Lessons from CDM and carbon trading for the Chinese CER

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Recap: Cap-and-trade Emission Trading Schemes

Emission Trading Schemes implication for one emitting site

Future emissions are capped

1. The plant receive allowances corresponding to the cap

Scenario 1, the plant does not lower its emissions

2. Scenario 2, the plant lowers its emissions

Needs to buy allowances or offsets

Market

May sell its surplus of allowances

Historical emissions

Y

Y + 1

The plant, at the end of the compliance year, needs to comply with its obligations, i.e. to give back allowances equivalent to its actual emissions.
Offsets - CDM (CER), financial incentive to invest in low emission projects

**EU-ETS**

- **Kyoto Protocol**
- **Emission reduction projects - CDM / JI**
- **CER**

**Baseline scenario**
- Power company 10 MW from coal only

**Emissions Reduction project**
- Power company 8 MW from coal, 2 MW from wind
- The project: a wind farm

**Credits (CER)**
But, Who needs CER offsets?

The company with emissions higher than its quota/cap?

The company with lower emissions than its quota?
CER and EUA

CER = Reduction of 1 Ton of CO2
EUA = Allowance to Emit 1 Ton of CO2

1 CER = 1 Ton of CO2 = EUA

Linking Directive: CER = EUA (under some conditions)

1000CER = 1000EUA

CER price = EUA price?
CER price = EUA price? NO

CER or in general Carbon Offsets are by definition CHEAPER than allowances in the ETS that they cater to.
Primary CER vs Secondary CER

Which CER price?

- **Primary CERs** are those directly purchased from (sold by) the offset project – They are cheaper because the purchaser is exposed to project risks.

- **Secondary CER** are CERs who are available and can be traded at exchanges.
Primary CER

- **Pros**: Cheaper than EUA and also of other CERs; good opportunity if you can produce them in your plants out of ETS perimeter/scope.
- **Cons**: No guarantee of volumes actually delivered or date; replacement cost if volumes are not enough.
Secondary CERs

- In China you should be able to take advantage of offsets with some vanilla operation…
Secondary CERs

- But you will have more space to take advantage of market opportunities and optimize your carbon assets as soon as option trading will start...
Loan agreement details & cash flow

Example

Emission Reduction Credits = + additional cash flow - reduced loan repayment time

Example of a Carbon Finance transaction cash flow
Deal structure: a tripartite cooperation

**Example**

**Project identification & negotiation**

- **Project Owner**
- **Debt provider**

**Signing of:**
- Service Agreement
- Emission Reductions Purchase Agreement
- Loan Agreement

**CDM / JI PROJECT**

**Corporate or Project finance**

**Technology**

**Local & International partners**

**Project construction**

**Carbon asset production**

**CER monitoring & issuances**

**Project Owner**

- Carbon assets production
- CERs deliveries & monetisation
  - (Orbeo Marketing & Trading platforms)

**Debt provider**

- Debt servicing
- Carbon payments

**Project payback**

- AFD, World Bank, ...

**Possible Guarantee by Development Bank / Agency**

**Project realisation**

- Corporate or Project finance
- Carbon offset development
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