

# Full of Promise



**SUN POWER:** Clean energy from solar panels, wind turbines and hydro-electric plants would generate credits that carbon emitters could buy as offsets.



**SEEING GREEN:** One bill pending in Congress would encourage reforestation of harvested trees as well as afforestation—planting forests on open land.

What insurance companies should look for in international climate negotiations.

by Tanya Havlicek

Climate change has the potential to alter the business world in surprising ways. Covering corporate efforts to comply with carbon regulations is a potentially major opportunity for insurers, particularly

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with projects to reduce or “offset” emissions.

If the United States adopts cap-and-trade legislation, the offset provisions allowed could have major implications for the U.S. insurance market and create a larger and more diverse market than exists in Europe. A prime example is the potential for offsets from agriculture, land use and forestry projects—an area where pending U.S. legislation is much more aggressive

## Key Points

- ▶ **The Situation:** Insuring corporate efforts to comply with carbon regulations is potentially a major opportunity for carriers.
- ▶ **At Issue:** Specific domestic and international rules for trading, compliance and market structure will shape the opportunity for insurers.
- ▶ **What's Next:** By comparing the structure of existing proposals and active markets, insurers can get a handle on U.S. carbon market development.

than current European practice, and which the Copenhagen Accord highlighted as a priority for further development.

Many insurers were hoping that more certainty on emissions limits would come out of Copenhagen. Instead, developed countries merely agreed to choose voluntary targets. Copenhagen did extend the groundwork for carbon trading rules that could be implemented if the U.N. eventually signs a binding treaty, and included more detail on agriculture, land use and forestry rules.

While a cap is essential for cap-and-trade to work, the rules for generating and trading credits are just as important for understanding the insurable risks. The cap size is necessary to gauge capital requirements and the extent of the market, but the rules are essential for designing products that best match the risks of carbon trading. These rules will be further developed this fall when the U.N. Conference of the Parties meets in Cancun, Mexico.

A legally binding treaty would establish an international cap and country-specific caps, similar to the Kyoto Protocol, the predecessor to current negotiations, which expires in 2012. Emissions credits would be allocated and traded directly or they could be generated and traded through international investments in offset projects. These include energy efficiency retrofits, solar power for rural electrification, or reforestation projects.

Investing in offsets exposes buyers of these credits to risk of non-delivery, either through noncompletion of projects, technology failures that lead to the generation of fewer than contractually promised credits, or credit default or bankruptcy of the development company. There are also compliance risks if projects don't meet domestic or international standards.

Firms would also be exposed to financial risk if a project failed and they were forced to buy credits in

the spot market. The financial risk is particularly acute in permit markets because of price volatility, but similar insurable risks remain even if regulation doesn't take the form of cap-and-trade markets.

As long as there is a risk of carbon offset projects failing to deliver promised reductions, companies may be forced to pay unexpected taxes under a carbon tax system, or face other unexpected penal-

**The rules that define emissions compliance and qualifying offset projects will lay the foundation for innovation and pricing of insurance products.**

ties under a command-and-control system. The various project risks in these cases would persist without the price risk associated with the permit market.

Carbon credit nondelivery risks differ with the type and source of the offsets. The rules that define emissions compliance and qualifying offset projects will lay the foundation for innovation and pricing of insurance products.

### **The US Landscape**

The Copenhagen Accord contains what the U.N. called "the ingredients of an architecture for a response to climate change."

The voluntary target offered by the United States in the Copenhagen Accord, to reach 17% below 2005 emissions by 2020, is "subject to pending legislation"—a major caveat. That legislation is the Waxman-Markey bill (HR 2454) that passed the House of Representatives in June 2009, but has yet to be debated in the Senate.

The Waxman-Markey bill would allow offsets to cover two billion tons of U.S. carbon emissions,

compared to just 350 million tons in the European Union Greenhouse Gas Emissions Trading System. The bill would also allow one billion tons from international sources and substantial offsets from forestry, agriculture and land-use changes.

The EU trading system has only allowed limited offsets for afforestation (adding forests to previously unforested land) and reforestation (restoring previously standing forests), and does not allow offsets for agricultural and land-use changes because of unresolved difficulties over the measuring, monitoring, and verifying systems that would certify reductions. Congress is unlikely to implement cap-and-trade legislation without binding commitments from other major emitting nations, however.

### **The EU's Trading System**

Trading began in the European Union in 2005, where the offset rules tend to favor energy efficiency and technology installations over forestry projects. Nations can earn credits from projects in other industrialized countries, or by sponsoring projects in developing countries through the Kyoto Protocol's Clean Development Mechanism.

The total offset market was worth approximately \$13.6 billion in 2007 and \$33.5 billion in 2008, with the change driven mainly by the increase in the secondary CDM market (\$5.5 billion to \$26.2 billion), according to a report on [www.wbcarbonfinance.org](http://www.wbcarbonfinance.org).

CDM projects have been criticized for their administrative complexity because of the rigorous process to prove their additional reductions. Sponsors must establish:

- Host country consent and contribution to sustainable development.
- That reductions meet "additionality" criteria using approved methodologies.
- Baselines for projecting future emissions in the absence of the project.
- Real, measurable and long-term



reductions through a third-party validation process.

As a result of these offset rules, three main insurance products have been offered in European markets to cover nondelivery of credits: trade credit coverage, political risk coverage and carbon credit securitization.

Trade credit coverage deals with both industrialized and developing country projects. Claims can result from unmet deadlines, technological failures or disputes over Kyoto Protocol compliance. Policies can cover buyers forced to purchase replacement credits in the spot market, or the lost revenue of sellers.

Political risk coverage insures against political contingencies ranging from unrest or instability in the host country to the host government changing the rules for doing business or impeding payment by a buyer. Currency inconvertibility tends to be the most common type of political risk claim, but in the past 10 years, claims that are due to political violence, including civil disturbances and wars, also have increased.

Carbon credit securitization products are still fairly new and cover debt financing for offset projects. They cover either the undelivered credit value or the outstanding debt, similar to a loan guarantee. Fundamentally, the loan repayment coverage is no different than any other business loan with the risk of default, except the projects happen to be green and thus present specific risk profiles.

Clean energy projects should generate emissions credits as well as energy services. If the project developer goes bankrupt or defaults on the loan, credit nondelivery risk and loan repayment risk are coupled together. Separate insurance products could be designed for these risks, or they could be bundled.

Demand for insuring the carbon credit market in Europe has

developed more slowly than many had hoped, which has been due to the recession, trading prices for metric tons of carbon dioxide and commitment levels of Kyoto participants on GHG reductions, according to the July 2009 *Best's Review* article, *Smoke Signals*.

### US Carbon Markets

A U.S. carbon market would likely contain elements of the EU ETS and of existing domestic pollution markets, which include regional and voluntary carbon markets. The Chicago Climate Exchange is a voluntary market but requires participants to make legally binding emissions commitments. Offsets are issued retrospectively, only after third-party verifiers certify the reductions based on detailed criteria for sequestering, destroying or reducing emissions.

In 2009, 26.3 million metric tons of carbon dioxide offsets were registered on the exchange, with trade prices ranging from 50 cents to \$2 per metric ton, according to the CCX Offset Report. State governments have more recently entered the carbon trading game—for example, the Regional Greenhouse Gas Initiative, involving 10 Northeast and Mid-Atlantic states—but the timing of the financial crisis has slowed development of these markets.

Another issue for insurers to watch for is policy on derivatives trading, which can mitigate some financial risks while introducing others. The Waxman-Markey bill bans over-the-counter derivatives in its carbon market.

Some analysts believe a ban on OTC derivatives would doom U.S. carbon markets, while others believe derivatives would weaken environmental goals by altering the pollution price signal that encourages emitters to adopt cleaner technologies, according to a some news reports.

Coined “financial weapons of mass destruction” by Warren Buffett, there are many examples of financial

derivatives going awry in recent history. Examples include subprime mortgage-backed securities, AIG's credit default swaps and long-term capital management in Russia. Separate legislation from the U.S. House Financial Services Committee would require collateral for all derivatives trading, indicating how lingering anxiety over the mortgage market collapse could shape carbon trading.

If derivatives are a part of a U.S. carbon market, firms will need to prepare for these financial risks as well as issues with regulation, monitoring and speculators cornering and controlling the market.

### Beyond Carbon Markets

As innovators in risk management, insurance specialists are uniquely equipped to address many of the emerging risks posed by climate change.

In 2007, the U.S. Supreme Court ruled that greenhouse gas pollutants fall under the Clean Air Act, raising questions about liability for emitters and whether coverage exists under current environmental insurance policies. Energy companies, chemical manufacturers and insurance companies already have had to defend against climate change-related lawsuits.

Specific domestic and international rules for trading, compliance and market structure will shape the opportunity for insurers in mitigating financial risks in carbon markets.

However, uncertainty over the global economy and international commitments to carbon reductions has raised doubt about the potential for these products.

By comparing the structure of existing proposals and active markets such as the EU ETS, the prominent cap-and-trade bills pending in Congress and the ongoing U.N. negotiations, insurers can assess the direction of U.S. carbon market development, if not yet the size. BR