



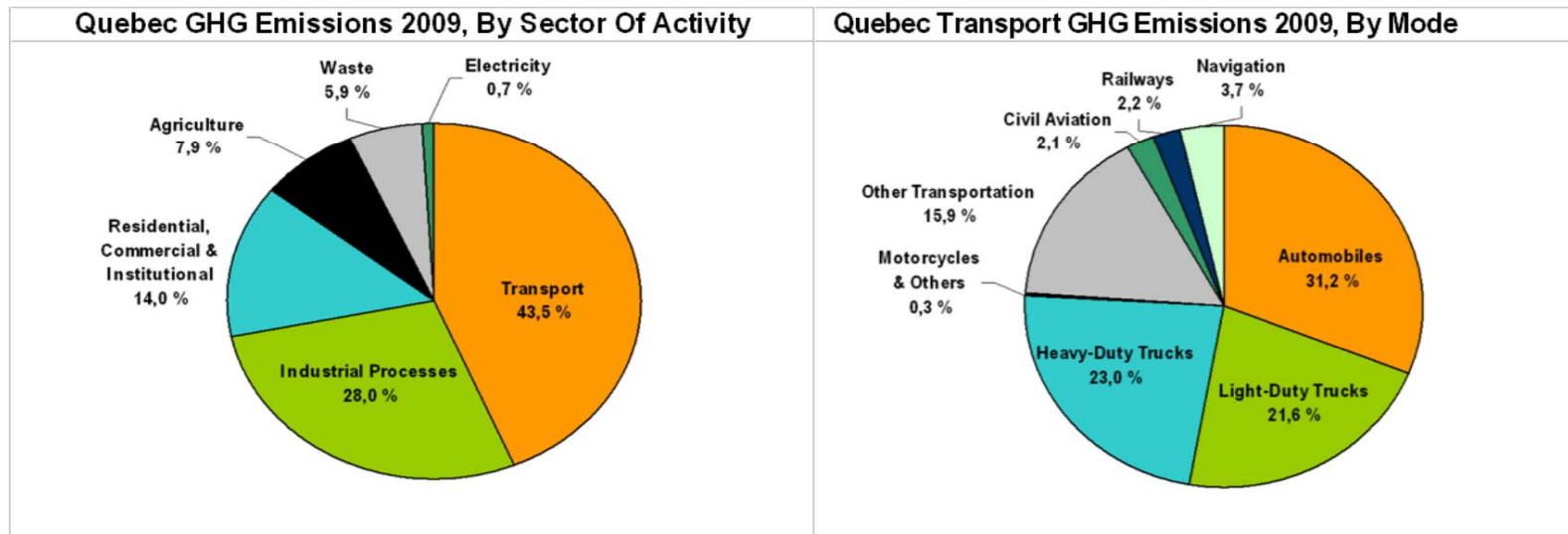
Québec Climate Change Action Plan A Transportation Review

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Québec Climate Change Action Plan (CCAP) Transportation Review

- **GhG Emissions 1990-2009 – Highlight:**
 - GhG Emission = - 2.5 %
 - Electricity Generation = 97 % Renewable
 - Transport sector share increased from 32.7 % to 43.5 %
 - Other sectors decreased by 18.1 %



CCAP - Transportation Review

The Green Spring:

- ◆ **Sustainable Development Act**
(April 2006)
- ◆ **Energy Strategy 2006-2015**
(May 2006)
- ◆ **Climate Change Action Plan 2006-2012** (June 2006)
- ◆ **Public Transit Policy**
(June 2006)

Related Policies:

- ◆ Sustainable Development Strategy 2008-2013 (January 2008)
- ◆ Sustainable Development Action Plans 2009-2013 (March 2009)
- ◆ **Electric Vehicles 2011-2020 Action Plan**
(April 2011)
- ◆ **Climate Change Action Plan 2013-2020 / Adaptation Strategy** (June 2012)

2006-2012 CCAP - Transportation Review

FUNDING: \$ 1.58 billion - Green Fund

◆ **Green Fund** :

- \$ 200 million/year from a levy on gas and fossil fuels from energy distribution companies.
- \$ 350 million from the Canada ecoTrust for Clean Air and Climate Change
- 60 % of budget on transportations measures
- 12 / 26 Actions related to the transportation sector

2006-2012 CCAP - Transportation Review

- ◆ **Light Duty Vehicle GhG Emissions Standard (Action 3)**
 - **December 2009 – Adoption of GhG Light Duty Vehicle Standard Regulation.**
 - **June 2010 - Online service for car manufacturers emission test results for vehicles sold in Québec.**
 - **June 2011 – Harmonization of Québec’s motor vehicle GhG emissions regulation with Canada-US Standard regulation.**

2006-2012 CCAP - Transportation Review

◆ Ethanol development (Action 4 - \$ 3.5 million)

- Industrial Research Chair for Cellulosic Ethanol, University of Sherbrooke, produced from waste.
- Enerkem Inc, Westbury & Varennes, Qc / Edmonton, Alta. / Pontotoc, Mississippi

Other Initiatives:

Tax credit for the production of cellulosic ethanol - March 2013 (\$ 5 million/year)

- Ethanol produced from forest or agricultural biomass - thermochemical process.

Support for the improvement of first generation ethanol production processes to promote the transition to second generation technology. (\$ 8 million - until 2014–2015)

- Objective: Facilitate the integration of new processes and equipment into existing first generation facilities

2006-2012 CCAP - Transportation Review

◆ **Municipal: (Action 5)**

Turn off your motor

Financial and technical support to municipalities wishing to adopt anti-idling regulations, awareness campaign and install signs.

Climat municipalités (\$ 9.8 million)

Financial assistance to support GhG emissions inventory, emissions reduction and adaptation to the impacts of climate change action plans.

City of Montréal's adaptation plan (\$ 1.9 million)

March 2011, the City of Montréal and the majority of the cities suburbs of the agglomeration realized a vulnerabilities assessment review to climate change and developed a strategy to adapt infrastructure management methods.

2006-2012 CCAP - Transportation Review

Program to improve public transit services (Action 6 - Public Transit Policy)

- \$ 451.9 million in funding to transit authorities
- Urban transit authorities expanded their service more than 25 % between 2006 and 2011 (Initial goal 16 %)
- Ridership increased by 11 % (Initial goal of 8 %)
- \$11.8 million : 115 hybrid taxis - 10 hybrid or electric buses - 559 public transit vehicles equipped with energy efficiency technology (- 30 %)
- \$ 36.4 million - 68 regional county municipalities - 7 regional conferences of elected officials to expand public transit service in rural areas and improve transit planning
- GhG emissions reduction: 147 000 CO2 eq. tons

2006-2012 CCAP - Transportation Review

◆ **Government assistance program for alternative modes of transportation (Action 7 - Public Transit Policy)**

- Budget: \$ 46.8 million
- 197 km Bikelanes and Pedestrian Paths (62 projects)
- 37 School corridors
- 18 Active Mobility Plans
- 8 Sustainable Transportation Management Centers
- More than 70 Private & Publics Partners
- 140 000 Employees
- 59 500 Students

2006-2012 CCAP - Transportation Review

◆ Assistance program to reduce or prevent GHG emissions by implementing intermodal projects for the transportation of goods (Action 8)

- \$ 14 million in funding for 25 projects
- GhG emissions reduction: 66 000 CO2 eq. tons

Construction of a rail line and a rail transshipment center – Port Cartier

- \$ 3.1 million railroad link and wood shipping-receiving and storage center at km 75 of the Arcelor Mittal railway.
- GhG emissions reduction: 10 400 CO2 eq. tons each year.

2006-2012 CCAP - Transportation Review

- ◆ **Program for improving energy efficiency in freight transportation (Action 9)**
 - \$ 5.4 million provided to purchase equipment such as auxiliary heating systems, power units, aerodynamic skirts
 - \$ 3.2 million has been awarded to 16 projects in the maritime and rail transport categories
 - GhG emissions reduction: 81 000 CO2 eq. tons

2006-2012 CCAP - Transportation Review

◆ **Heavy Trucks: Mandatory Speed Limiter Activation set to a Maximum of 105 km/h (Action 10)**

- December 2007 - Legislative amendments for mandatory use of devices on all trucks to limit their maximum speed to 105 km/h were introduced.
- January 2009 - These legislative changes came into effect simultaneously in Québec and Ontario.
- July 1, 2009 - Control and penalties measures implemented.
- These provisions apply to all heavy vehicle operators inside and outside of Québec whose trucks operate on provincial roads.
- GhG emissions reduction: 130 000 CO2 eq. tons

2006-2012 CCAP - Transportation Review

◆ Other initiatives

■ Depreciation rate for new heavy duty vehicles

April 1st, 2010 - Increased fiscal credit from 40 % to 60 % / 85 % for liquefied natural gas (LNG) vehicles.

■ Inspection and maintenance of heavy duty diesel vehicles

May 1st, 2011, More stringent emission opacity standards

Québec and Ontario now have some of the most stringent standards in North America.

GhG emissions reduction: 25 000 CO₂ eq. tons a year.

2006-2012 CCAP - Transportation Review

◆ **Adapting transportation infrastructure research project (action 23 – \$ 3.9 million)**

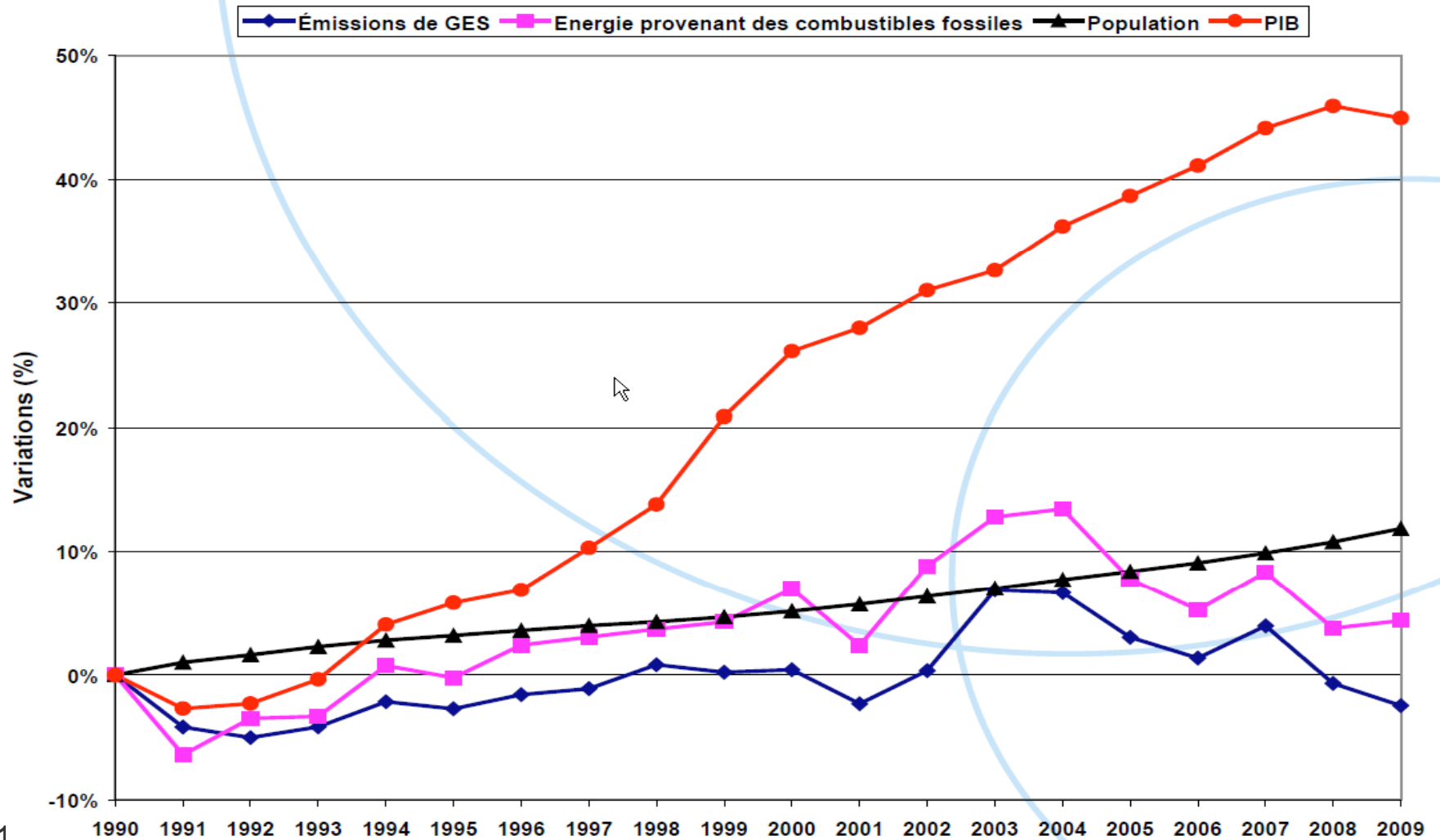
Nunavik (8 projects)

- Review of the vulnerability of transportation infrastructures, adaptation
- Identify potential measures and test some technology options

Gulf and Estuary of the St. Lawrence River (9 projects)

- Review of the vulnerability of road infrastructure and coastal erosion
- Research on adaptation technique

Québec GhG Emissions 1990-2009 – Energy Consumption – Population – Economic Growth



Electric Vehicles 2011-2020 Action Plan (April 2011)

◆ Objectives:

- Lower GhG Emissions
- Reduce Oil Dependency
- Develop a world class industrial sector

◆ Budget:

\$ 250 million

Electric Vehicles 2011-2020 Action Plan

Targets:

- 25 % in sales of new light-duty electric or plug-in hybrid passenger vehicles (5 % of automobile fleet) by 2020
- Electrification of 95 % of the Public transit network by 2030
- Purchase of 400 EV by the public, municipal, and private sectors by 2015
- Increase the number of jobs in the sector from 1,500 to 5,000

CCAP 2020 - Outlook

- ◆ **CCAP 2020 – GhG Emissions Target :**
 - 20 % below 1990 level by 2020 or –17.3Mt of GhG
 - (- 25 % / New Government)

Budget 2013-2020: \$ 2.7 billion (30 priorities)

- 66 % of funding dedicated to the transportation sector
- \$ 1.5 billion for mass transit and active transportation

Funding:

- Phasing out of the annual duty payable to the Green Fund (December 2014 - \$ 220 million)
- Auctioning of CO2 emissions permits under the Cap and Trade System for GhG Emissions Allowances (\$ 2.445 billion)

Two phases:

- Phase I (2013-2015): 35 % of GhG reduction target
- Phase II (2015-2020): Incentives and Program review depending on Green Funds (\$ 2.8 billion)

CCAP 2020 - Outlook

◆ **Criteria for priority setting**

- GhG reduction potential
- Structuring nature of the investments
- Social, economic and environmental benefits

◆ **Nature of the measures**

- Attractive (subsidies, loans, etc.)
- Normative (regulations, standards, guidelines, etc.)
- Formative (training, coaching and knowledge acquisition)
- Mobilizing (citizen mobilization, awareness initiatives and education)

CCAP 2020 - Outlook

◆ Prepare for the future

- Sustainable land-use management & planning
- Research and development
- Citizen mobilization
- Government lead by example

◆ Reduce GhG emissions in all sectors

◆ Strengthen Québec society's resilience to climate change impacts

- Public Health
- Economic prosperity
- Sustainability of infrastructures
- Ecosystem preservation

Québec Cap and Trade Carbon Market – Western Climate Initiative (WCI)

◆ **Cap on GhG emissions for all regulated emitters. To be lowered as the years go by Industrial and electricity sectors (January 1st, 2013):**

- Free allocation of emissions rights
- Emitters exceeding CAP: Must adopt clean technologies or buy emissions allowances
- Emitters below CAP: Sell excess carbon credits on the carbon market
- 2015: Transportation sector joins the Cap & Trade / Number of free units allocated lowered by 1% to 2% annually
 - Operators of businesses that distribute or import fuel
 - Obligation to cover emissions by buying emission allowances on government auctions or on the carbon market

◆ **Revenues will be entirely dedicated to the Green Fund & CCAP 2020**

Québec Climate Change Action Plan Transportation Review

◆ Conclusion:

- GhG Emissions Mitigation and Adaptation to climate change Impact are the two components of this plan
- Transportation sector and Electric Mobility are priorities of the Government Climate Change Action Plan
- Québec is a leader in sustainable mobility