

The design and implementation of the Climate Leadership Plan in Alberta

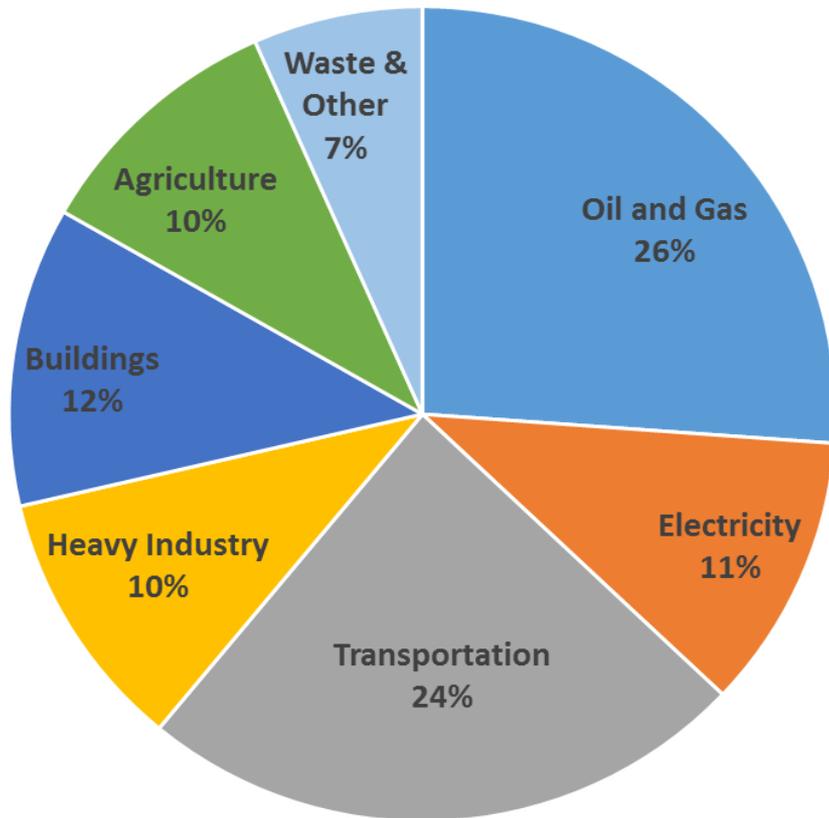
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Overview

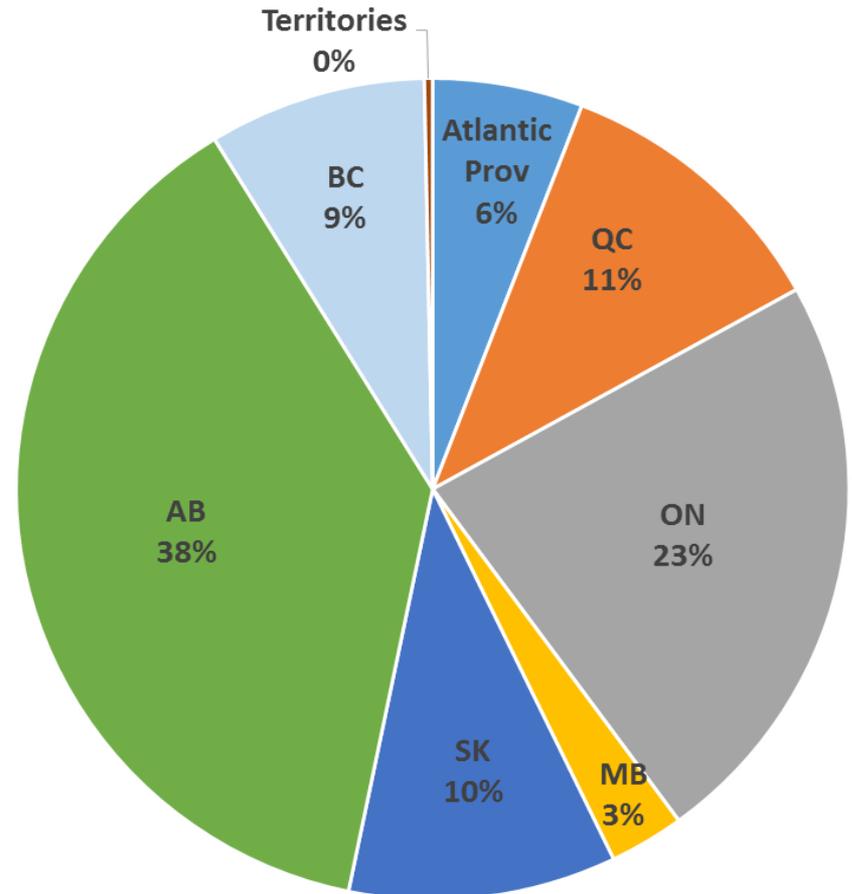
- **AB's Climate Leadership Plan and hybrid carbon pricing system**
 - **Emission profile**
 - **Policy history**
 - **Current version**
- **Pan-Canadian Framework and backstop carbon pricing system**
 - **Alignment**
 - **Contrasts**
- **Issues and challenges**
 - **Canada**
 - **Alberta**
 - **Agriculture**

Canada's Emissions Profile (2015)

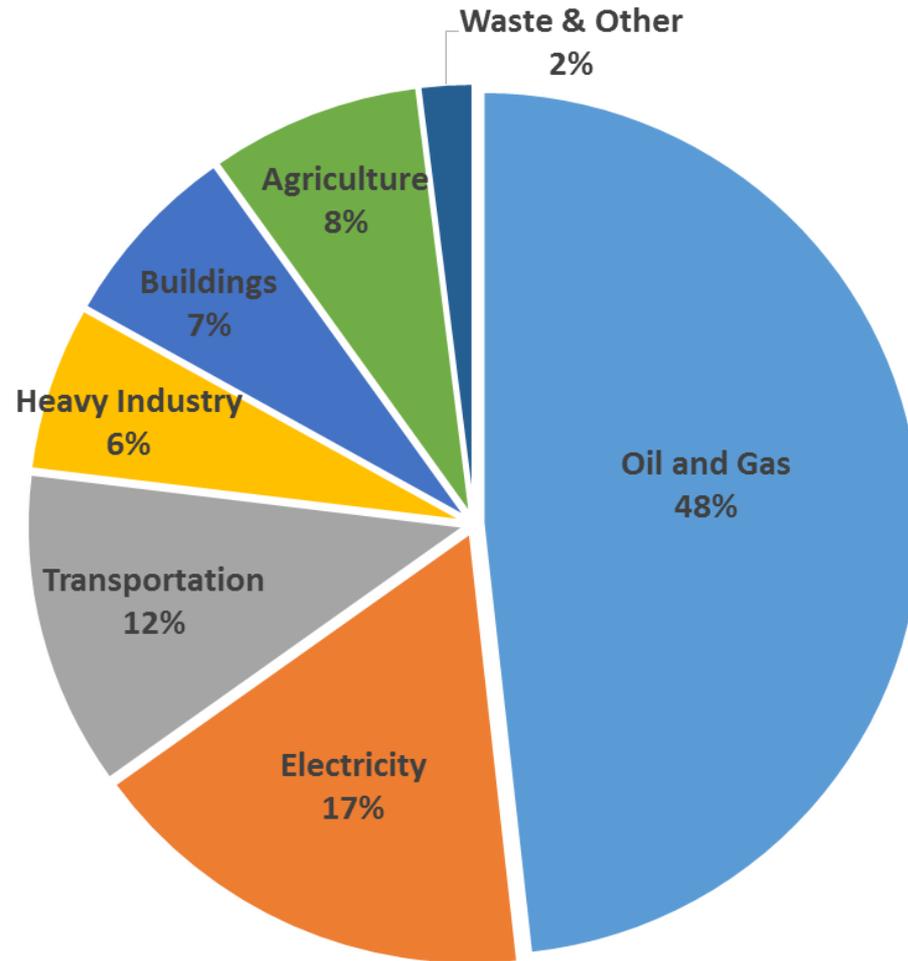
(Sector)



(Province)



Alberta's Emissions Profile (2015)



Key events in Alberta's Climate Policy History

- 2002 – *Albertans & Climate Change: Taking Action* released
 - First climate strategy in Canada
- 2003 – *Climate Change and Emissions Management Act* passed
- 2007 – Specified Gas Emitters Regulation (SGER) introduced
 - First carbon price in Canada (\$15/t)
- 2008 – Revised provincial Climate Change Strategy released
- 2015 – *Climate Leadership Plan* released, SGER amended
- 2016 – CCEMC rebranded as Emissions Reduction Alberta (ERA)
- 2017 – Carbon Levy starts at \$20/t CO₂e; SGER replaced with the Carbon Competitiveness Incentive Regulation (CCIR)
- 2018 – Carbon Levy increases to \$30/t CO₂e

Climate Leadership Plan (CLP) Pillars

- 1. Implement economy-wide carbon price**
 - Carbon Levy is applied to heating and transportation fuels
 - CCIR emissions performance system for large final emitters (>100,000 t CO₂e/y)
- 2. Phase out coal-fired electricity generation**
 - replace with renewables and natural gas by 2030
- 3. Legislated limit on emissions from oil sands production**
 - 100 megatonnes (Mt) per year
- 4. Methane emissions reduction from oil and gas operations (fugitive gases) by 2025 (- 45%)**
 - Not biogenic sources of methane

Specified Gas Emitter Regulation and Climate Leadership Plan Pricing Approaches (carbon competitiveness incentive regulation, CCIR)

2007 - - - - - 2017 . - - - - - →

SGER

- Pricing only for large final emitters (>100,000 t CO₂e)
 - Covered ~45% of provincial emissions
- Carbon price of \$15/t CO₂e
 - to \$20/t in 2016
- Intensity based emissions reduction of 15% for all large final emitters based on historical performance
 - to -20% in 2017

Carbon Levy & CCIR

- Hybrid pricing system with provisions for individuals and large final emitters
 - Covers 70-90% of provincial emissions
- Carbon price of \$30/t CO₂e
- Output-based emissions reductions based on product specific benchmarks for large final emitters

Alberta's Hybrid Pricing System now

Carbon Levy

- Applied to the combustion of all fossil fuels
- Individuals pay on fossil fuel usage at the point-of-sale
- Current rate of \$30/t CO₂e
 - Federal schedule increases to \$50/t by 2022
- Marked (purple) gasoline and diesel for agricultural purposes exempt

CCIR

- Applies to facilities with emissions >100,000 t CO₂e/y
- Facilities pay based on their exceedance of a product specific benchmark (output-based allocation)
- Multiple compliance options:
 - Payment at rate of \$30/t CO₂e
 - Use of EPCs or offset credits
 - Facility emissions reductions
- Benchmarks are product specific to protect EITE industries. No industries exempt.

Programs and Initiatives

(C Levy revenue recycling)

Consumer level

- Direct rebates for low and middle income households
- Energy Efficiency Alberta (EEA)
 - Energy efficient products
 - In-store rebates
 - Solar PV

Agriculture

- Canadian Agricultural Partnership (CAP)
 - Irrigation efficiency
 - Environment and climate change
 - producer and group
- Energy Efficiency programs
 - On-farm energy management
 - On-farm solar PV
 - Business, non-profit and institutional energy savings
 - Greenhouse Growers Rebate Program
- Small business tax rate cut
 - 3% to 2%

Pan-Canadian Framework (PCF) on Clean Growth and Climate Change Pillars (2017)

1. Carbon pricing

- All jurisdictions required to implement some form by Jan 1, 2019

2. Complementary emission reduction measures

- Phase out of coal-fired electricity generation, reduction in fugitive CH₄, phase out of HFCs, emission standards for vehicles, clean fuel standard, building codes, etc

3. Adaptation and resilience

- Disaster Mitigation and Adaptation Fund

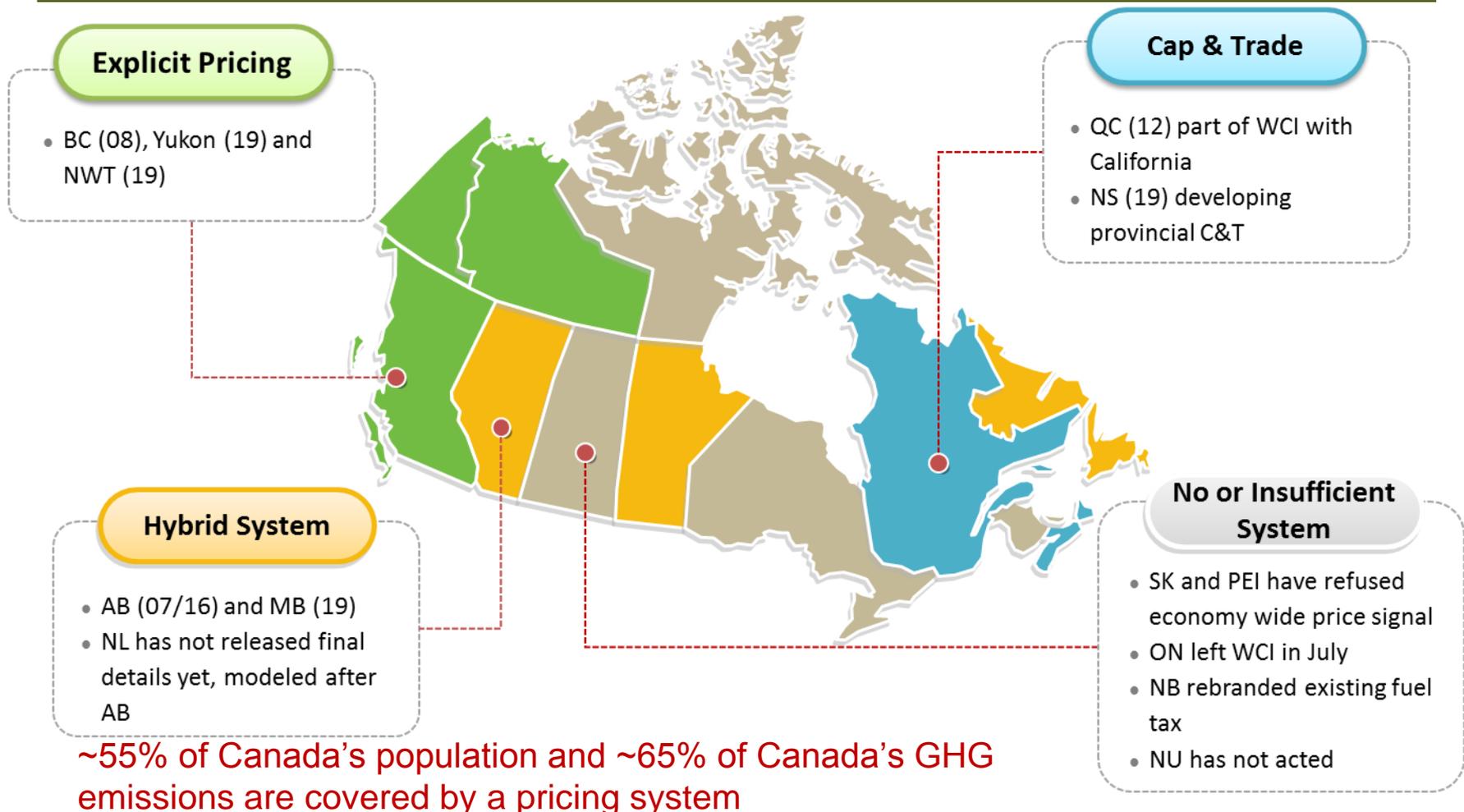
4. Actions to accelerate innovation, support clean technology and create jobs

- Drive demand and innovation through pricing, regulation and procurement

PCF Carbon Pricing Requirement

- **Flexibility to suit local circumstances**
 - **Explicit pricing (BC), Cap-and-Trade (QC), Hybrid (AB)**
- **Backstop pricing system to be imposed in any province or territory who does not implement their own (or requests federal administration of system)**
 - **YK has deferred administration of territorial carbon price**
- **Sept 1 - submit pricing plans for review**
- **Federal backstop will come into effect on Jan 1, 2019 in any jurisdiction which fails to meet the federal standard**
 - **Hybrid system with explicit carbon price and output-based pricing system for large emitters (>50,000 t CO₂e/y)**

Announced and Active Carbon Pricing Systems



Common Approaches Across Climate Strategies

- **Carbon pricing mechanisms**
 - **Explicit, cap-and-trade and hybrid models**
- **Emissions reduction targets**
 - **Canada 30% below 2005 levels**
 - **Provinces variable**
- **Fuel switching and renewable energy incentives**
 - **Coal-fired electricity generation to natural gas and renewables**
 - **PACE programs**
- **Energy efficiency programming**
 - **Residential, business and farm specific programs**
- **Clean/green technology R&D**
- **Focus on mitigation over adaptation opportunities**

Issues/challenges

- **Canada**
 - **Interprovincial competitiveness concerns**
 - **Uneven emissions profiles of provinces**
 - **Uneven response to emissions in past**
 - **Public acceptance of the problem, not of the solution(s)**
 - **Lack of evaluation and verification tools**

- **Alberta**
 - **Dominance of oil and gas sector (provincial economic and emissions profiles)**
 - **Poor communication of potential impacts/cost of Carbon Levy**
 - **Lack of evaluation and verification tools**

Issues/challenges cont.

- Agriculture -

– Heterogeneity of farms

- Supply managed sectors v. non-managed
- Crops v. livestock v. mixed

– Understanding of Carbon Levy costs

- Carbon Levy exemptions – not all fuels included
- Inability to pass on increased operational costs

– Ability to drive emissions reductions

- Low energy users, emissions from CH₄ and N₂O not addressed
- Early adopters of BMPs, low hanging fruit taken
- Burden of proof for regulated offsets

– Public trust in agriculture

- Evolving public attitudes
- Defining, verifying and marketing “sustainability”

– Farm-scale and sector-level data and models

Thank you!

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URL References

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- AB Environment and Parks <http://aep.alberta.ca/default.aspx>
- Canadian Agricultural Partnership <https://cap.alberta.ca/CAP/>
- Climate Leadership Plan <https://www.alberta.ca/climate-leadership-plan.aspx>
- Carbon Competitiveness Incentive Regulation <https://www.alberta.ca/carbon-competitiveness-incentive-regulation.aspx>
- Emissions Reduction Alberta <https://www.eralberta.ca/>
- Energy Efficiency Alberta <https://www.encyalberta.ca/>
- Environment and Climate Change Canada <https://www.canada.ca/en/environment-climate-change.html>
- Pan-Canadian Framework on Clean Growth and Climate Change <https://www.canada.ca/en/services/environment/weather/climatechange/pan-canadian-framework.html>