



EPRI GHG Emissions Offset Policy Dialogue – Carbon Funds

EEA Fund Management Ltd
28 October 2010

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Trading Emissions Plc overview

- Trading Emissions PLC (TEP) was formed to invest in a range of emission assets, including: Kyoto compliant project credits such as CERs, EU carbon, US carbon and US sulphur instruments.
- TEP's principal focus is the acquisition of Certified Emission Reductions (CERs) created through the Clean Development Mechanism of the Kyoto Protocol.
- TEP is a publicly quoted company listed on the Alternative Investment Market (AIM) of the London Stock Exchange.
- The company is registered in the Isle of Man with a board of Non-Executive Directors. The Directors are advised on all transactions by the Investment Advisors, EEA Fund Management Limited.
- The company raised £135m through its listing on AIM in April 2005, making it the world's largest private investment vehicle focussed on emission assets.
- Initial investors include Invesco Perpetual, Credit Suisse Asset Management, Gartmore Asset Management, Jupiter Asset Management, F & C Unit Management, Bluecrest Asset Management and Moore Capital.
- Following successful allocation of the initial funds, TEP raised a second tranche of £175m through a C share issue in May 2006.
- Share classes were merged as of 30th June 2007.
- The Company commercializes its portfolio on a spot and forward market basis, and has entered into such sale contracts, following substantial improvements in liquidity and price conditions in the market for secondary CERs.

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Financing Structures for Carbon Projects

- **Carbon Funds are structured in a way to take higher risks and access project opportunities at an early stage, thus leveraging a higher upside potential**
- Carbon funds can purchase carbon assets under Emission Reduction Purchase Agreement (ERPA), but also can make investments in project opportunities and companies to leverage carbon assets
- Carbon Funds have the flexibility to develop creative deals and financing structures, tailored to the needs and risk appetite of project developers
- Offer a wide range of contract structures, terms and flexible pricing structures, including links to European market prices
- Enhanced credit may facilitate project developers' access to capital, including through monetisation of ERPAs
- Ability to absorb large carbon volume transactions as well as large size investments
- Ability to accept variable counterparty risk

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CER Portfolio

Carbon Funds acquires carbon credits in three ways:

- **Emission Reduction Purchase Agreements (ERPAs)** - carbon offtake contract signed with the project host
- **Structured debt and equity** – project finance / equity with all or part of the Fund's return in carbon credits
- **Strategic investments** in companies that will enable the Fund to gain exposure to the price of carbon and other environmental credits.



Financing Structures for Carbon Projects (cont.)

Emission Reduction Purchase Agreements

- Forward purchase of primary CERs with payment on delivery
- Flexible structures to suit project developers' needs and risk appetite
- Commercial, flexible and transparent pricing structures, including links to European market prices
 - Fixed price
 - Fixed floor price plus a percentage share in any future increase in market prices
 - Percentage of market price index
- Ability to contract post-2012 CERs (different price structures for pre- and post-2012 CERs)
- Ability to **finance CDM development costs upfront**, with such costs being offset with future payment obligations under the ERPA
- Ability to provide **upfront payment** as part of project finance
 - (Discounted) Percentage of expected contract value
 - Security for upfront payment required (such as bank guarantee, CERs from other projects etc.)
 - Discount rate depending on risk profile of project and counterparty as well as on quality of security

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Financing Structures for Carbon Projects (cont.)

Structured Debt Finance ('Carbon Loan')

- Secured debt finance made available to CDM projects as part of the overall financing structure, or to companies developing and operating CDM projects thus providing working/development capital
- Repayment of the Carbon Loan (interest and principal) with carbon credits generated from the project
- Security required
- Carbon Loan ranking junior to conventional (senior) bank lending (-> qualifies as mezzanine finance)
- Nominal value of CERs and interest rate will depend on risk profile of project

Equity Investments in Project Companies or Project Development Companies

- Often flexibility to offer wide range of equity structures
- Equity position provides direct access to the carbon assets plus the core cash yield
- Strategic investments in regional CDM project development businesses (primarily serving as working capital injections) through which Fund can gain indirect access to project opportunities

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CER Portfolio Management Principles

- Pricing - Strict purchase at appropriate prices (average purchase price of €8 / CER)
- Conservative risk adjustment of undelivered volumes
 - Technology
 - CDM status
 - Project development status
- Close management through the CDM process by team with high levels of expertise
- Diversification by technology and geography while taking into consideration the relative scale of market opportunities
- Limited forward sale of portfolio
- Strategy supported by balance sheet – strong counterparty position



Current Challenges of Carbon Market

- Very low carbon price levels due to global/European economic downturn and resulting decrease in demand for carbon assets (especially from industries covered under the EU ETS)
- Uncertainty on when economic contraction and downward pressure on carbon prices will cease
- General volatility of carbon prices
- Uncertainty on post-2012 carbon regime(s) and eligibility criteria for CERs post-2012

Consequences of bearish carbon markets

- Mismatch of price expectations of project developers and what carbon buyers/investors are willing to offer
→ negotiation and closing of primary carbon purchase contracts has become particularly difficult
- Decreasing value of expected future revenue stream from carbon assets
 - may result in a financing gap and make it harder to achieve financial close
 - reduces project/investment return expectations and thus may cause projects to fail to hit financing/investment hurdles (especially where project economics are marginal)
 - Fewer projects may be able to secure financing



Effects of 'Credit Crunch' on Carbon Project Financing

Constraints on availability of fresh capital for clean tech/carbon projects due to global 'credit crunch'

- Stricter credit assessment and due diligence criteria
- Higher covenant and security requirements
- Higher equity requirements
- Delays in credit approval and more selective finance decisions
- Higher return expectations
- **Lenders/investors are becoming more risk averse, more demanding and more selective**

Chances to secure finance are higher for projects which

- are at a more advanced development stage
- can demonstrate sound economics from core business activity
- can secure high equity portion
- are developed by companies with strong track records



EEA Fund Management Limited

- EEA was established in August 2003 by Simon Shaw. It manages a range of equity and climate related funds.
- It gained unique experience in the climate change market through its management of Climate Exchange PLC, the financing vehicle for the Chicago and European Climate Exchanges and also through the launch and management of TEP.
- EEA has in excess of US\$1.6bn in assets under management.
- EEA advises on investments in clean energy and environmental markets and is the exclusive retained investment advisor to Trading Emissions PLC and Leaf Clean Energy Company.
- EEA manages high performance equity mandates: two UK-based mutual funds CF EPIC UK Equity and CF EPIC Insurance & General Fund; and an offshore hedge fund, EEA Select Opportunities Fund.
- EEA also manages the US-based EEA Life Settlements Fund.
- In 2007, EEA opened offices in Washington, D.C. and Rio de Janeiro for the purpose of managing existing investments and originating deals on behalf of TEP.

