

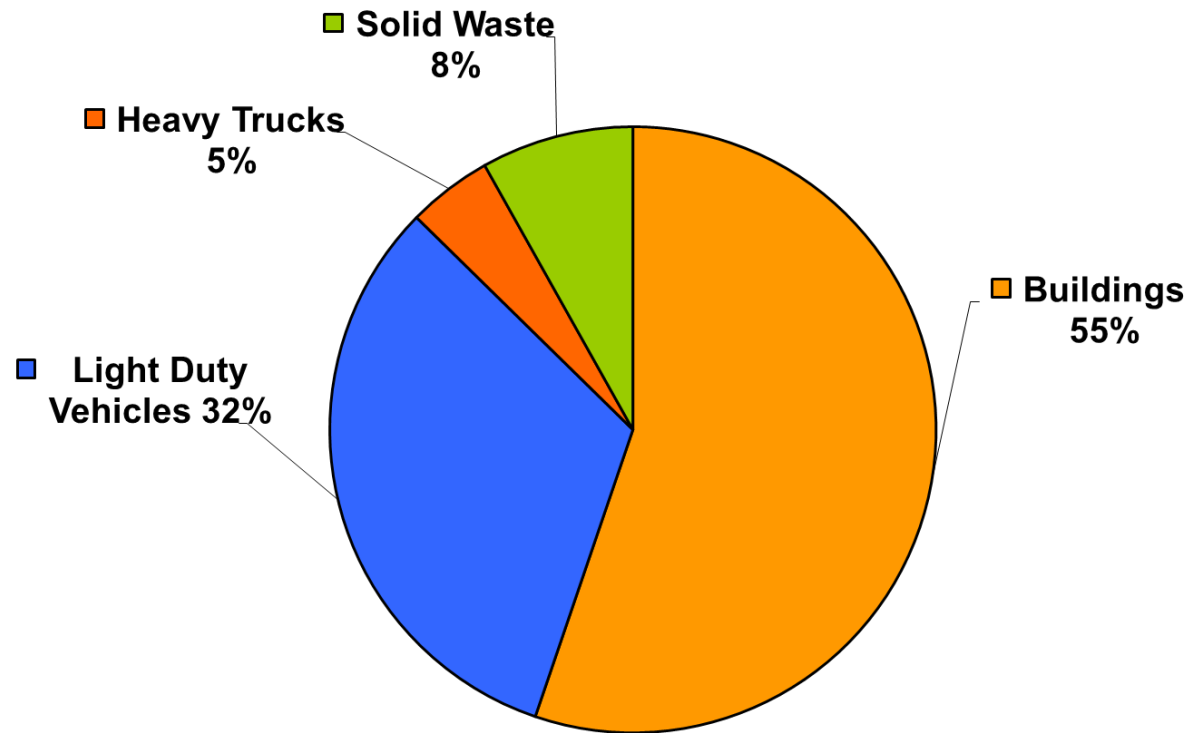


Vancouver's Green Building Targets:

- Reduce energy use & greenhouse gas emissions by 20% by 2020
- All new buildings will be carbon neutral beginning in 2020

Vancouver's 2008 Community GHG Emissions

The majority of Vancouver's greenhouse gas emissions come from buildings



What is a Green Building?

- Energy efficient / uses renewable energy
- Reduced water use
- Recycled, non-toxic and/or local materials
- Healthy indoor air quality
- Low impact on surrounding environment



Benefits of Green Buildings

Environmental benefits

- Protect biodiversity & ecosystems
- Improve air & water quality
- Reduce waste

Economic benefits

- Reduce operating costs
- Create & expand markets for green product & services

Social benefits

- Enhance occupant comfort & health
- Heighten aesthetic qualities
- Improve overall quality of life

LEED Green Building Rating System

- LEED = Leadership in Energy & Environmental Design
- Administered by Canada Green Building Council
- Voluntary green building rating system
- 4 levels of certification:
 - LEED Certified, Silver, Gold, Platinum



LEED Green Building Rating System

- 5 categories of environmental performance:
 - Sustainable Sites
 - Energy & Atmosphere
 - Water Efficiency
 - Materials & Resources
 - Indoor Environmental Quality
- ** Innovation



LEED Gold Rezoningings

- To increase the construction of green buildings in Vancouver, all rezoning projects must be certified to LEED Gold
- Must demonstrate a sustainable design strategy
- Must apply for certification with Canada Green Building Council



1. Sustainable Site Design

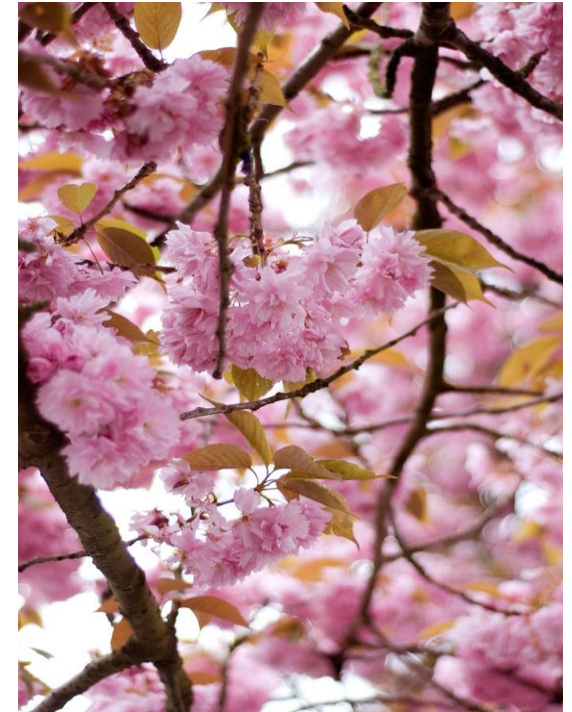
- **policy:** reduce energy needs and incorporate passive design in the site design
 - GC2020 target - carbon neutral construction



- **intent:** discourage reliance on mechanical systems for heating, cooling, lighting
- **deliverable:** a study/site plan/design rationale considering layout, and site structure + orientation

2. Access To Nature

- **policy:** improve access to nature
 - GC2020 target - every person lives in a 5 min. walk to a natural space, and plant 150,000 new trees
- **intent:** provide habitat, create public open spaces + opportunities to experience nature in the city
- **deliverable:** a plan demonstrating how the project will improve access to nature



3. Sustainable Food Systems

- **policy:** increase community food system assets
 - GC2020 target - increase city and neighbourhood food assets by min. 50% over 2010 levels



- **intent:** improve the resilience of Vancouver's food system
- **deliverable:** a plan demonstrating how min. 2 food assets will be developed or enhanced

4. Green Mobility and Clean Vehicles

- **policy:** prioritize sustainable transportation modes and electric vehicles
 - GC2020 - reduce community GHG emissions by 33% from 2007. Have 50% of trips take place by walking/cycling/public transit, and reduce motor vehicle km traveled by 20% from 2007
- **intent:** reduce reliance on modes that consume excessive energy + add to poor air quality/GHG
- **deliverable:** a transportation management plan



5. Rainwater Management

- **policy:** recognize rainwater as a resource to enhance the community and environment
 - GC2020 target - every person lives in a 5 min. walk to a natural space by 2020, and plant 150,000 new trees
- **intent:** conserve potable water use, re-use water on-site, reduce generation of (and treat) run-off
- **deliverable:** a plan showing how the project will meet specified requirements re: water quantity and quality



6. Zero Waste Planning

- **policy:** reduce waste and GHG emissions, and re-use and recycle materials
 - GC2020 target - reduce solid waste going to landfill by 50% from 2008 levels



- **intent:** waste reduction and product/material diversion from the waste stream
- **Deliverable:** a plan with a site/development infrastructure design component, and an ongoing operations/maintenance component

7. Affordable Housing

- **policy:** consider a range of unit types/tenures and explore opportunities for the development of 20% of units as non-market
- **intent:** to create options for more housing affordability, types and choices
- **deliverable:** a Housing Agreement that secures a balanced housing mix with a wider range of household types and income groups than might otherwise be achieved



8. Low Carbon Energy Supply

- **policy:** screening study required re: viability of campus/district energy systems
 - CG2020 targets - reduce community-based GHG emissions by 33% over 2007. Reduce energy use + GHG emissions in existing buildings by 20% over 2007
- **intent:** reductions in GHG emissions, and flexibility to adapt to more sustainable technologies and fuels
- **deliverable:** a technical and business case analysis used to assess whether district- or development-scale low carbon energy is viable

