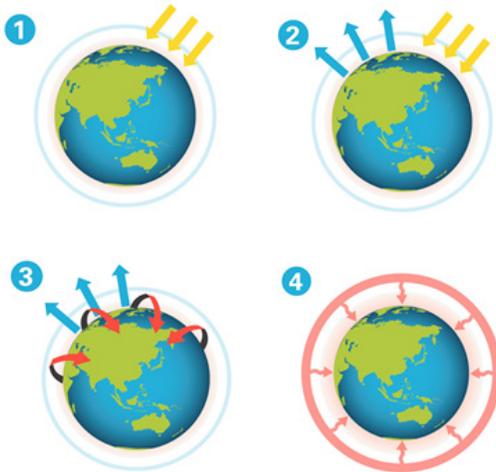


The Science of Climate Change



- 1 Sunshine warms the earth.
- 2 Our planet absorbs some of this while rest radiates away as heat.
- 3 Clouds and greenhouse gases such as carbon dioxide, absorb some of this energy and radiate it back to the earth.
- 4 Human activity has increased greenhouse gas emission in the atmosphere. The excess greenhouse gasses are absorbing and radiating back too much heat back to earth.

(Let's talk about Coal, 2017)

Canada, Montreal and Climate Change Policy

Every year, world leaders gather to discuss and negotiate climate change action and policy, in what is known as the United Nations Framework Convention for Climate Change. During the meeting of 2015, COP21, the Paris Agreement was founded. Canada, along with every country in the world (except Syria and USA) have signed the Paris agreement.

The Paris Agreement

- First universal climate agreement, including Canada
- Limit temperature rise to 1.5 - 2 °C
- The agreement requires a complete de-carbonization of the world economy within the next half century
- Current suite of Canadian emissions pledges will not be sufficient to meet the 2°C ; most estimates suggest that this level of ambition would instead lead to warming of about 2.7 °C before end of the century (climateactiontracker.org).

Climate Change Policy and Canadian Cities

- 81% of the Canadian population live in urban centers
- Cities have direct control over 40-50% of Canada's emissions
- City mayor are directly accountable to their constituents for their decisions.
- The Montreal Climate Coalition has proposed that Montreal set a target of net-zero CO₂ emissions by our 400th anniversary in 2042.
- This emission target would therefore be consistent with a global effort to limit temperature increases to 1.5 °C above pre-industrial temperatures.

Montreal Green House Gases Emissions and Targets

- Montreal is a member of Partners for Climate Protection, a group of cities committed to reducing GHGs setting 5 milestones for a city
- Montreal is at milestone 3: developing a local action plan

- Montreal's Sustainable Development Plan:
 - Initiative started in 2005.
 - Sets specific targets, progress reports every 2 years, local plans by borough and community
 - Montreal goals: compared to 1990
 - a 30% reduction GHGs by 2020
 - an 80% reduction GHGs by 2050
 - Report in 2013: Montreal has reduced GHGs by 25% since 1990

- Projet Mtl: elected Nov 5, 2017
 - No specific plan on reducing GHGs
 - Develop policies to respond to climate change: policies around snow removal, water networks, responses to natural disasters like heat waves and floods
 - Greener spaces
 - Improve sustainable transport and bike networks

Recomendations to the City of Montreal by Office de Consultation Publique de Montréal in 2015

- Reduce the attractiveness of individual cars constitutes one of the first tasks on which the City must focus, especially in central areas.
- To ensure smooth traffic flow and reduced fossil energy consumption, the commission recommends that Montréal forbid the circulation of heavy vehicles and delivery trucks on city streets at rush hours.
- Adopt new regulation standards to increase the energy efficiency of buildings
- Prioritize the recycling of empty buildings
- Foster and develop the modal aspect of foot and bicycle travel

Example of City Based Solutions

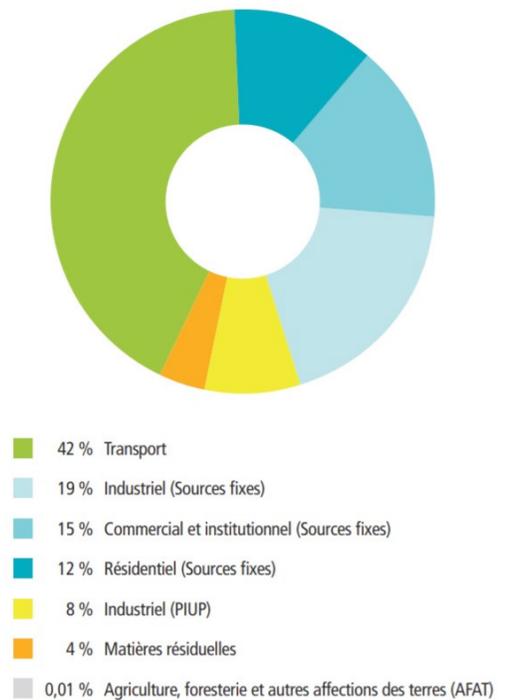
Toronto

- Toronto's residential building sector generates approximately 44% of its greenhouse gas emissions, with older buildings as key emissions contributors.
- They are Renovating its older building stock via a community-focused program that engages property owners, building managers, and residents in improvements.
- Two new loan programs in Toronto offer homeowners an affordable option to retrofit their property to improve energy efficiency and water conservation.

Vancouver

- Committed to reducing house gas emission by 80% from 2007 level by 2050.
- Vancouver is the first city in North America to develop a Renewable City Strategy to derive 100% of the city's entire energy needs from renewable sources by 2050.
- By 2050, Vancouver's goal is that 25% of private cars will be renewably powered EVs and 45% will be plug-in hybrids running on renewable electricity and biofuels.

DISTRIBUTION DES ÉMISSIONS DE GES DE LA COLLECTIVITÉ MONTRÉLAISE EN 2013



Resources

<http://climateactiontracker.org/countries/canada.html>

http://ocpm.qc.ca/sites/ocpm.qc.ca/files/pdf/P80/7.2.19_damon_matthews.pdf

https://www.climaterealityproject.org/sites/ climaterealityproject.org/files/CITIES100_2016.pdf

<https://data.bloomberglp.com/dotorg/sites/2/2015/10/Low-Carbon-Futures-in-Canada.pdf>

http://ocpm.qc.ca/sites/ocpm.qc.ca/files/document_consultation/3.1_anglais_ocpm_fossil_fuels_en_1.pdf

http://ville.montreal.qc.ca/pls/portal/docs/page/d_durable_en/media/documents/plan_de_dd_en_lr.pdf

Montreal's assessment GHGs 1990-2013:

http://ville.montreal.qc.ca/pls/portal/docs/PAGE/ENVIRO_FR/MEDIA/DOCUMENTS/invent_ges_collectivite_2013_fr.PDF

Discussions prompts

- Reflection on local environment: what are some ways you can identify where greenhouse gases can be reduced in your building, company, neighborhood or municipal community?
- Come up with a policy you would like our new mayor to adopt – Provide a solution to one of the recommendations outlined in the brief, or for a recommendation you propose
- How can we advocate for climate action policy more in our local government?
- How can we hold our local government more accountable?