

# PRACTICAL CARBON GREEN BUSINESS

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This is the third article in the series on the impact of carbon on insurance. The first article provided a practical background on carbon legislation. The second article focused on how carbon may impact losses at carbon emitting installations. This article will introduce the legislative background for green technology and the potential for unexpected losses.

## CDM and JI – Green Carbon Credits

In addition to capping emissions in signatory states, Kyoto and the ETS have also implemented a wider framework of emission reduction measures built around incentives. The Clean Development Mechanism ('CDM') and Joint Implementation ('JI') are Kyoto mechanisms which help developed economies to meet their Kyoto reduction targets through the use of green technology in developing economies. The emphasis on technology transfer is designed to address the expected significant increase of carbon emissions in developing economies.

### CDM Projects

CDM projects are intended to reduce emissions in developing economies. CDM projects generate green credits. In fact, green credits may be awarded for reduction of any one of six greenhouse gases including carbon dioxide. Examples of typical CDM projects would be a hydroelectric project in China or a wind farm in Peru. These projects provide electricity to areas that would otherwise be supplied by carbon emitting power stations. CDM projects have two income streams: one from the provision of electricity to an identified domestic market; the other by the annual production of green credits.

### JI Projects

JI projects are very similar to CDM projects. However, JI projects are based in more developed western economies where emissions are capped. JI projects also generate green credits. It is generally intended that projects are undertaken in less mature economies such as Poland rather than in fully developed economies such as France.

### Rating Green Projects

CDM and JI Projects are not token projects. They must meet actual needs in a developing economic infrastructure. Each project is assessed on its merits by the respective CDM/JI UN Executive Boards. The Boards then rate the projects for the annual green credits a project will generate. Each green credit is considered the equivalent of one tonne of carbon which was not emitted as a result of the project.

Applications for projects are comprehensive and freely available online. The rating takes into account a range of environmental, scientific, technological, sociological and economic factors. Both CDM and JI projects encourage private sector investment alongside state financed projects.

## Valuing Green Credits

Green credits can be valued in two ways. First, they can be generated purely for trading purposes. Green credits can also be generated by the owner of an installation in a Kyoto signatory state which is operating under the ETS cap and trade scheme. A green credit is, in many senses, the equivalent of a carbon credit and can be used to account for exceeding an installation's carbon cap. Like allocated carbon credits, green credits can be transferred between installations. Green credits limit the exposure to fines and market volatility, particularly at the end of an accounting period.

The success of Kyoto and the ETS will ultimately be determined by market forces and the cap and trade ETS. JI and CDM Projects underline the fact that under Kyoto, carbon emissions are a global issue.

## Future Value of Green Credits

Along with an expected reinforced carbon cap and related increased value of carbon credits the importance and scale of CDM and JI projects and the resulting value and number of green credits is likely to increase. As more projects are approved by the respective CDM/JI Executive Boards and commenced all over the world by potential assureds their green credit revenue streams are likely to increase in value.

## What's at Stake ?

Insurers should consider the potential liabilities of the dual income streams generated in CDM/JI projects. An outage at a project, such as a hydroelectric plant in China, may involve not just the loss of electricity but also the stream of green credits at whatever their market value may be. As already noted, the value of green credits is expected to increase.

In addition to risk exposure in CDM/JI projects, there are new exposures to outages of green technology. Green technology, such as a green boiler, or any other incorporated technology that reduces emissions at an installation, can be found at a range of installations. In the EU green technology is relied upon in installations to stay under a carbon cap. The same green technology can be found as part of a CDM/JI project which generates green credits.

For different reasons claims can arise from outages on green technology in both capped installations where they reduce the demand for carbon and in CDM/JI projects where the generation of green credits may be delayed or otherwise interrupted. In the EU, an outage of a green boiler can result in a claim which includes the cost of additional carbon credits either to burn alternative/traditional fuel or in the replacement costs of a production unit which will include carbon credits as a production cost. In CDM/JI projects, an outage of a green boiler can result in a claim for the lost primary income stream and for the lost green credits.

## Outage Example

A CDM project in India generates electricity from waste gas during steel production. It is rated for 1,267,392 green credits and, on average, will generate 3472 green credits per day valued at approximately €10 per credit. A 90 day outage at the plant will result in a loss of 312,480 green credits, or €3,124,800. There may be additional losses resulting from the outage including the inability to supply electricity and ICOW claims from an installation in the EU who is dependent upon the stream of green credits to remain below its carbon cap.

## Green Business is More Transparent Than Dirty Business

The adjustment of green technology outages in CDM/JI projects is more likely to be transparent than where carbon caps are in operation. Nevertheless, estimating the quantum of loss for green technology and revenue streams from green credits may be complicated and perhaps beyond the purpose of property and business interruption insurance. With fluctuating, volatile markets, green losses will have exposure similar to risks faced by commodities and hedge traders.

## DSU and ALOP

Delayed Start Up and Advanced Loss of Profit policies for green technology will be particularly vulnerable to the loss of revenue streams from green credits.

## Mixed Business Portfolio

Insuring green technology as part of a mixed 'dirty and green' portfolio of business may not be sufficiently transparent. The generation of green credits may be funnelled in to a business to avoid carbon caps at a range of installations. Simultaneously, the cost of these carbon credits may not be transparent, particularly where an assured may transfer credits between facilities. Outages could have unexpected outcomes.

## New Products

Insuring green technology in the EU as stand alone risks may result in unexpected losses. In the event of such a loss, an adjustment should take into account the additional costs of production, from alternative fuel or replacement production units, which will almost certainly include purchasing additional carbon credits.

Carbon presents insurers with an opportunity to develop specialist emissions reduction insurance products for both cap and trade and green risks. Insurers may also wish to review wider policies for the impact of carbon (D&O, credit and political risk, PI, financial lines and institutions).

The next article considers the future impact of carbon on insurers, the consequences of the anticipated US inclusion in a similar carbon reduction scheme and suggests carbon strategy for insurers.