ICLEI MILESTONE 2: SET A REDUCTION TARGET
OSHKOSH, WISCONSIN

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March 7, 2016

ICLEI Milestone 2: Set a Reduction Target

Oshkosh, Wisconsin

March 7, 2016

Prepared by the
East Central Wisconsin Regional Planning Commission

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ABSTRACT

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This report summaries the baseline inventory outlined in Milestone 1 and provides a basis for the established reduction targets, it outlines major accomplishments that have been made since 2007 towards reducing greenhouse gas emissions, sets short, mid and long-term reduction targets and identifies potential strategies that can be used to achieve the identified reduction targets.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The City of Oshkosh recognizes that greenhouse gas (GHG) emissions from human activity are contributing to global climate change. On September 11, 2007, the City of Oshkosh signed onto the U.S. Mayor's Climate Protection Agreement committing to reduce GHG emissions to meet or surpass the Kyoto Protocol targets. To further this effort the City committed to adopt the International Council for Local Environmental Initiatives (ICLEI) five milestones to reduce GHG and air pollution emissions.

This report, the second in the series of five milestone reports, provides an (1) overview of global climate change and the impacts that are being experienced in the Oshkosh area; (2) summaries the baseline inventory outlined in Milestone 1 and provides a basis for the reduction targets that were established; (3) outlines major accomplishments that have been made since 2007 by city government and UW-Oshkosh towards reducing greenhouse gas emissions; (4) sets short, mid and long-term reduction targets; and (5) identifies potential strategies that can be used to achieve reductions in greenhouse gas emissions.

Baseline line inventories for municipal operations and for community sectors were completed for the year 2007. Municipal operations include City owned buildings and facilities, streetlights and traffic signals, water delivery and wastewater facilities, solid waste facilities, and vehicle and transit fleet. The community-wide inventory looked at the residential, commercial, industrial, transportation and waste sectors. According to Milestone 1, in 2007, about 1,305,709 metric tons of CO_2e emissions were generated in the City of Oshkosh. Almost 98 percent of the total emissions were from the community-wide portion of the City, while the remaining 2 percent could be attributed to municipal operations.

Analyzing greenhouse gas emissions by sector and source provides a basis on where efforts to reduce the City's overall emissions should be concentrated in order to make the greatest impact. A closer review of the municipal operations revealed that about three-quarters (74.4%) of the municipal greenhouse gas emissions were from electric usage. A further breakdown of the emissions attributed to electric usage showed that almost thirty percent (29.6%) of the electric emissions were related to the wastewater treatment plant, and a quarter (26%) were from buildings and facilities. Over half (54.8%) of the greenhouse gas emissions were attributed to electric usage, while another 18 percent (18.2%) of the community-wide emissions were caused by the burning of natural gas. Looking at community-wide gas emissions by sector, commercial (46.3%) and industrial (31.7%) businesses contributed about three-quarters of the greenhouse gas emissions related to electric use and about two-thirds of the emission resulting from natural gas (commercial, 34.5%; industrial 29.6%).

Since 2007, the City of Oshkosh and UW-Oshkosh have been working to reduce their greenhouse gas emissions. The City of Oshkosh has received about $690,300 in grant and incentive money to improve energy efficiency and conservation in municipal building/facilities. This has resulted in annual utility cost savings and a reduction of greenhouse gas emissions.

The University of Wisconsin Oshkosh has also been aggressive in reducing its greenhouse gas emissions and is striving for climate neutrality by mid-century.

Reduction targets are used to establish a tangible focal point for local action and change. They provide an objective to strive for and against which progress can be measured. It enables policy makers to outline a series of policies, programs and projects whose combined emission reductions will achieve the emission reduction goal. Short, mid and long-term reduction targets were established by the Oshkosh Sustainability Advisory Board (SAB), ICLEI Education and Outreach and Government Action Subcommittee after researching reduction targets established by international and national agreements, ICLEI communities, Wisconsin and surrounding communities. The following reduction targets were established:

- Short-Term Emissions Target: 25 percent below 2007 baseline by 2025
- Mid-Term Emission Target: 40 percent below 2007 baseline by 2035
- Long-Term Emission Target: 80 percent below 2007 baseline by 2050

As the City of Oshkosh develops its Climate Action Plan, it should consider some of the recommendations identified in its current strategic plan, as well as additional policies that will assist the City in reducing greenhouse gas emissions and achieving the identified reduction targets.

ICLEI MILESTONE 2: SET A REDUCTION TARGET
OSHKOSH, WISCONSIN

INTRODUCTION

The City of Oshkosh recognizes that greenhouse gas (GHG) emissions from human activity are contributing to global warming. On September 11, 2007, the City of Oshkosh signed onto the U.S. Mayor's Climate Protection Agreement committing to reduce GHG emissions to meet or surpass the Kyoto Protocol targets including a seven percent greenhouse gas emission reduction from 1990 levels by 2012 (Resolution 07-262). To further this effort the City committed to adopt the International Council for Local Environmental Initiatives (ICLEI) five milestones to reduce GHG and air pollution emissions. Milestone Report #1, the first step in the five milestone reports was completed on May 6, 2013.

This document denotes the completion of the second milestone in ICLEI's five milestone process: Set a Reduction Target.

U.S. Mayor's Climate Protection Agreement

Under the Agreement, participating cities commit to take following three actions:

- Strive to meet or beat the Kyoto Protocol targets in their own communities, through actions ranging from anti-sprawl land-use policies to urban forest restoration projects to public information campaigns;
- Urge their state governments, and the federal government, to enact policies and programs to meet or beat the greenhouse gas emission reduction target suggested for the United States in the Kyoto Protocol -- 7% reduction from 1990 levels by 2012; and
- Urge the U.S. Congress to pass the bipartisan greenhouse gas reduction legislation, which would establish a national emission trading system.

Source: The United States Conference of Mayors.

GLOBAL CLIMATE CHANGE

Climate refers to the average weather conditions in an area. For example in Oshkosh it's expected that the climate will be cold and snowy in the winter and warmer in the summer. When we talk about climate change, we are talking about a pattern of change that is happening over a number of years. Global climate change means that the pattern of change is occurring around the world. So why is this important? We know that the earth's climate has changed many times since the earth was formed. For example, evidence has shown that the earth has gone through periods when most of the surface was covered by ice and other periods where warming have occurred. In the past, this change has been naturally occurring. Today, human activities, especially the burning of fossil fuels and land clearing activities are contributing to global climate change at a more accelerated rate.

Global Warming

Global warming is defined as the gradual increase in the temperature of the earth's atmosphere. According to NASA's Goddard Institute for Space Studies, the earth's average surface temperature has risen around 1.8 degrees Fahrenheit since the late 19th century.[1] Most of this warming has occurred in the last 35 years and 2015 was the warmest year on record since modern record keeping began in 1880.

[1] NASA's Goddard Institute for Space Studies, website: http://www.giss.nasa.gov/.

Most scientists believe that a rise in greenhouse gas emissions is causing the temperature of the earth's atmosphere to increase. Two greenhouse gases of most concern are carbon dioxide (CO_2) and methane. CO_2 emissions are released into the atmosphere whenever fossil fuels are burned to produce electricity, heat buildings and power vehicles, boats, lawn mowers and other devices. Methane, or CH_4, is a byproduct of organic waste and sewage decomposition. Methane gas is produced when organic waste, such as paper, yard trimmings, leaves, wood and food decompose. Sewage treatment plants and landfills are a large source of methane gas, though not the only source. Methane is 21 times more powerful per unit of carbon, in terms of its greenhouse effect, than CO_2.

The slightest change in average global temperatures can cause major changes in climate patterns. It may also cause some areas of the world to become warmer, while others may become colder. Likewise precipitation may increase in some areas while others may experience drought and water shortages. As a result of global warming, the earth is already experiencing more frequent and extreme weather events.

Studies have shown that even if substantial reductions in greenhouse gas emissions are made, average global temperatures will continue to rise. If changes aren't made and global emissions continue to increase these changes could be much larger. A study done in 2014 indicated that within the Midwest, temperatures could increase by 3.8 degrees Fahrenheit by mid-century if substantial reductions in emissions are made or to 4.9 degrees Fahrenheit if global emissions continue to increase.[2]

Local Impacts[3]

In our area, climate change will impact human health, water resources, agriculture and ecosystems.[4] Average temperatures are already warmer; this is especially true for both winter and nighttime temperatures.

Human Health

In the summer, warmer average temperatures are leading to an increase in the number of days above 95 degrees Fahrenheit. Whenever there are extended periods of excessively hot weather, young children, older adults and people with existing health conditions are more vulnerable to heat stress. Warmer temperatures furthermore increase the demand for air conditioning, which leads to an increase in the amount of greenhouse gases being emitted into the air. When it's warmer, people, animals and crops need more water. Increased water

[2] Pryor, S. C., D. Scavia, C. Downer, M. Gaden, L. Iverson, R. Nordstrom, J. Patz, and G. P. Robertson, 2014: Ch. 18: Midwest. Climate Change Impacts in the United States: The Third National Climate Assessment, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 418-440. doi:10.7930/J0J1012N.
[3] For more information on climate change in Wisconsin see Wisconsin's Changing Climate: Impacts and Adaptation. http://www.wicci.wisc.edu/publications.php.
[4] http://www3.epa.gov/climatechange/impacts/midwest.html.

demand, increases energy usage needed to produce and treat more water and wastewater, which in turn increases the amount of greenhouse gases being emitted into the atmosphere.

Water Resources

We are already seeing more intense storms with higher precipitation levels and this trend is expected to continue. During heavy downpours, precipitation has less time to be infiltrated into the ground, this strains drainage and sewer systems, and may increase the amount of sediment, nutrients, pollutants and trash entering streams, rivers and lakes. Intense storms may also cause flooding, increase the likelihood of property damage, cause travel delays and disrupt services. Warmer temperatures can directly raise the temperature of lakes, rivers and streams. Rising water temperatures can harm species such as trout that live in cold water habitats, and spur the growth of blue-green and toxic algae that reduce water quality. Rising temperatures could also diminish winter ice cover, which may leave shores more vulnerable to waves, increase erosion and flooding, and damage fish habitat and property.

Agriculture and Ecosystems

Climate change is expected to have numerous impacts on agriculture, forests, and other ecosystems. While there may be some short term benefits such as a longer growing season, and enhanced crop growth due to increased carbon dioxide levels, there are likely to be increasingly detrimental long-term effects. Warmer temperatures can stress crops and animals, and increase pathogens and disease. This could result in lower crop yields, and a reduction in milk, eggs and meat. In addition, wetter springs could delay planting. In the last 57 years, spring has come earlier in Wisconsin than it used to, and the growing season has been extended by about two weeks.[5] Trees are budding earlier and so are flowers. This is disrupting life cycles of many of our state plants and animals. Plant species that we are used to may also change, as temperatures continue to rise and plant ranges shift north. This may impact the species of trees native to the Oshkosh area.

ICLEI MILESTONES – AN OVERVIEW

The City of Oshkosh has pledged to reduce global warming by completing five Milestones.

- Milestone Report 1 – Conduct a Greenhouse Gas Emission Analysis: Baseline Inventory and Forecast Emissions Growth. The GHG Emissions Inventory and Analysis is an audit of the activities causing or releasing GHG, and a projection of how much these activities are likely to grow by a target year. The City of Oshkosh has completed this report.
- Milestone Report 2 – Set a Reduction Target. The reduction target is the specific GHG emissions reduction goal that the City of Oshkosh aims to achieve by a designated year.

[5] http://www.wicci.wisc.edu/report/WICCI-Chapter-4.pdf.

It is usually expressed as a percentage below the quantity of emissions released in the baseline year.

- Milestone Report 3 – Develop a Climate Action Plan. This plan is a description of the actions, policies, programs and measures that the City of Oshkosh will take to meet its GHG reduction target. In addition to listing actions to be implemented, the plan should discuss how each action will be implemented (timeline, financing, and responsibility).
- Milestone Report 4 – Implement the Climate Action Plan.
- Milestone Report 5 – Monitor Progress and Report Results.

MILESTONE REPORT 1 – A SUMMARY

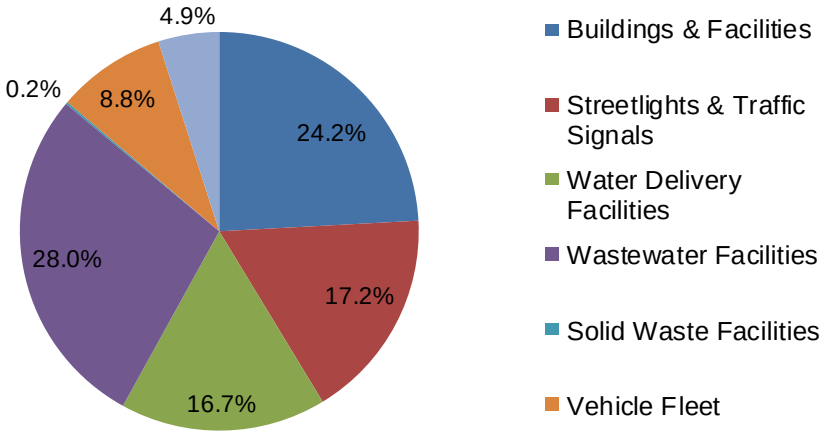
Baseline inventories for the City of Oshkosh were completed for both municipal operations (2009) and community-wide (2011-2012) between 2009 and 2012.[6] The inventories included all major sources of greenhouse gas emissions generated within the City.

Oshkosh Municipal Operations

A detailed inventory was completed for municipal operations, which included building and facilities, streetlights and traffic signals, water delivery facilities, wastewater facilities, solid waste facilities, vehicle fleet and transit fleet. Total emissions were 25,487 metric tons of CO_2e in 2007. About half (52.2%) of the emissions were due to building and facilities (24.2%), and wastewater facilities (28.0%) (Figure 1). Another third (33.9%) were due to streetlights and traffic signals (17.2%) and water delivery facilities (16.7%). The remaining 13.9 percent of emissions were due to solid waste facilities (0.2%), vehicle fleet (8.8%) and transit fleet (4.9%). The source of about three-quarters of the emissions can be attributed to electric usage (Figure 2). Another 20 percent (21.2%) can be attributed to natural gas (11.3%) and diesel fuel use (9.9%). A detailed breakdown of metric tons of CO_2e by sector and source is found in Appendix A, Table A-1.

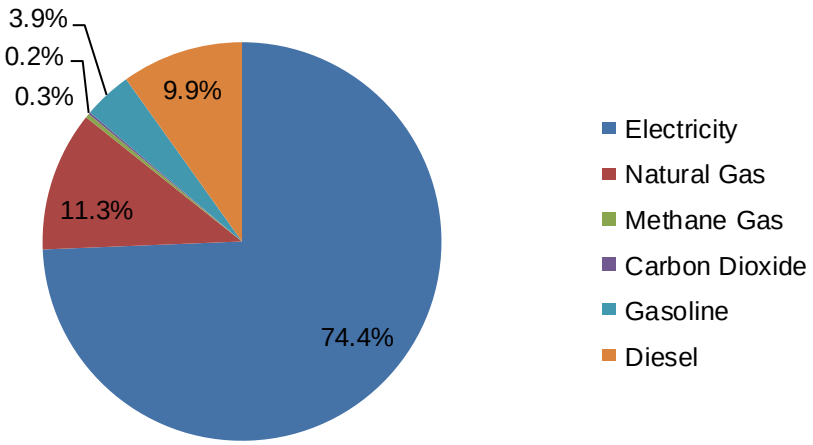
[6] ICLEI Milestone Report 1, Oshkosh Wisconsin Greenhouse Gas Emissions Analysis, May 6, 2013.

Figure 1: Percent Municipal Operations Greenhouse Gas Emissions by Sector, 2007



Source: ICLEI Milestone Report 1, Oshkosh Wisconsin Greenhouse Gas Emissions Analysis, May 6, 2013.

Figure 2: Percent Municipal Operations Greenhouse Gas Emissions by Source, 2007



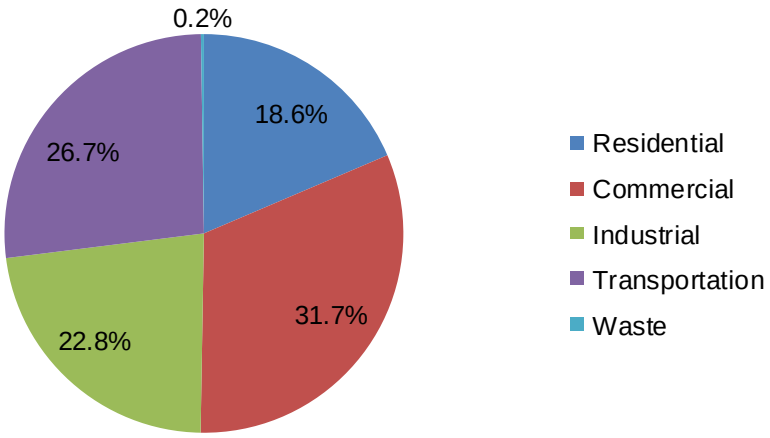
Source: ICLEI Milestone Report 1, Oshkosh Wisconsin Greenhouse Gas Emissions Analysis, May 6, 2013.

Oshkosh Community-Wide

A detailed greenhouse gas emissions inventory, which included residential, commercial, industrial, transportation and waste was completed for the community (does not include municipal operations). Total emissions were 1,280,222 metric tons of CO_2e in 2007. Around a third (31.7%) of the emissions were due to the commercial sector, about a quarter each were due to the transportation (26.7%) and industrial (22.8%) sectors and about twenty percent was attributed to the residential sector (18.6%) (Figure 3). The waste sector made up the remaining 0.2 percent of the total emissions. The source of over half (54.8%) of the emissions can be attributed to electric usage (Figure 2). Another 40 percent (40.6%) can be attributed to natural gas (18.2%) and gasoline use (22.4%). Diesel (4.4%) and other (0.2%; paper products, food

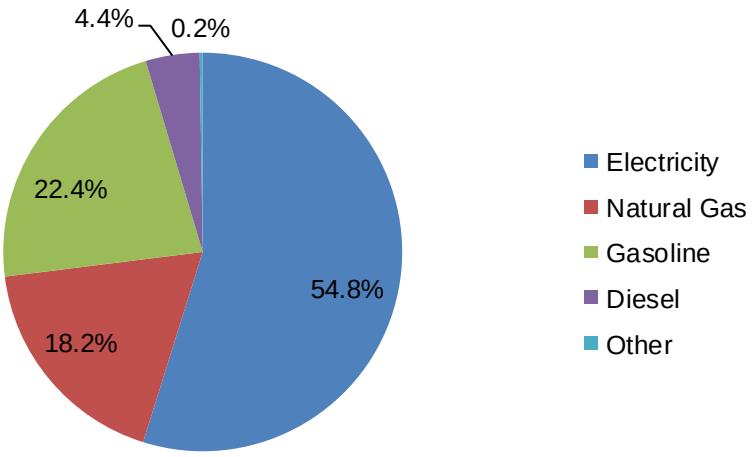
waste, plant debris, and wood and textiles) make up the remaining 4.6 percent. A detailed breakdown of metric tons of CO_2e by sector and source is found in Appendix A, Table A-2.

Figure 3: Percent Community-Wide Greenhouse Gas Emissions by Sector, 2007



Source: ICLEI Milestone Report 1, Oshkosh Wisconsin Greenhouse Gas Emissions Analysis, May 6, 2013.

Figure 4: Percent Community-Wide Greenhouse Gas Emissions by Source, 2007



Source: ICLEI Milestone Report 1, Oshkosh Wisconsin Greenhouse Gas Emissions Analysis, May 6, 2013.

Emissions Forecast

In 2013, a forecast of future emission growth was completed using a business-as-usual scenario. The forecast took into account population growth and estimated what the volume of greenhouse gas emissions would be in the future if no further action actions are taken by the local government to reduce those emissions. It was assumed that the population of the City of Oshkosh would grow by about 1 percent by 2017. The City of Oshkosh's community-wide

emissions, based on a population growth rate of 1 percent, will increase approximately 44.5 percent by the year 2017. Therefore the community-wide emissions will grow from 1,280,222 metric tons of CO_2e in 2007 to 1,849,505.87 metric tons of CO_2e in 2017. It was assumed that the emissions from municipal operations would not increase.

REDUCTION TARGETS

Purpose

The purpose of setting reduction targets is to establish a tangible focal point for local action and change. Local governments drive local action and exercise more authority and ability than any other level of government within their jurisdiction. Setting a reduction target enables policy makers to outline a series of policies, programs and projects whose cumulative emission reductions will achieve the emissions reduction target. A reduction target provides an objective to strive for and against which progress can be measured. It allows a local government the ability to quantify its commitment to fighting global climate change.

Developing strategies to reduce emissions can help the City of Oshkosh slash energy costs, thus saving taxpayers money. By taking action now to address climate change, the City of Oshkosh and elected leaders can be recognized for their leadership on climate and energy issues. Reducing greenhouse gas emissions and energy consumption can improve air quality and public health, stimulate the local economy, create green jobs, and make Oshkosh a more livable, walkable, healthy and accessible community.

Common Targets

Climate scientists feel that global concentrations of greenhouse gases need to stabilize at 450 parts per million by volume CO_2e by mid-century in order to avoid the most dangerous future climate change scenarios. In order for this to happen, emissions from Western industrialized countries would need to be reduced between 25 and 40 percent below 1990 levels in 2020, and between 80 and 95 percent below 1990 levels by 2050.[7] As a bases for setting targets, the Oshkosh Sustainable Advisory Board (SAB), ICLEI Education and Outreach and Government Action Subcommittee researched reduction targets established by international and national agreements, ICLEI communities, Wisconsin and surrounding communities.

[7] Quick Start Guide for Setting Greenhouse Gas Reduction Target, Climate Mitigation for Local Governments: Milestone Two, November 2010.

International and National Agreements

Kyoto Protocol. The Kyoto Protocol was adopted in Kyoto, Japan, on December 11, 1997. It became effective on February 16, 2005. The reduction target for the United States was set at 7 percent below 1990 levels by 2012.[8] However, the United States did not sign the agreement and therefore the target is not binding.

Kyoto Protocol
The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets.

Source: United Nations Framework Convention on Climate Change

Paris Climate Conference (COP21). At the Paris climate conference (COP21) in December 2015, 195 countries adopted the first-ever universal, legally binding global climate deal. As part of this agreement, governments agreed (1) to a long-term goal of keeping the increase in global average temperature to well below 2°C above pre-industrial levels; (2) to aim to limit the increase to 1.5°C, since this would significantly reduce risks and the impacts of climate change; (3) on the need for global emissions to peak as soon as possible, recognizing that this will take longer for developing countries; and (4) to undertake rapid reductions thereafter in accordance with the best available science. The United States has communicated its intentions to reduce its greenhouse gas emissions by 26 to 28 percent below its 2005 level in 2025. It has set a 17 percent reduction by 2020. The United States is looking at an economy-wide emissions reduction of 80 percent or more by 2050.[9]

G8 Nations. At the 2009 Copenhagen Climate Change Conference, G8 nations agreed that they must limit worldwide temperature rises to no more than 2 degrees Celsius; and they should collectively cut emissions by 80 percent by 2050.[10] They furthermore agreed that the world should be able to cut its emissions by 50 percent by the same date. Baselines years may vary between countries, but efforts should be comparable. For example, United Nation scientists have used 1990 as the starting point, while the United States and Japan have been using 2005 levels. However, all have agreed that 2 degrees Celsius is a minimum in order to prevent irreversible global warming.

What are the G8 Nations?
The G8 Nations refer to the group of 8 highly industrialized nations: France, Germany, Italy, the United Kingdom, Japan, the United States, Canada and Russia. The group meets annually to foster consensus on global issues like economic growth and crisis management, global security, energy, and terrorism.

Source: Council on Foreign Relations

U.S. Conference of Mayors' Climate Protection Agreement. The U.S. Conference of Mayors' Climate Protection Agreement set a reduction target of 7 percent below 1990 levels by 2012. The City of Oshkosh signed this agreement on September 11, 2007.[11]

[8] Though it is important to note that, compared to the emissions levels that would be expected by 2012 without the Protocol, this target represents a larger cut.
[9] United Nations Framework Convention on Climate Change. Website: http://unfccc.int/focus/indc_portal/items/8766.php.
[10] http://www.theguardian.com/world/2009/jul/08/g8-climate-carbon-emission-targets.
[11] The United States Conference of Mayors. Website link: http://www.usmayors.org/climateprotection/agreement.htm.

Wisconsin Agreements

25x25 Resolution. There are more than 140 Energy Independent Communities in Wisconsin who support resolution 25x25. Most are partners, and have passed a resolution to adopt the State's 25x25 goals. By adopting the resolution, communities have adopted the goal of generating 25 percent of their energy (electric and transportation fuels) from renewable energy sources locally by 2025, as a way to advance Wisconsin's vision for energy independence.[12] The City of Oshkosh has not passed the 25x25 resolution.

Governor's Task Force on Global Warming. The Governor's Task Force on Global Warming developed a final report, Wisconsin's Strategy for Reducing Global Warming, dated July 2008. In order to minimize the impacts of global warming, the report recommends aggressive short and long-term goals for greenhouse gas (GHG) emissions. The goals are (1) a reduction to 2005 emissions levels no later than 2014, and (2) a reduction of 22 percent below 2005 GHG emission levels by 2022. The long-term target is to reach a 75 percent reduction from 2005 levels by 2050.

Agreements in Other States

States are taking action to reduce greenhouse gas emissions. Minnesota has taken action to reduce greenhouse gas emissions. Within the EPA region 9, California, Hawaii and Nevada have also set reduction targets.

California. The state of California under Executive Order S-3-05 set the following greenhouse reduction targets: by 2010, reduce greenhouse gas emissions to 2000 levels; by 2020, reduce greenhouse gas emissions to 1990 levels; and by 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.[13] AB 32, the California Global Warming Solutions Act of 2006, requires California to reduce its GHG emissions to 1990 levels by 2020.[14] This is a reduction of approximately 15 percent below emissions expected under a "business as usual" scenario.

Hawaii. The state of Hawaii, Act 234, Session Laws of Hawaii 2007 was modeled after California AB32. It limits greenhouse gas emissions to 1990 levels by 2020, excluding airplanes. The state has also established a Clean Energy Initiative which sets the goal of achieving 70% renewables by 2030.[15]

Minnesota. In 2007, Minnesota passed legislation to cut the state's greenhouse gas emissions to 15 percent below 2005 base levels by 2015, 30 percent by 2025 and 80 percent by 2050.[16]

[12] State Office on Energy Independence. Website: http://www.stateenergyoffice.wi.gov/.
[13] California Office of Governor Brown. Website link: https://www.gov.ca.gov/news.php?id=1861.
[14] California Environmental Protection Agency, Air Resources Board. Website link: http://www.arb.ca.gov/cc/ab32/ab32.htm.
[15] U.S. Environmental Protection Agency. Website link: http://www3.epa.gov/region9/climatechange/hawaii.html.
[16] Center for Climate and Energy Solutions. Website link: http://www.c2es.org/us-states-regions/key-legislation.

ICLEI

The ICLEI guidance manual[17] recommends a community-wide reduction target of 80 percent below 1990 levels by 2050. Local governments lead by example and should also commit to an 80 percent emission reduction target for local operations. A recent report *Measuring Up 2015, How US Cities are Accelerating Progress* by ICLEI and World Wildlife Fund, states that hundreds of local governments representing at least 14% of the U.S. population have started studying their greenhouse gas emissions and setting emissions reduction goals. Many communities are also working to implementing various measures to meet these goals. Together these actions can have positive change.

ICLEI Communities

The City of Oshkosh has committed to adopt the International Council for Local Environmental Initiatives (ICLEI) five milestones to reduce GHG and air pollution emissions. As part of its review of other ICLEI communities, SAB looked at other ICLEI communities.

Columbus, Ohio. The population of Columbus, Ohio according to the U.S. Census was 11,536,725 in 2010. The City established a 5-year plan (2015 – 2020) to reduce emissions by 20 percent below the baseline (2013). Internally, the City would reduce emissions from government operations by 30 percent by 2020 and 40 percent by 2030.

Madison, Wisconsin. The population of Madison, Wisconsin according to the U.S. Census was 233,362 in 2010. The City performs an inventory every 2 years to track progress towards meeting its overall goal of reducing greenhouse gas emissions. According to a recent report, the following targets were set using a base year of 1990: 20 percent by 2010 and 30 percent by 2020.[18] The Madison Sustainabilty Plan: Fostering Environmental, Economic and Social Resilience, 2011 included a target of reducing greenhouse gas emissions by 80 percent, based on a 2010 baseline, for 2050. Other targets included net zero energy standards by 2030 for new buildings and developments, 40 percent reduction in vehicle emissions by 2030 and 25 percent of electricity, heating and transportation energy will be from clean energy sources by 2025.

Fitchburg, Wisconsin. The population of Fitchburg, Wisconsin according to the U.S. Census was 25,163 in 2010. According to an ICLEI study, Fitchburg set a short-term reduction target of 7 percent by 2012, and a medium-term target of 11 percent by 2020, both utilizing a 1998 base year.[19] The City of Fitchburg has signed the Legacy Communities Green Tier Charter.

[17] Quick Start Guide for Setting Greenhouse Gas Reduction Target, Climate Mitigation for Local Governments: Milestone Two, November 2010.
[18] Measuring Up 2015, How US Cities are Accelerating Progress by ICLEI and World Wildlife Fund.
[19] Measuring Up 2015, How US Cities are Accelerating Progress by ICLEI and World Wildlife Fund.

Janesville, Wisconsin. The population of Janesville, Wisconsin according to the U.S. Census was 63,606 in 2010. According to an ICLEI study, Janesville set a long-term reduction target of 75 percent by 2050, utilizing a 2005 base year.

Other Communities in Wisconsin

City of La Crosse. The population of La Crosse, Wisconsin according to the U.S. Census was 114,638 in 2010. The City set the following reduction targets;[20] 25 percent reduction in electric usage by 2025 for municipal facilities from 2007 (based on kWhr), 25 percent reduction in natural gas usage by 2025 for municipal facilities from 2007 (based on Therms), and 25 percent reduction in diesel fuel usage by 2025 for municipal and Municipal Transit Utility from 2008 (based on gallons). The City of La Crosse has signed the Legacy Communities Green Tier Charter.

Surrounding Communities

City of Neenah. The City of Neenah, according to the U.S. Census, had a population of 25,501 in 2010. In 2009, the City completed a greenhouse gas baseline inventory for municipal operations. It has adopted the Wisconsin 25x25 resolution of 25 percent renewables by 2025. The City is in the process of preforming an updated greenhouse gas inventory.

City of Kaukauna. The City of Kaukauna had a population of 15,462 people in 2010, according to the U.S. Census. The City adopted the Wisconsin 25x25 resolution of 25 percent renewables by 2025. Since Kaukauna was at 17% renewable at the end of 2009, the City decided to expand the goal from the prescribed 25% to 34% by the year 2025[21]. Using a base year of 2009, it set a zero percent energy growth; therefore if the City's population grows by 2 percent, energy use will not increase.

City of Appleton. The City of Appleton had a population of 72,623 people in 2010, according to the U.S. Census. The City set the following goals[22]: (1) by 2025, energy consumption (electricity, natural gas and motor fuels) for municipal facilities will be 25 percent less than the baseline year of 2005; (2) by 2025, energy consumption (electricity, natural gas, motor fuels) per capita for the Appleton community will be reduced by 25 percent relative to 2005; (3) by 2030, city operations will reduce carbon dioxide emission by 25 percent (or as amended per subsequent state law); (4) work to implement a regional policy to reduce the percentage of commute trips by single occupancy vehicles by 10 percent, relative to the established base year; (5) work with community partners to reduce per household vehicles miles traveled by 25 percent, relative to an established baseline year; and (6) provide proactive maintenance, operations and upgrades of facilities and equipment to achieve the City's goal to reduce natural

[20] City of La Crosse & La Crosse County Strategic Plan for Sustainability, adopted 2009.
[21] *25 X 25 Plan for Energy Independence, City of Kaukauna, 2010 Wisconsin Energy Independent Community Partnership*, December 31, 2010.
[22] *Creating a Sustainable City – A Master Plan to Move the City of Appleton Towards Sustainability, 2010.*

gas and electric consumption by 10 percent by 2010. The City of Appleton has signed the Legacy Communities Green Tier Charter.

Targets: Short, Mid and Long-Term

ICLEI recommends that regardless of the long-term emission reduction target set, local governments should establish interim targets. Short and mid-term interim targets facilitate additional support and accountability and help ensure a continuous momentum around local climate protection efforts. Communities should set short, mid and long-term targets based on a somewhat even spacing between the date the target is set and the date of the long-term target. In general, a short-term target should be set for about 5 to 15 years, a mid-term target should be set for about 20 to 35 years and the long-term target should be about 40 years. To monitor the effectiveness of its programs, local governments should plan to re-inventory its emission on a regular basis. ICLEI recommends conducting an emission inventory at least every five years.

The Oshkosh Sustainable Advisory Board (SAB), ICLEI Education and Outreach and Government Action Subcommittee set the following reduction targets from the base year 2007:

- Short-Term Emissions Target: 25 percent by 2025
- Mid-Term Emissions Target: 40 percent by 2035
- Long-Term Emissions Target: 80 percent by 2050

SAB considered the following criteria when setting the emission targets:

- Long-Term – 2050 and 80 percent reduction was selected, based on recommended long-term target dates and reduction targets set by ICLEI, and others. This date and reduction target has been reaffirmed by the United States written intentions as part of the recent Paris Climate Conference (COP21).
- Short-Term – Based on a long-term target date of 2050, the subcommittee looked at setting a target date between 2020 and 2025. It was felt that this would allow the City time to adopt Milestone Reports numbers 3, 4 and 5 and see a positive reduction in emissions. A short-term target of 25 percent reduction is in line with ICLEI's guidance manual and adopted targets by others.
- Mid-Term – Based on a long-term target date of 2050, and a short-term target date of 2035, the subcommittee looked a setting target date between 2025 and 2050 and a reduction target between 25 percent and 80 percent.

It is important to remember that it will be difficult for local governments to reduce emissions by 80 percent without the assistance of state and federal policy changes that create new incentives and new sources of funding for emission reduction projects and programs. The recent written intentions by the United States to reduce its greenhouse gas emissions by 26 to 28 percent below its 2005 level in 2025 and to reduce economy-wide emissions by 80 percent or more by 2050 should help the City of Oshkosh achieve these goals.

MAJOR ACCOMPLISHMENTS TOWARD REDUCING GREENHOUSE GAS EMISSIONS

City government and UW-Oshkosh have been working to reduce greenhouse gas emissions. Some of the things that have been done are listed below.

City Government

In 2009, the City of Oshkosh received a $634,100 Energy Efficiency and Conservation Block Grant (EECBG) from the Department of Energy. To ensure that the grant funds were being used to make the largest impact, the City hired a consultant to complete an audit of City facilities. Utilizing the grant funds and the audit, the City invested in a wide range of projects to improve energy efficiency and conservation within various municipal buildings/facilities (public library, fire stations 15, 16, 17, 18 and 19, city hall, wastewater treatment plant, safety building, water distribution system and filtration plant, senior center north and south, public museum, convention center and transit department building). Energy and conservation projects that were implemented included lighting retrofits, building envelop projects, plumbing improvements, and others. It is estimated that these improvements will save the City about $132,000 in annual utility costs and an annual CO_2 reduction of about 1,810,000 pounds. By late 2011, most of the EECBG grant funds had been expended. As a result of implementing the EECBG grant money for lighting retrofit projects, the City was able to secure an additional $55,000 from Wisconsin Focus on Energy (WFOE) incentive funds. This money was used for LED lighting improvements at the Convention Center and to replace two aging chiller pumps and related piping at city hall. It is estimated that the replacement of the two pumps with more efficient units will save the City an additional $1,500 to $2,000 annually in utility savings. Implementation of these two projects resulted in an additional $1,200 in WFOE incentives. Furthermore, the City has also adopted a policy that as street lights are replaced, incandescent bulbs are being replaced with LED.

In addition, the City of Oshkosh has adopted a strategic plan to guide City actions. The latest plan, *2015-2016 Strategic Plan*, identifies the following key strategic initiatives:

- Support Economic Development
- Continue to Strengthen Our Neighborhoods
- Improve and Maintain Our Infrastructure
- Improve Our Quality of Life Assets
- Develop an Effective, High Performing Government

SAB reviewed the City's current strategic plan and identified objectives and strategies that would help municipal operations and the community reduce greenhouse gas emissions. Twelve strategies were identified that the City is already working on (Appendix A, Table A-3). Collectively these strategies have the potential to reduce greenhouse gas emissions for gasoline and diesel fuels for municipal operations and electric, natural gas and gasoline fuels for the community-wide inventory. Fifteen strategies were identified that the City is not currently implementing, though some of these strategies have been discussed (Appendix A, Table A-4).

Together these strategies have the potential to reduce greenhouse gas emissions for electric, natural gas, diesel and gasoline fuels, and CO_2 for municipal operations and electric, natural gas, diesel and gasoline fuels, paper, and food waste for the community-wide.

UW-Oshkosh

The University of Wisconsin Oshkosh has been embracing actions to reduce its greenhouse gas emissions. Some of the major actions that the University has undertaken include[23]:

- Signed the Earth Charter, 2002. This charter was a pledge to infuse sustainability in all that the University does (academics, student affairs, research, services, outreach, facilities operations and management and administration).
- Signed the American College and University Presidents Climate Commitment, 2007. This agreement obligates the university to strive for climate neutrality by mid-century or sooner.
- Adopted Campus Sustainabilty Plan, 2008 and updated this plan in 2014.
- Uses STARS (Sustainability Tracking, Assessment, and Rating System) since 2010. Maintained a Gold Rating since 2013.
    - Constructed 6 building to LEED Standards and an additional 4 buildings have green features: Horizon Village Residence Hall, Sage Hall, Student Success Center, Alumni Welcome Center, Taylor Residence Hall, Student Recreation and Wellness Center, Blackhawk Commons, Heating Plant, Titan Stadium, Albee Hall and Pool and Reeve Memorial Union thereby reducing heating/cooling costs, electrical usage, water usage, waste, and diesel fuel use.
- Improved energy efficiency of existing buildings.
- 16 percent of purchased power comes from renewable sources, plus the university generates energy from solar and biomass.
- Achieved a 30 percent reduction in solid waste generated from 2000 levels.
- Provide free public transit rides to faculty, students and staff.
- Phasing out gasoline only vehicles.
- Vehicles and equipment fueled by diesel fuels have been switched to 10% biodiesel fuel mix.
- Most incandescent bulbs have been replaced with CFL or LED lights.

CONCLUSION

The reduction targets set in this report, along with the greenhouse gas emissions baseline inventory developed in Milestone Report 1, will guide Oshkosh's efforts in the development of a Climate Action Plan (Milestone Report 3). Actions taken by the City of Oshkosh and the University of Wisconsin-Oshkosh are reducing greenhouse gas emissions and will help the City and the community meet the established reduction targets.

[23] University of Wisconsin Oshkosh. Website link: https://www.uwosh.edu/sustainability.

As the City of Oshkosh develops its Climate Action Plan it should take into consideration that about three quarters (74.4%) of the municipal operations greenhouse gas emissions are from electric usage. About thirty percent (29.6%) of the electric emissions are attributed to the wastewater treatment plant. While about 26 percent of the electric emissions are from buildings and facilities, with the exception of the library (6%), police department (5.3%) and park and recreation (4.5%) most individual building have relatively small emissions. Other areas that the City could look at would be street lights and water filtration.

According to the 2007 greenhouse gas base line inventory, about 98 percent of the CO_2e emissions can be credited to the community-wide portion. Therefore the City should develop strategies to reduce emissions in this area. Considering just community-wide emissions, over half (54.8%) of the CO_2e emissions are from electric usage, and another 18 percent (18.2%) are from natural gas. Commercial (46.3%) and industrial (31.7%) businesses contribute about three-quarters emissions resulting from electric use and about two-thirds of the emissions resulting from natural gas (commercial, 34.5%; industrial, 29.6%). Therefore identifying strategies or incentives for businesses to reduce energy usage may have the greatest impact. Though a smaller portion of the overall emissions, when identifying strategies, the residential sector should not be forgotten. Another sector contributing significant amounts of CO_2e is the transportation sector. This sector contributed over a quarter of the community-wide emissions.

Besides looking for guidance from the City's current Strategic Plan, the City may want to consider the Green Tier Program. The Green Tier Program[24] is a voluntary program that recognizes and rewards environmental performance "that voluntarily exceeds legal requirements related to health, safety and the environment resulting in continuous improvement in this state's environment, economy, and quality of life." [25] Under the Legacy Communities Green Tier Charter, municipalities take actions and share information to achieve superior environmental performance with regard to one or both of the following areas:

- water quality and water resources management; and/or
- sustainability practices.

Signing a green tier chapter may assist the City of Oshkosh in achieving its goals and being recognized as a leader in this field.

[24] Wisconsin Department of Natural Resources. Website link: http://dnr.wi.gov/topic/greentier/.
[25] s. 299.83(1m)(b), Wis. Stats.

APPENDICES

APPENDIX A

Table A-1: Oshkosh Municipal Operations Greenhouse Gas Emissions Inventory, 2007

Sector	Electricity		Natural Gas		Methane Gas		Carbon Dioxide		Gasoline		Diesel		Total	
	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent
Buildings and Facilities	**4,890**	**25.8%**	**1,265**	**43.7%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**6,155**	**24.2%**
Cemetery	16	0.1%	31	1.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	47	0.2%
City Hall	241	1.3%	107	3.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	349	1.4%
Community Development	11	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	11	0.0%
Convention Center	122	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	122	0.5%
Fire Department	287	1.5%	124	4.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	411	1.6%
Golf Course	92	0.5%	18	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	110	0.4%
Library	1,134	6.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,134	4.5%
Museum	387	2.0%	197	6.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	584	2.3%
Park Shops	52	0.3%	47	1.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	99	0.4%
Park and Recreation	855	4.5%	141	4.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	996	3.9%
Police Department	996	5.3%	221	7.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,339	5.3%
Sanitation	25	0.1%	25	0.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	49	0.2%
Senior Center	202	1.1%	69	2.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	271	1.1%
Street Department	285	1.5%	183	6.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	468	1.8%
Transit Buildings	186	1.0%	103	3.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	289	1.1%
Streetlights & Traffic Signals	**4,376**	**23.1%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**4,376**	**17.2%**
Street Lights	4,261	22.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4,261	16.7%
Traffic Signals	115	0.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	115	0.5%
Water Delivery Facilities	**3,578**	**18.9%**	**679**	**23.5%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**4,257**	**16.7%**
Water Distribution	118	0.6%	83	2.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	201	0.8%
Water Filtration	3,408	18.0%	596	20.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4,004	15.7%
Water Towers	52	0.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	52	0.2%
Wastewater Facilities	**6,108**	**32.2%**	**948**	**32.8%**	**85**	**100.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**7,142**	**28.0%**
Wastewater	5,603	29.6%	805	27.8%	85	100.0%	0	0.0%	0	0.0%	0	0.0%	6,494	25.5%
Wastewater LS	505	2.7%	143	5.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	648	2.5%
Solid Waste Facilities	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**44**	**100.0%**	**0**	**0.0%**	**0**	**0.0%**	**44**	**0.2%**
Vehicle Fleet	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**997**	**100.0%**	**1,256**	**49.9%**	2,254	**8.8%**
Animal Shelter	0	0.0%	0	0.0%	0	0.0%	0	**0.0%**	2	**0.2%**	0	**0.0%**	2	0.0%
Media Services	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	0.1%	0	0.0%	1	0.0%
Cemetery Department	0	0.0%	0	0.0%	0	0.0%	0	0.0%	11	1.1%	26	1.0%	37	0.1%
City Hall	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.2%	0	0.0%	2	0.0%
Electric	0	0.0%	0	0.0%	0	0.0%	0	0.0%	12	1.2%	9	0.4%	21	0.1%
Engineering	0	0.0%	0	0.0%	0	0.0%	0	0.0%	22	2.2%	0	0.0%	22	0.1%
Parking Utility	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	0.4%	0	0.0%	4	0.0%
Fire Department	0	0.0%	0	0.0%	0	0.0%	0	0.0%	30	3.0%	246	9.8%	276	1.1%
Forestry Department	0	0.0%	0	0.0%	0	0.0%	0	0.0%	13	1.3%	11	0.4%	24	0.1%
Golf Course	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	0.2%	0	0.0%	2	0.0%
Museum	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	0.4%	0	0.0%	4	0.0%
Parks Department	0	0.0%	0	0.0%	0	0.0%	0	0.0%	88	8.8%	17	0.7%	105	0.4%
Police Department	0	0.0%	0	0.0%	0	0.0%	0	0.0%	531	53.2%	0	0.0%	531	2.1%
Sanitation Department	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	0.5%	350	13.9%	355	1.4%
Storm Water Utility	0	0.0%	0	0.0%	0	0.0%	0	0.0%	65	6.6%	0	0.0%	65	0.3%
Street Department	0	0.0%	0	0.0%	0	0.0%	0	0.0%	47	4.7%	482	19.2%	529	2.1%
Traffic Department	0	0.0%	0	0.0%	0	0.0%	0	0.0%	6	0.6%	7	0.3%	14	0.1%
Transit Department	0	0.0%	0	0.0%	0	0.0%	0	0.0%	8	0.8%	0	0.0%	8	0.0%
Wastewater	0	0.0%	0	0.0%	0	0.0%	0	0.0%	25	2.5%	37	1.5%	62	0.2%
Water Distribution	0	0.0%	0	0.0%	0	0.0%	0	0.0%	77	7.7%	70	2.8%	147	0.6%
Water Plant	0	0.0%	0	0.0%	0	0.0%	0	0.0%	7	0.7%	0	0.0%	7	0.0%
Winnefox Library	0	0.0%	0	0.0%	0	0.0%	0	0.0%	37	3.7%	0	0.0%	37	0.1%
Transit Fleet	**0**	**0.0%**	**0**	**0.0%**	**0**	**0.0%**	**0**	0.0%	**0**	0.0%	**1,260**	50.1%	**1,260**	4.9%
Total	**18,952**	**100%**	**2,892**	**100%**	**85**	**100%**	**44**	**100%**	**997**	**100%**	**2,516**	**100%**	**25,487**	**100%**

Source: ICLEI Milestone 1, Oshkosh, Wisconsin Greenhouse Gas Emissions Analysis, May 6, 2013

Table A-2: Oshkosh Community-Wide Inventory, 2007

Sector	Electricity		Natural Gas		Gasoline		Diesel		Paper		Food Waste		Plant Debris		Wood/Textiles		Total	
	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent	Metric Tons eCO_2	Percent
Residential	154,416	22.0%	83,488	35.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	237,903	18.6%
Commercial	325,129	46.3%	80,456	34.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	405,585	31.7%
Industrial	222,397	31.7%	68,968	29.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	291,364	22.8%
Transportation	0	0.0%	0	0.0%	286,280	100.0%	55,996	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	342,275	26.7%
Waste	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1,925	100.0%	589	100.0%	132	100.0%	448	100.0%	3,094	0.2%
Total	701,942	100%	232,912	100%	286,280	100%	55,996	100%	1,925	100%	589	100%	132	100%	448	100%	1,280,221	100%

Source: ICLEI Milestone 1, Oshkosh, Wisconsin Greenhouse Gas Emissions Analysis, May 6, 2013

Table A-3: City of Oshkosh 2015-2016 Strategic Plan, Initiatives in Progress

Goal	Objective	Strategy/Tactic	Impact Area
Support Economic Development	IB: Identify Partnership Opportunities	Work with industrial & commercial businesses to educate them on available incentives to reduce energy consumption	Community-wide: Reduction in commercial/industrial electric/natural gas usage
	IE: Develop Targeted Economic Development plans	Focus Economic Development Plan deliverables to further GHG emission reduction targets	Community-wide: Reduction in commercial/industrial electric/natural gas usage
Strengthen Neighborhoods	IIB: Realign, Update and Enforce Zoning	Through Rental Registry Program: Require/incentivize energy efficient rental homes	Community-wide: Reduction in residential electric/natural gas usage
	IID: Increase & Encourage Owner Occupancy / Owner Investment in Property	Public/Private funding for home improvements: Require/incentivize energy efficient improvements	Community-wide: Reduction in residential electric/natural gas usage
		Educate realtors: Discuss the importance of energy efficiency and promote available incentives	Community-wide: Reduction in residential electric/natural gas usage
	IIE: Enhance Crime Prevention Measures	Increase presence of bike/foot patrols: reduces GHG for city fleet	Municipal Operations: Reduction in vehicle fleet gasoline usage
	IIF: Identify Funding Sources	Establish Revolving Loan Fund to incentivize retrofits with savings returned after 3-5 year payback used to invest in further retrofits.	Community-wide: Reduction in residential electric/natural gas usage
Improve and Maintain our Infrastructure	IIIA: Improve Our Streets, Transit, Bike and Pedestrian Infrastructure	Ensure implementation of Bike/Ped Plan recommendations to increase non-motorized transportation options	Community-wide: Reduction in transportation gasoline usage
		Install fleet wide automatic passenger counters for better accounting of ridership to help track GHG emission reductions	Community-wide: Reduction in transportation gasoline usage
		Replace bus fleet to promote a more efficient system	Municipal Operations: Reduction in Transit Fleet diesel fuel usage

Source: City of Oshkosh 2015-2016 Strategic Plan

Goal	Objective	Strategy/Tactic	Impact Area
Improve and Maintain our Infrastructure	IIIA: Improve Our Streets, Transit, Bike and Pedestrian Infrastructure	Continue to support and advocate for complete streets.	Community-wide: Reduction in transportation gasoline usage
Develop an Effective, High Performing Government	VD: Engage and Educate Citizens. Market the City and Communicate Value	SAB only City presence at Farmers Market. Keep telling the story and letting the citizens know the good work we are doing	Community-wide: Potential to impact all areas of greenhouse gas emissions

Source: City of Oshkosh 2015-2016 Strategic Plan

Table A-4: City of Oshkosh 2015-2016 Strategic Plan, Initiatives Not Started

Goal	Objective	Strategy/Tactic	Impact Area
Support Economic Development	IA: Establish Revolving Loan Fund	Write, submit and be awarded a grant that would pay someone to assist small businesses with analysis of utility bills, to help them put in energy efficiency measures.	Community-wide: Reduction in commercial/industrial electric/natural gas usage
		Incentivize retrofits with savings returned after 3-5 yr payback used to invest in further retrofits (like Green Funds at some universities)	Community-wide: Reduction in commercial/industrial electric/natural gas usage
	IE: Develop Targeted Economic Development plans	Incentivize/reward/recognize industry that contributed to GHG emission reductions by making infrastructure upgrades (simple as a plaque given at a luncheon/State of the City)	Community-wide: Reduction in commercial/industrial electric/natural gas usage
Strengthen Neighborhoods	IIB: Realign, Update and Enforce Zoning	Require/incentivize energy efficient rental homes	Community-wide: Reduction in residential electric/natural gas usage
Improve and Maintain our Infrastructure	IIIA: Improve Our Streets, Transit, Bike and Pedestrian Infrastructure	Convert Hotel Parking ramp lighting to LED	Municipal Operations: Reduction in Buildings & Facilities electric usage
		Upgrade Existing Intersections to Activation as Budgets and Time Allow - Eliminating Flash intersections	Community-wide/Municipal Operations: Reduction in transportation/vehicle fleet gasoline usage
	IIIC: Improve Our City Buildings	Prioritize the need to improve efficiency of buildings	Municipal Operations: Reduction in buildings and facilities electric/natural gas usage
		Implement HVAC/Roofing recommendations to further efficiency. Be sure to include attic installation where possible for greater efficiency	Municipal Operations: Reduction in buildings and facilities natural gas usage
	IID: Manage Our City Equipment	Develop policy that would encourage households to put out only full black bins, reducing driving/idling time for collection. Pilot study needed to determine if this does save on emissions	Municipal Operations: Reduction in vehicle fleet diesel fuel usage

Source: City of Oshkosh 2015-2016 Strategic Plan

Goal	Objective	Strategy/Tactic	Impact Area
Improve and Maintain our Infrastructure	IID: Manage Our City Equipment	Develop policy that allows for sharing/purchase of efficient equipment	Municipal Operations:
Improve Our Quality of Life Assets	IVB: Update Existing Quality of Life Asset Plans	Brand Oshkosh Resources: work with UW-Oshkosh to tell the sustainability story of Oshkosh.	Municipal Operations/Community-wide: Potential to impact all areas of greenhouse gas emissions
	IVC: Implement Top Priority Projects in Plans	SAB to provide guidance when prioritizing projects to ensure implementation includes GHG reduction strategies	Municipal Operations/Community-wide: Potential to impact all areas of greenhouse gas emissions
	IVD: Implement Special Event Coordination / Management	SAB to provide guidance on green event planning and incentivize groups willing to include waste reduction strategies	Municipal Operations/Community-wide: Reduction in solid waste facilities/vehicle fleet diesel fuel usage/CO_2 emissions & paper/food waste
	IVF: Preserve and Protect the City's Natural Resources	Create city ordinance that prohibits IDLING at train tracks and open bridges when temp is above 40F. This will require public education, but there are examples from many other communities where "no idling" signs are the norm and the practice.	Community-wide/Municipal Operations: Reduction in transportation/vehicle fleet diesel and gasoline fuel usage
Develop an Effective, High Performing Government	VB: Improve Employee Engagement	Encourage/incentivize non-motorized commuting by city employees to reduce transportation GHG	Community-wide: Reduction in transportation gasoline usage

Source: City of Oshkosh 2015-2016 Strategic Plan

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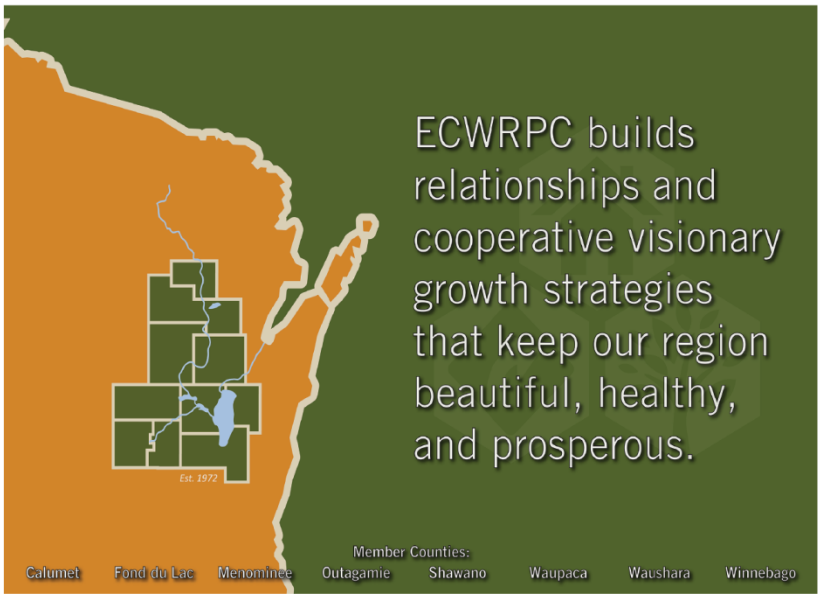

** To be determined*