
Trading in Fake Carbon Credits: Problems with the Clean Development Mechanism (CDM)

What is the CDM?

The Clean Development Mechanism (CDM) is the world's biggest carbon offsets market. In theory, the CDM allows industrialized countries to support projects that decrease emissions in developing countries and then use the resulting emissions reduction credits towards their own reduction targets under the Kyoto Protocol. Industrialized countries supported the establishment of the CDM because it would provide them with flexibility in how they can meet their Kyoto targets, particularly if domestic reductions turn out to be more costly than expected. Developing countries supported the CDM because they would receive funds for "sustainable development."

Each CDM credit – known as a certified emission reduction (CER) – supposedly represents one metric ton of carbon dioxide not emitted to the atmosphere. Governments can purchase credits directly or companies can buy them to comply with national-level legislation or, in Europe, with the European Union's (EU) Emissions Trading Scheme. Currently, over 1000 projects are registered (approved) under the CDM, most commonly hydropower dams, but also wind turbines, biomass power plants, changes to industrial processes, capturing methane from coal mines, and others. The CERs produced through 2012 are expected to be worth \$35-\$85 billion.¹

Unfortunately, the CDM is failing miserably and is undermining the effectiveness of the Kyoto Protocol. Most "emission reduction" credits are "fake," from projects that do not actually reduce emissions. Billions of dollars have been transferred from taxpayers to undeserving project developers and a growing army of carbon brokers and consultants. In the process, the CDM is not only failing to support climate change mitigation and sustainable development in developing countries, but also provides industrialized countries with a way out of meeting their own domestic reduction obligations.

The CDM's Fundamental Flaw – Additionality

The most basic problem – and indeed the fundamental flaw – with the CDM, as well as with any project-based offsetting mechanism, is the need to prove the "additionality" of a project. A project is "additional" if it was only able to go forward because of the extra carbon credit income from the CDM. Any project registered under the CDM that would have been built anyway, without carbon credit income, allows an industrialized country to emit more than their targets, without causing any changes on the ground where the project is located. In reality, non-additional projects are going forward under the CDM on a large scale. Researchers estimate the proportion of CDM projects that are truly additional to be only a fraction of the market.² The evidence is clear that *the majority of CDM projects do not actually reduce emissions (are "non-additional")*:

- **75% of all approved CDM projects were already up and running at the time they were approved.** If carbon credit income were really essential for a project to go forward, then most CDM project developers would need to wait to make sure that their project had been successfully approved by the CDM Board before beginning construction. However, as of October 1, 2008, 76% of all approved CDM projects had not only started construction, but were actually completed and up and running at the time they were registered as CDM projects.
- **Paying for big dams in China, the world's most prolific dam-builder.** Hydropower projects constitute a quarter of all projects in the CDM pipeline (registered and applying for registration), and 67% of these (around 700 projects) are in China. Almost half of all new hydropower capacity being built in China is in the CDM pipeline, but there has been no substantial jump in hydropower development to match the large number of proposed "additional" projects applying to generate CDM credits.
- **Forgery, fraud and storytelling.** When asked, numerous CDM project developers admit that they would have built their projects anyway, regardless of CDM subsidies. Many validators, CDM consultants, and credit traders, as well as people involved in renewable energy development more generally, agree that the majority of CDM projects are non-additional.³ Forgery and fraud are common themes discussed in carbon trading conferences and workshops.

¹ Calculated from Reuters News, 22 September 2008, *Analysts see massive CER shortage to 2012*

² e.g.: Wara MW, Victor DG. 2008. *A realistic policy on international carbon offsets. Rep. PESD Working Paper #74*, Program on Energy and Sustainable Development, Stanford University, Stanford, CA

³ From interviews conducted by Barbara Haya during 2006-8 for a PhD dissertation at the University of California, Berkeley

The CDM cannot be fixed through stricter rules and procedures

It is often suggested that the CDM's rules and procedures should be tightened to prevent non-additional projects from going through. However, efforts to make additionality testing more rigorous will increase CDM process costs and timeframe, already considered too cumbersome and long, without resulting in sufficiently accurate additionality testing. The subjectivity involved in project development, investment and lending decisions makes an accurate test for project additionality impossible. Each proposed CDM project is audited by a validator, who, among other criteria, is asked to assess the likely additionality of the project. Auditors are accustomed to auditing fairly objective criteria, but there are no accurate objective measures of the intentions of developers, investors and lenders. Industry representatives have complained that "good story-tellers" can get a project approved, "while bad story-tellers may fail even if the project is really additional."⁴

Other Underlying Problems with Offsetting and the CDM

- ***Perverse incentives.*** Because offsetting mechanisms are measured against a "business-as-usual" baseline (what would have happened without CDM credits), they risk creating perverse incentives for governments and individual facilities to maintain high baselines. For example, a relatively efficient company will be credited with fewer credits for implementing additional efficiency measures than a company that is historically less efficient which implements the same measures. There is concern that, ultimately, the CDM could substantially increase emissions through these perverse incentives, especially by disincentivizing climate-friendly legislation by governments. Why would a government voluntarily act to cap methane from its landfills if in doing so it makes these activities "business-as-usual" and therefore not additional and not eligible for CDM income?
- ***Conflicts of interest.*** Validators have conflicts of interest to positively validate proposed CDM projects, since they are hired by the developers themselves and want to be hired again. The subjectivity involved in additionality testing makes it easy for validators to justify positive validations in regards to additionality.
- ***The CDM is not an effective safety valve.*** One of the purposes of the CDM is to act as a safety valve, as a means of controlling costs of compliance with the Kyoto Protocol. The two year or more lag between conceptualization of a CDM project and the start of credit generation limits the CDM's effectiveness as a cost-containment mechanism. This time lag means that the CDM is not quickly responsive to changes in the supply and demand of CERs.⁵
- ***Sustainable development?*** While many types of project both reduce emissions and have high poverty alleviation benefits, such as biogas digesters and village electrification from renewable technologies, these projects need relatively high CER prices to be viable and are a tiny part of the CDM pipeline. The journal *Climatic Change* in 2007 investigated whether the CDM was delivering on its sustainable development mandate. The conclusion was a resounding no.⁶ But even worse, many projects in the CDM pipeline have severe negative social and environmental impacts. For example, one of the worst proposed CDM projects is Campos Novos, an 880 MW dam in Brazil, which started the CDM approval process last year. Construction for this mega-dam started in 2001, many years before the first CDM project was registered, and involved violent suppression of protests and the displacement of 750 families without the compensation promised them.
- ***Paying for coal.*** In September 2007, the CDM's governing Executive Board decided that "supercritical" coal-combustion plants should be able to receive CERs. But supercritical technology is not a prohibitively expensive or radically new technology that can only be built with help from the CDM. By 2004, half of all orders for coal-fired plants in China were for supercritical units. India's first application for supercritical CERs will likely be for a massive 4,000 MW supercritical coal plant, slated to be one of the world's top 50 greenhouse gas polluters.

Looking Forward

In the post-2012 commitment period under the UN Framework Convention on Climate Change, much deeper emissions cuts by industrialized countries will be necessary, as will much larger financial flows to help support real shifts towards low-carbon development paths in developing countries. For all the reasons describe above, it is clear that offsetting mechanisms are fundamentally flawed and that ***the CDM must not continue beyond 2012.*** Further, industrialized countries will need to meet their obligations for financial transfers to developing countries – for mitigation and adaptation – in a way that is independent from and additional to their emission reduction obligations. An important additional problem with offsetting mechanisms is that they allow these two obligations to be traded-off of one another. Fund-based approaches should be utilized instead.

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⁴ Schneider, L. 2007. "Is the CDM Fulfilling its Environmental and Sustainable Development Objectives? An Evaluation of the CDM and Options for Improvement." Report prepared for WWF by Öko-Institut, 5 November).

⁵ Wara MW, Victor DG. 2008. *A realistic policy on international carbon offsets. Rep. PESD Working Paper #74*, Program on Energy and Sustainable Development, Stanford University, Stanford, CA

⁶ Michaelowa, A. and K. Michaelowa. 2007. "Does climate policy promote development?" *Climatic Change* 84.