

Linkage with Quebec in California's Greenhouse Gas Emissions Cap-and-Trade Market

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International Linkage of Greenhouse Gas (GHG) Emissions Trading Systems

- Momentous challenge to link trading systems internationally
 - Requires close coordination of legal and regulatory frameworks in each country
- CARB has diligently worked at developing common protocols with Quebec for past several years
 - Neither market is currently operating
- European Union Emissions Trading System (EU-ETS) is largest international GHG emissions trading system
 - Phase 1—1/1/2005 to 12/31/2007
 - Phase 2—1/1/2008 to 12/31/2012
 - Phase 3—1/1/2013 to 12/31/2020



Prices of EU ETS Emissions Allowances (EUA) in euros/ton

International Linkage Under EU ETS versus California and Quebec Linkage

- All EU Member States must subject themselves to common body of rights and obligations (“acquis”)
 - Rights and obligations must be put into country’s national legislation when it becomes a member of EU
- Acquis in national legislation of EU Member States on:
 - Greenhouse Gas Monitoring and Reporting
 - EU ETS
 - Transport/Fuels quality and emissions
 - Other environmental and climate-related issues
- Acquis ensure common set of governing principles for EU ETS governed by European Union legal system
- Canada and United States do not have benefit of “American Union” legal system

Areas for Concern in Linking California's and Quebec's Greenhouse Gas Emissions Trading Systems

- Coordinating legal and regulatory frameworks within context of international law
- Consistency in transparency about market mechanisms and compliance
- Consistency of definitions and market rules for use of compliance instruments
- Consistency of enforcement of market rules
- Ability to respond quickly to unforeseen contingencies and to take action to address them

Coordinating Legal and Regulatory Frameworks

- Linkage implies that Quebec-issued compliance instruments can be used to offset emissions in California
 - May require foreign jurisdiction to verify integrity of compliance instrument
 - Quebec may wish to compel California to require California participants to provide information to Quebec
 - One can think of instances where California may not want to request a market participant to provide information to Quebec
- California may find a market design flaw that can be corrected by a market rule change in both jurisdictions
 - It cannot compel Quebec to make necessary market rule change
- Federal and state regulatory coordination in US is indicative of challenges of coordinating international legal and regulatory frameworks
 - Recall divergent federal and state regulatory definitions of “just and reasonable price” and appropriate response to observed electricity and natural gas prices during 2000 to 2001 time frame

Consistency in Transparency About Market Mechanisms and Compliance

- Differing levels of public data release about market outcomes can cause trading activities to migrate to the least transparent jurisdiction
- Differing levels of public data release can increase opportunities for participants to take advantage of their private information to the detriment of energy consumers
- Low levels of information transparency in each market, even if they are symmetric across the two markets can increase opportunities for participants to exploit their private information and economic harm caused by these actions

Consistency in Definitions and Market Rules for the Use of Compliance Instruments

- Rights and responsibilities of issuers and users of allowances and offsets should be the same across jurisdictions
- California and Quebec currently have different approaches to assigning liability for environmental integrity of offsets
 - California assigns liability to buyer of offset
 - If California invalidates an offset, the buyer must replace it with another valid compliance instrument (offset or allowance)
 - Quebec has an environmental integrity pool
 - If Quebec invalidates an offset, a valid offset is retired from environmental integrity pool
- California and Quebec allow offsets from differing sources
 - California allows forestry and urban forestry, but Quebec does not
 - Quebec allows landfill methane destruction, but California does not
- How same offset project is credited with GHG emissions reductions could also differ across jurisdictions
 - Some comparative experience with offset project crediting processes in each jurisdiction could help ensure same project in Quebec and California receives same GHG emission reduction credit

Consistency in the Enforcement of Market Rules

- Differences in enforcement of market rules can significantly harm market efficiency
 - This argues in favor of extremely precise market rules in both jurisdictions
- Prohibition of activities that involve significant judgment to determine a violation will exacerbate this problem
 - Recall federal versus state regulator interpretation of market rules governing wholesale electricity and natural gas
- Accumulated history of decisions in both jurisdictions can help to eliminate differences in enforcement market rules before linkage

Ability to Respond Quickly to Unforeseen Contingencies

- Multiple regulatory jurisdictions, neither with oversight over entire international market, can limit ability of regulatory process to respond quickly to unforeseen contingencies
- Action plans for response to potential contingencies should be in place before linkage occurs
 - History of operation and responses in each jurisdiction can provide important input to design of joint action plans

Cost versus Benefits of Linkage

- Quebec relatively small and economic output is not as GHG-emissions intensive as California
 - Quebec's population is 7.9 million and GDP is \$319,348 million CAD
 - California's population is 37.7 million and GDP is \$1,936,400 million USD
- Quebec's electricity sector is primarily hydroelectric, whereas California's is dependent on natural gas
 - Quebec and California are not part of same electricity interconnection
- All of these factors point to limited economic and environmental benefits from California linking with Quebec
- Benefits of linking with other parts of US and Canada likely to be much more substantial
 - Quebec and California linkage has demonstration value for future linkages
- Linkage with early market designs has significant potential downsides as discussed above

Conclusion

- Expected cost of early linkage appears larger than expected benefits to California
- Delaying linkage until both California and Quebec markets are well-functioning is likely to reduce cost and increase benefits.
- This is unlikely to be the case at least until second phase of program in California is implemented in 2015.