How to develop voluntary carbon market projects

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VER Concept

- **Voluntary Emission Reduction** (VER) is a type of carbon offset exchanged in the voluntary or 'Over-the-Counter' (OTC) market for carbon credits
- Verified Emission Reductions are usually created by projects which have been verified outside of the Kyoto Protocol.
- 1 VER = 1 tonne of CO2e emissions.
- VERs may be developed and calculated in compliance with one of several VER standards. These set out rules defining how emission reductions are measured. Standards provide assurance for buyers of VERs. At a minimum, all VERs should be verified by an independent third-party.

Why entity or individual buy VER

- Entity and individuals voluntarily compensate for their emissions or provide an additional contribution to mitigating climate change.
- Benefits of purchasing VER
  - Carbon neutral or less carbon emission activity
  - Contribution to environment
  - Social responsibility
  - Reputation
  - Awareness for environment and sustainable development
  - Preparation for future emission reduction regulation
  - Contribution for poverty reduction

VER Buyers

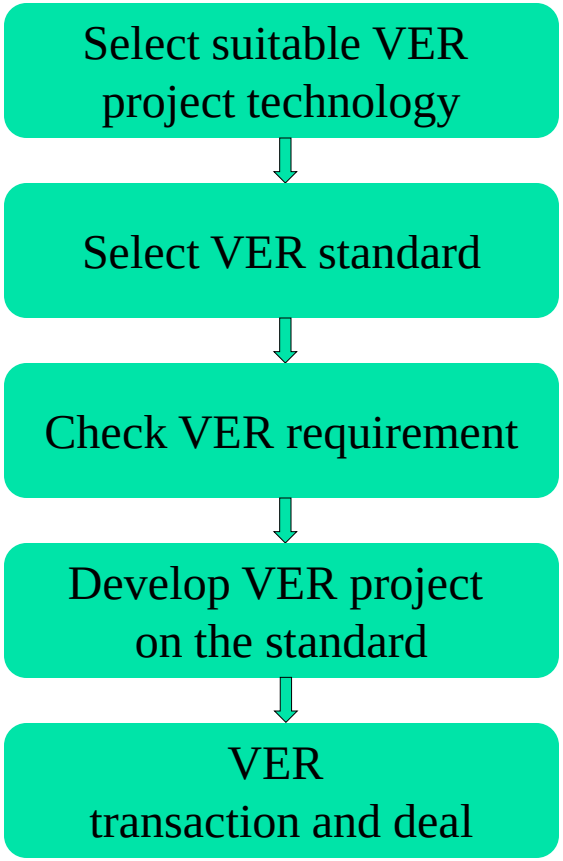
- Industry company
  - Green office
  - China Paper Industry company purchase VER from hydro power project to realize carbon netural
- Governments
  - Some Governments invest to offset the GHG emissions in the big events;.
- NGOs/organizations
  - FIFA - 2010 World Cup
- Individuals
  - Carbon neutral travel- air fight
  - Pacific Gas & Electric Co gives customers the option to pay extra to offset their electricity emissions

Benefit for selling VER

The project participant could benefit from selling VER:

- Receive additional revenue from carbon reduction by the project, and create a more attractive investment return;
- Participant carbon emission reduction activity;
- Be familiar with international procedure of carbon emission measurement and assessment;
- Practice international management standard

VER project development steps



Technologies for the VER project

- Eligible technology in the voluntary market, such as :
  - Afforestation and reforestation
  - Renewable energy: Wind, Hydropower, Solar Power, etc.
  - Biomass electricity generation
  - Animal and agricultural methane destruction
  - Landfill gas capture and utilisation
  - Coal mine methane utilisation
  - Industrial gases and industrial energy efficiency
- Technology has big impact on VER transaction price

VER project source

VERs are derived from project-based emissions reductions:

- Pre-registration CDM project**:** project already operate but have not registered as CDM
- Project purely developed based on VER standard: VCS, GS etc.
- ✓ Special situation: technologies or methodologies not been approved or ready under CDM
- ✓ Small-scale, community-driven projects : insufficient resources (opt for the lower cost option of VERs).

Main Voluntary carbon offset standards

Offset Standards in the Voluntary Carbon Market, 2010

Standard	Started Vintage	Geographic Scope	Total Project Registered
American Carbon Registered Standard (ACR)	1996	International	25
Chicago Climate Exchange (CCX) Offsets Program	2003	International (historically US focused 60%)	340
Gold Standard	2003	International	247
Verified Carbon Standard (VCS)	2006	International	555
Panda Standard	2010	China	Under development

How to choose VER standard

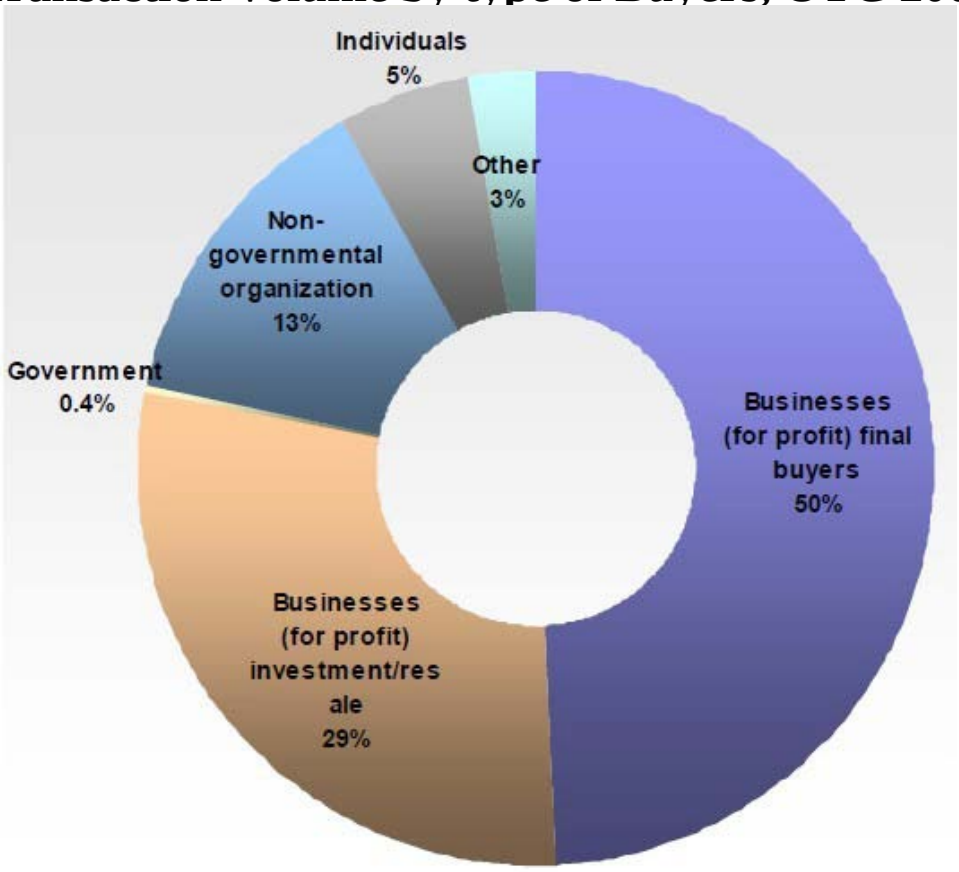
These standards for voluntary carbon offset have their own baseline assessment, additionality assessment, verification , issuance method and registration system.

Choose the standard:

- For the develop purpose and the buyer's demand
- Transaction in Chicago Climate Exchange, choose the CCX standard
- Transaction in Europe Market, choose the GS, VCS standard

VER Buyers' transaction volume

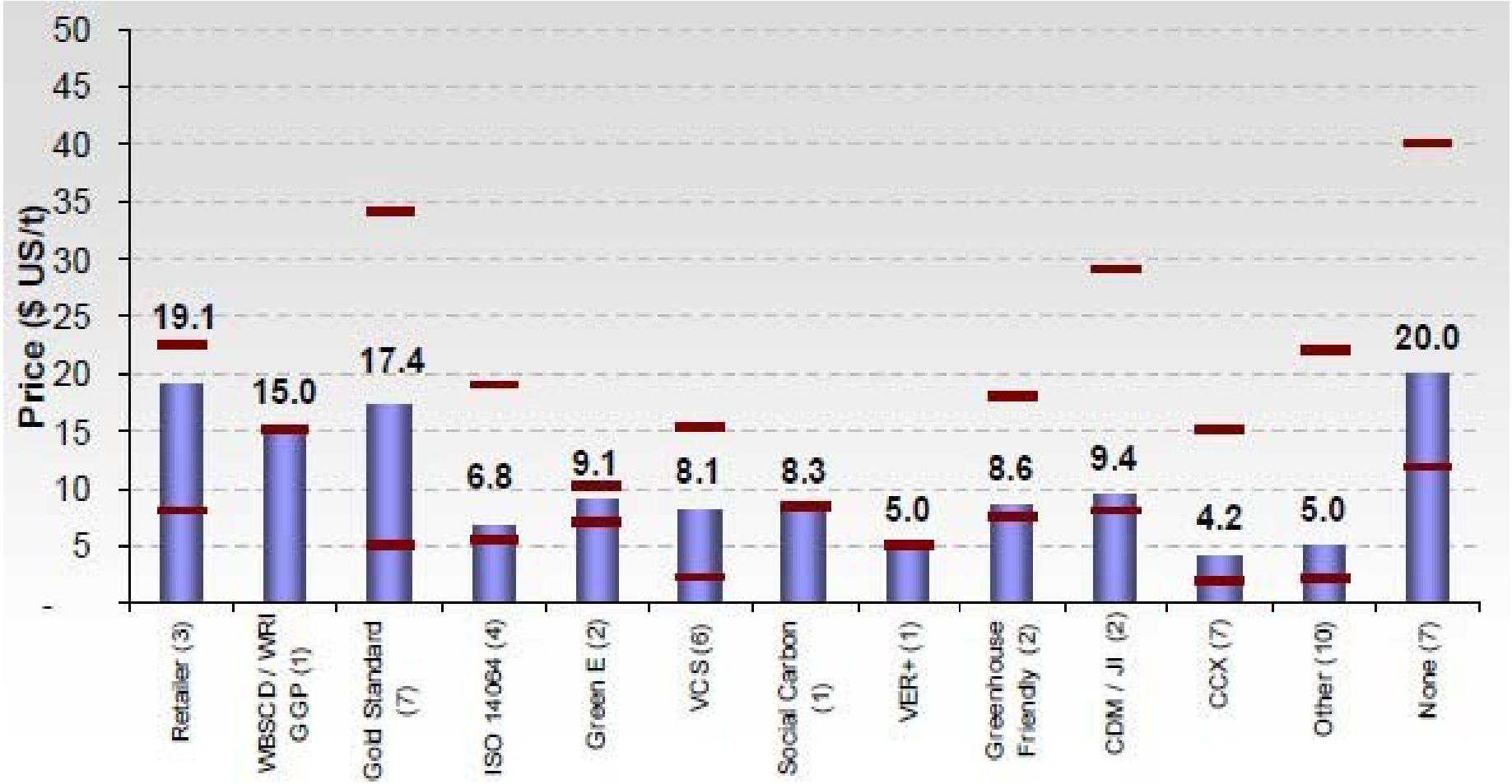
Transaction Volume by type of Buyers, OTC 2007



Source: New Carbon Finance, Ecosystem Marketplace

Transaction price on different standards

Credit Prices by Standard, OTC 2007 (Source : State of voluntary Carbon Market)



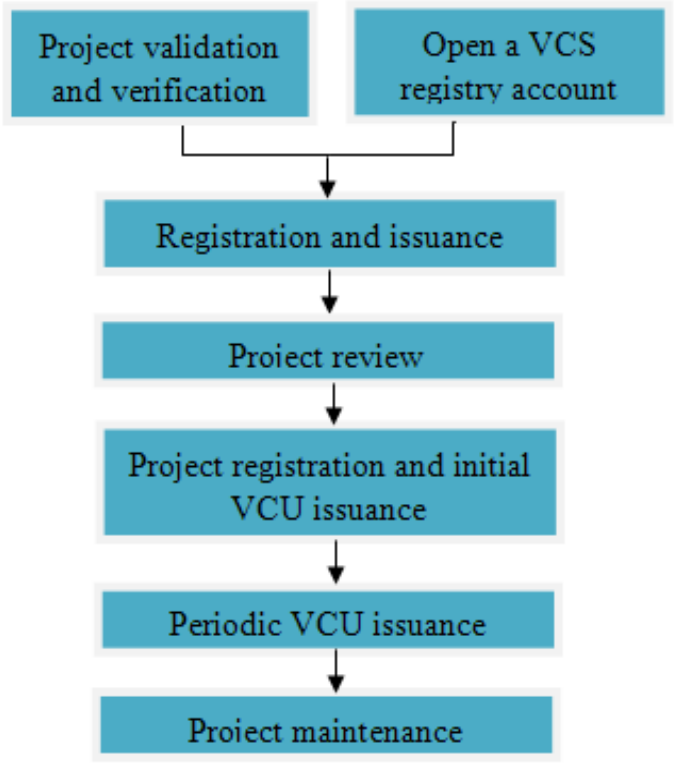
VER project general requirement

The VER buyer pays attention on the following issues:

- Environmental sound technology
- Positively impact on the economy, health and welfare of the local community hosting the project
- Contribution to sustainable development
- Meets relevant requirements by selected specific standards

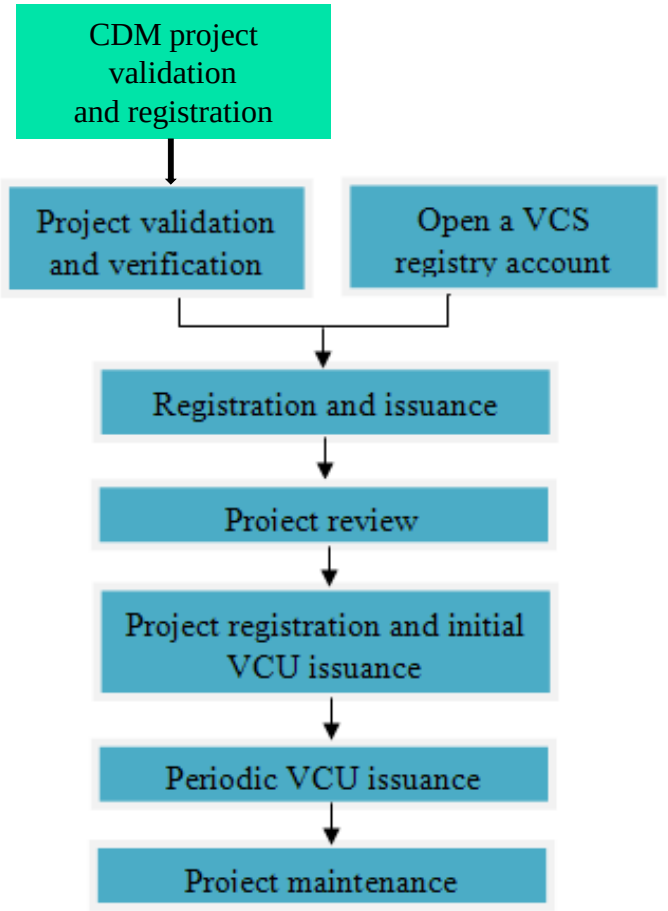
VER project development procedure

- Similar to CDM project development procedure, but shall follow the specific standard
- Example of pure VCS project development procedure:



Pre - CDM VER development procedure

- Example of pre-CDM VER project development procedure based on VCS standard :
- VCS takes the conclusion of validation and registration



Transaction mode

The voluntary carbon offsets could be transacted through:

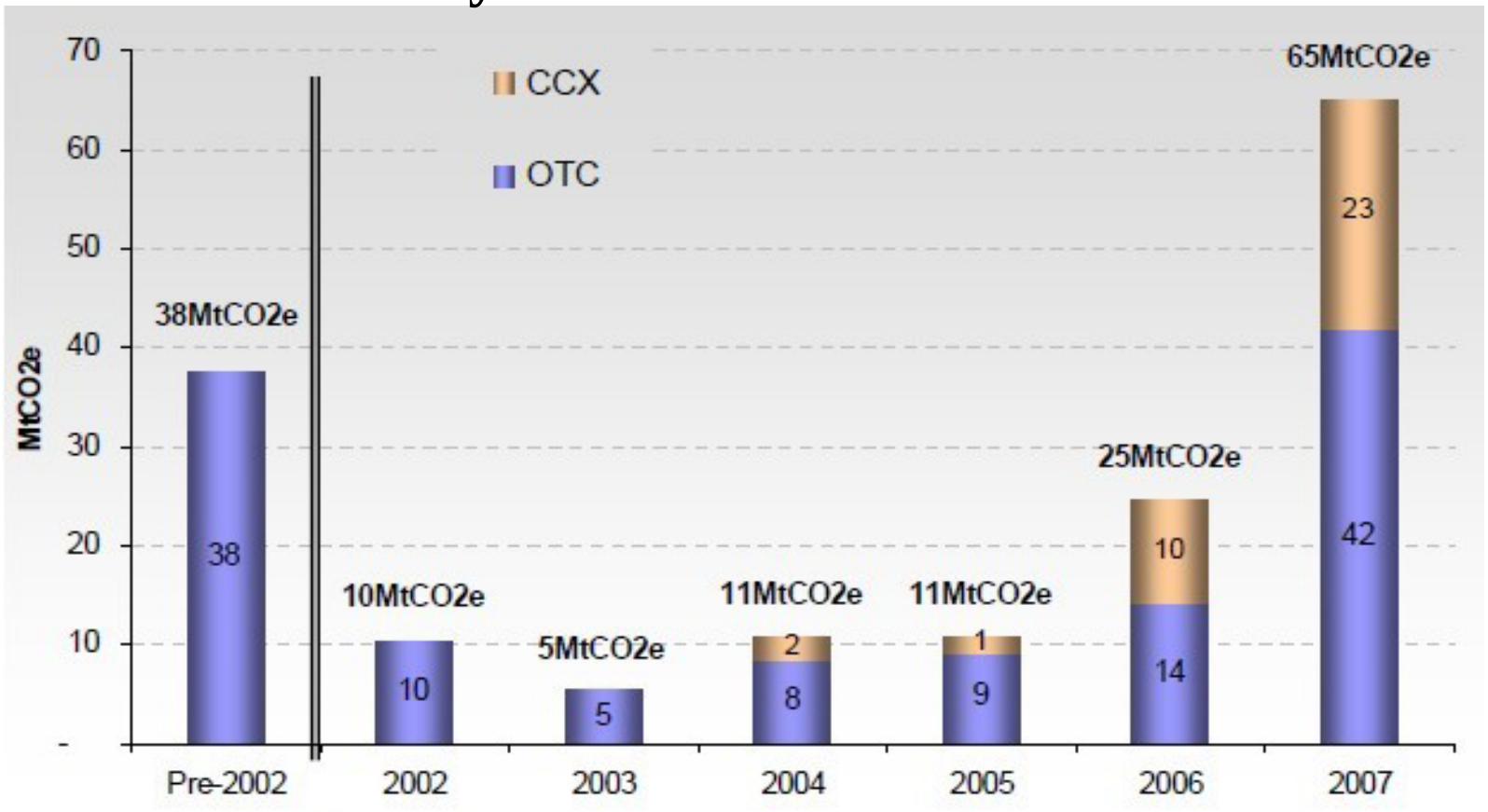
- Over-the counter (OTC) market
- Voluntary market exchanges and platforms

It also could be transacted through the legally binding platform-CCX(Chicago Climate Exchange)

Note: CCX closed in 2010

Transaction volume of different mode

Voluntary Carbon Market Volumes



Source: *New Carbon Finance, Ecosystem Marketplace*

Transaction Platforms

Voluntary market exchanges and platforms , for example:

- Carbon Trade Exchange (CTX)
- China Beijing Environmental Exchange (CBEEX)
- Tianjin Climate Exchange (TCX)
- Climex
- Montréal Climate Exchange (MCeX)
- World Green Exchange
- Markit
- Africa Carbon Credit Exchange (ACCE)
- The Africa Carbon Exchange (ACX)
- Caribbean Basin Climate Exchange (CBCX)
- The Green Exchange (GreenX)
- The Santiago Climate Exchange (SCX)

How VER price is decided?

Key issues for transaction price

The VER transaction price depend on the following issues:

- Supply and Demand in the market
- VER standard
- VER project technology
- VER hosting country
- Transaction volume
- Transaction vintage
- Transaction mode

Voluntary market projects vs. CDM market

	Voluntary	CDM
Commodity	VER	CER
Price	Lower	Higher
Coverage	Voluntary / worldwide	Annex 1 countries
Market size	Smaller	Larger
Regulation	Follow the different standards	UNFCCC EB
Methodologies	CDM and others standards	Approved by EB

Advantages for VER project development

- Less bureaucratic and more efficient
- Less costly
- New sectors not covered by CDM
- New technologies not covered by CDM
- Better contribution impact on sustainable development
- Feasibility of forestry projects
- Relative simple procedure to generate credits

Challenges for VER project development

- Unstable market demand
- Small market
- Lower VER price
- Quality: certainty of additionality
- Transparency
- Number of standards
- Volume of VER project
- Relative high transaction price against revenue for small scale VER project
- Registry

Thank You!

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