



Sous-commission "Préparation du débat d'orientation avec rapport sur l'orientation politique ainsi que le cadre d'action en matière de climat et d'énergie" de la Commission de l'Economie et la Commission de l'Environnement

Procès-verbal de la réunion du 29 juin 2015

Ordre du jour :

- 6688 Débat d'orientation avec rapport sur l'orientation politique ainsi que le cadre d'action en matière de climat et d'énergie
- Rapporteur: Monsieur Henri Kox
- Echange de vues avec des représentants de la Banque européenne d'Investissement au sujet de leur engagement et soutien financier apportés dans le domaine de la lutte contre les changements climatiques

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M. Jonathan Taylor, Vice-Président de la Banque européenne d'Investissement, accompagné de collaborateurs (*Environnement et action en faveur du climat*)

M. Timon Oesch, de l'Administration parlementaire

Excusés : M. Frank Arndt, M. Eugène Berger, M. Fernand Kartheiser, M. Roger Negri, M. Marco Schank, M. David Wagner

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Présidence : M. Henri Kox, Président de la Commission

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Après quelques mots de bienvenue et la présentation des participants et intervenants lors de la présente entrevue, Monsieur le Vice-Président de la Banque européenne d'Investissement (BEI) donne un bref aperçu sur les missions de la BEI comme la plus grande banque de développement du monde dépassant même de par son volume des prêts et emprunts la Banque mondiale, institution financière de l'ONU et dont le siège se trouve à Washington (USA).

Monsieur le Président-Rapporteur explique l'objet de la Sous-commission « climat et énergie » instaurée par la Chambre des Députés qui devra orienter le Gouvernement dans sa politique de protection du climat et ceci également en vue de la COP21 qui se déroulera fin d'année à Paris et lors de laquelle le Luxembourg parlera au nom de l'Union européenne. C'est dans ce contexte que la Sous-commission qu'il préside s'intéresse aux capacités de la BEI dans le financement de projets ayant un impact positif dans la lutte contre le changement climatique.

Monsieur le Vice-Président de la BEI propose de procéder de manière systématique et de commencer par des présentations¹ expliquant comment la Banque européenne d'investissement appuie les objectifs politiques de l'Union européenne en matière de lutte contre le changement climatique.

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Lors d'une première présentation (*Annexe 1*) la méthodologie développée par la BEI pour mettre en œuvre une politique active de financement de projets à faible intensité d'émissions de GES (*low carbon*) ou réduisant ces émissions, est expliquée.

La présentation subséquente (*Annexe 2*) expose les services de conseil proposés par la BEI.

Le programme ELENA² géré par la BEI est le sujet de la troisième présentation. (*Annexe 3*).

Le tour des présentations se clôt avec un aperçu des produits innovants de financement de la politique du climat développés par la BEI (*Annexe 4*).

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Les questions et interventions des parlementaires permettent de préciser les points qui suivent :

- **Autoroutes.** D'un point de vue des « objectifs climat » à atteindre, une nouvelle autoroute pourrait bel et bien être évaluée positivement, s'il s'avère qu'un tel projet contribue au décongestionnement du réseau routier et à un trafic bien plus fluide dans une région déterminée. Des embouteillages chroniques engendrent une surconsommation de carburants et sont néfastes en termes d'émissions de GES. La rentabilité économique au sens social d'un tel projet (gains de temps p.ex.) doit également être établie. L'analyse économique-financière calculée par la BEI inclut maints aspects (coûts sociaux et

¹ Copie des fiches *PowerPoint* afférentes jointes en annexe au présent procès-verbal

² *European Local ENergy Assistance*

environnementaux, émissions de GES, ...);

- **Banques privées.** Il est précisé que la BEI ne finance pas directement les entreprises ou acteurs publics réalisant un projet déterminé, mais coopère avec des banques régionales sur place. Il est rappelé que les projets financés doivent soutenir les priorités politiques définies par l'Union européenne ;
- **Nucléaire.** Des projets d'investissement dans des infrastructures nucléaires ou de nouvelles centrales nucléaires ne sont pas a priori exclus du bénéfice des crédits et de l'expertise financière de la BEI. Il est renvoyé à la méthodologie d'analyse de la BEI ci-avant exposée.

La BEI n'a pas de préjugés politiques ou technologiques. Les projets soumis en quête d'un financement passent tous un même « screening » détaillé et en profondeur. Un projet de centrale nucléaire serait même susceptible d'entrer dans la catégorie « low carbone ». Si un Etat membre déciderait d'atteindre ses objectifs de réduction des émissions de GES en recourant davantage à l'énergie nucléaire, la BEI ne saurait pas s'opposer à une telle décision politique. Un projet soumis est jugé par ses effets prévisibles à moyen et à long terme. Actuellement, au sein de l'Union européenne, les nouveaux investissements réalisés dans le domaine nucléaire visent surtout l'amélioration des dispositifs de sécurité ;

- **Prix de la tonne CO_{2-éq.}** Il est confirmé que, dans ses propres calculs, la BEI admet un prix pour l'émission d'une tonne CO_{2-éq.} bien supérieur (10 à 15 fois plus élevé selon l'orateur de la BEI) à celui du marché actuel. Cette valeur est définie par leurs économistes spécialistes de l'énergie et est appliquée à tous les projets soumis pour analyse – dont également les projets dans le domaine nucléaire ;
- **Projets « climat » au Luxembourg.** Actuellement, la BEI ne finance aucun projet au Luxembourg et elle n'est saisie d'aucune demande de financement de la part des autorités luxembourgeoises. Ceci pour plusieurs raisons. Les projets réalisés au Luxembourg ont une envergure financière relativement insignifiante et les autorités au Luxembourg n'éprouvent aucune difficulté à financer pareils projets par du recours à du crédit ou en puisant dans certains fonds publics. En plus, compte tenu du faible niveau général des taux d'intérêts, l'attractivité des prêts de la BEI a souffert. Partant, l'intérêt d'une participation de la BEI résiderait principalement dans une analyse et un avis externe, détaillé et neutre dont pourraient bénéficier de tels projets publics et dans certaines facilités offertes par la BEI qui n'a aucun problème à faire face aux très longs horizons de financements et retards, parfois importants, accusés dans la réalisation de tels projets. Elle ne met les sommes à disposition qu'au moment requis. Certains projets d'infrastructures publiques envisageables ou envisagés au Luxembourg (remplacement sur l'ensemble du territoire national des lampadaires sur le réseau routier par un éclairage bien plus économe, tramways etc.) pourraient pourtant bel et bien être conformes aux critères de sélection de la BEI ;
- **Social.** L'effet social des projets financés est pris en compte. Pour ce qui est des projets réalisés en l'Union européenne, la dimension sociale

n'est pas étudiée de manière détaillée – sauf à évaluer l'impact en termes d'emplois créés. Cette approche diffère dès qu'il s'agit de projets de développement à financer à l'extérieur de l'Union européenne. Etant donné que bon nombre de ces Etats ne présentent pas les mêmes standards aussi élevés dans le domaine des droits civils et sociaux. Certaines lignes rouges à ne pas franchir ont été définies pour de tels projets (pas d'expropriations sans justes dédommagements, respect de règles de non-discrimination etc.).

Luxembourg, le 10 août 2015

Le Secrétaire,
Timon Oesch

Le Président,
Henri Kox

Annexes :

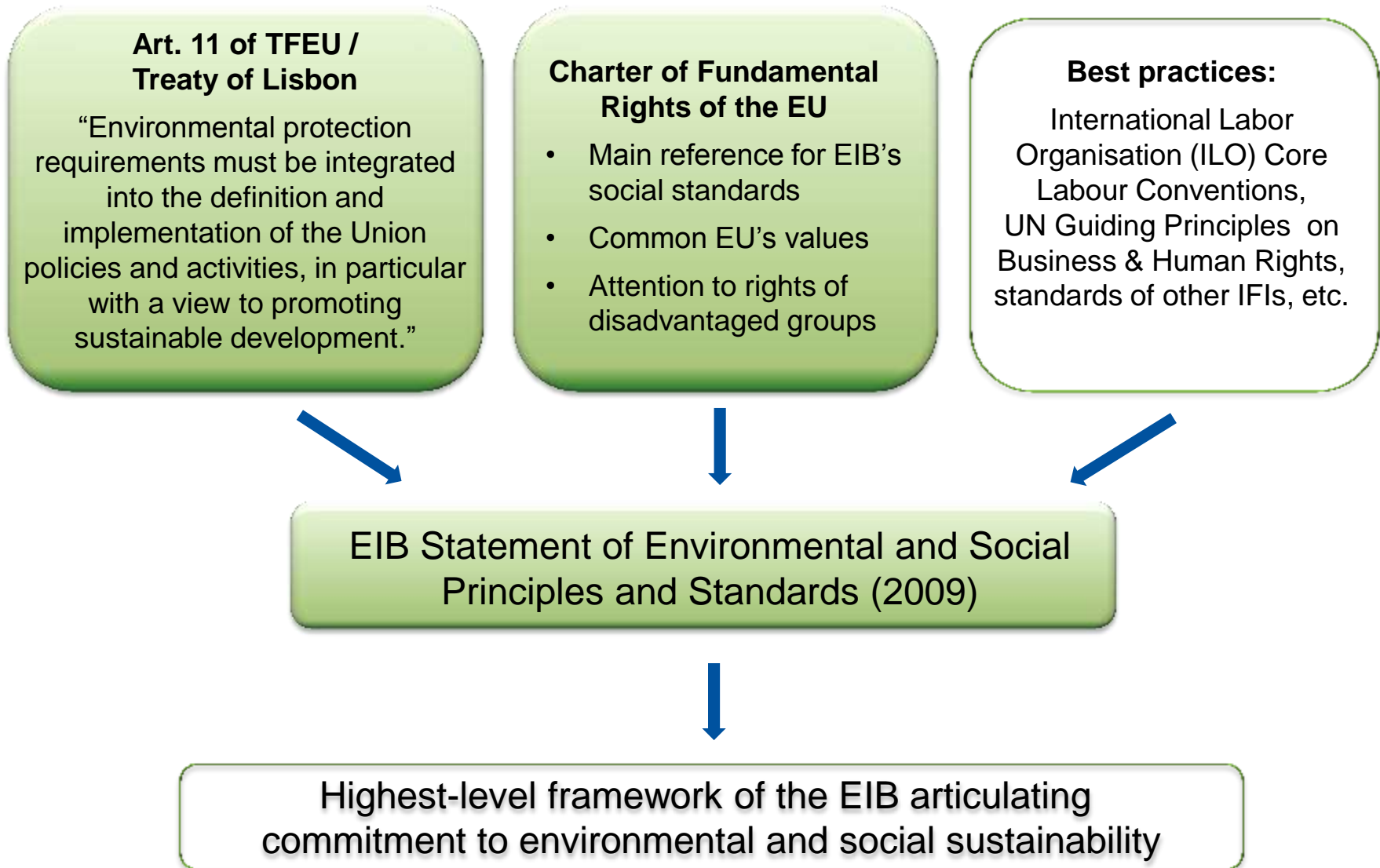
- 1) « EIB's environmental policies and climate action », 12 pp. ;
- 2) « InnovFin Advisory Overview », 16 pp. ;
- 3) « ELENA - European Local ENergy Assistance », 7 pp. ;
- 4) « Overview of innovative climate finance product », 27 pp..



London Array Offshore Windfarm
© Siemens AG Munich/Berlin

EIB's environmental policies and climate action

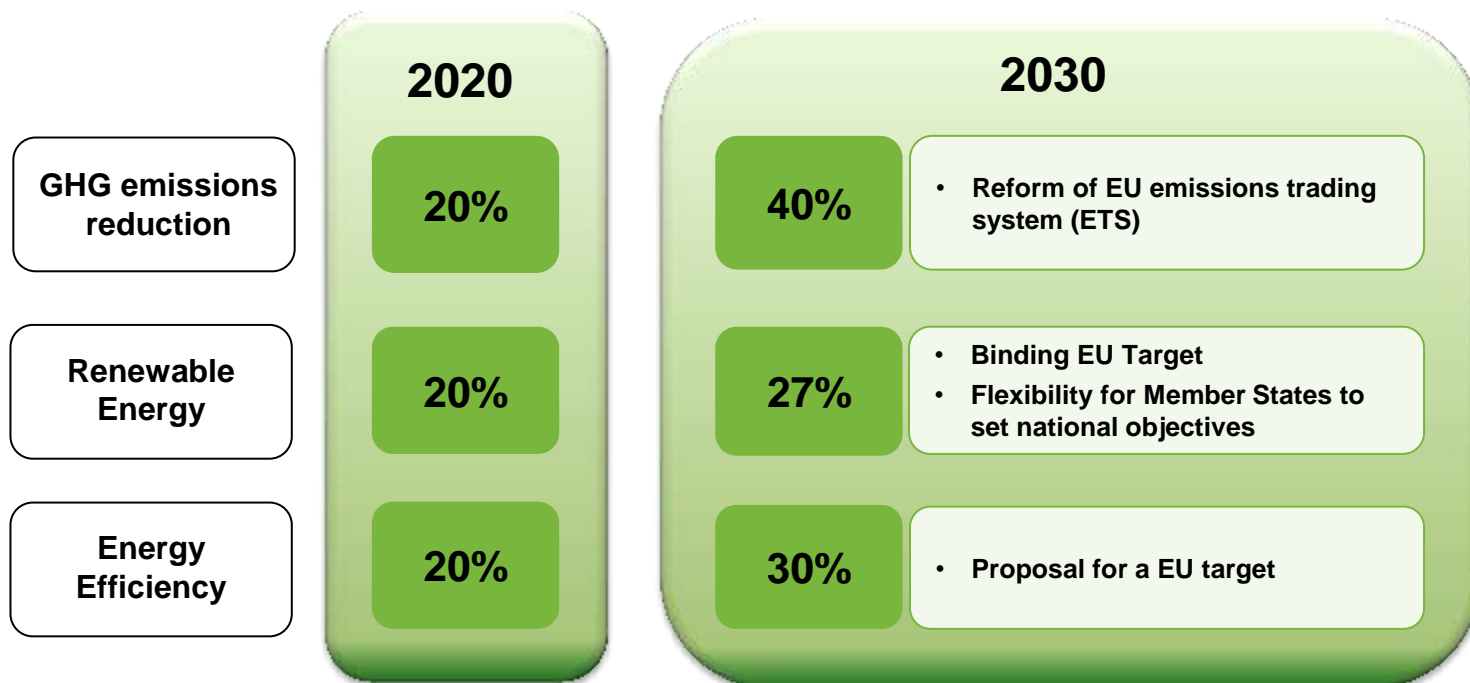






Climate Change Mitigation

- 2009: EU Climate and Energy package – ambitious 20-20-20 targets to be attained by 2020
- 2011: Roadmap for moving to a competitive low carbon economy by 2050
- 2014: Policy framework for climate and energy up to 2030



Climate Change Adaptation

- 2013: EU Adaptation Strategy



10 Environmental and Social (E&S) Standards - complementing financial and economic due diligence:

- Derived from EU law (Art. 11 of Lisbon Treaty), international conventions and good practice requirements, e.g. Charter of Fundamental Rights of the European Union, ILO Core Labour Conventions and Equator Principles
- Aligned with standards applied by other MDBs
- Section 4 – specific reference to **mitigation and adaptation, at project level**

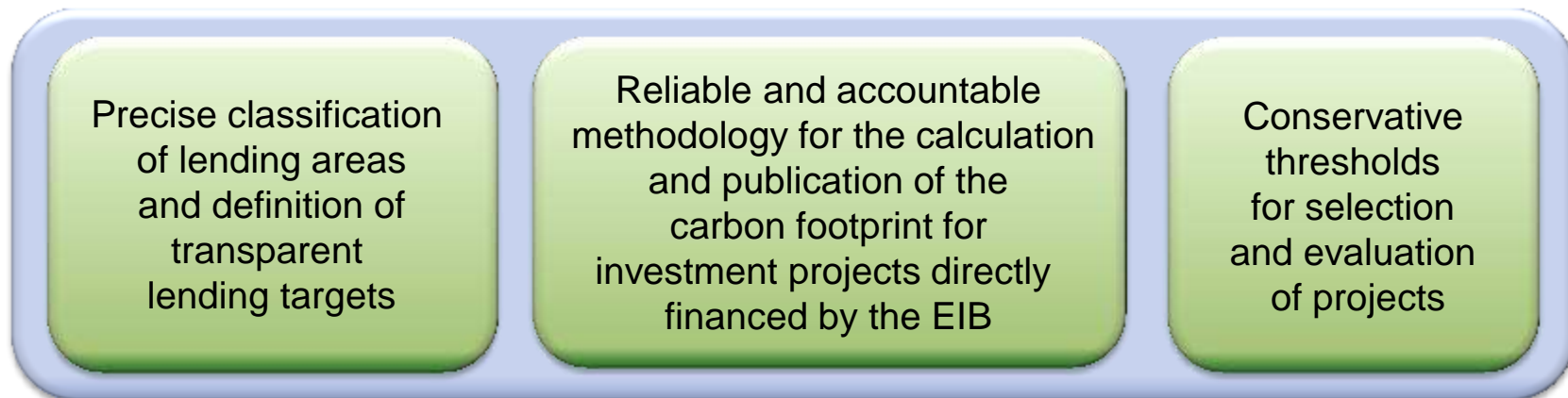
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Climate-related standards

EIB financing as a whole is aligned with EU climate policies, which should be taken into account at all stages of the project cycle, in particular regarding the assessment of the economic cost of greenhouse gas emissions and the climate vulnerability context. Specifically, project promoters must ensure that all projects comply with appropriate national and, where applicable, EU legal requirements, including multilateral agreements, related to climate change policy.



Theory turned into practice: concrete measures at the EIB



Ranking EIB portfolio by GHG emissions

Low carbon

Carbon intensive



2010 (2015): Precise classification of climate action lending areas

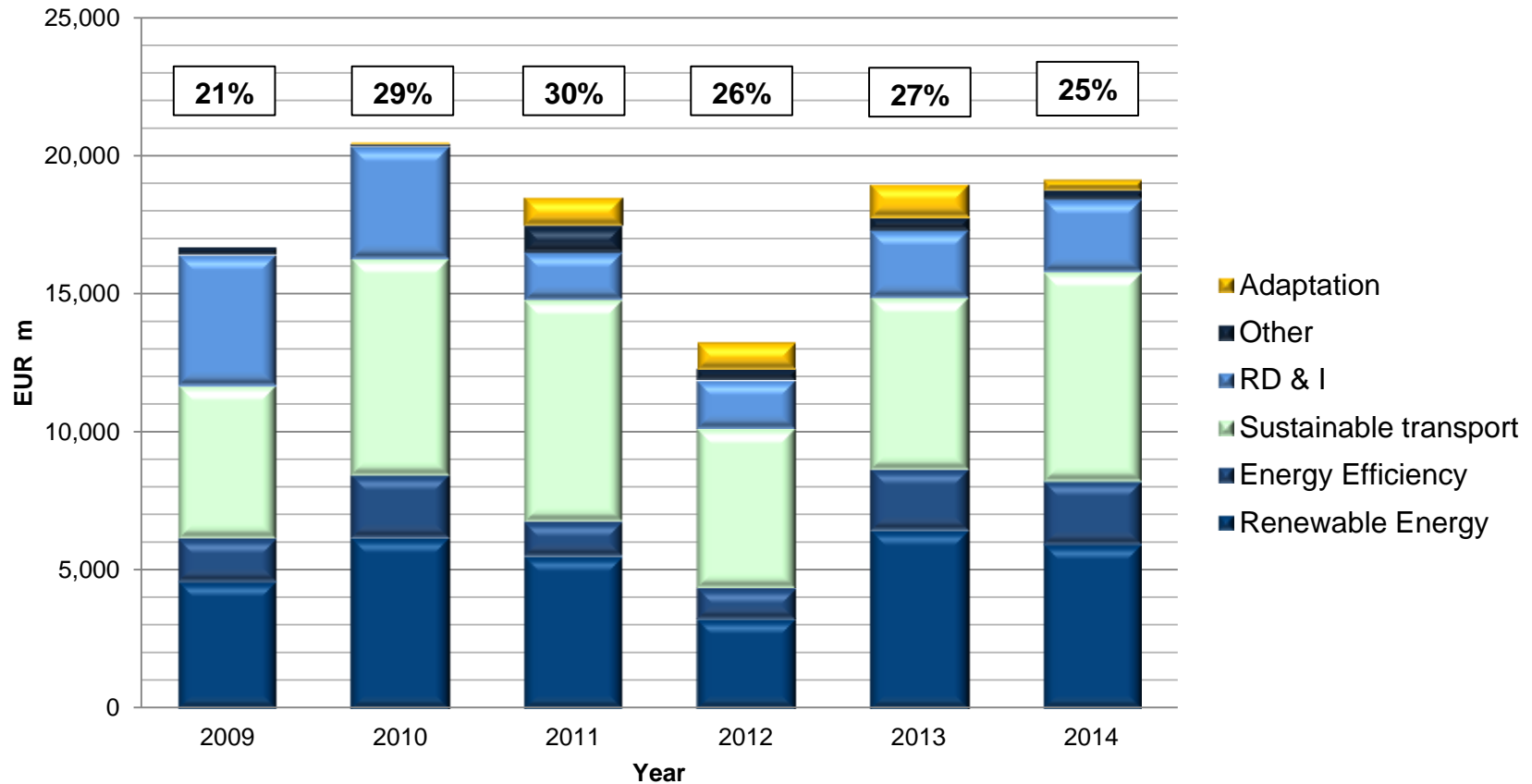


Renewable Energy	Electricity, heat or fuel production from renewable sources, related component manufacturing facilities and associated infrastructure
Energy Efficiency	Projects justified on the basis of cost-benefit analysis – NPV of cost of the project over its life < NPV of energy saved, including externalities
Sustainable Transport	Transport projects resulting in reduction of GHG emissions through modal shift and/or more efficient operation in a single mode
Forestry and Land Use	Biological sequestration projects that sequester or conserve CO ₂ -equivalent
Research, Development & Innovation	RDI activities in areas of energy efficiency and low-carbon technologies, including deployment of breakthrough innovation
Adaptation	Projects and/or measures to increase climate resilience of vulnerable infrastructure or areas, such as e.g. flood control and drought management
GHG capture or avoidance	Projects with demonstrable substantial reductions in GHG emissions, e.g. methane capture or avoidance projects from waste water treatment

2010: Definition of a transparent lending target in the Corporate Operational Plan – 25% of annual volumes for 2015-2017



EIB climate action loan signatures
(in EUR m and percentage of total annual loan signatures)



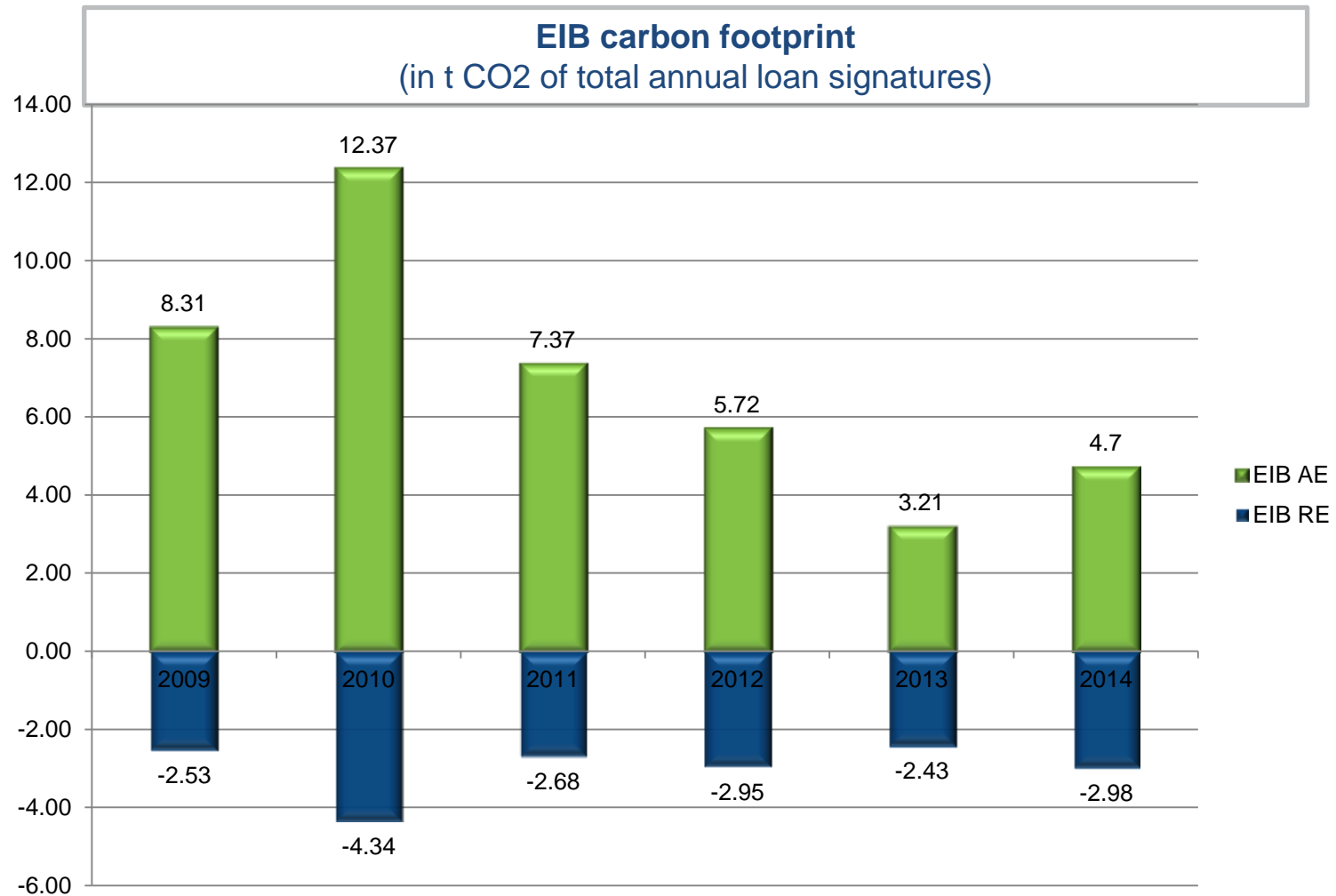
Total signed for climate action in 2009-2014: EUR 107 bn



- Methodology developed in 2009, publicly available:
http://www.eib.org/attachments/strategies/eib_project_carbon_footprint_methodologies_en.pdf
- Ex-ante estimates of future emissions of 7 Greenhouse Gases covered by the Kyoto Protocol (translated into CO₂-eq), from all relevant EIB investment projects across all sectors
- Approach guided by the principles of Completeness, Consistency, Transparency, Conservativeness, Balance and Accuracy
- Estimates for a representative year of project operations

Progressive cap on emissions of EIB portfolio

Full life cycle analysis





Climate change poses significant risks to projects...

... in risky sectors (esp. projects exposed to water cycle)

... in vulnerable areas (e.g. coastal zones)

... potentially affecting livelihoods or ecosystems already near the limit of tolerance (e.g. the Sahel)



Need to mainstream climate risk considerations into project cycle and promote adaptation projects

EIB **identified sectors** most at risk from future climate change impacts and is developing systematic **screening of projects for climate risks...**

and

... aims to ensure that potential consequences of projects on vulnerability of ecosystems and human structures are addressed in EIA (Environmental Impact Assessment) best practice



Joint Report on MDB Climate Finance

EIB coordinating methodological work and Report publication in 2014, to improve and refine the tracking of climate finance for mitigation and adaptation*

Support to **UN Sustainable Energy For All (SE4ALL)** initiative, including developing a Renewable Energy Performance Platform, together with UNEP



Member of CCAC - **Climate and Clean Air Coalition**, targeting reductions in Short Lived Climate Pollutants, and improvements in air quality

Signatory to **MDB Declaration on Sustainable Transport**, committed to a scaling up of investment as part of the Rio+20 process

* Joint Report on MDB Climate Finance 2013 to be published in September 2014



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InnovFin Advisory Overview
*Workshop on EIB's Climate
Change Activities*

Shiva Dustdar
29 June 2015

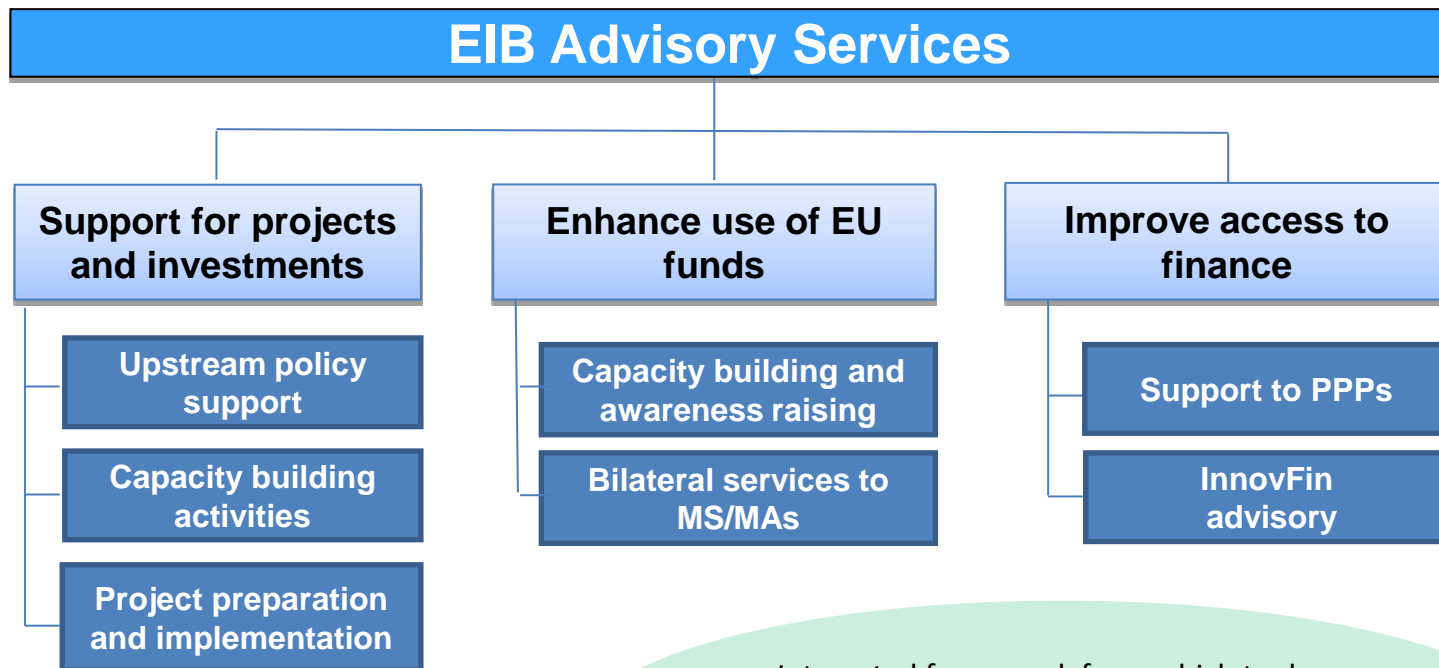
EIB Advisory Services

Coordination

Procurement

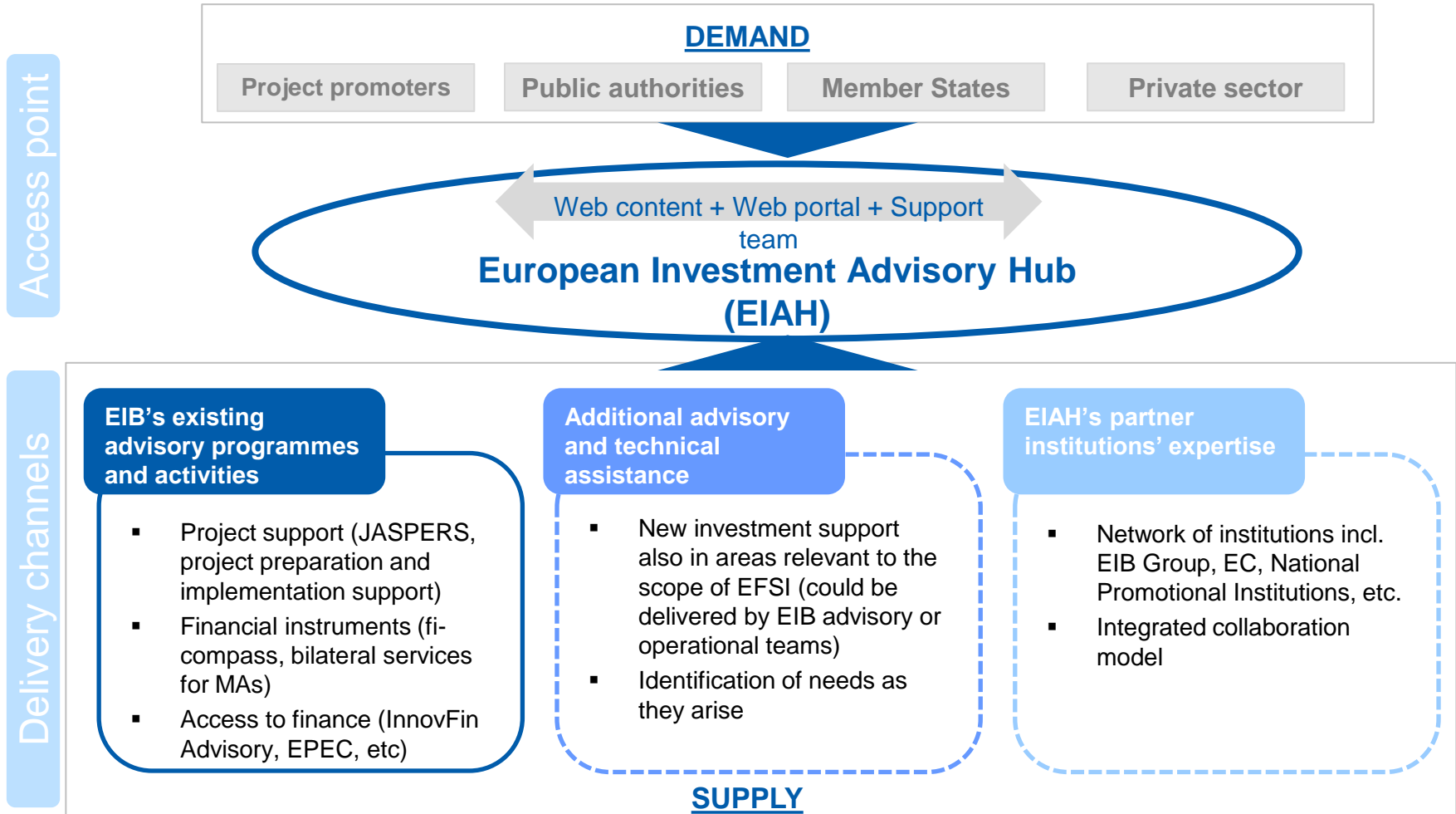
Quality management

Budget, staffing, planning...



- Integrated framework from which to draw services
- Building on expertise from across the Group
- Effective delivery based on synergies

European Investment Advisory Hub (EIAH)



InnovFin Advisory launched in 2014



SMEs	Mid-Caps	Large Caps	Advisory
InnovFin SME Guarantee	InnovFin MidCap Guarantee	InnovFin Large Projects	InnovFin Advisory
InnovFin SME Venture Capital	InnovFin MidCap Growth Finance		<ul style="list-style-type: none"> Horizontal Activity Project Advisory
SMEs and small Mid-Caps < 500 Employees	Mid-Caps < 3,000 Employees	Large Caps Typically > 3,000 Employees	Public & Private sector promoters
Intermediated SME/Mid-Cap Financing	Intermediated and/or direct Corporate lending	Direct Corporate Lending	Financial Advisory

☐ direct products

▤ indirect products

Main areas of activities

Horizontal Activities

- Prepare studies on access-to-finance gaps and on increasing effectiveness of financial products to address specific sectors/R&I projects' needs
- Develop “business cases” for new financing mechanisms to support specific R&I policy objectives

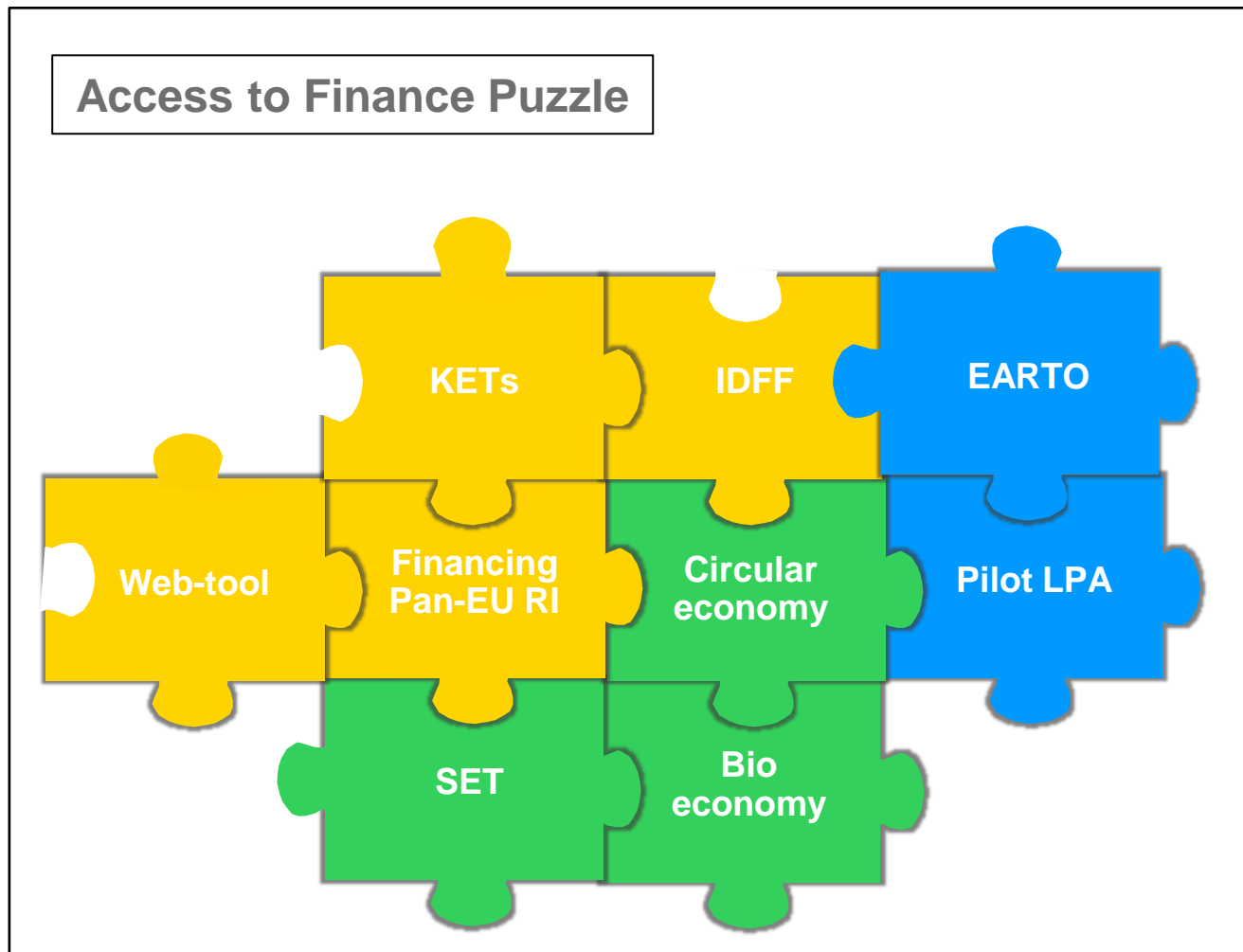


Project Advisory

- Improve the bankability and the investment readiness of companies/projects needing funding to make significant R&I investments
- Clients include R&I driven companies (midcaps or larger), public-private consortia, Joint Technology Initiatives, PPPs, R&D clusters, EC and EU Member States

- Business model
- Debt capacity analysis
- Capital structure
- Funding strategy
- Classic or innovative (public) financial instruments
- Funding sources and their eligibility criteria
- Governance
- Stakeholder engagement

Horizontal activities



InnovFin Advisory in support of EIB's Climate Change activities...



Advising the Luxembourg Government and European Commission on how financial products can support and accelerate the transition to CE activities → Luxembourg Presidency Conference at EIB in Dec 2015



Among others, development of methodology for quantifying risks and prioritising investment in the SET Plan.



Study to assess, and potentially improve, access-to-finance conditions met by Bio-economy companies.



Advising the FCH JU, the German and UK Coalition members on the bankability of hydrogen infrastructure roll-out.

Circular Economy and Climate Change

Growth Within: A circular economy vision for a competitive Europe reveals that by adopting circular economy principles, Europe can take advantage of the impending technology revolution to create a net benefit of €1.8 trillion by 2030, or €0.9 trillion more than in the current linear development path. This would be accompanied by better societal outcomes including an increase of €3,000 in household income, a reduction in the cost of time lost to congestion by 16%, and a halving of CO2 emissions compared with current levels.

Joint Report of the Ellen MacArthur Foundation, the McKinsey Centre for Business and Environment, and SUN (Stiftungsfonds für Umweltökonomie und Nachhaltigkeit) available at <http://www.ellenmacarthurfoundation.org/news/latest-research-reveals-more-growth-jobs-and-competitiveness-with-a-circular-economy.pdf>

Our Circular Economy Advisory Scope of Work

1. Assess the financeability by the EIB of Circular Economy projects in Luxembourg
2. Assess if EIB's financial products are fit for purpose to support Circular Economy projects in the EU (including in the context of the Investment Plan for Europe)



Engage in a wider consultation process in close collaboration with the Eco-Innovation Cluster and KPMG

Approach and Timeline

1. Ongoing conceptual analysis (CE definition, business models, risk assessments, case studies, relevant literature review, policy context)
2. Participation to awareness raising events
 - Development Potential of Circular Economy (Luxembourg Ministry of Economy, February 9, 2015)
 - Circular Economy – Preparing the Luxembourg Financial Sector for Take-off (organised by KPMG, February 12, 2015)
 - Involved in the finance-oriented Circular Economy Working Group comprising EBRD, several Dutch banks (ABN AMRO, ING and Rabobank), as well as a pension fund (PGGM)
3. Consultation with banks
 - Workshop with Luxembourg banks (June 9th, 2015), under the aegis of ABBL (Luxembourg Bankers' Association)
 - Bilateral consultations with interested banks
4. Consultation with Luxembourg –based companies
5. Key recommendations presented /potential new financings showcased at the December 2015 conference organised under the aegis of the Luxembourg Presidency of the Council, with the support of the EIB and of the European Commission

SET Scope of Work

- Development and support of the EC “Study on Innovative Financial Instruments for First-of-a-kind (FOAK) demonstration projects in the field of Energy”
- This study focuses on the **financing of the critical link between innovation and commercialization** of EU-based FOAK commercial-scale demonstration projects which uses **innovative low-carbon energy-supply technologies under the SET plan** (e.g. biomass conversion technologies, concentrated solar power, geothermal energy etc.)
- By examining the investments and funding needs and the associated **access-to-finance obstacles** of these projects (business and financial risk factors), it will be analyzed if new/modified public financial instruments are required to **further support the commercialization of clean energy technologies**
- The study is expected to be completed in H1 2016
- As part of the risk evaluation of projects under the SET Plan, development of a risk assessment methodology. It shall provide a framework to distinguish between bankable and non-bankable projects under the SET plan

H2 Mobility Germany

- H2 Mobility Germany (“H2M”) is a JV between Air Liquide, Daimler, Linde, OMV, Shell and Total aiming to deploy the largest H2 refueling stations network in Germany
- H2M has been formally established in February 2015 and has already accessed various grants programmes
- Despite the capital committed by the Shareholders, the financing of H2 refueling infrastructure is particularly challenging due to the combination of different risks:
 - Technology
 - Implementation
 - Regulatory
 - Market
 - Financial

IFA project advisory for H2 Mobility Germany

- IFA has been working with H2M management and shareholders to:
 - Review their preliminary business plan
 - Advise on an optimal capital structure to fund the business
 - Assess the possibility for EIB to begin a financing process
 - Explore various funding options
- It is expected that H2M could be ready for an appraisal for an EIB loan during Q1 2016
- In addition, IFA has also made the case for the expansion of the eligibility criteria of innovative financial instruments under development (i.e. the FDP facility) to finance H2 related projects

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European Investment Bank

EIB making a difference

25 000
international patent applications

172 000
students enrolled per year


high-speed broadband access for
3.2 million households

285 000
micro, small and medium-sized businesses

This helps sustain some
3.6 million jobs

supported some
500 000 young people

4 million people benefitting from access to safe drinking water or improved sanitation in emerging and developing economies



545 million additional passengers and
100 million transport hours saved

6 000 MW of electricity capacity, of which 80% from renewables

Improved healthcare facilities for
10 million EU citizens

3 000 GWh of energy savings

3 million tonnes per year of CO₂ emissions saved

the equivalent of taking
1.5 million cars off the road

12 000 GWh of electricity generated from renewable sources per year, powering over **1** million homes





ELENA - European Local ENergy Assistance



Energy and climate change in cities



- Urban areas account for about 70 percent of energy consumption and CO₂ emissions in the EU.
- There is substantial potential for investments in energy efficiency (EE) and renewable energy (RE) in cities.
- Some pioneering cities in the EU have launched major investment programmes in these areas, primarily in buildings involving partnerships with Energy Service Companies (ESCOs).



General objectives of ELENA



- Assist in the transition from preparing action plans to making investments
- Support for programmes that can be replicated in/from other regions or cities
- Extend the use of innovative techniques and approaches



European Local ENergy Assistance -- ELENA

- ❖ EC-EIB cooperation to support local and regional authorities to reach 20-20-20 targets;
- ❖ Grant facility: managed by EIB; funded by EU budget (CIP/IEE programme /Horizon 2020 programme).
- ❖ Application to Energy Efficiency; local renewables; clean transport.
- ❖ Market replication focus;
- ❖ Minimum investment leverage required
- ❖ Budget 2009 - 2013: 93 Mio € (allocations can be made until end 2015)
- ❖ Budget 2014 (H 2020): 15 Mio €

ELENA

(Project Development Services)

Support to Final Beneficiaries with:

- Additional technical staff
- Additional Technical studies
- Additional Feasibility studies
- Procurement/tendering
- Financial structuring

- **INVESTMENT PROGRAMMES/PROJECT**
- **EE and RES investment in public and private buildings**, including social housing and street and traffic lighting;
- **Urban transport** to support increased energy efficiency and integration of renewable energy sources;
- **Local energy infrastructure** to support developments in previous sectors including smart grids, ICT, etc.



- Facility operational since January 2010
- 41 projects signed/approved for a total of EUR 71 million
- Supported Investment programmes around EUR 3.9 billion
- Further projects in the pipeline or under approval with the EC.



Energy Efficiency in the Province of Milan



Finance provided by local Banks, supported by EIB loan (EUR 65 million).
Technical Assistance provided by the EIB-ELENA facility

Problem

Large EE potential in public buildings but budget constrained municipalities with a lack of technical capacity to develop a flow of projects.

Solution

adopt energy performance contracting

- aggregate projects
- coordinate at Province level;
- standardise contracts

Programme:

Refurbishment of existing school buildings in some 30 to 40 municipalities.

Implementation by ESCOs who pay the investments costs and guarantee energy savings (around 20%); serve debt through energy savings.

Overview of innovative climate finance products

Workshop with Luxembourg Members of Parliament on EIB's Climate Change Activities

The European Investment Bank (EIB)

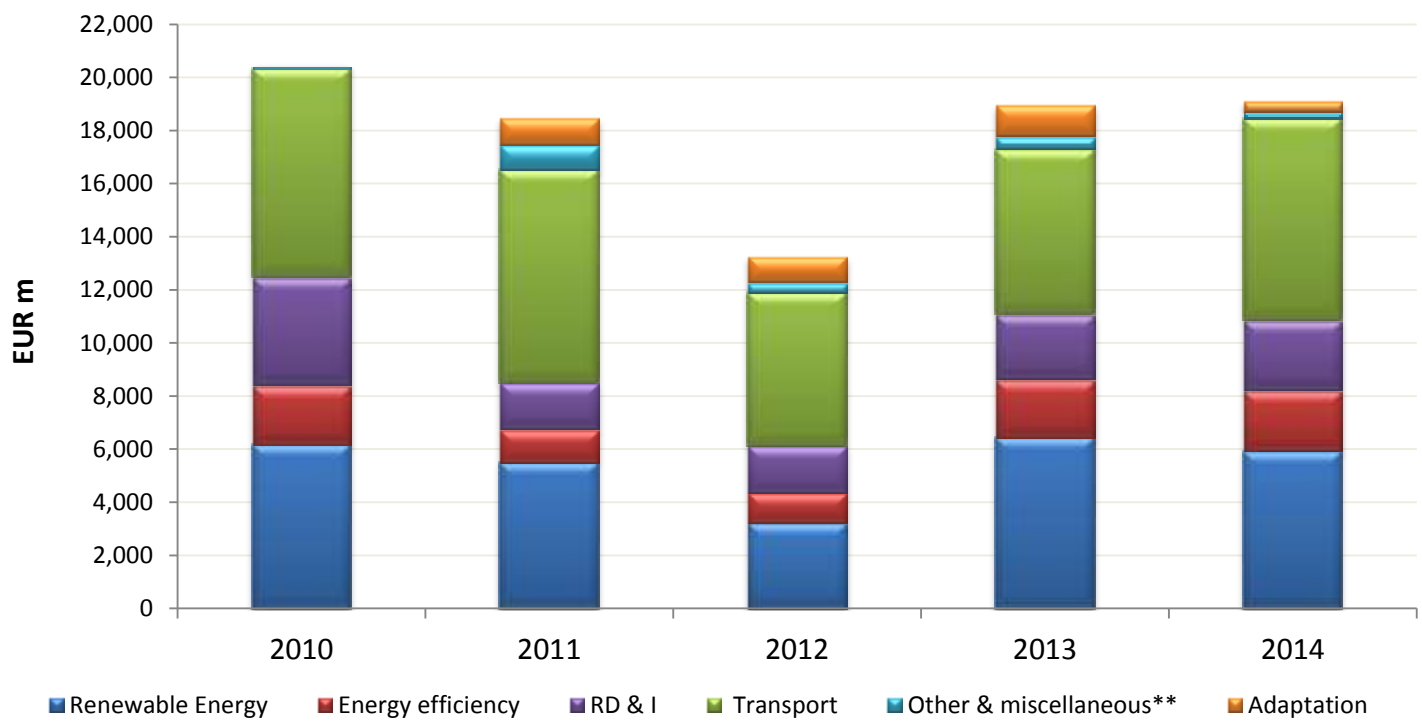


- EIB is the EU's long-term lending bank set up in 1958 by the Treaty of Rome, headquartered in Luxembourg
- EIB shareholders are the 28 EU Member States
- Largest multilateral lender and borrower in the world
- Around 400 projects annually in more than 160 countries
- Around 10% of financing is for projects outside the EU
- Financing is in support for EU priority objectives (climate change, infrastructure, energy, SMEs, regional development, etc.)



- Efforts to mitigate/adapt to climate change are a priority for EIB
- More than 25% of total EIB lending goes towards Climate Action
- Over EUR 100bn of financing worldwide during the last five years

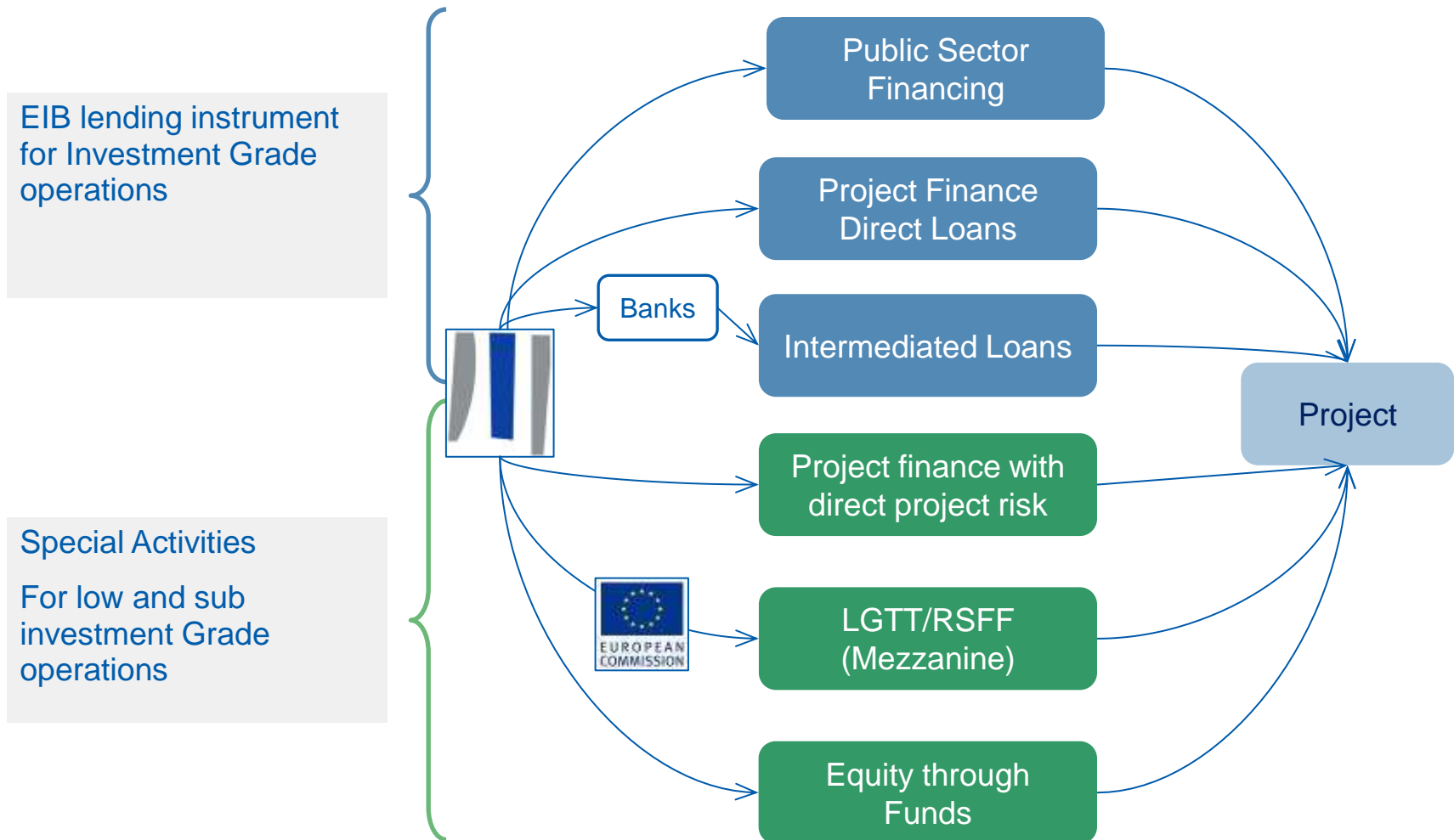
EIB Climate Action financing 2010-2014



EIB Financing Instruments



- The EIB has an extensive range of instruments to finance public and private sectors at investment and sub-investment grades of risk to its disposal



Innovative climate finance products



- In addition to the more traditional financing products, EIB offers a number of innovative climate finance products coupled with technical and financial advice to engage the private sector to achieve:
 - Flexibility in terms of broader eligibility of expenditure and in the use of funds for equity, debt and guarantee investment
 - Leverage effect - encouraging private and public sector commitment of investment, project implementation and management experience
 - Catalytic effect - enhancing the investment market complements other initiatives and additional sources of funding (including institutional investors)
 - Expertise and creativity - our expertise and rigorous due diligence help meet the highest standards.

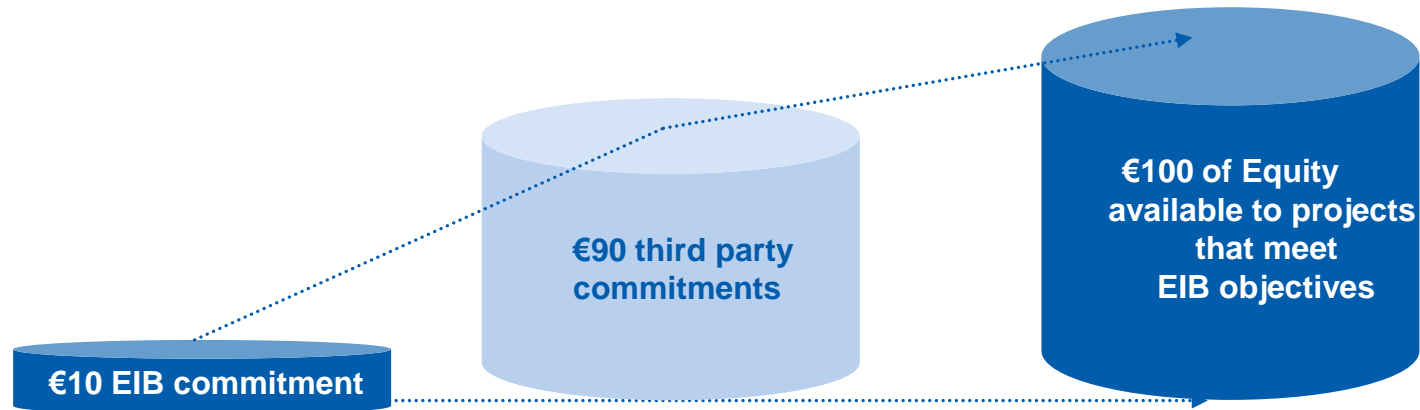


Funds

Fund investments



- Fund investments demonstrate the EIB's catalytic effect
- Efficient use of EIB capital through a leverage effect

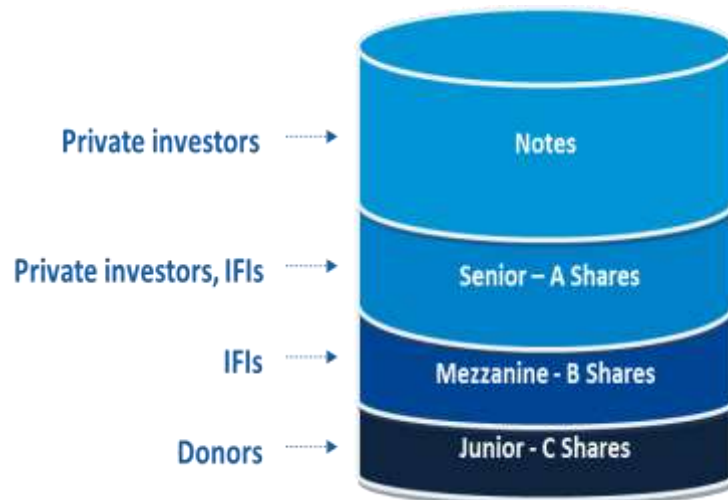


- Policy test upfront and project driven (i.e. primary focus on the underlying assets in terms of fit with EIB objectives and economic benefit)
- Can invest time to work with a fund manager from concept stage
- Can go into segments not quite mainstream yet (e.g. bio-diversity, land decontamination, land use/carbon)
- Can support start-up teams and new concepts
- Can play different management roles alongside investment

Layered-risk funds



- Layered-risk funds allow the issuance of different share tranches and notes to offer investors different risk-return profiles.
- The capital structure of such an investment vehicle typically rests upon the provision of a first loss piece (termed junior C shares in the figure below) by donors.
- Once the asset side of the fund develops, this structure allows the possibility to issue notes to private investors who remain most senior in the cash waterfall.



Example debt/equity fund: EEEF

- The European Energy Efficiency Fund (EEEF) is managed by Deutsche Bank (www.eeef.eu) aims to provide market-based financing for commercially viable public energy efficiency (70%) and renewable energy projects (30%) within the European Union
- Total size: EUR 265m (EUR 125 Mio EERP, EUR 75m EIB, EUR 60m CDP and EUR 5m DB)
- Beneficiaries: Local & regional Public authorities, but PPPs are possible
- Financing in form of loans, guarantees, forfeiting schemes (to finance ESCO projects).
- Technical Assistance (grant) is available to structure projects

EEEF offers a layered risk/return structure for investors with a fixed commitment of EU budget funds

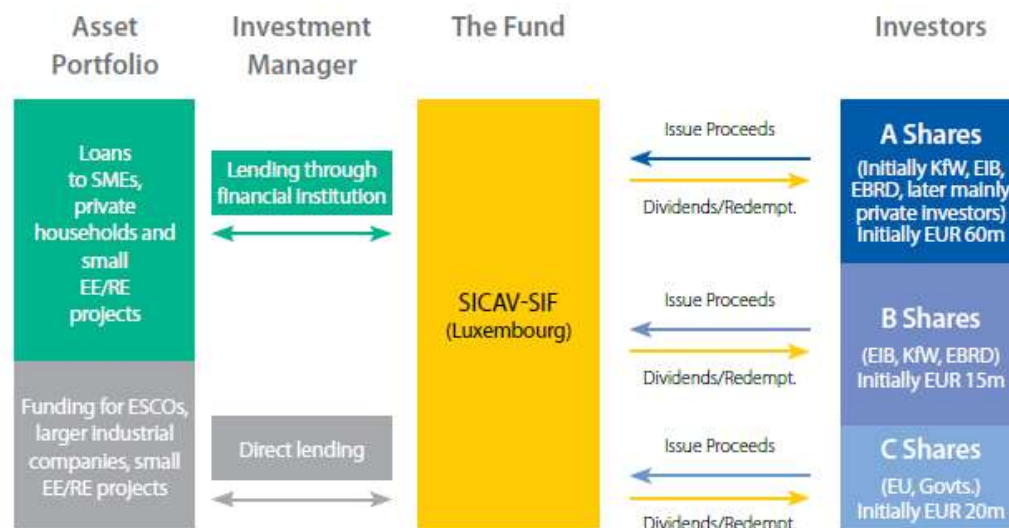
Example layered debt fund: GGF



GREEN FOR GROWTH FUND
SOUTHEAST EUROPE

INVESTING IN ENERGY EFFICIENCY
AND RENEWABLE ENERGY

- The Green for Growth Fund (GGF) is an example for a layered debt fund and aims to foster energy efficiency and renewable energy investments in South-East Europe and Turkey
- Initiated by the EIB and KfW and supported by the European Commission, GGF works predominantly through the provision of dedicated financing to businesses and households directly or through partnerships with financial institutions
- GGF was able to issue first notes to mobilise additional financing from private investors

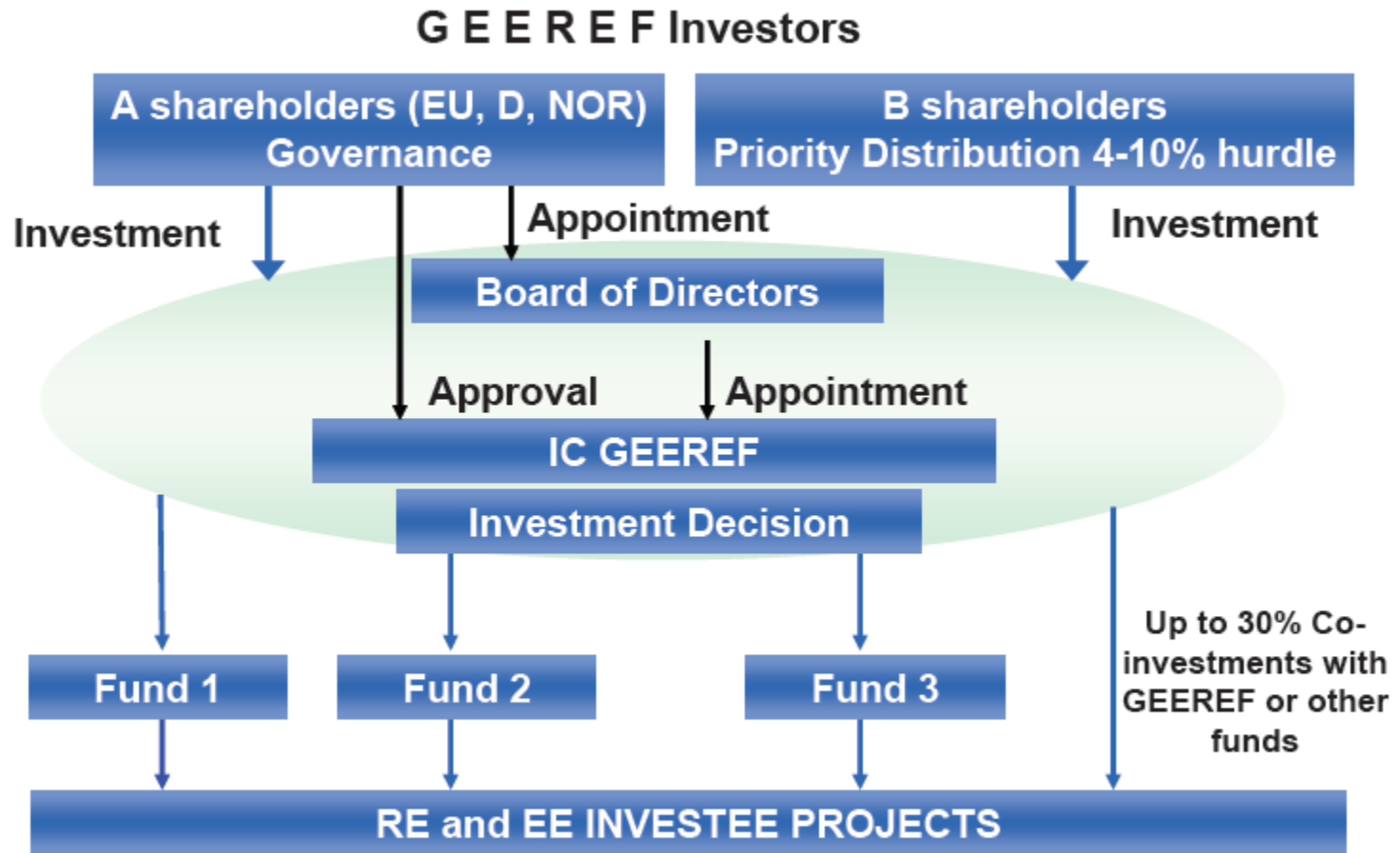


Issuance of different share tranches (A, B, C and Notes) offers investors different risk-return profiles

Example fund of funds: GEEREF



- GEEREF is a fund of funds and provides global risk capital to energy efficiency and renewable energy projects in developing countries and economies in transition (African, Caribbean and Pacific region, non-EU Eastern Europe, Latin America and Asia)
- GEEREF is sponsored by the European Union, Germany and Norway and advised by the European Investment Bank Group focusing on a triple bottom line of people, planet and profit
- GEEREF completed a fundraising campaign in June 2015 and raised over EUR 110m in private capital in additional to the EUR 112m contributions from the sponsors
- GEEREF is one of the first instruments that has demonstrated that it is possible to mobilise private financing by using public funds a risk capital in a financing structure



GEEREF is an innovative PPP model

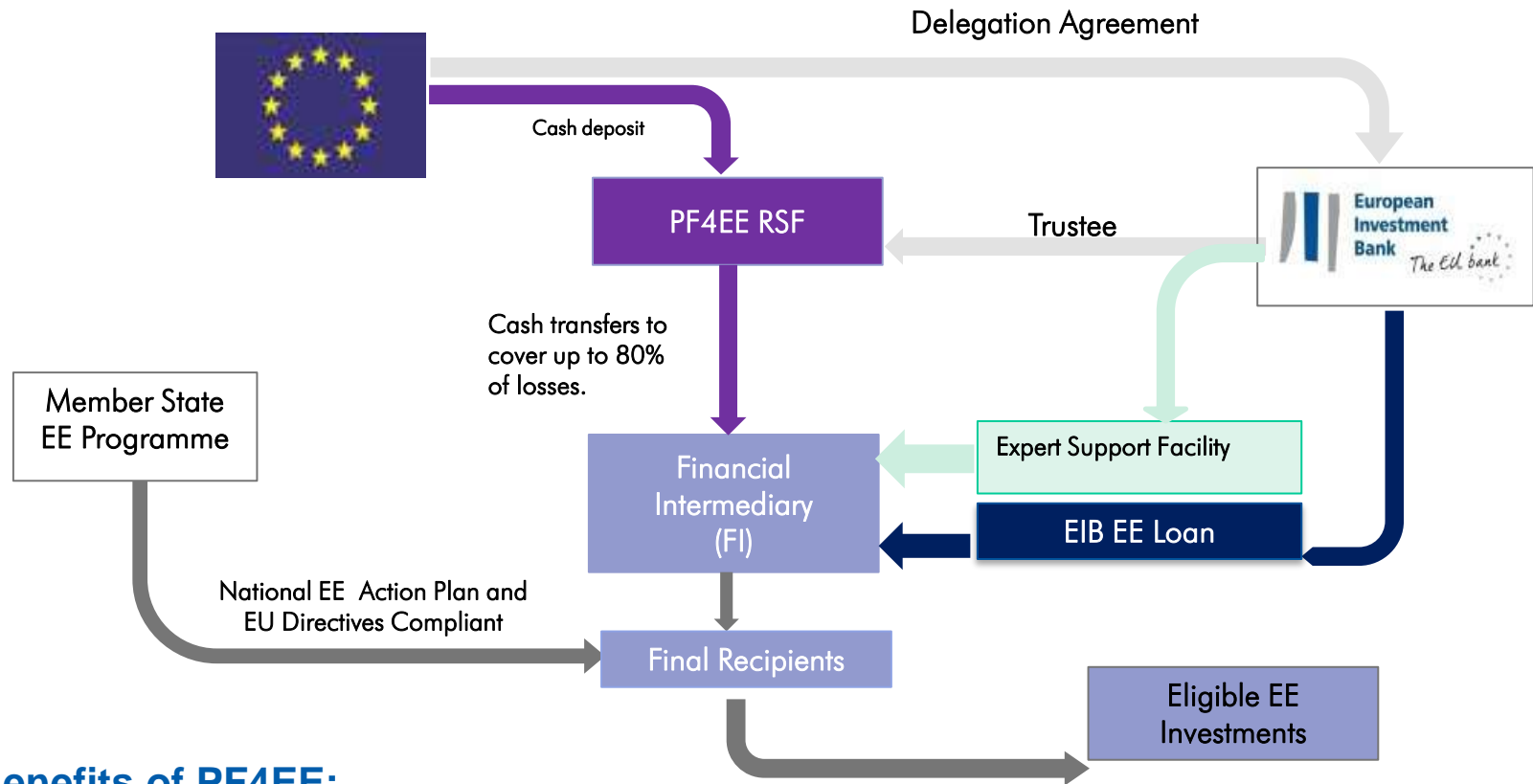


Energy Efficiency



- **Private Finance for Energy Efficiency (PF4EE)** is a joint instrument of the EIB Group and the European Commission (EC) to support the financing of energy efficiency (EE) investments.
- PF4EE supports eligible EE investments identified by schemes developed within EU Member States and is made up of 3 components:
 - **PF4EE Energy Efficiency Loan:** an EIB financing with long tenor and flexible allocation rules
 - **PF4EE Risk Sharing Facility:** Up to 80% coverage of credit losses on a loan by loan basis up to a given amount
 - **PF4EE Expert Support Facility:** A technical consultancy services aiming at supporting EE financing at Financial Intermediary level

PF4EE - Structure



Benefits of PF4EE:

- Better financing conditions because lower credit risk profile and adapted refinancing.
- Lower security/collateral requirements due to the Risk Sharing Facility.
- Global financing solution, if blended with EE grants from Member State EE programme.



Sustainable land-use



Example sustainable land use fund: Althelia



- The Althelia Climate Fund is an innovative, pilot sustainable land use investment fund.
 - Focus: nature conservation and sustainable forestry management, in particular REDD+ (tropical forest conservation activities that reduce greenhouse gas (GHG) emissions by avoiding deforestation and forest degradation, protecting and enhancing forest carbon stocks)
- EIB cornerstone investment with BNP Paribas, FMO (Netherlands Development Finance Company), FinnFund & Church of Sweden. Fund closed in 2013 with EUR 60m+ in commitments
- Project investments: generate revenues from forest carbon stock conservation and non-carbon sources (e.g. non-timber forest products, sustainable agriculture and other services/commodities)
 - Risk mitigation: Althelia finalised negotiations for an USAID guarantee to partially offset the price risk for generated carbon credits (so-called Advanced Market Commitment)

Good example of new market segment with policy risk mitigation

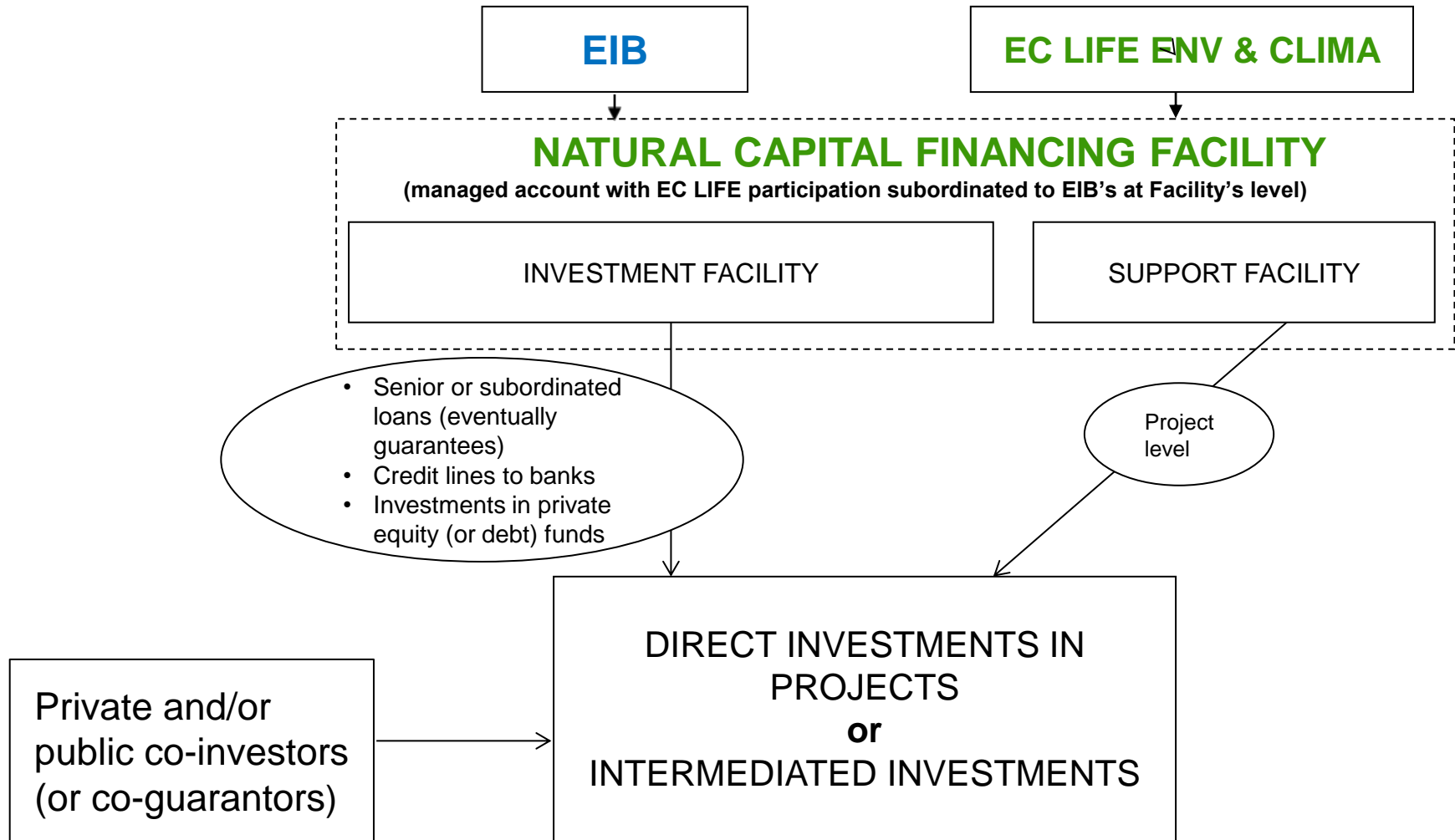


New initiative: Natural Capital Facility (NCF)



- Promote Green Infrastructure (GI), conservation, adaptation to climate change
 - Financing GI: urban, rural, built structures using nature
 - Natural Conservation: site preservation, recreation activities
 - Ecosystem-based Climate Adaptation: marine/coastal protection, natural management of basins, rivers/canals
 - Water Cycle catchment management: rainwater collection, SUDS, natural wastewater filtration, flood defence
- Projects optimised through use of market-based instruments (e.g. PES and Offsetting Credits)
 - Payment for Ecosystem Services (provided by biodiversity, watershed etc.) on the principle of beneficiary pays
 - Compensation and offsettings (for impacts on biodiversity, soil etc.) on the principle of polluter pays, eventually subsequent “no net loss and securing net gain” with generation of offsetting credits
 - Soil and forest sequestration of carbon with generation of carbon credits
- Pro-biodiversity businesses generating green services & commodities markets / Nature-based climate change adaptation businesses
 - Small pro-biodiversity businesses
 - Sustainable Forestry and Agriculture (including biomass), Sustainable Aquaculture
 - Nature-based processes or technologies for climate change adaptation
- Waste:
 - Remediation and regeneration of polluted land
 - Restoration of natural sinks absorbing waste
 - Recycling of organic waste including bioenergy

NCF: indicative structure



EU funding will help project development and provide risk mitigation



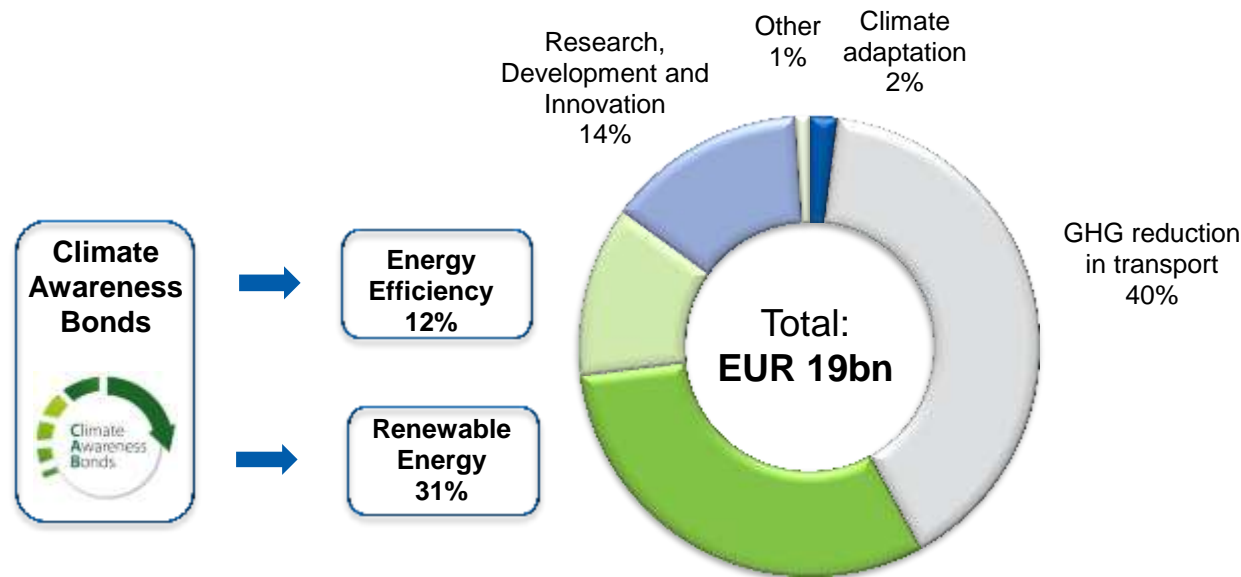
Engaging institutional investors

EIB CAB 'Use of Proceeds' – sector selection



- More than 25% of annual EIB lending goes towards Climate Action
- Within this, for Climate Awareness Bonds allocate funds to Renewable Energy and Energy Efficiency

EIB Climate Action Lending 2014 (by policy objective)

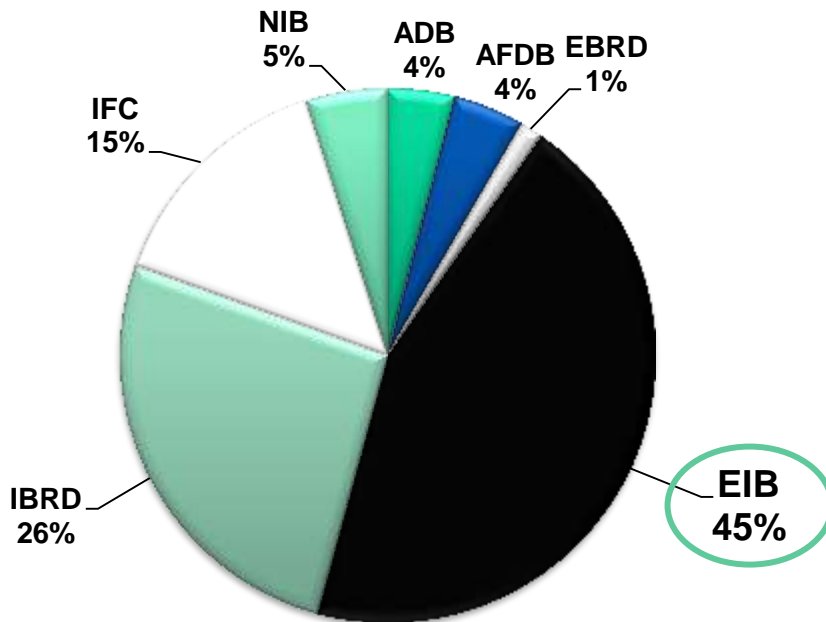


Green Bond Issuance

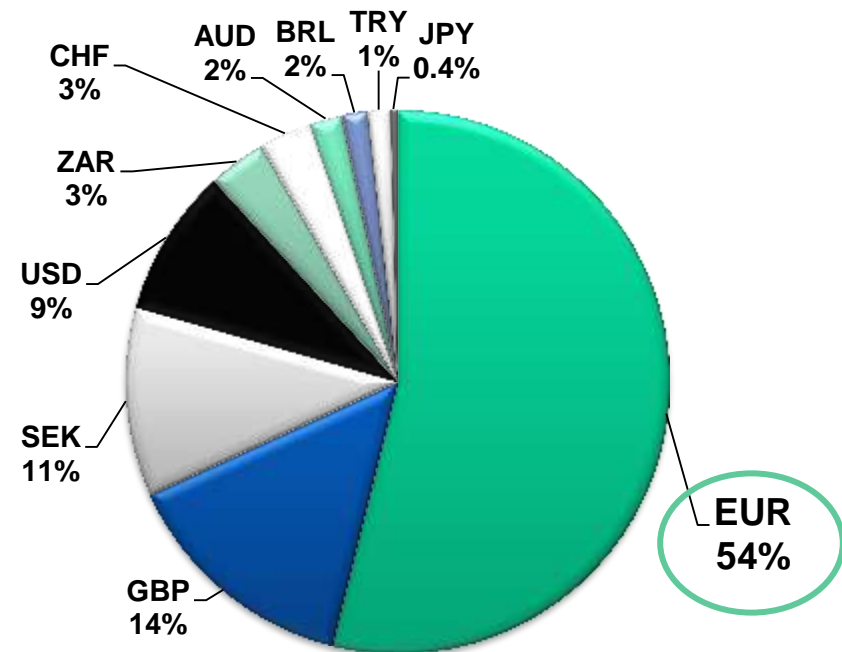


- CAB issuance to date: EUR 9bn equivalent in 10 currencies
- EUR CAB due 2019 - largest green bond in the market at EUR 3bn
- Focus on EUR & USD, tenors up to 10 years

Outstanding environmental bonds issued by MDBs (size > USD 100m)^



EIB CAB issuance by currency*



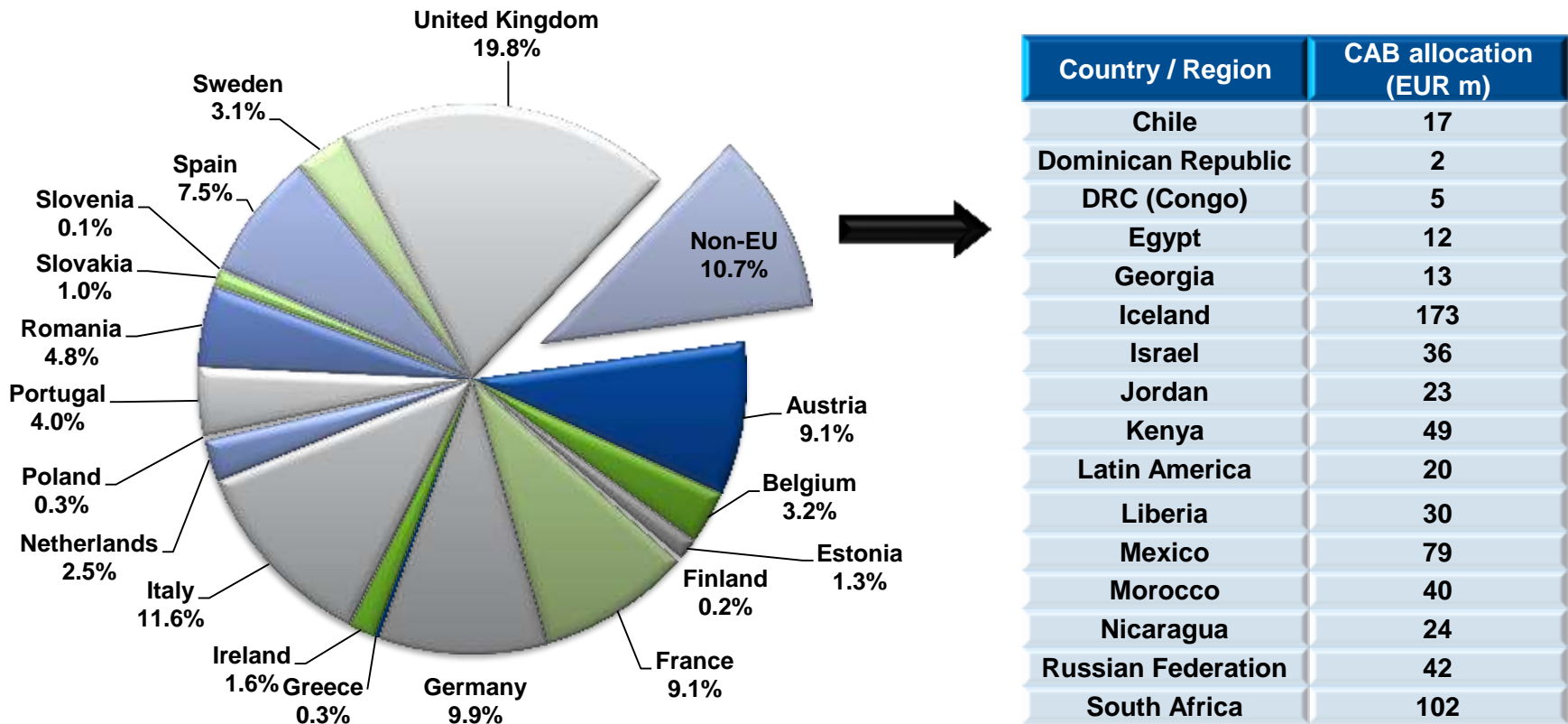
^Source: market data collected by Credit Agricole CIB; as of 27 April 2015

*As of 23 April 2015

CABs and EIB's Climate Action worldwide

- 95 projects in 38 countries within and outside of the EU

Geographical breakdown of CAB allocations 2007-2014*



Detailed list of CAB allocations available at: http://www.eib.org/investor_relations/documents/eib-cab-projects

*The chart shows EUR m CAB allocation and % share in total CAB allocations



EIB Climate Awareness Bonds – key features



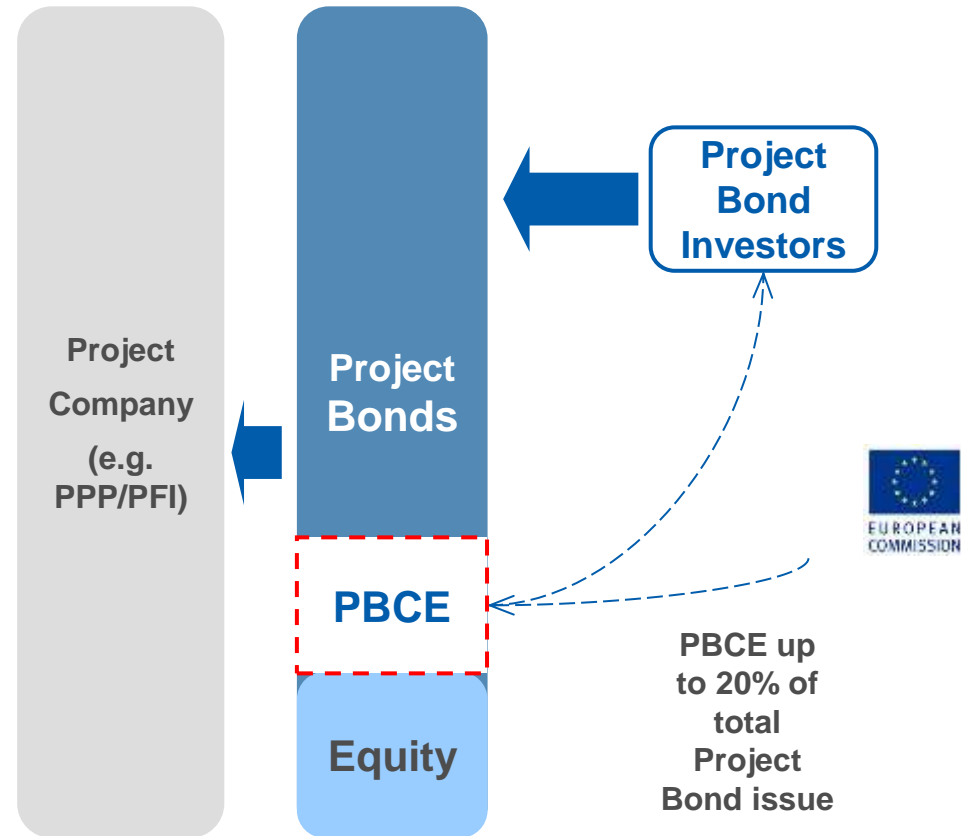
- ✓ **Scale:** Largest green bond issuer to date (EUR 9bn) and in 2014 (EUR 4.3bn)
- ✓ **Liquidity:** Largest green bond (EUR 3bn), liquid size in USD and GBP
- ✓ **Capacity:** Large flow of climate action lending
- ✓ **Green Bond curve in EUR:** two references in 5- and 12-yr tenors
- ✓ **Clear sector focus:** Projects in **Renewable Energy** and **Energy Efficiency**
- ✓ **Quality:** Project due diligence expertise, applying high EU standards
- ✓ **Transparency:** Detailed reporting on use of proceeds (audited sustainability report + dedicated newsletter) and policies (required as Aarhus signatory)
- ✓ **Project impact reporting** (2014 CAB newsletter) released 27th March 2015
- ✓ **Verification / audit:** external audit of reporting on the use of proceeds
- ✓ **Exposure to EIB credit, not projects:** CABs rated pari passu with other EIB bonds (AAA/Aaa/AAA)
- ✓ **No premium charged** - priced like other EIB bonds of same size & maturity
- ✓ **Open** to SRI and mainstream investors

Project Bond Credit Enhancement (PBCE)



The PBCE instrument:

- Ensures debt service for the Project Bond Investors up to the total size of the instrument
- Provides additional liquidity to avoid default, and acts as a first-loss debt piece
- Credit enhances project bonds from a typical BBB- rating by up to 3 notches (to A-)
- Can be provided as either a funded (subordinated loan) or unfunded (letter of credit) instrument
- Once drawn (unfunded), mezzanine debt repaid by junior cash sweep

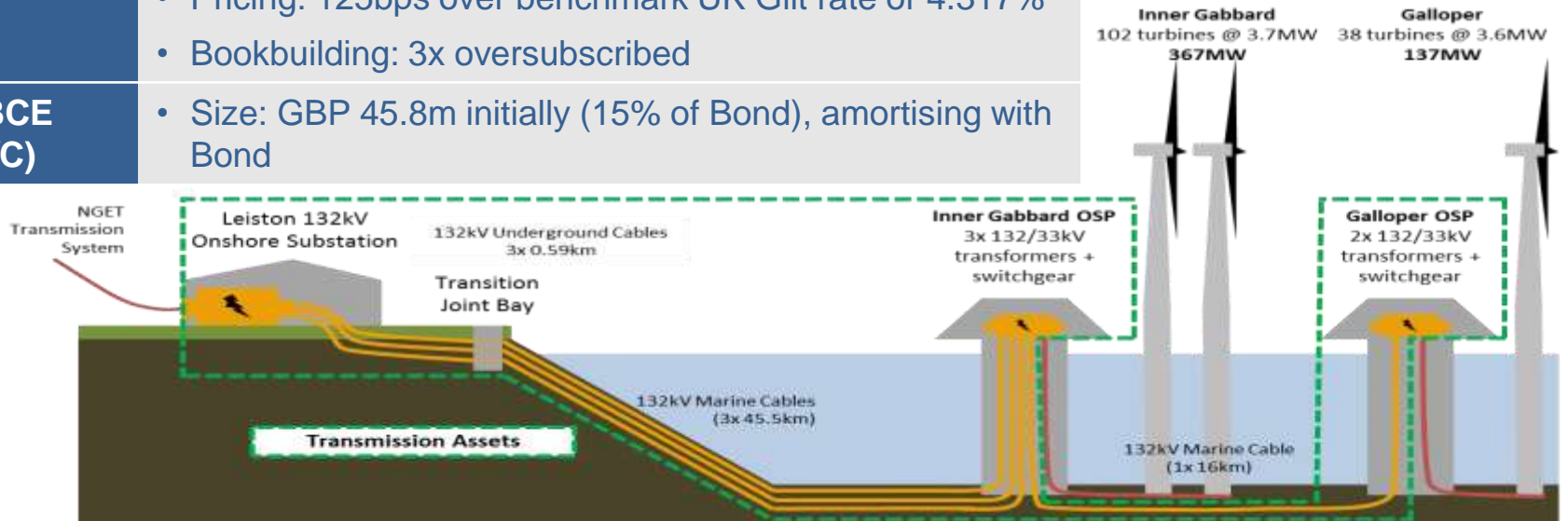


The Greater Gabbard OFTO



Project Overview

Project	<ul style="list-style-type: none"> • Electricity transmission assets connecting the 140 wind turbines of the 504MW Greater Gabbard offshore wind farm to the UK onshore grid • Construction completed • Concession of 20 years
Financing (Bond)	<ul style="list-style-type: none"> • Size: GBP 305.1m, publicly listed, long term, amortising senior debt with a tenor of 19 years • Rating: A3 (with the PBCE) • Pricing: 125bps over benchmark UK Gilt rate or 4.317% • Bookbuilding: 3x oversubscribed
PBCE (L/C)	<ul style="list-style-type: none"> • Size: GBP 45.8m initially (15% of Bond), amortising with Bond





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