

EMISSION REDUCTIONS: CONTRACTS AND PRICING

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Outline

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 - Typical Concerns of the Buyers
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 - Delivery Shortfall
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 - Liabilities and Indemnities
 - Default, Termination and Remedies
 - Confidentiality
 - Dispute Resolution
 - Taxes, Levies and Charges
 - Force Majeure
 - Miscellaneous Provisions

Outline (Cont'd)

- Part B: Pricing of Carbon Contracts
 - CER Price Volatility
 - How to explain Price Volatility
 - Equilibrium Price
 - How to protect against CER Price Volatility
 - Prices in post- 2012 period
 - Conclusions
 - Resources for checking carbon prices

Part A: CARBON CONTRACTS

Overview

- Certified Emission Reductions (“CERs”), issued under the CDM framework established under the Kyoto Protocol to the UNFCCC;
- Verified Emission Reductions (“VERs”), certified by other standard setting bodies, for example:
 - Voluntary Carbon Standard,
 - Gold Standard for Voluntary Carbon Offsets.

Importance of a Contract

- Certainty of a legally documented framework for sale/transfer of ERs
- The framework will determine:
 - Allocation of risks inherent in the generation and supply of ERs;
 - Determination of price;
 - Bankability of the project against which to raise financing- both debt and equity.
- Forward Contracts more complex than Spot Contracts

Standard Forms

- Over the past few years, various standard forms of Emission Reduction Purchase Agreements (“ERPA”) have been developed
- Most of these are buyer driven initiatives
- Seller needs to review carefully in order to ensure fair allocation of risks and benefits

Types of Contracts involving ERs

- Spot Contracts
- Forward Contracts
- Contracts involving Revenues from ERs
 - Part payment on an equity investment or
 - Part payment on a financial loan to a Project (ER receivables as security for the loan)

Typical forms of ER sale

- Direct and immediate sale of ERs which have been generated (i.e. a spot transaction);
- Direct sale of ERs from a future activity of a Project (either all of the CERs from the project or a certain amount for each Verification period) (i.e. a forward sale):
 - Sale of percentage of ‘estimated volumes’ or of ‘actual volumes generated’
- Options to purchase agreed volumes of ERs at a later date (i.e. an option agreement).

Preliminary Issues

- Ownership rights over the ERs
- Legal status of the specific project, i.e. whether registered or not, whether commissioned or not, etc.;
 - Legal framework governing the project in a specific jurisdiction;
 - Project clearances;
 - Any other regulatory requirements.

Key Issues

- Time period for generation of ERs and their delivery schedules
- Guaranteed or Non-Guaranteed Volumes
- Cost Distribution
- Pricing
- Terms of Payment:
 - Advance
 - On delivery
- Consequences of non-delivery of Guaranteed Volumes
- Default & Cure
- Termination

Nature and Complexity of ERPAs

1

- Forward contracts providing guaranteed delivery and advance payments
- Often require Bank/Corp Guarantees for Advances
- FEMA Clearance for Advance

2

- Forward contracts: non-guaranteed delivery and no advance payments
 - Care should be taken that 'non-guaranteed' is clearly understood; often linked to PDD volumes

3

- Spot Contracts

Forward Contracts- Guaranteed Delivery and Advance Payments

- **Critical issues**
 - Time of delivery
 - Volume of delivery: PDD volumes often higher than actual generation
 - Pricing
 - Internal regulatory framework such as FEMA requirements relating to advance payments.
- **Risks**
 - Delays in Registration
 - Verification
 - EB Issuance of Less than estimated ERs
 - Change in Methodology, etc.
 - Project risks

Risk Factors & Mitigation:

Allocate Risk to Party in best position to bear it

Risks

- Delays in Registration/ Verification
- Change in methodology
- EB Issuance is lesser than estimated because of several methodological issues
- Project Risks (Construction, Performance, Regulatory/ Political)

Mitigation

- Adequate Force Majeure Provisions:
 - Delays attributable to Verification, Registration
 - Change in Methodology
- Link Delivery to 'best endeavour' obligation on Project operation
- Link Delivery to actual issuance
- Provisions for Replacement ERs
- Adequate provisions for amicable win-win solutions
- Political/ Regulatory factors such as non-supply of MSW, to be classified as Force Majeure
- Alternate sources of supply for risks attributable to developer

Liabilities and Indemnities

- Parties will have to determine to what extent, if any, the liability of either or both parties should be limited
- Limit liability to ‘Direct’ damages; exclude indirect and consequential damages
- Link Compensation for ER non-delivery to Damages based on difference between agreed price and market price

Dispute Resolution

- Important to set out procedures for dispute resolution to address uncertainties
- Governing law, Jurisdiction
- Identify place of the arbitration and the arbitration system to be used

Taxes, Levies and Charges

- Often arise from the registration and transfer of rights
- Determine what fees to be paid for the creation and registration of ERs and who bears the cost of any transfer fees or cost of compliance
- Issue of taxation related to pricing (whether price is inclusive or exclusive of goods and service tax and other charges)
- Should address issues concerning local taxes, future legislation imposing taxes or charges on ER transactions
- Should address the possibility of future legislation imposing various taxes or charges on ER transactions
- Important note: CDM projects under Kyoto Protocol will have to direct a particular “share of proceeds” to cover administrative expenses (*Article 12, para 8, KP*)

Miscellaneous Provisions

- Entire agreement
- Governing law and enforceability
- Variation/amendments
- Severability
- Waiver
- Survival
- Notice
- Assignment
- Jurisdiction
- Public Relations

How to determine a 'Fair Deal'?

- Pricing
- Other Factors equally important:
 - Even-handed contractual terms
- Avoid provisions relating to
 - Unilateral penalties
 - Liquidated damages
- Certain Provisions to be mutual:
 - Indemnification
 - Representations and Warranties

Part B: PRICING OF CARBON CONTRACTS

Main drivers- CER Pricing

- Interplay of
 - Market situation
 - Annex I country trading schemes
 - GHG quota allocations
 - Supply of CDM projects
 - UNFCCC negotiations
 - EUA (EU Allowance) pricing- often acts as benchmark

Typical Pricing Structures

- Fixed Price
- Floating Price linked to an Index (e.g., EUA index published by ECX)
 - Index pricing as of * date of signature of ERPA
 - Spot index price on date of purchase
- Fixed Price with a floating component linked to an index
 - *(E.g.: Fixed + % of Index Price – floor, or whichever of the two is higher)*

Fixed or Floating

- Different considerations
 - Certainty & predictability
 - Linking to index- taking a part in the price risk, benefits from bullish market trends
 - But, carbon revenues cannot be used as a collateral for project or corporate financing if price is linked to a floating index.

Who bears Costs also plays a role in considering purchase offers

- Project Development
 - Drafting of PIN/ PDD
 - Baseline calculation & Monitoring Plan
 - Validation
 - Initial Verification Report
 - Verification
- CDM Fees & Taxes
 - EB Registration fees
 - EB share of proceeds
 - Taxes in Host country
 - Taxes in Buyer's jurisdiction

Price Volatility

- 2006:
 - Range for non-guaranteed forward delivery, was from €3.50 to € 15
- 2010:
 - Range of non-guaranteed forward delivery has been €8 to € 12

Market forces

- 2009- a challenging year- global economic crisis negatively impacted both the demand and supply sides
- Industrial output plummeted the demand for carbon assets fell.
- Financial crisis spurred financial institutions and private investors to deleverage and redirect their positions away from risky investments and toward safer assets and markets.
- Impact on ER markets and pricing

Post 2012

- It is quite difficult to determine ER price in the coming years
- Estimates for CER pricing have ranged from EUR 17-30
- Forward prices: CERDEC-12 at ECX: approx. EUR 13-15
- Prices volatility likely due to financial speculation and probable regulation mistakes
- Recent cause for speculation/ fluctuation: HFC saga.

Post-2012 (cont'd)

- The European Climate Exchange in early August launched EUA futures contracts for the years 2015-2020
- The first trade in post-2014 EUAs took place with a multi-year trade between Gunvor Global Energy and JP Morgan
- The 2020 price was set at €22.72.

Policy choices as determinants

Recent EC Developments:

- However, recent EC proposals to restrict the use of offsets generated by CDM projects
- EC is planning to publish proposals before December on limiting their use in the third phase of the EU ETS, from 2013, in a bid to improve the environmental impact of the scheme

HFC saga:

- Potential Reduction in CDM projects & CER volumes
- Price estimation of EUA @ EUR 25 by end of 2010/ early 2011

Price Volatility

- Carbon credits are a new type of immaterial commodity, highly dependent on political decisions

Global demand versus global offer for carbon credits (World Bank, 2009)

Global Demand (2008)	Global Offer (2008)
UK- 39%	China- 84%
Italy- 9%	India- 4%
Spain & Portugal- 4%	Rest of Asia- 4%
Austria- 2%	Africa- 2%
Europe Baltic Sea- 17%	ECA- 1%
Other Europe- 16%	Brazil- 3%
Japan- 5%	Rest of Latin America- 2%
Others- 8%	

Price Volatility (cont.)

- Developers assessing their CERs potential should not only pay attention to their project advantages and risks, but also to carbon price macro drivers:
 - Allowances allocations in parties with GHG reduction commitments
 - Links with EU ETS demand, therefore between CERs/EUAs prices and the economic fluctuation of the buyers
 - Factors such as fuel prices (coal, gas) and even European weather influence EUA prices and therefore CER prices
 - Political decisions at various levels, COP/MOP provides positive and negative signals to the carbon market

How to protect against CER Price Volatility

- Which would be an adequate carbon finance strategy: Selling forward or spot?
- Decision depends on:
 - Risk aversion
 - Requirement for immediate funds
- Forward transactions are a good way of securing minimum incomes; but often lose out of upward movement in prices
- There are several methods and clauses to secure floor prices indexing ERPAs to spot prices with or without guaranteed delivery
- Rating reports from specialized agencies are a sophisticated and useful tool to obtain better prices for your CERs
- To optimize the carbon finance incomes it is a need to count with a safe trading strategy.
- Project proponents should design their strategies according to their needs

Resources for checking carbon prices

- For information on price volatility, resources include:
 - Point Carbon
<http://www.pointcarbon.com/trading/>
 - Idea Carbon <http://www.ideacarbon.com/>
 - European Climate Exchange <http://ecx.eu>
 - Chicago Climate Exchange
<http://www.chicagoclimatex.com>
 - Montreal Climate Exchange
http://www.mceg.ca/index_en

THANK YOU!