

# Sharing best practices on financing instruments for industry decarbonisation

Climate Club Workshop

Virtual meeting - 9 April 2024 - 13:00-14:45 CET

# Agenda



1. Opening Remarks 13:00-13:10  
*Interim Secretariat of the Climate Club*  
*Federal Ministry for Economic Affairs and Climate Action of Germany*
2. Keynote Presentation: Financing solutions to foster industrial decarbonisation in emerging and developing economies 13:10-13:20
3. Panel: Case studies from industry and finance stakeholders 13:20-14:10
4. Snapshot Presentation: Climate Club's Global Matchmaking Platform 14:10-14:15
5. Audience Participation: Case studies, insights and financial instruments 14:15-14:40
6. Closing Remarks and Next Steps 14:40-14:45

# Objective and Scope of Workshop



- Understanding how existing economic, financial and de-risking instruments can help unlock private capital and promote industry decarbonisation
- Discussing between international finance institutions and organisations promoting industrial decarbonisation through various instruments

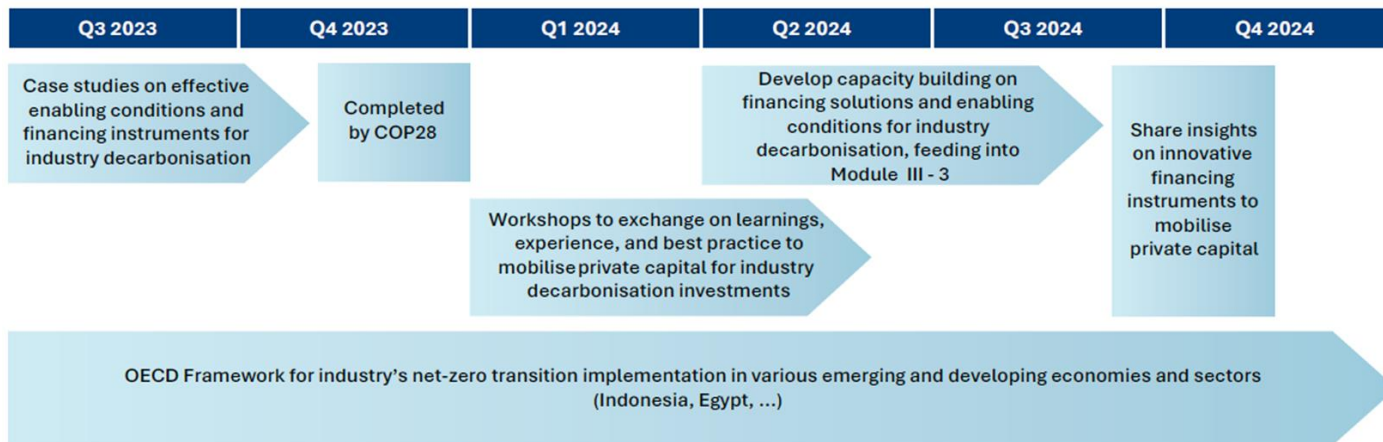
# Module III - 2. Developing a better understanding of successful financing instruments and enabling conditions to mobilise private capital

## Rationale

- **Case studies** on effective enabling conditions and financing instruments for industry and summary of learnings that can help for their replication in emerging and developing economies.
- **Exchange of learnings, experiences, and best practices** through workshops and based on these outcomes develop capacity building programmes for relevant actors to mobilise private capital for industry decarbonisation investments.

## Objective

- **For selected countries** solutions for improving enabling conditions and financing supported with a pipeline of projects based on the OECD Framework for industry's net zero transition.
- **Contribute to the development of innovative financing instruments to unlock and mobilise private capital.**



## Outputs of Pillar III, Module 2 for 2024

- Outcomes from the implementation of *OECD Framework for Industry's net-zero Transition*:
  - in the **cement/steel sector** for a portfolio of low-carbon technologies
  - in **emerging markets and developing economies** for specific sectors (clean hydrogen for industrial applications in Egypt, steel in Indonesia, petrochemicals & plastics in Thailand)
  - **Solutions on financing and improved enabling conditions** to mobilise private capital for investments in low-carbon technologies
- Second stakeholder workshop to exchange on best practices
- Capacity building programme concept for financing industry decarbonisation
- Summary report of learnings

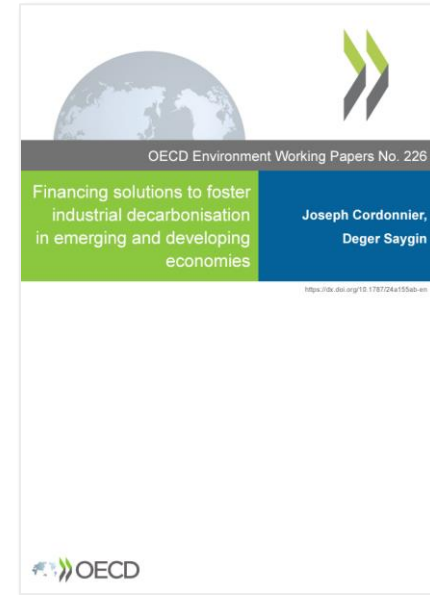
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# Financing solutions to foster industrial decarbonisation in emerging and developing economies

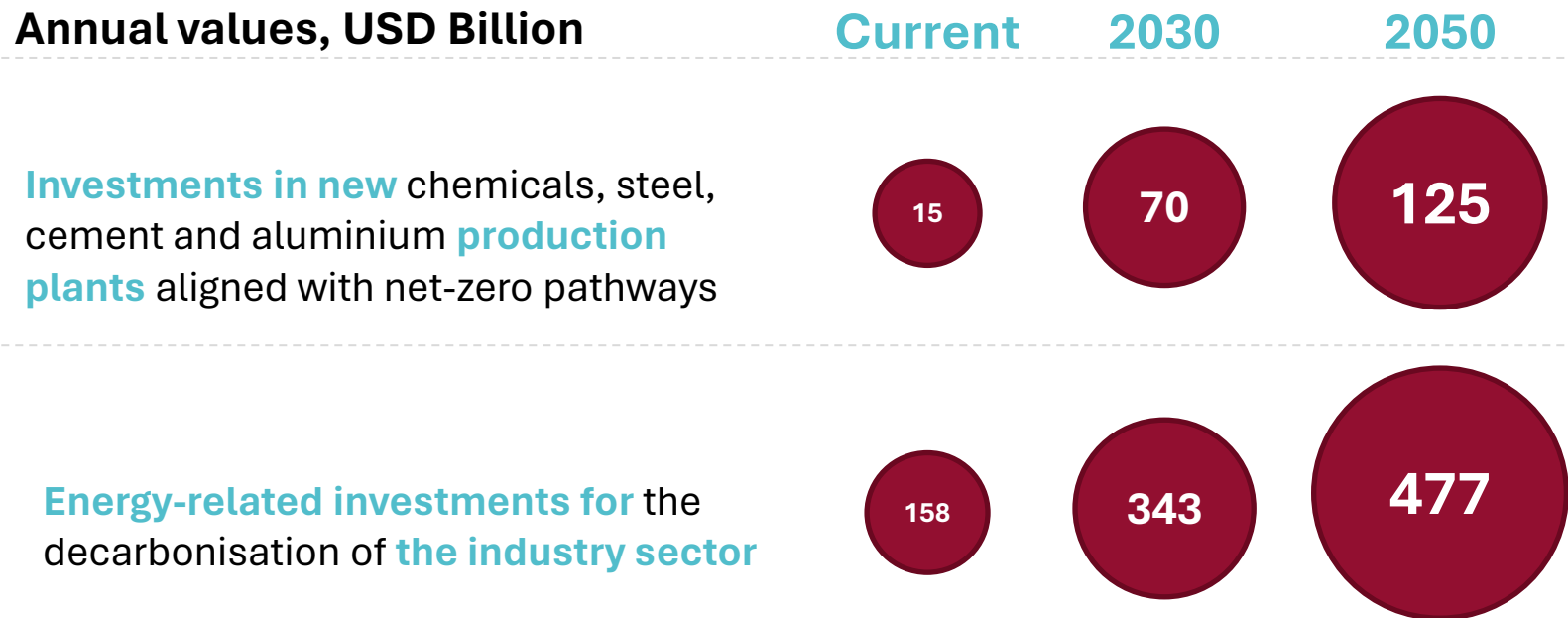
- The report complements the [OECD Framework for industry's net-zero transition](#)
- It analyses the **main financial challenges to scale up investments for industry decarbonisation** at a pace consistent with net-zero pathways
- The report highlights a range of **available de-risking and financial instruments** that can help overcome these hurdles



OECD publication

November 2023

# Private capital mobilisation is needed to close investment gap for industry decarbonisation



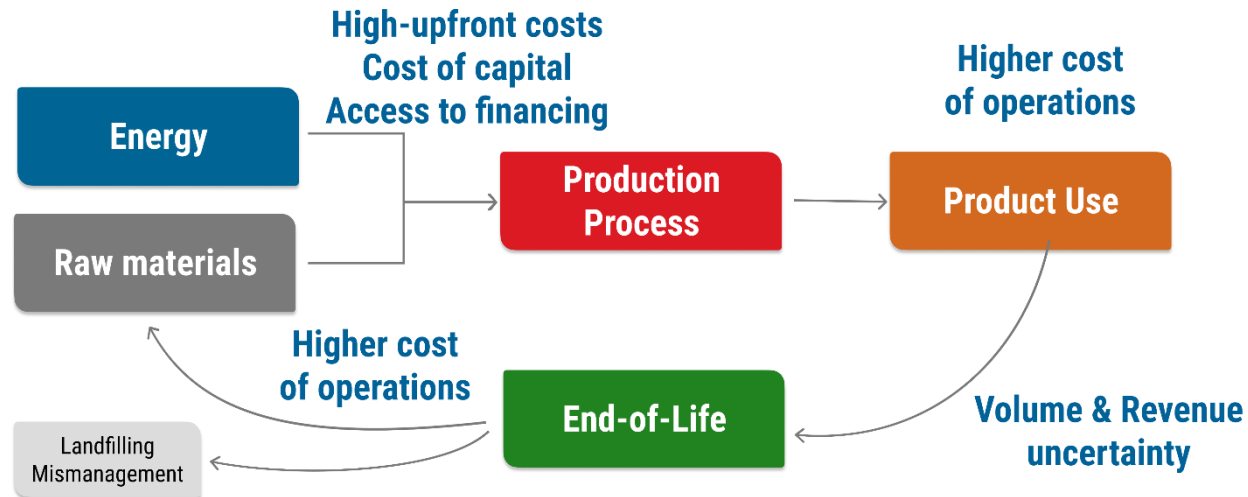
Sources: (ETC, 2023), (IEA, 2021)



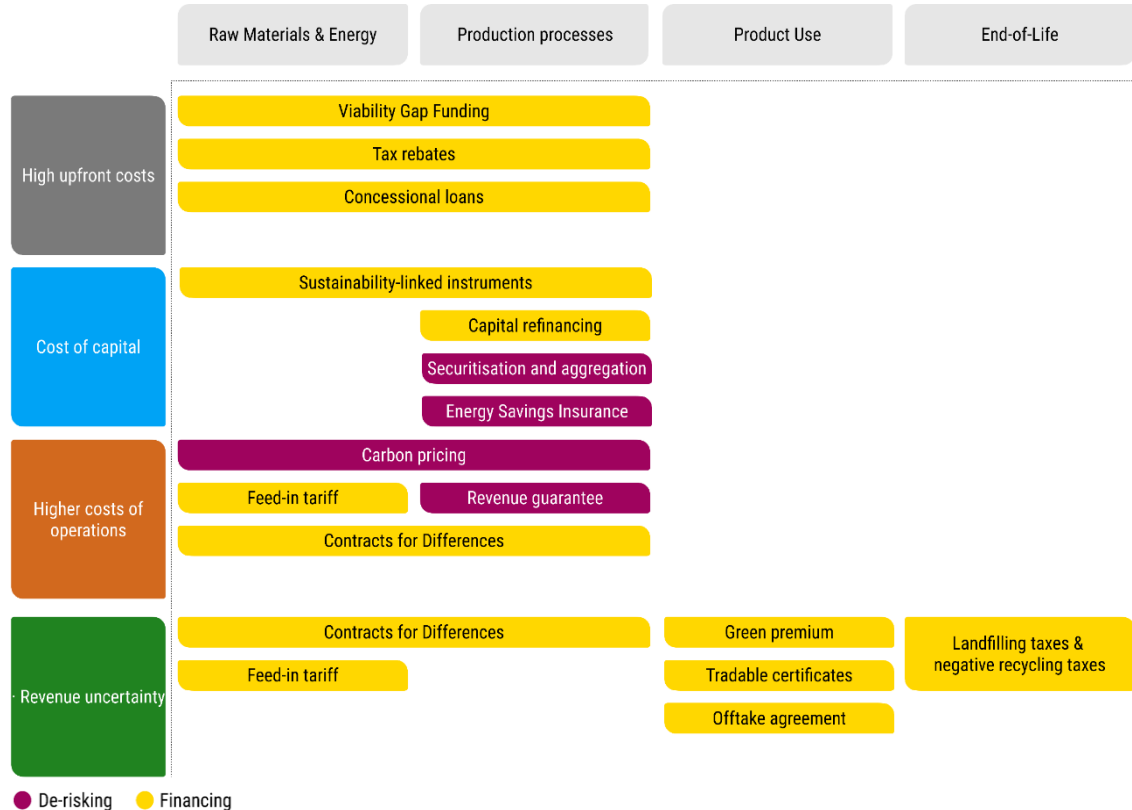
# Financial support is needed across the whole industry value chain to overcome key challenges

OECD “Framework for Industry’s net-zero Transition” aims to:

- **Improve enabling conditions:** policies, regulations, skills, ...
- **Identify financial solutions:** focus of Climate Club’s Module III-2



# Tailoring de-risking and financing instruments



- Various **economic, de-risking and financial instruments** are already available
- **Combining instruments** can help address multiple barriers when developing an industrial decarbonisation project



# Learnings from case studies on available financing instruments for industry decarbonisation

## Financing instruments characteristics

- Multiple uses of **de-risking instruments** to optimise the leverage of public resources
- **Direct public support** for targeted or time-bound uses.

## Governance and implementation

- **Knowledge-sharing and matchmaking platforms** for better and rapid implementation
- **Multi-stakeholder approach**

## Enabling conditions

- **Capacity-building** to strengthen institutional readiness and maturity of the domestic industry
- Key role of **unified sustainability taxonomies**

## Replicability & scale-up

- **Innovative financial instruments** (e.g. energy savings insurance, carbon contract for difference) are still **at very early stage**
- Importance of **project pipelines**

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# Panel Discussion



**Matthias Voitok**

Head of  
Structured  
Finance for  
North, Central,  
South-East  
Europe  
European  
Investment Bank



**Louise Them  
Kjøhlholm**

Chief ESG  
Advisor  
Export and  
Investment Fund  
of Denmark



**Christiaan  
Gischler**

Lead Energy  
Specialist  
Inter-American  
Development  
Bank



**Femi Akinrebiyo**

Global Manager,  
Manufacturing  
Investment &  
Trade Supplier  
Finance  
International  
Finance  
Corporation



**Pär Gebauer**

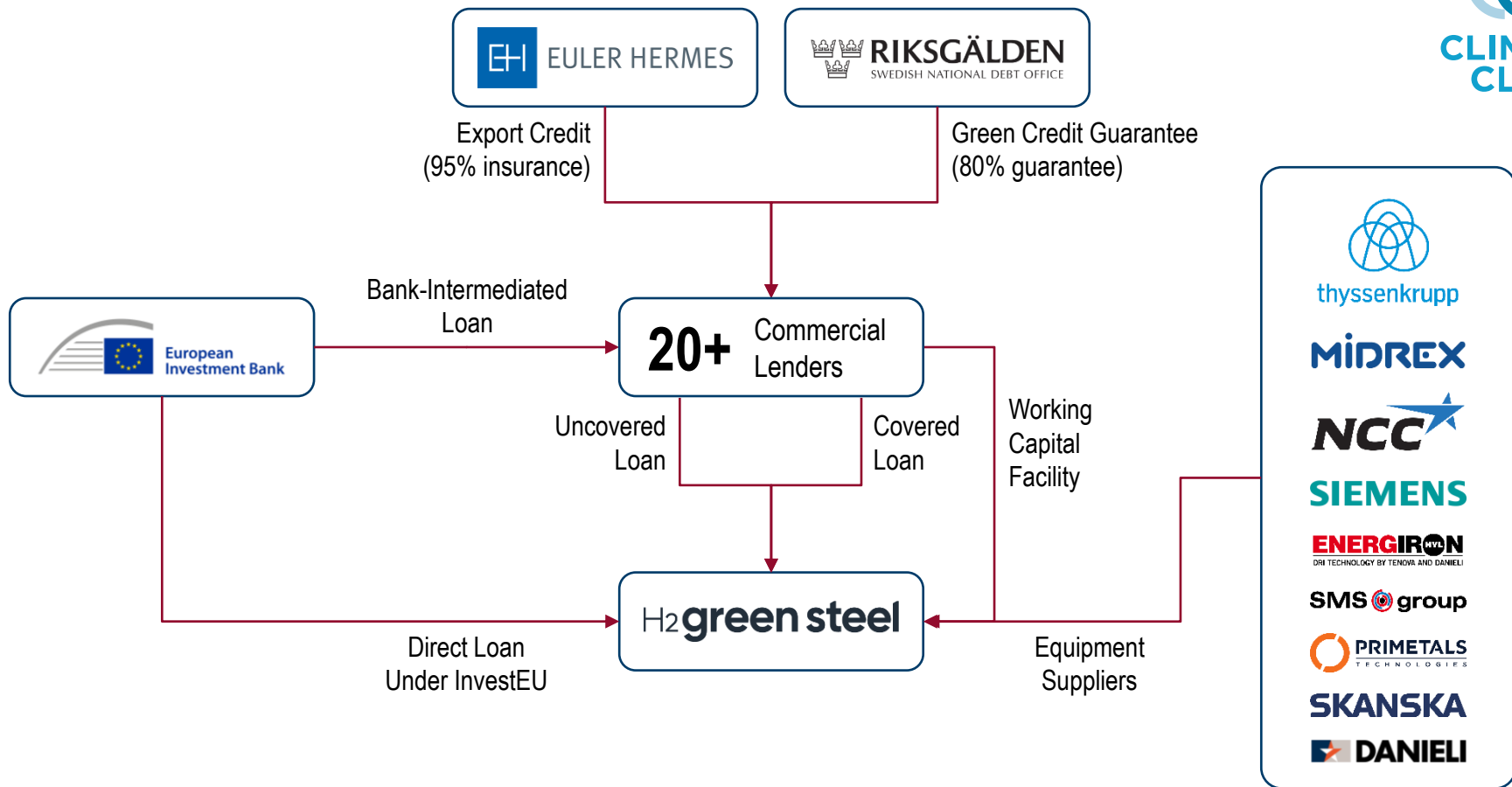
Advisor  
Mitigation Action  
Facility

# European Investment Bank

Matthias Voitok



# European Investment Bank





# The EIB's H2 Green Steel Project Financing: Description

## Programme and instrument

- Non-recourse project financing under the InvestEU facility

## Status

- EUR 6.5bn project funding secured (EUR 4.2bn debt financing), currently under construction

## Amount

- EIB provides EUR 314m, of which EUR 200m direct loan under InvestEU and remainder intermediated

## Cross-cutting or industry-specific

- Steel manufacturing industry



# Regional Focus, Design and Implementation

## H2 Green Steel Project in Boden (Northern Sweden)

### Design and structural components of project

- **EIB** acting as **anchor investor/pathfinder** and taking **major direct project risk** (EUR 200m).
- **Riksgälden (Swedish National Debt Office)** (green credit guarantee) and **Euler Hermes** (export credit) cover for EUR 1.2bn each.
- **Group of over 20 commercial lenders** and Svensk Exportkredit (SEK), led by BNP Paribas (lenders' market advisor), ING (lenders' doc bank), KfW IPEX-Bank and Societe Generale (both financial advisors to H2GS) and UniCredit (lenders' technical advisor).

### Implementation of Project

- **Classical project finance, modified to needs of project** (financial structuring, debt sizing, structuring around conditions precedents proving technical ramp up etc.)

# Impacts from H2 Green Steel Project

## The impact of the H2 Green Steel Project

- **H2 Green Steel** is the **first** large-scale **integrated, digitalized, and circular** green steel plant in the world.
- **2.5 Mt annual green steel production** with **95% CO<sub>2</sub> emission reduction** with full electrification.
- **H2 Green Steel** will hold **one of the world's largest electrolysis plants to date** with **740 MW for green hydrogen** production.
- There was a **strong interest** of both **equity investors** (strategic and financial) and **key industrials** (as investor and offtaker).

# H2 Green Steel: Lessons Learned

## What are the key takeaways from implemented projects?

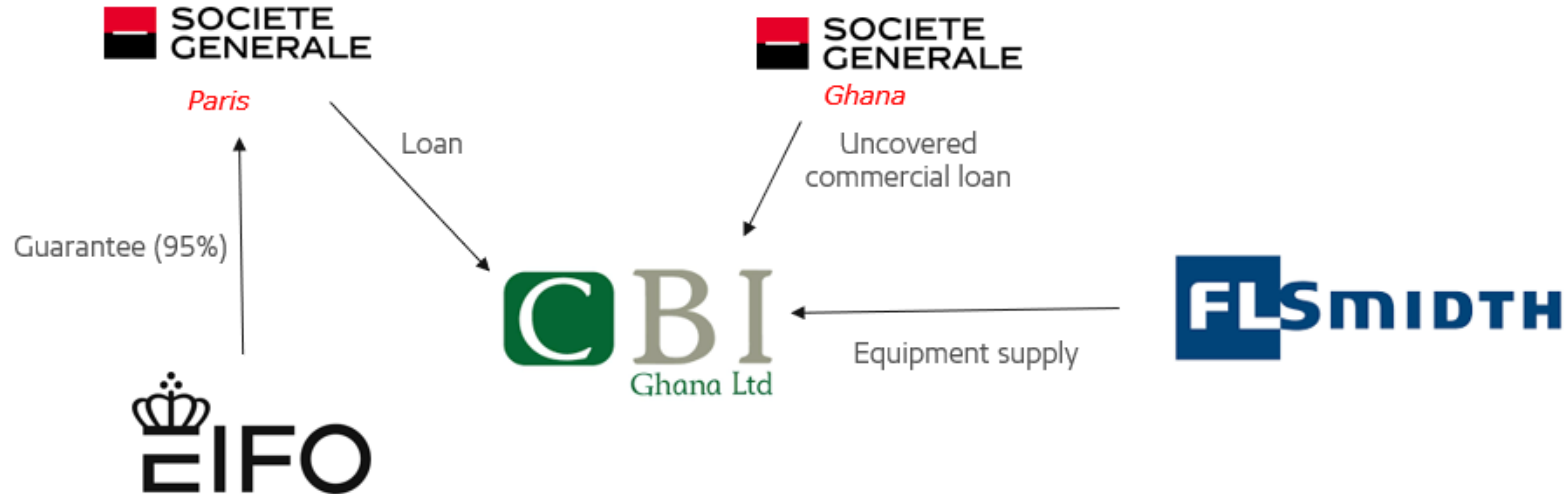
- Political backing (EU and national H2 regulatory support, Taxonomy, Grants).
- First-mover advantage with single integrated site (reducing offtake and interface risk).
- Strong market interest in product: solid 5-7 years take or pay offtakes and customers ready to pay green premium of appx. 20-30% compared to “brown” steel.
- Access to cheap renewables (regional competitive advantage in North of Sweden, access to 100% RE). Access to sufficient grid capacity.
- Access to and expansion of infrastructure (ports, rail, air) needs to be developed prior to financial close.
- Strong cooperation with municipality Boden: labour and real estate market, public services. Procurement under PPP models.
- Access to talent & HR: strategy to attract from abroad and recruit globally. Attractiveness of vibrant start-up vs. rural locations.

# Export and Investment Fund of Denmark

Louise Them Kjølholm



# Buyer Credit Guarantee



**Expansion of an existing cement plant with a grinding mill and a clay calcination unit delivered by FLSmidth.**

# Buyer Credit Guarantee: Description

## Product

- Buyer Credit Guarantee

## Status

- Under construction planned to be completed in 2024. Old unit in operation.

## Amount

- USD 42 million (95 % of the loan paid)

## Sector

- Cement industry

# Regional Focus, Design and Implementation

## Buyer Credit Guarantee

### Region

- Ghana

### Design

- Cement crusher, clay calciner
- New technology to use calcined (locally sourced) clay as a Supplementary Cementitious Material (SCM), substituting partially the imported clinker in the finished cement mix. CO<sub>2</sub> footprint reduction of the product by up to 20%.

### Implementation of Project

- A loan agreement lists the framework conditions such as alignment with the EU Taxonomy and IFC Performance Standards and World Bank Group's Environmental, Health, and Safety (EHS) Guidelines. Additional specific requirements are listed in an Environmental and Social Action Plan (ESAP).



# Impacts from the Buyer Credit Guarantee

## What are the impacts of the implemented project(s)

- The Buyer Credit Guarantee can create opportunities provides to the low-carbon technologies to foreign customers and supports Danish companies in gaining market shares in international markets. The financing mechanism structured by EIFO and Société Générale made it possible for FLSmidth to sell its technology to CBI.
- The project will also have significant impact on the economy of Ghana, contributing to closing the cement demand-supply gap in Ghana. It will add value to local resources (kaolinitic clay), provide job opportunities, reduce dependence on imported resources (clinker), and reduce the cement production's carbon footprint.

# The Buyer Credit Guarantee: Lessons Learned

## What are the key takeaways from implemented projects?

- The Buyer Guarantee's structure enabled CBI Ghana and its shareholders to get access to attractive, long-term financing. (Ghana's country rating was B15 at the time of the transaction, limited the ability of CBI to obtain external international funding without an EIFO guarantee).

## How replicable is this project and the use of this financial instrument?

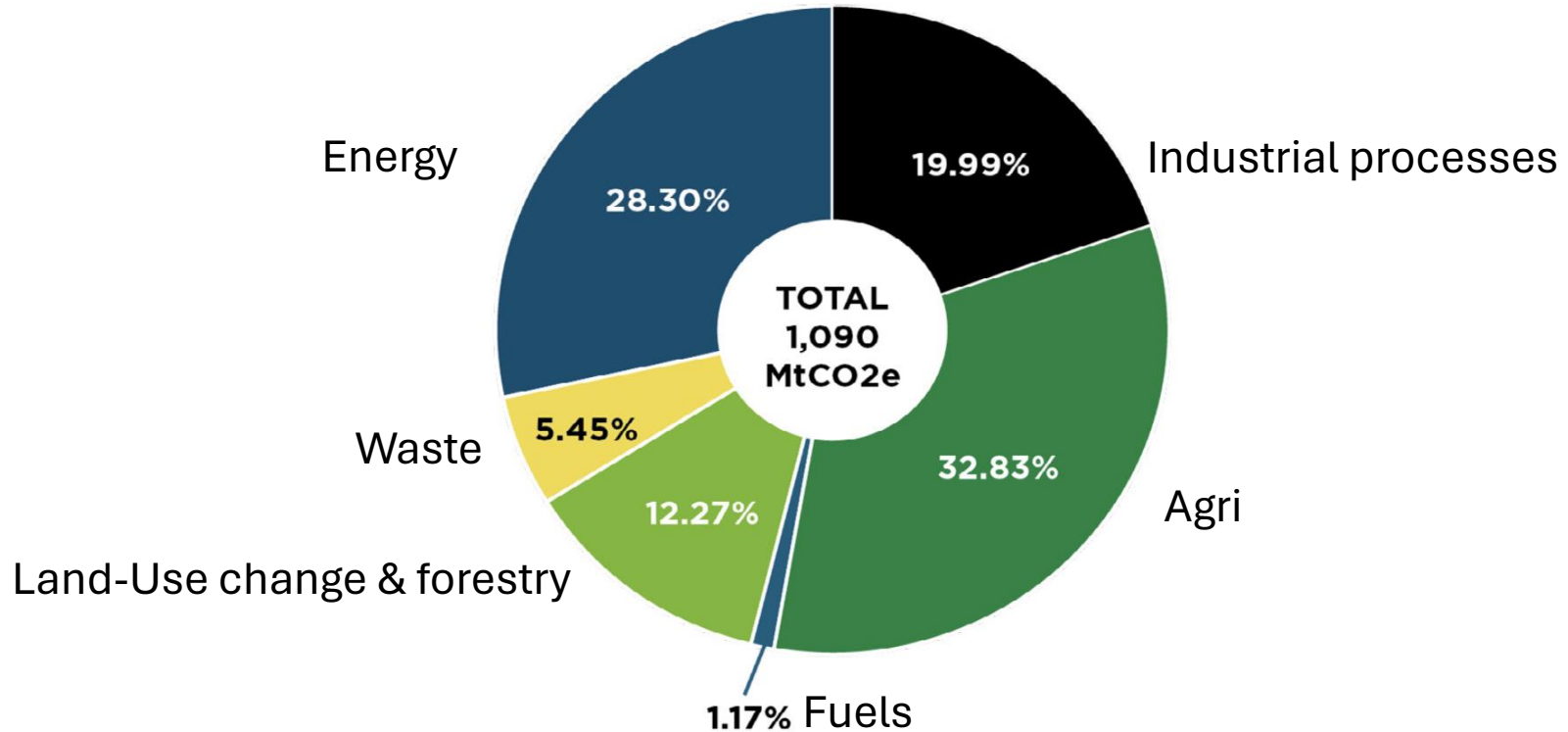
- Buyer Credit Guarantee are highly replicable.
- They can be implemented in various geographies and industries to facilitate investment in decarbonization projects.
- In countries with high-risk profiles, the Buyer Credit Guarantee is key as it unlocks financing and thus enables the foreign buyer to finance the purchased equipment.

# Inter-American Development Bank

Christiaan Gischler

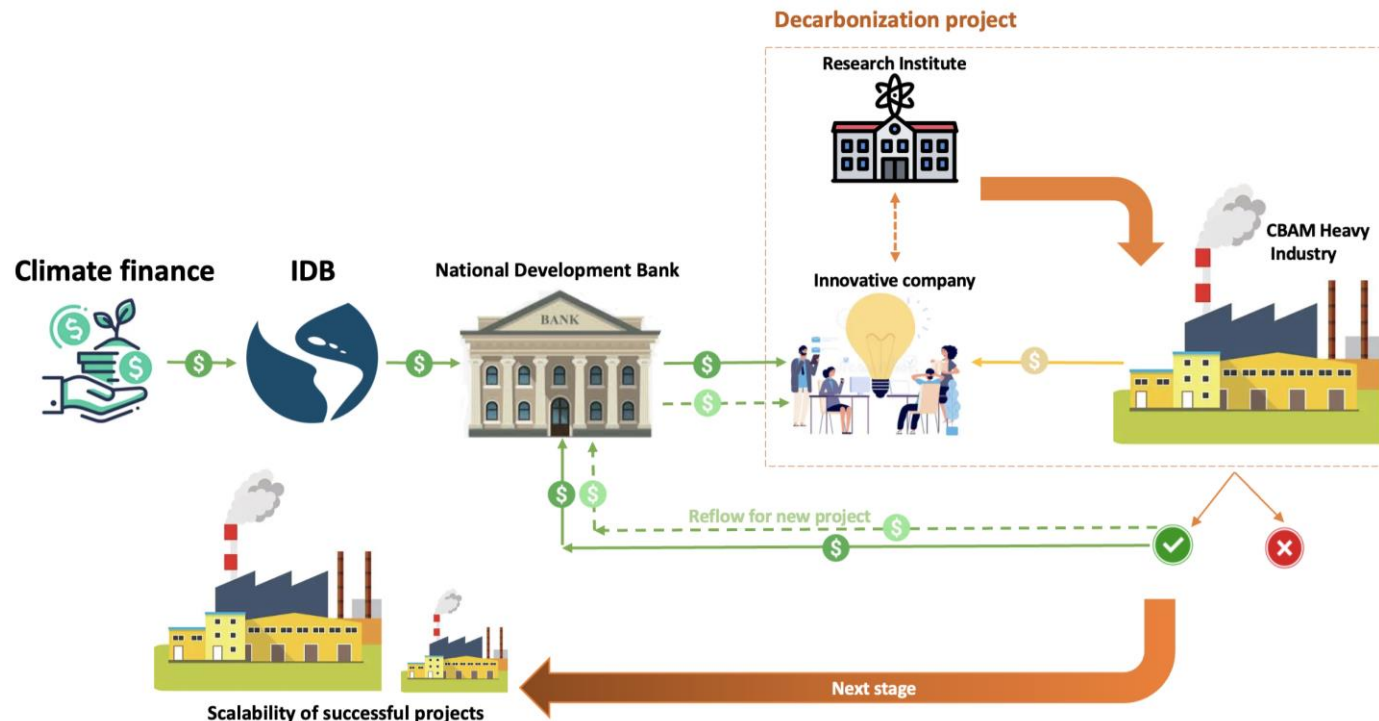


# Context - GHG emissions in LAC by sector in 2019



BID, 2019.

# Climate Finance for Decarbonisation



Support to partner countries on the EU CBAM and carbon pricing for industrial decarbonization

# Climate Finance for Decarbonisation - Description

## Programme and instrument example

- Grants, contingent recovery grants, and blended funds with climate finance

## Status

- IDB applied to several climate funds

## Amount

- Grant requested to climate funds: EUR 20/40m
- Total Volume: EUR 130m *at least*
- The project aims to attract significant investments from both public and private sectors

## Cross-cutting or industry-specific

- Steel and aluminium industries in Brazil and Mexico, initially
- Cement, pulp & paper, automotive parts, fertilizers

# Regional Focus, Design and Implementation

## Regional Focus

- Regional with a focus on more industrialized countries such as Brazil, Mexico, Chile, Colombia & Argentina

## Design and structural components of project

- **Contingent recovery investment grant**
  - Pilots
- **Blended funds**
  - Decarbonization acceleration of facilities
- **Grants**
  - Strengthen policy
  - Develop robust MRV systems that comply with CBAM requirements
  - Capacity-building and knowledge-sharing products

## Implementation of Project

- **Consortium** IDB – Lead Organization + Research Institutes (policy development and capacity building)
- **Partners** Latin American Steel Association (ALACERO), National Chamber of Aluminium Industry (CANALUM), FICEM (Cement Interamerican Federation), among others

# Impacts of Climate Finance for Decarbonisation

## What are the impacts of the project

- Contribute to the adoption of decarbonization technologies in hard-to-abate sectors in LAC
- Support efforts for governments in LAC to adopt policies that foster decarbonization and maintain the competitiveness of the region's exports by valuing their carbon content
- Assist exporters of energy-intensive commodities in applying CBAM-aligned MRV systems



# Climate Finance for Decarbonisation: Lessons Learned

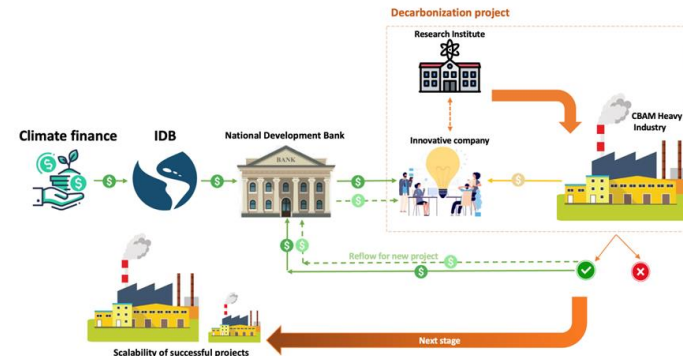
What are the key takeaways from implemented projects?

- **Complexity in project structuring**
  - This is a multifaceted challenge with intricate layers of planning, execution, and stakeholder management
- **Sector with facilities that can be adapted**
  - Adaptation of current assets not only optimizes cost but also accelerates the implementation of strategic initiatives

How replicable is this project and the use of this financial instrument?

The project is not only replicable but adaptable as well.

Replicability

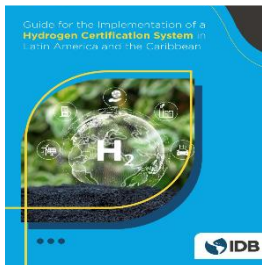


Scalability

# Thank you for your attention!

christiaang@iadb.org

Guide for the implementation of a  
Hydrogen Certification in LAC



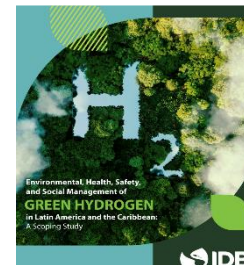
Unlocking green and just hydrogen  
in LAC



Accelerating the decarbonization  
of heavy industry in LAC



Environmental, health, safety and  
social management of GH2 in LAC

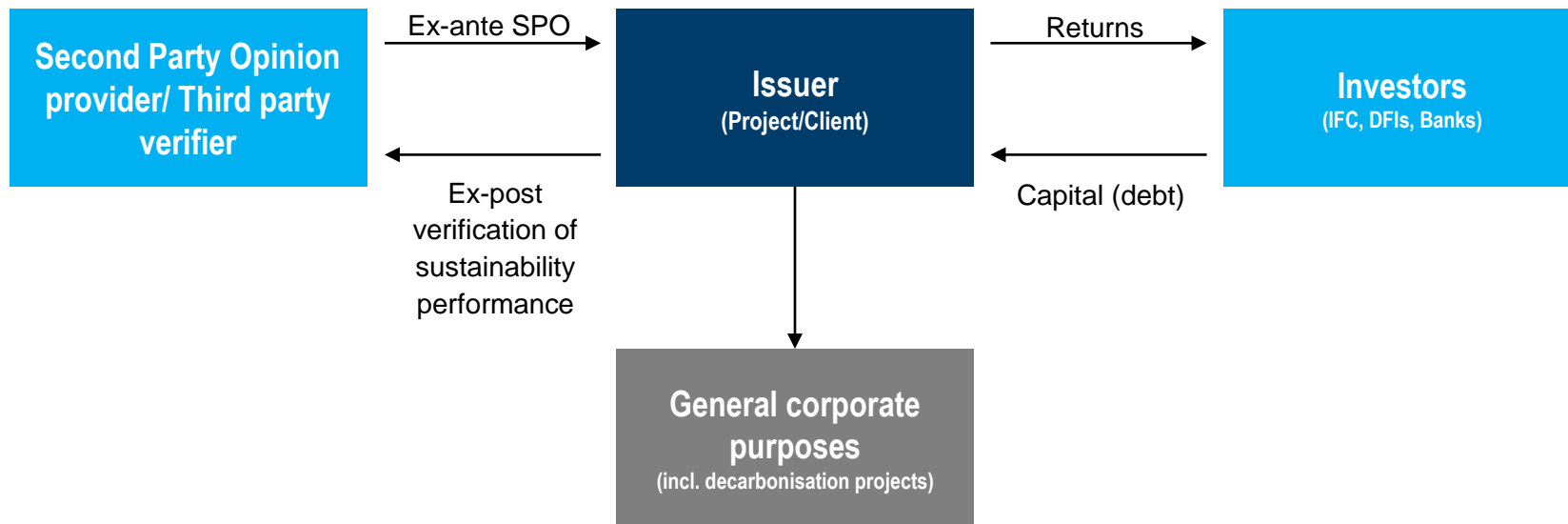


# International Finance Corporation

Femi Akinrebiyo



# IFC's Sustainability-Linked Financing instruments are linked to defined sustainability targets



Sustainability-linked loans and bonds **tie financial terms to ESG goals**, promoting sustainable practices among companies seeking capital

# IFC Sustainability-Linked Financing (SLF): Description

## Programme and instrument example

- Loans (SLLs) and Bonds (SLBs)

## Status

- Operational

## Amount

Between FY21 and FY23, IFC committed:

- **USD 2.6b own account** sustainability linked financing, including **USD 2.1b in SLLs** and **USD 443m in SLBs**

## Cross-cutting or industry-specific

- Cross-cutting

# Regional Focus, Design and Implementation

## Votorantim Cimentos

### Regional Focus

- Brazil

### Design and structural components of project

- Upgrade of **existing production line**
- Expansion of **co-processing capacity** to **increase** use of **alternative fuels**
- IFC invested **USD 150m** from its own account

### Implementation of Project

- The **loan was structured as a Sustainability Linked Loan (SLL)** aligned to the SLL Principles
- IFC helped the company with its **alternative fuels sourcing strategy** as part of an **Upstream/Advisory engagement**.

# Impacts from Votorantim Cimentos



## What are the impacts of the implemented project(s)

- Plant will **double its use of alternative fuels** (currently c.34%).
- Project will lead to **reduction of the plant's CO<sub>2</sub> emissions.**
- IFC financing supports company's aim to **reduce emissions and align with its global corporate target by 2030.**

# Loans (SLLs) and Bonds (SLBs): Lessons Learned

## What are the key takeaways from implemented projects?

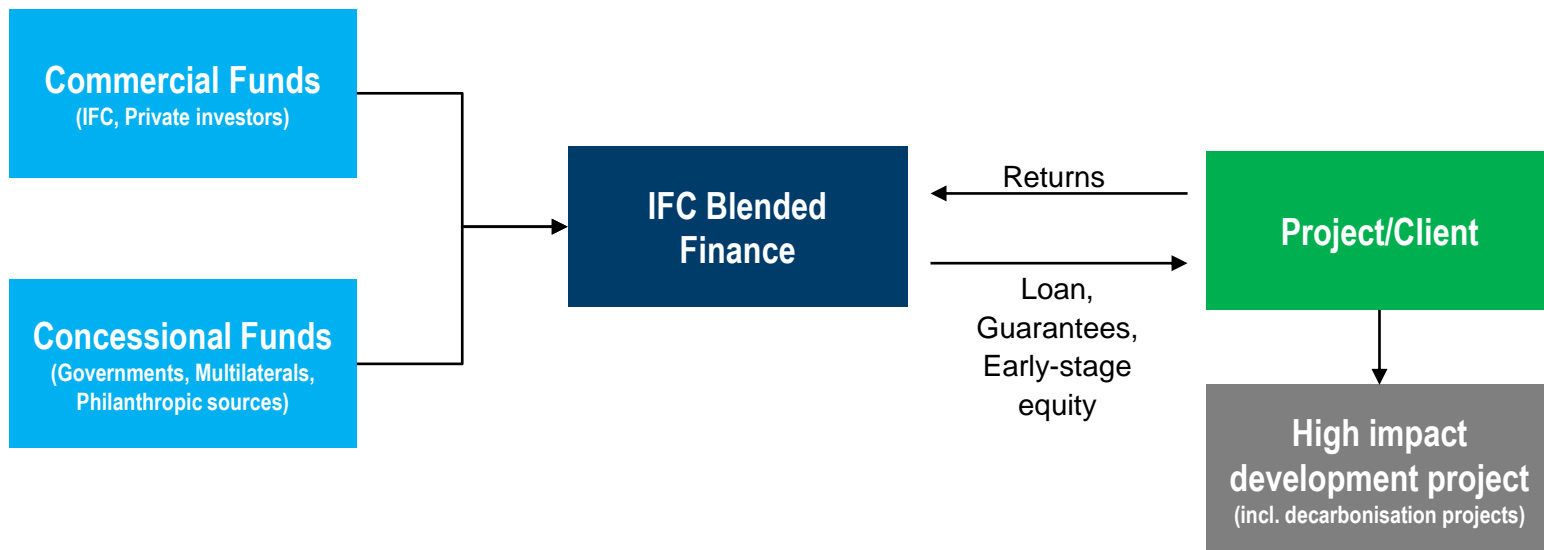
- Aligns with the company's sustainability goals and helps catalyze sustainability standards within the industry.
- Cost-effective for companies with predefined sustainability targets
- SLF helps to create documentation and monitoring of sustainability commitments and KPIs, increasing visibility and attractiveness of debt instruments.

## How replicable is this project and the use of this financial instrument?

- The use of SLLs in the cement sector can be replicable and applicable to other hard-to-abate sectors.
- Credible, robust KPIs and SPTs, along with effective performance tracking, ensure replicability of SLL and SLB financial mechanisms.



# IFC's Blended Finance offering de-risks investments to realize high-impact projects



IFC Blended Finance **mixes funds from private investors with concessional funds** from public and/or philanthropic sources, and **commercial financing on IFC's own account.**

# IFC Blended Finance (BF): Description

## Programme and instrument example

- Concessional loan, Quasi-Equity/ Equity, Guarantee & Performance-Based Incentives

## Status

- Operational

## Amount

- Between FY10 and FY23, **USD 4.7b** in concessional funds were committed across IFC projects

## Cross-cutting or industry-specific

- Cross-cutting

# Regional Focus, Design and Implementation

## Indorama Eleme Petrochemicals

### Regional Focus

- Nigeria

### Design and structural components of project

- Installing two **Heat Recovery Steam Generators (HRSGs)** to improve energy **efficiency** and **steam reliability** and a **52 000 TPA furnace** to increase **olefins production** using natural gas liquids
- Installation of extra **quench water heat exchangers**, two **cooling water cells**, and **one circulation pump** to **improve cooling system flexibility**
- **USD 64 million** loan from IFC's own account, and a **USD 9 million** concessional loan from the IDA PSW BFF<sup>1</sup>

### Implementation of Project

- Blended concessional finance **helped catalyze** an **environmentally beneficial project** that would have been **difficult** to pursue due to **unfavorable economics**.

1. International Development Association's Private Sector Window Blended Finance Facility

# Impacts from Indorama Eleme Petrochemicals

## What are the impacts of the implemented project(s)

- Net GHG **emissions reduction of c.220 kilotons of CO<sub>2</sub>e** per year.
- The project served as a demonstration effect for energy-efficient technology in Nigeria, potentially influencing market practices and environmental sustainability.



# Indorama Eleme Petrochemicals: Lessons Learned

What are the key takeaways from implemented projects?

- **BF enabled investment** in HRSG **technology that is not market practice** in Nigeria and IFC's second BF co-investment in support of Waste Heat Recovery (WHR) technology.
- Provides an **important demonstration effect** of cogeneration system performance using HRS to chemical industry operators, other industrials and to power companies operating simple cycle turbines

How replicable is this project and the use of this financial instrument?

- The use of BF in the chemicals sector can be replicable and applicable to other hard-to-abate sectors.
- BF can reduce risk and enhance bankability of decarbonization projects in hard-to-abate sectors

# Mitigation Action Facility

Pär Gebaur

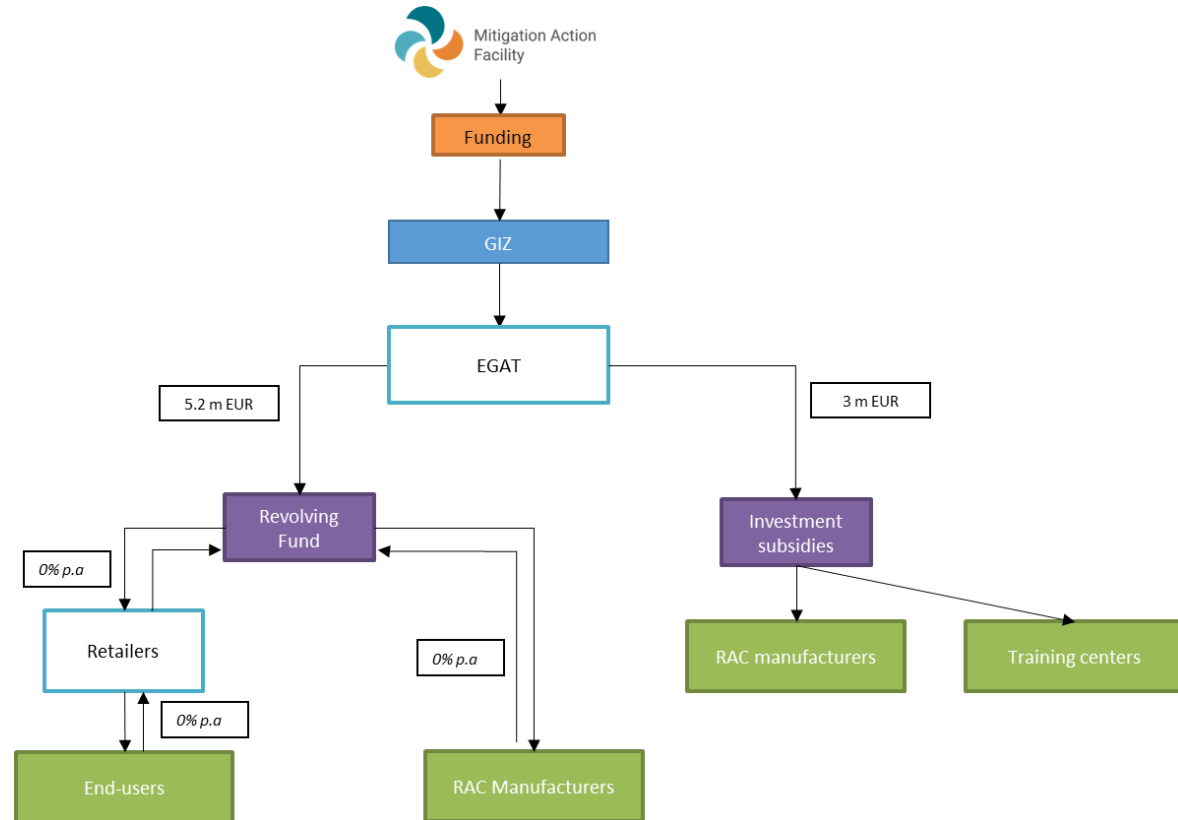


Mitigation Action  
Facility

# RAC NAMA Fund

- **The Electricity Generating Authority of Thailand (EGAT) created the RAC<sup>1</sup> NAMA Fund as Thailand's first climate finance project**

1. Refrigeration and Air-Conditioning



# RAC Nama Fund: Description

## Programme and instrument example

- Grants (producers), Concessional Loans (producers and retailers)

## Status

- Completed in 2021, EUR 143 m of private finance mobilised

## Amount

- EUR 8.3m (3m grant + 5.3m loan)

## Cross-cutting or industry-specific

- Cross-cutting



# Regional Focus, Design and Implementation

## Regional Focus

- Thailand

## Design and structural components of project

- Consists of a technical component (TC) and a financial component (FC) – total funding EUR 14.7 m

## Implementation of Project

- IOs fully responsible for project implementation
- Implementation is divided in 2 Phases
- **Project qualifies, if:**
  - Eligible for ODA finance and implemented in one of the priority sectors (energy, transport, industry)
  - Aligns with Paris Agreement goals
  - Leverages additional public and/or private investments
  - Offers intersectional understanding of gender and social inclusion

# Impacts from the RAC NAMA Fund

## What are the impacts of the implemented project(s)

- Private contributions of EUR 143 million
- GHG mitigation of 1.05 MtCO<sub>2</sub>eq
- 270 900 units of green cooling technology sold
- 10 refrigeration and air-conditioning (RAC) technologies manufacturers were supported. Over 20% of market share.

# RAC Nama Fund: Lessons Learned

## What are the key takeaways from implemented projects?

- Targeted Financial Instruments that are simple, adequate and timely
- Interest of FI to engage and suitable implementing partners
- ‘Guarantees’ can facilitate access to capital

## How replicable is this project and the use of this financial instrument?

- Grants are useful financial instruments when converting production lines
- Loans (0%) are useful to support market introduction activities and attract end-user demand for green products and technologies

Riccardo Savigliano, UNIDO

# Global Matchmaking Platform

9 April 2024

# What is the Global Matchmaking Platform?



- **Our goal:** accelerate and coordinate international support efforts for emerging markets and developing economies (EMDE's) in the field of **industrial decarbonization**.
- How? **GMP connects** governments with financial and technical assistance offers based on their needs for industry decarbonization.
- GMP will match governments with support for activities such as:
  - **Enhancing enabling environment:** policy development, roadmaps, target setting, updates to National Determined Contributions (NDCs), sector-specific strategies and analyses, standards, incentives, MRV systems, and capacity building across the public and private sector.
  - **Project and pipeline development:** technology needs assessments and identification of solution providers, pre-feasibility studies and investment proposals, securing investment and finance, as well as awareness raising on trends, technology options, costs, de-risking instruments and financing mechanisms.

# Our offer to ensure viable and impactful investments

## Service

Rigorous **screening** and collaborative shaping of country support requests

Landscape **coordination** and **sectoral focused overview**; access to directory of relevant implementing partners and key stakeholders

Analyses of **political direction, ambition** and **funding gaps**

## Impact

Identify solid pipelines, reduced project risks and reduced timing for development

-> higher efficiency

Project additionality ensured and duplication avoided

-> scale-up

Project impact maximized and development of programmatic approaches supported

-> long term planning

## Next steps

- UNIDO will be reaching out for bilateral meetings to solicit your input
- Official GMP launch at COP29
- Contact: r.savigliano@unido.org

## Questions for stakeholders

- **What expectations** would your organization have from the GMP in terms of support, resources, data sets and pipeline for decarbonization projects?
- **What role** do you see for the GMP in facilitating financing opportunities for decarbonization projects in EMDEs with your institution?
- **How could the GMP Secretariat approach** your organization to become a GMP partner/contributor?

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# Audience Discussion

## Question and Answer

- Are there **any additional financing instruments deployed within your organisations** or current projects that aim to use financial instruments to successfully mobilise private capital?
- What are the **key success factors to implement, replicate and scale-up** the discussed financial instruments across organisations and countries?
- What are the **main challenges faced** when deploying financial instruments **in emerging and developing economies**?

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## Follow-up of the meeting

- A **summary of the meeting**, including the presentation slides will be shared with all participants.
- Inputs will be used for the **design of a capacity building programme** for financing industry decarbonisation in emerging markets and developing economies.
- A **second workshop is planned in Q3 2024**, including dissemination of insights from steel and cement sector decarbonisation financing solutions.



# Thank you for your attention!

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<https://climate-club.org/>