Baseline Greenhouse Gas Emissions Inventory for 2008

August 13, 2009

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Summary

- Introduction
- Major Findings
- Recommendations
- 2020 Community Emissions Forecast
- Next Steps
- Benefits of Taking Action

Introduction

- This report was performed with the guidance of Kirkwood Electric and ICLEI, utilizing ICLEI's CACP software.

ICLEI Local Governments for Sustainability USA

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CACP 2009

Energy & Climate Change Legislation

- Waxman-Markey energy bill would regulate utilities.
  - The proposal's impact on Kirkwood Electric:
    - Exempt from Renewable Energy Portfolio Standard
    - Subject to Cap-and-Trade Program
      - Essentially places a price on Carbon emissions.
      - Must acquire "Carbon Permits."
      - Penalties.
        - Could increase cost of purchasing wholesale power from AmerenUE if there is an emissions shortfall.
      - Allocations (permits) can be bought and sold on the open market.
        - Studies indicate that the speculation of these credits could increase wholesale market power prices.
    - Legislation should provide enough free allocations to utility companies to cover the emissions produced by the Prairie State power plant.

Community: Major Findings

- **Kirkwood emitted 576,676 metric tons of CO_2e in 2008.**
  - **The equivalent of the annual emissions from 105,618 passenger vehicles or burning 3,011 railcars worth of coal.[1]**
- **The results show that the frequent use of major roads and resulting high traffic volume in Kirkwood are the largest contributor of the city's GHG emissions.**

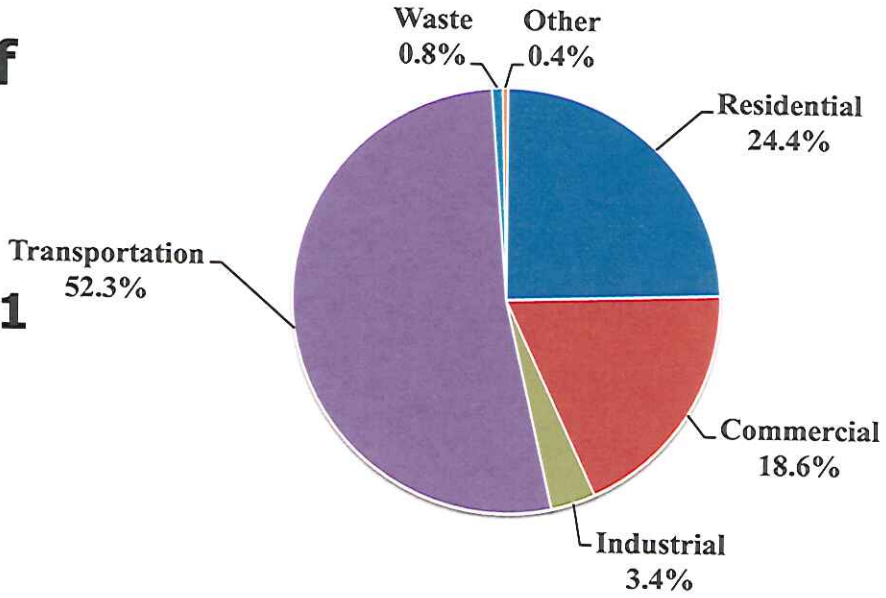
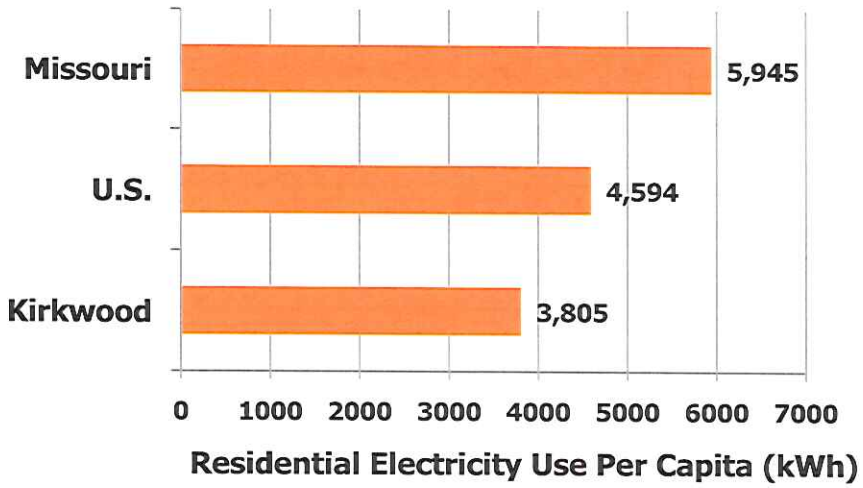


Figure 1: Community GHG Emissions by Sector, 2008 (Page 11)

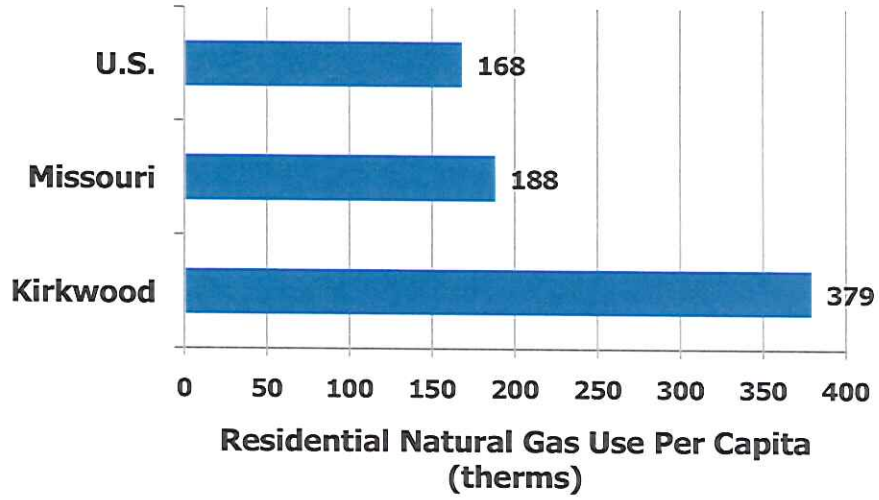
[1]Found using the U.S. EPA's Greenhouse Gas Equivalencies Calculator

Community: Major Findings

Electricity



Natural Gas



Government: Major Findings

- Kirkwood Government Operations emitted 7,451 metric tons of CO_2e in 2008.
- The facilities at the Community Center accounted for 43% of all building's emissions and nearly 25% of Government Operations emissions.
- The Train Station used the second most energy per square foot, second only to the Community Center.

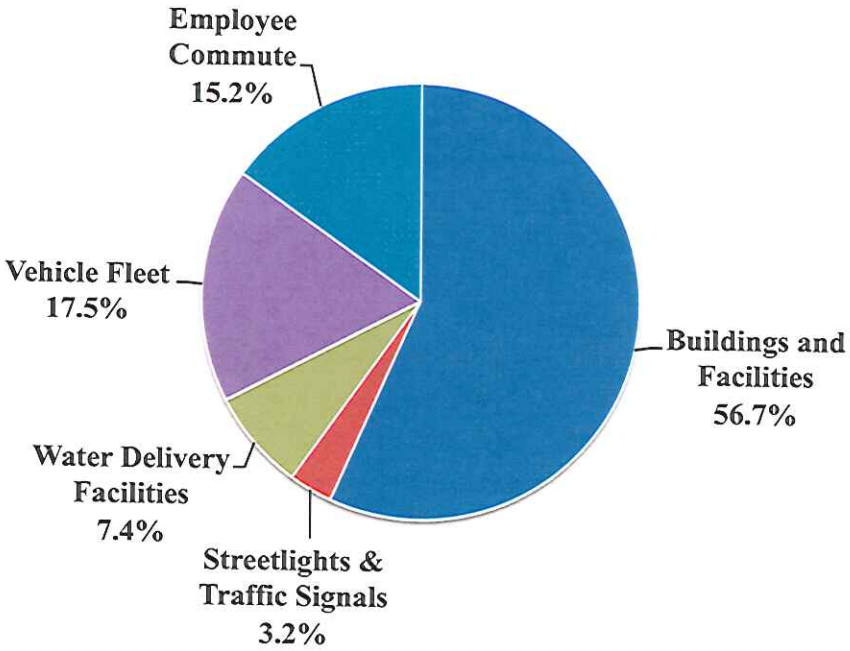


Figure 6: Government Operations GHG Emissions by Sector, 2008 (Page 25)

*Note: An updated insert for page 5 is attached to the original page.

Five Major Recommendations

- Lead by Example.
- Continue the ICLEI Five Milestone process.
- Utilize your utility.
- Educate and encourage citizens to take action.
- Form a Sustainability Committee.

Leading by Example

- Making sustainability a cornerstone of government operations can serve as a model for further action throughout the community.
- Leadership can be shown by buildings and fleet upgrades, in city publications, and at city sponsored events.

Continuing the ICLEI Five Milestone Process

- STEP 1: Conduct a baseline emissions inventory and forecast.
- STEP 2: Adopt an emissions reduction target for the forecast year.
- STEP 3: Develop a local action plan.
- STEP 4: Implement policies and measures.
- STEP 5: Monitor and verify results.

Utilizing Your Utility

- Create incentives for energy efficiency and renewable energy through Kirkwood Electric.
- Implementing Smart Grid technology will help customers and Kirkwood Electric work together to reduce demand.
- Energy efficiency is the first step in reducing GHG emissions.

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Educating and Encouraging Citizens to Take Action

- Inform citizens of their opportunities for energy efficiency.
- Utilize the city's website to provide tips on reducing your carbon footprint.
- Work with citizen groups, such as Kirkwood Living Green, to advocate sustainability at community events.
- Establish a community-wide Green Week.
- Inform citizens of reduction targets and challenge them to help meet the community's targets.

Forming a Sustainability Committee

- A committee of appointed members would strengthen the city's environmental record and ultimately decrease GHG emissions in the future.
- Responsibilities would include…
  - Continuing the ICLEI Five Milestone process.
  - Reviewing the results and recommendations of the inventory.
  - Implementing a sustainable office practices program.
  - Reviewing city policies.
  - Making recommendations for environmental initiatives.
  - Streamlining the data collection process to coordinate future GHG emissions inventories.

2020 Community Emissions Forecast

- Community GHG emissions are forecasted to increase by 0.22% to 577,955 metric tons of CO_2e in 2020 (from 576,676 in 2008).
- The slight increase in emissions is due to the relatively small expected change in population.
- Residential and Commercial emissions are expected to rise, while transportation, due to expected increases in fuel efficiency, is expected to decrease in emissions.

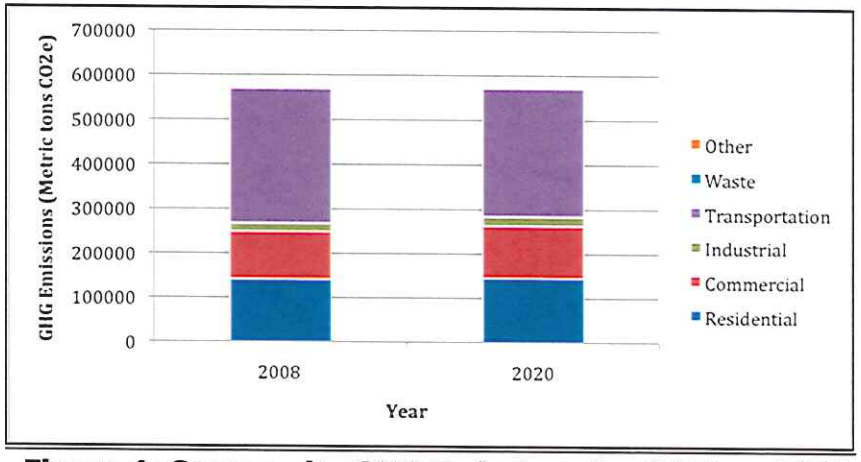

Figure 4: Community GHG Emissions for 2008 and 2020 (Page 22)

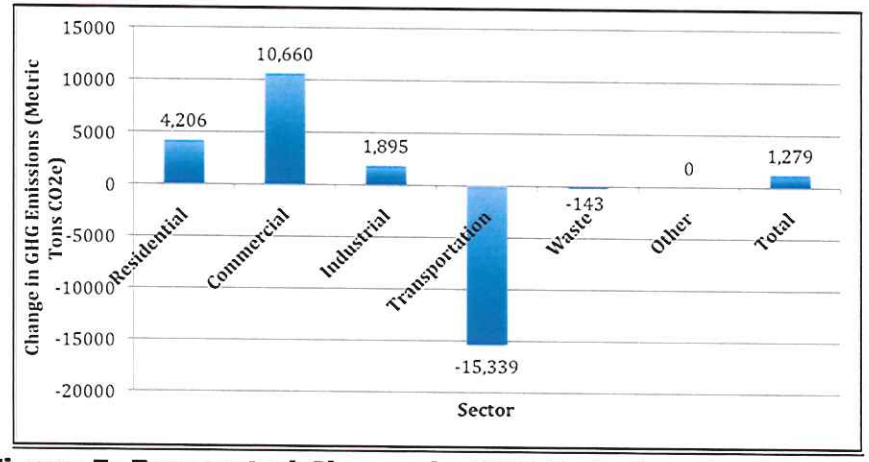

Figure 5: Forecasted Change in GHG Emissions by Sector, 2008-2020 (Page 23)

Next Steps

- **Form a Sustainability Committee.**
  - Review the results and recommendations of the 2008 inventory.
  - Other cities with environmental groups include Clayton, Creve Coeur, and University City.
    - Information on these groups can be found at each city's website.
- **Set a reduction target for Community and Government Operations Emissions.**
- **Begin to Develop a Kirkwood Climate Action Plan.**
  - Focus on improving energy efficiency as an initial step towards emissions reductions.

Benefits of Taking Action

- Reaffirms Kirkwood's commitment from the U.S. Mayor's Climate Protection Agreement to reduce GHG emissions.
- Allows Kirkwood Electric to prepare for possible regulation from Federal Energy & Climate Change Legislation.
- Positions Kirkwood as a leader within the St. Louis community in mitigating the effects of Climate Change.
- Helps create a healthier and more livable community that citizens can continue to take pride in.

Questions?