



Carbon Market Overview: Highlighting Sustainable Development In the Demand & Supply Agenda

**Presentation made for the
ADB ASIA Clean Energy Forum**

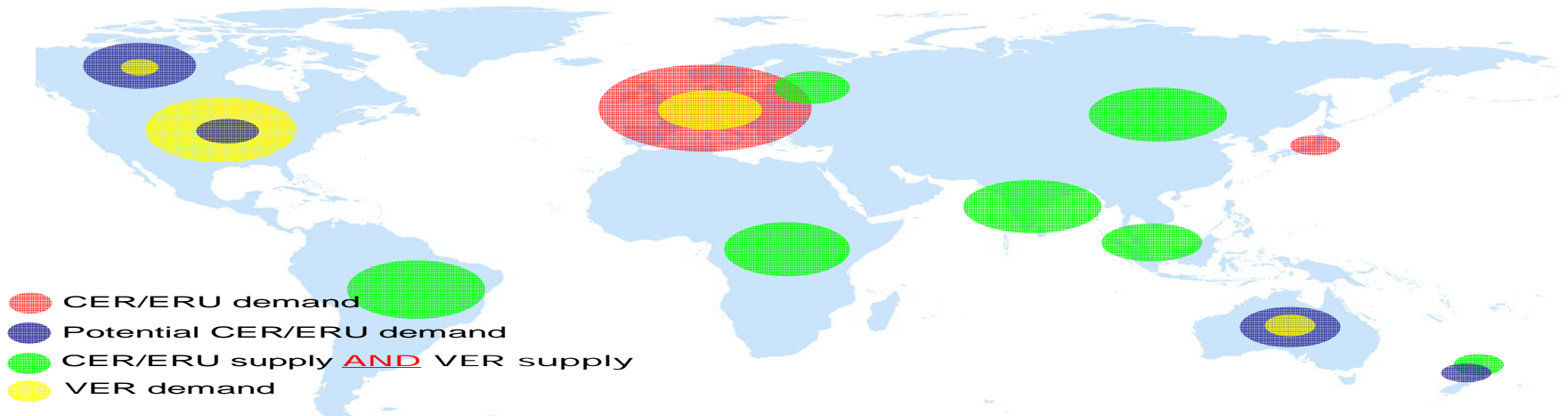
by

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Current Demand and Supply Picture: Not So Idyllic

How to Leverage Sustainable Development amongst Developing Member Countries (DMC)

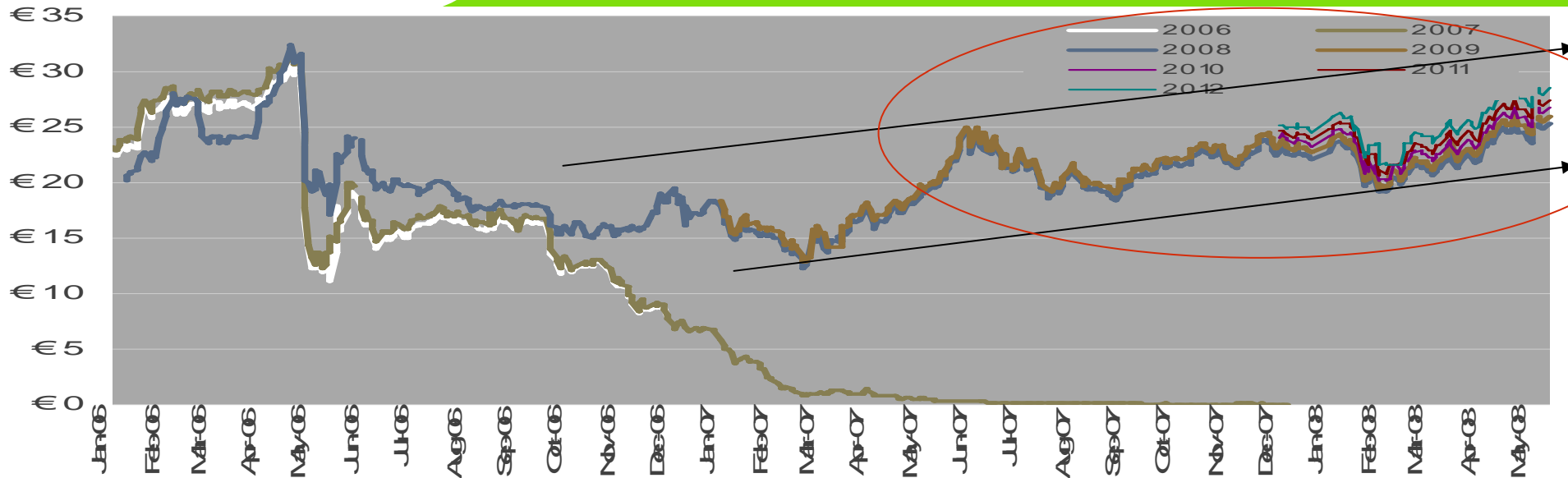
**TFS Green as a ADB DMC Sellers' Representative:
Your Partner in Sustainable Development**



- Total Carbon Market as of 2007*:
 - EU ETS: The Biggest Allowance Market having 98% of market volume valued at USD 50B
 - CDM: Biggest Project based Credits having 90% of market volume valued at USD 12.9B
 - Secondary CDM ↑ at 27% in volume valued at USD 5.5B
 - Primary CDM volume ↓ to 63% in but ↑ in value by 40%

*Source: State and Trends of the Carbon Market 2008, World Bank

Current EUA Market Situation: Bullish



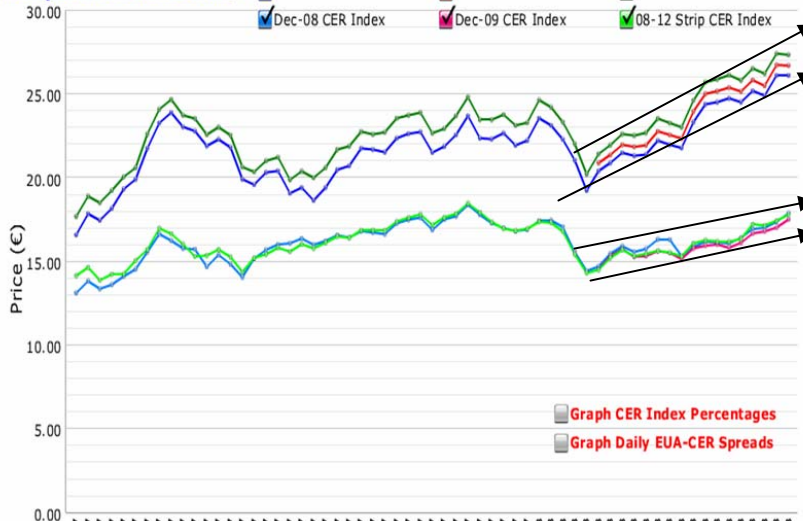
<u>ECX - EUAs</u>	30-May
Dec 08	€26.10
Dec 09	€26.69
Dec 10	€27.33
<u>Reuters CER Index</u>	
Dec 08	€17.87
Dec 09	€17.49
08-12 Strip	€17.78
<u>Exchange CERs</u>	Dec-08
ECX (ICE)	€17.85
Nord Pool	€17.80
Green Exch.	€17.85

- **EUA Prices on an up-trending channel**
- **Higher Oil and Gas prices (cheaper to use Coal thus the need to offset more emissions)**
- **Need to hedge/cover CER supply shortfalls due to project delays and/or failures in a portfolio (project portfolio write-offs)**
- **Bigger short position of EU community due to increasing emissions brought about by inclusion of new industries (aviation) by 2011**
- **Estimated EU Demand for CERs= 285M/ year**

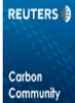
CER Prices on Uptrend; Spreads Between EAU and CER Prices Continue to Widen

◆ Dec-08 EUA ◆ Dec-09 EUA ◆ Dec-10 EUA ◆ Dec-08 CER Index ◆ Dec-09 CER Index ◆ 08-12 Strip CER Index

Daily EUA & sCER Chart



Graph CER Index Percentages
Graph Daily EUA-CER Spreads



EUAs = Daily ECX closing prices - Reuters RIC code <0#CFI>; Reuters CER Index = Calculated average of contributed broker prices - RIC code <CER/RTR>

◆ Dec-08 EUA-CER Spread ◆ Dec-09 EUA-CER Spread ◆ Dec-10 EUA-Strip CER Spread

Daily EUA & sCER Chart



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Bullish Factors

- Lieberman-Warner Climate Security Act
- Global Post Kyoto Mechanism
- Australian Demand and possible linking
- SRI /CSR Demand for quality CERs via Trust receipts

Bearish Factors

- No Post Kyoto Treaty after 2012
- Limited entry or exclusion of CERs in the EUETS Phase 3 in the absence of a collective post Kyoto mechanism? (~280MT)
- International Transaction Log delays

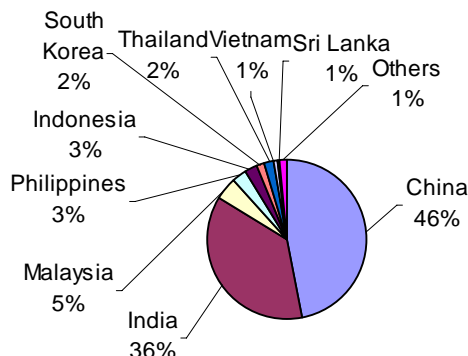
Current CDM Supply Picture: Good But Can Be Better

Who's buying?

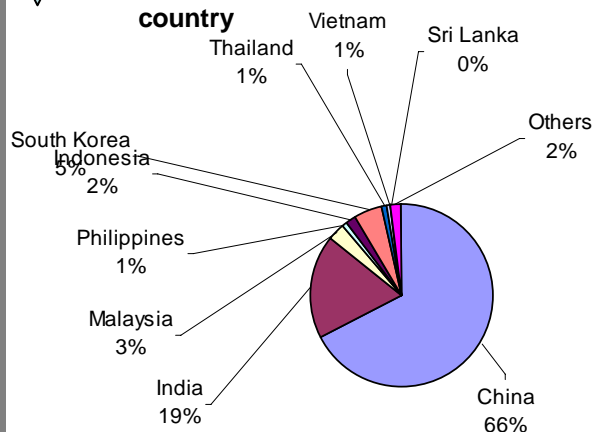
EcoSecurities	247
Carbon Asset Management Sweden	111
EDF Trading	83
IBRD	78
Cargill International	64
RWE	59
ENEL	58
Trading Emissions	57
Agrinergy	55
AgCert	51
Mitsubishi	51
Noble Carbon	46
MGM Carbon Portfolio	42
Marubeni	39
CAMCO	38
Carbon Resource Management	39
Climate Change Capital	37
Kommunalkredit	36
Danish Ministry of Climate & Energy	35
Energy Systems International	33

Who's Selling?

Number of CDM projects in Asia by country

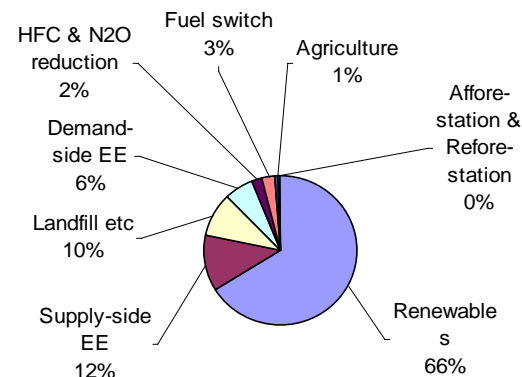


Volume of CERs until 2012 in Asia by country

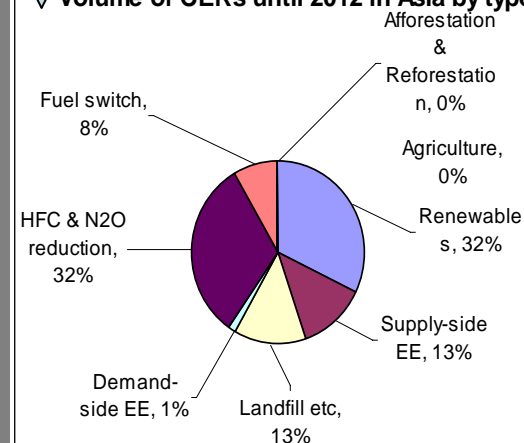


What's Selling?

Number of projects in Asia by type



Volume of CERs until 2012 in Asia by type



- **Good News:**

1. Many Small scale projects: 46.15% small vs. 53.85% large out of 1077 projects
2. 54.28% are Energy Related (RE and Non RE W/ 37 methodologies)
3. Asia Pacific CDM projects accounts DMCs for 63.88%
4. Expected annual average CERs from registered parties 216M
5. Total Issued CERS by Host party = 149M

- **But....**

1. India and China still dominate small scale market at ~ 80%
2. Energy Efficiency (supply side, transport, demand side) still quite low – Reason: lack of successful projects on a big scale; few methodologies in place
3. Asia Pacific is dominated by China (21%) and India (32%); 20% by ROW
4. China accounts 51%, India (14%), Korea at 6.74%, Indonesia – 1.18%, Malaysia-1.12%, ROAP- <2%
5. China account 30%, India 28%, Korea – 18%, Vietnam 3%, ROAP - < 3%

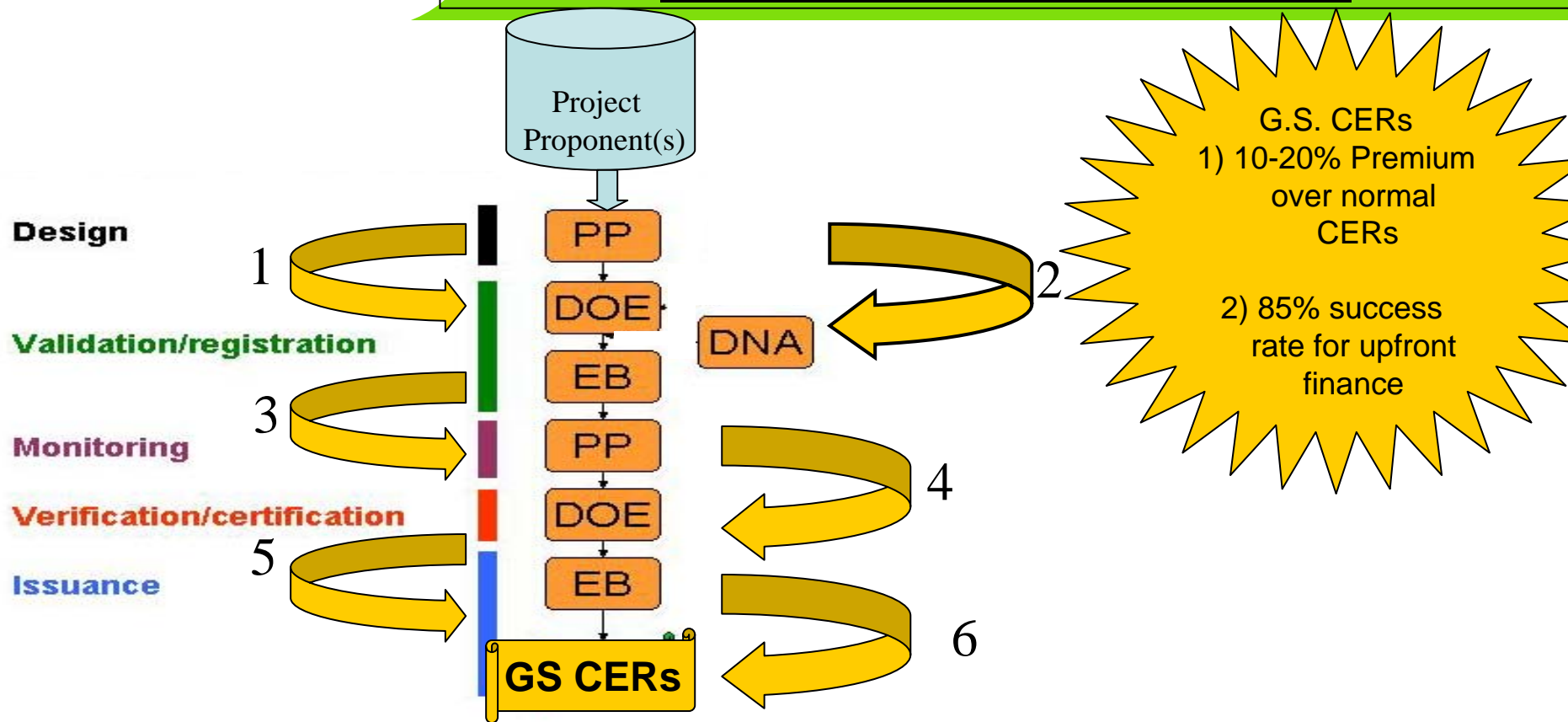
Sustainable development beginning to trickle down but we need to see more of it

Demand and Supply Picture: Not so Idyllic

**How to Leverage Sustainable Development amongst
Developing Member Countries**

**TFS Green as a ADB DMC Sellers' Representative:
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Adopt Existing Best Practices in CDM Project Development: Use The Gold Standard



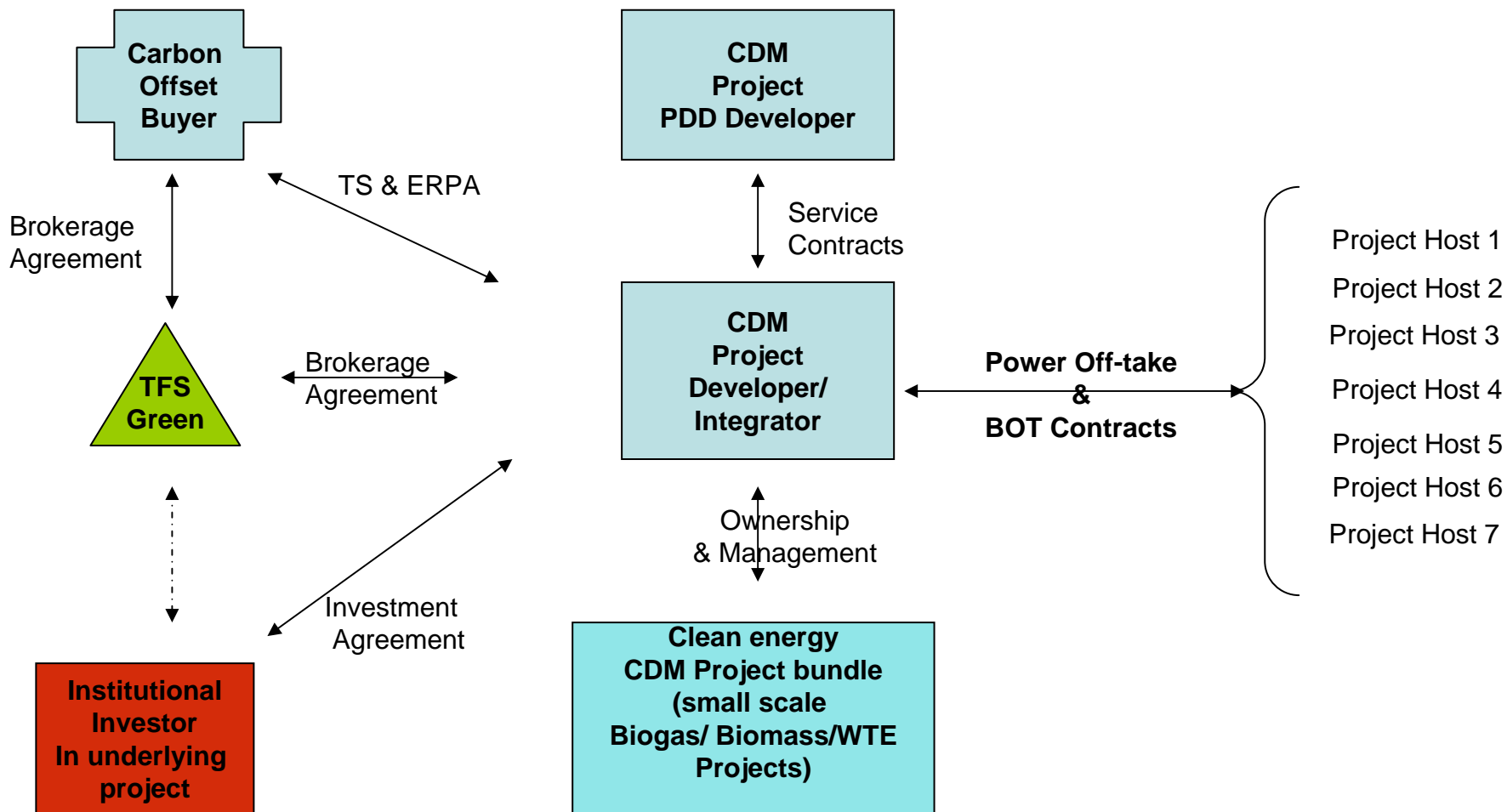
*GS process help preserves environmental integrity and ensures sustainable development.
GS projects get price premium due to its stature as a quality project.*

Better DNA Systems: Take the Lead of Philippine DNA

- Sustainable Development Benefits Description
- Interim Guidelines for the Conduct of Stakeholders' Consultation
- A/R Criteria and Indicators
- Proofs of Legal Capacity
- Documentation of Permits, Licenses, Certificates

Build in key elements of the Gold Standard in the DNA processes. This ought to help validators establish benchmarks on how to assess sustainable development and stakeholder's consultation.

Sample Deal Structure of an Aggregated Carbon Offset Project



Project Developer / Technology Provider assumes total project development and finance risk.

**Demand and Supply Picture:
An unbalanced distribution of CDM project Development**

**How to Leverage Sustainable Development amongst
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Benefits in Dealing with TFS Green as a DMC Sellers' Representative

Packaging the DMC Seller's CDM Project



A Seller Centred Approach

Offering the DMC Seller's Project



Choice of a wide array of quality Buyers or Pre-selected Buyers to match Seller's requirements

Conducting the Bidding Process



Best route for optimizing value of Seller's CERs

Term Sheet (TS) and ERPA Negotiation & Signature



Access to markets Best Practices on TS & ERPA negotiations and signing

Deal Settlement Monitoring



Commitment to guide and advise to ensure smooth settlement of the Deal

TFS Green's 3-Pronged Approach in Helping Promote Sustainable Development

Awareness & Advocacy
Campaigns on the
CDM Market

Information sharing and educational thrust on CDM Market Risks and opportunities or relevant stakeholders in DMCs
(i.e. Govt, Business Association, finance inst)

Capacity Building
in CDM
Project Development

Provision of Technical Advise and Guidance in over-all CDM Project Development
(i.e. structuring CERs to enhance investment viability; sharing of best practices in CDM project Development)

Efficient & Cost Effective
Routes in
CER Commercialization

Technical Advise, Guidance, and Management in

- CDM Term Sheets Development (Seller Centered Approach)
- CERs Bidding process (access to quality buyers),
- Emission Reduction Purchase Agreements (ERPA) development and signing,
- Transaction monitoring over a 2 year period



Thank You

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