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GAO Skepticism Of Carbon Offset Markets

Law360, New York (January 23, 2009) -- The U.S. Government Accountability Office (“GAO”) recently released two reports skeptical of the credibility and effectiveness of both the U.S. voluntary carbon offset market and the compliance carbon offset market under the Kyoto Protocol’s Clean Development Mechanism (“CDM”).[1]

The GAO reports were commissioned by House Republicans on the Committee on Oversight and Government Reform and the Committee on Energy and Commerce in response to increasing press coverage critical of the U.S. voluntary carbon offset market and the CDM.

After reviewing both markets, the GAO reports conclude that the use of carbon offsets “may not be a reliable long-term approach to climate change mitigation.”[2]

Overview Of Carbon Offset Market

A carbon offset is a measurable reduction in greenhouse gas emissions from an activity or project in one location that is used to compensate for greenhouse gas emissions in another location.

Carbon offsets can be generated from a wide range of projects that either reduce greenhouse gas emissions at their source or sequester emissions.

The most common offset projects registered by the CDM are hydroelectric power and industrial gas destruction projects; the most common sources of offset credits in the U.S. voluntary market involve methane capture and destruction from coal mines, landfills and agricultural operations, carbon capture and geological storage projects, and biological sequestration projects.[3]

The carbon offset market is often divided into two categories: the “compliance” market and the “voluntary” market.

The majority of global carbon offset purchases are in the “compliance” market: the offsets are purchased by entities seeking to comply with legal requirements to decrease their greenhouse gas emissions, such as the European Union’s Emissions Trading Scheme (“ETS”).

By contrast, the U.S. carbon offset market is a largely “voluntary” market in which individuals or entities purchase carbon offsets for reasons of social responsibility, public relations or in anticipation of future federal, regional or state regulatory requirements.[4]

Both the compliance and voluntary markets have expanded exponentially in recent years; however, the size of the global voluntary market (approximately \$337 million in 2007) continues to be dwarfed by the size of the global compliance market (approximately \$13 billion in 2007).[5]

The compliance market is dominated by the CDM, which is currently the largest carbon offset market.

The CDM is a mechanism administered by the United Nations under the Kyoto Protocol that allows industrialized countries with binding greenhouse gas reduction commitments to meet their targets by investing in projects that reduce greenhouse gas emission in developing countries.

The offset credits issued through the CDM are referred to as Certified Emission Reduction credits (“CERs”), each equivalent to one metric ton of carbon dioxide.

The CDM is considered a flexibility mechanism that is intended to provide a cost-effective way for industrialized countries to reduce greenhouse gas emissions (by purchasing reductions from projects in developing countries where such reductions may be cheaper), while also promoting sustainable development in developing countries.[6]

The European Union allows covered private entities to purchase a limited number of CERs and use them toward compliance with their mandated caps. The CDM is subject to a complex set of rules and procedures governing the verification and issuance of CERs.

By contrast, according to the GAO U.S. Report, the U.S. voluntary market for carbon offsets has very little regulatory oversight, lacks transparency, and lacks a single standard for verification and a central trading platform, exchange or registry system.

Some commentators have referred to the growing U.S. voluntary market as the “wild west.”

Most carbon offsets sold in the U.S. voluntary market are sold over-the-counter on the retail market (i.e., outside the context of a formal exchange), although some are sold through the Chicago Climate Exchange (“CCX”), a voluntary, membership-based cap-and-trade system in which members make contractually binding commitments to meet annual greenhouse gas emission targets and can sell surplus allowances to members who emit above their targets.

The CCX trading platform is also available to offset providers representing various greenhouse gas reduction projects of non-members. According to the GAO U.S. Report, little information is available regarding the CCX’s proprietary verification standards and registry.

Fundamental Trade-Offs Between Costs And Credibility

Both GAO reports indicate that there is a fundamental tension between minimizing costs and maximizing the quality or credibility of carbon offsets.

A key rationale behind allowing the use of carbon offsets in a cap-and-trade program is that it reduces compliance costs for covered entities.

However, to ensure the credibility of carbon offsets, regulatory oversight and stringent verification and monitoring standards may be necessary, thereby increasing transaction costs for the issuance of offset credits.

The key challenge in ensuring the credibility of carbon offsets is achieving additionality.

A carbon offset project is generally considered “additional” if it results in reductions of greenhouse gas emissions below the quantity that would have been emitted in the absence of the incentive provided by the offset credits (often referred to as the “business-as-usual scenario”).

Nonadditional projects can compromise the environmental integrity of a cap-and-trade program by allowing covered entities to increase their emissions without a corresponding reduction from offset projects.

A number of different standards have emerged to judge the additionality of offset projects, some of which consider additionality on a case-by-case evaluation of the specific circumstances of each project and others which determine additionality of projects by comparison to efficiency standards for a technology or sector (referred to as “performance benchmark” standards).

However, because additionality is based on projections of what would have happened in the hypothetical absence of a carbon offset project, the GAO reports indicate that it is virtually impossible to be certain whether a carbon offset project is truly additional.

The GAO CDM Report: Lessons Learned From The CDM

The UN-created CDM has a lengthy and rigorous project approval process to ensure that offset projects will result in real and additional emission reductions.

Documentation for an offset project must be evaluated and validated by an independent entity (referred to as a “Designated Operational Entity” or “DOE”) accredited by the CDM Executive Board (“EB”), approved by the host country, and formally accepted and registered by the EB.

DOEs conduct periodic reviews to verify that monitored reductions in emissions have occurred as a result of registered CDM projects and provide written certifications of such reductions before the issuance of CERs.

The GAO CDM Report concludes that the CDM’s case-by-case approval process may not be a cost-effective method of achieving greenhouse gas emission reductions.

Stakeholders interviewed by the GAO described the process as bureaucratic and overly burdensome and suggested that the administrative complexity of the CDM process, the limited resources of the 10-member EB and its subsidiary panels, and the shortage of accredited DOEs, have resulted in bottlenecks and delays.

Registration of offset projects and verification of emission reductions can take several years. Moreover, transaction costs associated with the CDM process can be significant.

The GAO CDM Report estimates that project preparation, validation and registration costs range from \$80,000 to \$230,000, and project monitoring, verification and certification and CER issuance costs range from \$20,000 to \$35,000 in the first year and \$15,000 to \$25,000 in subsequent years.

Although there is some evidence that the lengthy CDM process provides greater assurance of credible offset projects, the GAO notes that there is also evidence that the CDM has approved offset projects that are not additional.

For example, a 2007 study examined 93 official projects registered by the CDM between 2004 and 2007 and found additionality was questionable in 40 percent of the projects.[7]

Due to the inherent challenges in measuring greenhouse gas reductions from offset projects, the GAO concludes that it may be difficult to provide assurances of offset credibility.

Regarding the lessons to be drawn from the CDM and the use of carbon offsets for compliance with a cap-and-trade program, the GAO CDM Report concludes that:

- It may be possible to achieve the CDM's sustainable development goals and emission reductions in developing countries more directly and cost-effectively through other means.
- Due to the difficulty in ensuring that offset credits represent real, measurable and long-term emission reductions, the use of offset credits in a cap-and-trade program can undermine the system's environmental integrity.
- Although proposed reforms may help streamline and improve the CDM's effectiveness, offsets may best be used as "a temporary means to help transition developing countries into a more comprehensive climate strategy." [8]

The GAO U.S. Report: Challenges And Policy Options For The U.S. Offset Market

Unlike the CDM process, there is no single federal regulatory body with oversight responsibility over the U.S. voluntary carbon offset market.

Instead, the role of the federal government has been limited to some consumer protection and technical assistance efforts by certain agencies, including:

- the Commodity Futures Trading Commission (which exercises limited oversight over the CCX),
- the Energy Information Administration (which provides a registry for recording reductions of greenhouse gas emissions),
- the U.S. Environmental Protection Agency (which provides technical assistance to companies that have entered the voluntary Climate Leaders program) and
- the Federal Trade Commission (which is in the process of updating its Green Guides to include consumer protection relating to carbon offsets).

In addition, unlike the CDM process, there is no single standard or body of verification and monitoring standards governing carbon offsets in the U.S. voluntary market.

As a result, it is difficult for offset purchasers to determine whether offsets are fully fungible (i.e., interchangeable and of comparable quality) commodities.

In addition, the GAO U.S. Report indicates that the lack of a standardized offset registry limits the market's transparency and can lead to double-counting.[9]

In general, stakeholders interviewed in connection with the preparation of the GAO U.S. Report believe that certain types of offset projects are more credible than others.

Specifically, methane capture and fuel-switching projects were identified by stakeholders as the most credible, and renewable energy certificates and agricultural and rangeland soil carbon sequestration projects as less credible.

The GAO U.S. Report concludes that additional regulatory oversight of the voluntary carbon offset market could address some of the concerns regarding the credibility of carbon offsets.

Policy options for enhancing regulatory oversight of the voluntary carbon market (or inclusion in any future U.S. compliance market in connection with anticipated federal legislation placing binding limits on greenhouse gas emissions) include:

- Adopting standardized quality assurance mechanisms;
- Requiring the use of a standardized registry to track the creation and ownership of carbon offsets;
- Prohibiting certain types of carbon offset projects that are considered less credible;
- Applying discounts or imposing insurance requirements on certain types of offsets with greater uncertainty; and

- Establishing product disclosure requirements to help purchasers evaluate an offset's quality.

However, the GAO U.S. Report concludes that these policy options for enhancing regulatory oversight of the voluntary carbon offset market involve trade-offs, such as reduced flexibility of market participants, increased costs for market participants and governmental oversight bodies, and a potentially chilling effect on innovation.

Conclusion

Although both GAO reports suggest potential reforms to improve the credibility and cost-effectiveness of the carbon offset markets, they appear skeptical that the proper balance can be achieved.

However, in light of the current recession and the desire on the part of congressional lawmakers not to impose unnecessary costs on U.S. companies, it appears likely that carbon offsets will be allowed in any future federal cap-and-trade program as a cost-containment mechanism. The outlines of any such federal offset program remain to be drawn.

U.S. offset market participants should pay close attention to any new regulatory proposals and be mindful of the GAO's conclusion that offsets represent a "temporary," rather than "long-term," approach to climate change mitigation.

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[1] See Carbon Offsets: The U.S. Voluntary Market is Growing, but Quality Assurance Poses Challenges for Market Participants (GAO-08-1048, August 2008) (the "GAO U.S. Report"); International Climate Change Programs: Lessons Learned from the European Union's Emissions Trading Scheme and the Kyoto Protocol's Clean Development Mechanism (GAO-09-151, November 2008) (the "GAO CDM Report").

[2] GAO CDM Report, at p.8.

[3] Certain types of offset credits are not eligible for compliance with the European Union Emission Trading System, including credits generated from nuclear and forestry projects.

[4] The Regional Greenhouse Gas Initiative in the northeast United States and other regional and state cap-and-trade programs under development all provide for limited use of offsets.

[5] It is difficult to separate the U.S. portion of the market from the global voluntary market, as U.S. market participants buy and sell across international boundaries.

[6] Flexibility mechanisms under the Kyoto Protocol also include Joint Implementation (“JI”), a program pursuant to which industrialized countries with binding targets under the Kyoto Protocol can generate offset credits, called Emission Reduction Units (“ERUs”), by implementing greenhouse gas reduction projects in other countries that have binding Kyoto targets. JI projects typically take place in eastern Europe, where there are opportunities for low-cost emission reductions. The JI market is significantly smaller and less mature than the CDM market.

[7] Schneider, Lambert, “Is the CDM fulfilling its environmental and sustainable development objectives? An evaluation of the CDM and options for its improvement” (Berlin, Germany 2007).

[8] GAO CDM Report, at p.8.

[9] In 2008, the California Climate Action Registry, a private nonprofit organization, established the Climate Action Reserve, a public program providing both guidelines for offset projects and an online system for tracking qualifying projects and their offset credits with the goal of increasing the transparency and credibility of the carbon offset market.

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