

Sustainable Bonds – Why don't we have one yet?

6 April 2022

Dr. Holger Perlwitz

Erste ESG-Tagung, Deutscher Investor Relations Verband
Frankfurt

1. State of Play Green Bond Market

2. Case Studies from Energy Sector

- a. First German Green Bond - issuer: 'ESG Pure Play'
- b. Green Bond - issuer: 'Non ESG Pure Play'

3. EU Taxonomy – is everything defined yet?

What is a Green Bond ?

'Green Bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance in part or in full new and/or existing eligible Green Projects and which are aligned with the four core components of the Green Bond Principles.'

The Green Bond Principles (GBP) are voluntary process guidelines published by International Capital Market Association (ICMA), last update in June 2021.

ICMA is a membership association, committed to serving the needs of its wide range of members representing both the buy side and sell side of the industry. Its membership includes issuers, intermediaries, investors and capital market infrastructure providers.



Green Bond Principles

Voluntary Process Guidelines for Issuing Green Bonds

June 2021



Core Components of the Framework – Foundation of Green Bond Issuances

1

Use of Proceeds

- Define green bond eligible categories
- Map categories with Sustainable Development Goals
- Possible mapping of categories with green activities defined in 'EU Taxonomy'
- Financing vs. refinancing

2

Project evaluation and selection

- Nominate Green Bond Committee Members
- Set up a formal 'selection process' for green projects

3

Management of Proceeds

- Explain how to track the Green Bond proceeds
- Describe how to manage unallocated proceeds
- Define how to manage Green Bond proceeds in case of divestment of the 'green asset'

4

Reporting

- Communicate impact of the green asset
- Relevant Key Performance Indicators (e.g.. CO2 avoidance)

Verification

Assurance through independent **Second Party Opinion** provider

Two types of Sustainable Bonds



The
Green Bond
Principles



The
Social Bond
Principles



The
Sustainability Bond
Guidelines



The
Sustainability-Linked
Bond Principles

Use of Proceeds*

Green, Social, Sustainability Bonds
("GSS" or "UoP")

Core Components:

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting

Key Recommendations:

1. Bond Frameworks
2. External Reviews

General Purposes*

Sustainability-Linked Bonds
("SLBs")

Core Components:

1. Selection of Key Performance Indicators (KPIs)
2. Calibration of Sustainability Performance Targets (SPTs)
3. Bond characteristics
4. Reporting
5. Verification

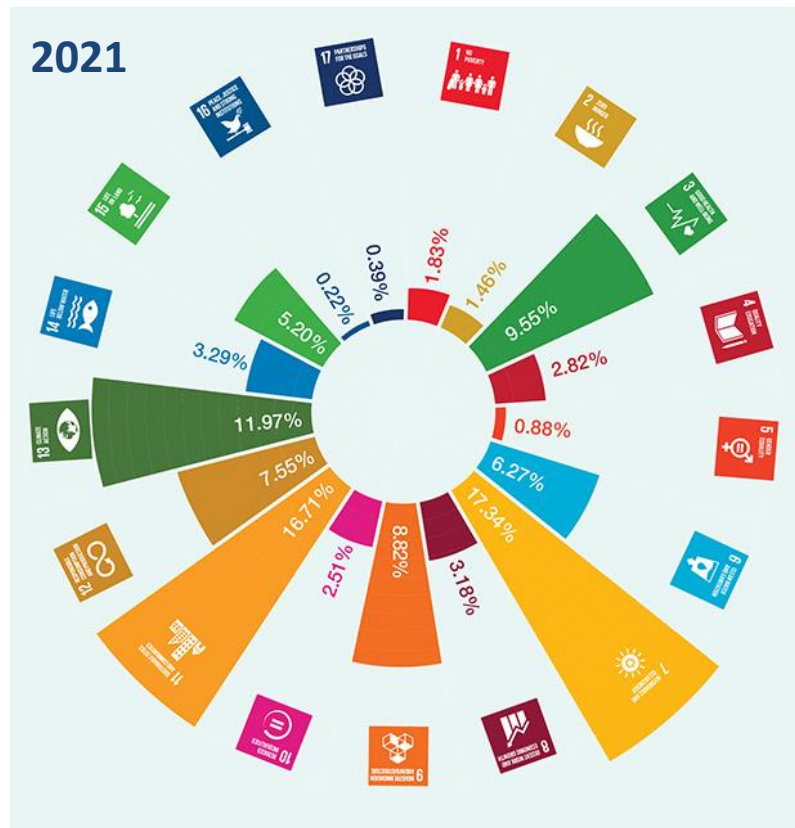
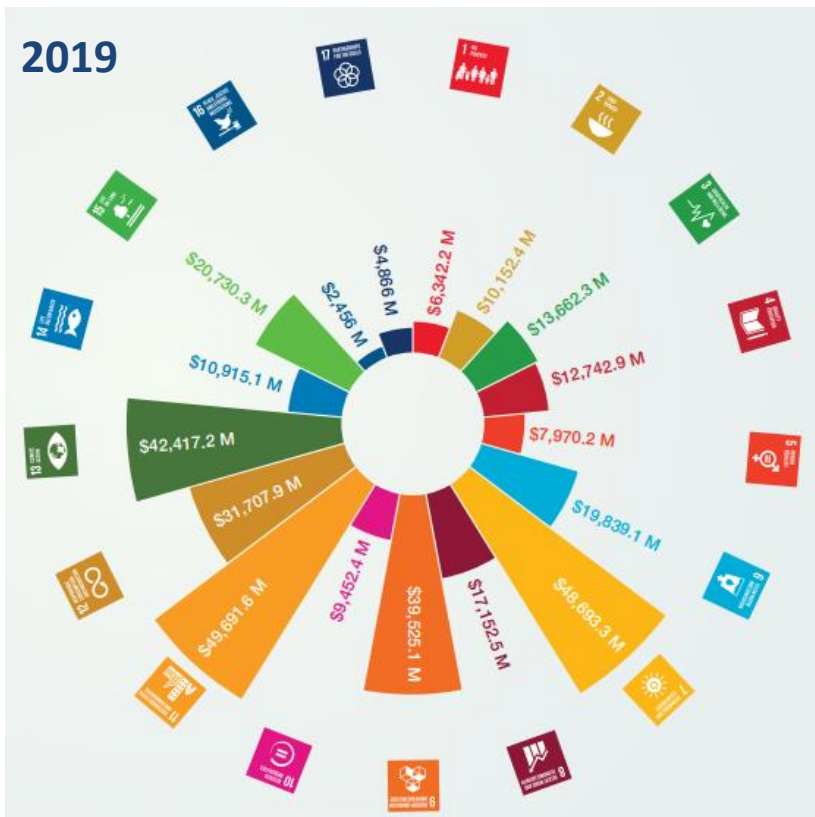
**Financial
Instrument
Guidance**

Projects are intertwined with the 17 UN Sustainable Development Goals



Often mapped to green investments from energy industry.

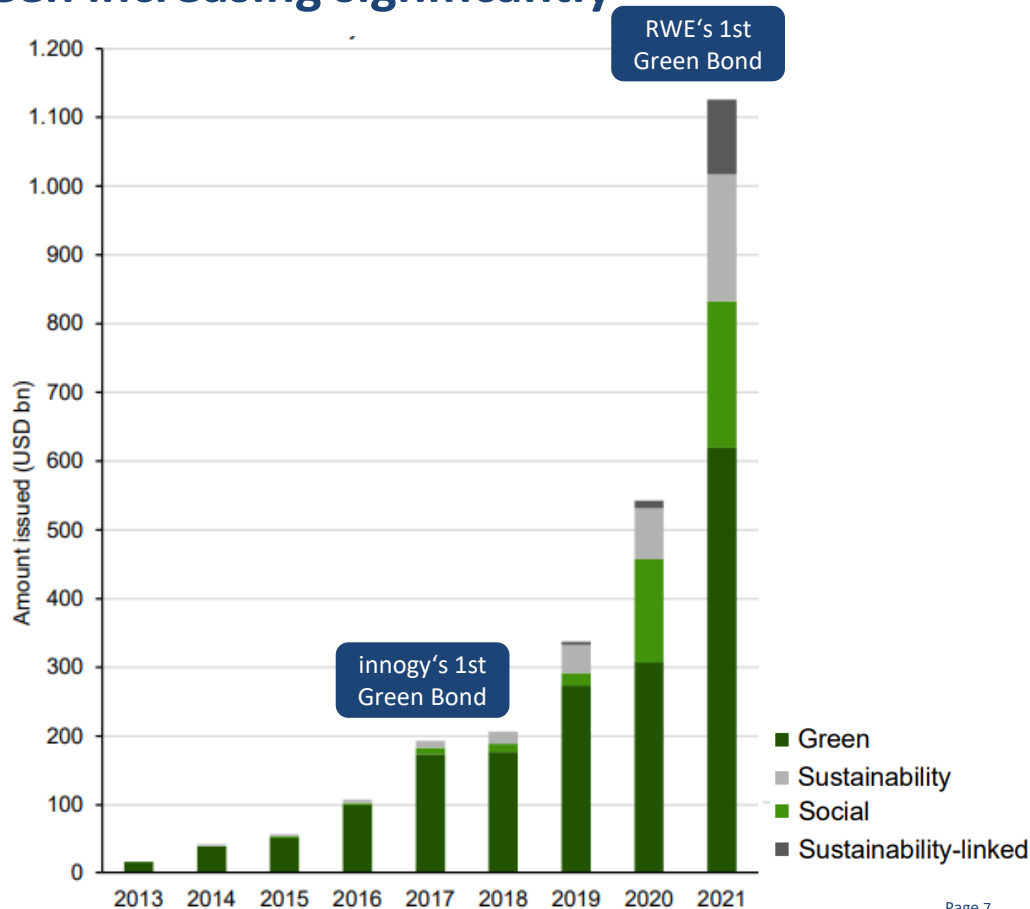
SDG 3 among the top funded SDGs 2021, due to Covid-19 pandemic





The Green Bond Market has been increasing significantly

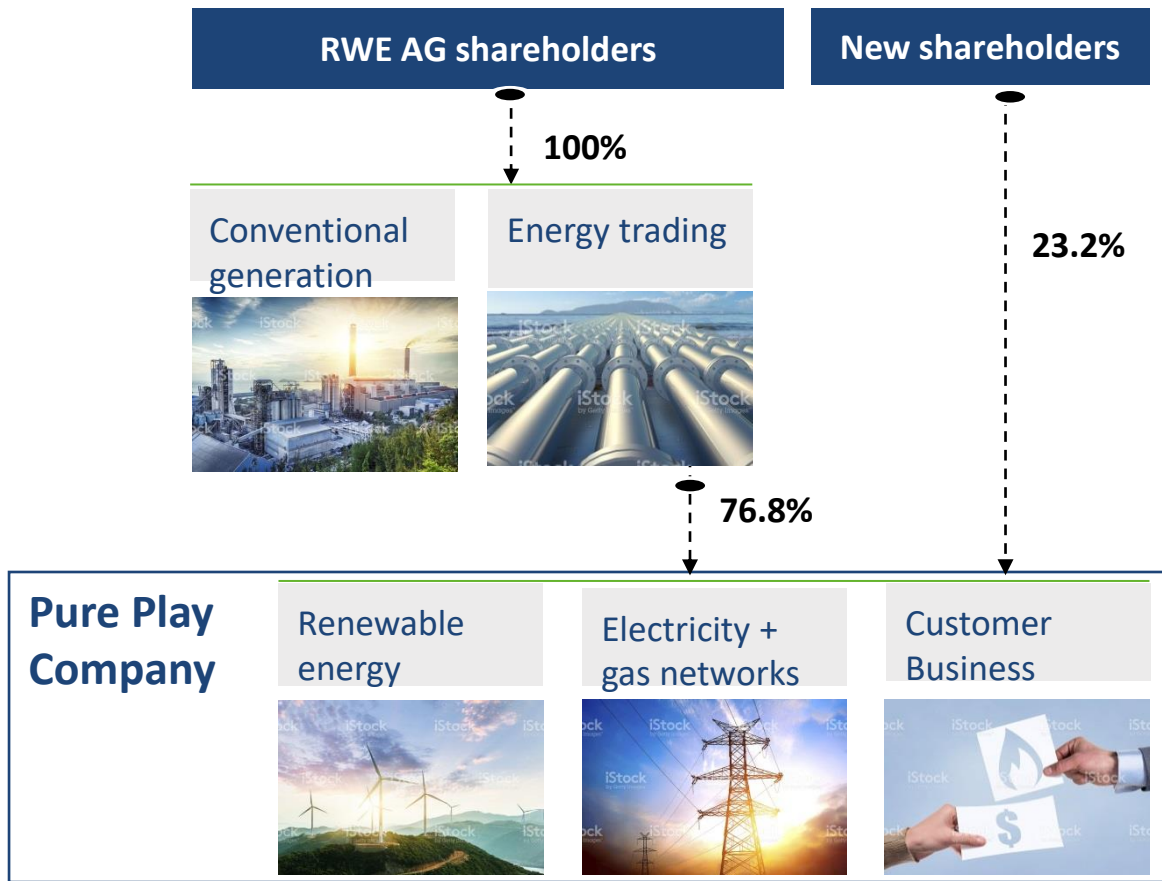
- In 2007 EIB issued Inaugural Green Bond: €600m, tenor 3yr
- Utilities are dominant corporate issuers, e.g. Iberdrola, TenneT
- With Covid-19 pandemic, emergence of Sustainability, Social & Sustainability-linked bonds
- Environmental Finance expects a total sustainable bond issuance of \$1.5 trillion in 2022.



1. State of Play Green Bond Market
2. Case Studies from Energy Sector
 - a. **First German Green Bond - issuer: 'ESG Pure Play'**
 - b. Green Bond - issuer: 'Non ESG Pure Play'
3. EU Taxonomy – is everything defined yet?



innogy – an 'ESG Pure Play'





How we kicked off the process ...



Pre-decision phase:

- Analyse the company.
- Involve internal stakeholders.
- Meet bond investors.
- Manage expectations: diversification of investor base, better pricing, ...

Starting with the preparation:

- Mandate experienced **banks** that can support the whole process.
- Involve relevant **internal stakeholders** e.g. Sustainability Department, Business units (role: ownership of capex figures).
- Check the **ESG ratings** & how important are they?
- Beauty Contest to select **ESG agency** for a Second Opinion.
- Start setting up the **Green Bond Framework**.

How can the four components be defined?

1. Use of Proceeds

Green Bonds are exclusively used to finance or refinance **Eligible (Green) Projects** of the following three categories:

- ✓ **Renewable energy projects**
- ✓ **Energy efficiency projects**
- ✓ **Clean Transportation projects**



3. Management of Proceeds

- Internal **monitoring** of the Eligible Projects and tracking of the outstanding proceeds.
- In **case of divestment/cancellation** reallocation to other Eligible Projects.
- Unallocated proceeds will be invested in e.g. money market products and/or marketable securities.

2. Project evaluation and selection

- **Business units** propose projects and provide information.
- The **Green Bond Committee² (GBC)** verifies and finally selects Eligible Projects.

4. Reporting

- **Prior to issuance** of each bond, disclosure of relevant Eligible Projects and expected climate and environmental impact.
- **Annual** reporting of the following information:
 - The total amount of proceeds allocated
 - The amount of unallocated proceeds (if any)
 - Climate and/or environmental benefits

1 The Green Bond Principles (GBP) issued by the International Capital Market Association (ICMA).

2 The GBC consists of representatives from Corporate Responsibility, Treasury, and members of business units involved.

Example – innogy, as of October 2017

Project evaluation and selection process



Example – innogy, as of October 2017

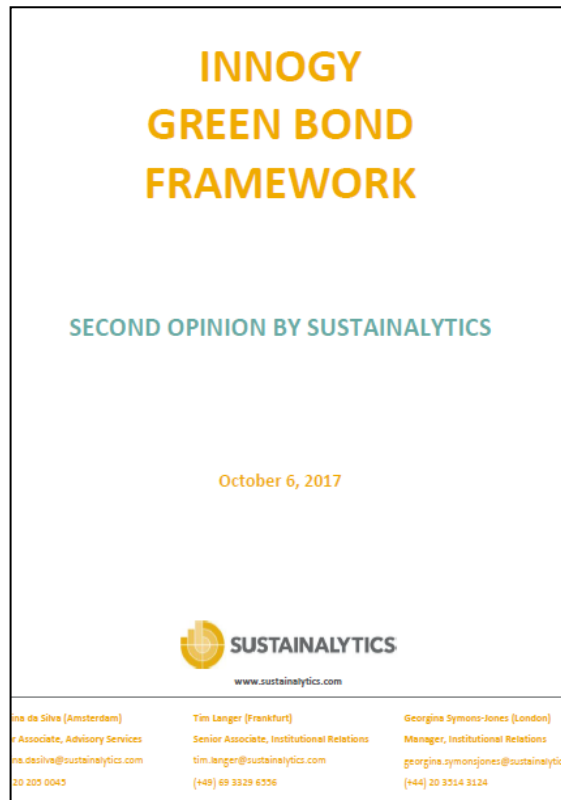


External review by Sustainalytics: Second Opinion

- Verification process of around 4 - 6 weeks.
- Second opinion confirming the alignment of innogy’s Green Bond Framework with the Green Bond Principles.
- The eligible project categories are in line with the Sustainable Development Goals.
- Under the framework, the issuance of multiple Green Bonds is possible.
- Sustainalytics Second Opinion is available on the company’s website.

Remark: Sustainalytics – external reviewer with highest market share in 2021 (EF, 2022)

Example – innogy, as of October 2017



Netroadshow - good preparation is key ...

presented by:

Head of Treasury

Head of Sustainability

CFO Renewables

Agenda

1. innogy's credit profile
2. Sustainability strategy
3. Green bond framework
4. Eligible renewable projects

innogy's credit

Fitch

- Fitch assigned innogy a 'BBB' rating
- Fitch takes into a supervisory board

Moody's

- On 30 June 2017 same rating is also assigned
- The ratings reflect innogy's strong financial performance and supportive

S&P

- On 29 June 2017, S&P affirmed innogy's BBB- (positive outlook)
- The positive outlook reflects the potential for a one-notch default rating
- innogy's stand alone credit profile of bbb, however it is currently

EiB loans transferred to replace corresponding

Maturity profile as of 31 July 2017 (€ bn)

Credit highlights

Business Model

- Clear focus on grid, renewables and retail business
- No nuclear liabilities
- Experienced management team and sound organisational set-up
- Strict investment criteria (based on hurdle rates)

Financials

- Stable and highly regulated earnings and investment focus
- Value creation through mix of cash generative and growth assets
- ~70% cash conversion (CFO/Adj. EBITDA)

Capital structure

- Solid investment grade ratings
- ~4.0x leverage (Net Debt/Adj. EBITDA)
- Solid balance sheet

Support EIB OTC clause

- 1/3 loans from RWG of c. €2bn
- 2/3 EIB loans of c. €3bn

innogy's current ESG/C

SUSTAINABLE DEVELOPMENT GOALS

- 14 Sustainable Development Goals
- Programmes to support vulnerable communities in the UK (Health Through Warmth, improves lives of 100,000 people)
- Occupational safety and health: 100% compliance with health and safety regulations
- Health rate 95.7%
- Renewals of c. 4.4 billion (2016)
- More than 40,000 employees across Europe
- Innovation hub with the core areas for the disruptive digital, EV charging stations and related sustainable infrastructure (hardware and software)
- Training for the employees' professional development
- Diversity and equal opportunity are provided within the company
- Share of women in the company: 34%
- Engagement: the company's research
- Waste is treated along the principles of avoidance, recovery and disposal
- innogy's products are CE certified and clearly and transparently labelled
- Addressing climate change and promoting climate protection through renewable energy generation including on- and off-site wind energy, solar energy, biomass energy
- Around innogy's hydrogen plants, full facilities are installed: innogy is also implementing measures to protect marine life/fish of offshore wind farms.
- Detailed measures minimizing environmental impacts or optimizations are developed to preserve the terrestrial ecosystem and biodiversity.
- Enhancement of system integration in other e.g. through the smart city projects
- Most sustainability in other is supported through individual energy connections.

oekom Corporate Rating¹ - Prime - Rating: B-

Gwynt y Môr offshor		Zuidwester onshor		Gallopier offshore		Nordsee One offshore wind farm at a glance	
Country	UK	The Netherlands	The Netherlands	Germany	Germany	Germany	Germany
Technology	Onshore	Onshore	Onshore	Offshore	Offshore	Offshore	Offshore
Location	13 km distance	Westmereend	Westmereend	30 km distance to	332 km	45 km distance to mainland (shore)	north of the island of Jülich
Full capacity				336 MW	332 MW		
Water depth	12	12 x 2.58m	12 x 2.58m	27 - 34 m	27 - 34 m		
No. of turbines	160 x 3.6MW	12 x 3.6MW	12 x 3.6MW	56 x 6.6MW	56 x 6.6MW		
Foundation type	Monopiles	Monopiles	Monopiles	Monopiles	Monopiles		
Innogy SE share	4	COO ¹	COO ¹	Innogy SE share	25.4	Innogy SE share	34 (E.ON)
Innogy investment ²	2013	Innogy investment ²	2013	Planned CDD ³	2018 (under construction)	Planned CDD ³	2017 (under construction)
Innogy investment ²	2013	Avoided GHG emissions	113	Innogy investment ²	104 (E.ON)	Innogy investment ²	34 (E.ON)
Avoided GHG emissions	56	Avoided GHG emissions	113	Innogy investment ²	369 (E.ON)	Innogy investment ²	225 (E.ON)
Avoided GHG emissions	56	Avoided GHG emissions	113	Avoided GHG emissions	232 (E.ON)	Avoided GHG emissions	159 (E.ON)

Eligible projects

Nordsee One

On September 2018 ribbon-cable laying works were successfully completed. In total 70 kilometers of ribbon-cable were laid and buried into the sea bed, three weeks ahead of schedule. In addition 54 wind turbine foundations, the offshore substation and all turbines have already been installed. Commercial commissioning of the 332 MW wind farm is anticipated by the end of 2017.

Announcing, marketing and issuing of the first Green Bond

Day 1

- **9 am:** Go/No Go Call: announcement of 10-year benchmark Green Bond.
- **Morning:** [Netroadshow](#) 'Investor Presentation Green Bond' and go-live of Green Bond webpage with [Green Bond Framework](#), [Second Opinion](#) and further relevant information.
- **Afternoon:** calls with investors.

Day 2

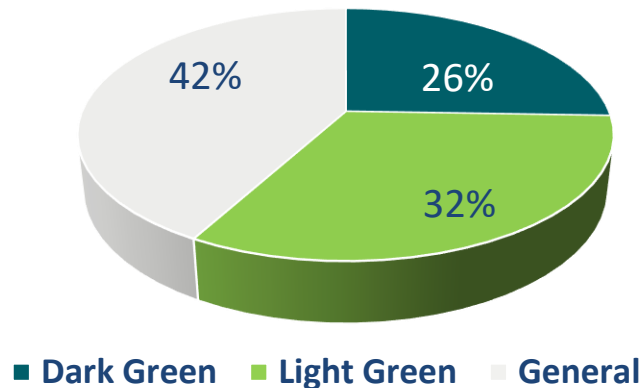
- **9:25 am:** Joint-Bookrunners opened books with IPTs set at [MS+65bps](#) area.
- **11:55 am:** On the back of strong investor demand and an orderbook of €3.5bn, guidance at [MS+50bps](#) (+/- 3bps) was released.
- **12.15:** The orderbook closed in excess of €4.2bn, which allowed innogy to price the €850m bond at [MS+47bps](#)¹.

¹ Estimated Greenium of around 3 bps ('negative NIP'). Remark: 100 bps (basis points) = 1%

Investor structure in innogy’s first Green Bond

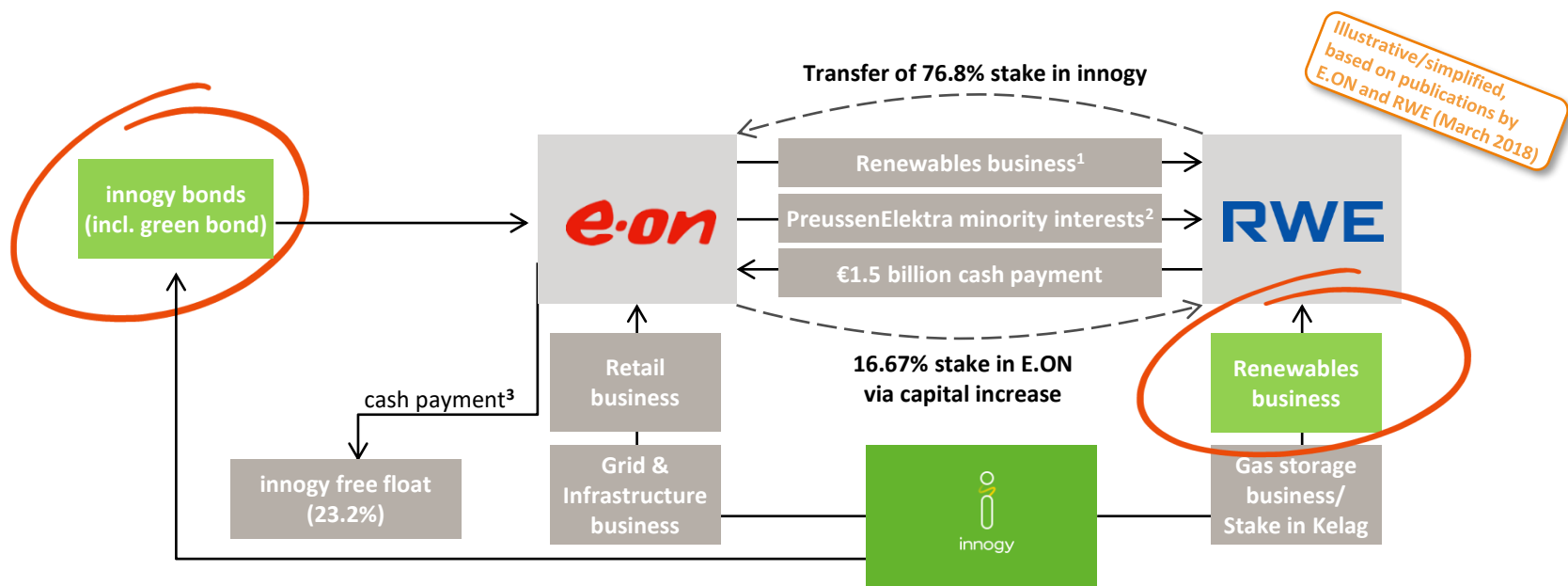
- C. 250 investors, both conventional and ESG/SRI, show comfort in innogy’s credit story and Green Bond framework.
- More than 50% green investors; 26% dark green investors (SocGen estimates).
- Country and geography split of investors is similar to previous bond issuances.
- On the back of a strong orderbook, the bond was five times oversubscribed.
- Remark: In 2021, on average c. 70% was allocated to green investors (CBI, 2021).

Allocations by Green Investors



The only constant is change

eon/RWE announced a transaction that would separate the Green Bond from its assets



Green Bond Framework allows for reallocation of proceeds

1 Excluding German and Polish onshore wind assets belonging to e.dis (151MW) and the 20% stake in Rampion offshore wind farm (80MW). 2 Minority interests in nuclear power plants Lippe-Ems and Gundremmingen. 3 for tendered shares; alternative measures are also possible

ICMA's Green Bond Framework allows for reallocation of proceeds

1. Use of Proceeds

Green Bonds are exclusively used to finance or refinance² **Eligible (Green) Projects** of the following three categories:

- ✓ **Renewable energy projects**
- ✓ **Energy efficiency projects**
- ✓ **Clean Transportation projects**

3. Management of Proceeds

- Internal **monitoring** of the Eligible Projects and tracking of the outstanding proceeds.

- **In case of divestment/cancellation reallocation to other Eligible Projects.**

Unallocated proceeds will be invested in e.g. money market products and/or marketable securities.

2. Project evaluation and selection

- **Business units** propose projects and provide information.
- The **Green Bond Committee³ (GBC)** verifies and finally selects Eligible Projects.

4. Reporting

- **Prior to issuance** of each bond, disclosure of relevant Eligible Projects and expected climate and environmental impact.
- **Annual** reporting of the following information:
 - The total amount of proceeds allocated
 - The amount of unallocated proceeds (if any)
 - Climate and/or environmental benefits

1 The Green Bond Principles (GBP) issued by the International Capital Market Association (ICMA).

2 Disbursements not earlier than 2014.

3 The GBC consists of representatives from Corporate Responsibility, Treasury, and members of business units involved.

Distribution System Operators are the enabler of the Energiewende

More than 90% of all renewable capacity is directly connected to it.

Investments to
connect renewables

Grid investments related
to the Energiewende

Smart meter
investments

Commitment to managing bonds in an investor friendly way

Sustainalytics evaluated the compliance of the **Distribution System Operator** projects with the eligibility criteria defined in innogy's Green Bond Framework and confirmed this in an assurance letter ¹:

innogy's eligible assets, (re)financed either by existing outstanding green bond or by future issuances, can be related to the following three eligible categories:

- (i) Investments to connect renewables (above 30 kW) to the grid,*
- (ii) Grid investments due to Energiewende,*
- (iii) Smart meter investments.*



These types of investments are part of the eligible projects as defined in the 2017 GBF and are in line with the Green Bond Principles. In addition, Sustainalytics considers the listed types of expenses as contributing to the transition of energy systems towards renewable and low carbon energy'

Green Bond Committee decided to reallocate proceeds

1. State of Play Green Bond Market
2. Case Studies from Energy Sector
 - a. First German Green Bond - issuer: 'ESG Pure Play'
 - b. Green Bond - issuer: 'Non ESG Pure Play'**
3. EU Taxonomy – is everything defined yet?

RWE - A Transition Story

Green Bonds - Why don't we have one yet?

Core Business

Offshore Wind



- Global offshore activities



Onshore Wind/Solar



- Onshore and solar operations in
- Europe & APAC
 - Americas



Hydro/Biomass/Gas



- Hydro, biomass and gas plants in Germany, UK, Netherlands
- Hydrogen projects
- Kelag stake



Supply & Trading



- Trading/origination
- Gas & LNG
- Commodity solutions
- Energy transition investments
- Gas storage business



Coal/Nuclear

- German lignite operations; mines and plants
- German nuclear power plants



RWE will be climate neutral by 2040 (scope 1 – 3 emissions)



SCIENCE
BASED
TARGETS

for 2030 certified



Non-Deal RS: 'Green Bonds for a Green Future'

- Virtual Fixed Income Roadshow
- Focus on debt and ESG story
- Involve top management: CEO, CFO
- Dedicated session for Bond Sell Side
- Group meetings with institutional investors, mostly from UK, NL, FR and DE
- 7 meetings with around 50 investors and analysts
- Remarks:
 - There might be investors that can't invest in the company's shares but can in its green bonds
 - Inform Bundesbank about a possible issuance (CSPP Program)

Roadshow Schedule (14. April 2021)		
09:30 – 10:15	<i>Sell Side Meeting</i>	...
10:30 – 11:10	Group Meeting	...
11:30 – 12:10	Group Meeting	...
12:15 – 12:55	Group Meeting <i>German Investors</i>	...
14:00 – 14:40	Group Meeting	...
14:45 – 15:25	Group Meeting	...
15:30 – 16:10	Group Meeting	...

Connect your credit story with ESG strategy

Sustainable Development Goals

Our ambition to be carbon neutral by 2040

Our responsible phaseout of coal and our growth strategy in renewables



Our Code of Conduct: living our values

Holding ourselves and our partners within our value chain accountable



Our Social Charter and diversity approach

Paving the way for gender equality and decent work



Our commitment to innovation

Investing in efficient infrastructure development and low-carbon research



Our efforts for biodiversity

Biodiversity policy and exemplary recultivation



ESG Ratings



SUSTAINALYTICS

MSCI



Now a Part of S&P Global



DISCLOSURE INSIGHT ACTION

ISS ESG

Credit Ratings

MOODY'S

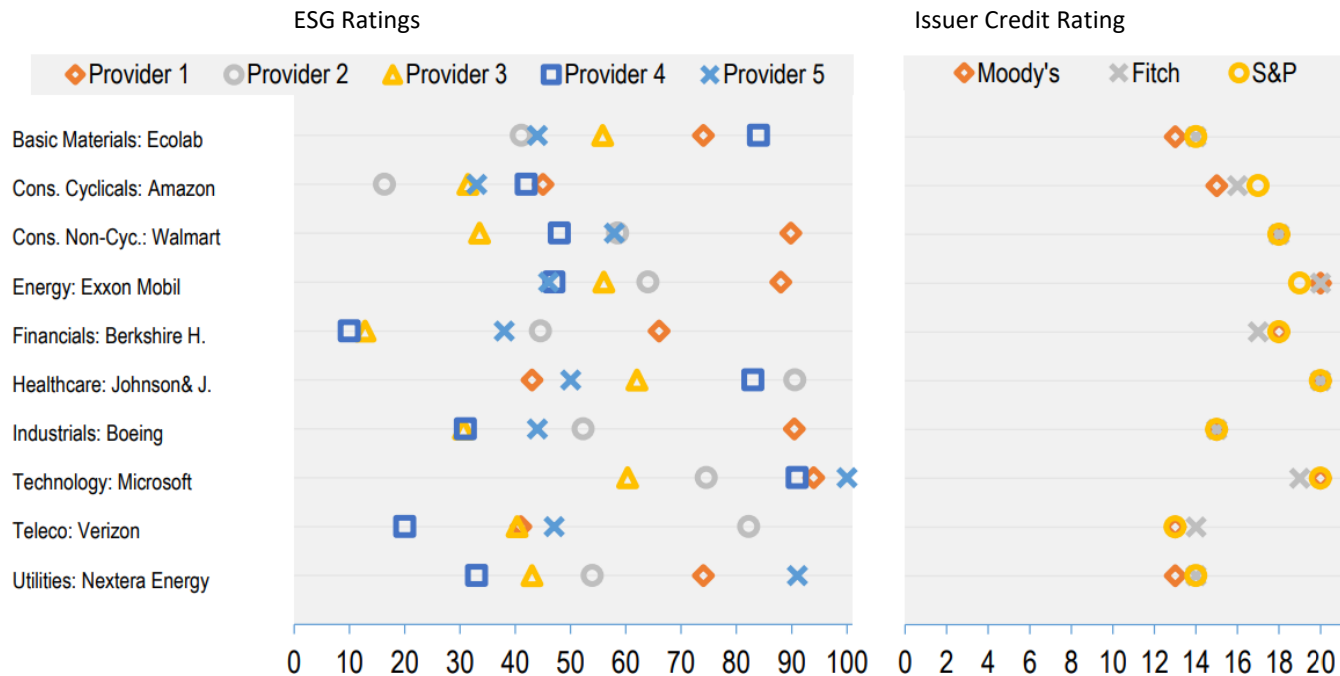
Baa2 Stable

Fitch

BBB+ Stable

- Strong liquidity ensured by cash position and bank facilities
- Commitment to a strong investment grade rating
- ...

Excursus - ESG Ratings show divergence, Credit Ratings show consistency



Source: OECD 2020, Sustainable Fitch, Webcast 14. October 2021

Note: Sample of public companies selected by largest market capitalization as to represent different industries in the United States. The issuer credit ratings are transformed using a projection to the scale from 0 to 20, where 0 represents the lowest rating (C/D) and 20 the highest rating (Aaa/AAA).

Sources: Refinitiv, Bloomberg, MSCI, Yahoo finance, Moody's, Fitch, S&P, OECD calculations



Manage 'E' in alignment with Paris & discuss 'S' implications ...



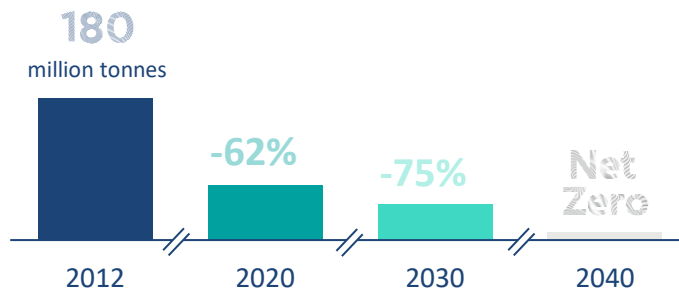
RWE will be carbon neutral by 2040. Our climate targets for 2030 have been certified by the Science Based Targets initiative to be in line with goals of the Paris Agreement in December 2020:



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

ESG



Science-based targets provide companies with a clearly defined path to reduce emissions in line with the Paris Agreement goals. RWE is one of just over 500 global companies that have set such targets.

ESG

- Socially-acceptable phaseout of coal-fired generation
- In 2019, some 10,000 people were employed in the Rhenish mining region. By 2030 less than 4,000 will be working there
- 'Coal Exit' tariff agreement with ver.di, and IG BCE [...]

Keep it as simple as possible - Plain vanilla Green Bond Framework



The image shows the cover of the RWE Green Bond Framework document, dated April 2020. The cover features a large image of a wind turbine against a blue sky. The RWE logo is at the top. The title 'RWE Green Bond Framework' is prominently displayed in white and teal text. Below the title, there is a section titled 'Second-Party Opinion RWE Green Bond Framework' and an 'Evaluation Summary' section. The 'Evaluation Summary' includes several key points:

- USE OF PROCEEDS:** The eligible category is Renewable Energy, aligned with the 2018 Sustainability Core Components of the Green Bond Principles 2018. This category will lead to positive environmental impact and capacity for renewable energy production.
- PROJECT EVALUATION / SELECTION:** RWE's process for evaluating and selecting projects is overseen by a Committee (the "Committee"). The Committee evaluates and selects projects based on the Framework eligibility criteria, the monitoring and, if assets are no longer eligible, the Committee will remove eligible assets as soon as feasible. The project selection process is in line with market practice.
- MANAGEMENT OF PROCEEDS:** RWE's process for managing proceeds is handled by the Finance & Capital Markets Department. Proceeds will be allocated to eligible projects through internal tracking and accounting systems. For a level of allocation which matches or exceeds the amount of green bonds issued, proceeds from its outstanding green bonds will be temporarily held in RWE's balance sheet in cash and cash equivalents. This is in line with market practice.
- REPORTING:** RWE intends to report allocation of proceeds on an annual basis, until full allocation. RWE will report on total amounts of investments and eligible projects, financing vs refinancing of projects, and on the use of proceeds. In addition, RWE is committed to reporting on relevant impact metrics. Sustainalytics views RWE's allocation and impact reporting as aligned with market practice.



RWE's Green Bond Framework¹ is aligned with **SDG 7.2: 'increase substantially the share of renewable energy in the global energy mix'**



RWE published its Green Bond Framework in April 2020



Sustainalytics provided the **Second-Party Opinion** of the Framework



The framework is based on the **ICMA Green Bond Principles** (basically complies with requirements of draft EU Green Bond Standard)










Show, that you have plenty of eligible projects & will become a regular issuer of green bonds

Project IRR typically exceeding base renewables WACC by 100 to 300 bps. Hurdle rates include risk premia depending on project risk profile (technology, regulatory and remuneration risk)



Examples of major projects¹

Based on RWE publications, as of June 2021

	 Offshore Wind					 Onshore Wind	 Solar	
Project	Triton Knoll	Kaskasi	Sofia	Cassadaga	Scioto Ridge	Hickory Park	Limondale	
Country								
Capacity pro rata	506 MW	342 MW	1400 MW	126 MW	250MW	236 MW ²	249 MW	
Expected COD	2022	2022	2026	2021	2021	2021	2021	

¹ Green bond-eligible capex is defined as gross capex minus all external funding, e.g. project debt/tax credits or equity from external partners. ² Including storage (40 MW/80 MWh). | Note: Construction including pre-construction/preparation works.



What happened on the execution day?

1 June 2021, RWE returned to the bond market - after more than 5 years - with its **inaugural Green Bond**

Transaction overview

9.00 CET:

- **Go/No-Go call**

9.30 CET:

- The deal hit the screens **with a 10-year tenor, size of EUR 500m and 'Initial Price Talk' of MS + 80-85 bps (incl. 25-30 bps NIP)**. A **netroadshow** was made available to investors
- The positive market environment underpinned investor's great appetite for RWE's return to the market, supported by the Green Bond format

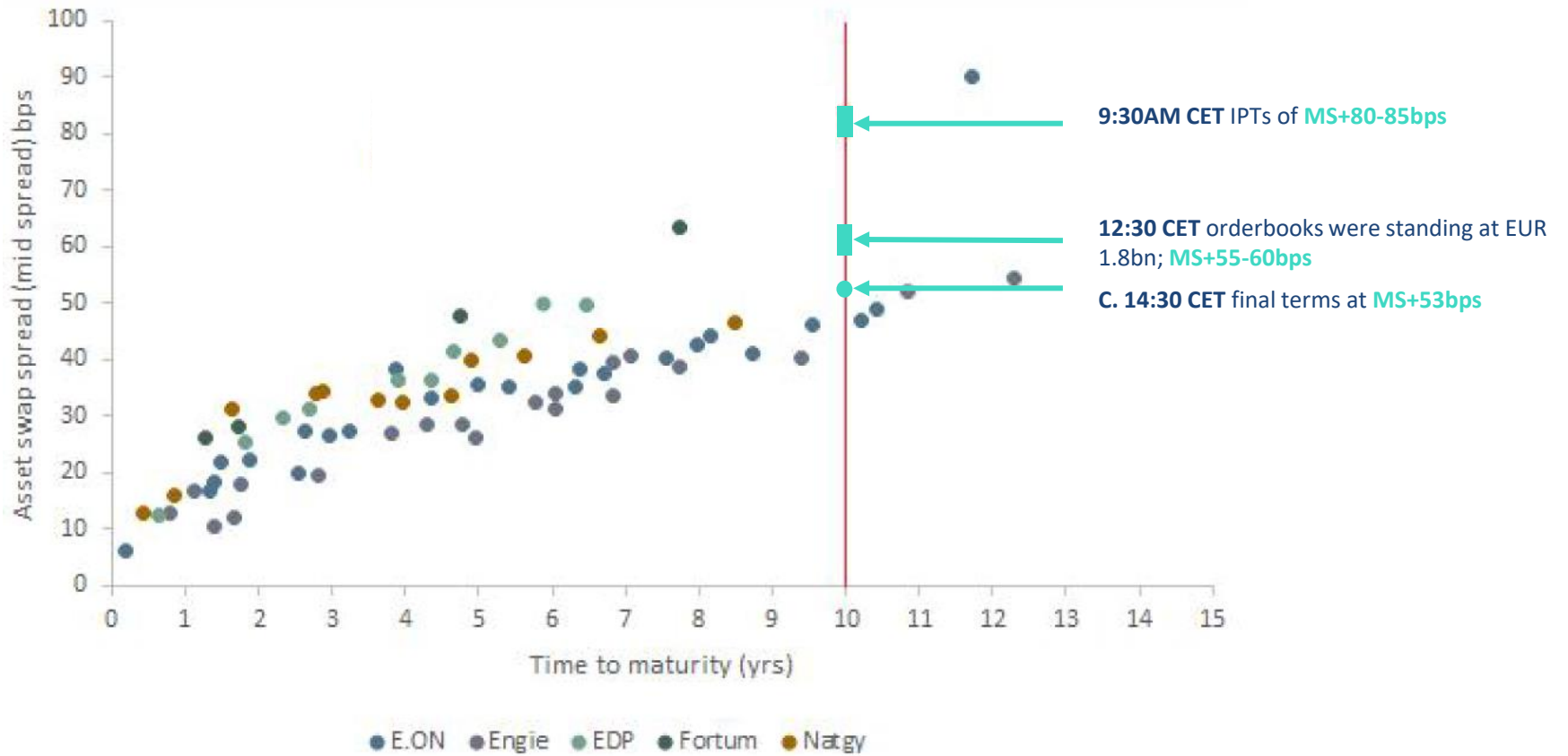
12.30 CET:

- **Strong Orderbook** allowed for a revision in **pricing indications to MS + 55-60 bps**

14.30 CET:

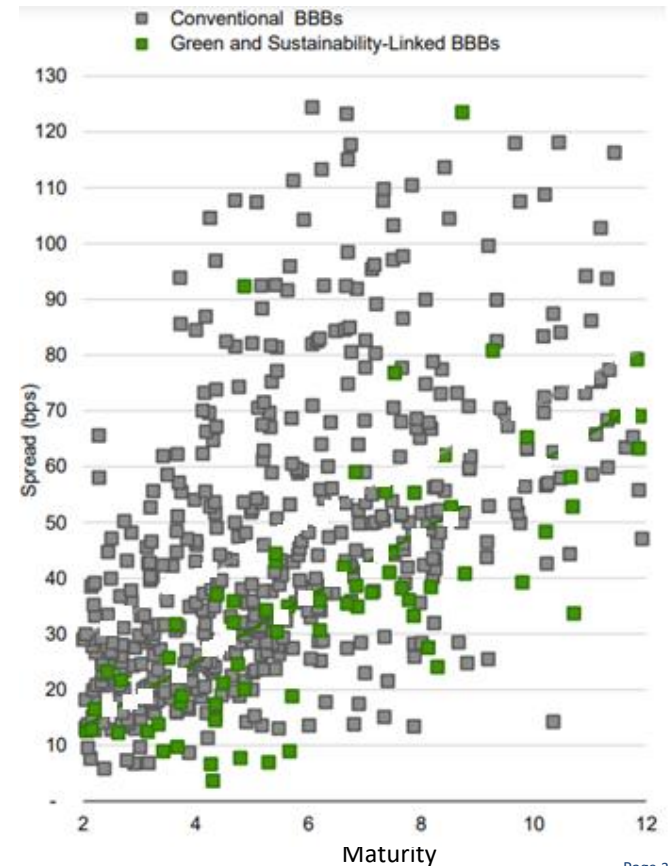
- **Final Orderbook of EUR 1.6bn** implied a 3.2x oversubscription with **pricing of MS + 53 bps**, achieving a negative NIP of -2 bps ('greenium')

How does the pricing fit into the secondary market curve ...



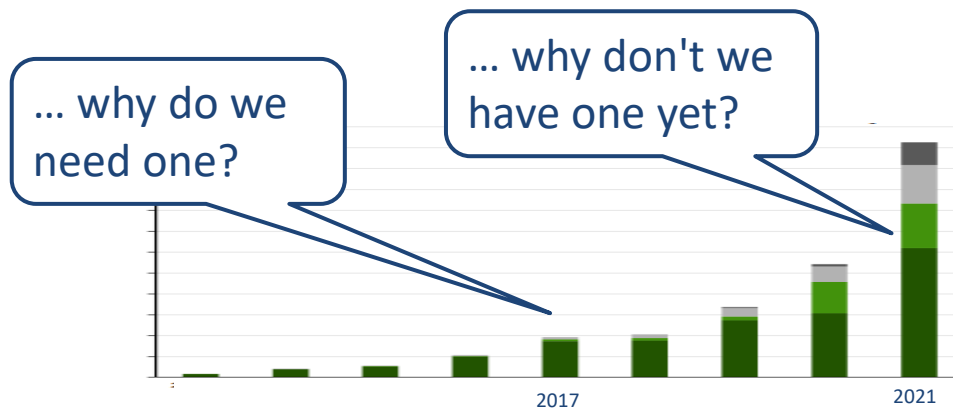
ESG is the #1 trend in Debt Capital Markets - implications on pricing

- The high pace reallocation of capital towards sustainable assets has made sustainability a key variable in bond pricing
- From the issuer's point of view, the term 'greenium' refers to the yield advantage of ESG bonds compared to normal bonds of the same issuer
- It also reflects the acceptance of investors for a lower yield, due to the green credential of the bond
- Greenium could be observed for most transactions (calculation depends on certain assumptions)
- Remark: For 2021, the average greenium was between 3 and 3.5 basis points (ESGClarity, 2021)





Sustainable Bonds, ...



Some Lessons Learned

- Even if Green Bonds are 'use of proceeds bonds', investors pay attention to the **ESG profile of the company**
- If you are new in the credit market, **take some time to discuss your credit story** ('non deal' roadshows) with investors. Also introduce senior finance management to the debt market
- If your company is not a green pure play, **make it clear that the green strategy dominates**, and explain the development of the non green business
- Potential reward: The green bond market is still a '**seller's market**', and a green bond will be appreciated by investors (e.g. reputation, diversification of investor base, greenium)

1. State of Play Green Bond Market
2. Case Studies from Energy Sector
 - a. First German Green Bond - issuer: 'ESG Pure Play'
 - b. Green Bond - issuer: 'Non ESG Pure Play'
3. **EU Taxonomy – is everything defined yet?**

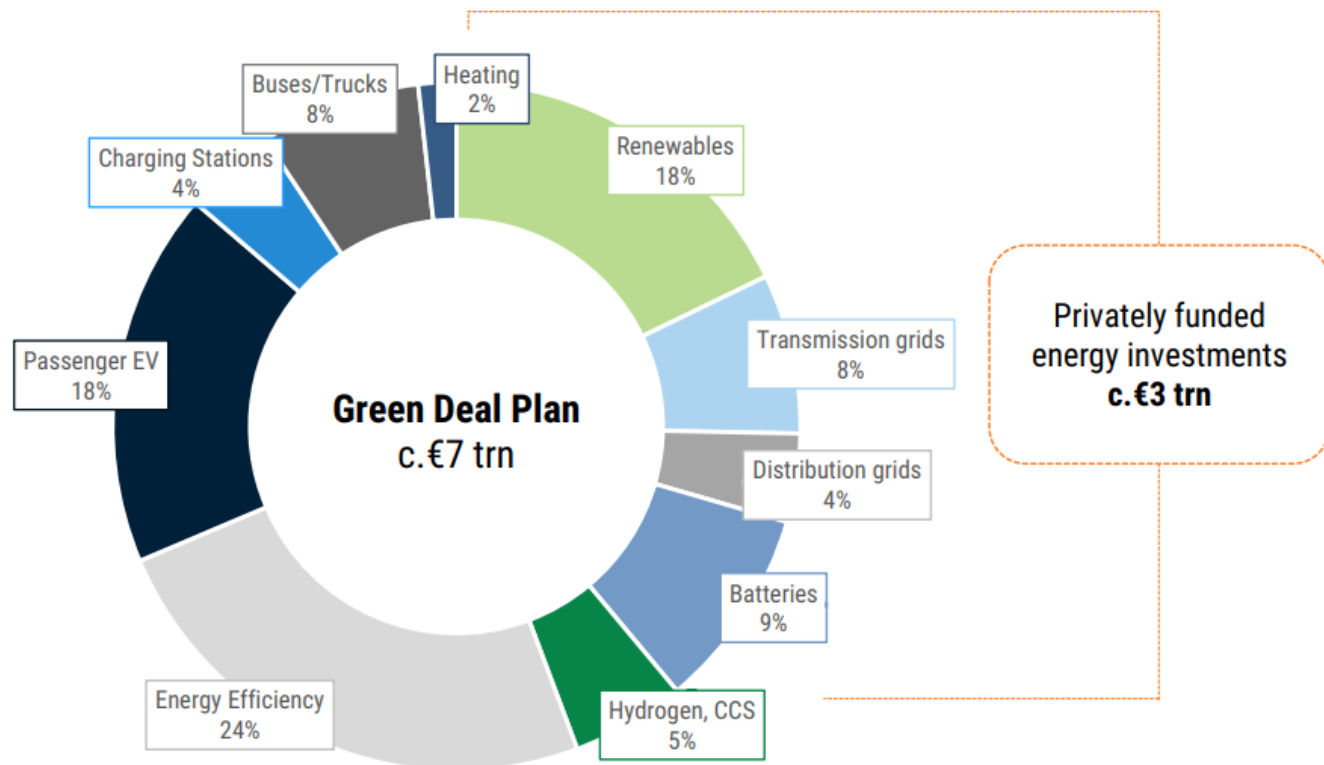
Green Deal, implementing the Paris Target in the EU

Do we have a common understanding what green means?



- EU Green Deal: 30% of needed funds will be raised by Green Bonds
- EU wants to become the world's largest Green Bond issuer (€250bn by 2026, 1st issuance of €12bn in 2021)
- Green Taxonomy & Green Bond Standard component of the EU's Green Deal

Significant amount of private funds need to flow in green activities



The EU Green Bond Standard

- On 6 July 2021, the **European Commission** proposed a new **Regulation** for a voluntary European Green Bond Standard
- The proposed Regulation aims to make the EU's financial system more sustainable by creating a '**gold standard**' for Green Bonds
- Several companies have already aligned their (ICMA) Green Bond Framework with the EU Taxonomy & proposed EU Green Bond Standard (e.g. EnBW, e.on)



Green Bond Rules – Comparison ICMA vs. EU

	ICMA Green/Social Bond Principles	EU Green Bond Standard (TEG Proposal)	
Green Projects	Alignment with the GBP/ SBP project categories	Alignment with the EU Taxonomy	x
Green Bond Framework	Description of issuer’s approach regarding process for project evaluation and selection and management of proceeds	Disclosure of issuer’s alignment with the EU taxonomy; overall green bond strategy; project selection; methodologies and processes for allocation and impact reporting	
Reporting	Allocation and impact reporting recommended	Allocation and Impact reporting mandatory	x
Verification	Appointment of an external reviewer recommended	<ul style="list-style-type: none"> • Issuers shall appoint an ESMA accredited external verifier • Verification applies: (i) to the Green Bond Framework and at least (ii) to the Allocation Reporting 	x

ICMA Principles are the basis for the EU Green Bond Standard

The EU Taxonomy¹: A common classification system for sustainable economic activities – gold standard

- Definition of **environmentally sustainable economic activities** to help investors and companies to make informed decisions in the transition to Net Zero
- Sectors include around **80% of EU's direct greenhouse gas emissions**
- **Large corporates and financial market participants** need to report from **2022**

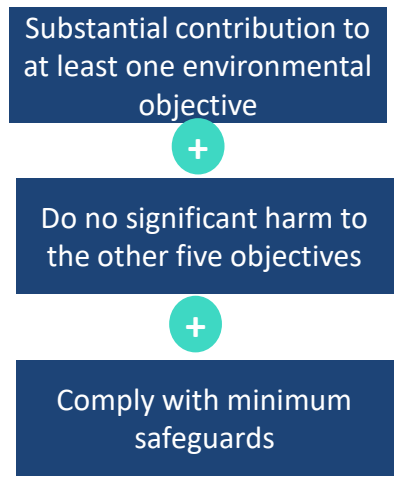


¹ The Taxonomy Regulation entered into force on 12 July 2020.

EU Taxonomy – a compass for sustainability?

The EU Taxonomy is a **list of economic activities** and **criteria** for companies to assess their contribution to the following **six environmental objectives**¹:

- 1. **Climate Change Mitigation** ✓
- 2. **Climate Change Adaptation** ✓
- 3. Sustainable Use of Water & Marine Resources
- 4. Circular Economy, Waste Prevention & Recycling
- 5. Pollution Prevention & Control
- 6. Healthy Ecosystem



Technical screening criteria have been developed for the **two climate objectives**. Disclosure for capex, opex and revenues are aligned with climate objectives.

¹ EU Platform on Sustainable Finance launches: New criteria for all six taxonomy objectives, especially for 3-6 (March 2022)

EU Taxonomy – Rest in Peace?

Gas & nuclear in guidebook for ‘green’ investments (February 2022)





EU Taxonomy Complementary Delegated Act: gas & nuclear are green if ...

Bridge technologies to meet the EU's target of net zero emissions by 2050

Criteria for Natural gas

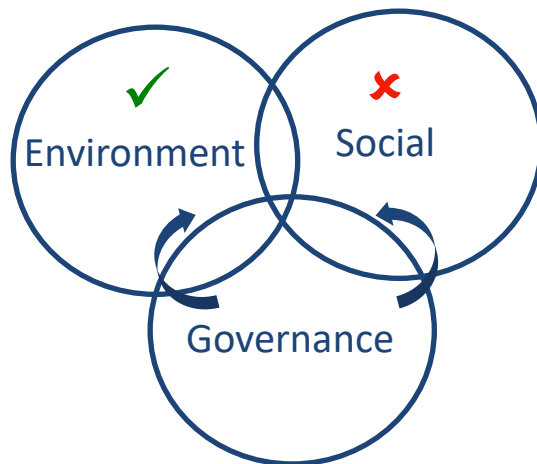
- New plants must **replace coal-fired power station** and be built by end of 2030
- Must be designed to run 100% on low-carbon fuels **by end of 2035**
- **Emissions upper limits**, e.g. lower than 270g CO₂/kWh over 20 years

Criteria for Nuclear power

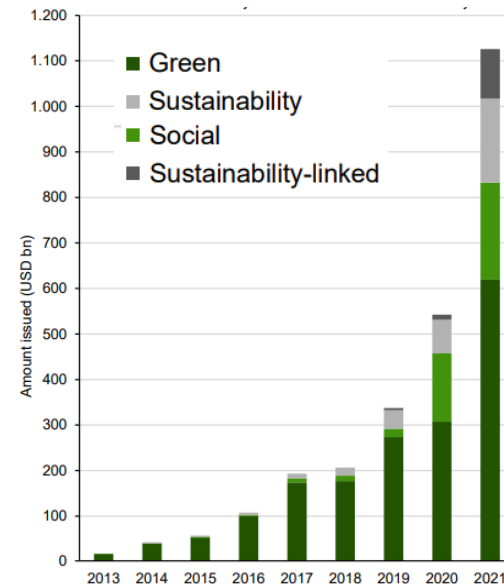
- Investments in **new plants** and **upgrades** of existing installations
- New plants must obtain a **construction permit before 2045**
- **Disposal facility in place by 2050** for high-level radioactive waste

'Green' - possibly well defined, but what about the 'S' letter of ESG?

EU Green Taxonomy



EU Social Taxonomy
(work in progress¹)

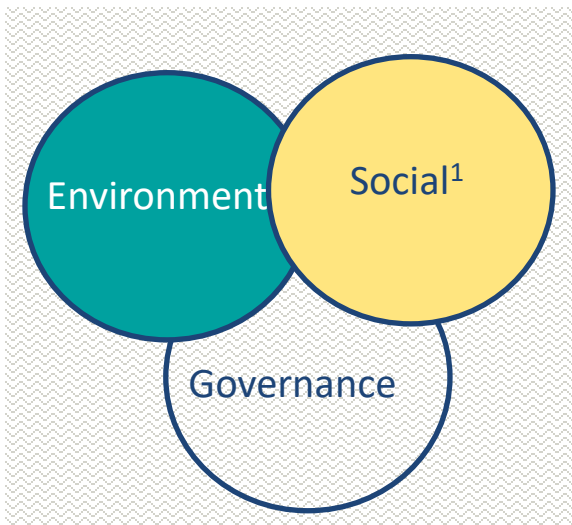


- Covid-19 pandemic: social topics
- Ukraine War: social topics & security topics

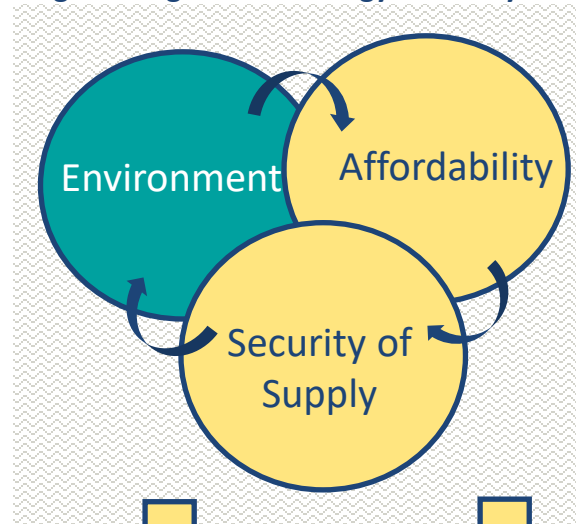
¹ The EU Platform on Sustainable Finance published its final report on a social taxonomy on 28. Feb. 2022. Focus is on the following three social objectives: Decent work (including for value-chain workers); Adequate living standards and wellbeing for end-users; and Inclusive and sustainable communities and societies.

With the Ukraine war, further aspects of 'sustainability' come in focus ...

ESG



Target triangle of the energy economy



Further push for Green Deal:

„Freiheitsenergie“
(Lindner, Feb. 2022)

Energieversorgung
„Nationalen Sicherheit“
(Habeck, Feb.2022)

**„Bezahlbare Energiepreise
für Haushalte & Wirtschaft“**
(Scholz, March 2022)

¹ The EU Platform on Sustainable Finance published its final report on a social taxonomy on 28. Feb. 2022. Focus is on the following three social objectives: Decent work (including for value-chain workers), Adequate living standards and wellbeing for end-users; and Inclusive and sustainable communities and societies.

What about the defence industry – 'A guarantor of peace?'

“Sustainable investments must fulfil the criterion ‘Do no significant harm’ – this is not the case with armaments,” said Henrik Pontzen, head of ESG at Union Investment.

Source: Reuters, March 2022

Banks Change Course on Weapons Finance as Defense Spending Soars

- Commerzbank, SEB signal openness to arms industry amid war
- Germany says Russian war ushers in 'new era' for military

Source: Bloomberg, March 2022

Russia's War Prompts a Pitch for 'Socially Responsible' Military Stocks

Bombs, guns and fighter jets aren't typical E.S.G. investments, but two Citi analysts say they should be. Advocates for “socially responsible” investing call the idea “absurd.”

Source: New York Times, March 2022

Sicherheit als "Mutter" aller Nachhaltigkeit!

BDSV, March 2022

Rolls Royce, Thales and Airbus have joined a chorus of companies over the last two weeks calling for investors to treat the sector more favourably, arguing security and stability are key to sustainability.

Source: Reuters, March 2022

'The reasoning for declaring activities socially harmful ... would be internationally agreed conventions on certain kinds of weapons'

Source: Final draft EU Social Taxonomy. Feb. 2022

Vladimir Putin's Contribution To ESG Investing

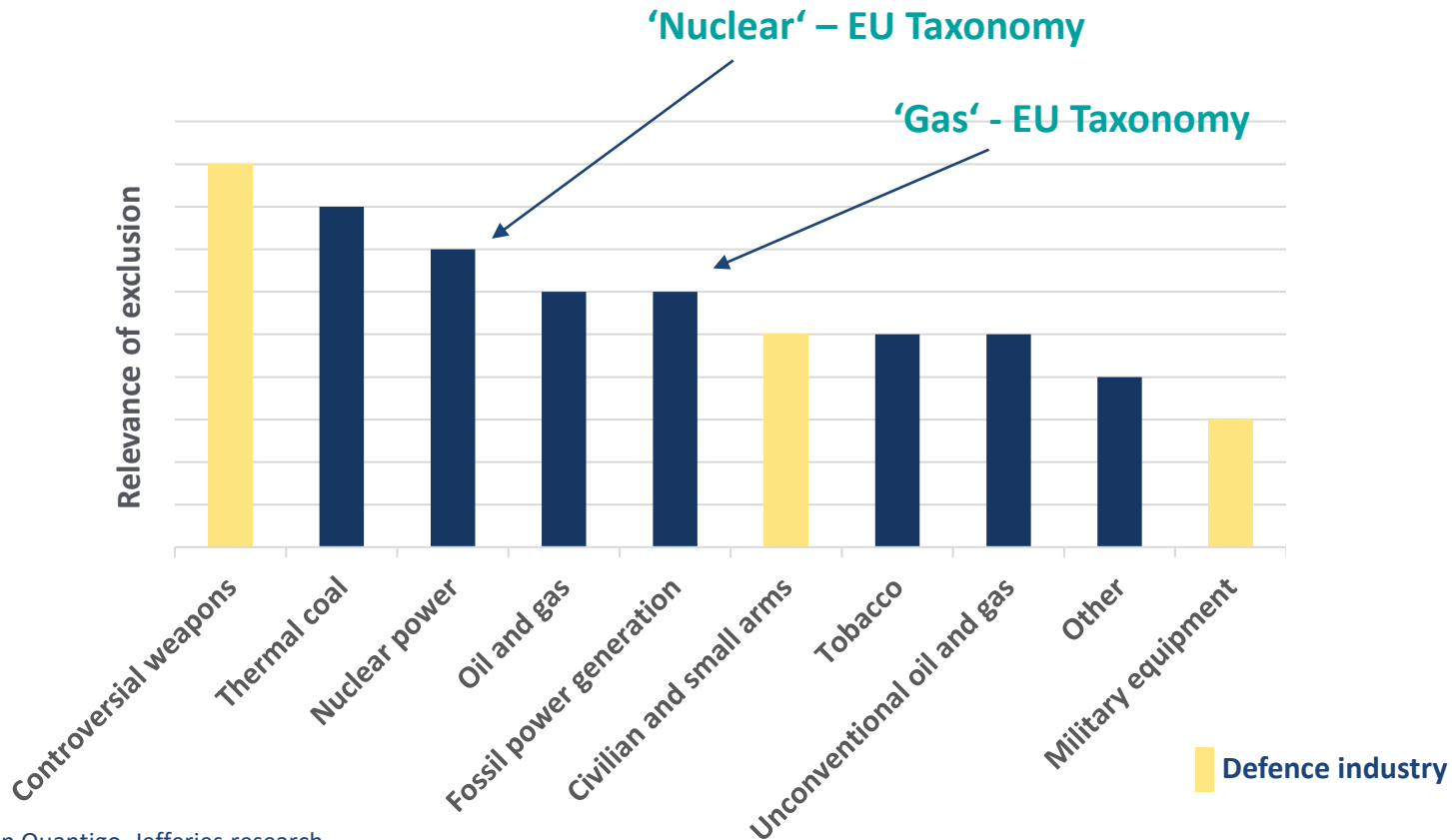
Source: Forbes, March 2022

“Wir müssen deutlich mehr investieren in die Sicherheit unseres Landes, um auf diese Weise unsere Freiheit und unsere Demokratie zu schützen“, 100 Mrd € in 2022 und zukünftig 2% des BIP

Olaf Scholz, Februar 2022



Let's summarize and compare with 'EU eco-labels'



Who finally decides what is 'sustainable' ...



*... **investors decide** what they consider as sustainable. Clear communication of **ESG Strategy** remains **key for companies**.*

Holger Perlwitz

T +49 162 2843 044

holger.perlwitz@tu-dresden.de

Dr. Holger Perlwitz



Ab Q3 2022
2015 - heute

Professor Nachhaltige Energiewirtschaft, HKA
Lehrbeauftragter TU Dresden

2015 - 2022
2010 - 2015
2006 - 2010

Leiter Fixed Income Investor Relations, RWE/innogy
Leiter Marktrisiko & Risikosteuerung, RWE
Teamleiter Marktanalyse CO₂ & Erneuerbare Energien, RWE

2003 - 2006
1997 - 2002

Wissenschaftlicher Mitarbeiter, KIT
Studium Wirtschaftsingenieurwesen, KIT