City of Bloomington Sustainability Action Plan
Climate, Energy, and the Built Environment
Meeting 2

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Current Situation in Bloomington

- Limited documentation of energy efficiency projects
  - Data on energy use by sector is available
- Electricity consumption decreased between 2008 and 2016
  - 6% growth in population
  - Overall consumption decreased by 11%
  - Municipal consumption decreased by 19%
  - Residential consumption decreased by 10%
- Open house feedback:
  - Need more focus on demand side changes from residents and businesses
  - Current green incentives program is not utilized and therefore not effective
Energy Conservation and Efficiency

Community Goals found in Bloomington Comprehensive Plan

- Reduce community-wide fossil fuel consumption
- Target efficiency improvements in the public and private sectors
- Drive increased efficiency in the built environment
- Promote energy saving retrofitting of public and private buildings and informed decision-making for building renters based on energy consumption.
- Create an energy efficiency program aimed at cost-effective, energy-saving strategies for residential households
- Improve the information available to renters and homeowners to increase energy efficiency
- Assess incentive programs that encourage greater energy efficiency
- Develop a greenspace per capita goal
Recommended Community Goals found in Bloomington Environmental Action Plan

- Reduce GHG emissions from 2005 levels by 17% by 2020 relative to 2005 levels
- Reduce energy consumption in buildings by 20% by 2020
- Promote retrofitting of older buildings
- Promote consumption-based decision-making
- Reach 40% tree cover in Bloomington and site where energy benefits can best reduce energy needs in buildings
Metrics Found in Bloomington Documents

- Buildings and energy sector represents 68% of GHG emissions (2016 GHG Inventory)
- Total electricity usage per capita (all-sector) (2016 GHG Inventory)
  - 2008: 20,089 kwh per capita
  - 2016: 9,256 kwh per capita
- Energy use trend
  - 11% decrease between 2008 and 2016
Energy Conservation and Efficiency

Metrics Used in Other Cities

• Iowa City, Iowa
  • Energy use trend increasing
  • Overall increase of 3.6% between 2005 and 2017
  • Municipal decrease of 9.8% between 2005 and 2017
  • 12% population growth
  • Total GHG emission fell by 23.1%

• Columbia, Missouri
  • Total GHG emissions tons per capita decreased by 0.2%
  • Population growth of 10.6%

• Ann Arbor
  • Total GHG emissions tons per capita decreased by 0.8%
  • Population growth of 6%
Energy Conservation and Efficiency

Metrics Recommended in ISO 37120 and STAR

- STAR Indicator #7
  - 28% reduction of 2005 levels of GHG emissions by 2025
- ISO 37120 Indicator 8.3
  - GHG emissions in tons per capita
- ISO 37120 Indicator 7.1:
  - Yearly total residential electricity use
  - Residential is one of the largest sectors of consumption in cities
- ISO 37120 Indicator 7.3:
  - Energy consumption of government-owned buildings per year
- ISO 37120 Indicator 7.5:
  - Total electricity use per capita
  - Helps cities understand how much electricity is being consumed to effectively manage generation, consumption, and conservation of electricity
Actions Used in Other Cities

• Updating building codes to comply with International Energy Conservation Code and promote energy efficiency (Lawrence, Kansas; Iowa City, Iowa; Columbia, Missouri)
• Rebates or financing for energy efficiency improvements
  • Pay-As-You-Save Program (PAYS) (Iowa City)
  • Low-interest financing through private & non-profit lenders (Iowa City)
• Facilities Conservation Improvement Program (Lawrence)
• Become a “Smart City” (College Station, Texas)
• Property Assessed Clean Energy (PACE) Program (Ann Arbor)
  • Find department administering
  • Department of Energy Financing
Actions Recommended in STAR

- **STAR:**
  - Achieve 35% Green Infrastructure cover in community
    - Use of tree siting, porous and high-albedo surfaces, and green roofs/walls to reduce energy needs inside buildings
  - Adopt an energy efficiency action plan
  - Adopt or upgrade building codes to encourage energy efficiency
  - Adopt an energy use disclosure ordinance
  - Education/outreach campaigns
  - Encourage the collection and reporting of energy use data
  - Create incentives to promote energy efficiency
    - New construction
    - Updates to existing buildings
    - Low-income assistance programs
Thank You
Questions and Answers