Canadian Pork Council
CARBON MARKET BULLETIN
September 2006

What You Will Find Inside:

- No nationally regulated carbon market yet, but don't discount emerging regional markets
- The challenge of delivering agriculture-based GHG offsets to market
- What role does the aggregator community play in the carbon market?

Despite the fact that a nationally regulated trading system has yet to be established, the Canadian carbon market continues to gain momentum due to the efforts of numerous players, both on the supply and demand sides of the market. The dissolution of the former Liberal government's proposed carbon market mechanisms has significantly slowed market activity prior to the release of a new 'Clean Air Plan' being developed by the current Conservative federal government.

Significant momentum had been building in Canada, in anticipation of a commissioned baseline and credit carbon market system, proposed by Environment Canada in August 2005. It is now unclear what significance the reduction of Canada's greenhouse gas (GHG) emissions will play in the new 'Clean Air or Green Plan'. There will most likely be some provisions included in the plan to work towards reducing GHG emissions, as well as other gaseous and particulate emissions, including those known to cause smog in Canada's larger cities.

The lack of significant progress by both the Canadian and United States federal governments has not stalled North American carbon market development completely. In the absence of federally regulated initiatives, numerous carbon markets have been developed or proposed by both state and provincial governments, as well as regional coalitions. For example, the province of Quebec has suggested that a provincial GHG reduction initiative is being designed, California has very recently signed legislation that requires the reduction of GHG emissions by law, and a coalition of 10 Northeastern and mid-Atlantic states have created the Regional Greenhouse Gas Initiative (RGGI) to tackle and reduce CO_2-emissions created in the region. Movement toward the creation of regional GHG emission management systems suggest that the willingness exists within various states and provinces to make significant cuts to GHG inventories, despite an absence of federal GHG emissions control initiatives. These are interesting developments for any sector able to reduce its GHG emissions, as the opportunity to offer GHG offset credits for sale into numerous regional or provincial carbon markets continues to grow.

> ***Carbon Offset*** *– A validated reduction in GHG emissions due to the adoption of innovative management practices, technologies and/or control systems, often referred to as 'carbon credits'*
>
> ***Offset System*** *– Provides a market mechanism allowing the supply and demand for carbon offsets to be created, bought and sold*

Currently in Canada, there are no federally approved carbon market initiatives in play, outside of a number of learning and pilot projects. Despite the lack of carbon credit trading systems federally, speculative trading continues, albeit at a slower pace than existed prior to the election of the Conservative federal government in Canada. The province of Alberta has passed legislation requiring newly constructed power plants using conventional fossil fuels, such as coal, to offset their CO_2-emissions to the level that would be emitted by a natural gas-fired generating system. This has created a local market for carbon offsets in Alberta, to be applied towards the emissions of several new large electricity generation plants.

The challenge of delivering agriculture-based GHG offsets to market

As carbon market development and growth continues throughout North America, the agricultural sector will need to be fully aware of the opportunities that regional carbon markets can bring to the farm gate.

It's important to understand that there are a number of steps involved in the development of a package of carbon offsets for sale. These steps generally include:

1. ***Demonstrate*** that appropriate scientific knowledge exists to support the claim that a practice or technology can reduce GHG emissions;
2. ***Ensure*** that the project 'fits' with the eligibility criteria of the particular market; this typically includes some form of registration and acceptance by an overseeing body;
3. ***Implement*** the project by changing practices or installing the technology;
4. ***Verify*** that GHG reductions have been achieved by the project;
5. ***Certify*** carbon offsets by some oversight on the market;
6. ***Deliver*** GHG offsets for sale on the carbon market

Challenges for Ag Sector Carbon Offsets Projects

1. *Small offset packages created per farm unit*
2. *Potentially high GHG project verification costs*
3. *Need for aggregating smaller projects into market ready commercial offsets packages*

The agricultural sector has the potential to deliver modest-sized packages of carbon offsets to market, which makes the sector an interesting case-study for carbon market analysts. However, because of the relatively small packages of offsets that can be created by each individual farming operation, the agriculture sector will also have particular challenges in capitalizing on the sale of carbon offsets.

Examples of agricultural GHG reduction projects might include increasing feed conversion efficiency on a pork or cattle farm, or changing the time of year that manure is applied to cropland. Inherently, the land-based aspects of agricultural projects, along with the need for many farms to be aggregated, create risk and complexity challenges that need to be managed. This is in comparison to some of the larger offsets packages that can be created by larger, single-source industrial projects. Examples of larger projects might include the full-scale retrofit of a pulp and paper mill with new energy efficient pumps and motors, which reduces electricity consumption by 35%, or the construction of a 100-megawatt wind farm with 75-wind turbines.

Agriculture is not alone in having to create marketable offset packages by *aggregating*, or adding together, numerous projects. A similar example would be a community energy efficiency project where 100-home owners commit to installing new high efficiency appliances and compact fluorescent light bulbs, turning down air conditioning and heating systems by 2°C, etc. The package of offsets created from reducing the energy consumption of the *entire* group can then be offered for sale on the carbon market.

What role does the aggregator community play in the carbon market?

The concept of aggregation will be a likely component of any initiative delivering agricultural-based carbon offsets to market, and the developing market has created a niche for companies or organizations to offer aggregation services. An aggregator will group together smaller packages of carbon, that are created through numerous, often similar projects, into one large portfolio which

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is more attractive to those looking to buy offsets. The role played by the aggregator community in delivering carbon offsets to market will be more fully explored in future Carbon Market Update Bulletins.

The next Canadian Pork Council Carbon Market Bulletin will be released in late November 2006 and will include information on the following topics:

- The Canadian federal government's plan for reducing Canada's GHG emissions
- Validating and verifying agricultural GHG projects, what's the difference?
- What does Canadian science tell us about pork sector GHG emissions?

Future bulletins will also explore the process by which GHG reduction projects can be developed and implemented on Canadian farms, and special considerations that may be of interest to the producer community, with regard to the carbon market, such as risk management options.

For more information on any of the topics discussed in this bulletin, or for more information on Canadian Pork Council greenhouse gas management awareness projects contact:

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<u>Addendum to Canadian Pork Council *Carbon Market Bulletin – July 2006*</u>

It has been brought to the attention of the Canadian Pork Council that some of the details included in the ***Carbon Market Bulletin – July 2006***, could be considered misleading and are potentially damaging to the reputation of the carbon credit aggregator community in Canada.

With the lack of a regulated national carbon market in Canada, the Canadian Pork Council (CPC) has attempted to follow carbon market developments and offer its producer membership timely information as it becomes available. One of the goals of CPC communications regarding GHG management is to provide information that will allow a producer to make personal decisions on the level of risk they are willing to assume in the carbon marketplace, and whether participation based on market speculation is prudent for their particular situation.

It was not the intent of the CPC to discredit the work of the carbon offset aggregator community or the services that they are currently providing in speculative and/or emerging regional carbon market systems. The CPC recognizes that organizations offering aggregation services will play a significant and important role in assisting the agriculture sector to realize the opportunity of existing and emerging carbon markets.

Producers should consider that, due to the speculative nature of emerging carbon markets, a certain level of risk remains that misinformation may exist regarding the pork industry's opportunity to participate in the carbon market. While producers are now able to participate in evolving markets, CPC maintains a position that producers should be very cautious about carbon market participation until a nationally regulated carbon market system has been approved and implemented.

Without an approved carbon market system in place, there is no official means by which proposed GHG reduction strategies can be publicly measured and approved based on their scientific validity (see ***The challenge of delivering agriculture-based GHG offsets to market***, in the above text). The lack of a public review and approval process for proposed agricultural GHG reduction strategies poses particular challenges for the sector given the complexity of agricultural GHG science. Further, with the lack of a public review process, this complex science will need to be fully understood by individual producers in order to make informed decisions on whether a GHG reduction strategy is applicable to their operation, or whether appropriate science exists to back the claim.

To reiterate the intended message of the ***Carbon Market Bulletin – July 2006***, producers should be fully aware of the risks that exist when participating in immature or speculative markets, and appropriate risk management options should be considered before entering into any contractual agreements to deliver carbon offsets into any new or emerging marketplace. Notwithstanding the current position of the CPC with regards to marketing carbon offset credits, producers should rely on their own understanding of risk management options in making the final decision on whether to participate in the carbon marketplace.

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