African Bankers’ Carbon Finance and Investment Forum

CDM Project Investment Analysis

Kimberly van Niekerk
Principal Consultant, Camco
4 November 2010
DBSA, Midrand
Presentation outline

• Camco
• Estimating carbon revenue
• Major factors affecting CDM investment analysis
• CDM project cycle: investment considerations
• Structured finance for CDM projects
• Case study: Camco forward sale
• Recent investment lessons
Camco

- A leading international centre of expertise in the field of sustainable energy and climate change:
  - Advisory services, carbon, investments
  - 20-year legacy
  - Extensive experience throughout Africa
  - Listed on the London Stock Exchange
  - Over 240 staff worldwide, operating out of 15 offices
  - Across 11 countries – Austria, Bulgaria, China, Kenya, Malaysia, Russia, South Africa, Tanzania, UK, USA, Vietnam
Estimating carbon revenue

• Overall estimation of potential CDM revenues involves many factors:
  – Power produced/ emissions abated
  – Country grid emission factor
  – Efficiency/ Capacity factors
  – Carbon price and market drivers going forward

• Other factors can have an impact upon the estimation, including: carbon leakage, methodological considerations (exclusions, conservative approaches to calculation), co-mingling of emission abatement activities, etc
Major factors affecting CDM investment analysis

- Three general risks to any CDM project: Methodology, Additionality and Technology – each with its own effect on project investment analysis
  - Methodology: need for new methodology, changing methodology, revision – each requires detailed financial analysis
  - Additionality: CDM projects are typically those that would not have happened anyway, implying lower rates of returns
  - Technology: New renewable technologies are not well known and imply higher and varied risks to investors

- Other key specific risks
  - Capacity and technical constraints often hinder investment and by extension, investment requirements
  - Project size and location: International developers wanting large size and standardised project portfolios
  - Other institutional constraints: low electricity prices negatively affecting return calculations; policy/ regulation (i.e., Refit/ PPA arrangements)
CDM project cycle and process

A SIMPLIFIED CDM PROJECT FLOW - THE PROJECT DEVELOPER'S PERSPECTIVE

- Identification of project and development of project concept note
- Quantification of GHG benefit and development of Project Design Document
  - Includes:
    - Set project & baseline boundaries
    - Define baseline scenario and additionality
    - Set baseline emission level and crediting period
    - Calculate baseline emissions
    - Calculate project emissions
    - Adjust for leakage
    - Adjust for risk

- Validation of Project According to Project Design Document
  - Possible review by the CDM Executive Board

- Submission of validation reports and Project Design Document

- Registration with the CDM
  - Project implementation and monitoring

- Verification and certification
  - Possible review by the CDM Executive Board
  - Issuance of CERs to project developers

ROLES:
- Project developer
- Host Government
- Operational Entity
- CDM Executive Board

Source: Danish Embassy website
CDM project cycle: investment risk at key points

- Pre-PIN: prepayment options
- PDD stage: investment required is often underestimated
- Other project cycles delays:
  - Methodological revision, deviations requirements
  - Validation Q&A
  - Executive Board Q&A
- All of the above can lead to additional investment requirements and review/alteration in the original investment planning
Structured finance of CDM projects

- Structuring is a means to reduce the above risks in a multitude of ways
- A key benefit of structuring is that it allows market players to leverage from portfolio diversification
  - Creates a pool of projects with different sector, technology, methodology and performance risk profiles
  - Suits buyers by increasing delivery probability and suits sellers by decreasing financial risk in a fully guaranteed delivery transaction from a single project
  - Traunching: Allows for a given carbon asset to be divided up and categorised
  - More advanced structures, i.e. using a floating structure linked to an index in a market downturn, increased use of options
Case Study: Camco forward sale

2-3 years

Investment
Camco sources and selects high-potential projects

Development
Camco guides each project through the relevant governing framework (e.g., CDM, JI, Gold Standard) and various local and tangential entities

Issuance
Pending successful verification, credits are then issued

Contract Structure Options

Carbon Share
(Camco has the right to buy a share of credits at a set price)

Cash Share
(Camco receives a % of proceeds when a client sells credits)

Forward Sale
(sell credits before they are issued; can be simple or structured, with an upfront component)

Payment upon delivery

Spot Sale
(Timing determined by Camco)

Spot Sale
(Timing determined by Client)

Monetisation Schedule

Contract Structure

• Bring forward carbon revenue
• Structured sales can vary (e.g., up-front payments, tranches)
• Transaction price between purchase price (usually €7-8) and spot price

• Camco sells credits post-issuance at prevailing market prices
• Timing of post-issuance sale depends on price expectations
• Camco guarantees a floor price

• Camco receives a defined share of revenues once client sells post-issuance credits
• Camco does not guarantee a floor price
Commercialisation decisions

Due to our reputation and the strength of our portfolio we can achieve a high carbon price relative to the market

Factors Influencing Timing and Structure of Carbon Sales

GOAL
• Maximizing value for shareholders

CONSIDERATIONS
• Prevailing and projected price volatility
• Nature of underlying projects and contracts
• Stage of project development
• Balancing overall portfolio risk/reward (i.e., optimizing mix of exposure to the carbon price upside and realizing a base price immediately)
• Using financial structuring skills to add extra margin

Contract Structure

Monetisation Schedule

Investment
Development
Issuance

2-3 years

Carbon Share
Forward Sale
Payment upon Delivery
Spot Sale
Spot Sale
Cash Share

Contract Structure

Due to our reputation and the strength of our portfolio we can achieve a high carbon price relative to the market
Recent example

Camco has a carbon portfolio of over 100 million tonnes.

Camco will pull together a diverse mix of pre-issuance credits...

...and divide the deal credits into multiple tranches...

...to better appeal to the different interest of different types of end buyers.

Delivery Risk to End Buyers

€15m to Camco

Camco Transaction Portfolio

Structuring

End Buyers

Mix of Pre-Issued Credits
(by project types, geographies, progress, etc.)

Tranche A

Tranche B

Tranche C

Compliance

Financial

€17

€14

€15m to Camco

Delivery Risk to End Buyers
Recent investment lessons

- Carbon price must be clear
- Debt financing is looking for fixed rate structures
- Innovative structures can be used as enhancements to both buyer and seller
- Investors will be far less interested in an environment of high ETS conditionality
- It is easier to attract financing if the project is registered
- Many factors unique to the CDM world must be considered when looking at the impact of CDM revenue in conventional project investment analysis
- Investment analysis must not only take account of major CDM risks, but must be examined against a background of major milestones in the CDM project cycle
Questions & Discussion