

# **Modernization and decarbonization of the electric power system**

## **Financing fossil fuel infrastructure - what works, what does not, why**

presented by

Dr. Carolina Coll, UNFC Commercial Group,  
UNECE Expert Group on Resource Classification

**15<sup>th</sup> Session Group of Experts on Cleaner Electricity Systems  
Geneva, 6th November 2019**

# Topics for Discussion

- ▶ Recent Developments in Financing
- ▶ Sector financing: Public - Private
- ▶ Projects for Financing
- ▶ Concluding remarks

# Recent Developments in Financing

- ▶ Political environment : green is top of the agenda
- ▶ In 2018 a new product took the world of corporate financing by storm: green loans.
- ▶ Green loans are aimed at advancing environmental sustainability and until quite recently came under the umbrella of Green Bond Principles.
- ▶ Since 2018 their own guidelines known as Green Loan Principles
- ▶ The Green Loan Principles have been jointly developed by the leading lenders active in in the green-loan market to promote the development and integrity of the green-loan product.
- ▶ These principles aim to create a framework of market standards and guidelines as well as offer a consistent methodology preserving the integrity of the green-loan market.

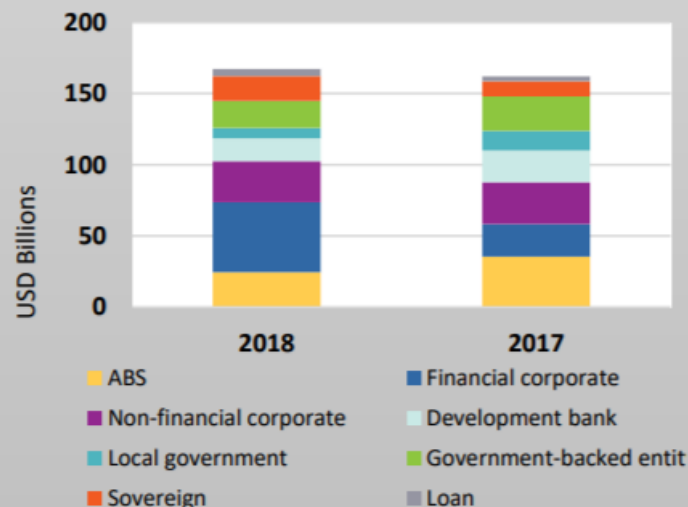


# Recent Developments in Financing

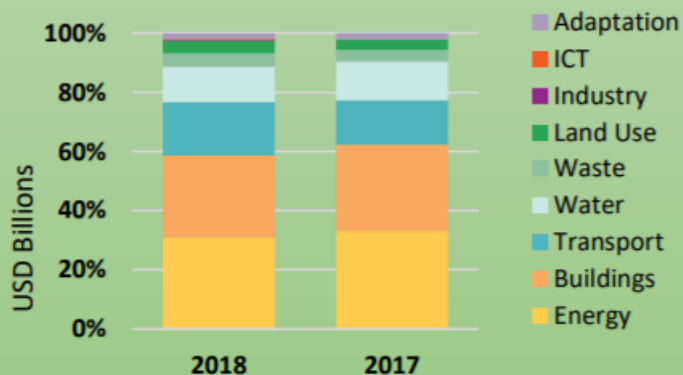
## How was 2018?

- USD167.3bn total green bond issuance\*
- 3% growth\* on 2017
- 1,543 green bond issues from 320 issuers\*
- 204 new issuers, bringing the total to 625\*
- 44 countries, of which 8 new countries\*
- EUR4.5bn (USD5.5bn) – largest single green bond, issued by the Kingdom of Belgium
- New sovereign green bonds from Belgium, Indonesia, Ireland, Lithuania, Poland and the Seychelles, and two taps of France's GrOAT

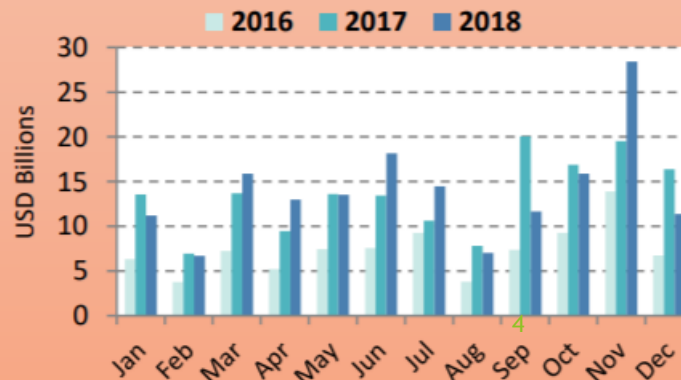
2018 volume by issuer type



2018 use of proceeds - Evolution



Monthly issuance volumes\*



# Recent Developments in Financing

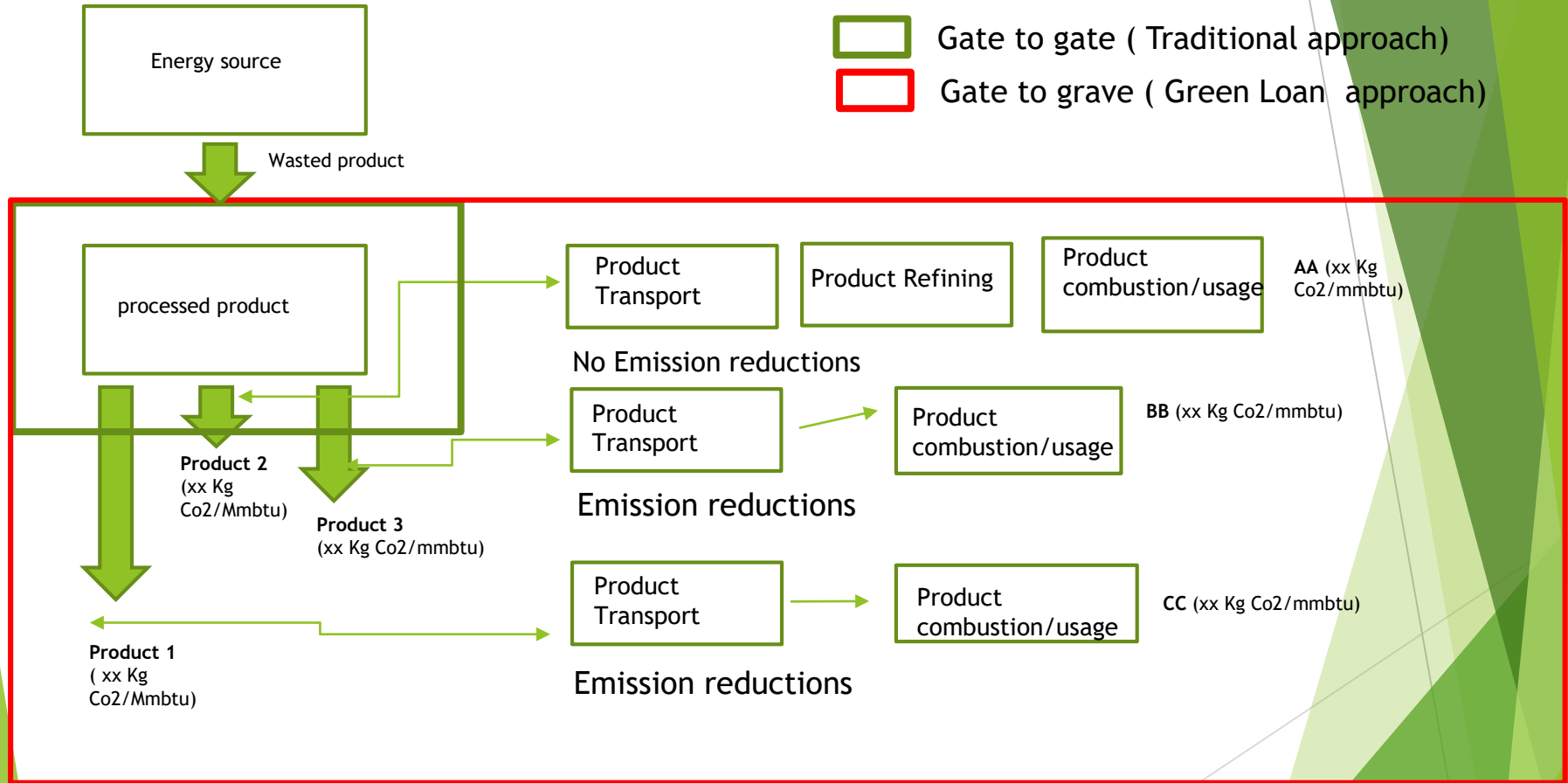
The 2018 edition of the GBP\* remains framed by four core components

- ▶ Use of Proceeds: utilisation of the proceeds for Green Projects (should provide clear environmental benefits)
- ▶ Process for Project Evaluation and Selection Management of Proceeds: issuer should clearly communicate to investors the environmental sustainability objectives; and manage potentially material environmental and social project risks.
- ▶ Management of Proceeds: track of net proceeds to eligible Green Projects
- ▶ Reporting: Issuers should make, and keep, readily available up to date information on the use of proceeds to be renewed annually (annual report)

Recommendations for the use of external reviews.

\*ICMA (International Capital Market Association)

# Project Boundaries: GHG emissions



# Project Financing: Public and private

*For **public financial institutions** is all increasingly about helping clients to meet their climate change targets!*

- ☐ *Commit to help clients to deliver on the goals of the Paris agreement*
- ☐ *Multilateral Development Banks (MDB) collective efforts to fight climate change will add to USD\$65 billion\* annually to 2025*
- ☐ *MDB to help clients move away from fossil fuels and/or increase substitution with renewals and/or less polluting fuels*

*\* World Bank estimates*

# Project Financing: Public and private

*For **private sector institutions** is still all about profitability but also climate change targets!*

- ☐ *Private sector investors can mobilize a further USD\$ 40 billion \* by 2025 through technical assistance, use of guarantees and other de-risking instruments to help tackle climate change*
- ☐ *Private sector is still actively engaged in fossil fuels but need assurances on measures the project is taking to reduce Climate impact*
- ☐ *Private sector interest in proven technologies that can make projects greener like CCS and CCUS*

*\* World Bank estimates*



# Project Financing: Public and private

- ▶ Saudi Aramco holds Biggest IPO Prize for World's Top Banks
- ▶ Saudi Aramco holds biggest history IPO prize for Top Global banks
- ▶ Official kick-off 1<sup>st</sup> week Nov 2019 of what could be the world's largest initial public offering.
- ▶ Saudi Arabia is reportedly targeting a valuation between \$1.5 trillion to \$2 trillion for Aramco, the most profitable company in the world.
- ▶ Saudi Aramco to float **1% to 2%** of its stake in the Tawadul market in Saudi Arabia that could be worth around **USD\$20 billion**.
- ▶ The company will release a prospectus on November 9, Chief Executive Officer Amin Nasser confirmed at the same conference.
- ▶ Offering is already over subscribed!!!

# Project requirements for Private Financing

*Projects independent of the resource should aim at increasing*

- ▶ **Energy access** (according to the WB more than 840 million people without access to electricity, ~90% are found in Sub-Saharan Africa (~570mn) and South Asia (~260mn))
- ▶ **Reliability** (Electricity supply is unreliable across developing regions, but the problem is acute in Sub-Saharan Africa (7.1) and South Asia (5.9))
- ▶ **Climate change impact** (GHG/ CO<sub>2</sub> emissions are most concentrated in regions with relatively better electricity access, such as Europe & Central Asia, and East Asia). Project to demonstrate can achieve these targets with proven technologies (e.g. CCS/CCUS)

# Project requirements for Private Financing

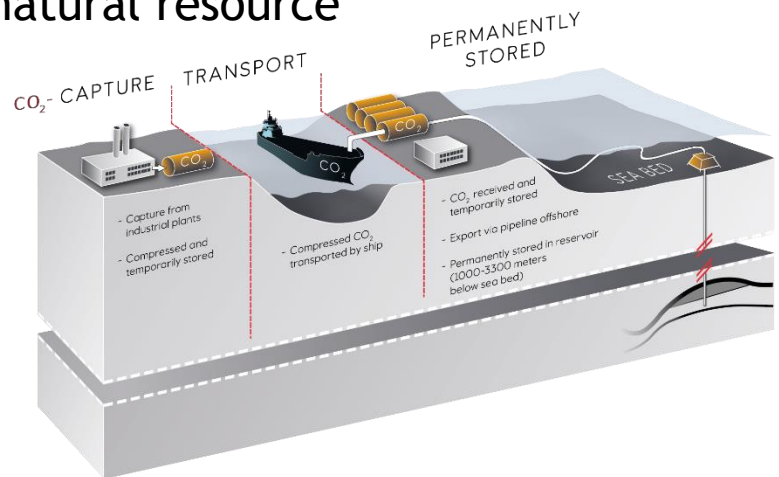
Key highlights from the Global Status of CCS (2017) are:

- ▶ To reach Paris climate targets:
  - more than 2000 CCS facilities will be needed by 2040
  - 14 % of cumulative emissions reductions must be derived from CCS;
- ▶ CCS is a key clean technology capable of decarbonising industry – steel, chemicals, cement, fertilisers, pulp and paper, coal and gas-fired powered generation;
- ▶ To date, more than 220 million tonnes of anthropogenic CO<sub>2</sub> has been safely and permanently injected deep underground;
- ▶ CCS/CCUS technologies are proven so lower risk of implementation compared to a decade ago

# Project requirements for Private Financing

- ▶ There are now 17 large-scale CCS facilities operating globally, with four more coming onstream in 2018;
- ▶ Several of these projects are proven to be commercial
- ▶ High impact- Capex intensive: Current CO<sub>2</sub> capture is 37 million tonnes per annum (Mtpa) - equivalent to removing eight million cars from the road each year;

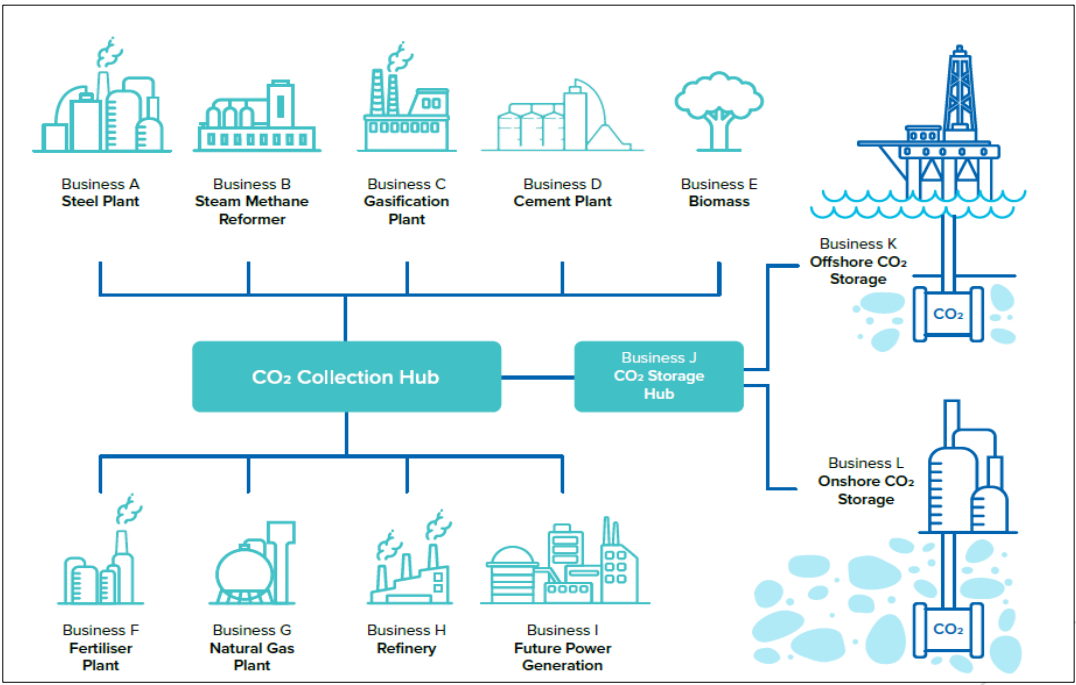
# Project: a single natural resource



Higher Risk  
For financing

KPI is zero net emissions

# Project: Multiple natural resources



KPI is zero net emissions

Lower Risk  
For financing

Cluster disaggregated business model (Global CCS Institute, 2019)

# Concluding remarks

- ▶ Emissions reductions targets as part of the Paris Climate Agreement requires a shift in financing energy systems
- ▶ Public finance has a critical role in achieving a low-carbon investment in energy requiring large-scale private sector engagement (e.g. CCS).
- ▶ Investors and banks have to work with energy companies to help them adapt their business models to ensure resilience through energy transition
- ▶ The private sector is ready to invest in proven technologies like CCS /CCUS that provides green targets for their investment globally,
- ▶ Perception of high risk in emerging markets acts as a constraint on the financing of energy projects in key countries.
- ▶ Public spending through multilateral development banks (MDB's) have a key role with governments to unlock private sector investment by aggregating and de-risking projects.

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