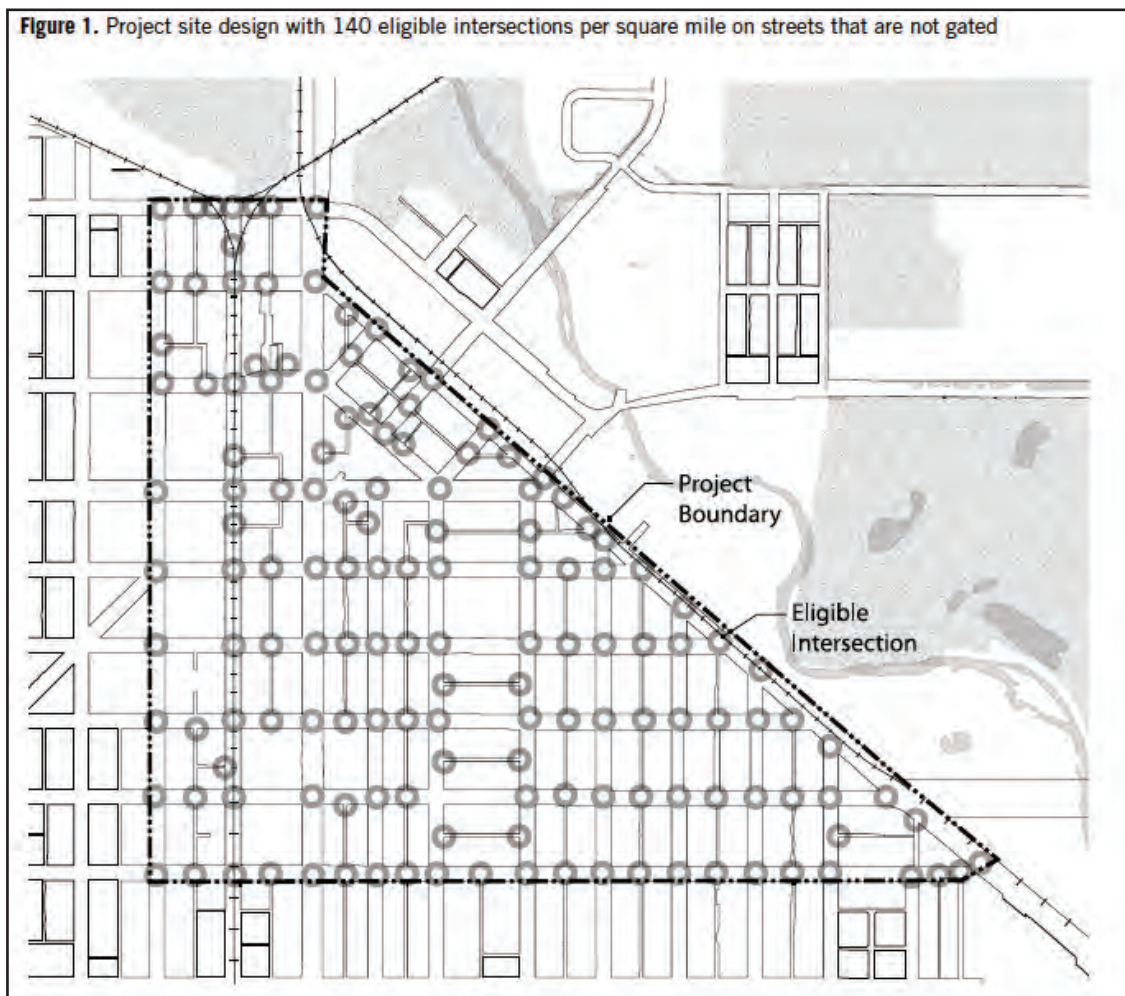
4.3 GOAL 2: REDUCE TRANSPORTATION EMISSIONS FROM FOSSIL FUELS

Action 1: Evaluate existing zoning and development codes for possible integration of LEED-ND and other green development standards

- LEED-ND combines energy efficient buildings with an energy efficient street pattern and urban form to create more sustainable places.

Action 2: Reduce single occupancy vehicle mode share from 51.6% to 40%

- Evaluate strategies to increase pedestrian, bike, carpool, and transit mode share
- Implement recommendations from the Urbana Bicycle Master Plan to achieve the next level of certification as a Bicycle Friendly Community.
- Support creation of a pedestrian master plan
- Encourage transit ridership



Source: LEED 2009 For Neighborhood Development

4.3 GOAL 3: INCREASE RENEWABLE ENERGY PURCHASING AND INSTALLATION

Action 1: Purchase Green Power Partnership qualified renewable energy credits in future municipal electric aggregation agreements*

- Urbana currently buys RECs equal to 100% of residential electricity use.
- Specification of Illinois generated RECs should be considered.

Action 2: Purchase Green Power Partnership qualified renewable energy credits and/or the installation of onsite renewable energy for City facilities

- Renewable energy credits (RECs) are generated offsite by large renewable energy facilities. These represent an environmental attribute that can be valued in the marketplace and traded, granting the purchaser the environmental attributes.
- Onsite renewables, while more expensive than RECs, provide long term clean energy and price stability.

Action 3: Pursue long term purchase of bundled renewable power and renewable energy credits

- Bundled power and RECs preclude the splitting of the two into separate markets with differing sales prospects.
- Bundled power and RECs on long term contracts send a powerful market signal demonstrating reliable demand for renewable energy.

Action 4: Propose strategies to improve the local onsite renewable energy market

- Services that map rooftop solar energy capacity can reduce uncertainty for potential buyers.
- Permitting practices should be tuned to minimize barriers to onsite renewable energy.
- Group purchasing of rooftop solar can reduce the soft costs of solar installations. Chicago is implementing a group purchase presently.
- Policies that ensure new buildings are ‘solar ready’ can ease the installation of solar panels at a later date.

Action 5: Propose strategies to increase renewable energy purchasing in the commercial sector*

- Commercial facilities can purchase bundled or unbundled RECs just as the City does for municipal electric aggregation.



Source: Armin Kübelbeck via Wiki Commons

4.3 GOAL 4: ADAPT TO CLIMATE CHANGE IMPACTS

Action 1: Engage the Illinois State Water Survey to evaluate an update to design storm standards

- Design storm standards in Technical Bulletin 70 of the Illinois State Water Survey (part of the Prairie Research Institute at the University of Illinois) define the 50 year storm event as having an intensity duration relationship that has a probability of being equaled or exceeded, on the average, once in a period of 50 years.
- Climate change may necessitate an update of these design standards.

Action 2: Evaluate funding needed to increase the tree pruning cycle to preserve existing trees

- Existing trees will sink more carbon and hold it longer when regularly pruned.
- Current Urbana cycle is thirteen years. The industry standard is five years.

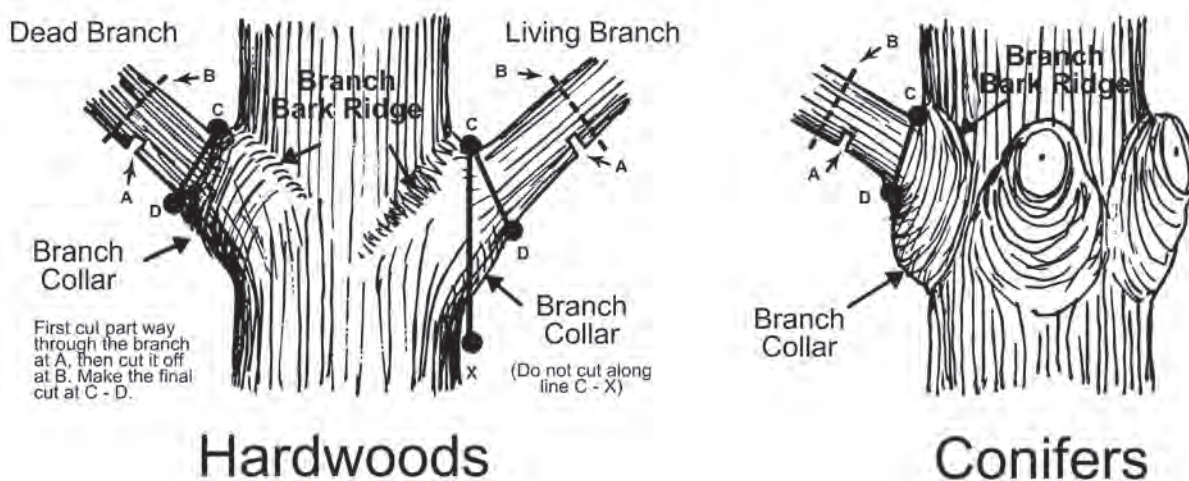
Action 3: Incorporate pollinator-supportive plant species in City landscapes

- Plant selections that provide food and shelter to insect pollinators can support pollination of both food crops and landscape plantings.

Action 4: Reduce tree species, genus, and family preponderance to 5%, 15%, and 30% respectively

- Current best practice in Arboriculture is to have no single species above 10% of the total urban forest and no single genus above 20% and no single family above 30% of the total urban forest. Urbana has no single species above 5.5% and no single genus above 20%. The percentages of families is unknown.
- Greater diversity in the street trees will minimize vulnerability to extreme weather events.

Proper Pruning Principles



Source: Arbor Day Foundation

4.3 GOAL 5: PARTNER TO ENHANCE LOCAL PARTICIPATION IN EXISTING PROGRAMS

Action 1: Partner with existing energy efficiency programs and community groups

- Utilize partnerships to increase the number of households and businesses in existing programs such as Ameren ActOnEnergy, ENERGY STAR, and Illinois Home Performance.

Action 2: Partner with organizations conducting smart grid education and engagement

- The Illinois Science and Energy Innovation Foundation is making grant funds available for promotion and education about smart grid technologies. Urbana can assist local organizations interested in providing public education and engagement on smart grid technologies.

Action 3: Partner with the Green Power Partnership

- Utilize partnerships to increase the number of Urbana businesses participating in the US EPA's Green Power Partnership by using and reporting green power.

Action 4: Partner with the local tenant unions

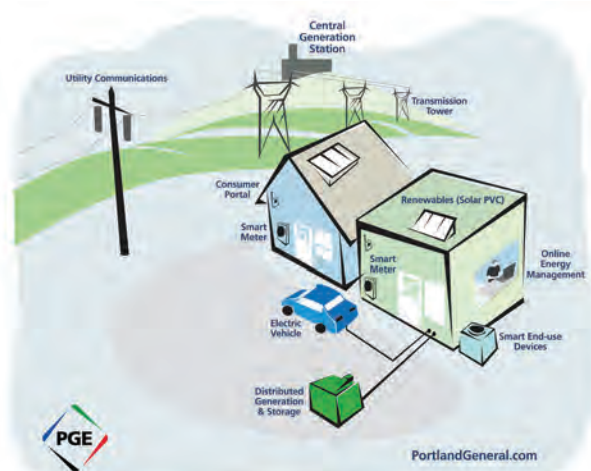
- Work with the tenant unions to promote energy efficient behaviors in rental residences.

GOAL 6: MONITOR PROGRESS TOWARDS CLIMATE ACTION PLAN GOALS

Action 1: Work with the Sustainability Advisory Commission to inventory greenhouse gas emissions and evaluate emissions reduction strategies every two years

Action 2: Work with the Sustainability Advisory Commission to create a new plan to reduce greenhouse gas emissions for the 2020 to 2050 period

Idealized Example of a Smart Grid



Source: Portland General Electric



ENVIRONMENTAL SUSTAINABILITY

ANNUAL REPORT: 2016
City of Urbana, Illinois

ENVIRONMENTAL SUSTAINABILITY DIVISION

The Environmental Sustainability Division works to improve the performance of energy, water, and waste management while reducing sanitary nuisances. The Division administers community energy efficiency and water conservation efforts while working with City staff to also save energy and water. The Division operates the U-Cycle curbside and multi-family recycling service while conducting engagement with City staff to reduce waste. The Division enforces nuisance vegetation and refuse codes and waste hauler licensing while engaging community groups to ‘adopt’ street sections for litter collection with the Adopt Urbana program. The Division manages the Municipal Electric Aggregation program and the concomitant purchase of renewable energy credits. The Environmental Sustainability Division works with the Sustainability Advisory Commission whose members are appointed by the Mayor. The Commission meets regularly to receive updates from the Division and advise on the future course of sustainability work. For more information, visit <http://urbanaillinois.us/sustainability>.

In 2017, the Division intends to conduct another bulk solar array purchase for the community, evaluate additional solar arrays for city facilities, consider how to offer hazardous waste disposal for residents, assess more energy efficient street light retrofits, and encourage monarch and pollinator supportive plantings.

Division Staff

Scott R. Tess, Environmental Sustainability Manager
 Courtney Kwong, Recycling Coordinator
 Jason Arrasmith, Environmental Compliance Officer
 Kate Brickman, Administrative Assistant

Sustainability Advisory Commission Members

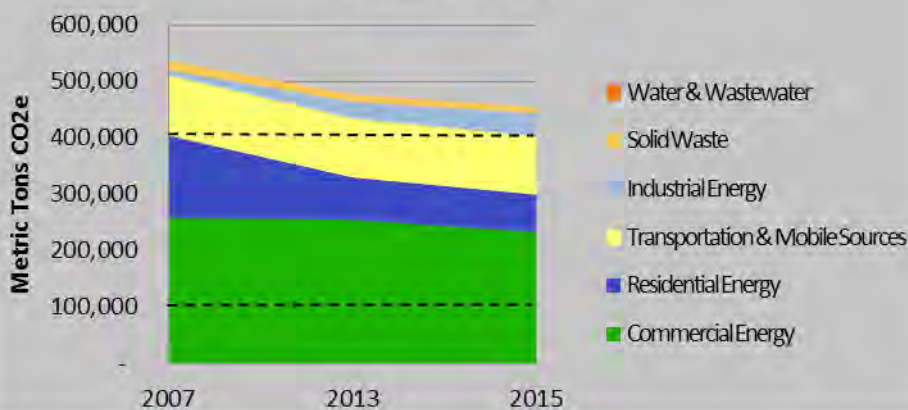
Andrew Stumpf
 Elizabeth Meschewski
 Marya Ryan, Chair
 Morgan Johnston
 Stacy Gloss
 Stephen Wald
 Todd Rusk

Environmental Sustainability Division Budget Fiscal Year 2016-2017

Category	Budget
U-Cycle -staffing, contract collection, carts, public engagement	\$715,041.00
Sustainability and Environmental Compliance -staffing, energy, water, nuisance abatement	\$252,609.00
Total	\$967,650.00



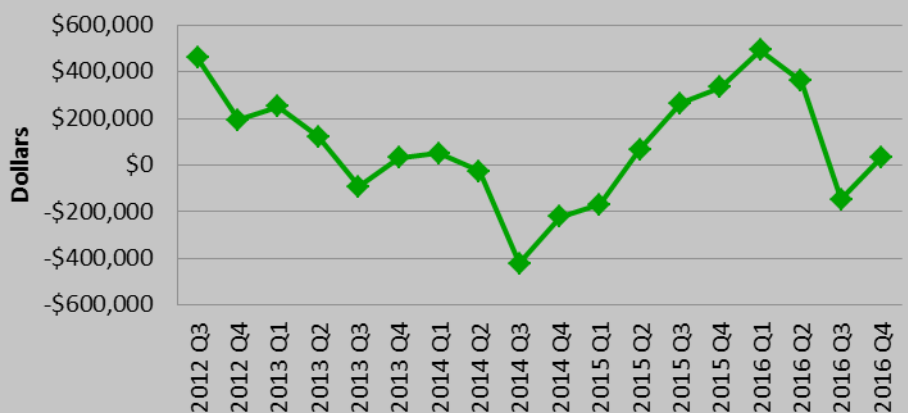
Community Greenhouse Gas Emissions



Additional Information

The reduction in greenhouse gas emissions in the Residential sector is primarily attributable to the purchase of Renewable Energy Credits in the City's Municipal Electric Aggregation program. The dotted lines represent the 2020 and 2050 greenhouse gas reduction goals.

Quarterly Municipal Electric Aggregation Savings

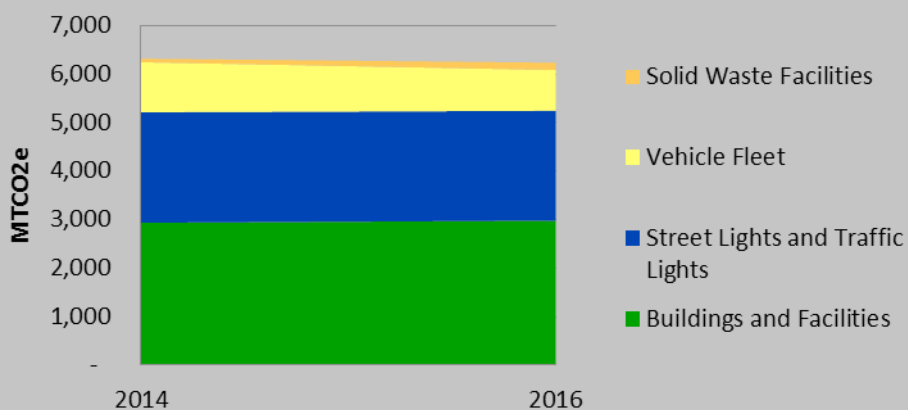


Urbana Leads with Solar

With support from the Grow Solar Partnership, the City of Urbana led a county-wide solar bulk purchase program. In six months the program conducted 24 Solar Power Hours educating hundreds of residents on solar energy arrays. 200 solar site assessments were performed at homes and businesses resulting in 81 contracts for solar energy installations. In total, 605 kilowatts of solar capacity was installed at homes, businesses, and farms across the County.



City Facilities Greenhouse Gas Emissions



Electrifying the Fleet

The City purchased its first all-electric vehicle. The 2016 Mitsubishi MiEV has a range of 61 miles per charge, perfectly suiting the daily needs of the City's Recycling Coordinator.



Additional Information

The Community Water Consumption chart shows proportional water consumption by sector in the community over time. *2013 data in this chart is estimated since actual data is not available from Illinois American Water.

Planning Our Water Future

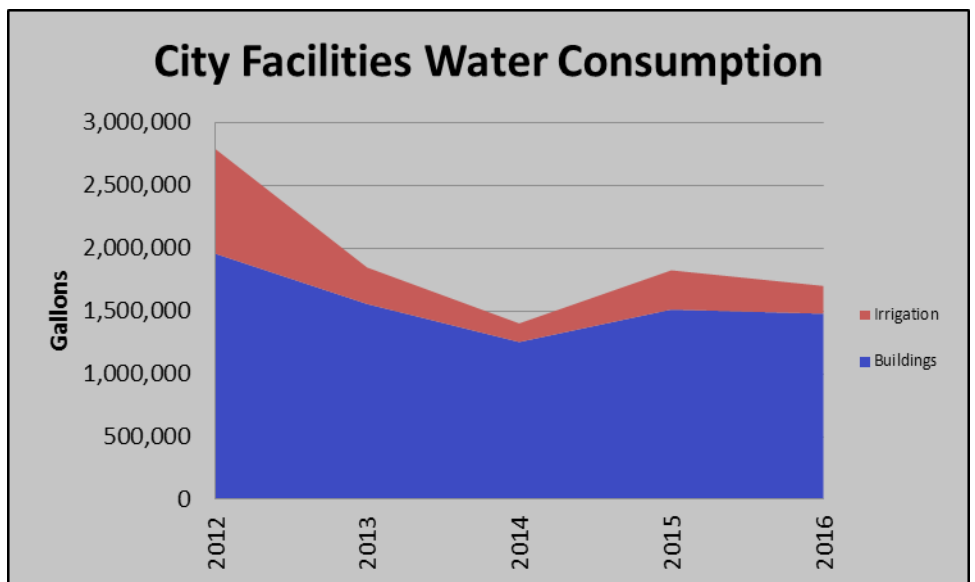
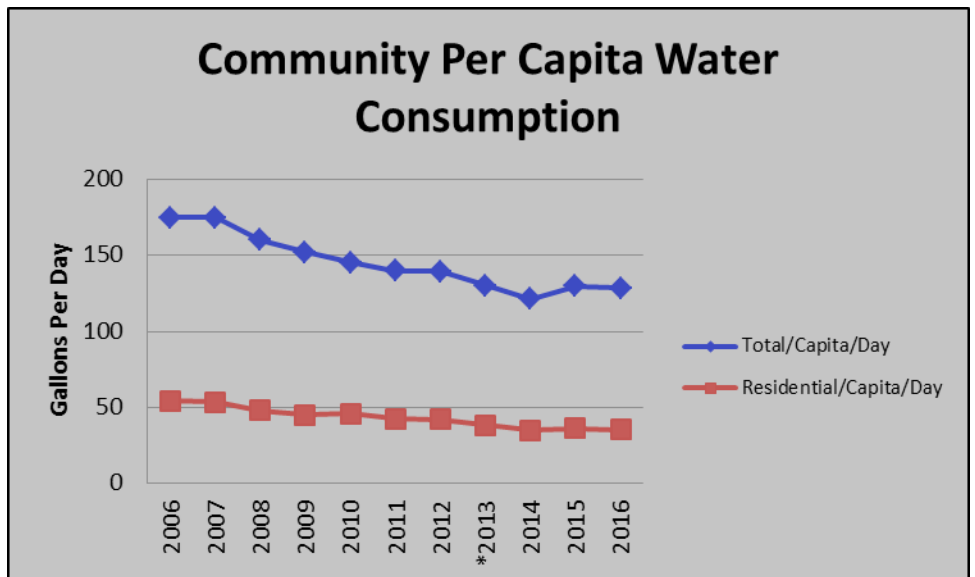
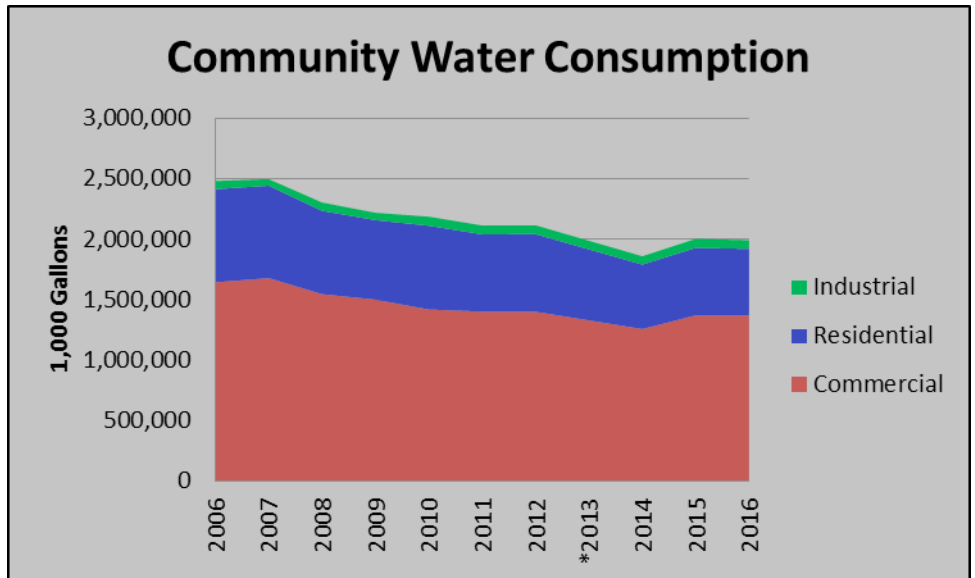
Over the course of two and half years, the Champaign County Regional Planning Commission has been working with stakeholders including City of Urbana staff to create A Regional Water Supply Framework. The mission statement of the Framework reads:

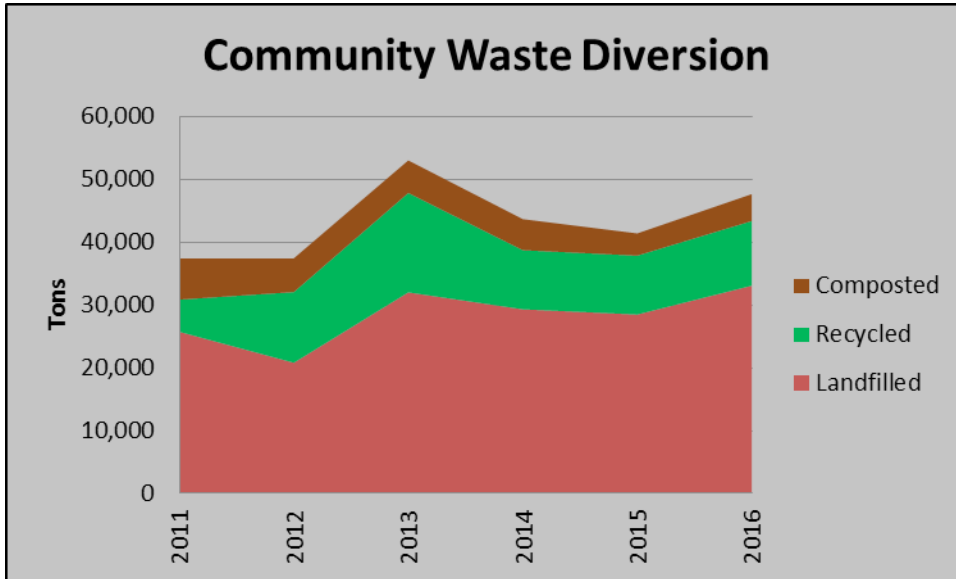
“to help protect the quality and quantity of the water supply for Champaign County by fostering a shared understanding of the current status of water quality and quantity in East Central Illinois and recommending an array of informed public policies and strategies useful in achieving those policies.”

The document and its 36 recommended actions are posted at http://www.ccrpc.org/wp-content/uploads/2016/11/Regional-Water-Supply-Framework_2016_FINAL_1108.pdf.



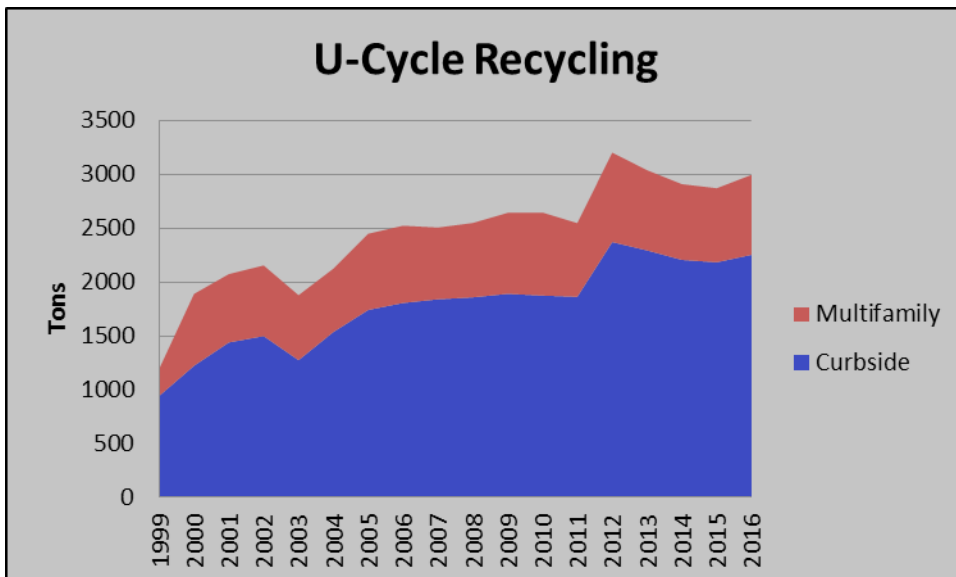
A Regional Water Supply Framework
FOR CHAMPAIGN COUNTY AND EAST-CENTRAL ILLINOIS
OCTOBER 2016





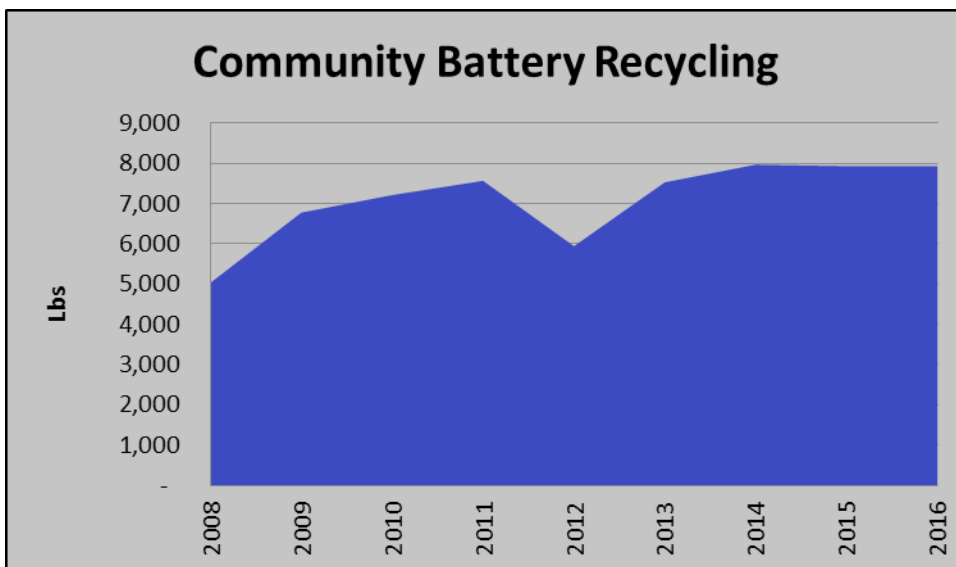
Additional Information

The Community Waste Diversion chart shows proportional waste, recycling, and composting over time. In 2016, total waste diversion was 31%.



America Recycles Day

U-Cycle and the Urbana Park District conducted an America Recycles Day event in November 2016 educating residents about local electronics recycling options. Approximately 90 participants took part in the event which included making mobiles out of old CDs and DVDs and making jewelry out of old keyboard keys. In addition, the Illini Gadget Garage assisted residents with basic troubleshooting techniques for their electronic devices.



Additional Information

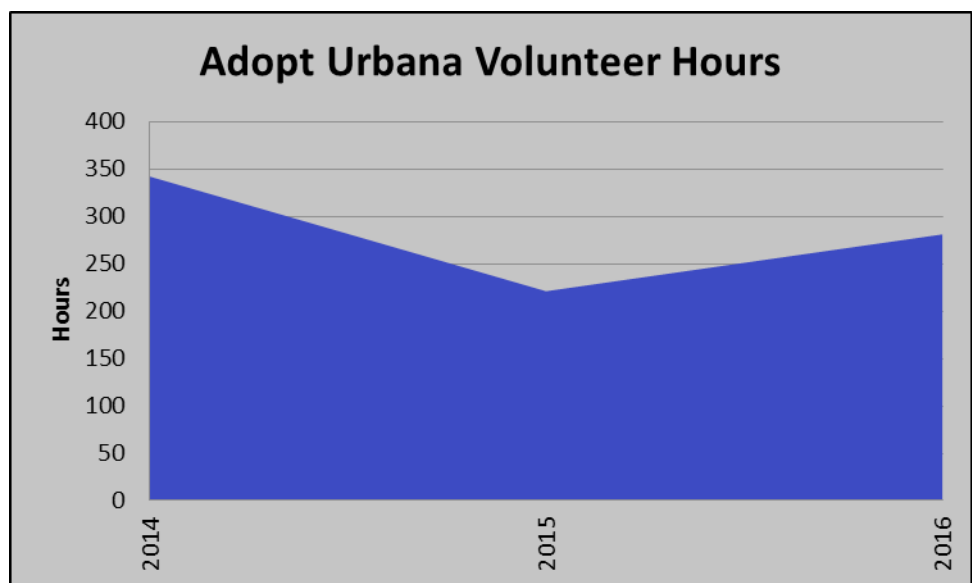
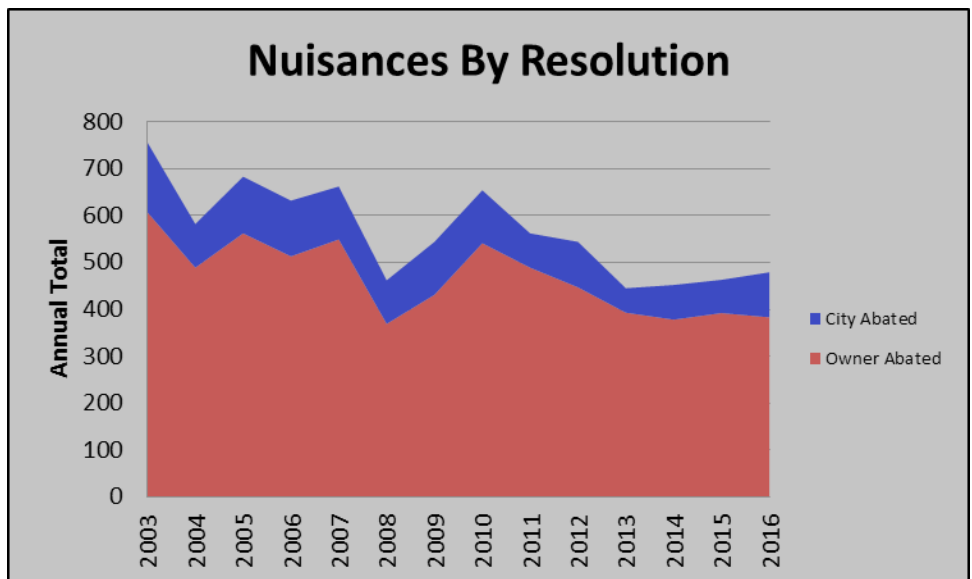
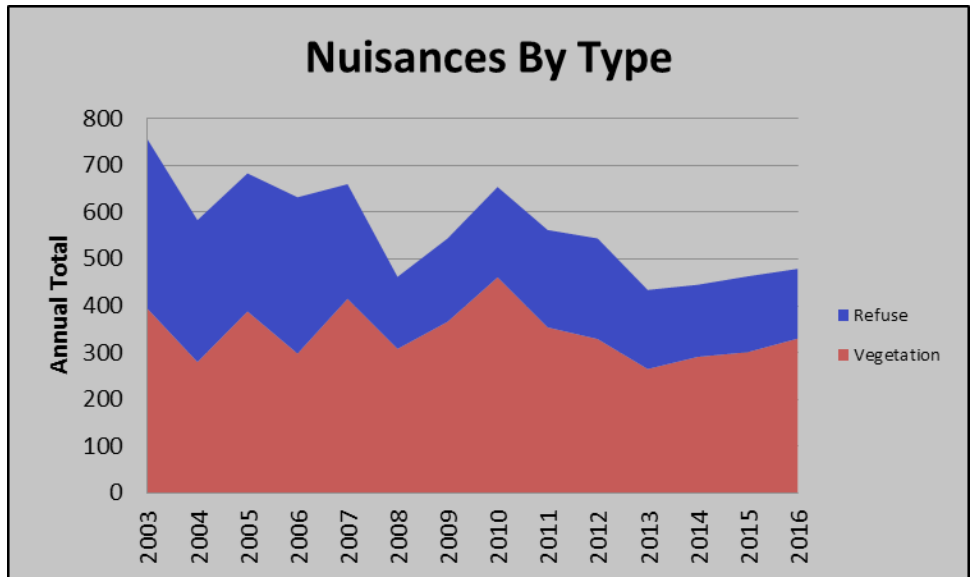
In 2016 a private company opened a construction and demolition materials recycling facility in Urbana. Waste haulers reported delivering 2,608 tons of materials to this facility for recycling in 2016.

Additional Information

The Nuisances By Type chart shows the proportion of nuisances that are either vegetation or refuse. Sidewalk snow removal violations as well as noise ordinance violations are not shown due to the very low instances of these violations.

Responding to Nuisances

City staff regularly convene a Problem Properties meeting where staff collaborate on improving conditions at properties that are having recurring crime, nuisance, or other challenges. This year the meeting discussed repeated complaints regarding the poor state of maintenance of clothing donation drop boxes. If the box is not regularly emptied, persons begin dumping clothes and other items around the box, creating a nuisance. When staff contacted property owners, many stated they never gave permission to host the boxes. Staff worked with property owners who wished to continue hosting the boxes to ensure good maintenance practices. Where owners did not wish to host the boxes, staff worked to identify the collection box owners and notify them that they didn't have permission to use the property.



AWARDS & GRANTS

The City of Urbana received a technical assistance grant from the US Department of Energy SolSmart program. The assistance is helping the City evaluate solar energy and energy storage opportunities at City-owned facilities. The City hopes to achieve a SolSmart designation in 2017.



Urbana has been named a Green Power Community by the U.S. EPA for its ongoing use of green power through the city's municipal electric aggregation program. Green power is zero-emissions electricity that is generated from environmentally preferable renewable resources, such as wind, solar, geothermal, biogas, eligible biomass, and low-impact hydro.

The City of Urbana's Public Works Building received the 2017 Urbana-Champaign ENERGY STAR Challenge award for Most Improved ENERGY STAR Score. ENERGY STAR Scores are a percentile ranking among a national data set of similar building types. The Public Works Building improved from a score of 58 to 72 on a 1-100 scale.

