

# **Economics of CDM Projects**

# Economics of CDM Projects – Key Factors

- Ø CDM projects produce both **conventional** project output and **carbon benefits(CERs)**.
- Ø The value of carbon benefits and its impact on project viability are **influenced** by several factors which include:
  - § **Viability/feasibility** as CDM project (**Technical/Financial**)
  - § **Quantity** of CERs generated by the project
  - § **Price** of CER
  - § **Transaction costs** involved in securing CERs
  - § **Risks** involved

# Financing CDM Projects – Basics

Ø Whether a potential CDM Project is **feasible or viable?**

§ **Technologically** feasible

§ **Financially** sound

Ø **Different types** of financing

§ **Project financing** – Grants/Loan/Equity

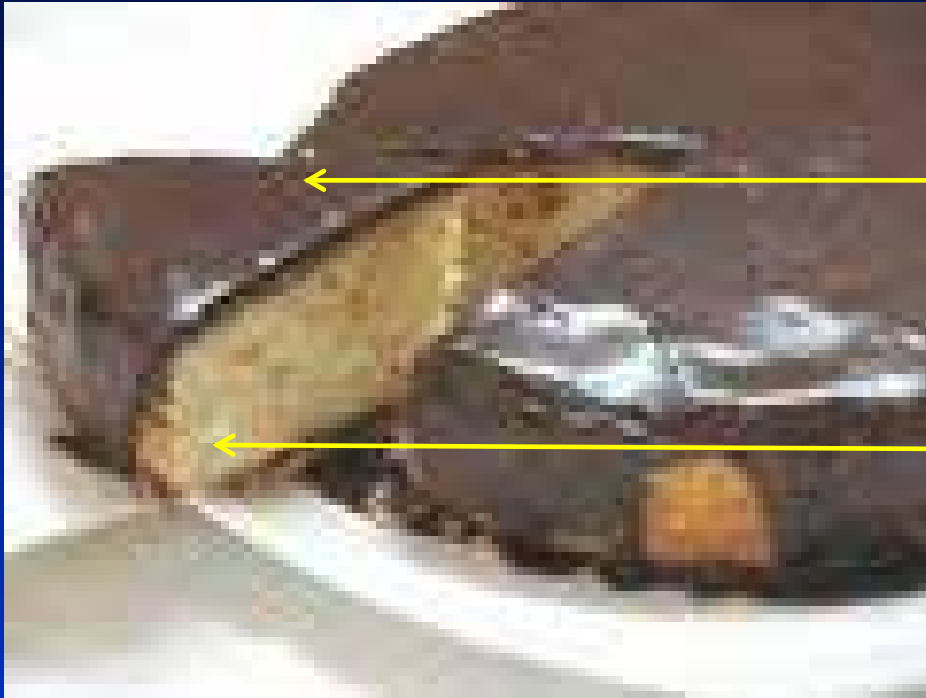
Financing of investment and construction costs, operating and maintenance

§ **Carbon Financing** – CDM Costs & CER revenues

- Transaction costs,

- Revenue earned from the carbon credits- typically 5 to 15 % of total project costs

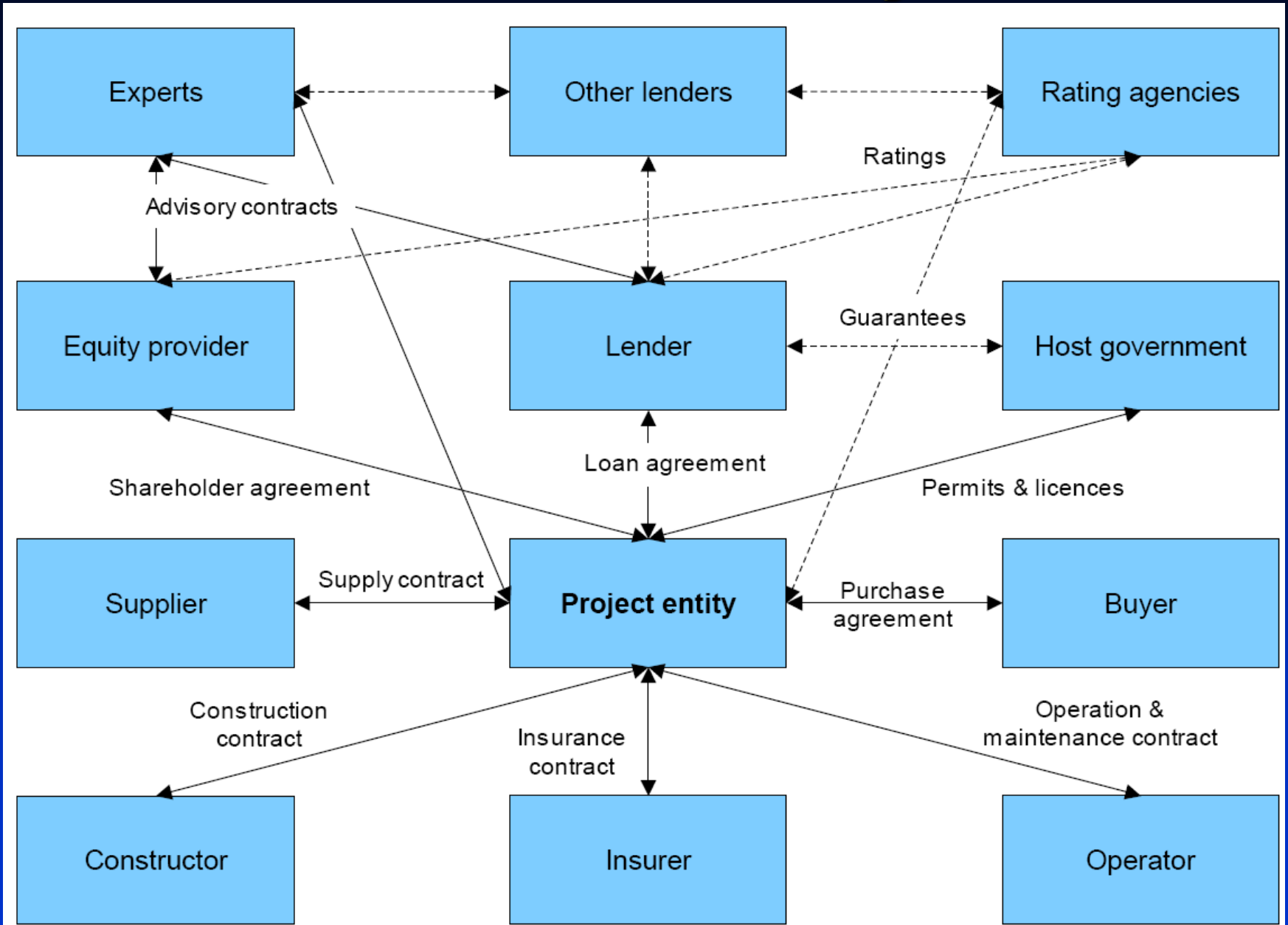
# Carbon Financing is just an Icing on the Cake



Carbon Financing

Project Financing

# Stakeholders involved in Project Financing



# Project Costs & Sources

## Ø Total Project Cost Estimates

§ Investment costs, including development costs, up to commissioning of project, Operation & maintenance

## Ø Sources of Finance to be Sought or Already Identified

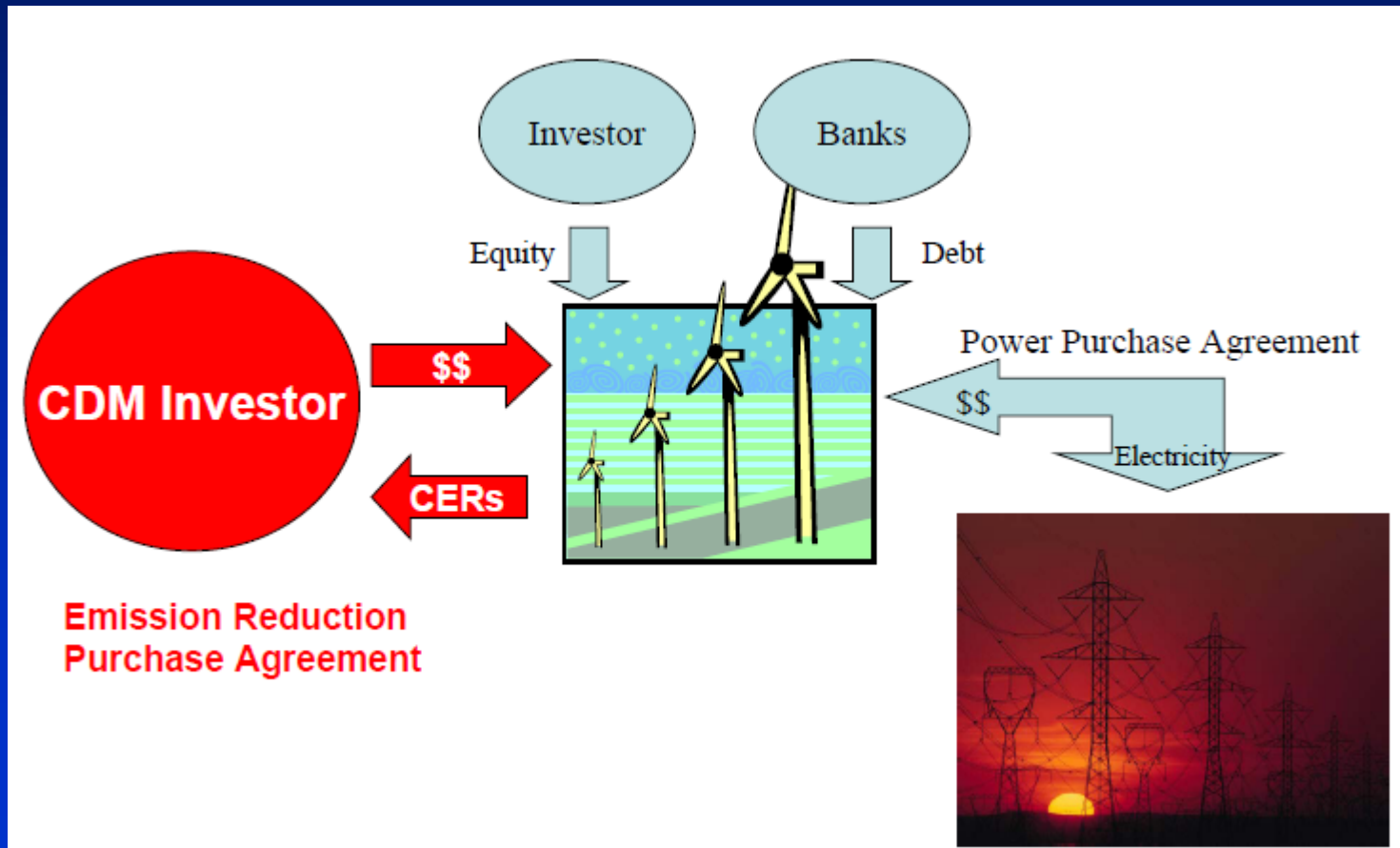
§ Critical to identify other debt and/or equity finance

§ Typical sources of funding: Multi-lateral/Bi-lateral, Financial Institutions

Ø CDM contribution = typically 5-15% of total project costs

# Options for CDM Financing - ERPA

Ø ERPA - Emission Reductions Purchase Agreement  
Annex I investor agrees to buy CERs as they are generated by the project



# Emission Reductions Purchase Agreement

- ∅ Can improve the **project IRR**

- ∅ Typically **forward contracts**

- § Payment upon **delivery** of verified ERs

- § **Upfront payments** are possible

- ∅ Helps secure **financing and reduce project risk**

- § Future ER payments as collateral for project loans

- § Can be paid into an escrow account, protecting lenders from currency convertibility and transfer risks



# Options for CDM Financing – Carbon Funds

## Carbon Funds

Ø Annex I investors contribute to a **mutual fund**

Ø Mutual fund **agrees to buy CERs** as they are generated by the project

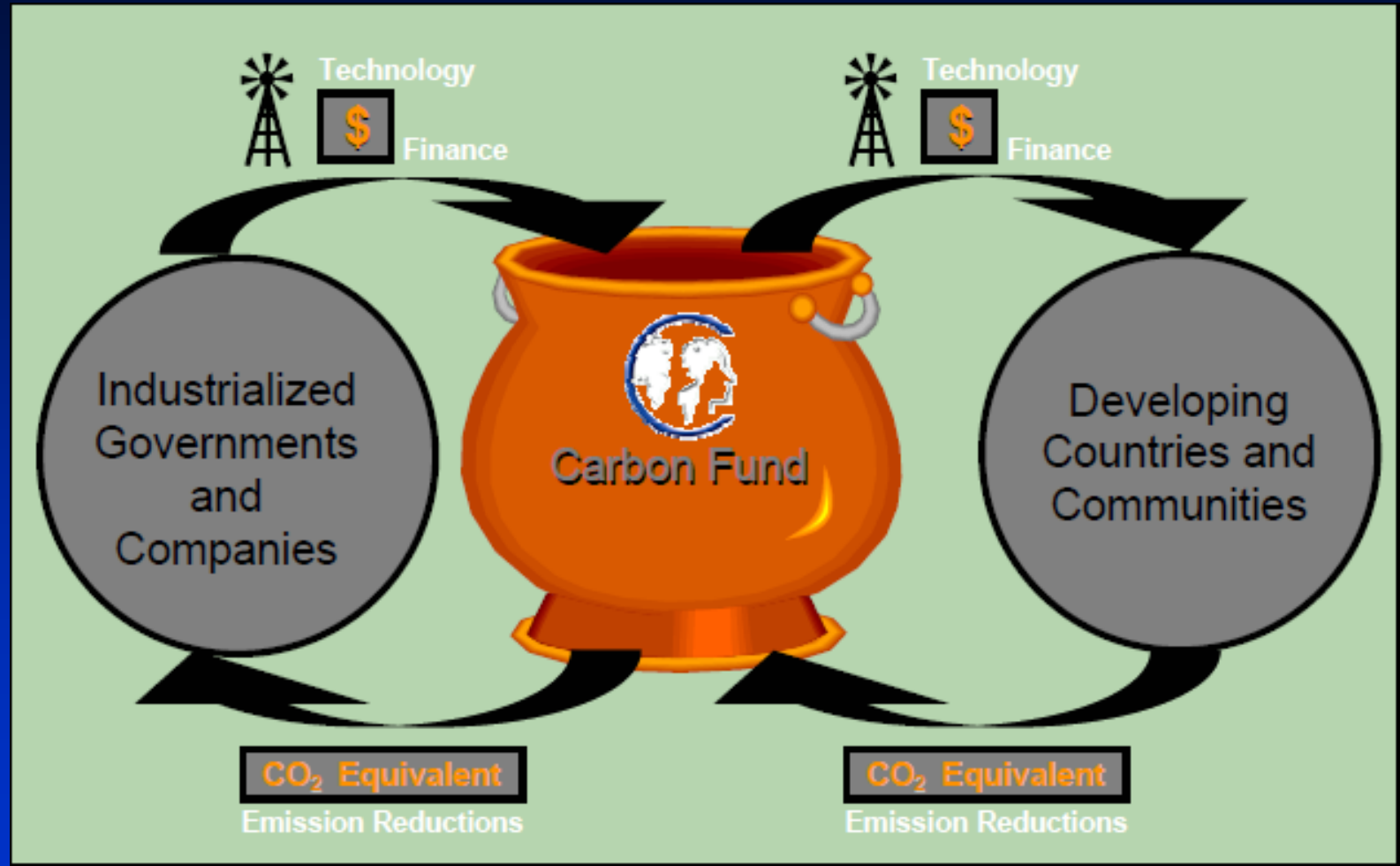
Ø Carbon Fund Examples:

§ ADB – Asia Pacific Carbon Fund/Future Carbon Fund

§ World Bank – Prototype Carbon Fund/Bio carbon Fund/Community development Carbon Fund

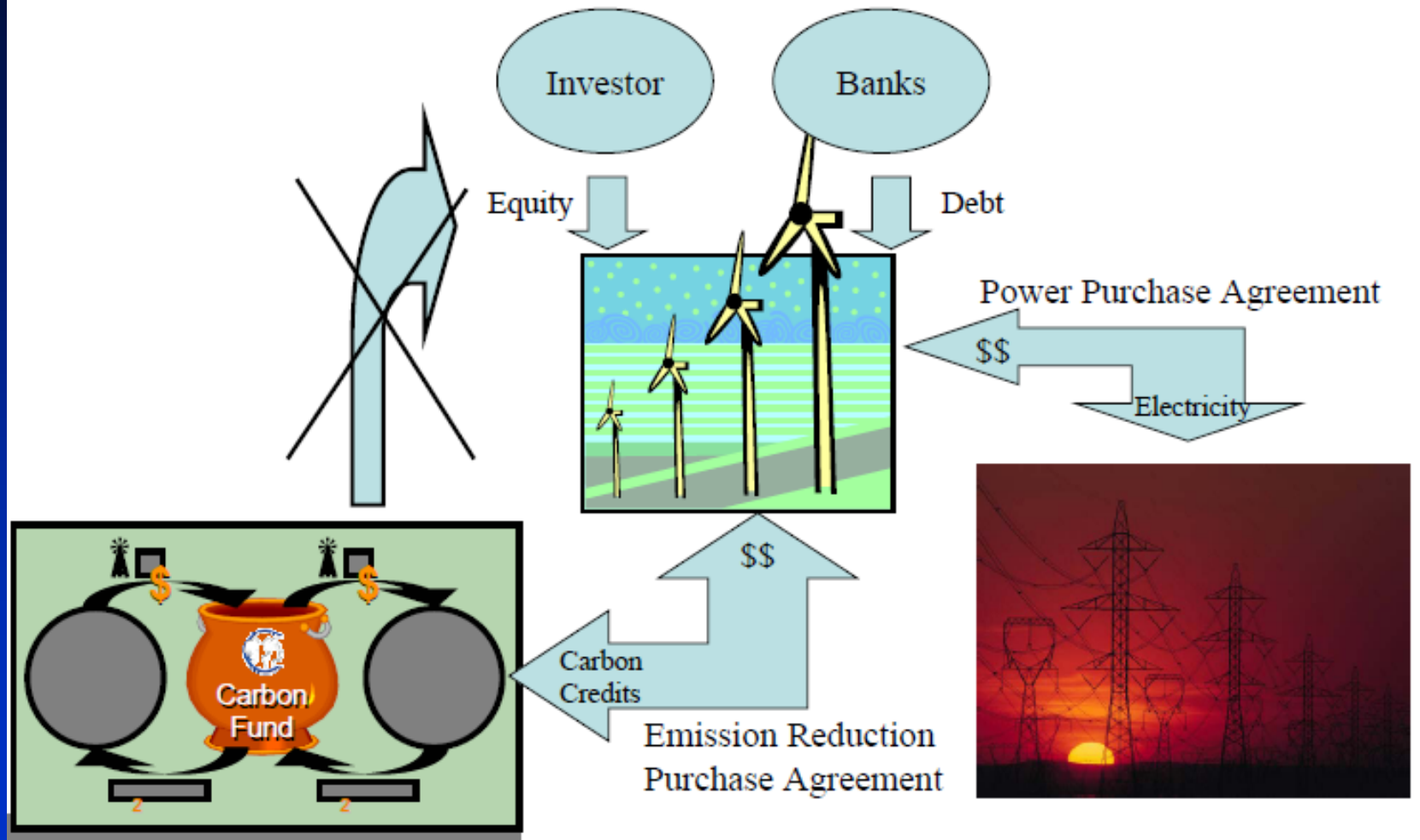
§ European Carbon Fund

# How Does a Carbon Fund Work?



# Carbon Funds – Nature of Contract

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# Options for CDM Financing – Equity or Debt

- Ø Full or Partial Equity Financing
- Ø Annex I Investor finances all or co-finances part of a CDM project in return for full or shared financial returns and CERs
- Ø Local investors co-financing CDM projects in a host country may wish to have share in CERs so that they have the opportunity to sell the credits at a later time
- Ø Debt Financing - Annex I Investor provides loan or lease financing at concessional rates in return for CERs

**THANK YOU**