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New Climate, Old Communities: Some first thoughts on opportunities and challenges

The Heritage Imperative: Old Buildings in an Age of Environmental Crisis
Heritage Canada Foundation Conference

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- We need to achieve greenhouse gas reductions of at least 80% by 2050
- Buildings and urban form have a huge influence over total greenhouse gas emissions.
- Your expertise will be crucial in meeting the challenge of climate change.

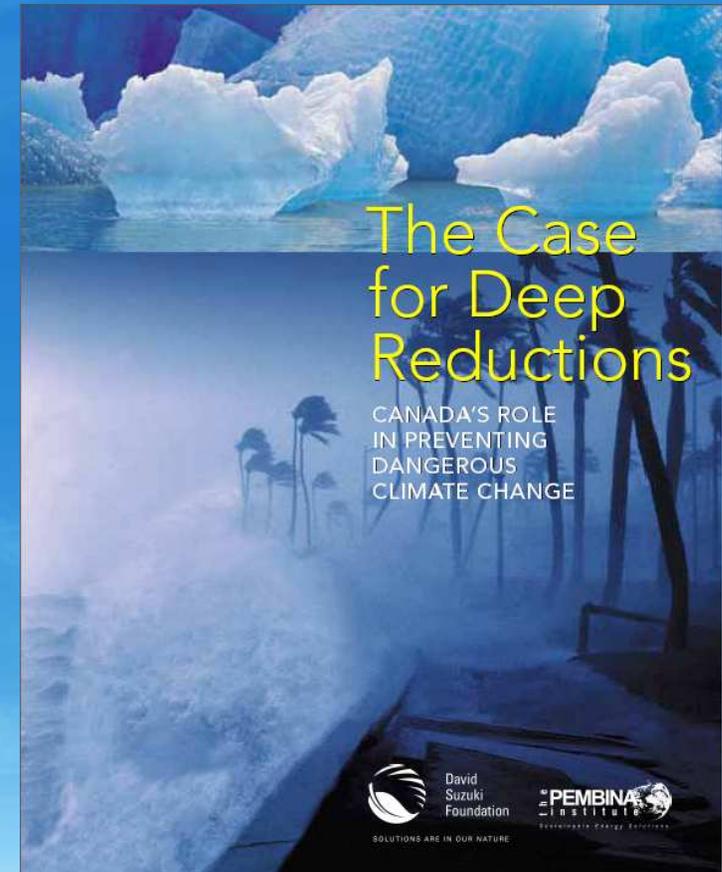


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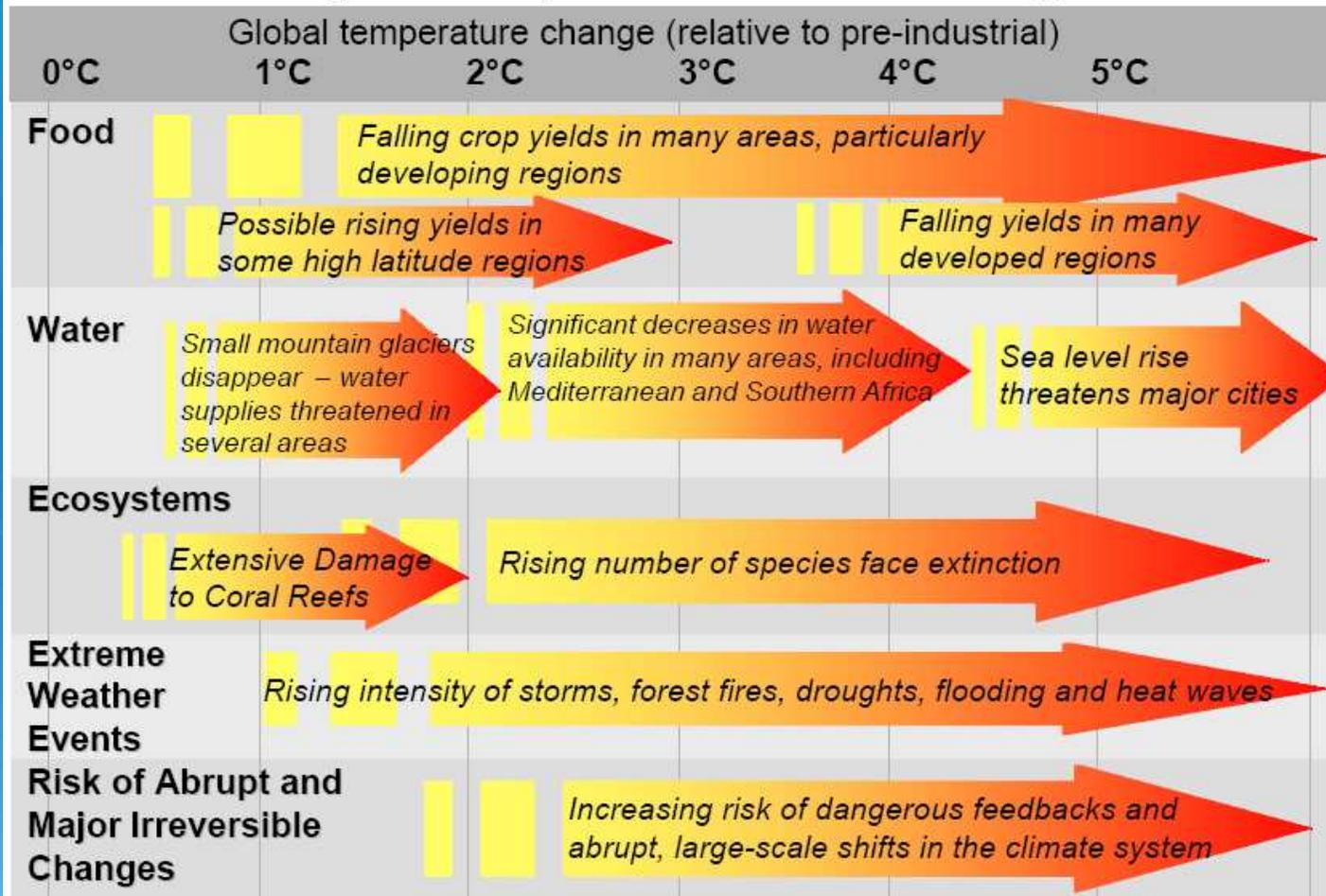
Necessary greenhouse gas reduction targets for Canada

- **AT LEAST 25% below 1990 level emissions by 2020**
- **AT LEAST 80% below 1990 level emissions by 2050**



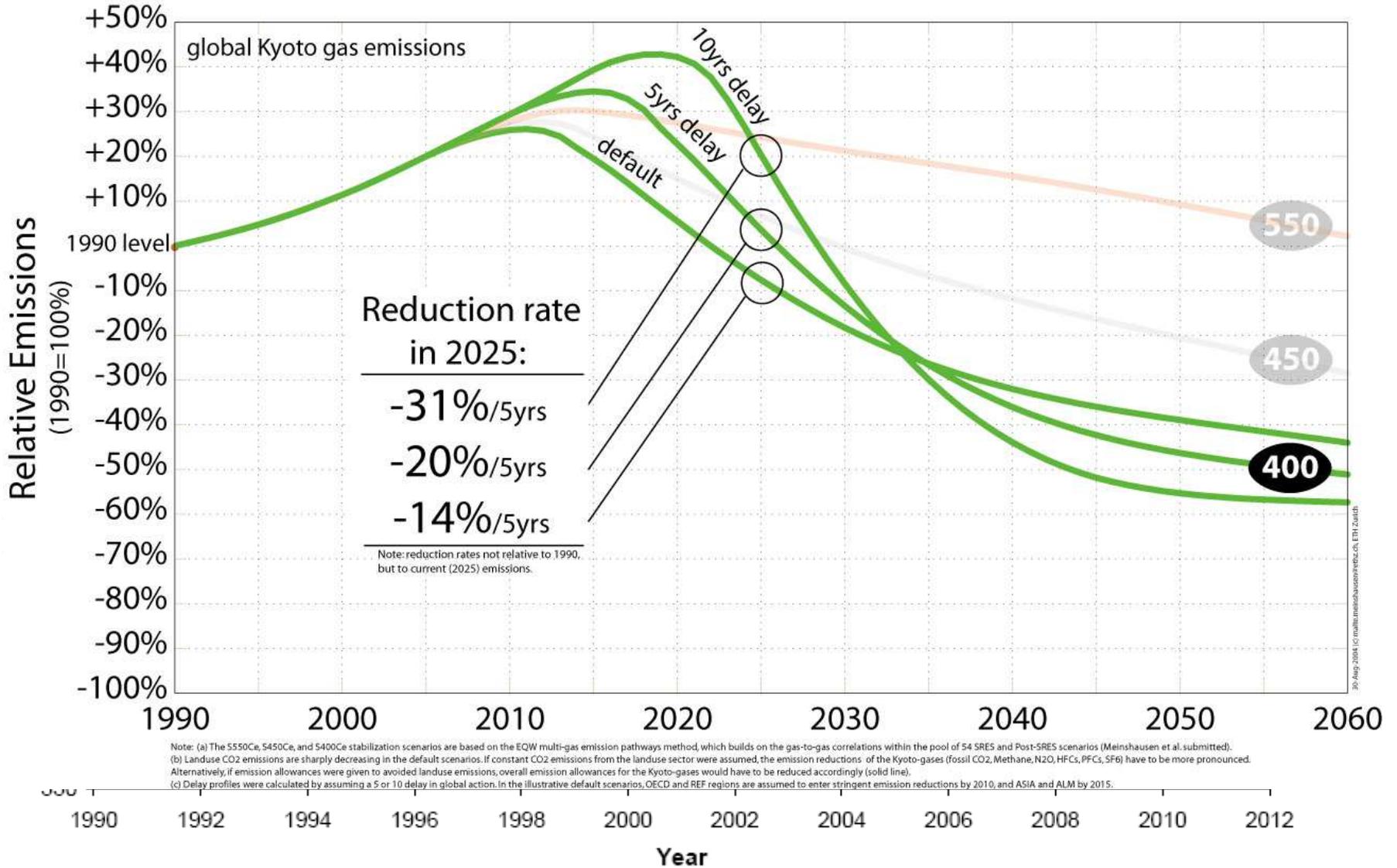


Projected Impacts of Climate Change

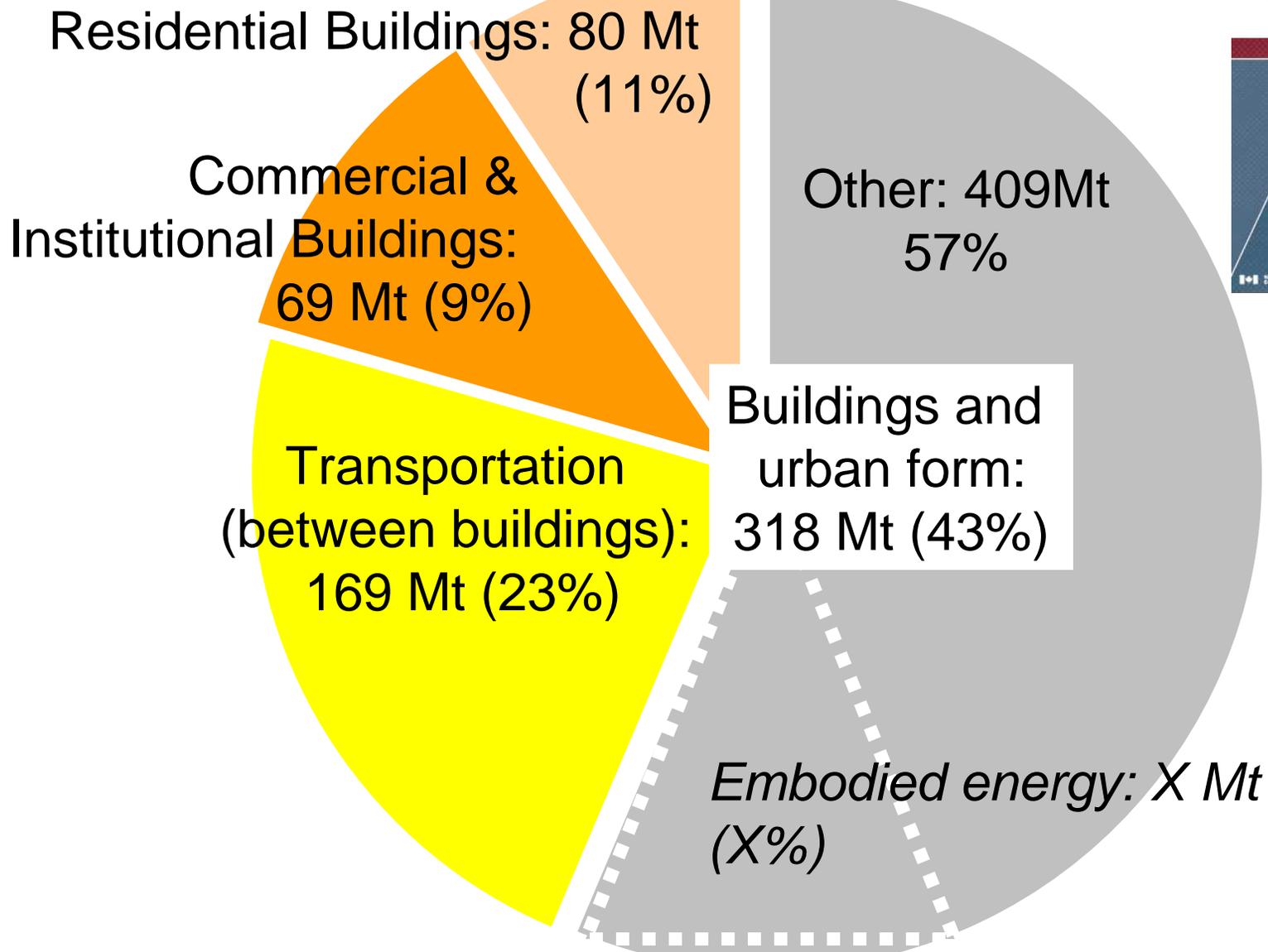




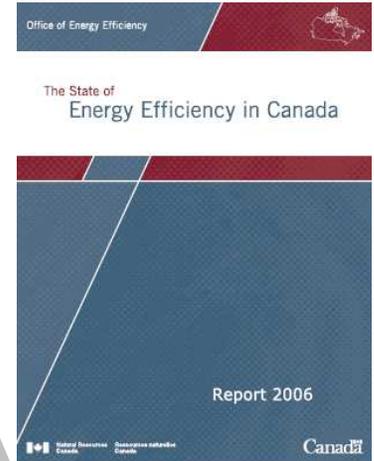
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Canada 2003



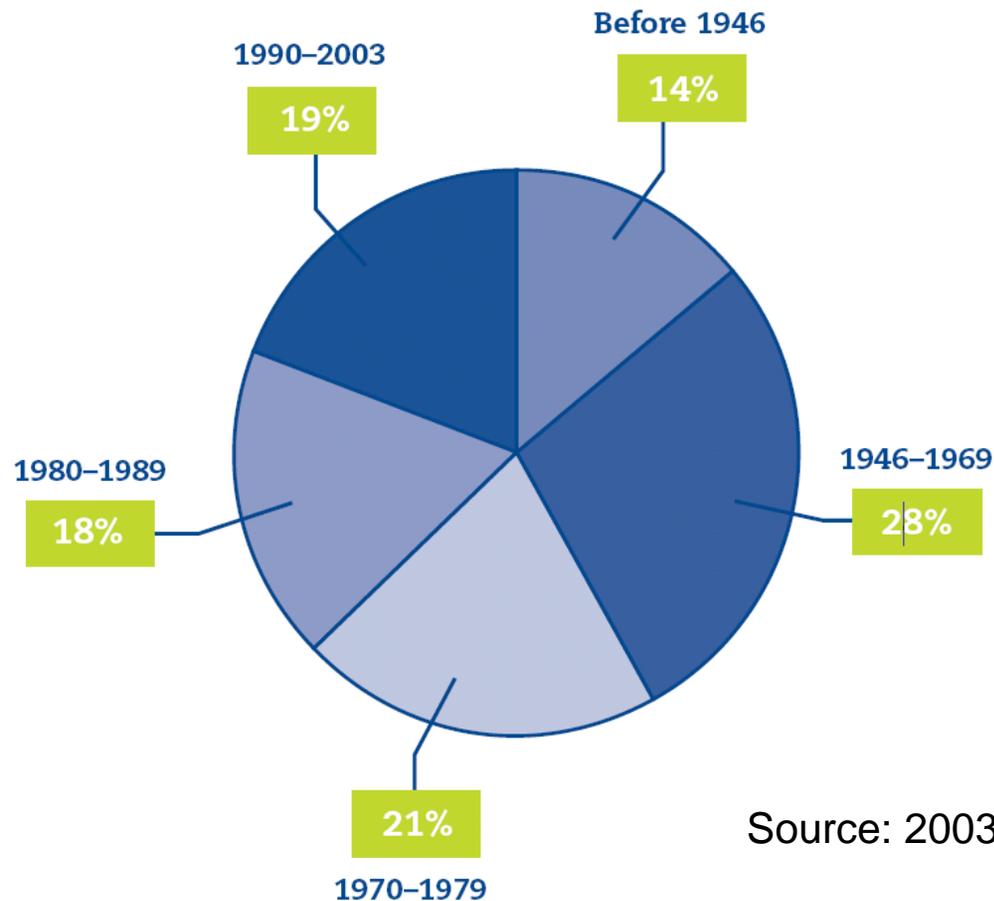
Total GHG Emissions 727,000,000 metric tonnes



The Greenest Building Is...One That Is Already Built

.....*Carl Elefante, AIA, LEED AP*

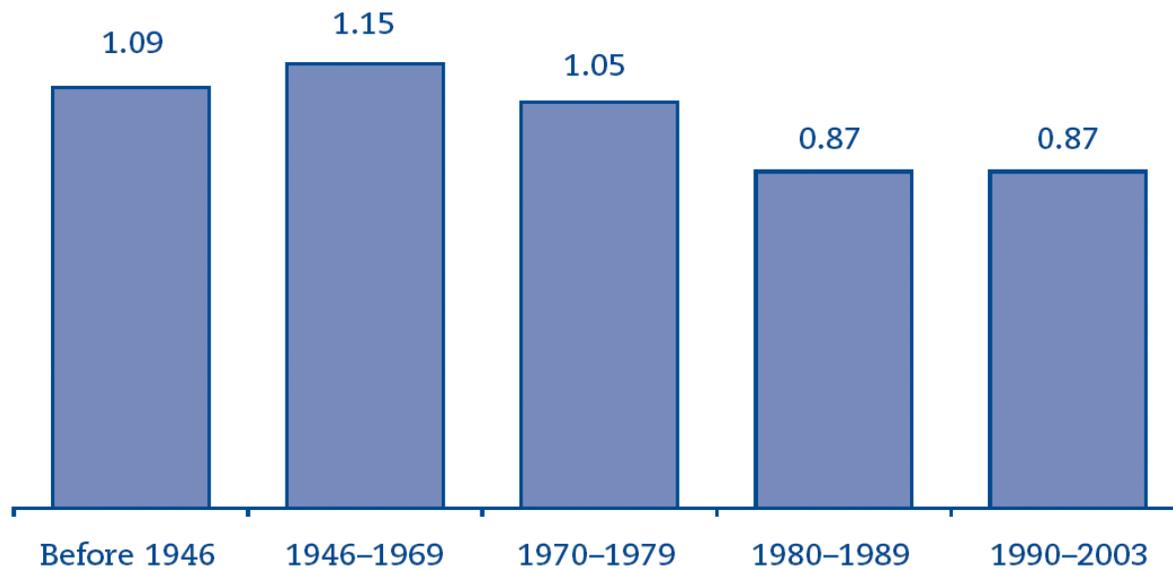
Year of Construction of Dwellings



Source: 2003 Survey of Household Energy Use, NRCan

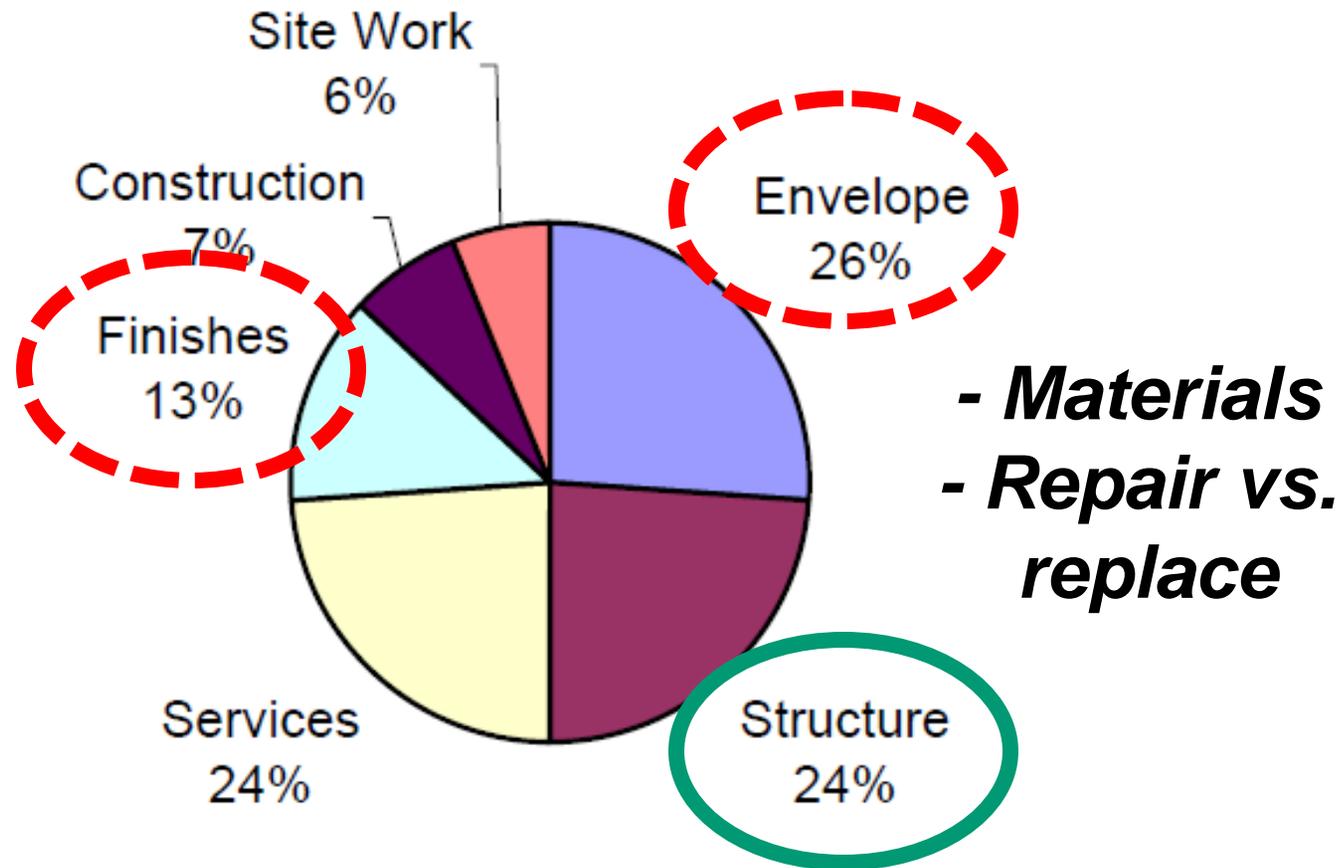
Are older buildings inherently more energy efficient?

Energy Intensity by Year of Construction (GJ/m²)



Data: 2003 Survey of Household Energy Use (SHEU), NRCan

Average Total Initial Embodied Energy



Source: Canada Historic Places Initiative



BEFORE

Source: Kalwall



AFTER

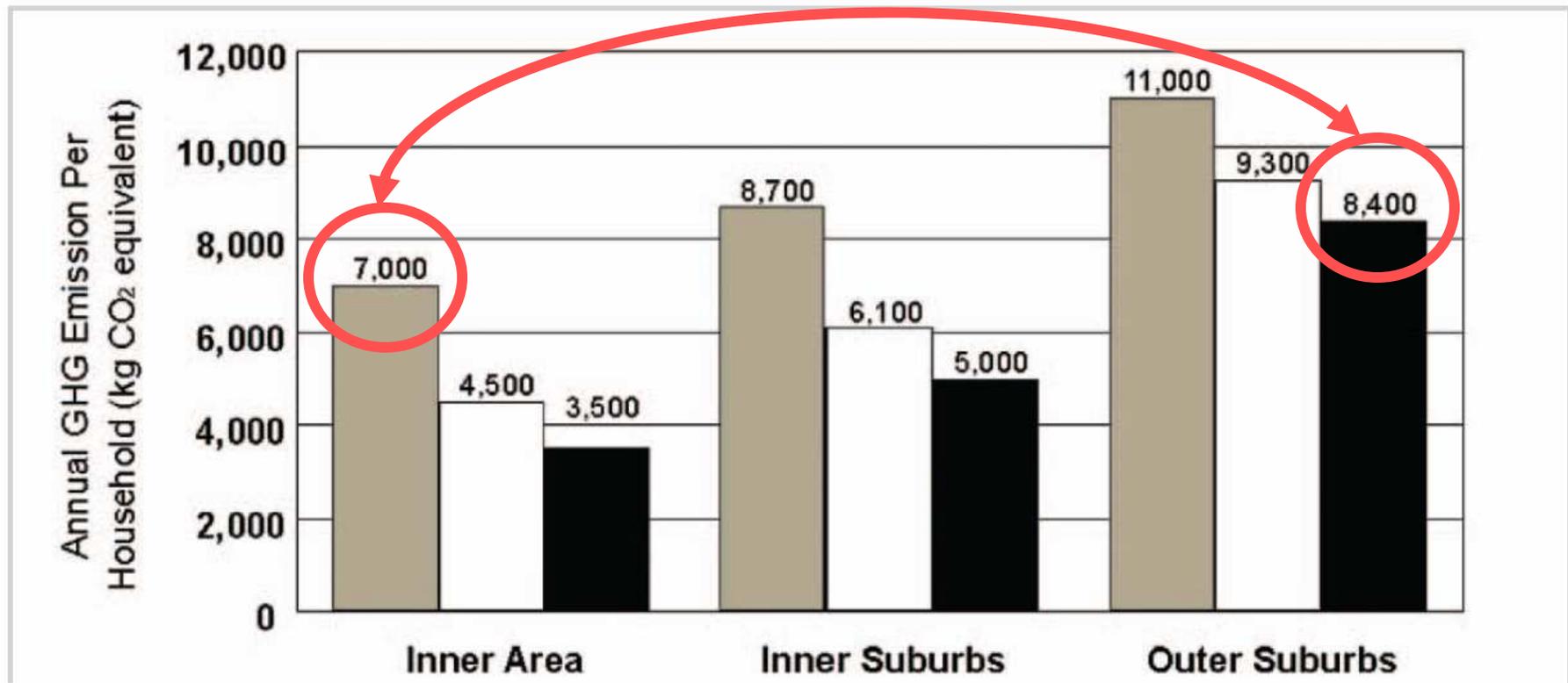


Photos courtesy of RDH Engineering Ltd.

Before

After

The Greenest **NEIGHBOURHOOD** Is...One That Is Already Built



- Neighbourhood 1: Conventional Suburban-Type Development
- Neighbourhood 2: Medium-Density Development
- Neighbourhood 3: Neo-Traditional Development



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Walk Score: 30 out of 100 – Car-Dependent ?

Walk Score: 68 out of 100 – Somewhat Walkable ?



Walk Score™

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DOCKSIDE GREEN

THE COMMUNITY THE WORLD IS TALKING ABOUT

LIVING

COMMUNITY

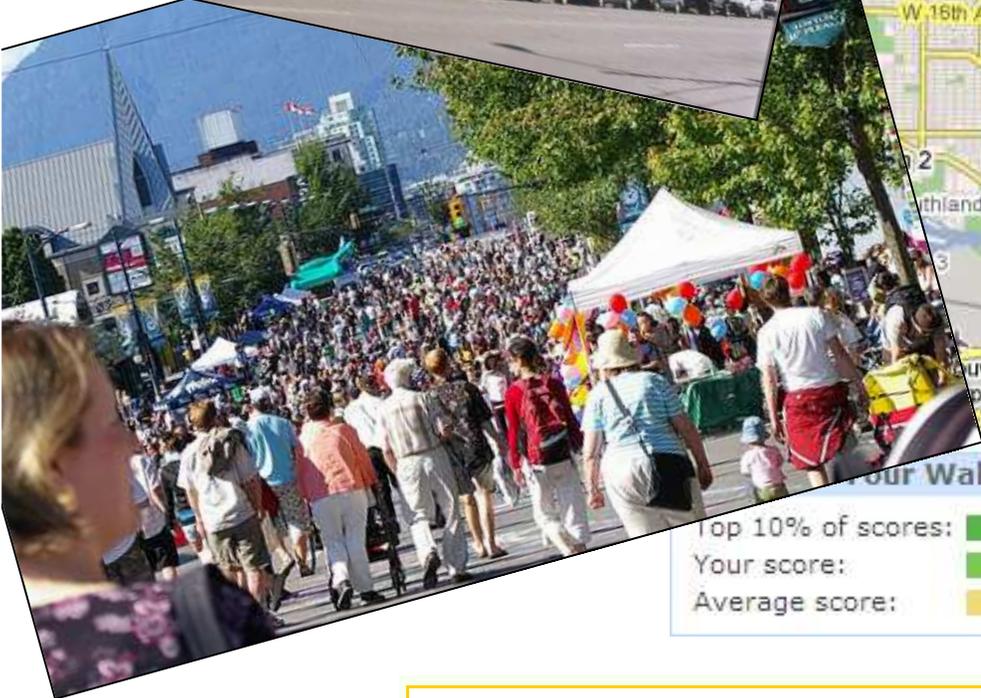
ENVIRONMENT

Photo: <http://www.seevancouverheritage.com/vhr/vhr01/4931-13a.JPG>



Walk Score™

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Walk Score: 85 out of 100 – Very Walkable ?

Photo by [Rob](#) on Flickr



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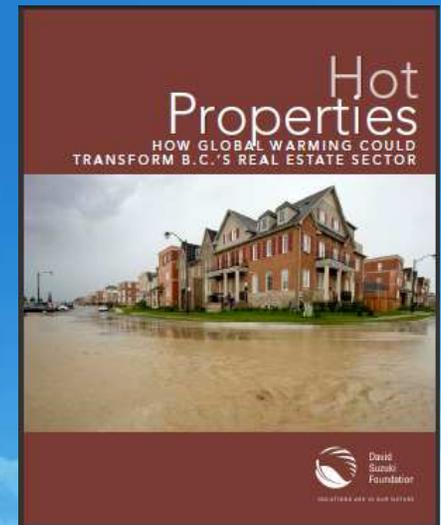
Climate change pushes compact development

**Government regulations,
price on carbon**

**Consumer preference
for “green” products**

**Compact
development**

**Government and insurers reduce their exposure
to climate impacts**



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Credible threats to discretionary long-distance transport

- Rising travel costs: fuel prices, infrastructure deficit (road), security overhead (air)
- “Good-enough” teleconferencing



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Heritage neighbourhoods rise again / Heritage buildings razed again?

- A shift towards more compact development in may increase redevelopment pressures in surviving historic districts.



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