



Energy Efficiency Finance The EIB Approach

European Investment Bank

Presentation to Ad Hoc Group of Experts on Energy
Efficiency

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THE EUROPEAN INVESTMENT BANK



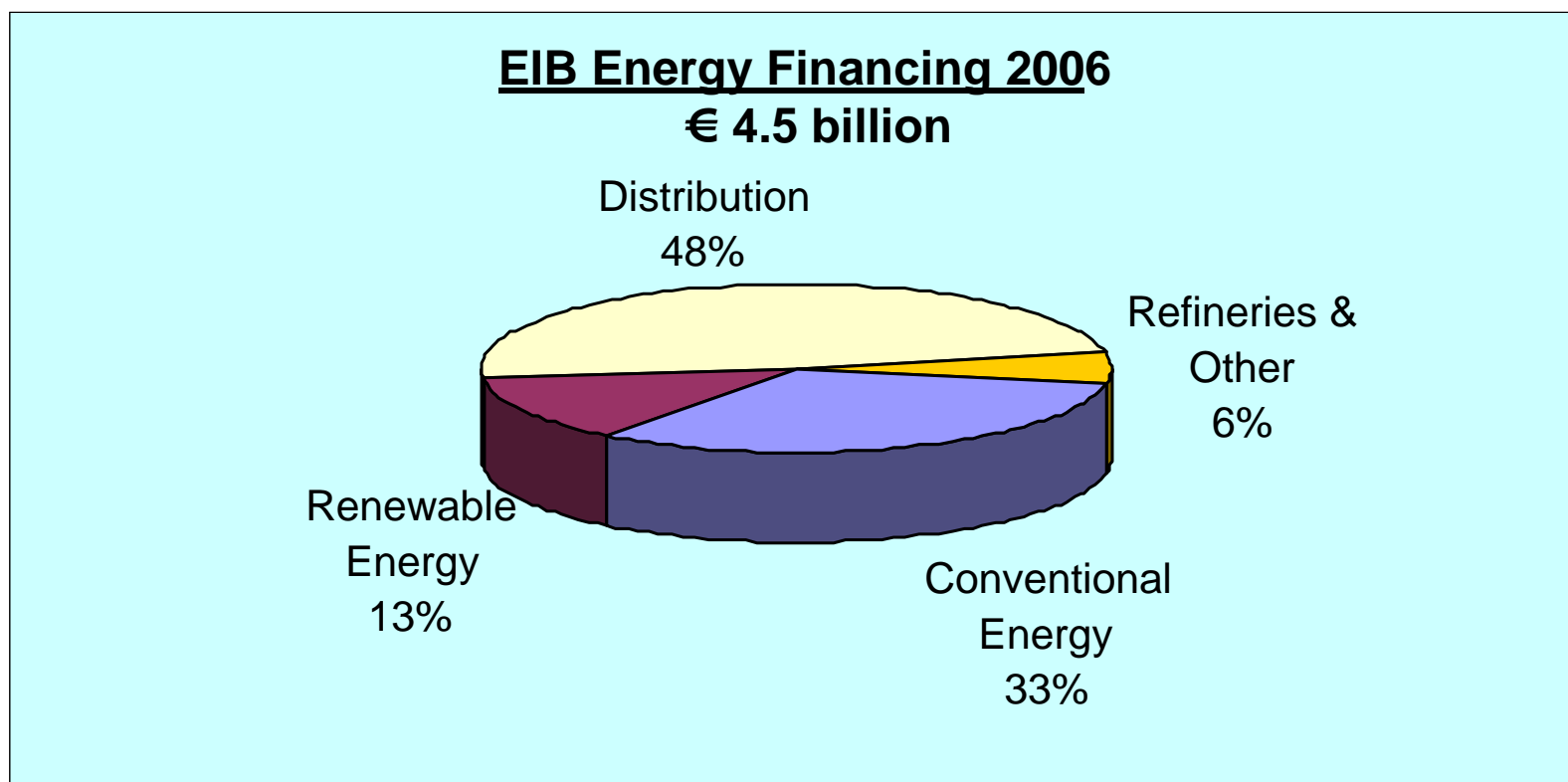
- The European Union's financing institution ...
 - Created by the Treaty of Rome in 1958, to provide long-term finance for projects implementing the EU's policies.
 - Subscribed capital: € 164.8bn
 - EIB shareholders: 27 Member States of the European Union.
 - EIB's annual lending (2006): € 45.8bn.
 - Annual lending to the energy sector (2006): € 4.1 billion

SUSTAINABLE, COMPETITIVE AND SECURE ENERGY



- Priority areas:
 - Renewable energy
 - Energy efficiency
 - Research, development and innovation
 - Diversification and security of internal supply (including TEN-E)
 - External energy security and economic development
- In 2007 direct loans of EUR 8.3bn of which:
 - € 7 billion within the EU
 - € 1.3 billion outside the EU
 - € 2.2 billion to renewable energy projects
 - € 0.25 billion to TEN-E projects

EIB'S ENERGY FINANCING IN 2006



Renewable Energy Financing in 2006 amounted to € 517m

RENEWABLE ENERGY 2004 TO 2007

M €	2004	2005	2006	2007
EU MS + Accession	119	358	450	1439
Others	261	132	67	579
Total	380	490	517	2,018
RE / Electricity	19%	45%	46%	58%

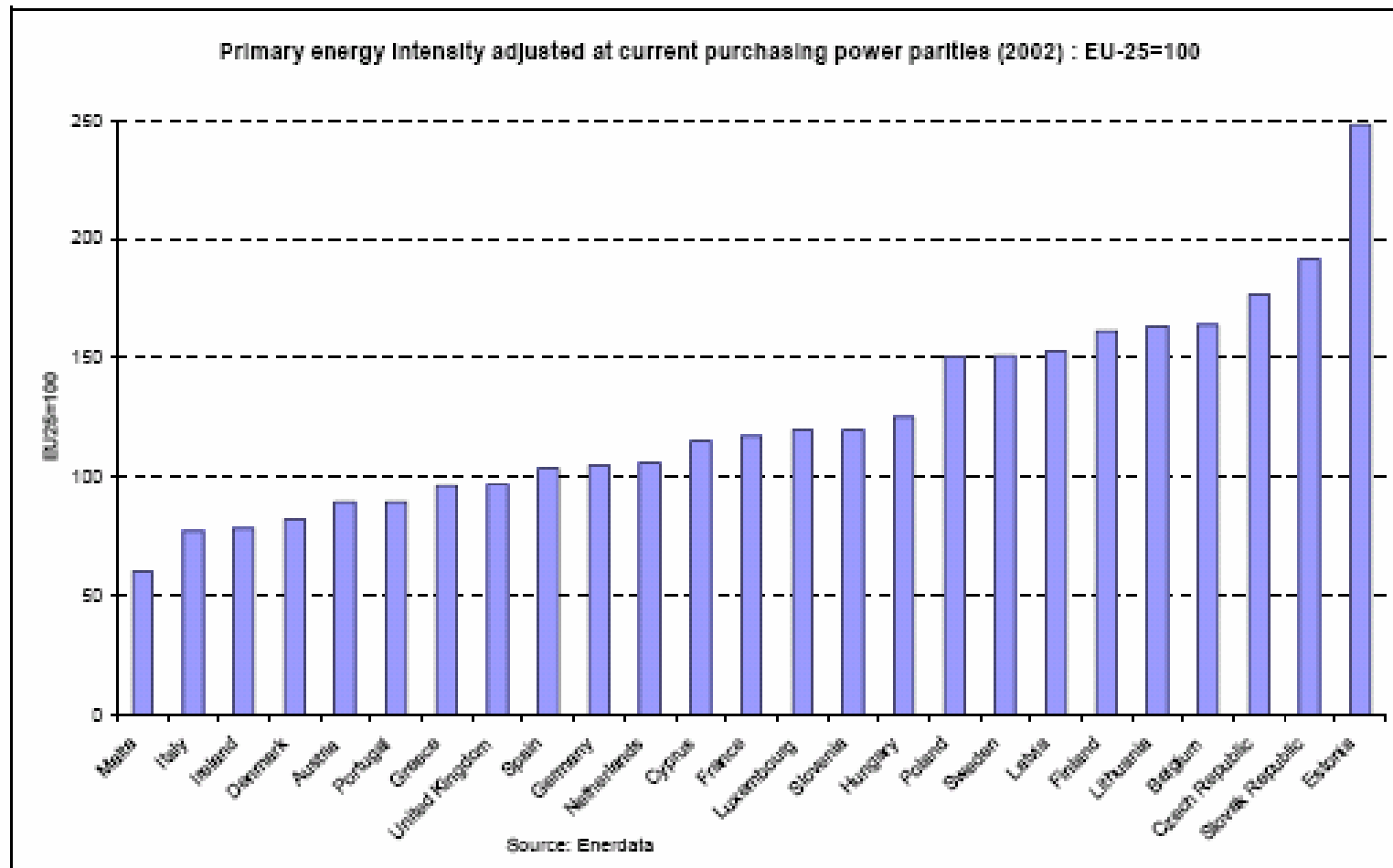
ENERGY EFFICIENCY LENDING



- Projects targeting Energy Efficiency averaged € 2.2 billion per annum (8% of total EIB signatures)
- Includes demand side *and* supply side projects
 - Power production has focused on combined heat & power and district heating (€ 250 million in 2006 – 9% of energy signatures)
 - Smaller demand side projects (principally benefiting SMEs) supported through dedicated energy efficiency global loans (€ 150 million in 2006)
 - Significant investment in automotive R&D, almost exclusively for improved energy efficiency
- Many examples of energy efficiency investments as components of [industrial or accommodation investments](#)

FUTURE ORIENTATIONS

A focus on high energy intensity countries



ENERGY EFFICIENCY

- Most EIB projects lead to energy ‘savings’ – energy efficiency as a side effect
- Projects solely targeting energy efficiency:
 - Demand side (more efficient use of energy)
 - Supply side (more efficient transformation of energy)

ENERGY EFFICIENCY *POLICY ISSUES*



Information and incentives:

- Poor information about energy efficiency possibilities
 - Technical Advice funds when available
- High implicit discount rates for energy savings
 - combining grants and loans or risk sharing instruments
- Develop public transport and integration of energy considerations in urban development:
 - significant lending prospects in this area, including through PPP structures

ENERGY EFFICIENCY

CREDIT ISSUES

- Development of ESCOs:
 - limited possibilities at present
- Renovation of District Heating:
 - creditworthiness of the municipalities
- Energy efficient investment are generally small:
 - finance smaller projects, grouping several projects or credit lines

ENERGY EFFICIENCY: FUTURE ORIENTATIONS



- Need to address [policy constraints and credit issues](#)
- A focus on [high energy intensity countries](#)
- A focus on project preparation – [JASPERS](#) programme
- A focus on new lending instruments – [EEFF](#)
- [JESSICA](#)

ENERGY EFFICIENCY: INDUSTRIAL PROJECTS



- **Modernisation of critical equipment**
 - e.g. replacement of boilers in Pulp & Paper industry, 10-20% gains in EE.
- **Replacement (and expansion) of existing capacity**
 - e.g. process improvements in the chemical sector allowing 15-30% gains in EE
- **Use of residues (biomass) for power generation**
 - e.g. food industry
- **R&D aimed at product / process improvement**
 - e.g. automotive sector, 3-5 % EE gains

ENERGY EFFICIENCY: BUILDINGS AND ACCOMMODATION



Construction & refurbishment of buildings:

- Global loan for small / medium sized projects in housing modernisation (Germany)
 - 5-10% gains in EE achievable through insulation, boiler replacement etc
- Direct loans for modernisation of schools and hospitals (Various countries):
 - 10-20% of EE gains achievable through heat insulation, energy efficient lighting, utilisation of solar energy

ENERGY EFFICIENCY: PPP PROJECTS



- UK Schools and Hospital PPPs usually include managed energy service
- Risk allocation based on principle of ‘who best manages the risk’
- Conventionally:
 - Public sector takes tariff risk
 - Private sector takes volume risk (subject to change mechanic)
- Baseline consumption based on either energy norms or period of early operations

FINANCING INSTRUMENTS



- EIB's traditional loan products
- New financial instruments for sustainable energy

FINANCIAL INSTRUMENTS IN SUPPORT OF ENERGY EFFICIENCY IN BUILDINGS



- The EIB approach is to provide financial frameworks which include building energy efficiency, rather than dedicated instruments.
- All relevant EIB instruments can be applied to the buildings sector.
- Of special relevance would be frameworks combining Commission grants with EIB investment:
 - E.g. Energy Efficiency Finance Facility (EEFF) for projects in Bulgaria, Croatia, Romania and Turkey (under development)
 - * EIB credit line to Financial Intermediaries, supported with Commission grants (€6m).
 - * Grants to cover intermediary / end borrower costs and to reduce principal.
 - * Clear eligibility criteria.

EIB'S LOAN PRODUCTS



General Terms:

- Senior and subordinated loans
- Corporate Loans and Project Finance
- Loan term up to economic life of the assets
- Loan amount generally up to 50% of eligible project costs; can be up to 75 % under CCFF

EIB'S LOAN PRODUCTS (2)



Large-Scale Projects (typically > 50m € investment cost):

- Direct Investment Loans
- [Corporate Loans and Project Finance](#)
- Project could consist of single or multiple sites
- Comprehensive loan appraisal justified by project size
- Where EIB takes full project risk, loan may fall under SFF => EIB loan amount capped at 200m € (maximum amount could be lower depending on riskiness of project)

EIB'S LOAN PRODUCTS (3)



Small-to-Medium Scale Projects (typically < 50m € investment cost):

- Programme or [Framework loan](#) to corporate or intermediary
- Traditionally, intermediaries were financial entities – global loans
- EIB now willing to provide loan facilities to developers for bundling small-scale projects

EIB Strategy:

- Increase exposure to small-to-medium scale wind energy projects through:
 - [Intermediated loans on a risk-sharing basis](#); and
 - Facilities for developers.

FINANCIAL INSTRUMENTS FOR SUSTAINABLE ENERGY – RISK FACILITIES



- EIB capital under Structured Finance Facility (SFF) for non investment grade projects
 - € 3.75bn facility for higher risk priority projects
 - Quasi-equity / risk-taking instruments
 - Additional EC capital of € 1.5 billion under mandate to EIB
- [Risk Sharing Finance Facility](#)
 - Established with European Commission with capital of € 2 billion
 - Supports investment in R&D including Energy
 - Loans to corporates (including SMEs) and structured transactions with JTI's under Framework Programme 7
 - Other forms of public private lending supporting research infrastructures (for example ITER or ESFRI projects, R&D in nuclear safety)

FINANCIAL INSTRUMENTS FOR SUSTAINABLE ENERGY – CLIMATE CHANGE



- Climate Change Financing Facility (CCFF)
 - € 1 billion facility. Finance up to 75% of projects reducing greenhouse gas emissions or promoting adaptation
 - Projects may benefit from longer maturities & extended capital grace
- Climate Change Technical Assistance Facility (CCTAF)
 - A € 5 million TA facility to cover carbon crediting activities of projects expected to be financed by the EIB
 - Conditional funding –reimbursable on successful registration of carbon credits meeting requirements of Kyoto Protocol

FINANCIAL INSTRUMENTS FOR SUSTAINABLE ENERGY – EQUITY FUNDS



Equity Funds for renewable energy / clean energy projects

- Investment into energy projects via funds managed by professional fund managers;
- First transaction € 25 million investment as cornerstone investor in [Spain, Czech Republic and Netherlands](#)
- Further transactions with broader geographical base in negotiation with the private sector

FINANCIAL INSTRUMENTS FOR SUSTAINABLE ENERGY – EQUITY FUNDS



	Green Alliance	Enercap	DIF Renewable Energy
Target Size	€120 million	€ 100 million	€ 120 million
Sector Focus	Onshore wind, solar PV, biodiesel	Principally onshore wind	Principally onshore wind
Geography	Spain	Central and South Eastern Europe	The Netherlands and Northern Europe
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CARBON FUNDS

- [Multilateral Carbon Credit Fund \(MCCF\)](#)
- [Carbon Fund for Europe \(CFE\)](#)
- [EIB/KfW Carbon Purchase Programme](#)
- [Post 2012 Carbon Fund](#)

CARBON CAPTURE & STORAGE



CONTEXT:

- European Commission (DG TREN / DG ENV.)
- Zero Emission Platform
- Fossil Fuel Forum
- Clean Energy Framework
- Member States Initiatives (e.g. UK)
- [Financing Possibilities](#)

CLIMATE AWARENESS BOND

- Dedicated use of funds in sectors key to climate protection
 - Funds raised earmarked for renewable energy and energy efficiency lending
 - Investor option to reduce capacity for CO2 emissions
 - Largest ever syndicated index-linked bond
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