

US carbon trading project wins funding

It is commonly accepted in industrialised nations around the world that efforts to create a market-based solution for mitigating greenhouse gas emissions have totally stalled in the United States. But commonly accepted knowledge doesn't apply in the Midwest.

Last month, the Midwest-based Joyce Foundation announced a one-year grant to the Kellogg Graduate School of Management at Northwestern University. Under this grant Environmental Financial Products will carry out the design phase of a voluntary greenhouse gas (GHG) emissions trading system based in the Midwest.

Emissions trading has been advocated as the most efficient means of reducing GHG emissions. It uses the private marketplace by creating financial incentives for pollution reduction, rather than imposing more costly 'command and control' regulation. The design phase of the programme will begin a real-world test of the hypothesis that GHG emissions trading is a feasible and least-cost solution to the problem of climate change. If the design phase is successful, a second phase would establish the market.

There are several important reasons to implement a pilot GHG emissions trading programme in the Great Lakes region. Such a project would demonstrate the concept on a relatively small scale. Lessons for the design of a larger system could be drawn from a pilot. The Great Lakes region has a diversity of potential participants – electric utilities, agricultural producers, forestry companies, large landowners, refineries, steel plants, other heavy industry and several of the world's largest car makers. Numerous companies based in the Midwest, or with a major presence in the region, have been proactive on the climate change issue. Some have already traded carbon emissions reductions and/or have internal trading systems or self-imposed caps on GHG emissions.

Faculty from universities in the region offer world-class expertise in soil science and forestry that will prove valuable in specifying procedures for verifying carbon sequestration. Furthermore, experts in relevant areas of law and economics are affiliated with Midwestern universities. PricewaterhouseCoopers, through its regional, national and international professionals, provides an enormous resource in both market architecture and accounting protocols. Finally, the Midwest is home to world-class financial and market institutions such as the Chicago Board of Trade.

The underlying premise of the research is

that market creation begins with a voluntary private sector initiative. It is hoped that the customs and practices that are developed in the pilot programme will be incorporated in any subsequent trading efforts initiated by national, state and local governments.

The research will follow a 12-stage process that includes the steps that are necessary and sufficient to build a market. These stages were developed by the principal researchers involved in the pilot programme design, based on their prior experience and research. Simply stated, they are:

1. Clearly define the commodity.
2. Establish market oversight.
3. Define baselines.
4. Set emission targets, allocate permits and monitor emissions.
5. Establish uniform and non-segmented allowances.
6. Develop an allowance clearing house.
7. Employ existing exchanges and trading systems.
8. Develop auctions.
9. Refine and develop trade documentation practices.
10. Foster harmonisation with other research and markets.
11. Develop appropriate accounting principles.
12. Launch an international effort to ensure that participants in other markets can trade in the pilot programme as soon as is feasible.

The core goals of the market are: real environmental progress; a functional market with price discovery; learning and business advantage for the participants; and international linkages. The research will start by adapting the model of sulphur dioxide (SO₂) trading, which began five years ago under the terms of the Clean Air Act, to greenhouse gases. It is important to note that this voluntary regional pilot programme will be much more complex than the current SO₂ programme, which primarily involves electric utilities. Participants will be more diverse, since GHGs are emitted or sequestered by most sectors of the economy, not just the electric utility industry.

Major design issues for a Midwest-based GHG emissions trading system include decisions on who should participate in the system and its structure. For example:

- To what extent should entities that actual-



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ly emit GHGs (eg electric utilities or 'downstream' sources) be the targeted participants as opposed to producers of fuel or manufactured goods that use energy ('upstream' sources)?

How should the system be structured to obtain the greatest coverage of emissions and to prevent 'leakage' if not all sectors are included?

What is the best way to provide coverage for emissions from motor vehicles and airplanes?

How can forestry and agriculture, with their potential for increased carbon sequestration, as well as methane sources, be integrated into the system?

How will this domestic regional trading system interface with national and international emissions trading among developed countries and with emission reduction credits generated in developing countries under the Clean Development Mechanism of the Kyoto Protocol?

We expect that the pilot GHG emissions trading programme will give the participants a head start in both reducing emissions and building critical trading skills. This would enable them to take part in early reduction crediting programmes and establish them as global leaders in implementing cost-effective solutions to climate change. Both customers and shareholders should gain from this competitive edge.

I want to thank Michael Walsh, Alice LeBlanc and Rafael Marques for their contributions to both this article and the entire efforts of Environmental Financial Products.

Based in Chicago with assets of approximately \$1 billion, the Joyce Foundation supports efforts to strengthen public policies in ways that improve the quality of life in the Great Lakes region (Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, and Wisconsin). The grant for development of the carbon-trading pilot market was developed by Joyce Environment Program officer Margaret O'Dell.