

**Vancouver's Challenge:  
Greenhouse Gas Emissions and  
Becoming the Greenest City by 2020**

**Mayor Gregor Robertson  
City of Vancouver  
June 8, 2009**

# Overview

- **Current GHG Profile**
- **Vancouver's Imperative:**
  - Becoming the greenest city in the world by 2020
  - Vancouver's Annual GHG Targets
  - Climate protection and peak oil
- **Green Initiatives Underway**
- **Next Steps for Vancouver**



Vancouver is an  
Inaugural City for  
the  
United Nations  
Climate Neutral  
Network

# Vancouver's Context

- A city of 578,000 residents and 378,000 jobs, in a region of over 2.2 million people and 1.1 million jobs
- Compact community (59% apartments and 41% homes)
- Relatively low vehicle use (50%) and high transit (17%), carpooling (12%), cycling (3%) and walking (17%)



# Vancouver's Current GHG Profile: How Vancouver Compares

- Vancouver has the lowest per capita GHG emissions in North America, though still above European leaders such as Stockholm and Barcelona
- Low carbon hydro-electricity and compact, walkable communities with relatively low car use and landfill gas recovery contribute to low per capita emissions

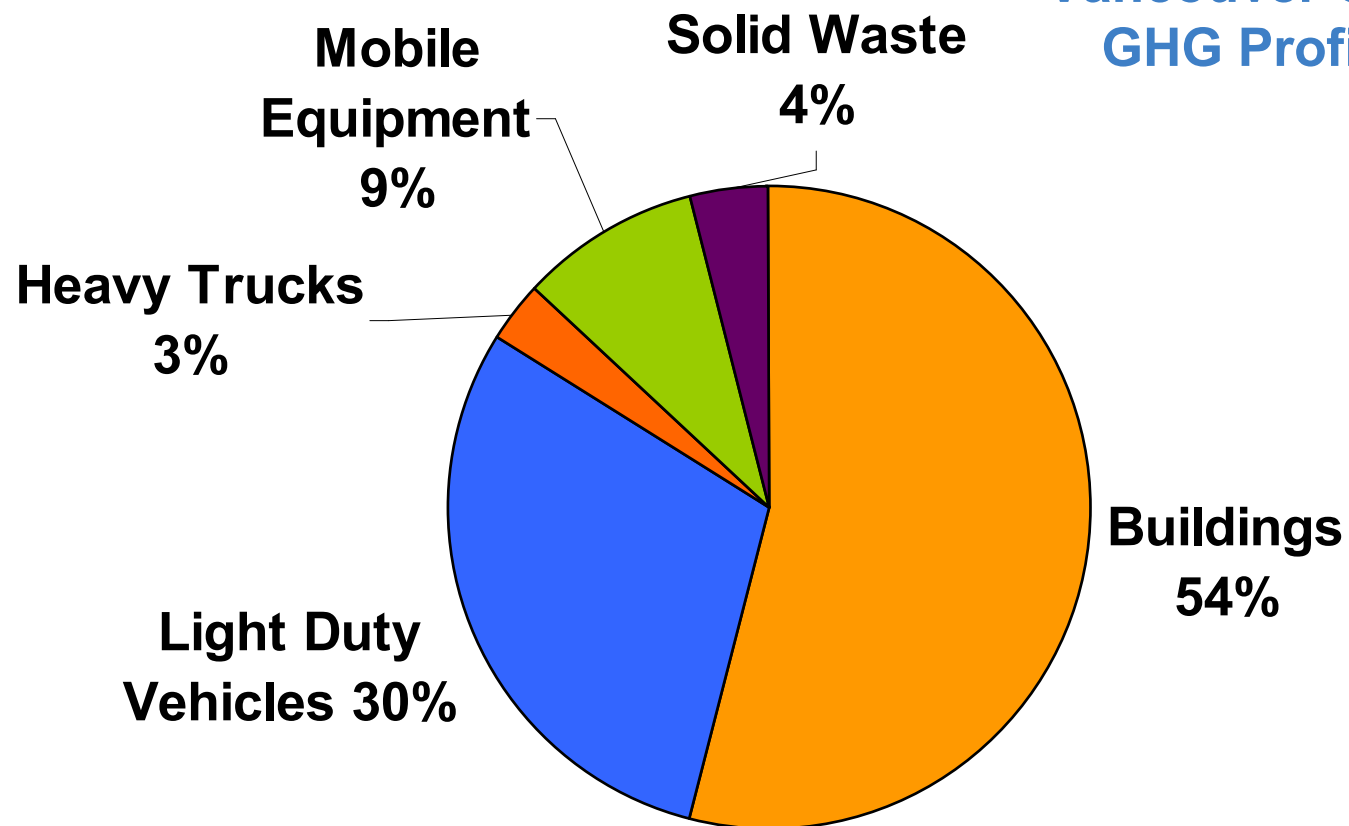
## North American GHG Leaders

| City      | GHG/<br>person | Change in<br>GHG/person<br>since 1990 |
|-----------|----------------|---------------------------------------|
| Vancouver | 4.9 t          | -15%                                  |
| Montreal  | 7.2 t          | N/A                                   |
| Toronto   | 9.3 t          | -7%                                   |
| Seattle   | 12.4 t         | 2%                                    |
| Portland  | 13.7 t         | -17%                                  |
| Austin    | 16.7 t         | -18%                                  |

Source: Institute for Local Self-Reliance, City of Toronto, City of Montreal, City of Vancouver

# Vancouver's Current GHG Profile

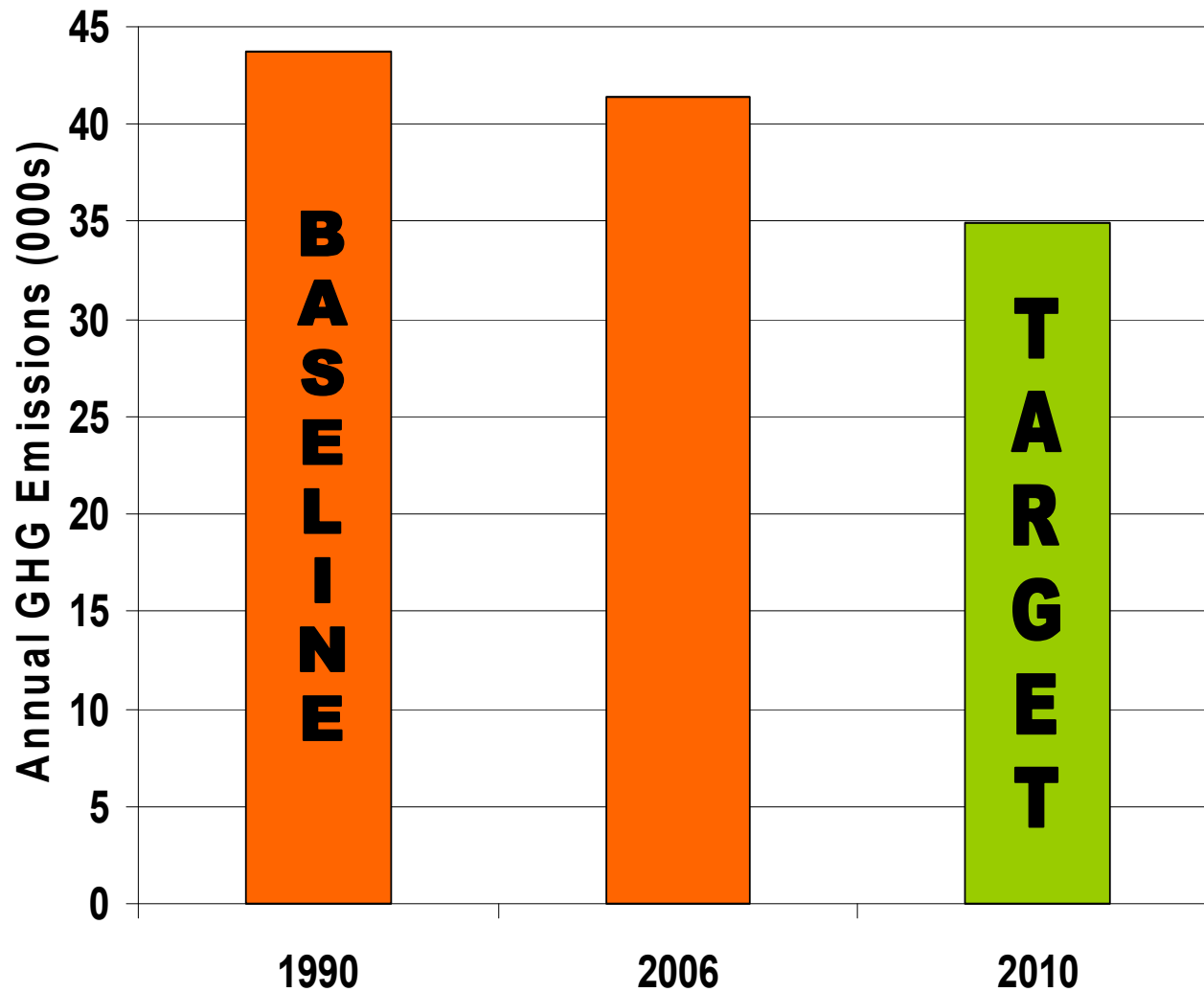
## Vancouver Community GHG Profile (2006)



# Vancouver's Imperative: Becoming the Greenest City by 2020



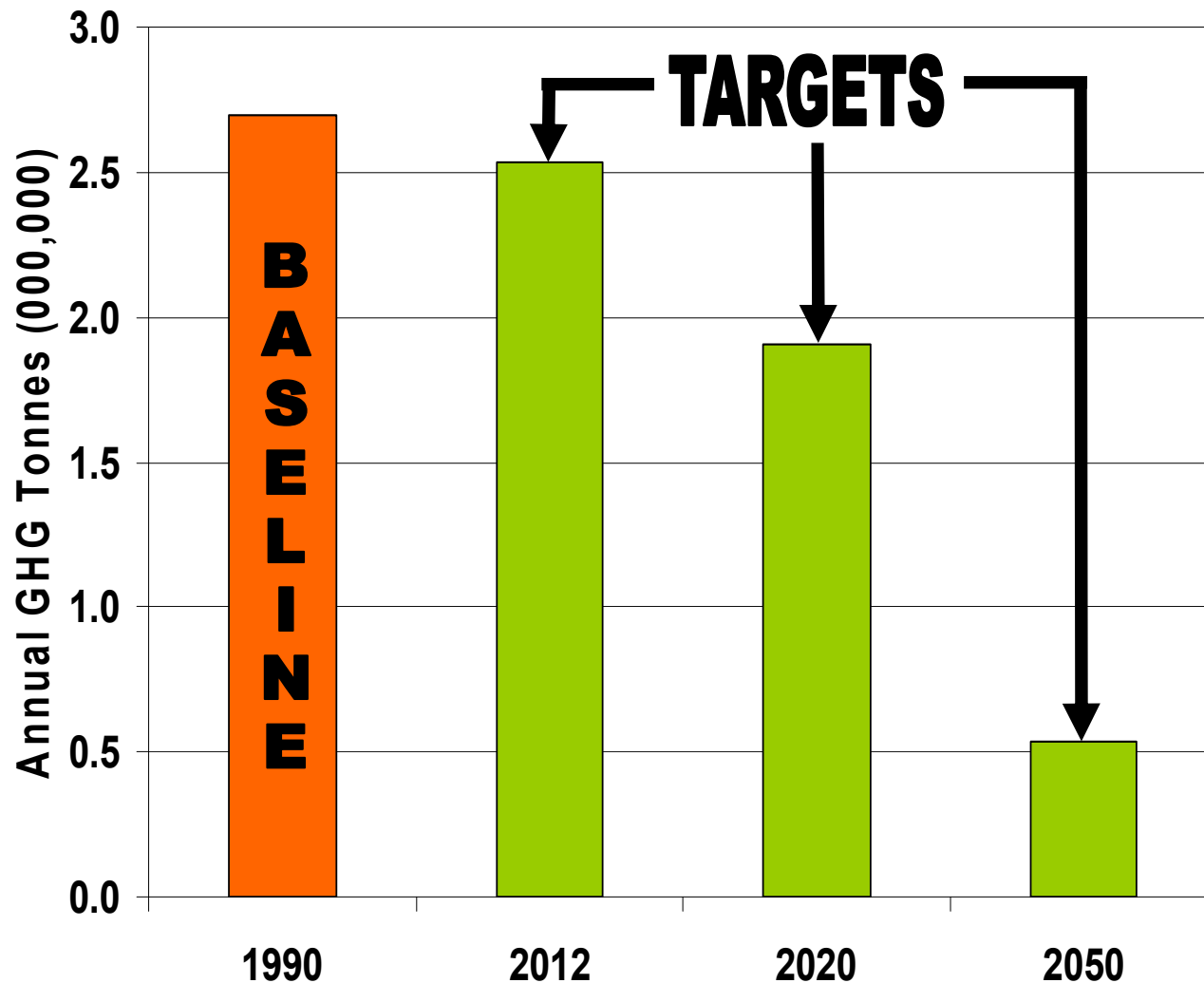
# Vancouver's Imperative: Annual Corporate GHG Targets



**Corporate  
GHG Targets**

- 20% below 1990 by 2010
- Carbon Neutral by 2012

# Vancouver's Imperative: Annual Community GHG Targets



**Vancouver  
GHG Targets**

- 6% below 1990 by 2012
- 33% below 2007 by 2020
- 80% below 1990 by 2050
- Carbon neutral new buildings by 2030



# Green Initiatives Underway: Vancouver's GHG Levers

## 3 municipal levers for reducing carbon dependency

Leadership and  
Empowerment

Land Use and  
Transportation

Buildings and  
Energy

# Green Initiatives Underway: Leadership and Empowerment

## Southeast False Creek Sustainable Community

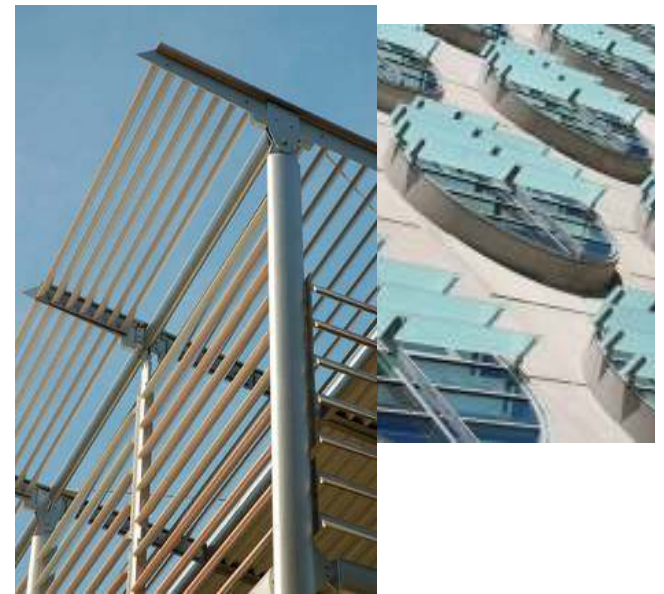
- Canada's first Net Zero Building that generates as much energy as it consumes
- LEED Platinum Community Centre
- Green roofs
- Solar hot water systems
- Rainwater capture and reuse
- Low parking and car-sharing
- Neighbourhood Energy Utility based on sewer heat recovery, the first of its kind in North America



# Green Initiatives Underway: Land Use and Transportation

## EcoDensity

- LEED silver equivalent for all rezonings
- For rezonings on sites greater than 2 acres:
  - District Energy Feasibility Study
  - Stormwater Management Plan
  - Low-carbon TDM Strategy
- Priority permitting for ultra-green developments
- New housing types including laneway houses and suites within apartments



# Green Initiatives Underway: Land Use and Transportation

## Sustainable Transportation

- Since 1994:
  - Walking trips up 44%
  - Cycling trips up 180%
  - Transit trips up 20%
  - Vehicle trips down 10%
- Expanding cycling network to 293 km and improving pedestrian infrastructure
- Planning for transit priority and rapid transit to Central Broadway (Vancouver's 2<sup>nd</sup> Downtown)



# Green Initiatives Underway: Buildings and Energy

## Green Homes Program

*“The best code on the continent”*

- R-20 Insulation in walls
- In-suite energy use displays
- Energy Star Windows
- Insulated hot water tanks and pipes
- 40% non-incandescent light fixtures
- Direct vent gas fireplaces
- Heat Recovery Ventilation
- Mandatory Energuide audit
- Pre-piping for renewable energy
- Dual flush toilets
- Electric vehicle Charging



# Green Initiatives Underway: Buildings and Energy

## Passive Design Guidelines

- Moving beyond the code to get “greener buildings”
- Providing tools for “good design” that use the form, structure and orientation of buildings to maximize energy savings and thermal comfort



# Green Initiatives Underway: Buildings and Energy

## Removal of Green Tape

- Height relaxation for green roof access
- Height relaxation for solar or wind power
- Wall thickness exemptions for increased insulation
- Front and side yard relaxations for fixed external shading devices



# Green Initiatives Underway: Buildings and Energy

## LiveSmart BC and Eco-Energy Retrofits

- Promote homeowner sign-ups
- Up to \$12,000 in Government incentives per home
- Outreach team at community centres, libraries and business “lunch-n-learns”
- Targeting 10,000 retrofits over 4 years
- Average of 2.5 tonnes saving per home



# Next Steps for Vancouver

- Working with our large emitters and retrofitting existing buildings
- Expanding rapid transit, creating walkable and bikable communities, and supporting vehicle electrification
- Expanding district energy systems and renewable energy
- Implement Greenest City Action Team Quick Start Recommendations
- Planning green, liveable and affordable land use



## Final Thought...

**“We overestimate what we can achieve in one year  
and underestimate what can be done in five ...”**

**1980s**



**2000s**

