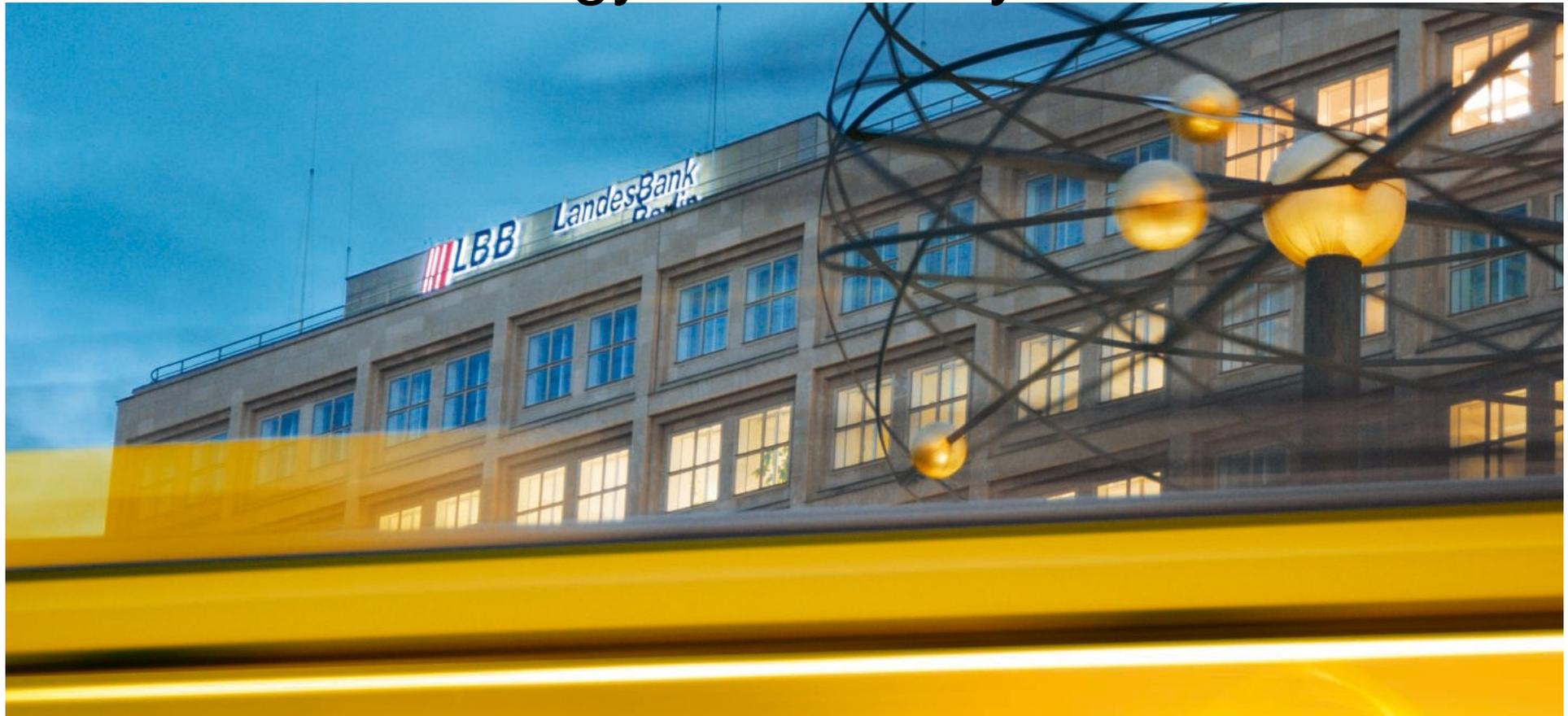




**LandesBank
Berlin**

Renewable Energy in Germany

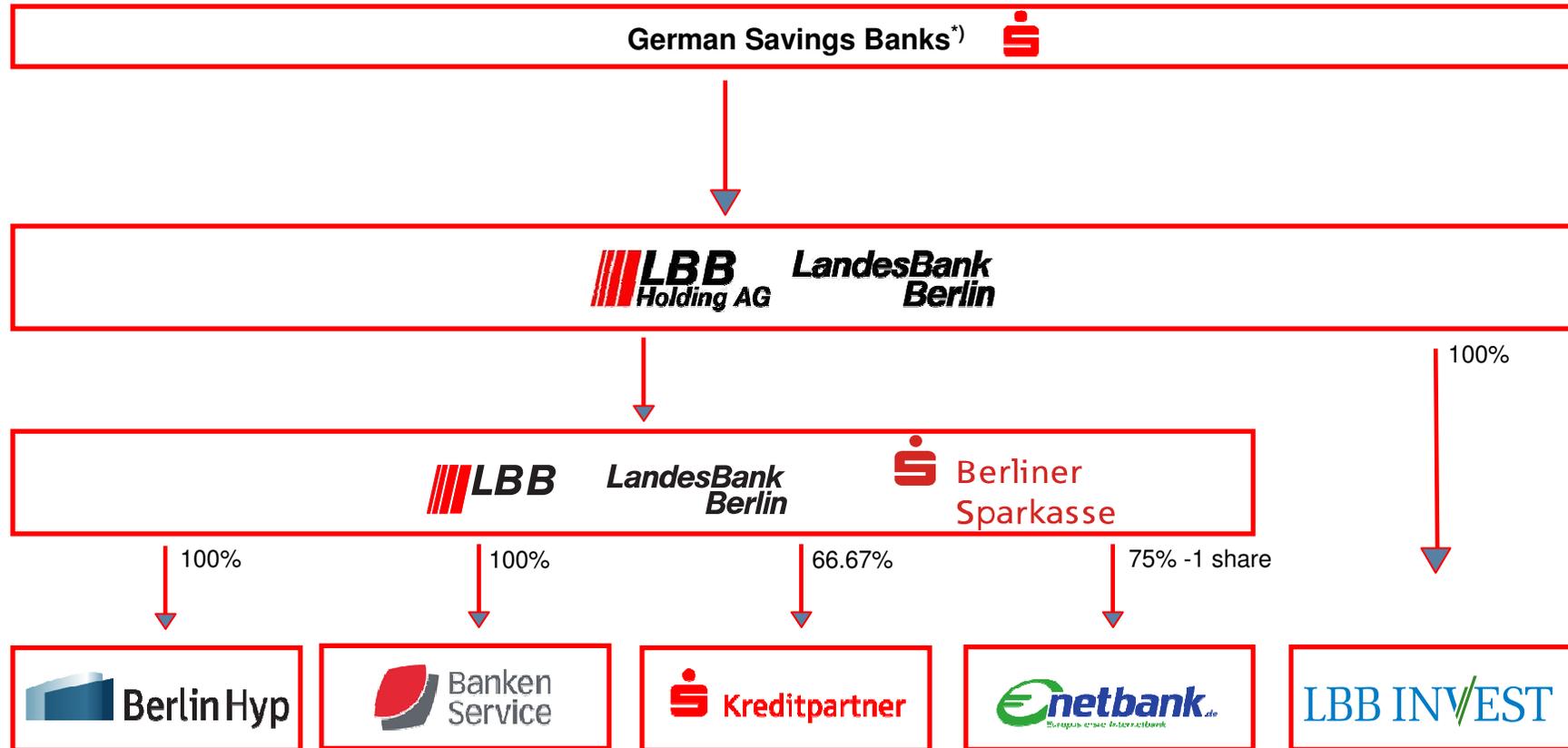


Innovative solutions for the Financing of Renewable Energy Projects

Ukraine, Kiev, 07.12.2012

Dr. Bernd Schmidt, Landesbank Berlin AG

Group Structure



^{*)} owned by the Erwerbsgesellschaft and the Beteiligungsgesellschaft der Sparkassen-Finanzgruppe

Rating Overview



	Moody's	Fitch	dbrs
Unguaranteed obligations			
Long-term rating	A1	A+	A (high)
Short-term rating	P-1	F1+	R-1 (middle)
Outlook	stable	stable	stable
Financial Strenght / Individual			
Financial Strenght / Individual	D+	D	BBB+
Guaranteed obligations			
Long-term rating	Aa1	AAA	---
Short-term rating	P-1	F1+	---
Outlook	stable	stable	---
Pfandbriefe			
Public Pfandbriefe	Aaa	AAA	---
Mortgage Pfandbriefe	Aaa	---	---

**Landesbank Berlin AG –
Solutions for energy based financings**



Track record of LBB in energy sector projects



- Windpark (10 generators, 25 MW) near Baku, Azerbaijan, EUR 64m

Deal of the Year 2009 (Trade Finance Magazine)

Best Deal 2009 (Global Trade Review)

- Windpark Botievo, Donetsk Region, Ukraine; 30 generators, 90 MW), EUR 107.6 m

- Combined Cycle Power Plant in Macedonia (220 MW), EUR 167 million:

Deal of the Year 2007 (Trade Finance Magazine)

Best Deal 2007 (Global Trade Review)



Challenges and preconditions for financing of energy projects (I)

1. Challenges

- ▶ relatively high investment costs
- ▶ high percentage of local costs
- ▶ feed-in tariffs are regulated by government and usually relatively low
 - ⇒ need for long repayment periods
 - ⇒ flexible repayment structures

2. Preconditions from financing point of view

a) regulatory

- ▶ guaranteed tariffs, allowing profitable generation of electricity
 - ⇒ ideal tariff: high enough for profitable operation + guaranteed over lifetime of project
 - ↳ But: tariffs are a political issue (experience of other countries)
- ▶ guaranteed connection to the grid
- ▶ legale framework for construction and operational license

Challenges and preconditions for financing energy projects II

b) economics of the project

- ▶ long-term power purchase agreements covering financing period
- ⇒ otherwise: cash-flow based project finance is not feasible
- ▶ need for solvent guarantor/sponsor
- ▶ Possible sponsors:
 1. Governments/local authorities
 2. Banks
 3. Corporates accounting under IFRS
- ▶ possibility to pledge equipment, land and shares, including possibility to register pledges

Renewable Energies supported by OECD IV consensus (I)

Renewable Energies are:

- ▶ Wind energy (wind)
- ▶ Solar power/ photovoltaic (sun)
- ▶ Hydropower (water)
- ▶ Bio energy (biogas, plants)
- ▶ Geothermal energy (heat)

Increasing importance due to:

- ▶ Increasing environmental pollution
- ▶ Obligations under the Kyoto protocol (reduction of carbon emission)
- ▶ With increasing oil price the production of electricity based on oil becomes inefficient

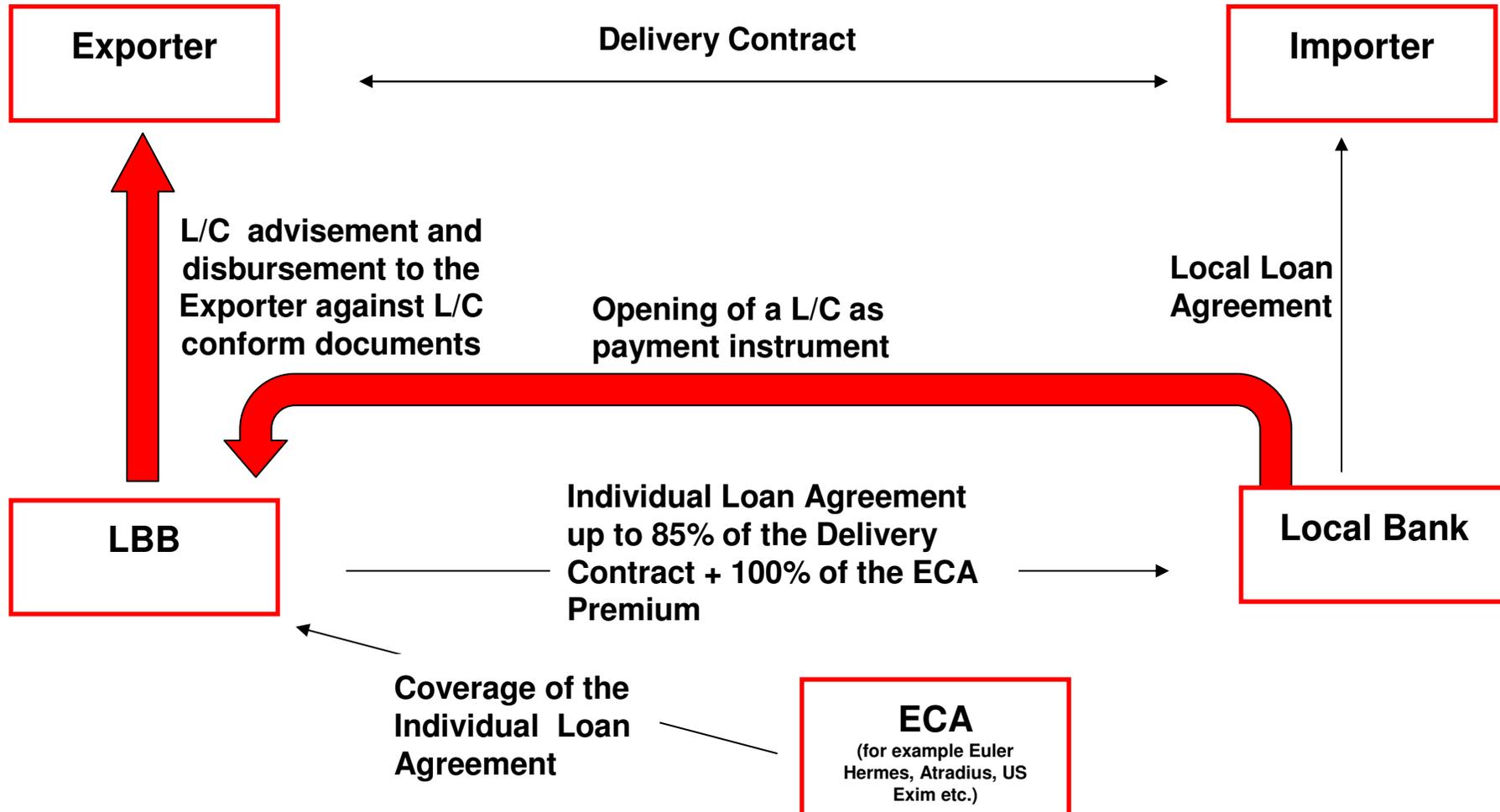
Financing conditions supported by OECD IV consensus (II)

- ▶ long tenors up to 18 years possible
- ▶ grace periods up to 1.5 years after start of operations
- ▶ flexible repayment structures (e.g. amortizing structures)
- ▶ capitalisation of interest payments up to the start of operations
- ▶ local deliveries up to 23% of the overall project volume
- ▶ cash flow enhancement through sale of CO₂ certificates
- ▶ interest risk e.g. manageable via cap agreements or fix rate conversions

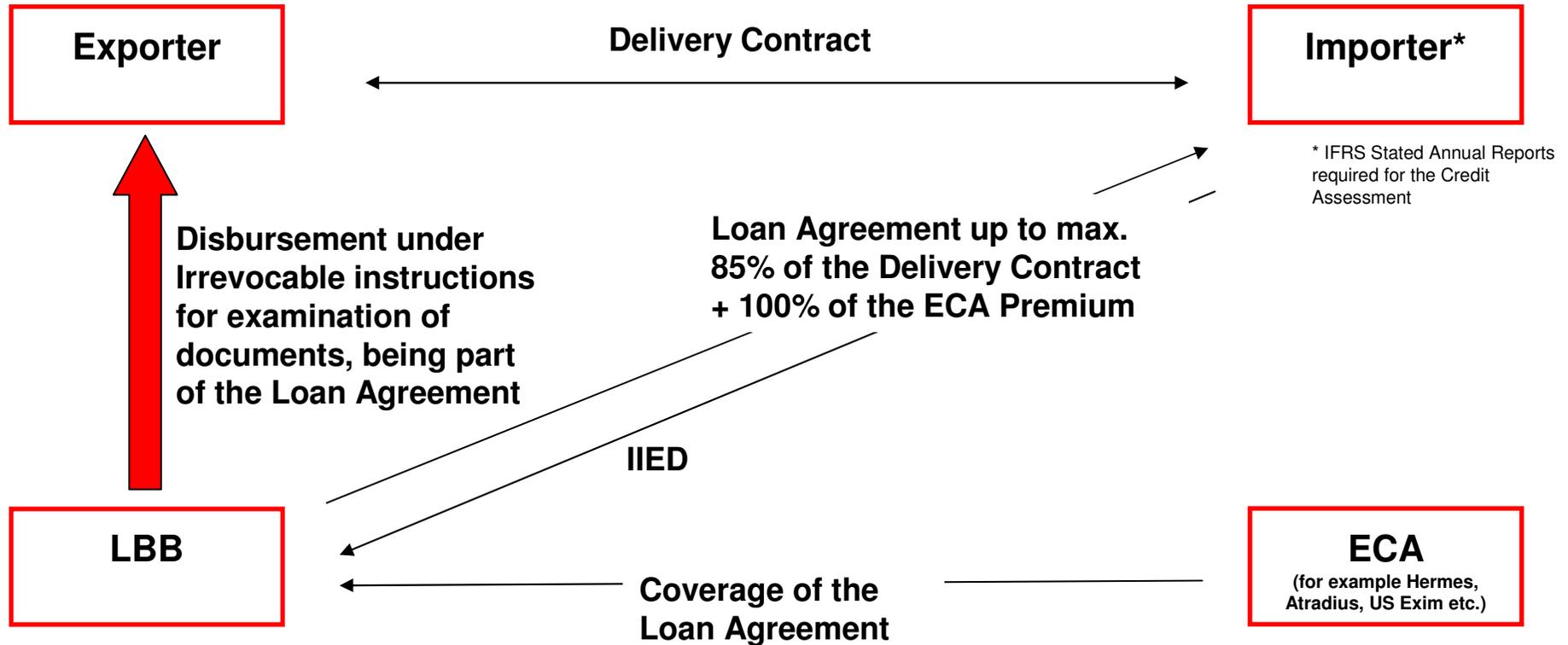
Special structures in tied buyer's credit of LBB

- ▶ long term ECA-covered financing
- ▶ up to 85% of the project volume can be financed
- ▶ 100% financing of the ECA-premium without increasing the contract value
- ▶ financing of down payments
- ▶ financing of local costs (23% of contract amount)
- ▶ capitalization of interest during construction period

Typical structure of an ECA-covered deal Bank to Bank



Typical structure of an ECA-covered deal Bank to Corporate



Structure of the financing costs of LBB for energy projects

Premium of the ECA

- + Funding costs 6-months - EURIBOR (float or fix)
- + Funding spread LBB for the whole loan tenor
- + Margin LBB



All-in - Interest LBB

- + Margin local banks



All-in - Financing costs

Windfarm Botievo (90 MW), Ukraine



① **Contract about:** Delivery of 30 generators (V112/ 3.3MW)

② **Contract partner:** Investor: Wind Power LLC, Donetsk
Supplier: Vestas Germany

③ **Structure of the contract:**

- TSA (term supplier agreement) ▶ equipment delivery
- TIA (term instalment agreement) ▶ local content

④ **Loan amount:** 107,6 Mio € (85% of the contract amount)
Tenor: 10 years + 1 year construction period

⑤ **Participated ECA`s:**



▶ Denmark



▶ Germany
(as Reinsurer)

Swiss Re

▶ Switzerland
(as private Reinsurer)

Thank you!



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