

# Greenprint Denver

*Mayor John Hickenlooper's Sustainable Development Program*



greenprint denver

## Climate Smart and Healthy:

Denver's Efforts to Promote  
Healthier Communities and a  
Healthier Planet

Gregg W. Thomas

Denver Department of Environmental Health  
RMLUI – Climate Smart and Healthy, March 6 2009





# Overview

- Strategic Planning
  - Denver Comprehensive Plan, Blueprint Denver, Greenprint Denver, Strategic Transportation Plan
- Multi-Agency Collaboration
  - Recognize the necessity, momentum is building
- Carbon Footprint – where do we stand?
  - Are trends changing?
- What's Missing?

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# Denver Comp Plan 2000

- Guiding Principles
  - Opportunity, Sustainability, Equity, Engagement
- Key Issues and Challenges
  - Long term physical environment
    - Sustainability, land use, mobility, legacy, housing
  - Long term human environment
    - Economics, neighborhoods, education, services
- Regional Cooperation is Vital
  - Population expected to increase 1,000,000 by 2030

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# Blueprint Denver 2002

- Areas of Change and Stability
  - Stability – no significant changes in land use
  - Change – infusion of population, economic activity and investment
- Multi-Modal Streets
  - More trips by more people in the same amount of space; improving transit, ped and bike facilities.
- Mixed-Use Development
  - Walk or take transit for their daily errands
  - Drive with shorter and less frequent car trips

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# Greenprint Denver

- Launched in 2005
  - Integrate environmental impacts alongside economic and social impacts
- Sustainable Development Action Agenda
- Local Government as an Effective Force for Innovation and Leadership
- Keeps True to Central Goals of Comp Plan
- Sets Goals and Measures Progress
  - e.g. 2007 Climate Action Plan

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# Strategic Transportation Plan 2008



- Natural Extension of Previous Master Plans
- Multi-Modal Solutions to Transportation Challenges
- Bold Departure from Traditional Transportation Planning
  - Tracks “person-trips” by *any* means rather than only vehicle travel
- Still recognizes importance of maintenance and operational efficiency of existing roads
- Take advantage of FasTracks over next decade

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# Living Streets Initiative

- Places Where All Ages and Abilities Feel Safe Using Any Mode of Travel
- Builds on Strategic Transportation Plan
- Integrate with Use and Form of Adjacent Development
- Broad City Partnerships
  - Public Works, Planning, Env Health, Econ Dev, Healthy People
  - Healthier living, econ dev, enhanced mobility
    - Don't enhance one at expense of the others

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# Living Streets Initiative



Photo: City and County of Denver



Photo: City and County of Denver



Photo: Dan Burden



Photo: City and County of Denver

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# Denver GHG Footprint

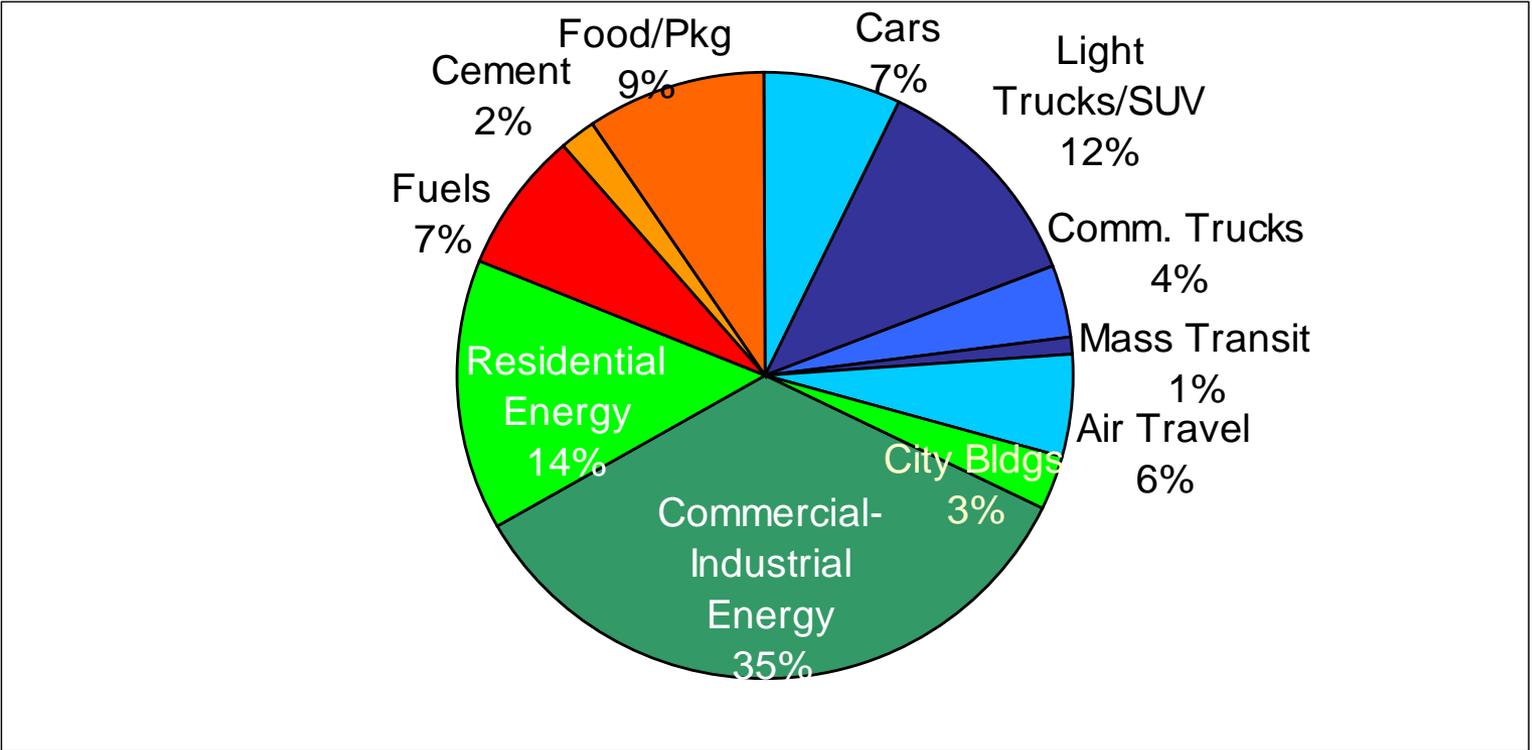
- City is viewed as a demand center for energy AND key urban materials
- End-use of energy in all buildings & industries located within Denver is inventoried
- Embodied energy of critical urban materials is included
  - Water, fuel, cement in urban concrete, food/packaging

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# 2005 Greenhouse Gas Emissions in Denver

Per Capita emissions = 25.2 mtCO<sub>2</sub>e / person



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Source: "Greenhouse Gas Inventory for the City and County of Denver" at [http://www.greenprintdenver.org/docs/Denver\\_GHG\\_Inventory\\_Report.pdf](http://www.greenprintdenver.org/docs/Denver_GHG_Inventory_Report.pdf)

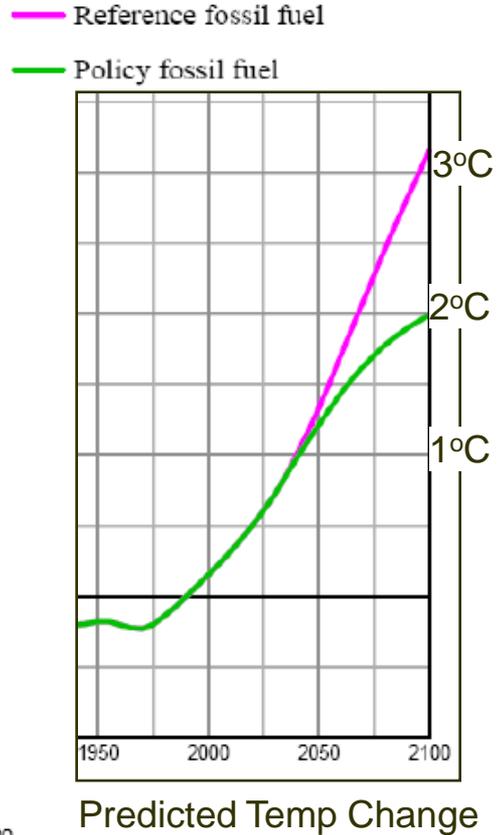
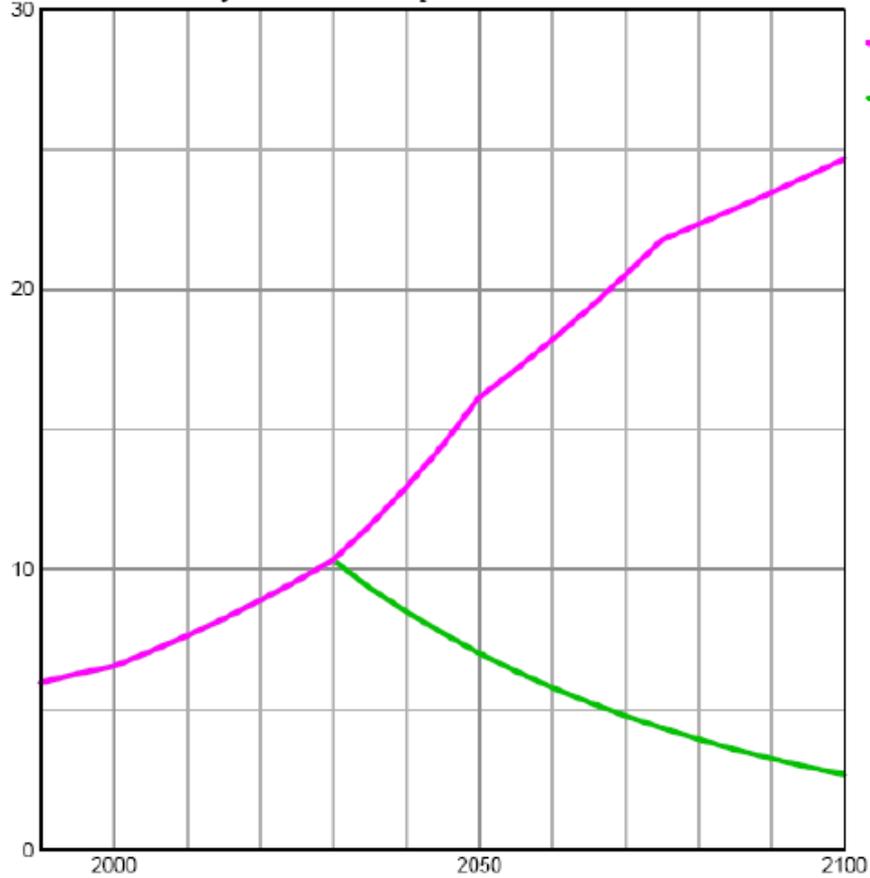




# Future Projections CO<sub>2</sub> and Temps

## Carbon Dioxide Emissions (Gt C)

Reference: IEA:2000-30 1.6% 2030-50 2.25% 2050-75 1.2% 2075-00 .7%  
Policy: IEA:ACT Map 2% Control Starts 2030



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Source: Frank Princiotta, US EPA  
Presentation at EPA/AWMA Information Exchange, Dec 2007





# Denver Climate Action Plan

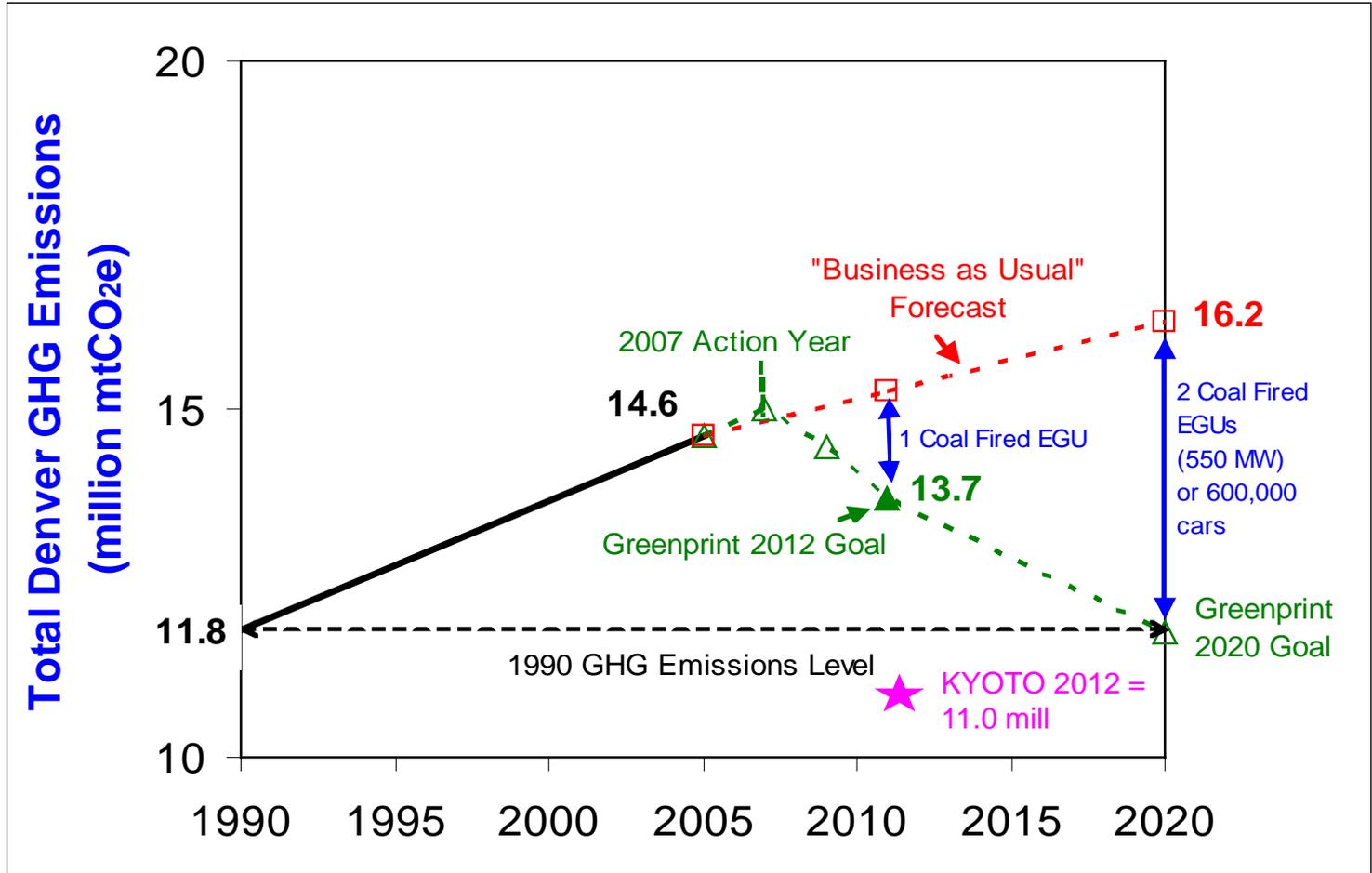
- Developed to achieve goal of 10% per capita reduction in GHG emissions
- Diverse combination of strategies
- City government actions alone will barely make a dent
- Need for partnerships in order to implement
  - Businesses, associations, lending institutions
  - Residents
  - Non-profits

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# Charting the Future



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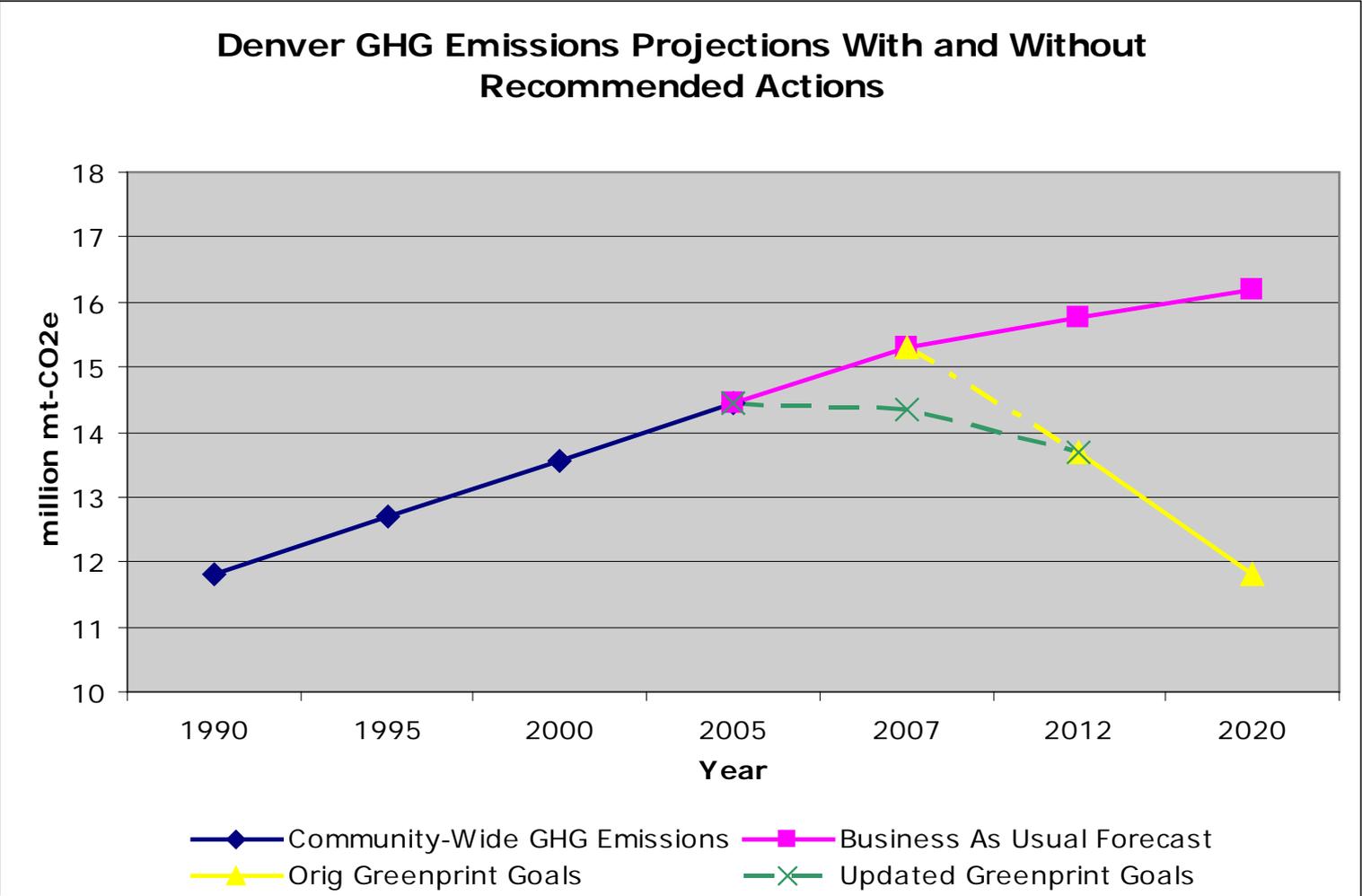
Source: "Greenhouse Gas Inventory for the City and County of Denver" at

[http://www.greenprintdenver.org/docs/Denver\\_GHG\\_Inventory\\_Report.pdf](http://www.greenprintdenver.org/docs/Denver_GHG_Inventory_Report.pdf)





# Measuring Progress



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# Denver Growth Trends

Between 2005 and 2007:

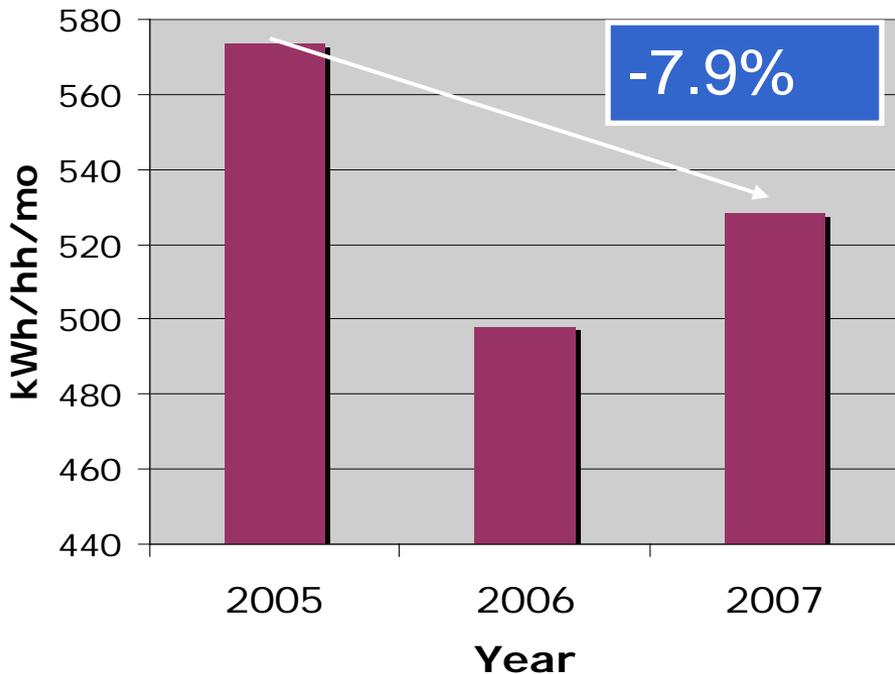
- Denver population increased from 579,000 to 592,000 (DRCOG)
  - 2.1% increase
- Denver households increased from 246,000 to 259,000 (DRCOG)
  - 3.3% increase
- Commercial sq. footage increased from 229 million sq. ft to 233 million sq. ft (Assessor's Office)
  - 2.1% increase

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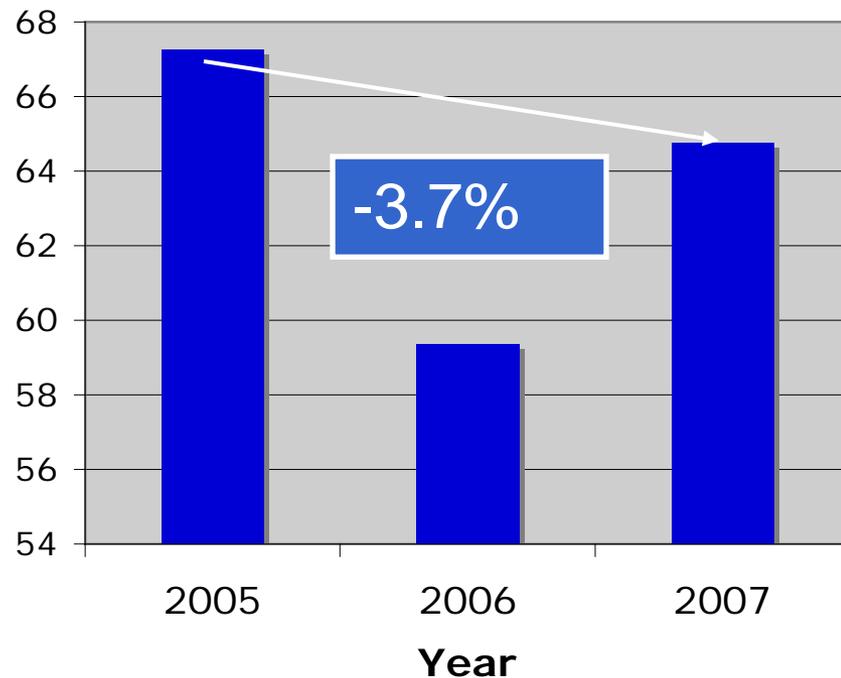


# Energy Use Per Home

### Residential Electricity Use Intensity, kWh/hh/mo



### Residential Nat. Gas Use Intensity, therms/hh/mo

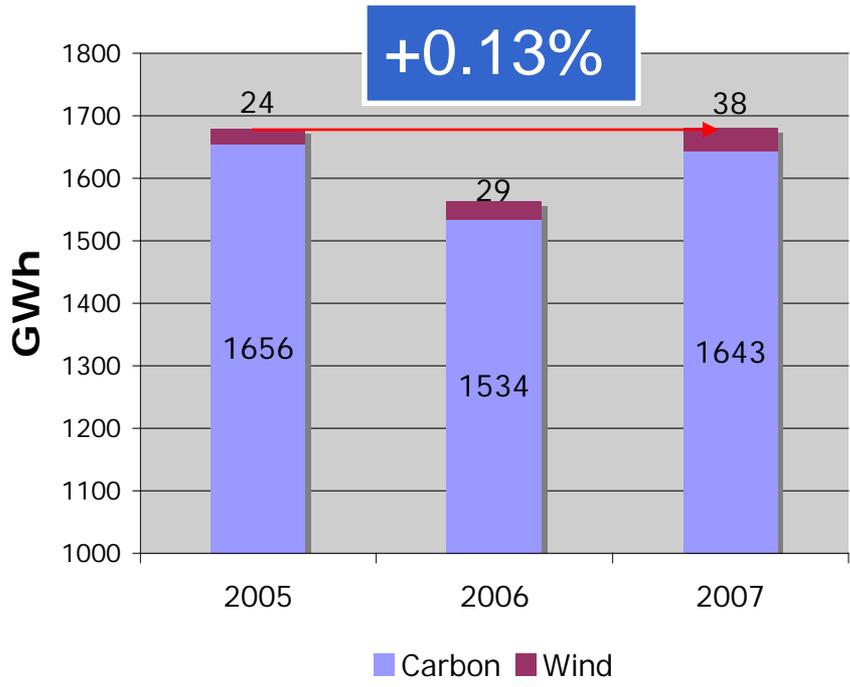


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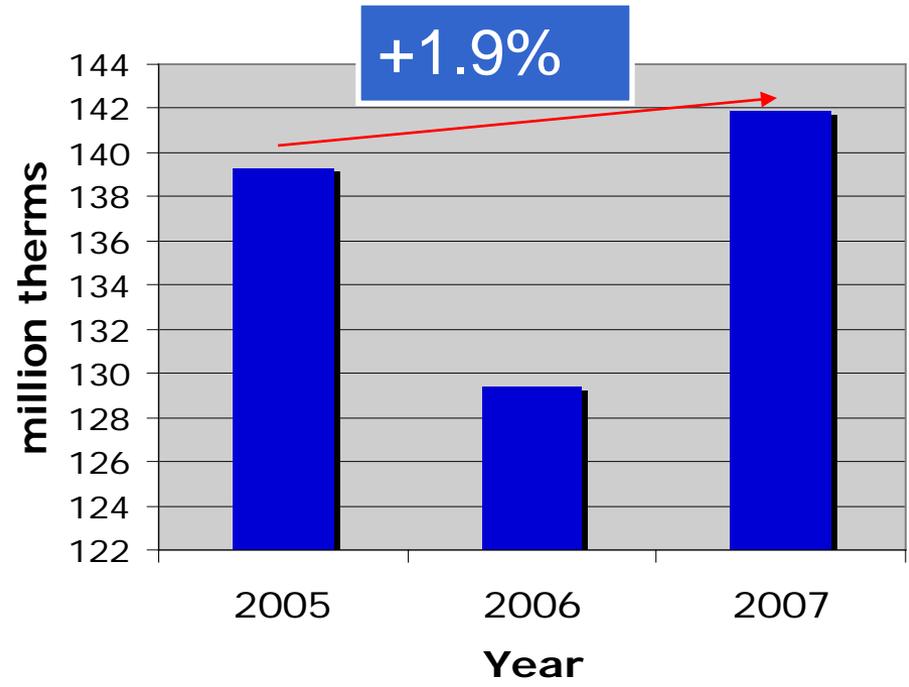


# Total Residential Energy Use

### Residential Community-Wide Electricity Use, GWh



### Residential Community-Wide Natural Gas Use, million therms



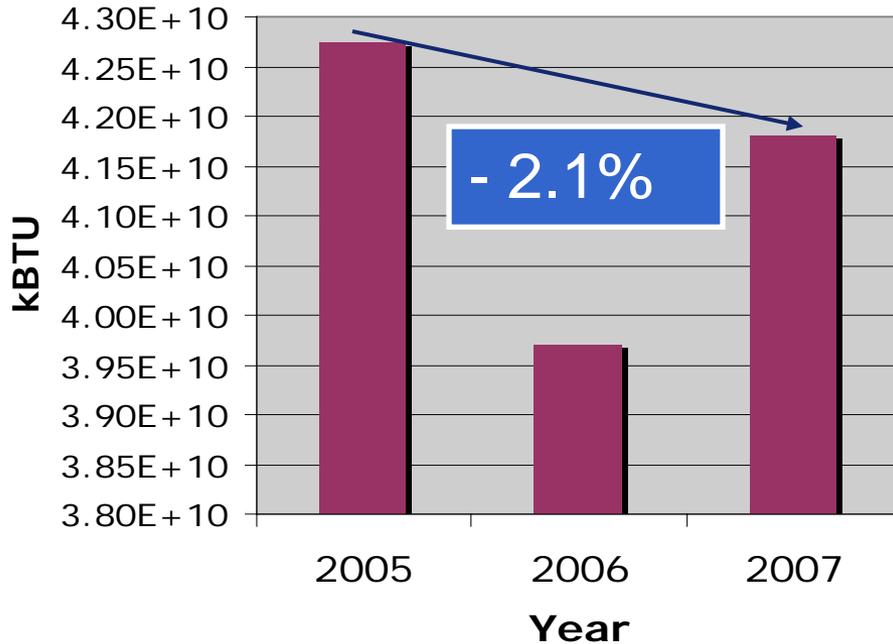
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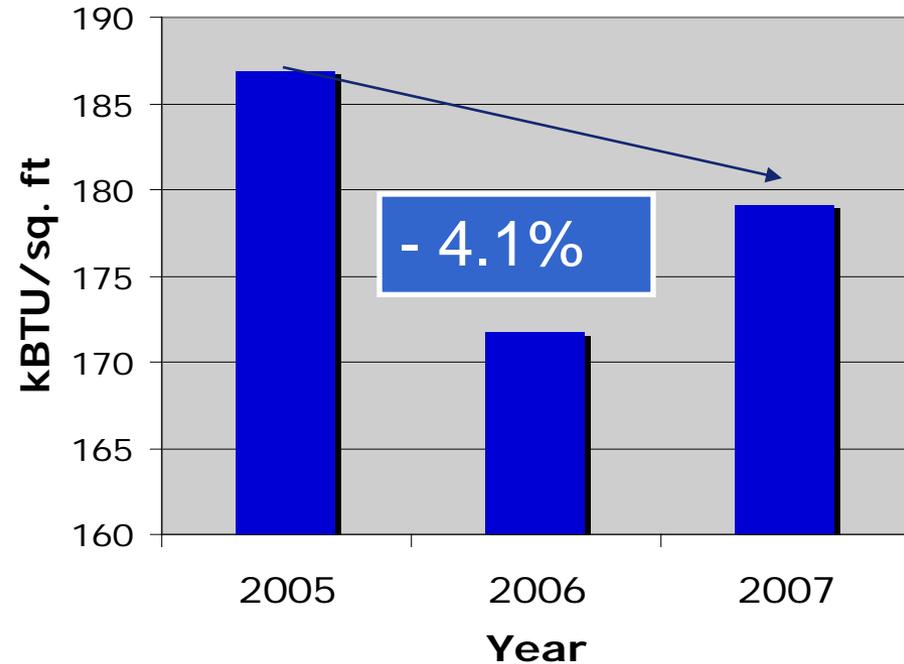


# Total Commercial Energy Use

### Commercial Community-Wide Energy Use, kBTU



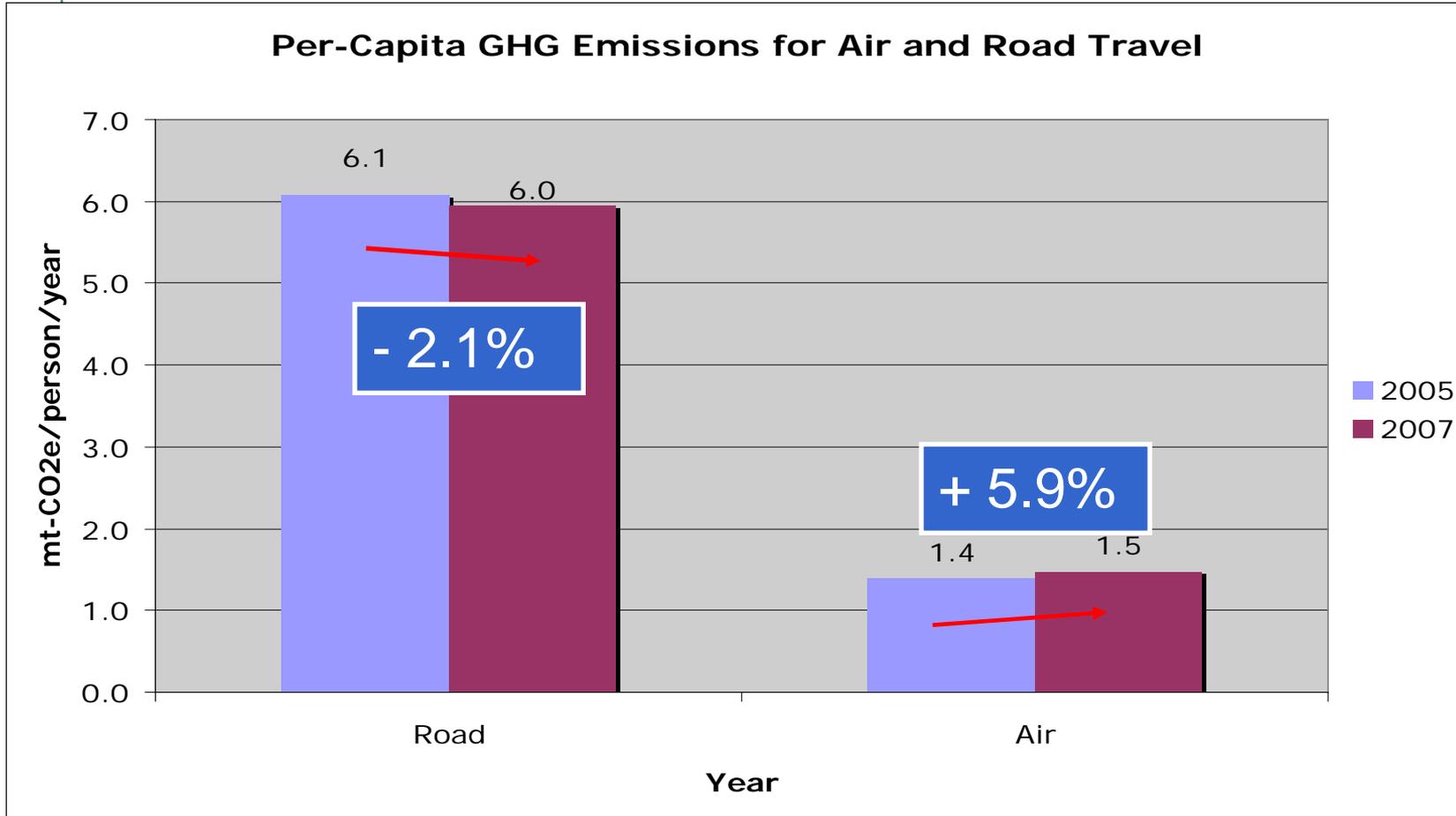
### Commercial Energy Use Intensity, kBTU/sq. ft.



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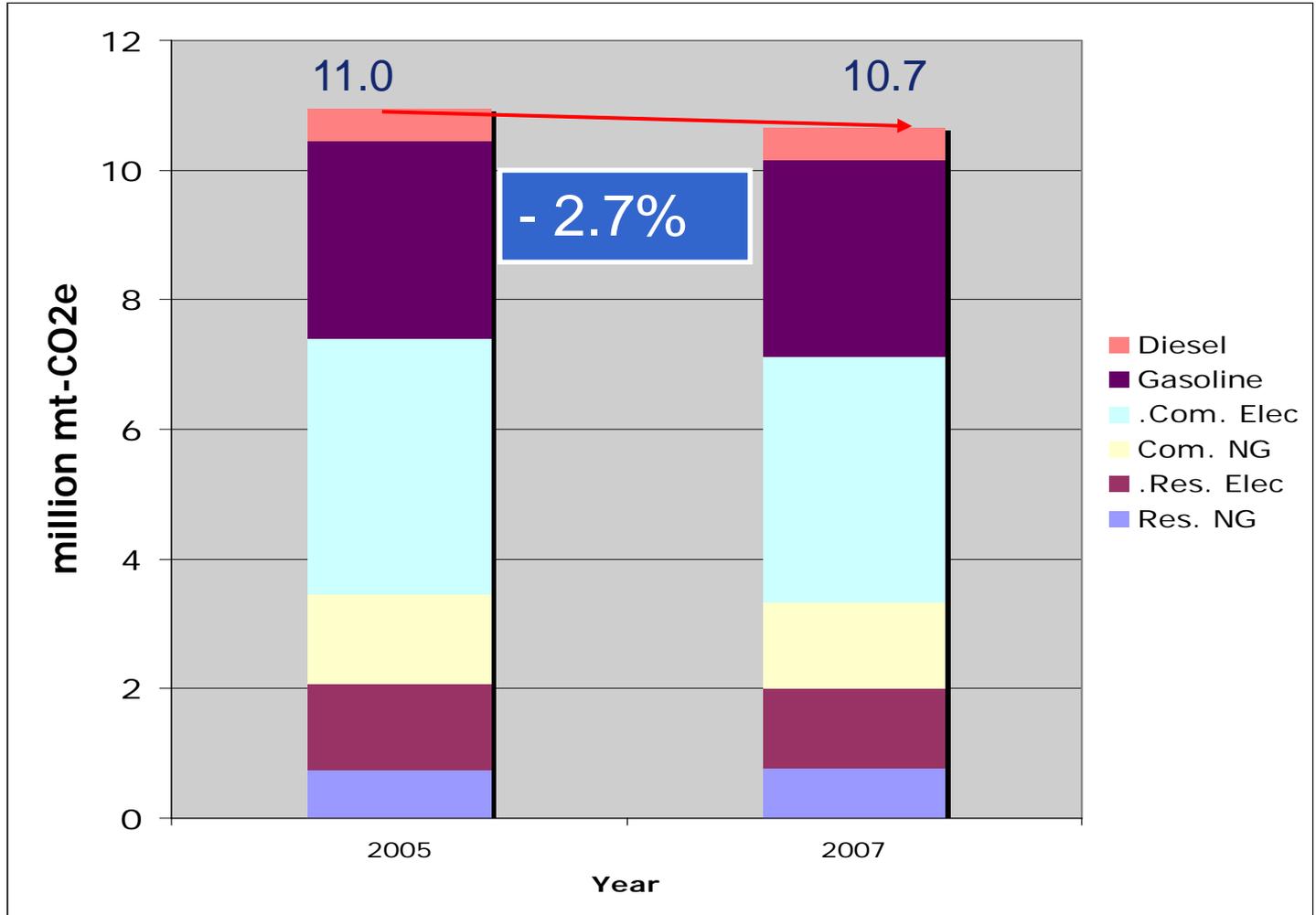
# Transportation Emissions



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# Cumulative GHG Emissions





# What's Missing?

- Though inter-agency coordination has increased, more needs to be done
  - Important for long-term succession planning
- Public health perspectives have been missing until recently
- Implementing visionary plans will require additional funding
  - Will the public support it?
  - Diverse perspectives can help greatly

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# Summary

- Denver's planning process has been consistent over the past decade
- Silos are being broken down
- Setting goals and measuring performance is critical
- Denver is also making strides in reducing its carbon footprint
  - Policies and market demands have both played important roles to date

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# More Information

- Web site: [www.greenprintdenver.org](http://www.greenprintdenver.org)



- E-mail: [greenprint@denvergov.org](mailto:greenprint@denvergov.org)
- GHG Questions: [gregg.thomas@denvergov.org](mailto:gregg.thomas@denvergov.org)

[www.greenprintdenver.org](http://www.greenprintdenver.org)