

# Recommendations for Quebec's draft cap-and-trade regulations

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## Introduction

The Pembina Institute appreciates the opportunity to comment on Quebec's draft cap-and-trade regulations.

We support the province's efforts to reduce greenhouse gas pollution and encourage the province to continue moving forward in those efforts.

Our assessment of Quebec's draft regulations and our resulting recommendations have been developed with four objectives in mind. Namely, Quebec's cap-and-trade system should be:

- **Effective** — in that it provides an adequate incentive to invest in clean energy.
- **Comprehensive** — in that it applies to all sources of accurately measurable emissions.
- **Fair** — in that it ensures households, communities and businesses throughout the province are treated equitably and given an opportunity to be part of the solution.
- **Transparent** — in that the public and Quebec businesses can have confidence that the government's approach is indeed effective, comprehensive and fair.

Meeting these objectives will allow Quebec to reduce its greenhouse gas pollution, increase investment in clean energy solutions and make significant progress toward achieving its emission reduction targets. The degree to which the objectives are met will depend in large part on the rules of the cap-and-trade system.

That's why getting the draft regulations right is so important. If the rules effectively create an increasing incentive to reduce pollution and invest in clean energy solutions, the benefits will be considerable. If the rules fail to do this, the system will fall short of expectations.

## Summary assessment

The Pembina Institute supports Quebec's efforts to put a price on carbon and there are some strong elements to Quebec's draft regulations. However, our assessment against the objectives of effectiveness, comprehensiveness, fairness, and transparency raises some concerns. We see a number of opportunities to improve the draft regulations that would produce better environmental outcomes and improve public support for the final system.

The table on the next page summarizes our observations about the draft regulations.

Objective	Observations
Effective	<p>The effectiveness of a cap-and-trade system depends primarily on the stringency of the cap, which in turn dictates the demand (and price) for pollution allowances. If that cap is stringent enough, the price will be high enough to motivate investment in clean energy.</p> <p>Based solely on the draft regulations, it is impossible to assess how effective Quebec's system will be, because the annual cap is not established in the draft regulations. Supplementary information provided by the Ministry of Sustainable Development, Environment and Parks indicates that the cap will align with Quebec's 2020 emissions reduction target, which would provide a strong signal for Quebec's economy and other jurisdictions. (See <i>Recommendation 1</i>)</p> <p>A related factor is the number of offsets allowed in the system. We have concerns that the proposed 8% limit allows too many offsets and will undermine the incentive for companies regulated by the system to reduce their emissions. It will likely result in some accredited offsets that do not represent real reductions. (See <i>Recommendation 2</i>)</p> <p>The proposed minimum auction prices and set reserve prices will help to guard against the potential for allowance prices to be too low to encourage investment in clean energy solutions. However, the minimum auction price is set relatively low and increases very slowly. Given that B.C.'s carbon tax in 2011 is equivalent to the proposed minimum auction price in Quebec in 2020, there is an opportunity to strengthen the minimum prices (See <i>Recommendation 3</i>)</p> <p>The proposed approach of using revenue from the system to invest in the province's green fund is sound. Linking the funds generated by the system with climate change solutions will build public confidence in the system and make it easier to individuals and companies to adopt those solutions. An additional positive is not allowing allowances to be borrowed from future compliance periods.</p>
Comprehensive	<p>By the second compliance period, the cap-and-trade system will apply to most emissions in the province. This broad coverage will encourage investment in clean energy throughout Quebec's economy and help the province achieve its objectives at a lower cost compared to an approach that is focused on a limited number of sectors.</p> <p>One exception to the broad coverage are the emissions from the combustion of biomass or biofuels, which will be treated as having no net emissions according to the draft regulations. This approach is problematic because the direct greenhouse gas emissions from burning biomass and biofuels are not necessarily fully offset by vegetation regrowth (particularly where land-use change occurs). (See <i>Recommendation 4</i>)</p> <p>The comprehensiveness in the first compliance period is not as robust because of the exemption offered to transportation and heating (on- and off-road transportation accounted for 40% of Quebec's emissions in 2009, while residential and commercial heating accounted for 14% in the same year). There does not appear to be any technical or economic justification for not including these sectors in the system initially. Quebec has an opportunity to move ahead of other Western Climate Initiative (WCI) partners in this area. (See <i>Recommendation 5</i>)</p>
Fair	<p>It is encouraging to see that Quebec has exceeded the minimum thresholds on auctioning agreed to by WCI partners. Deciding to auction 100% of the allowances for heating and transportation fuels is particularly commendable and comparable in approach to B.C.'s carbon tax. Auctioning as many of the allowances as possible is the fairest approach to allocation and the one that will maximize public trust and support in the system over the long term.</p> <p>On the other hand, the proposal to grant most large final emitters a significant portion of their allowances for free introduces a challenge to the fairness of the system. The fact that they will not be paying for approximately 80% of their allowances stands in stark contrast to the full auctioning that is proposed for heating and transportation fuel distributors in 2015. Without a clear rationale for different treatments, this approach risks undermining public support for the system and creating tensions between different economic sectors. (See <i>Recommendation 6</i>)</p>
Transparent	<p>We appreciate the Government of Quebec's decision to provide draft regulations in a transparent manner. Quebec has gone further than Ontario, B.C. or Manitoba in publically detailing how its proposed cap-and-trade system would operate. However, we are concerned that some of the proposed approaches to offsets and allocation will result in an unnecessarily complex system that will make it harder to gain the confidence of the Quebec public and businesses. (See <i>Recommendations 2 and 6</i>)</p>

## Recommendations

We offer the following six recommendations:

Recommendation	Recommendation helps the system be:			
	More effective	More comprehensive	Fairer	More transparent
1. Set a cap that aligns with short- and medium-term reduction targets	✓			
2. Eliminate or reduce reliance on offsets	✓			✓
3. Guard against allowances prices that are too low to encourage change	✓			
4. Account for the emissions from biomass and biofuels	✓	✓		
5. Include the emissions from transportation and heating fuels in 2013	✓	✓	✓	
6. Distribute all allowances by auction			✓	✓

### 1. Set a cap that aligns with short- and medium-term reduction targets

Based solely on the draft regulations, it is impossible to assess how effective Quebec's system will be because the annual cap is not established in the draft regulations. Supplementary information provided by the Ministry of Sustainable Development, Environment and Parks<sup>1</sup> indicates that the cap will align with Quebec's 2020 emissions reduction target, which would provide a strong signal for Quebec's economy and set a good example for other WCI partners. The cap in Quebec's cap-and-trade system should be set at a level that makes a proportionate contribution to the achievement of Quebec's province-wide emissions reduction target for 2020. That declining cap (to 2020) should be included in the final regulations to remove any potential ambiguity or uncertainty about the system's medium-term objectives.

### 2. Eliminate or reduce reliance on offsets

The proposed 8% limit for offsets (i.e. offsets may cover up to 8% of a firm's total emissions over a compliance period) introduces two concerns:

- It would likely reduce low-carbon investment in the sectors of Quebec's economy covered by the cap-and-trade system by depressing the carbon price.
- It risks compromising the system's environmental integrity, as offset systems inevitably reward some non-incremental or non-additional emission reductions.<sup>2</sup>

<sup>1</sup> Jean-Yves Benoit, *Projet de règlement concernant le système de plafonnement et d'échange de droits d'émission de GES*, séance d'information technique, MDDEP, 9.

<sup>2</sup> Certifying non-incremental offsets is problematic because it would mean the cap-and-trade system is achieving less environmental benefit than anticipated.

Given the very serious documented problems with offsets<sup>3</sup>, our preferred approach would be to entirely eliminate the use of offsets for compliance within the cap-and-trade system. The draft regulations already include a reserve of allowances which will provide some flexibility and cost protection. If more flexibility is needed, a preferable approach to offsets would be making additional allowances available for purchase (thus lowering the price) if auction prices significantly exceed the prices set for reserve fund allowances. The minimum price threshold for these additional allowances to be released would need to rise to at least \$200 per tonne by 2020.<sup>4</sup>

Eliminating offsets from the cap-and-trade system would not preclude emissions reductions strategies in sectors potentially not appropriate for cap-and-trade (e.g. forest or landfills). Other policy tools can be used to encourage or require reductions in these sectors without compromising the credibility of the cap-and-trade system.

If Quebec does choose to allow some offsets for compliance in its cap-and-trade system, we would recommend discounting the compliance value of offsets by at least 20% to provide a buffer to account for the inevitable non-additional offsets.<sup>5</sup>

### 3. Guard against allowances prices that are too low to encourage change

Quebec's draft regulations include two mechanisms to prevent very low allowance prices in the market: the minimum prices on auctions and the set prices for reserve fund allowances. These are important features that guard against the types of price crashes experienced in the European Union's Emissions Trading Scheme. Price crashes are problematic because, for example, if allowances had no value in the market, there would be no financial incentive to invest in clean energy solutions.

We encourage Quebec to be more ambitious in setting its price floors because the minimum auction price (starting at \$15 per tonne in 2013 and escalating to \$25.77 per tonne in 2020) is relatively low given the carbon prices that will be needed to achieve meaningful change in the Quebec and Canadian economy.<sup>6</sup> Within the Canadian economy, B.C.'s carbon tax provides a working model of a carbon price that is already equivalent to Quebec's proposed 2020 price floor.

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<sup>3</sup> See "A Realistic Policy on International Carbon Offsets" (Michael Wara and David Victor, 2008) or "Is the CDM fulfilling its environmental and sustainable development objectives? An evaluation of the CDM and options for improvement" (Lambert Schneider, 2007).

<sup>4</sup> The \$200 per tonne reference is taken from *Climate Leadership, Economic Prosperity* (Pembina Institute and David Suzuki Foundation, 2009), an economic modelling study that analyzed the carbon prices needed to make deep cuts in Canada's greenhouse gas emissions. This was a national, not a Quebec-specific, carbon price estimate for the cost of meeting a target of 25% below the 1990 level in 2020. Available online at <http://www.pembina.org/pub/1909>

<sup>5</sup> Schneider (2007) found that 20% of offsets from the Clean Development Mechanism were not additional.

<sup>6</sup> Based on *Climate Leadership, Economic Prosperity* (Pembina Institute and David Suzuki Foundation, 2009) carbon prices will need to reach \$200 per tonne by 2020 in Canada if the country is going to make an equitable contribution to global efforts to prevent dangerous climate change.

#### 4. Account for the emissions from biomass and biofuels

According to the draft regulations, the emissions from the combustion of biomass and biofuels will be treated as having no net emissions. This approach is problematic because the direct greenhouse gas emissions from burning biomass and biofuels are not necessarily fully offset by vegetation regrowth, and because there may be other significant lifecycle emissions associated with biomass and biofuel production, depending on the feedstock. In particular, researchers have raised considerable concerns about the indirect emissions from land-use changes that can be induced by crop-based biofuel production.<sup>7</sup>

These and other emissions resulting from biomass and biofuel production must be included in the accounting process to ensure that the system realizes the emission reductions that the government anticipates. Given the scientific understanding of these lifecycle emissions is likely to continue evolving, it would also be advisable to include a scheduled near-term review of emission factors for biomass and biofuels as a means of ensuring that Quebec's system is built on current best practices.

#### 5. Include the emissions from transportation and heating fuels in 2013

We support Quebec's approach of including all sources of accurately measurable emissions. Taking this approach creates a level playing field across the economy and maximizes the scope of solutions that the system will create incentive for. Quebec's commitment to include non-combustion emissions in the cap-and-trade system is an important part of this because it provides an example that closes gaps that are present in B.C.'s carbon tax and Alberta's system for industrial emissions.<sup>8</sup>

However, we do not support Quebec's proposal to wait until 2015 to include the greenhouse gas pollution from transportation and residential and commercial heating. There is no administrative barrier to including those sources of emissions from the outset. Given the urgency of tackling climate change, Quebec should be treating all sectors with the same sense of urgency. In combination, on- and off-road transportation and residential and commercial heating accounted for 54% of Quebec's greenhouse gas pollution in 2009, and those sources should be included when the system launches.

If Quebec is concerned about the ways in which heating and transportation fuels would impact the allowance price if they were fully integrated into the system in 2013, we offer two approaches to mitigate the concern:

- The government could prevent any trading between the companies responsible for heating and transportation emissions, and those responsible for industrial emissions in the first

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<sup>7</sup> Timothy Searchinger et al., "Fixing a Critical Climate Accounting Error," *Science* 326 (2009), 527–528. For a perspective on standard-setting for GHG emissions from biomass, see Judith Bates et al, *Minimising greenhouse gas emissions from biomass energy generation* (Bristol, UK: Environment Agency, 2009). Available online at [http://www.environment-agency.gov.uk/static/documents/Research/Minimising\\_greenhouse\\_gas\\_emissions\\_from\\_biomass\\_energy\\_generation.pdf](http://www.environment-agency.gov.uk/static/documents/Research/Minimising_greenhouse_gas_emissions_from_biomass_energy_generation.pdf)

<sup>8</sup> The treatment of non-combustion emissions is not fully equivalent to combustion emissions in the draft regulations because a larger percentage (up to 100%) are proposed for free allocation. As discussed in recommendation 6, Pembina disagrees with this approach and would prefer to see 100% auctioning (including non-combustion emissions).

compliance period (2013 and 2014). This would reduce liquidity in the market, but it would allow time for both sectors to understand how the system works prior to being integrated.

- For 2013 and 2014 (and potentially beyond), the government could increase Quebec's carbon tax on heating and transportation fuels to provide a price signal comparable to the cap-and-trade allowance price. British Columbia's experience with its carbon tax demonstrates the feasibility of quickly establishing a price on carbon for these sectors.

In either case, revenue could continue to be directed to Quebec's green fund.

## 6. Distribute all allowances by auction

It is encouraging to see that Quebec has exceeded the minimum thresholds on auctioning agreed to by Western Climate Initiative partners (10% at launch). Deciding to auction 100% of the allowances for heating and transportation fuels is particularly noteworthy. Auctioning as many of the allowances as possible is the fairest approach to allocation and the one that will maximize public trust and support in the system over the long term.

However, the proposal to grant most large final emitters a significant portion of their allowances for free introduces a challenge to the fairness of the system. The fact that these emitters will not be paying for approximately 80% of their allowances in 2013 and 72% in 2020<sup>9</sup> stands in stark contrast to the full auctioning that is proposed for heating and transportation fuel distributors in 2015. Because Quebec has not provided a clear rationale for these different approaches to allocation, the government risks undermining public support for the system and creating tensions between different economic sectors. A notable exception for industry is the oil and gas sector, which the draft regulations say will not be eligible for free allocation.<sup>10</sup>

The implied rationale for the proposal (oil and gas excepted) is that carbon pricing will disadvantage companies that compete internationally and that some free allocation will be needed to deal with those competitiveness concerns. However, various academic studies show that carbon pricing can increase the international competitiveness of many sectors of the Canadian economy if the resulting revenues are used to reduce taxes that discourage economically desirable activities (e.g. income taxes).<sup>11</sup>

While a carbon price is likely to offer many advantages to Quebec's economy, some specific energy-intensive and trade-exposed sectors could be disadvantaged by high carbon prices to the point where it would be in their interests to shift production to other jurisdictions without comparable

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<sup>9</sup> The 80% and 72% estimates are based on the formulas in Section 1 of the draft regulation and they assume 100% of a company's emissions come from combustion sources. The 72% for 2020 assumes no reductions for 2013 levels, and would be a higher percentage if reductions are achieved.

<sup>10</sup> A related point for the oil and gas sector is that the regulations need to guard against the potential for multiple small facilities (e.g. wells and compressor stations) that collectively represent a large mass of emissions to fall under the cap-and-trade system's threshold. The WCI recommendations intended for these types of sources to be captured and Quebec's should do the same.

<sup>11</sup> See "Pricing Greenhouse Gas Emissions: The Impact on Canada's Competitiveness" (Chris Bataille et. al., 2009) and "Impacts of climate policy on the competitiveness of Canadian industry: How big and how to mitigate?" (Nic Rivers, 2010).



prices. This situation would have both environmental and economic disadvantages for Quebec. Where there is a demonstrable risk of “carbon leakage,” free allocation does provide a form of protection — but free allocation also adds to system complexity and reduces transparency and government revenue.

A simpler and more transparent approach to protecting those specific sectors that truly face a risk of carbon leakage would be to auction 100% of the allowances and use a portion of the additional revenue to provide support for those sectors through some form of production subsidy. Ideally, those subsidies could be directed such that they supplement the cap-and-trade system’s incentive to reduce emissions.

Choosing to auction a higher percentage of allowances in this way would not be without precedent. For example, the Regional Greenhouse Gas Initiative, which is a cap-and-trade system operating between 10 northeastern U.S. states, recently auctioned 87% of the allowances.<sup>12</sup> Auctioning 100% of allowances would also be analogous to the carbon tax that B.C. has already implemented.

Eliminating free allocation would also allow Quebec to further simplify its cap-and-trade system because there would no longer be any need for the early action credits currently proposed in the draft regulations. A system based on 100% auctioning automatically rewards companies that have taken early action because their allowance requirements are lower.

Whether Quebec chooses to increase the percentage of allowances auctioned in 2013 or not, we offer two additional related recommendations:

- Provide clear thresholds or tests that will be applied before subsidizing companies (either with free allowances or other forms of protection). Based on analysis of Environment Canada’s facility level data, the government’s current proposal would see 92% of Quebec emitters be eligible for some form of free allocation in the first phase (2013 and 2014) of the cap-and-trade system.<sup>13</sup> It seems very unlikely that all of these emitters are at risk of being placed at a competitive disadvantage due to carbon pricing.
- Decrease the subsidy provided (either with free allowances or other forms of protection) more rapidly than the proposed formulas in the draft regulations.

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<sup>12</sup> Based on numbers reported on the RGGI website. Accessed on March 15, 2011 at [http://www.rggi.org/design/overview/allowance\\_allocation](http://www.rggi.org/design/overview/allowance_allocation)

<sup>13</sup> Calculated by totaling the emissions from the sectors eligible for free allocation and dividing by the emissions from all of Environment Canada’s facility level reporting data for Quebec. This database uses a 50,000 tonne threshold, so the number would likely change marginally if all the facilities with emissions between 25,000 and 50,000 tonnes were included in the calculation.