

June 13, 2013

Raising Questions About The Use of an Offset For Compliance with Carbon Emission Reduction Obligations

Written by: Shaun Fluker

Case Considered:

Citizen's Climate Lobby and Our Children's Earth Foundation v California Air Resources Board (Superior Court of California, County of San Francisco, January 25, 2013, Case number [CGC-2-519544](#)).

This comment examines a recent judicial review decision by the Superior Court of California dismissing a challenge to the legality of the carbon emission offset regime established by California's Air Resources Board (CARB). The petitioners in this case alleged the offset regime does not comply with its parent statute – the *Global Warming Solutions Act of 2006*, ([California, AB 32](#)) – and thus the CARB does not have legal authority to implement it. The essence of the claim was that a carbon emission offset created by the CARB regime would not necessarily represent the real and demonstrable carbon emission reduction required by the legislation. The Court ruled the offset regime created and administered by the CARB complies with the legislation.

Why might this California judicial review decision be of interest to Alberta? The primary reason is that Alberta is home to Canada's most established carbon emission offset regime. The legal framework governing carbon emission offsets in Alberta is similar to that in California, and thus vulnerable to a similar challenge some day. And while there are no challenges forthcoming to Alberta's regime that I am aware of, this decision provides a good opportunity to examine how Alberta's carbon offset regime works.

A primer on carbon markets

The international consensus is to use market-based regulation to achieve a global reduction in carbon emissions. The theory of market-based regulation is generally that price regulates our behaviour, and an efficient market that assigns a price on the right to emit carbon will accomplish the same emission reduction goals as traditional command and control directives but at less overall cost to society. The key functions of the carbon market are price discovery on the right to emit and providing a forum in which those rights can be traded between market participants.

A price on carbon emissions generates incentive for an emitter to invest in abatement technology or otherwise reduce its emissions. Trading rights to emit provides emitters with flexibility to decide how to comply with an emissions reduction obligation; for example, an emitter may choose to acquire the right to emit from others rather than reduce its own carbon emissions. In carbon markets the right to emit comes in the form of an emissions allowance or credit

distributed by a regulatory authority or a carbon emission offset recognized by a set of administrative rules

Carbon markets exist in varying shapes and sizes. The primary design is a cap-and-trade system, while a less common format is known as baseline-and-credit. I will briefly describe both here because California is a cap-and-trade system and Alberta is a baseline-and-credit system.

The cap-and-trade scheme generally involves the distribution and trading of a fixed number of carbon emissions allowances that cap the total aggregate emissions for a specified group of entities in a given jurisdiction and compliance period. Cap-and-trade basically works as follows. A regulatory authority caps the total allowable quantity of carbon emissions from specified regulated emitters for a designated compliance period, and then divides the cap into allowance units (each unit typically represents one ton of carbon dioxide equivalent – I will refer only to carbon in this comment for simplicity, but there are many greenhouse gases potentially subject to emission reduction obligations in a given jurisdiction). Prior to the commencement of each compliance period, the regulatory authority distributes allowance units by a prescribed method such as an auction or lottery. At the end of the compliance period a regulated emitter must report their carbon emissions and submit emission allowance units sufficient to cover the quantity of emissions reported. If a regulated emitter has insufficient allowance units to cover its reported carbon emissions for the period, the emitter must acquire additional allowance units from other market participants or pay an administrative penalty. The European Union Emissions Trading System is the world’s most established cap-and-trade system, and has operated in European Union member countries since 2005.

A baseline-and-credit emissions trading scheme is similar to the mechanics of cap-and-trade set out above, but differs significantly in some respects. Baseline-and-credit basically works as follows. The regulatory authority establishes a formula upon which to calculate a baseline amount of carbon emissions for each regulated emitter in a compliance period. If the scheme is intensity-based, then the baseline is calculated as an amount of carbon emissions per unit of production. The scheme does not impose an overall cap on emissions. Overall emissions in a jurisdiction will increase as the number of emitters increases, or similarly a regulated emitter itself may increase its absolute emissions so long as the intensity limit per unit of production is below the assigned baseline. At the end of the compliance period a regulated emitter must report their carbon emissions. The regulated emitter earns credits to the extent actual emissions are below the baseline, but must submit credits to cover any emissions in excess of the baseline. Alberta has an intensity baseline-and-credit system.

Carbon market schemes typically allow regulated emitters who exceed their emissions limit to comply with emission reduction obligations using emission offsets generated by “offset projects” operated by non-regulated entities. An emission offset is created by an activity conducted in a manner that generates less carbon emissions in comparison to an established business-as-usual scenario. The incentive to produce emission offsets is the opportunity to sell offsets at the market price for carbon to regulated emitters who need the offsets for compliance purposes.

The use of emission offsets for carbon reduction compliance has attracted some criticism, particularly when used in a cap-and-trade scheme such as that in California. The main concern is that the infusion of offsets into the market results in overall emissions that exceed the legislated cap because regulated emitters can use offset credits generated by non-regulated entities for compliance instead of the capped number of emissions allowances auctioned by the regulatory authority. The response to this criticism is that carbon emissions reduced or sequestered in one

location have an equally beneficial effect on the atmosphere as emissions reductions in another location, so it makes no difference whether the source of a reduction is a regulated emitter or someone else. The controversy does, however, illustrate the importance of ensuring an offset represents an actual reduction in carbon emissions that is additional to the norm, otherwise the use of emissions offsets would impair the effectiveness of a carbon reduction system. Most cap-and-trade systems address this in part by limiting the amount of emissions offsets that a regulated emitter can use in a compliance period.

The California emissions offset program

The California legal framework provides the CARB with extensive discretion to decide what rules to enact that will govern carbon emissions reduction in the state. The CARB decided to use a cap-and-trade system that allows regulated emitters to use both auctioned emission allowances and offsets for compliance purposes. Carbon emission reduction obligations in California commenced in January 2013. Also of note, California has agreed to link its cap-and-trade system with Quebec effective January 2014. Quebec also commenced its cap-and-trade system in January 2013. Assuming these jurisdictions proceed with linkage in 2014, a regulated emitter in Quebec will be allowed to use California allowances and offsets for compliance purposes and vice versa.

The petitioners in *Citizen's Climate Lobby* challenged the carbon emission offset regime established by the CARB, arguing that the CARB rules allow for the possibility that an offset does not represent a real and additional carbon emission reduction. The concept of “additionality” is at the heart of the dispute, and the California Superior Court provides a good overview of the issues. Overall, the question of concern here is whether an emission offset represents a real and additional carbon emission reduction; in other words, that the carbon emission reduction occurs from activity that would not have been conducted but for the financial incentive provided by the prospect of selling carbon offsets into the market for profit.

The Court notes that measuring for additionality with precision is a difficult exercise. A regulatory authority must decide what method to use for determining the level of carbon emissions in the business-as-usual case using a basket of hypotheticals. The most accurate method would be to assess each individual offset project on a one-by-one basis. This method is less common than the alternative standards or protocol method because the latter is far more efficient to implement on a wide-scale basis. The protocol method establishes the business-as-usual emissions baseline for a category of project and also gives parameters to quantify the amount of carbon emission offsets generated by a project in that category. I provide some examples of this approach below.

The specific claim by the petitioners in *Citizen's Climate Lobby* was the *Global Warming Solutions Act of 2006* ([California, AB 32](#)) did not provide the CARB with authority to use protocols to govern the generation of carbon emission offsets. Their argument was that the use of protocols to create offsets does not ensure that each and every offset generated by an offset project represents a real carbon emission reduction. At the time of this case, the CARB had authorized 4 protocols including the Urban Forest Project Protocol by which municipalities can generate emission offsets by planting more trees in their jurisdiction than are cut down in a given year – in other words by avoiding a net loss in trees per year. Among a host of reasons, the petitioners argued this Protocol did not ensure additionality because it failed to account for the many economic or social factors that might influence a municipality to plant trees besides the incentive to sell offsets into the carbon market. The petitioners argued municipalities strive to

avoid a net loss of trees per year anyways so surely there will be instances where a municipality planting trees is not “additional” and thus each and every offset produced by the protocol will not represent a real reduction in carbon emissions.

The Court observed the only guidance for the CARB provided by the *Global Warming Solutions Act of 2006* ([California, AB 32](#)) is that an offset represent a carbon emission reduction that is in addition to a reduction that would otherwise occur. The Act leaves the rest to the CARB. In light of this broad discretionary power the Court considered various statutory interpretation arguments and concludes that the CARB has the power to use protocols to govern the creation of offsets and that the 4 protocols enacted thus far sufficiently ensure carbon emission reductions are additional even though it is possible that non-additional offsets will enter the market. To hold otherwise, the Court ruled it would have to forbid the use of offsets entirely and in doing so violate the separation of powers between the legislature and the judiciary by rewriting legislation.

The Alberta emissions offset program

In 2003 Alberta became the first Canadian jurisdiction to enact a legal and policy framework governing carbon emissions, with reporting obligations commencing in 2003 and emission reduction obligations commencing in 2007. The framework consists of the *Climate Change and Emissions Management Act*, [SA 2003 c C-16.7](#) [CCEMA], and a number of regulations and policy enacted thereunder including the *Specified Gas Reporting Regulation*, [Alta Reg 251/2004](#), the *Specified Gas Emitters Regulation*, [Alta Reg 139/2007](#) [SGER], and policy guidance on matters such as the creation of carbon emission offsets and compliance reporting. Alberta Environment and Sustainable Resource Development is responsible for administering the carbon reduction program.

Unlike the cap-and-trade system in the EU and California, Alberta has a baseline-and-credit system which does not impose an absolute cap on carbon emissions but instead requires regulated emitters to reduce their carbon emissions per unit of economic production. Alberta’s framework thus allows for a rise in aggregate carbon emissions resulting from increased economic activity by regulated emitters.

Regulated emitters in Alberta are those with facilities that have carbon emissions in any single calendar year over 100 000 tons. Paradigm examples of facilities operated by regulated emitters include oil sands extraction and processing and coal-fired electricity generation. A regulated emitter must initially determine their baseline intensity of carbon emissions per unit of economic production in accordance with calculation prescribed in Part 4 of the SGER. Thereafter a regulated emitter must reduce its emissions per unit of economic production by up to 12 % per annum, depending on whether the facility is “established” or “new.” A regulated emitter is required to file a compliance report with Alberta Environment to confirm net carbon emissions at or below the intensity cap or acknowledge failure to comply with a proposal to remedy non-compliance. Failure to comply is an offence, and an offender is liable to a fine of up to \$200 per ton above the allowable limit.

In cases where actual carbon emissions will exceed their intensity cap for a compliance period, a regulated emitter may submit emission offsets to cover the excess. Section 5 of the CCEMA authorizes the Alberta government to enact regulations governing the creation and use of an emissions offset for compliance purposes. Section 7 of the SGER establishes some of these provisions, while most of the details are set out in policy guidelines published by Alberta Environment.

These guidelines are not policy so much as enforceable legal rules, since section 7(2) of the SGER states that an emissions offset must comply with these guidelines in order to be submitted for compliance.

Like California, Alberta uses the standards based or protocol method to govern the creation of carbon emission offsets. The SGER requires that an offset be created by an activity that follows an approved protocol for producing a demonstrable and quantifiable reduction of one ton of carbon emission that is not otherwise required by law. Alberta Environment policy guidance states that the offset must represent a reduction in carbon emissions that is above a business-as-usual or common practices threshold. As of the date of writing, Alberta Environment has approved 33 offset project protocols. Examples include landfill gas capture and combustion, waste heat recovery, and solar electricity generation.

Some concluding thoughts

The Alberta framework does not limit the number of offsets that a regulated emitter can use to meet its net emissions intensity cap for a compliance period. So the requirement of additionality in an offset is more acute in Alberta than in jurisdictions such as California which limit the number of offsets that can be submitted for compliance. To the extent it is possible for non-additional offsets to be generated in Alberta's regime, it is also possible for a regulated emitter to exceed its intensity cap and comply by submitting non-additional offsets. The result would be a complete failure by the legal framework to curb carbon emissions.

The issue of additionality in offsets, however, is not currently at the forefront in Alberta like it is in California. This is likely because Alberta does not impose an absolute cap on carbon emissions and regulated emitters still have the compliance option of simply paying \$15 per ton into the provincial carbon management fund to cover excess emissions in a compliance period. Alberta Environment reports that total fund payments have varied between approximately \$50 and \$80 million per year since 2008. So there really is no functional carbon market in Alberta.

Professor Fluker's research on carbon markets is supported by a grant from Carbon Management Canada (<http://www.cmc-nce.ca>).

To subscribe to ABlawg by email or RSS feed, please go to <http://ablawg.ca>
Follow us on Twitter @ABlawg

