

Vancouver: Greenest City 2020

The Journey Ahead



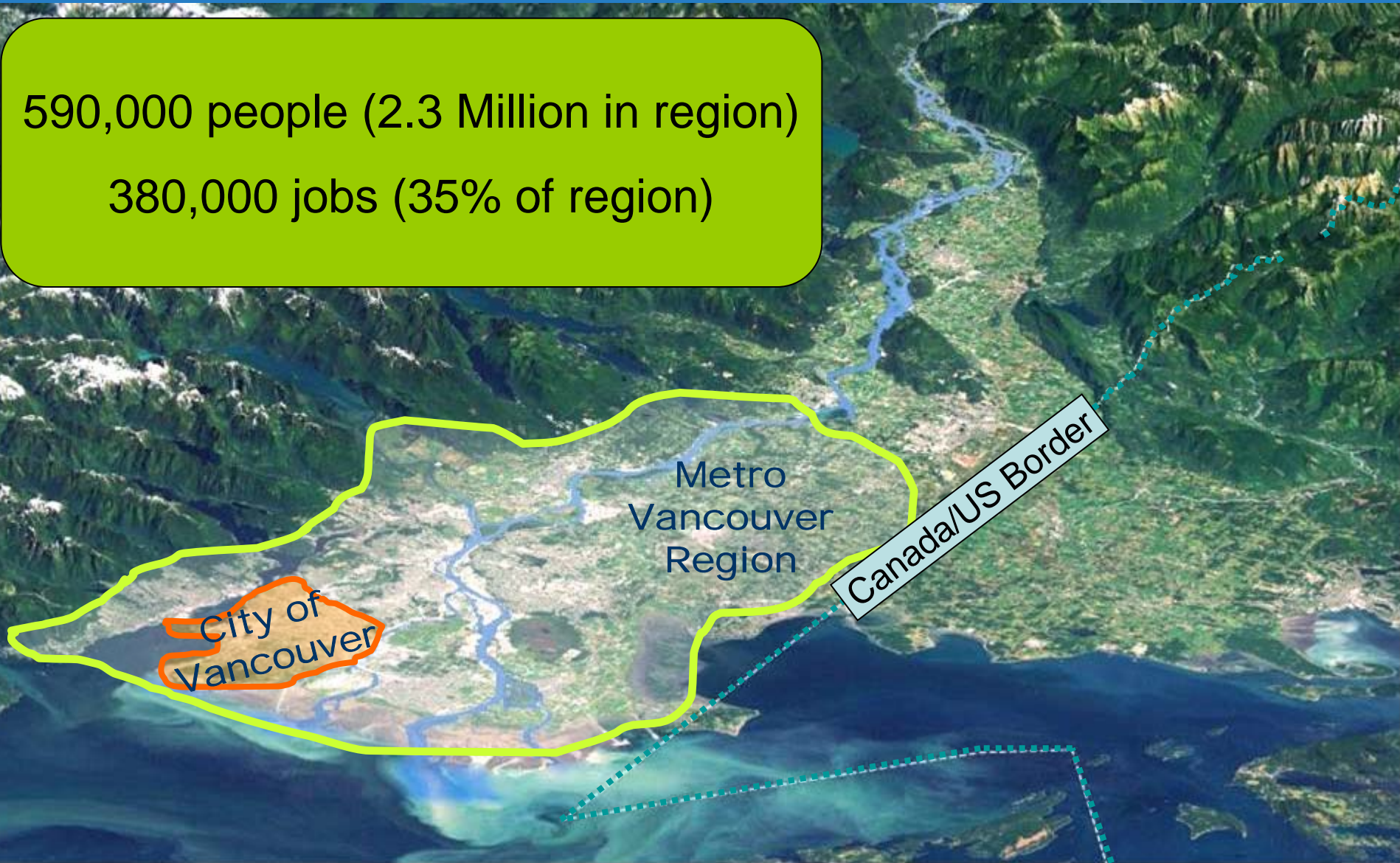
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City of Vancouver

vancouver
2010

Context

590,000 people (2.3 Million in region)

380,000 jobs (35% of region)



Context

- Climate similar to San Sebastian
- Compact city; no freeways
- Top three most liveable cities in the world - The Economist magazine



The Challenge

GREENEST CITY IN THE WORLD BY 2020

In early 2009, the City's Mayor formed the Greenest City Action Team (GCAT) with a mandate to make recommendations on how Vancouver can become the greenest city in the world by 2020.



Engage Partners in Planning

National award winning public engagement process involved:

- 10 Multi-departmental working groups
- 100 Stakeholder agencies (business, non-profit, academia, government agencies, etc)
- 30,000 members of the public



Simple Formula

Health

Zero Waste

Climate Protection



HEALTH Access to Nature

GOAL: Provide incomparable access to green spaces

2020 targets:

- 1) Ensure that every Vancouver resident lives within a five- minute walk of a park, beach, greenway or other natural space.
- 2) Plant 150,000 additional trees in the city between 2010 and 2020.



HEALTH LOCAL FOOD

GOAL: Become a global leader in urban food systems

2020 target:

Increase city and neighbourhood food assets by a minimum of 50% over 2010 levels.

HEALTHY CLEAN WATER

GOAL: Enjoy the best drinking water of any major city in the world

2020 targets:

- 1) Meet or beat the strongest of BC, Canadian and international drinking water quality standards and guidelines.
- 2) Reduce per capita water consumption by 33% over 2006 levels.

HEALTH CLEAN AIR



GOAL: Breathe the cleanest air of any major city in the world

2020 target:

Meet or beat the most stringent of BC, Canadian and international air quality standards and guidelines.

ZERO WASTE

HALF
OF
GARBAGE IS
COMPOST

GOAL: Create zero waste

2020 target:

Reduce total solid waste going to landfill or incinerator by 50% from 2008 levels.

CLIMATE ZERO CARBON

A photograph of a rooftop solar panel array in Vancouver, with a city skyline and mountains in the background. The solar panels are blue and mounted on a metal frame. The background shows a city skyline with various buildings and a large construction site with red cranes. The sky is clear and blue.

GOAL: Eliminate Vancouver's dependence on fossil fuels

2020 target:

Reduce community based greenhouse gas emissions 33 per cent from 2007 levels.

CLIMATE ZERO CARBON

Renewable Energy through District Energy Systems

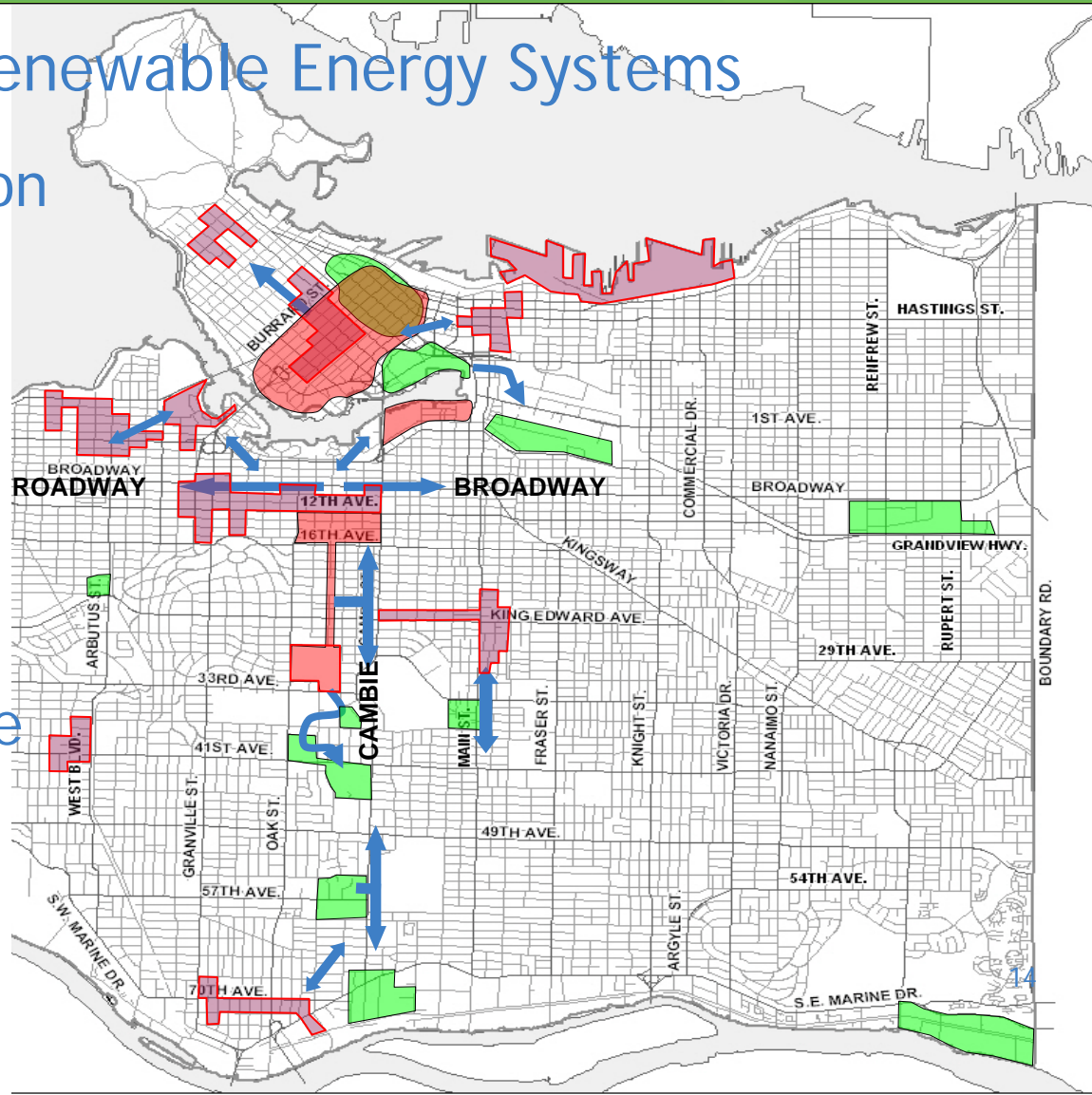
- Solar/waste/ground source heat capture
- Thermal transfer between buildings/users
- Organic and wood waste as energy and fuel source
- Utility approach = high capital costs amortized over long term by low operating costs
- Economies of scale lower costs



CLIMATE ZERO CARBON

Catalyze and Expand Renewable Energy Systems

- Establish new low carbon district systems with a large site re-developments
- Convert existing steam systems to low carbon energy sources
- Expand systems to serve new and existing buildings



CLIMATE GREEN TRANSPORTATION

GOAL: Make walking, cycling, and public transit preferred transportation options

2020 targets:

- 1) Make the majority of trips (over 50%) on foot, bicycle, and public transit.
- 2) Reduce distance driven per resident by 20% from 2007 levels.

CLIMATE GREEN TRANSPORTATION

Compact residential communities close to businesses, services, and recreation:

- Live, work, and play without depending on a car
- Reduces fuel use and emissions
- New development pays for parks, streetscape, daycare, etc



CLIMATE GREEN TRANSPORTATION

- Replace roads with bike and bus lanes; widen sidewalks
- Invest in public transit
- Require electric vehicle charging in new buildings and telecommunications poles



CLIMATE GREEN TRANSPORTATION

Cycling



increased

180%

1994 - 2004

Walking



increased

44%

1994 - 2004

Transit



increased

50%

1999 - 2009

Gasoline Sales



decreased

7%

1999 - 2008

Vehicle Trips



decreased

10%

1995 - 2005

CLIMATE GREEN BUILDINGS

GOAL: Lead the world in green building design and construction

2020 targets:

- 1) Require all buildings constructed from 2020 onward to be carbon neutral in operations.
- 2) Reduce energy use and greenhouse gas emissions in existing buildings by 20% over 2007 levels.

CLIMATE GREEN BUILDINGS

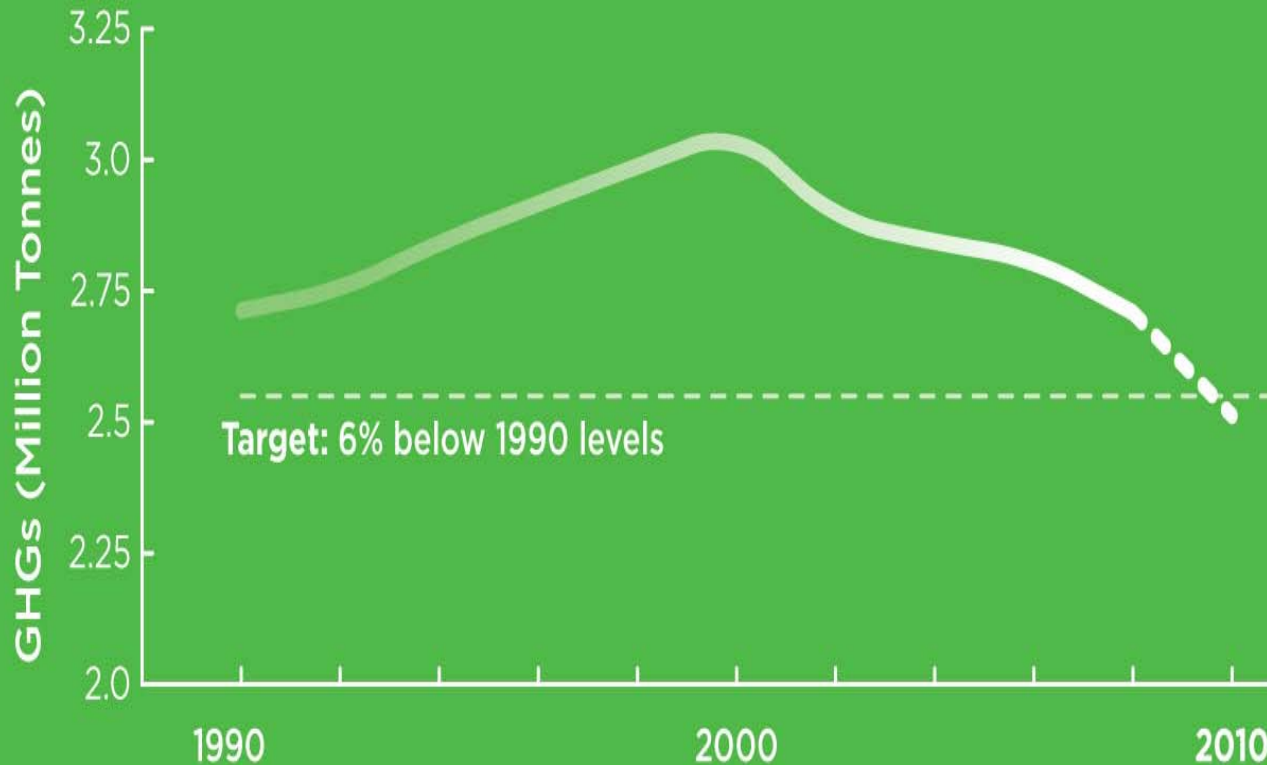
- Financing tools
- “Passive” design approaches including insulation, daylight, solar shading, thermal mass, and natural ventilation
- Smart buildings and continuous system optimization
- Regulate energy performance (efficiency and renewables) in building code



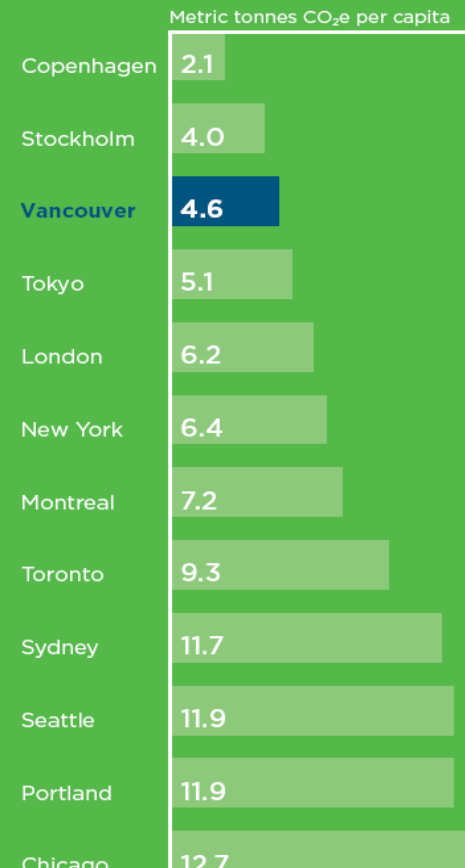
Energy Excellence and Economic Growth

Lowest Greenhouse Gas Emissions in North America

Vancouver's GHG Emissions are Declining



Greenhouse Gas Emissions Per Capita



Final Thought...

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

1980s



2000s

