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Carbon Offsets: A Q&A

What are they? How would they work? And will they really reduce emissions?

By ROB CURRAN

Much of the discussion about the landmark climate-change legislation winding its way through Congress has centered on the part of a federal cap-and-trade market where companies would buy and sell permits to discharge carbon dioxide.

Getting less notice is a provision that would allow companies to use carbon "offsets" as an alternative means of complying with new federal caps on greenhouse-gas emissions.

Offsets are credits that enable polluters to avoid cutting their own emissions by investing in projects such as tree planting that take carbon dioxide out of the atmosphere. Many observers see offsets as the key to reducing emissions without crippling U.S. industry with high costs, though some environmentalists worry that certain offset projects won't deliver the promised benefit to the environment.

Republicans strongly oppose cap-and-trade legislation—arguing it is a tax that will hurt the economy—but should it become law, a market in carbon offsets would be born. How would such a market work, and could it really reduce emissions? Which projects would qualify as offsets, and who would make those decisions? Could individual investors participate in an offset market, or would it be reserved only for industry?

Here are the answers to these and other questions.

Q: How is a carbon offset different from allowances in a cap-and-trade market?

A:In a cap-and-trade market, an allowance is a permit to emit one ton of greenhouse gases, defined as carbon dioxide or its equivalent. Under the Waxman-Markey climate-change bill passed by the U.S. House in June, utilities and other industries would receive a certain amount of these allowances gratis, but gradually Washington would place tighter caps on emissions with the aim, by mid-century, of reducing overall U.S. greenhouse-gas emissions about 80% from 2005 levels. To comply with the federal caps, companies would have to reduce emissions or buy more allowances.

Or they could buy carbon-offset credits, an alternative to allowances. An offset is a certificate that one ton of greenhouse gases was destroyed, and it is generated by projects that absorb carbon or otherwise reduce emissions. For example, a landowner who plants an acre of new forest could generate credits based on how much carbon dioxide those trees will draw from the atmosphere. The landowner could then sell the certificates as offsets to investors or corporations.

Under Waxman-Markey, a corporation could buy an offset and count it against its emissions. Market watchers expect the offsets to trade at roughly 80% to 90% of the market value of the allowances. They likely won't trade at par because there would then be no incentive to buy offsets as an alternative to allowances. If offsets cost the same as allowances, the polluter would just buy an allowance.

Q: Can't companies buy carbon-offset credits now?

A:Yes. Offset credits have been sold on the Chicago Climate Exchange since its launch in 2003. The exchange's members have agreed voluntarily to reduce their emissions at a certain rate and can meet the goal by cutting emissions or buying carbon credits. These contracts are either allowances generated by other members that have exceeded their emission-reduction goals, or offsets generated by exchange-approved independent projects. Investment in offsets accounts for roughly 15% of the overall emissions reductions members have made so far, according to a spokeswoman.

Offset credits also change hands in state-mandated cap-and-trade markets, such as the Regional Greenhouse Gas Initiative, a program for electric utilities in 10 Northeastern and Atlantic seaboard states that aims to reduce CO_2 emissions from the power sector 10% by 2018.

In the European Union, offsets are part of an emissions-trading program set up under the Kyoto Protocol. The volume of offsets traded, however, is a fraction of that of allowances. One broker says that's because the EU's generosity in granting free allowances to certain industries made offset purchases unnecessary during the initial phase of the program—a pattern likely to be repeated in a U.S. cap-and-trade market.

Q: Where will the offsets trade in the federal cap-and-trade system?

A:All three of the major U.S. exchanges say they are positioned to trade carbon allowances and offsets.

CME Group Inc., parent of the Chicago Mercantile Exchange, is awaiting regulatory approval to start an independent trading system called the Green Exchange that would trade allowances and offsets from several markets. The CME, which trades European and other carbon contracts through its New York Mercantile Exchange, co-owns the Green Exchange with Goldman Sachs Group Inc., Credit Suisse Group, Morgan Stanley and other big brokers and energy-trading firms.

Nasdaq OMX Group Inc., parent of the Nasdaq Stock Market in the U.S., acquired Norwegian carbon and energy exchange Nord Pool ASA in 2008. If Nasdaq participates in a U.S. federal cap-and-trade market, it will draw on the expertise Nord Pool developed in European carbon markets, says Fredrik Voss, a vice president for carbon and business development at Nasdaq OMX.

The New York Stock Exchange's parent, meanwhile, joined forces with the French state bank last year to launch BlueNext, an exchange that supports offset and allowance trading in various markets. BlueNext recently entered a joint venture with an exchange owned by China, the site of many of the overseas emissions-abatement projects that generate offset credits for European markets.

The Chicago Climate Exchange, owned by British firm Climate Exchange PLC, already trades roughly 7,500 carbon contracts and related derivatives a day, and is expected to play a leading role in a federal offset market.

The Waxman-Markey bill calls for the Commodity Futures Trading Commission to oversee offset and allowance trading just as it does oil, wheat and other futures trading.

Q: How big a market are we talking about? When will it get going?

A:Industries facing caps on their emissions will have the right to buy a total of two billion tons of carbon offsets annually. But brokers anticipate the offsets will trade only thinly until emissions-reduction targets become more stringent after the initial phase-in of emissions caps.

When the market gets started depends on congressional passage of a climate-change bill. Waxman-Markey calls for a cap-and-trade market to begin in 2011, but some are skeptical the bill will move through Congress quickly enough for that to happen. Goldman Sachs, for example, says it may be 2011 before a bill passes.

At this point, it isn't clear how much of the sprawling House bill will survive in the Senate, where moderate Democrats and Republicans could join forces to water it down. The cap-and-trade bill is on the calendar, but senators probably won't begin debating it until health care is off their plate.

Q: What qualifies as an offset for the U.S. market, and who decides?

A:Waxman-Markey calls for an independent board to be established by the Environmental Protection Agency to decide which emission-reduction projects qualify as offsets.

This Offsets Advisory Integrity Board likely will draw on standards already in use on voluntary and regional markets, such as California 's Climate Action Reserve, says Greg Spencer, president of Blue Source LLC, a Holladay, Utah-based firm that markets offsets to corporate polluters and manages carbon-abatement projects. California's voluntary carbon-trading scheme recognizes credits for things such as forestry projects, capture of livestock-manure gases, and methane-capture programs at landfills.

The Department of Agriculture, rather than the EPA, will be in charge of determining which domestic agricultural activities qualify as offsets. That worries some environmentalists, who say the department could give priority to the interests of farmers, who stand to make money from offset projects.

Q: So will offsets work? Will buying and selling these credits reduce emissions?

A:That depends on the integrity of standards and the efficiency of their creation and certification, says one broker. If standards are too loose or arbitrary, projects may earn credits without causing a net reduction of greenhouse gases, and investors will be reluctant to take part. If they are too tight, or the application process for credits too onerous, corporations may shy away, and not enough carbon-reduction projects will receive funding.

Critics point out that in the first year of the EU's carbon-trading scheme, some industries were actually able to increase their greenhouse-gas emissions by buying offset credits to compensate.

Q: Will renewable-energy projects qualify for offsets?

A:No, but the bill sets up a parallel market for Renewable Energy Credits. Wind farms, solar power plants and their peers already earn Renewable Energy Credits in states that have quotas for electricity generated from renewable sources. Waxman-Markey would set up a federal market for these credits, called RECs. To meet its target of generating 20% of U.S. electricity from renewable sources by 2020, the bill would allow utilities to buy these credits in lieu of building their own wind or solar farms, just as they might buy carbon-offset credits to fulfill their emissions requirements. Still, renewable-energy producers would benefit from federal carbon trading because money raised from auctions for carbon allowances would go toward government investment in renewables.

Q: Will offsets created now qualify for recognition when the federal market opens?

A:The bill calls for full recognition of offset credits when work on qualified project begins on or after Jan. 1, 2009. Nobody is sure which projects currently in circulation will qualify, however. Offsets created from 2001 to 2008 will be recognized, but not in full. Blue Source says many of its clients currently purchase offsets because they anticipate it will be cheaper to do so before the bill passes. Other polluters are taking a "wait-and-see approach," delaying investment until it is clear what kind of projects will qualify, says Mr. Spencer.

Q: Can individual investors participate in the offset markets, or is it just for industry?

A:Investors will be able to buy and trade offsets just as they can oil and wheat futures, and many already do: Anyone with an account at a brokerage such as Citigroup Inc. can trade on the futures arm of the Chicago Climate Exchange. Carbon hedge funds also are popping up. This summer, Canada's Blue Marble Capital Partners Ltd. started a fund to invest in established carbon markets and "emissions units in future carbon regimes." Another firm, CF Partners (U.K.) LLP, seeks arbitrage opportunities in the emissions markets. Nasdaq's Mr. Voss says one popular strategy for carbon-contract traders is to profit from variations in the price difference between allowances and offsets.

Q: Would it be smart to invest in offsets now? What's the bottom line?

A:Research firm Ecosystem Marketplace estimates that the average off-exchange price of a U.S. voluntary offset rose 20% to $7.34 a ton in 2008. On the futures section of the Chicago Climate Exchange, the right to buy an allowance or offset in the federal market in 2013 (or a state market if no federal market materializes) recently traded for $10.25 a ton, while offsets linked to 2009 projects were selling for roughly 25 cents a ton. If buying an offset now with an eye to selling it in the federal market, investors should investigate the vintage of the project from which it stems, says Blue Source's Mr. Spencer. The starting bid for a permit to emit carbon dioxide in the March 2011 auction is supposed to be $10 a ton.

Goldman Sachs says investors also can play the carbon market by investing in or betting against the stocks of companies that stand to win or lose under a federal cap-and-trade system.

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