

Memorandum

City of Lawrence

City Manager's Office

TO: David Corliss, City Manager
FROM: Eileen Horn, Sustainability Coordinator
DATE: December 2, 2014
RE: Update of Greenhouse Gas Emissions Inventory and signing of the Mayors Climate Protection Agreement

Background

The Climate Protection Task Force (CPTF) was appointed in February 2008 to create a Climate Protection Plan for the City of Lawrence. The Climate Protection Task Force first undertook a greenhouse gas emissions (GHG) inventory to establish a baseline of city GHG emissions.

Based upon the major findings of the GHG emissions baseline in 2008, then-Mayor Michael Dever and the CPTF developed the following climate change mitigation goal for the City of Lawrence: An 80% reduction in greenhouse gas emissions measured in carbon dioxide equivalent by 2050, using baseline data from 2005.

The Climate Protection Task Force recommended seven actions that the City of Lawrence should pursue to reduce both municipal and community greenhouse gas emissions, the first of which was the creation of the Sustainability Coordinator position shared with Douglas County. In May 2010, the City of Lawrence and Douglas County created the shared position housed within the two local governments. The Sustainability Coordinator works with City departments, County departments, and citizens to achieve the community's sustainability and GHG reduction goals.

Project Description: 2002-2012 Update to City GHG Emissions Inventory

This 2002-2012 GHG inventory update represents Lawrence's efforts to continue to monitor greenhouse gas emissions and evaluate the effectiveness of the mitigation strategies previously undertaken. The inventory was conducted by the Sustainability Coordinator with much input from various city departments. The following categories are included in the analysis:

Community Analysis:

- Residential energy use
- Commercial energy use
- Industrial energy use
- Transportation/mobile sources
- Solid waste

Government Analysis:

- Buildings/facilities
- Streetlights/traffic signals
- Vehicle fleets
- Transit fleets
- Water and wastewater treatment
- Employee commute

Key Findings from the 2002-2012 GHG Emissions Inventory Update

- The data shows that despite an increase in population of 10,000 people from 2002 to 2012, community GHG emissions have remained relatively flat.
- In 2012, Lawrence residents were responsible for 14.16 tons of CO₂e per person, putting it well under the 2010 national average of 19 tons per person.
- The stabilization of emissions could be due to multiple factors including; community education campaigns aimed at emissions reductions, policy changes to improve energy requirements in building codes, and internal efforts to improve the energy efficiency of city buildings and operations. In addition, there have been multiple factors outside of our community control including innovations in technology to improve efficiency (i.e. LED lighting) and the economic downturn which led to decreased energy use and decreased construction activity.
- Per capita emissions are declining in the focus areas prioritized in recent years by the city and community – namely energy efficiency and solid waste.
- However, emissions levels are increasing in the transportation sector as more Lawrence residents equals more single occupant vehicles on the roads. More work remains to be done to reduce transportation-related emissions, both through land use planning and improvements to vehicle efficiency.
- As the coal-dependent fuel mix at Westar Energy continues to drive Lawrence's emissions, energy conservation, efficiency, and renewable energy remain key elements in reducing overall emissions in our community and government buildings. This was a priority in the 2008 Climate Protection Plan, and remains a key focus still.
- Also of importance to reducing greenhouse gas emissions is water conservation and efficiency which, although not addressed in the original Climate Protection Plan report, have a significant potential to reduce water usage, which saves energy and protects City infrastructure.
- Despite progress in maintaining level emissions despite population growth, in order to reach the City's goal of 80% GHG emissions reduction by 2050, more aggressive measures are required.

New Priorities for GHG Emissions Reductions

At their September 2014 meeting, the City Sustainability Advisory Board discussed the key findings of the GHG emissions inventory update, and re-prioritized the original seven actions recommended by the original Climate Protection Plan.

The Sustainability Advisory Board re-prioritized the recommendations to reflect an increased focus on land use and transportation planning, to reduce vehicle miles traveled (VMT) within the city of Lawrence. Energy efficiency and conservation remains a high priority (#3) given that the majority of the city's GHG emissions are related to energy use in our residential, commercial, and industrial facilities. The Sustainability Advisory Board also added a new priority (#4) to emphasize the interconnectedness of water, energy, and emissions. As the City of Lawrence is the water and wastewater utility for our citizens, we have an opportunity to encourage water conservation which reduces water use, saves energy, and protects our water system infrastructure.

1. Incorporate the goal of reducing greenhouse gas emissions into land use planning.
2. Develop transportation policies and programs to consume less energy and reduce emissions.
3. Strengthen energy conservation policies and building standards.
4. Develop water conservation policies and programs to consume less water, reducing energy usage and infrastructure costs.
5. Expand source reduction and waste reduction programs and initiatives.
6. Exercise leadership by prioritizing efforts to reduce greenhouse gas emissions in municipal operations.
7. Provide dedicated staffing and adequate funding to support climate protection and sustainability initiatives.
8. Establish outreach and education programs on emission reduction issues.

Action

1. Receive the 2002-2012 Greenhouse Gas Emissions Inventory Update report from the Sustainability Coordinator, and offer feedback on revised priorities.
2. Request that the City Commission sign the revised Mayors Climate Protection Agreement, reiterating the City's commitment to reducing our greenhouse gas emissions and mitigating climate change risks to our community.