

CARBON-LINKED FINANCIAL PRODUCTS

08/24/2010

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Carbon markets are created by regulation

United Framework Agreement on Climate Change (UNFCCC), Rio, 1992

- stabilizing global greenhouse gas concentrations in the atmosphere recognizing climate change as a “**common but differentiated responsibility according to respective capabilities**”

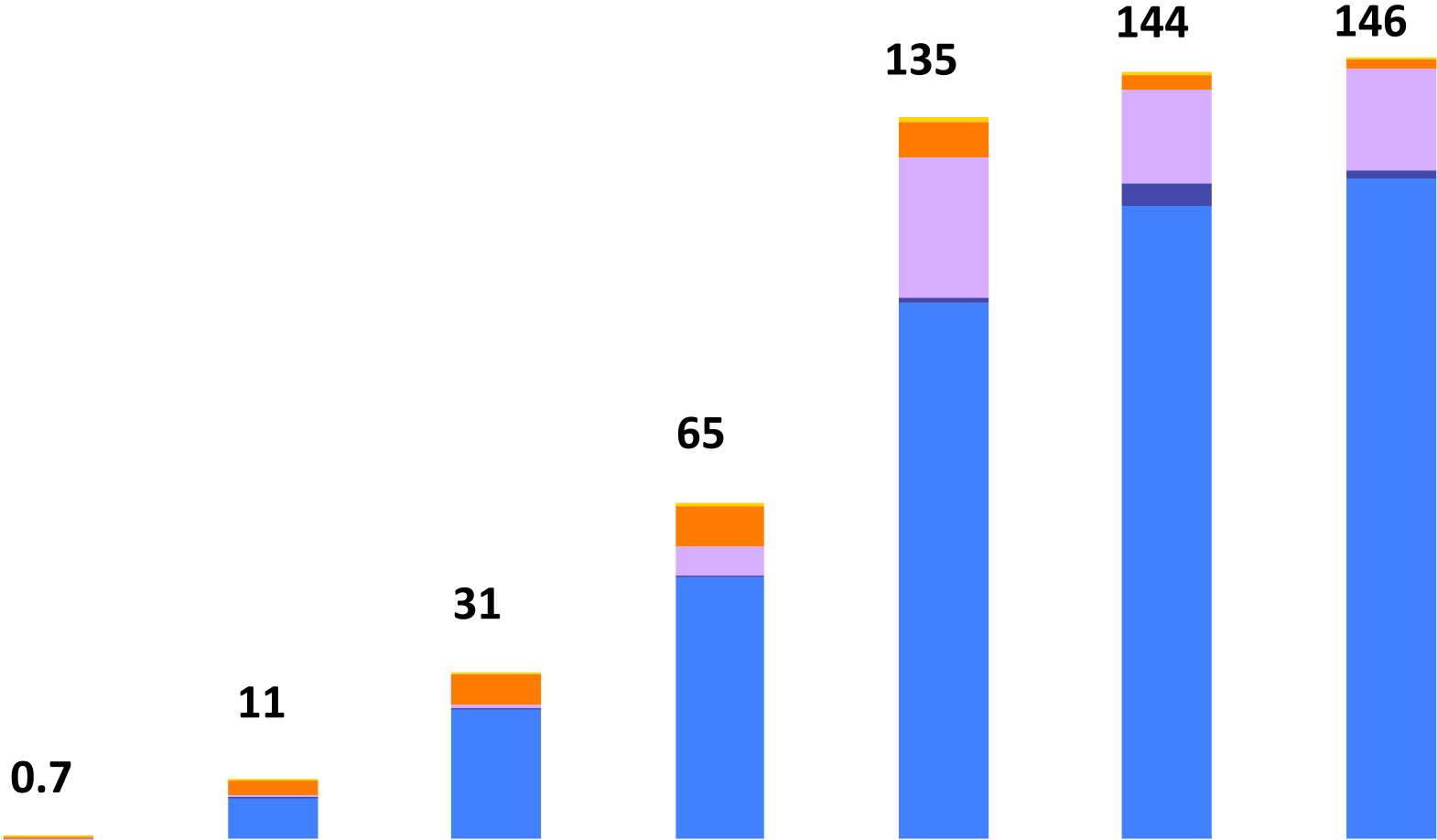
Kyoto Protocol, 1997

- Commitment by 38 developed countries to reduce greenhouse gas emissions by 5.2 % below 1990 levels in the period 2008-2012
- Created market mechanism (cap-and-trade) to manage the cost of emission reductions
- Allowed the participation of the developing countries through the clean development mechanism

The European Union Emission Trading System (EU-ETS)

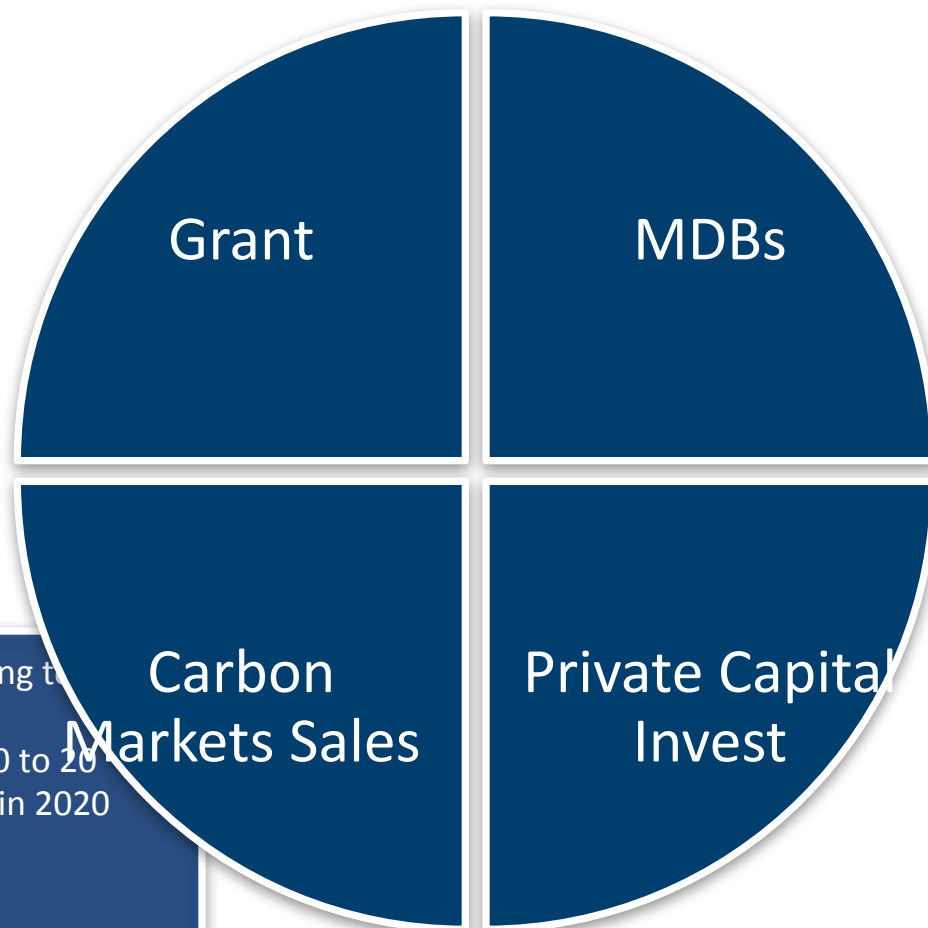
- Created market mechanism (cap-and-trade) to meet a part of EU's Kyoto Protocol Commitment
- Started in 2005 with no end-date defined. Phase 3 (2013-2020) reduction targets have been defined
- Allows offsets (CERs) from CDM projects but there are limitations after 2012

Evolution of the carbon market (in billion US\$)



- Developed countries shall raise \$30 billion through 2010 to 2012 of new and additional resources

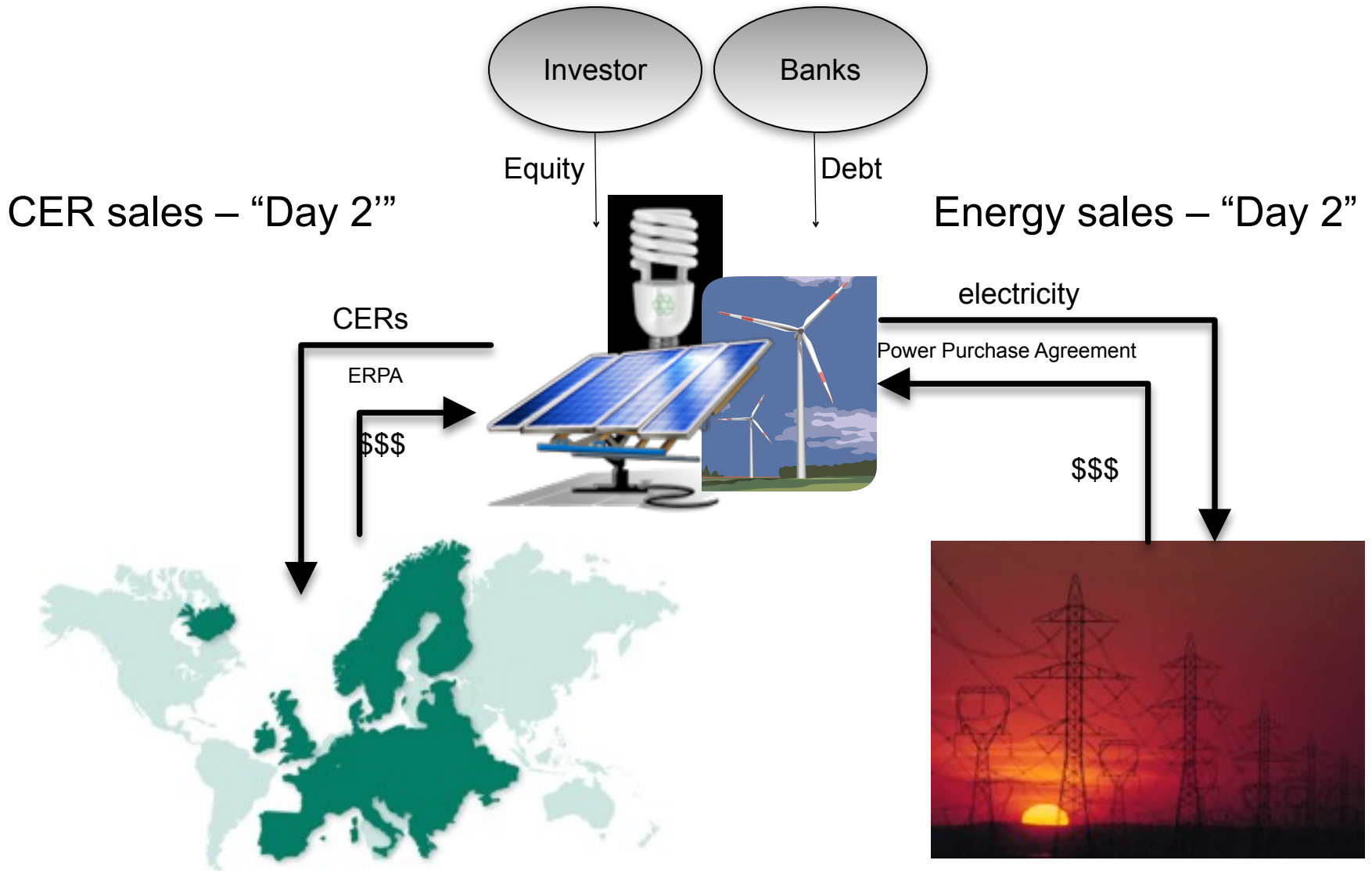
... and to mobilize **\$100 billion per year** by 2020 from a variety of sources



- Will vary according to carbon prices...
- At \$15/tCO₂: \$10 to 20 billion per annum in 2020

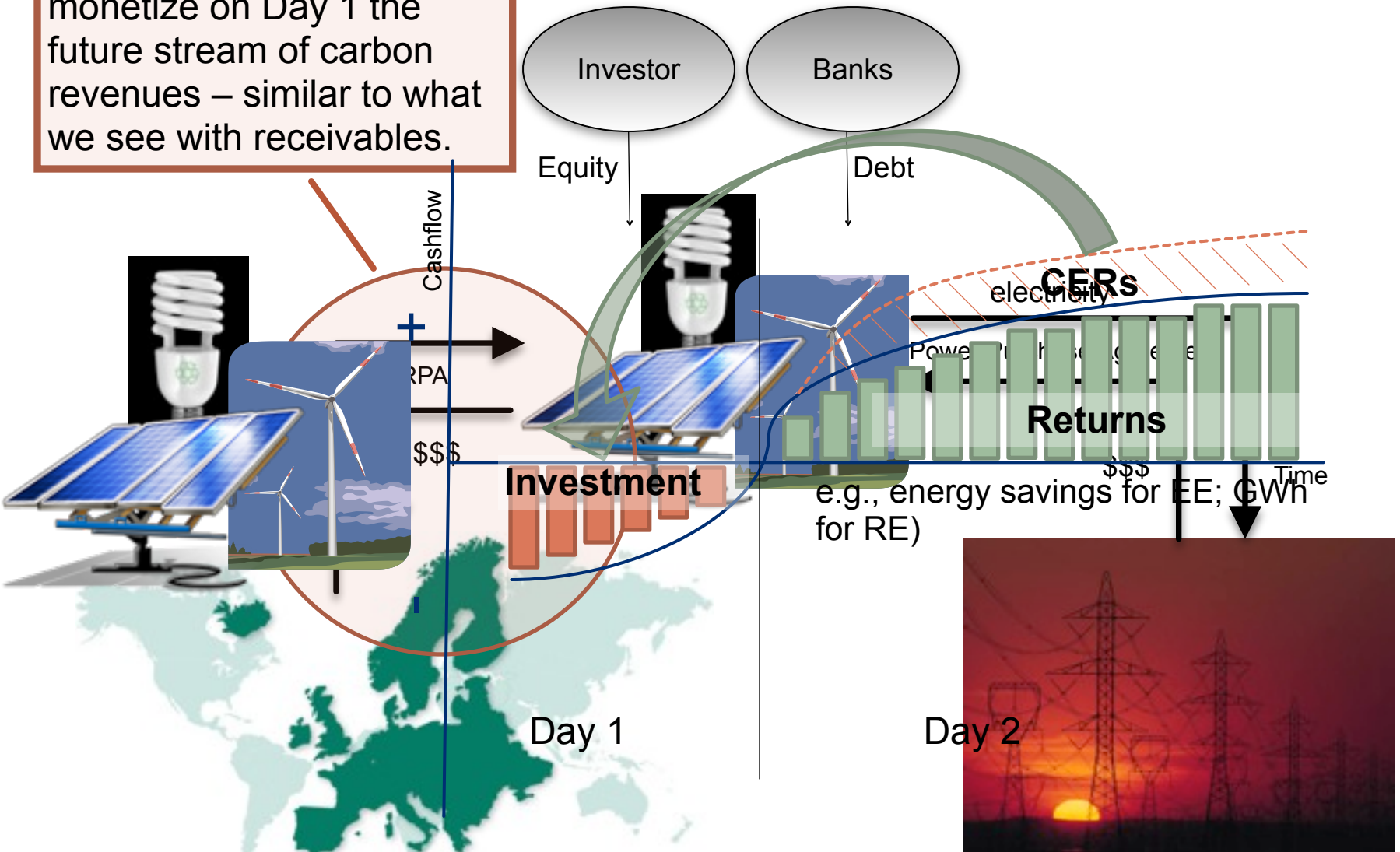


Energy Project Finance – “Day 1”



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Challenge: ways to monetize on Day 1 the future stream of carbon revenues – similar to what we see with receivables.



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Carbon Linked Financial Products

- Design objective is to utilize limited public sector financial resource flows (e.g. from the Green Fund) to leverage much larger private sector investments for low carbon infrastructure investments
- Selection of possible products:
 - Guarantees
 - Product 1: WB Carbon Market Development Guarantee (“Carbon Guarantee”)
 - Product 2: Off-Balance Sheet Carbon Guarantee
 - Bonds
 - Product 3: WB issued Carbon-linked Bond
 - Product 4: Country Issued Carbon-linked Bond with WB Guarantee
 - Product 5: Carbon Mezzanine Fund
 - Product 6: Carbon Price Support fund

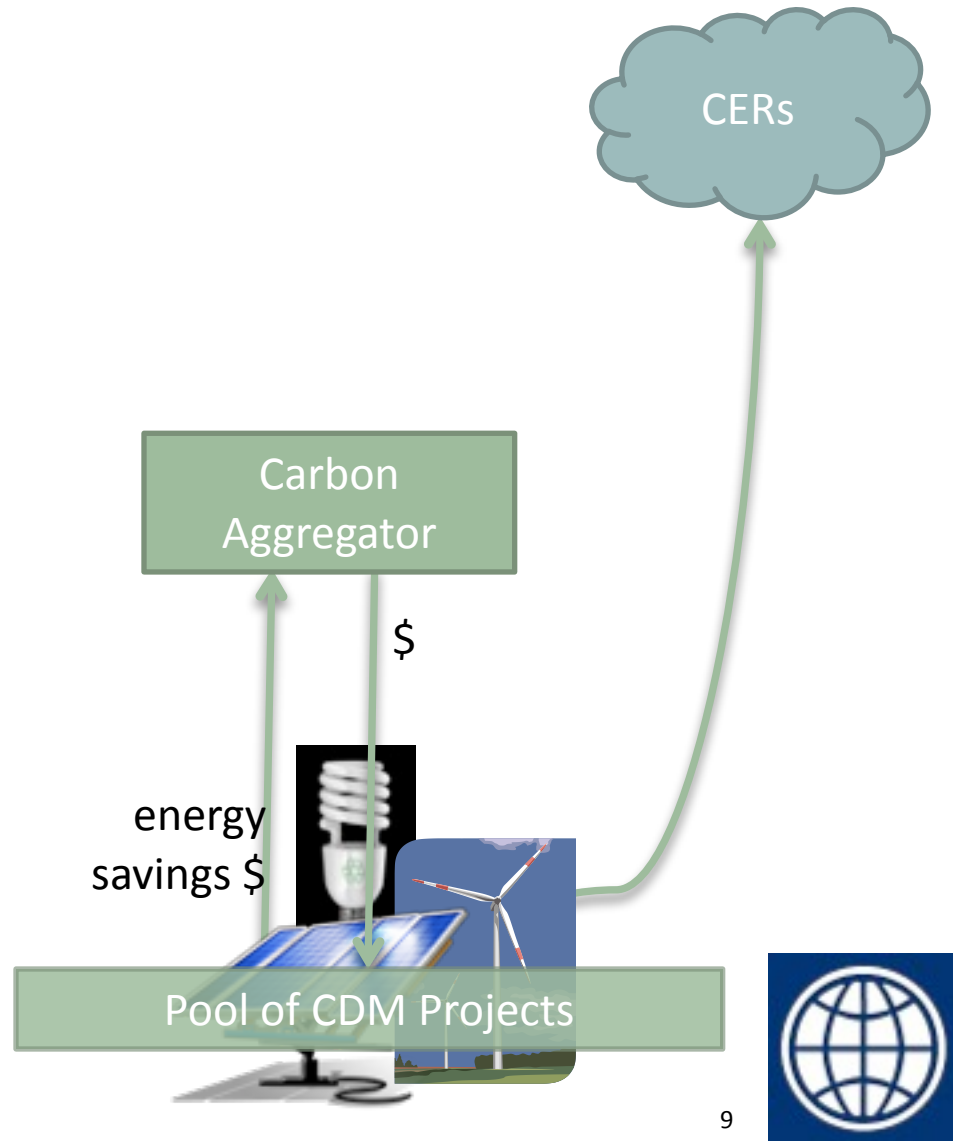


Proposal to help monetize future Carbon Credits (CERs, etc.) through the ‘Carbon Guarantee’:

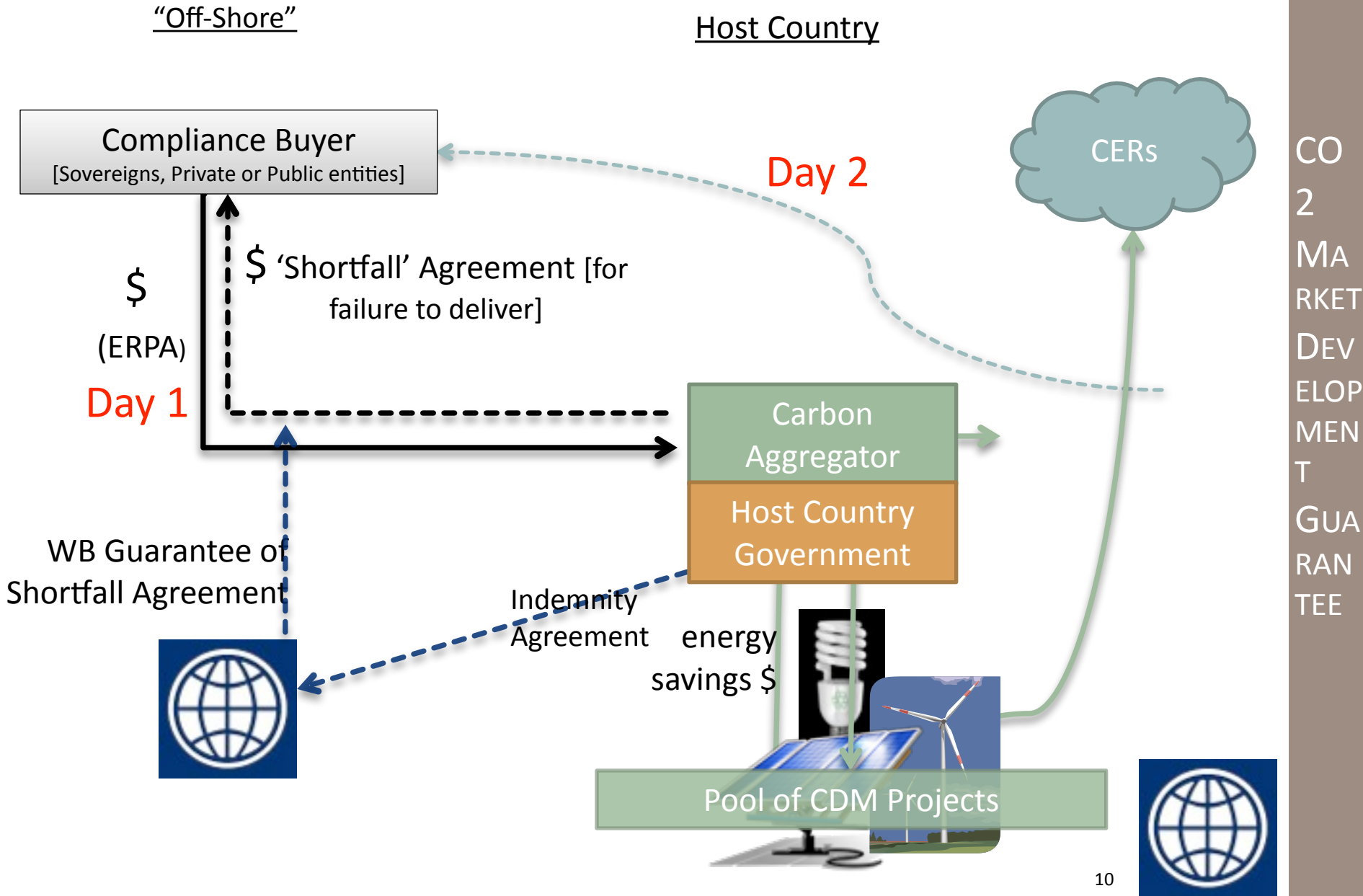
- Objective: facilitate an upfront payment for CER forward sales Contract (i.e., selling today future CER flows)
- Application: a developing country seller (investor in EE/RE) sells CERs to an Annex 1 country buyer (compliance buyers, etc.)
- Guarantee: the Bank guarantees government payment obligations (under its shortfall agreement), effectively guaranteeing CER delivery risk for projects in developing countries



Host Country



CO2 Market Development Guarantee – How it works



CO2 Market Development Guarantee – How it works

“Off-Shore”

Host Country

Compliance Buyer
[Sovereigns, Private or Public entities]

Day 2

\$ (ERPA)
\$ ‘Shortfall’ Agreement [for failure to deliver]

Day 1

Carbon
Aggregator
Host Country
Government



WB Guarantee of Shortfall Agreement

MDB
Trust
Guarantor

Indemnity
Agreement

\$
“Climate Fund/
Annex I”

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Conclusions

- Carbon Guarantee is possible financial product to allow developing countries to help finance low-carbon investment from the proceeds of the forward sale of Carbon Credits to buyers in industrialized countries;
- Provides funding today in exchange for a future flow of carbon credits to be generated from an EE/RE investment
- Donor funds or other “climate fund” back-stopping Bank guarantee allows
 - The carbon guarantee instrument to have wider application
 - Participation of private sector project owner and sellers
 - Public sector projects in countries where governments are not interested in providing guarantees to benefit.



Thank you!

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