Carbon Pricing 101

Canadian Federation of Agriculture

Ottawa, ON
February 23, 2017

Summary

1. **Why carbon pricing?**

1. **What devils in which details?**
   a. What instrument (cap-and-trade vs. carbon tax)?
   b. What emissions covered?
   c. How stringent is the policy?
   d. What happens to revenue generated?

1. **How could emitters respond?**

Carbon pricing is cheaper than other options

Flexibility:

- Market-based policy = cost-effective emissions reductions
- Options for out-of-province flexibility?

Revenue generation:

- Potential for recycling revenue back to the economy for additional benefits

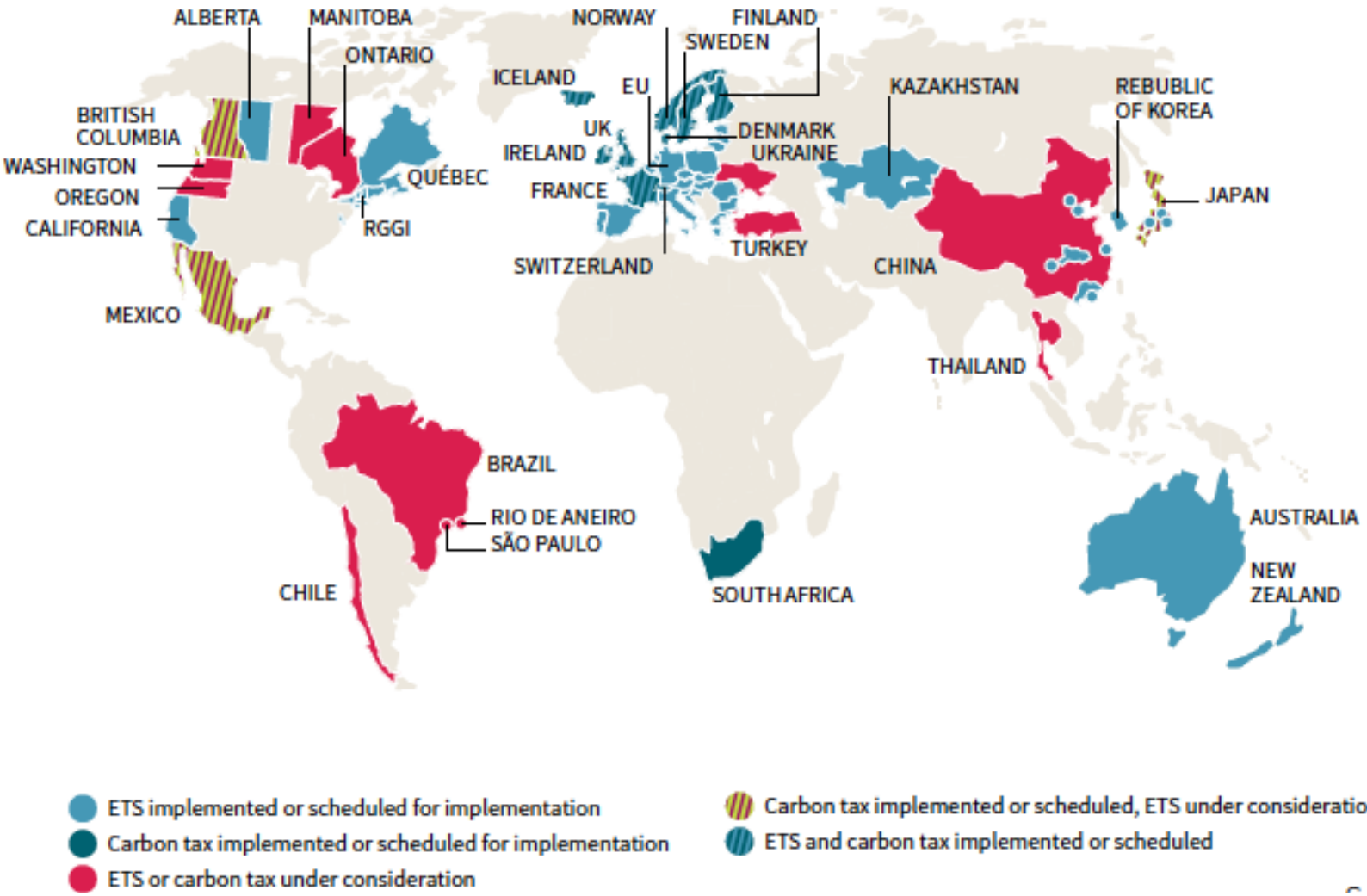
Innovation:

- “Dynamic” efficiency
- Incentives for developing lower-cost, lower-emissions technology

Minimal information requirements

- No need to choose specific technologies for support
- No need for precise costing of emissions reductions by sector

Carbon pricing has international momentum



Carbon pricing is happening in Canada

Trade-offs: carbon levy vs. cap-and-trade

Instrument	Advantages	Disadvantages
Cap-and-trade	Drives cost-effective emissions reductions	Complexity in design, implementation, operation
	Can generate revenue (auctions)	In practice, tends toward free allowances
	Quantity certainty	Price volatility
	Link to other systems	
	Complexity: hide impacts	Complexity: Less transparency
Carbon Levy	Drives cost-effective emissions reductions	Anti-tax campaigns
	Generates revenue	
	Price certainty	Quantity uncertainty
	Simplicity: administration	Simplicity: cannot hide

Coverage: which emissions have incentives for reduction?

Direct coverage?

Offset regimes?

Cost pass-through?

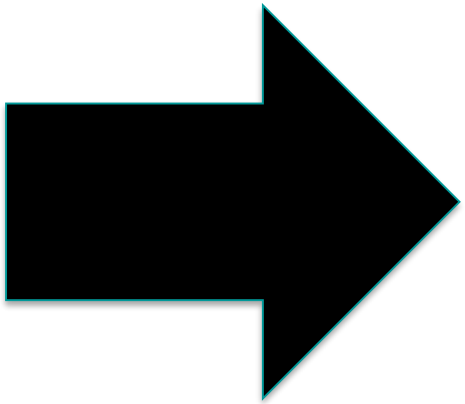
Benchmarking coverage of existing policies

	BC Carbon Tax	Alberta Carbon Fee and CCR	Ontario Cap-and-Trade	Quebec Cap-and-Trade
Regulated emissions (share)	70%	78%	82%	85%
Covered emissions	Fossil fuel combustion	Fossil fuel combustion, industrial processes	Fossil fuel combustion, industrial processes	Fossil fuel combustion, industrial processes
Offsets?	No	Yes	Yes	Yes

Stringency: the extent to which policy drives emissions reductions

Higher carbon prices

More aggressive emissions caps



More emissions reductions

There's more than one way to measure stringency.
Comparing across systems is complicated

Benchmarking stringency of existing policies

	BC Carbon Tax	Alberta Carbon Fee and CCR	Ontario Cap-and-Trade	Quebec Cap-and-Trade
Carbon price per tonne CO_2e (2020)	$30	$30	$19	$19
Expected emissions reductions (2020)	5-15%	7%	11%	15%

Some options for revenue recycling

Transferring revenue to households

Reducing income taxes

Investing in clean technology

Investing in infrastructure

Reducing government debt

Providing transitional support to industry

Summary of revenue recycling trade-offs

		Environmental Impacts	Economic Impacts	Competitiveness Impacts	Household Fairness	Public Acceptability
Transfers to Households		Neutral	Neutral	Neutral	Positive	Somewhat positive
Income Tax Cuts	**Personal**	Neutral	Somewhat positive	Neutral	Somewhat negative	Somewhat positive
	Corporate	Neutral	Positive	Somewhat positive	Somewhat negative	Somewhat positive
Infrastructure Investments		Somewhat positive (depending on choices)	Somewhat positive	Neutral	Neutral	Positive
Clean-Technology Investments		Positive	Neutral	Neutral	Neutral	Positive
Transitional Support to Industry		Negative	Somewhat positive	Positive	Neutral	Neutral
Debt Reduction		Neutral	Positive (with high debt)	Neutral	Positive (inter-generational)	Neutral

Implications for emitters

What emissions do you produce? And are they priced?

What fuel are you burning? Do you you pay the price on all fuel?

Do you buy products / services from covered emitters?

What "indirect costs" do others pass-on?

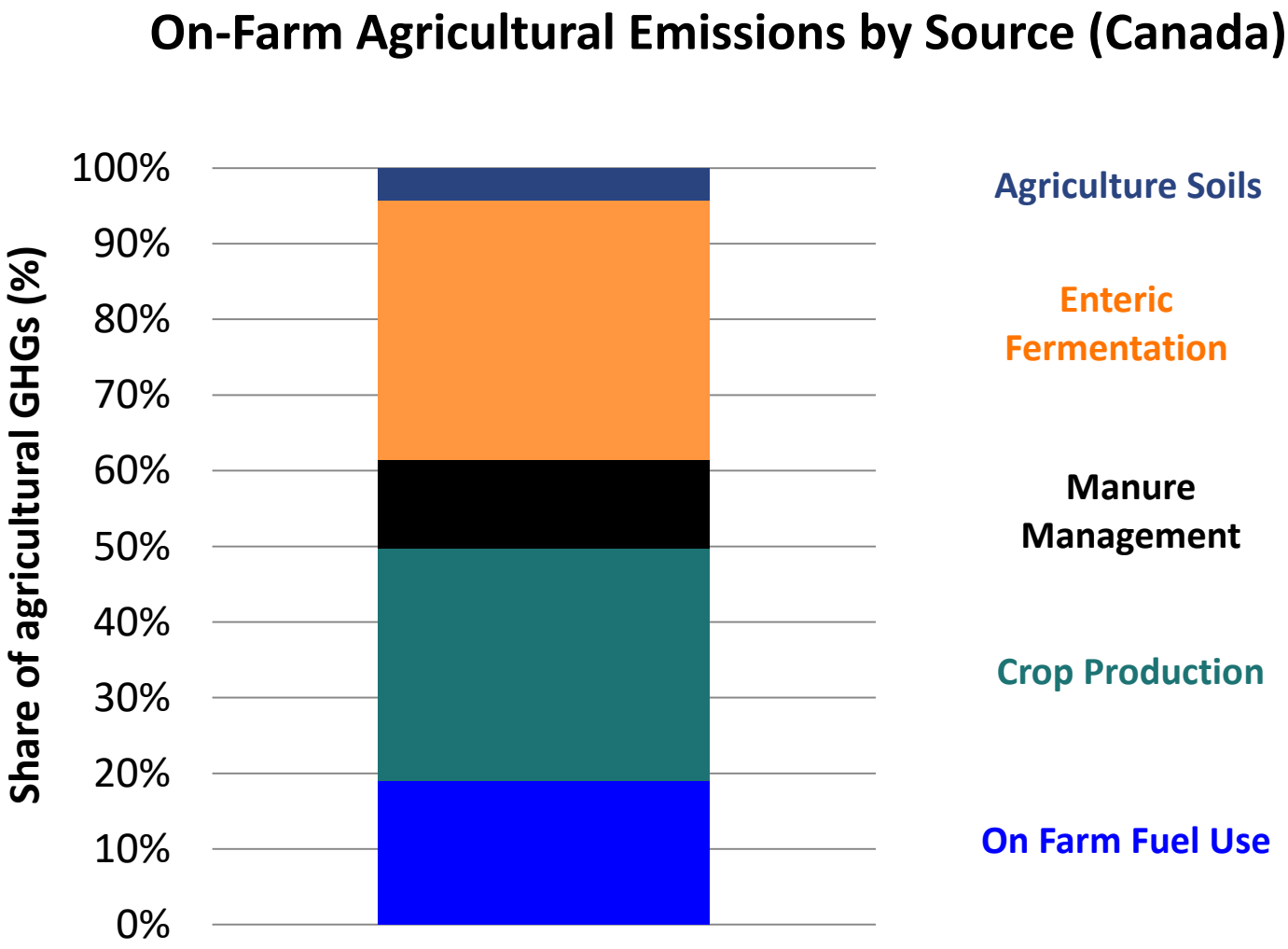
Even if you aren't covered, can you sell offsets?

Are there offset protocols for land-use, soil sequestration, etc?

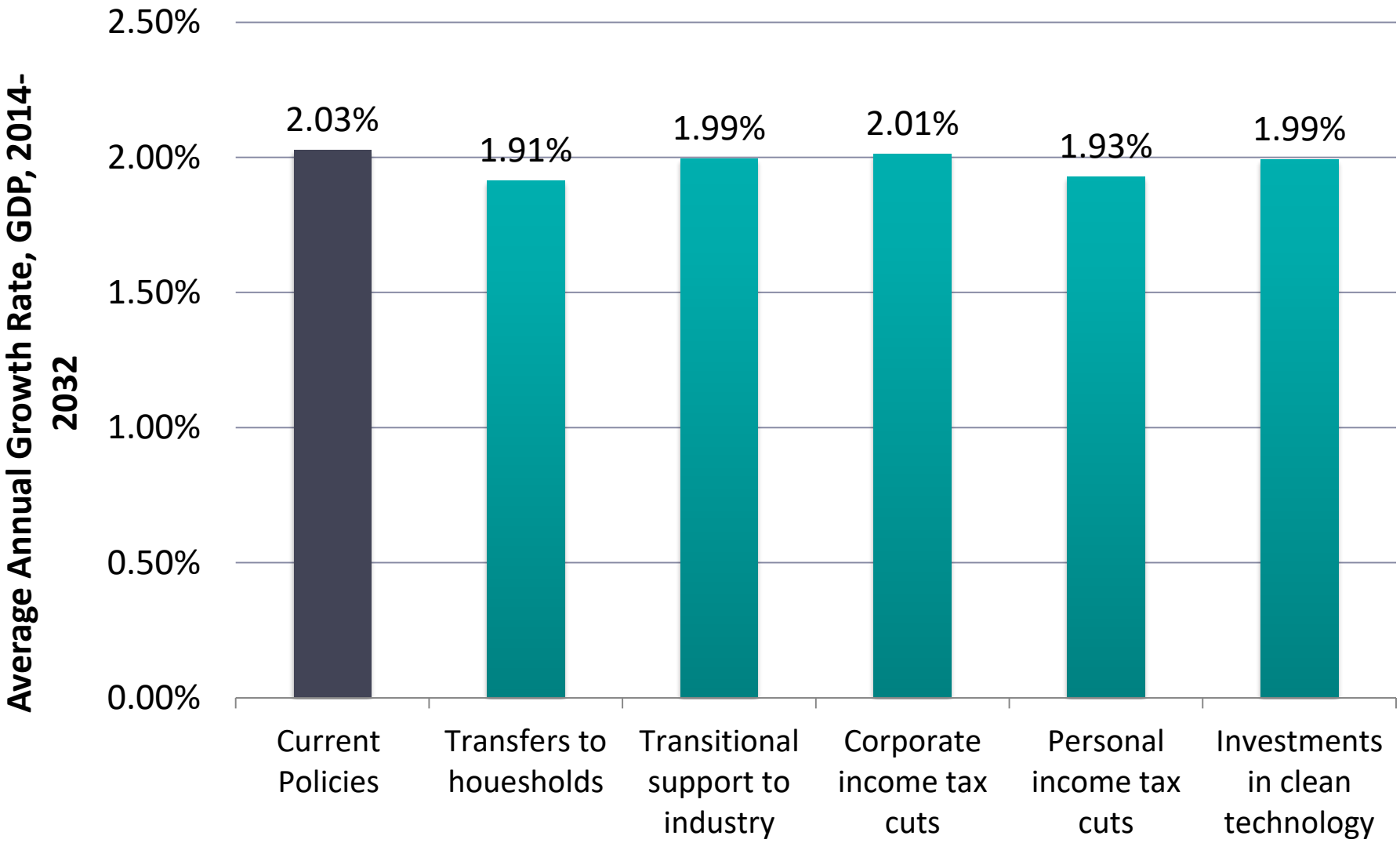
What are your opportunities for abatement? How much do they cost? Are they worth it?

Fuel switching?
Energy efficiency?
New technology investments?
Tilling practices, reforestation, sea-weed feedstock?
Switching between service providers?

Direct emissions in agriculture



Impacts of a $100 / t price on economic growth to 2032



Thank you!

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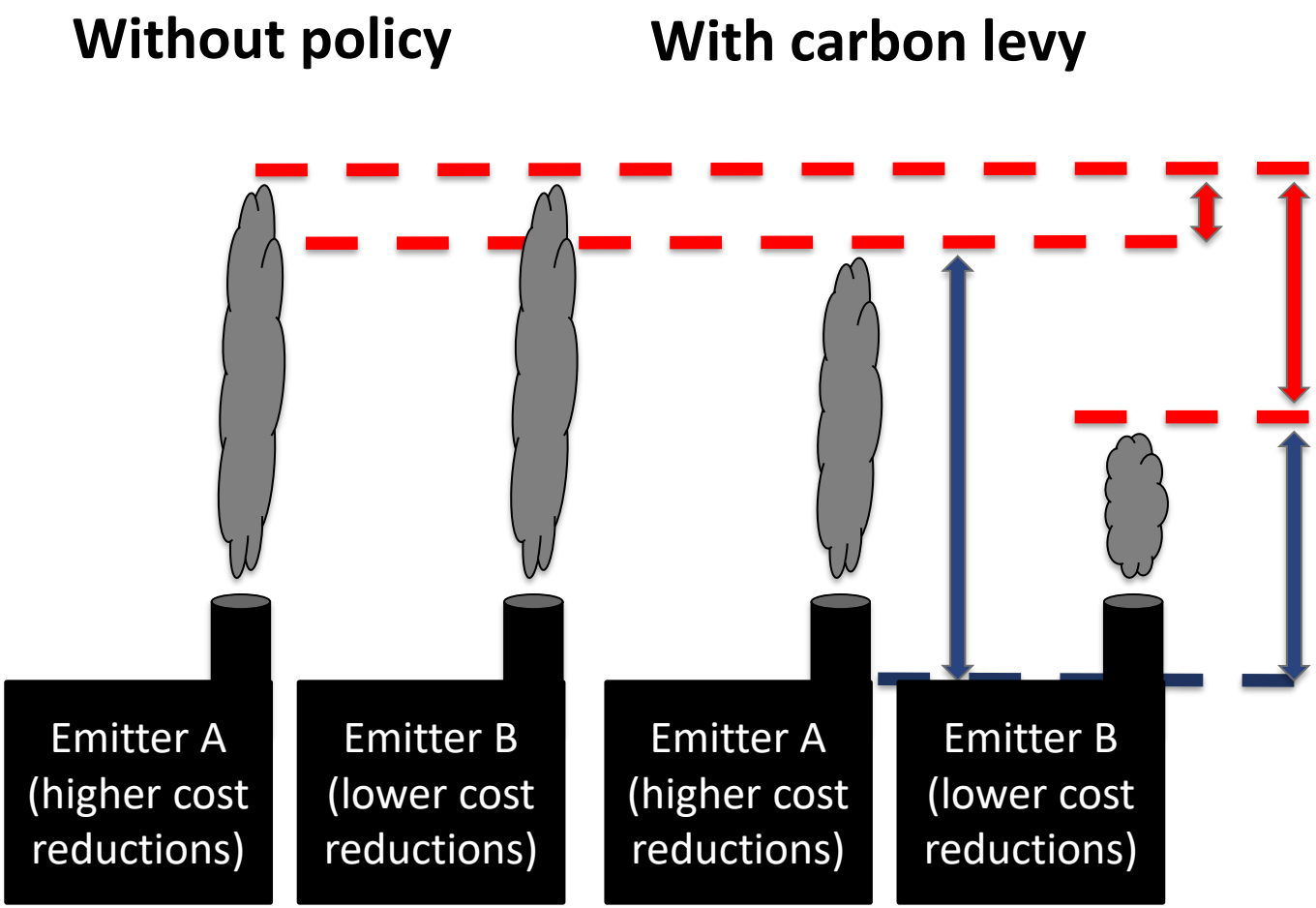
Extra slides

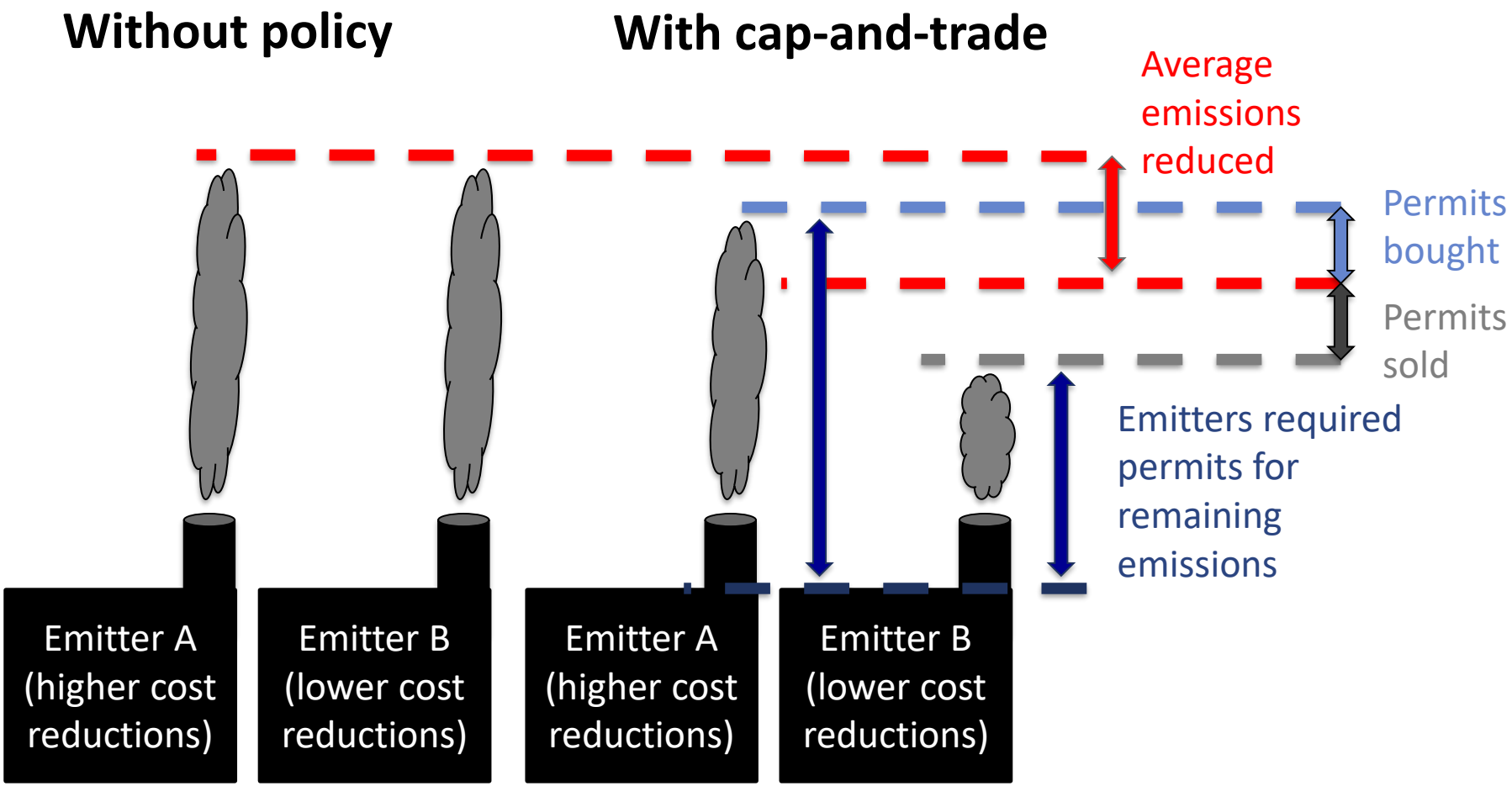
Carbon levy



Emissions reduced: all actions to reduce emissions that cost less than the price of carbon

Remaining emissions: Emitters pay levy on emissions they continue to produce.

Cap-and-trade



Implications for low-income households

Province	Percentage of carbon-pricing revenues required to fully offset carbon costs for households in the:	
	First quintile	First & second quintile
Alberta	3.2 %	9.5 %
Manitoba	4.4 %	12.6 %
Ontario	3.9 %	11.6 %
Nova Scotia	4.0 %	11.8 %

Competitiveness implications