

A Close Look at the California & Quebec Cap-and-Trade Linkage

Special Topics Webinar

January 16, 2014



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Agenda



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- 11:00** **Welcome & Opening Remarks**
- *Scott Hernandez, Climate Action Reserve*
-
- 11:15** **California's Climate Action Partnerships**
- *Ashley Conrad-Saydah, Deputy Secretary for Climate Policy*
California Environmental Protection Agency
-
- 11:30** **Quebec's Cap-and-Trade**
- *Jean Nolet, President*
ÉcoRessources
-
- 11:45** **Question and Answer**



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Legal Disclaimer

Some of the content of this presentation is based on the Climate Action Reserve's understanding of the California Cap and Trade Regulation. As the implementation of the Regulation is the responsibility of the California Air Resources Board, you should be aware that anything presented here may be interpreted or applied differently by the Board.

Moreover, this presentation does not constitute legal advice. Information presented here should be regarded as guidance and does not have a legally binding effect.



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Background on the Reserve

- Chartered by California law in 2001 as the California Climate Action Registry
 - Mission is to encourage voluntary actions to reduce emissions and to have such emissions reductions recognized
- In 2008, renamed and changed focus to creating a North American carbon offsets program
- Accredited Offset Project Registry (OPR) for California cap-and-trade program
- Balances business, government, and environmental interests

California Carbon Market: 2013-2020



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Compliance Period	Year	Allowance Budget (mt CO ₂ e)*	Max Offset Demand (8%)
First (narrow scope)	2013	162,800,000	26,800,000
	2014	159,700,000	
Second (broad scope)	2015	394,500,000	91,784,000
	2016	382,400,000	
	2017	370,400,000	
Third (broad Scope)	2018	358,300,000	83,104,000
	2019	346,300,000	
	2020	334,200,000	

* Source: California Air Resources Board (CARB)



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Linkage with Quebec

- Effective January 1, 2014, Quebec-issued and California-issued offsets and allowances are completely interchangeable
 - Currently, there are no Quebec-issued offsets
- Quebec is expected to be a net buyer from California
 - More ambitious reduction target
 - Quebec market is much smaller than California, so price impact will be positive, but limited
- Next linkage? Unclear. Maybe Washington State?

California's Climate Action Partnerships

Ashley Conrad-Saydah

Deputy Secretary for Climate Policy

California Environmental Protection Agency

January 16, 2014



Cap and Trade Goals

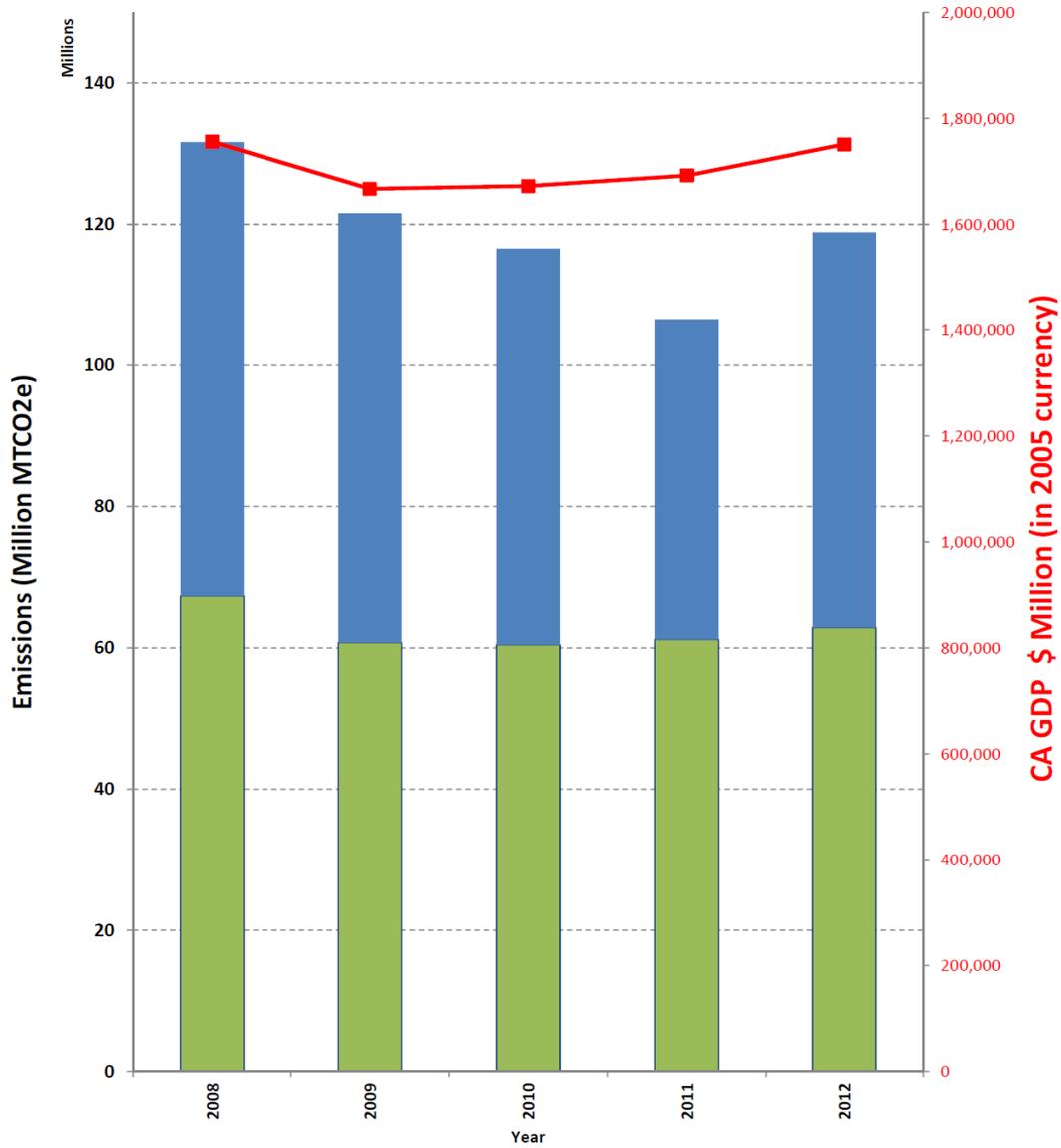
- Reduce statewide GHG emissions
 - Cap and Trade covers 85% of California economy
- Balance environmental stringency and costs
 - Price emissions; Utilize carbon offset credits
- Spur innovation to create a low-carbon economy
- Complement other air quality and GHG programs within AB 32 and other agencies
- Maintain a flexible mechanism with a strict cap
- Work with other jurisdictions, either through formalized information sharing (e.g. China) or linkage (e.g. Quebec)



2008-2012 CA GDP & Industrial Emissions Trends

(Source: MRR)

Pre-cap
progress



Expect more
progress
under the cap



- In-State Electricity Generation
- All Other Industrial Emissions
- CA GDP (Millions 2005 \$) (source: DoF)

Partnerships

- Varying gradations of partnerships
 - Visits from other jurisdictions
 - U.S. offsets accepted
 - Collaborative work (research, information sharing)
 - Formal Memoranda of Understanding
 - Full program linkage



PACIFIC COAST ACTION PLAN *on* CLIMATE AND ENERGY



PREAMBLE

THE GOVERNMENTS OF CALIFORNIA, BRITISH COLUMBIA,
OREGON AND WASHINGTON,

Pursuant to the *Memorandum to Establish the Pacific Coast Collaborative* of June 2008, as provided for in Article 6;

Affirming our shared vision of Pacific North America as a model of innovation that sustains our communities and creates jobs and new economic opportunities for our combined population of 53 million;

Recognizing that the Pacific Coast is a region bound together by a common geography, shared infrastructure and a regional economy with a combined GDP of US \$2.8 trillion, which makes it the world's fifth largest;

Acknowledging the clear and convincing scientific evidence of climate change, ocean acidification and other impacts from increasing concentrations of carbon dioxide in the atmosphere, which threaten our people, our economy and our natural resources;

Emphasizing that states and provinces around the world are battling climate change through technology innovation and actions that limit greenhouse gas emissions and other air pollution while creating economic growth, consumer savings and new jobs;

Celebrating that our own governments have reduced greenhouse gas emissions by adopting regulatory, policy and market-based measures that shift energy generation to clean and renewable sources, manage energy use through greater efficiency and conservation, and enable and promote consumer choice for clean vehicles;

existing carbon-pricing programs. Where possible, California, British Columbia, Oregon and Washington will link programs for consistency and predictability and to expand opportunities to grow the region's low-carbon economy.

- 2) **Harmonize 2050 targets for greenhouse gas reductions and develop mid-term targets needed to support long-term reduction goals.**

Climate scientists have identified the scale of greenhouse gas reductions that must be achieved globally to stabilize the climate. Where they have not already done so, California, British Columbia, Oregon and Washington will establish long-term reduction targets that reflect these scientific findings. To advance long-term reductions, Washington already has in place a mid-term 2035 target. California and Oregon will establish their own mid-term targets. British Columbia has already legislated 2020 and 2050 targets and will explore whether setting a mid-term target will aid their achievement.

- 3) **Affirm the need to inform policy with findings from climate science.**

Leaders of California, British Columbia, Oregon and Washington affirm the scientific consensus on the human causes of climate change and its very real impacts, most recently documented by scientists around the world in the Intergovernmental Panel on Climate Change's *Fifth Assessment Report* released in September 2013, as well as other reports such as the *Scientific Consensus on Maintaining Humanity's life Support Systems in the 21st Century*. Governmental actions should be grounded in this scientific understanding of climate change.

Recalling the findings of the 2012 *West Coast Clean Economy* report which projected 1.03 million new jobs could be created in key sectors, such as energy efficiency and advanced transportation, assuming the right policy environment;

Supporting positive federal action to combat climate change, including President Obama’s climate action plan and proposed rules to limit greenhouse gas emissions from power plants;

Joining the growing international convergence on the need to secure an international agreement to reduce global greenhouse gas emissions, including discussions at the coming Conference of Parties meetings in Warsaw (2013), Lima (2014) and Paris (2015); and

Agreeing that meaningful coordination and linkage between states and provinces across North America and the world on actions to reduce greenhouse gas emissions can improve the effectiveness of these actions, increase their overall positive impact and build momentum for broader international coordination to combat climate change;

NOW THEREFORE HEREBY AGREE AS FOLLOWS:

I. Lead national and international policy on climate change with actions to:

Direct our relevant agencies and officials to work together to:

1) Account for the costs of carbon pollution in each jurisdiction.

Oregon will build on existing programs to set a price on carbon emissions. Washington will set binding limits on carbon emissions and deploy market mechanisms to meet those limits. British Columbia and California will maintain their

4) Cooperate with national and sub-national governments around the world to press for an international agreement on climate change in 2015.

The governments of California, British Columbia, Oregon and Washington will join with other governments to build a coalition of support for national and international climate action, including securing an international agreement at the Conference of Parties in Paris in 2015. The governments of California, British Columbia, Oregon and Washington will coordinate the activities they undertake with other sub-national governments and combine these efforts where appropriate.

5) Enlist support for research on ocean acidification and take action to combat it.

Ocean health underpins our coastal shellfish and fisheries economies. The governments of California, British Columbia, Oregon and Washington will urge the American and Canadian federal governments to take action on ocean acidification, including crucial research, modeling and monitoring to understand its causes and impacts.

II. Transition the West Coast to clean modes of transportation and reduce the large share of greenhouse gas emissions from this sector with actions to:

1) Adopt and maintain low-carbon fuel standards in each jurisdiction.

Oregon and Washington will adopt low-carbon fuels standards, and California and British Columbia will maintain their

existing standards. Over time, the governments of California, British Columbia, Oregon and Washington will work together to build an integrated West Coast market for low-carbon fuels that keeps energy dollars in the region, creates economic development opportunities for regional fuel production, and ensures predictability and consistency in the market.

- 2) **Take actions to expand the use of zero-emission vehicles, aiming for 10 percent of new vehicle purchases by 2016.**

The Pacific Coast already has the highest penetration of electric cars in North America. The governments of California, British Columbia, Oregon and Washington will work together towards this ambitious new target by supporting public and private fleet managers to shift their procurement investments to catalyze toward electric car purchases and by continuing to invest in necessary infrastructure to enable low-carbon electric transportation.

- 3) **Continue deployment of high-speed rail across the region.**

Providing high-speed passenger rail service is an important part of the solution to expand regional clean transportation, improve quality of life and advance economic growth. The governments of California, British Columbia, Oregon and Washington continue to support the Pacific Coast Collaborative's Vision for high speed rail in the region, and will continue to seek opportunities to invest in rail infrastructure that moves people quickly, safely and efficiently, and encourages innovation in rail technology manufactured in the region.

- 4) **Support emerging markets and innovation for alternative fuels in commercial trucks, buses, rail, ports and marine transportation.**

- 2) **Support strong federal policy on greenhouse gas emissions from power plants.**

The governments of California, British Columbia, Oregon and Washington will support the U.S. Environmental Protection Agency's initiative to regulate greenhouse gas emissions from power plants and emphasize the importance of allowing state flexibility to design ambitious reduction programs within this regulation. Our jurisdictions will also coordinate and provide joint testimony in federal proceedings on greenhouse gas emissions when appropriate.

- 3) **Make infrastructure climate-smart and investment-ready.**

The West Coast Infrastructure Exchange (WCX) is demonstrating how to attract private capital for infrastructure projects while increasing climate resilience through best practices and certification standards. To scale up these efforts, the governments of California, Oregon and Washington will sponsor pilot projects with local governments, state agencies and the WCX. WCX also works closely with Partnerships BC, a center of infrastructure financing expertise established by the government of British Columbia that has helped to secure financing for over 40 projects worth more than C\$17 billion.

- 4) **Streamline permitting of renewable energy infrastructure.**

Meeting ambitious carbon-reduction goals will require scaling up wind, solar and other forms of renewable energy and effectively bringing clean power to customers in California, Oregon and Washington. Drawing on emerging models in California and the Pacific Northwest, the governments of California, Oregon and Washington will work with permitting agencies to streamline approval of renewables projects to increase predictability, encourage investment and drive innovation.

4) **Support emerging markets and innovation for alternative fuels in commercial trucks, buses, rail, ports and marine transportation.**

The Pacific Coast of North America is emerging as a center of private sector innovation and investment in cleaner fuels and engine technologies for heavy-duty trucks and buses, rail, ports and marine transportation. The governments of California, British Columbia, Oregon and Washington will develop targets and action plans to accelerate public and private investment in low-carbon commercial fleets and support the market transition to biofuels, electricity, natural gas and other low-carbon fuels in local and export markets.

III. Invest in clean energy and climate-resilient infrastructure with actions to:

1) **Transform the market for energy efficiency and lead the way to “net-zero” buildings.**

Energy efficiency is the lowest cost way to reduce greenhouse gas emissions while creating good local jobs. The governments of California, British Columbia, Oregon and Washington will work to harmonize appliance standards, increase access to affordable financing products, and support policy that ensures that energy efficiency is valued when buildings are bought and sold. Our efforts intend to build a vibrant, growing regional market for energy efficiency products and services.

Washington will work with permitting agencies to streamline approval of renewables projects to increase predictability, encourage investment and drive innovation.

5) **Support integration of the region’s electricity grids.**

Connecting the markets for buying and selling wholesale electricity in our region can increase local utilities’ flexibility and reliability and provide consumer savings by enabling use of a wide variety of energy sources across the region. Integrating our region’s electricity markets also expands energy users’ access to renewable energy sources, such as solar and wind power.

IV. Interpretation

This Action Plan is intended to spur finding new, smart ways for our governments, agencies and staff to work together, and with other governments and non-government partners, as appropriate, to add value, efficiency and effectiveness to existing and future initiatives, and to reduce overlap and duplication of effort, with the objective of reducing, not increasing, resource demands to achieve objectives that are shared.

V. Limitations

This Action Plan shall have no legal effect; impose no legally binding obligation enforceable in any court of law or other tribunal of any sort, nor create any funding expectation; nor shall our jurisdictions be responsible for the actions of third parties or associates.

SIGNED AT SAN FRANCISCO, CALIFORNIA, ON THE OCCASION OF THE FOURTH ANNUAL LEADERS’ FORUM OF THE PACIFIC COAST COLLABORATIVE, THIS 28TH DAY OF OCTOBER, 2013.

Quebec Linkage

LINKING TIMELINE		
2006		
	September 2006	AB 32 -- Global Warming Solutions Act
2007		
	February 2007	Western Climate Initiative: The Western Climate Initiative (WCI) is a collaboration of independent jurisdictions working together to identify, evaluate, and implement emissions trading policies to tackle climate change at a regional level.
2008		
	September 2008	WCI Program Design Recommendations: The Western Climate Initiative (WCI) jurisdictions recommend a design for a broad cap-and-trade program as part of a comprehensive regional effort to reduce emissions of global warming pollution.
	December 2008	Scoping Plan: This Scoping Plan, developed by ARB in coordination with the Climate Action Team (CAT), proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California.
2010		
	July 2010	WCI Detailed Program Design: WCI roadmap to inform the WCI Partner jurisdictions in their development of implementing regulations for a comprehensive regional cap-and-trade program.
2011		
	October 2011	WCI, Inc. Created: Western Climate Initiative, Inc. (WCI, Inc.) is a non-profit corporation formed to provide administrative and technical services to support the implementation of state and provincial greenhouse gas emissions trading programs.
	December 2011	California Cap-and-Trade Program: Final regulatory order for the California program.



2012		
	May 2012	WCI, Inc. Executive Director: Executive Director retained for WCI, Inc.
	June 2012	SB 1018 signed by the Governor: Requires Governor to issue findings prior to linking programs. Requires additional oversight of WCI, Inc., including two non-voting, ex officio members of the WCI, Inc. Board representing the Legislature.
	November 2012	California Allowance Auction: First auction of California emission allowances in November 2012. Subsequent auctions held quarterly.
	December 2012	Quebec Cap-and-Trade Program: Final regulations for Quebec program.
	December 2012	WCI, Inc. Board Meeting: Annual WCI, Inc. Board meeting with new California directors defined by SB 1018.
2013		
	April 2013	Governor's Findings: Governor issues findings that linking to the Quebec program satisfies the requirements of SB 1018. Directs ARB to report by November 1, 2013 on readiness to link.
	April 2013	Board Adopts Linkage Regulation: The Board adopts regulations to link the California program with the Quebec program.
	September 2013	SB 726 signed by the Governor: Requires additional oversight of WCI, Inc.
	October 2013	California Linkage Regulation: Final regulations for linking to the Quebec program becomes effective.
	November 2013	Readiness Report: Report to the Governor due on readiness for program linking with Quebec.
	December 2013	Quebec Allowance Auction: First auction of Quebec emission allowances planned for December 2013. Subsequent auctions to be held quarterly.
2014		
	January 2014	Program Linkage: Linkage of California and Quebec programs planned to take effect.
	Spring 2014	Practice Joint Auction: Practice joint auction of California and Quebec allowances to test procedures and systems.
	Spring/Summer 2014	First Joint Auction: First joint auction of California and Quebec allowances. Subsequent auctions to be held quarterly.



Moving forward

- Progress at sub-national level
 - UNFCCC Conference of the Parties
- Federal action on existing and new power plants
- Potential for international climate agreement
- Iterative reductions result in cumulative, worldwide benefits





QUEBEC'S CAP AND TRADE

Jean Nolet

ÉcoRessources Inc. Services



Offset Project Development



Carbon Management

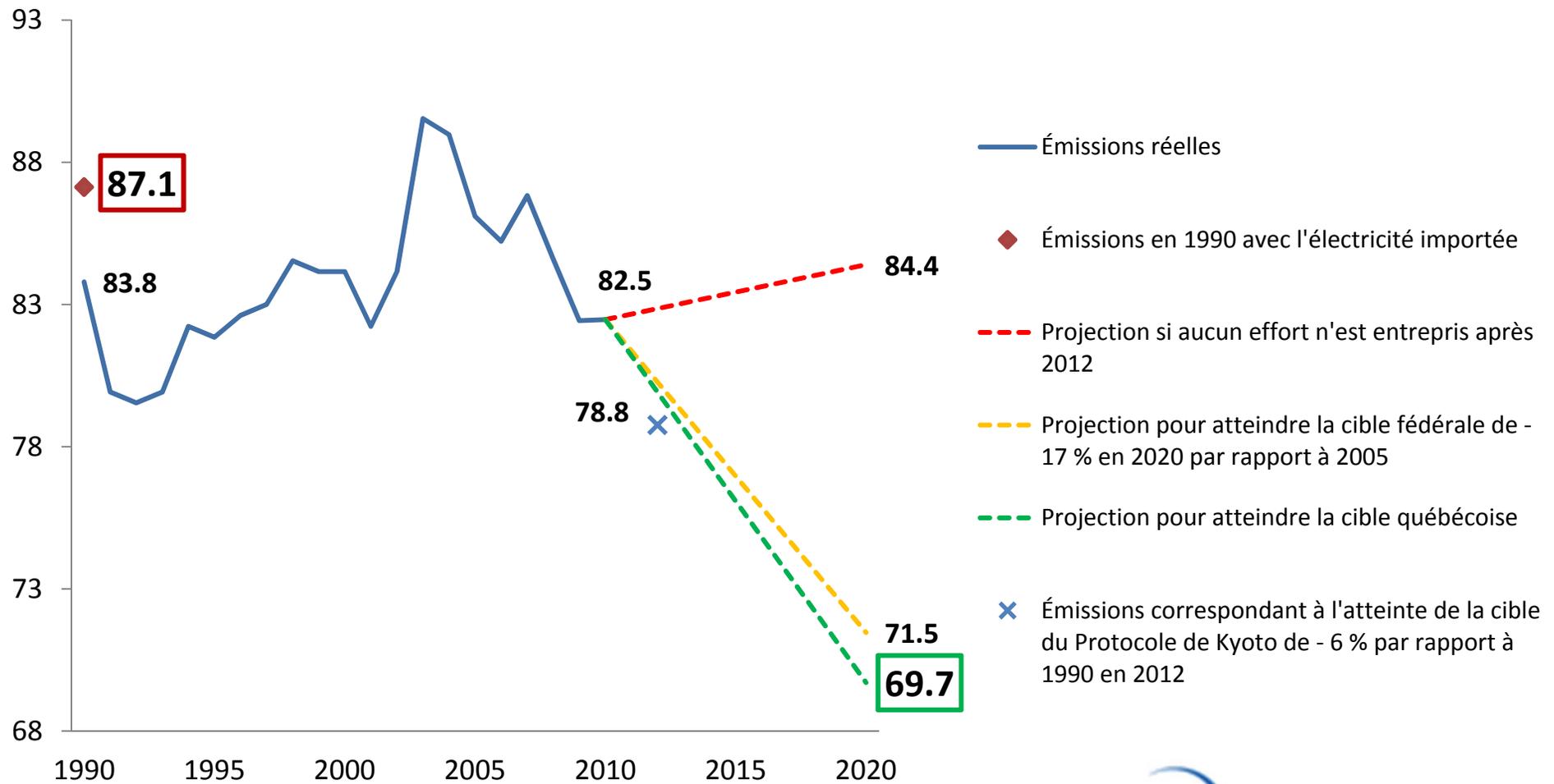


Carbon Finance



Policy Analysis and Training

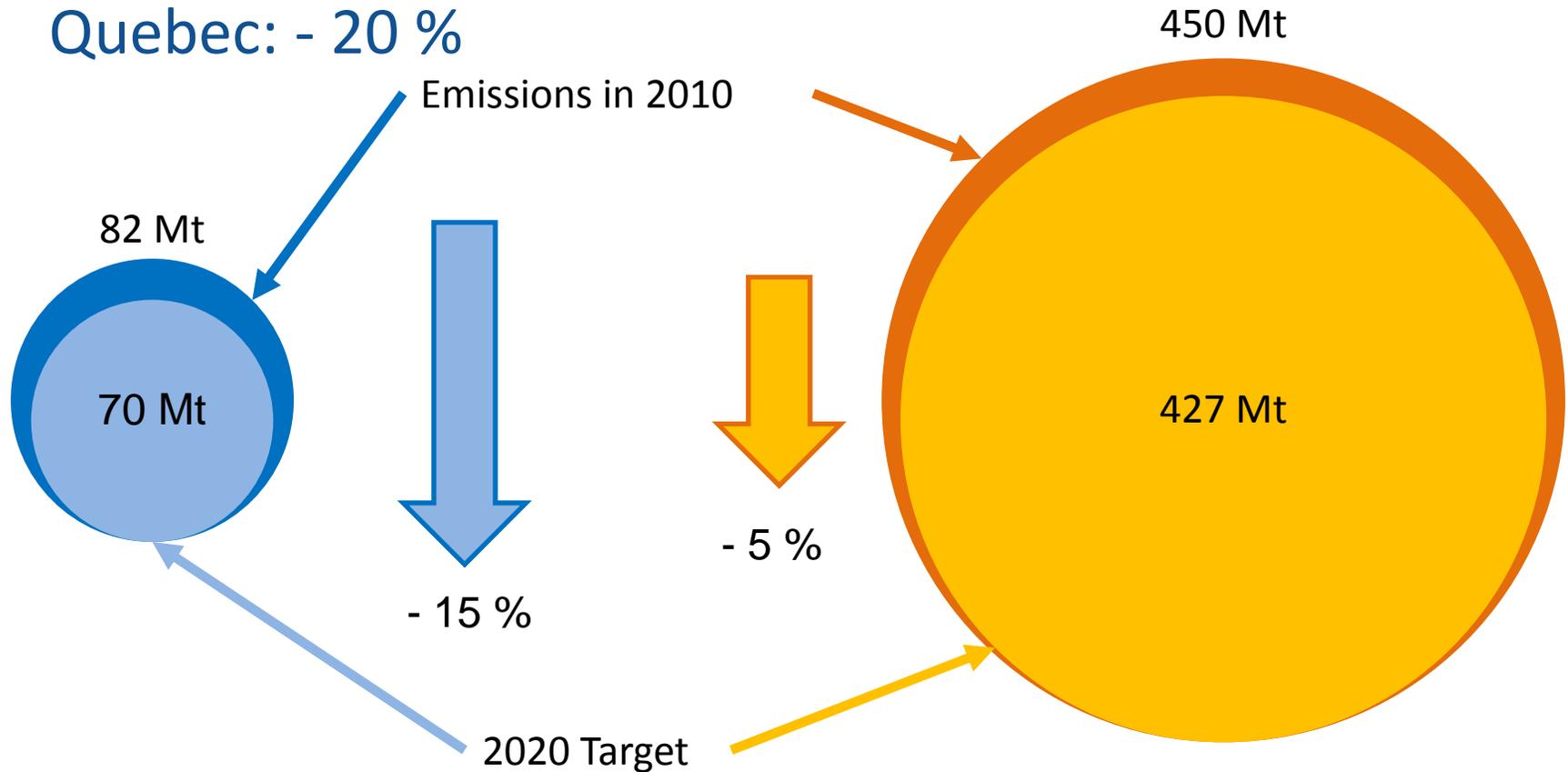
1. Reduction target for Quebec 2020 target: - 20% compared to 1990 levels



2. How do Qc and CA compare?

California: 0 %

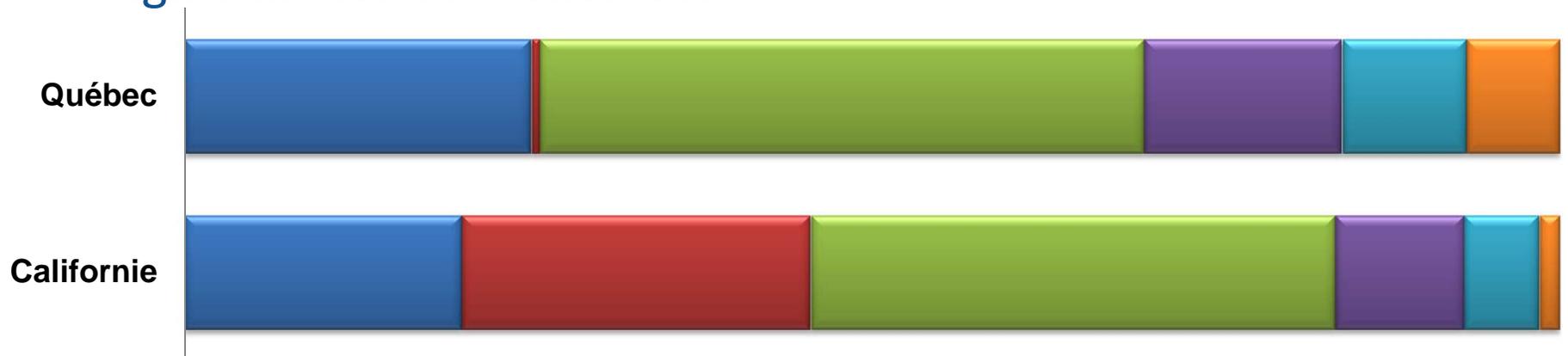
Quebec: - 20 %



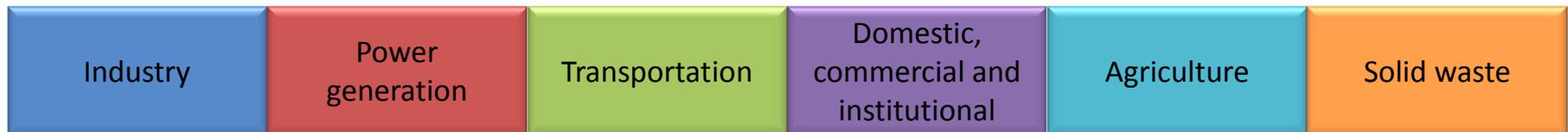
3. Different emission profiles...

Quebec:

- Power generation: 95% from hydro
- Only few low hanging fruits in Quebec
- High emission reduction costs



Emission profiles in 2009



4. Limited demand over short-term in Quebec

- Industrial sector
 - Main supply from free allocation
 - Currently no carbon market activity
 - We expect slow future activities:
 - Small demand satisfied through auctions
 - No speculative position
 - Banking if allowance allocation excess
- Fuel distributors
 - No free allocation
 - No yearly true-up like in California
 - Fears about supply and price volatility
 - Seeking certainty
 - No speculative position (not their business)
 - Some interest in offsets

5. Offsets: what is the state of affairs?

- Protocols are designed and published by the Ministry of Environment
- Quebec Ministry is in charge of the registration
- No revocation risks
 - Gouvernement places 3% of offset credits from each project into the Environmental Integrity Fund
- 3 protocols in Quebec :
 - Livestock manure management
 - Landfill gas
 - Ozone Depletion Substances (ODS)

6. Quebec likely to generate very few offsets

- **Livestock manure management**

- Within Quebec's borders
- Many small producers
- Many other barriers to biodigestion (business culture, technical barriers)
- Offset price will not be high enough on the short-term to cover the transaction costs

- **Landfill**

- Within Quebec's borders
- The vast majority are already under legislation to flare (no additionality)
- Only a few small landfills will be eligible
- Offset price will not be high enough over the short-term to cover transaction costs

- **Ozone Depletion Substances (ODS)**

- Within Canada's borders
- Only foam ODS accepted
- ODS from refrigerant not recognized (not yet?)

7. Overall... Little market activity in Quebec

- **Few buyers in Quebec**
 - Few large emitters
 - Free allocation has been generous
- **Little movement on the market so far**
 - No yearly true-up like in California
 - Signal of oversupply in CA-QC market
 - Few speculators on the market
 - Very limited offset potential
- **No sense of urgency to move**
 - Wait-and-see attitude
 - 2014 may be different as CFOs will have had to value allowances and first auction will have been held

8. And a very small offset market in Quebec

- Apparently no interest in government to support offsets
- Too few protocols, limited to Quebec (except for ODS) and in sectors of activity with low potential
- High cost of reduction projects
- No support for aggregation structures
 - E.g. no possibility of sampling to reduce costs of verification
- Signals that the market will be oversupplied are not encouraging
- Despite no revocation risk, very little offset activity in Quebec

9. Quebec last auction

- Quebec organized its first auction on December 3rd, 2013
- Only 1/3 of 2013 allowances and 1/4 of 2016 were sold
- Settlement price = floor price = 10,75\$
- ÉcoRessources' view
 - Not representative at all of future auctions
 - Not worrying for the viability of the carbon market

10. Next auctions

- First auction of 2014 will be held March 4th
- Will not be organized jointly
- Volume – Roughly what was sold at the last auction:
 - 2014 allowances: 1 049 111 units
 - 2017 allowances: 1527 000 units
- Price floor: 11,39\$ CAD

11. Next auctions

- Starting with the second auction of 2014 (in June), all auctions should be organized jointly by California and Quebec
 - Quebec and California participants will take part to the same auction
 - Quebec and California allowances will be mixed, indistinguishable and sold together. For example, within a lot of 1,000 emission units, there will be 90% allowances from Quebec and 10% from California.
 - Joint auction reserve price will be the highest floor price considering exchange rate

12. Linkage impacts – perceptions from Quebec

- Quebec's target is more ambitious
- Quebec has less emission reduction potential
- California is a much bigger market
 - Price should rise slightly in California with the linkage
 - Quebec entities should buy allowances and credits from Californian market: liquidity transfer from Quebec to California

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