

PRESS RELEASE

CDM Electricity Projects produce artificial Carbon Credits from inflated Emission Factors, new Study shows

BRUSSELS, 15 February 2011 – A new study published today finds that CDM Electricity Projects (e.g. wind farms and hydro dams) in China and India calculate carbon credits based on inflated grid emission factors. This will result in the issuance of an estimated 11 million carbon credits which do not represent real emissions reductions by 2012.

Background

CDM projects that receive carbon credits by replacing grid electricity calculate their emission reductions on the basis of so called “grid emission factors.” The higher the grid emission factor, the more credits a project can receive.

Grid emissions factors (EFs) are important because they define how much CO₂ per kWh produced would be emitted if the project was not built. The EF is used, together with the project emissions, to calculate the number of CERs a project can get. The higher the EF, the more credits a project can receive (and the more revenue a country will make if it taxes CERs, as is the case in China, for example).

Many CDM host countries choose to publish their grid emission factors via their national CDM authority. These can then be used by project developers to calculate the number of credits their project is expected to generate. Because a higher grid emission factor leads to a competitive advantage for project developers, host countries may have an incentive to inflate these values. Despite this risk, current CDM rules do not require that these factors be validated by an independent third-party auditor. On the contrary, last year the CDM Executive Board rejected a proposal to make such audits mandatory. As a consequence, once published by the host country authorities, the grid emission factors are applied without any scrutiny.

Here is an example to illustrate the effects of inflated EFs: if a grid emission factor is stated to be 800 kg of CO₂ per MWh but in reality the number is more like 750 kg of CO₂ per MWh, each renewable energy project would earn 50 CERs more per 1000 MWh it produces than it actually should. This adds up: in this example, a wind farm that produces 20,000 MWh of electricity per year would earn 1000 more CERs because the EF is inflated.

CDM Watch has commissioned a study to examine the validity of the grid emission factors published by China, India and several other countries.

Key Findings

The study shows that most of the 20 countries that have published grid emission factors fail to apply UNFCCC rules that lay out how grid emission factors should be established. In many cases it is even impossible to check the quality of the grid documents because essential information is missing.

“An accurate and conservative calculation of the grid emission factors is crucial to safeguard the environmental integrity of the CDM,” says the study author Axel Michaelowa. *“Yet, our study revealed serious shortcomings in terms of transparency, quality of data and conservativeness”* he added.

The results show that although the Chinese grid emission factor has become more conservative since 2009, the emission factor data and calculations lack transparency. Applying default values, as required by

UNFCCC rules when plant-specific data is missing, would have reduced CER volumes by up to 7% for 2007 and 2008. For India, the study highlights two significant shortcomings in the underlying data used to calculate the grid emission factor: (1) Non-CDM non-hydro renewable power plants are completely omitted in the calculations. Including them would reduce CER volumes by 3% for non-wind projects and 1.5% for wind projects; (2) Indian power plant operators over-report their fuel use.

“Although the extent of this over-reporting is not known, it is reasonable to assume that the Indian emission factors are artificially inflated by several percentage points”, Michaelowa comments.

The study concludes that there are serious deficiencies in the current grid emission factor calculations. It estimates that electricity-related projects registered in China and India will be over-credited by about 11 million carbon credits before the end of 2012, worth more than €100 million. This represents about 2.5% of total carbon credit volume for these projects.

Recommendations

“The findings of this report clearly show that the current UN rules allow for artificially inflated emission factors that lead to fake emission reductions” says Eva Filzmoser from CDM Watch “We expect the CDM Executive Board to act swiftly and to introduce robust rules that do not leave any margin for gaming, which undermines global climate policies.”

To address the shortcomings, CDM Watch recommends immediate action from the CDM Executive Board, namely:

- Independent validation of grid emission factors.
- The use of default values for power plant efficiencies for all power plants where data is not published
- Inclusion of all non-CDM renewable power plants in the grid emission factor.
- Retroactive application of a revised grid emission factor if the grid emission factor used is found to be inconsistent with the tool to calculate the emission factor for an electricity system.

You can download the study at: <http://www.cdm-watch.org/?p=1640>

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