



NRW.BANK – Green Bond Programme

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NRW.BANK
Wir fördern Ideen

NRW.BANK – Green Bond Programme

Executive Summary

- 1 NRW.BANK – COVID-19
- 2 NRW.BANK – Sustainability
- 3 NRW.BANK Green Bond #2-2021 – EU GBS (TEG)
- 4 NRW.BANK Green Bond #2-2021 – Project Examples
- 5 NRW.BANK Green Bonds – Review

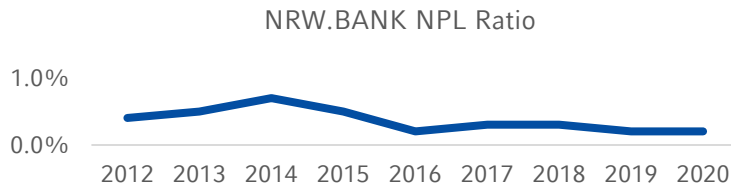
Appendix

Contact

Disclaimer

Executive Summary

- NRW.BANK is **explicitly guaranteed** by the State of North Rhine-Westphalia
- NRW.BANK, as a state owned development bank
 - has a clear public mission mandate
 - does not focus on maximising profits
 - does not pay a dividend
 - has exceptionally low NPLs:



- NRW.BANK is the second-largest development institution in Germany

- NRW.BANK has
 - a zero risk weighting
 - Bank regulation
 - Solvency II
 - Rating (Aa1/AA/AAA)
 - LCR status: HQLA/level 1 asset
- NRW.BANK key figures:
 - CET 1: 43.9%
 - LCR: 260%
 - Leverage ratio: 11.2%
- Bail-in exempt
 - NRW.BANK law: §17 Dissolution (2)
“Insolvency proceedings with respect to the Bank’s assets are inadmissible.”
 - No CACs are used
- ECB quantitative easing
 - On initial ECB list for PSPP/PEPP



1 NRW.BANK – COVID-19

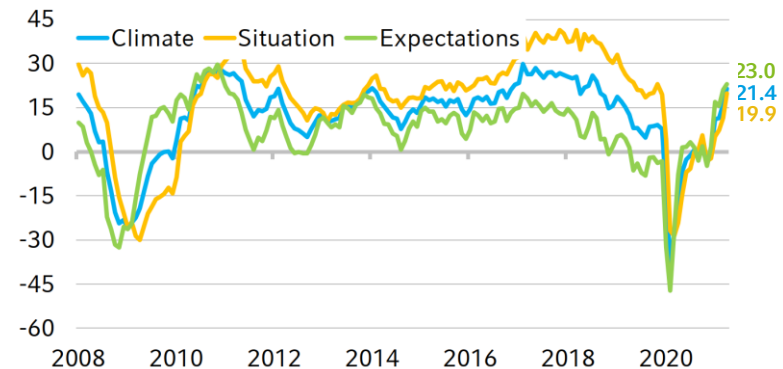
1 NRW – COVID-19: V-Shape Recovery Continues

- GDP Germany
 - 2020 QII -> -9.7%
 - 2020 QIII -> +8.7%
 - 2020 QIV -> +0.5%
 - 2021 QI -> -1.8%
- 2020: Germany -4.9%; NRW -4.4%
- 2021*: Germany 3.5%; NRW 3.5% (RWI)

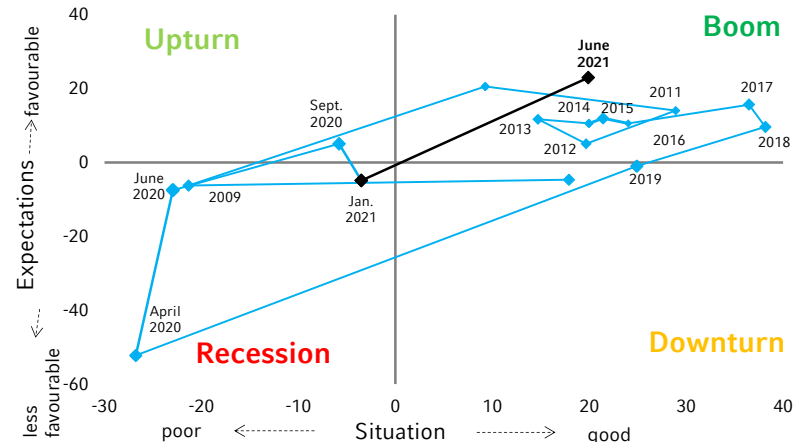
- Labour market: stable
 - Germany June: 5.7% (5.9%)
 - NRW June: 7.4% (7.5%)
 - NRW short-time work (March)
 - Employees: 0.5 million (0.7 million)
 - Corporates: 71132 (85049)
- Ifo Index NRW in June: 5th increase in a row

*forecast

■ Ifo Business Climate NRW June



■ Ifo Barometer NRW June



1 NRW.BANK – COVID-19

- NRW.BANK is
 - the development bank of North Rhine-Westphalia
 - part of the federal development bank network
- Record high new development loans disbursed: EUR 17 billion (EUR 10.3bn)
- Total Assets: EUR 156 billion (EUR 149bn)
- Close cooperation with KfW
 - Onward lending of KfW funds
 - EUR 3.5 billion targeting SMEs
- Special programmes on behalf of NRW
 - CoronaMunicipalities: up to EUR 5 billion
 - CoronaInfrastructure: up to EUR 5 billion
 - CoronaSME: up to EUR 5 billion
- Infrastructure: airports, hospitals, etc
 - Maintaining air traffic
 - Providing intensive-care beds
- Municipalities: good market access
- SME: complementary to KfW
- No significant write downs:
 - Specific risk provisions: EUR 31.2 million
 - General value adjustments: EUR 25 million
- Allowance Reserves: EUR 226.7 million
 - Fund for general banking risk: EUR 50 million



2 NRW.BANK – Sustainability

2 Global Warming

Five warmest years:

2016: +0.99 °C

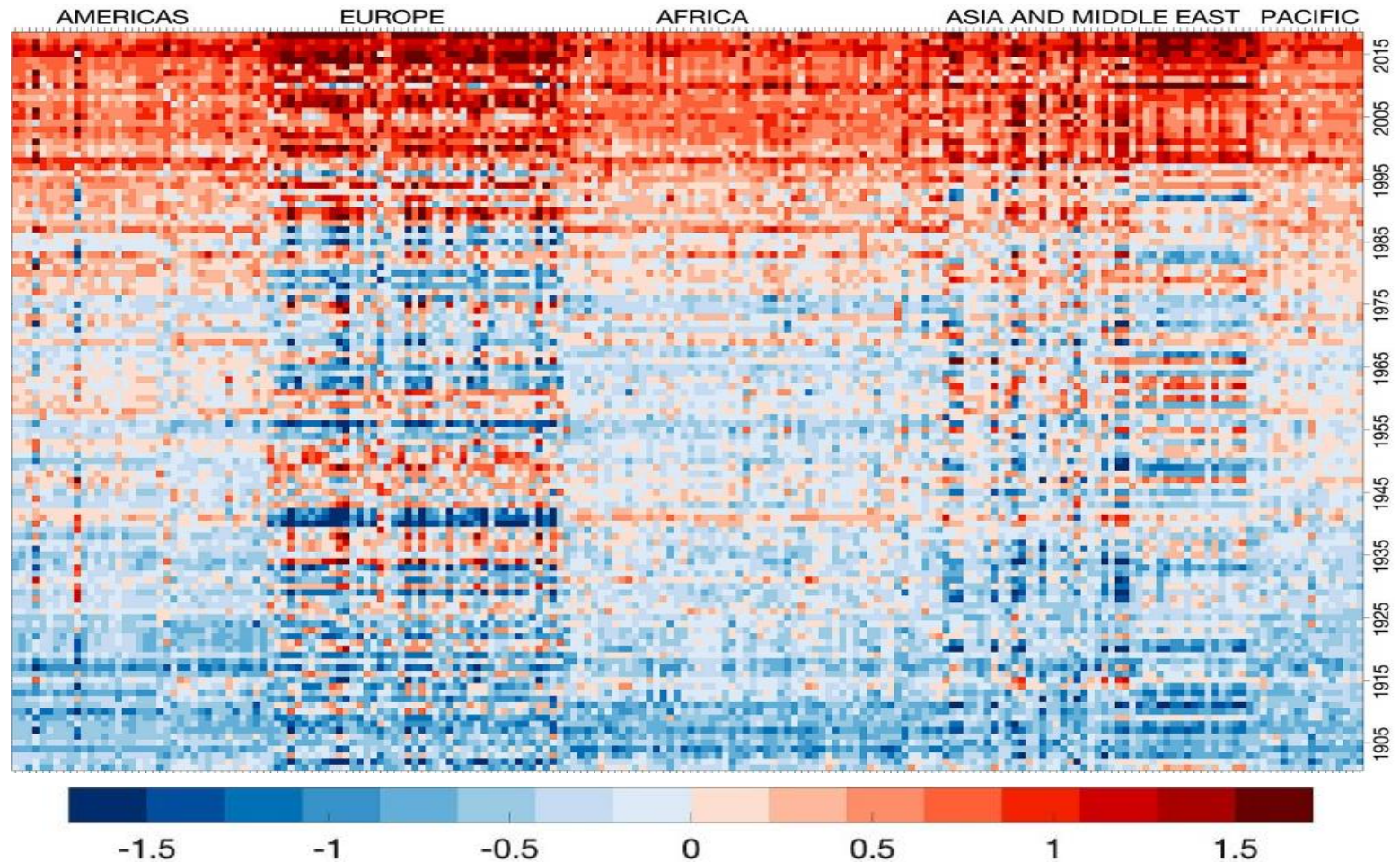
2020: +0.98 °C

2019: +0.95 °C

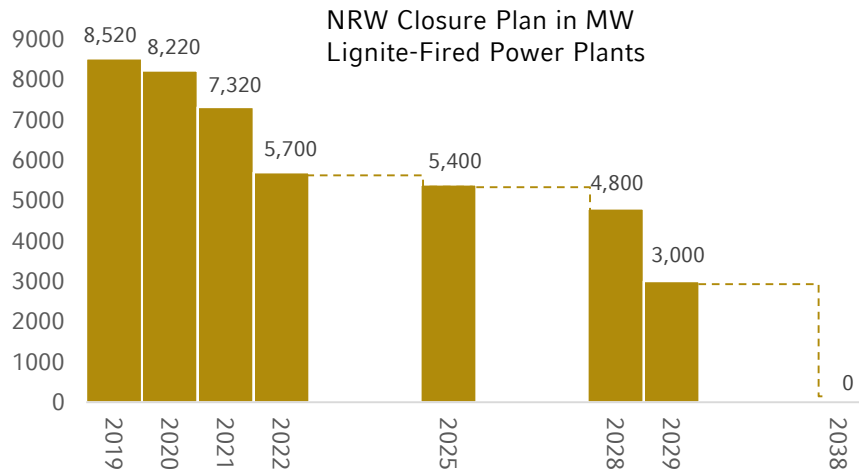
2015: +0.93 °C

2017: +0.91 °C

Climate scientist Ed Hawkins' Climate Stripes: Each row of coloured pixels represents the temperature record of an individual nation within in its region.



2 NRW: Phasing Out Lignite/Coal-Fired Power Plants by 2038



■ Lignite-fired power plants:

■ NRW leads the way -> 8520 MW

- Nord-Süd-Bahn 2020 – 2022: 2820 MW (smaller power plants and factories)
- Weisweiler F: 01.01.2025 -> 300 MW
- Weisweiler G: 01.04.2028 -> 600 MW
- Weisweiler H: 01.04.2029 -> 600 MW
- Niederaußem G & H: 31.12.2029: 1200 MW
- Niederaußem K: 31.12.2038 -> 1000 MW
- Neurath F & G: 31.12.2038 -> 2000 MW

- Federal Grants: EUR 15 bn
- Jülich: sustainable and infrastructure-compatible hydrogen economy cluster
- Hambach forest preserved
- Compensation payments for:
 - power plant operators (over 15yr period)
 - a socially acceptable staff reduction
 - adjustment allowance
 - pension compensation
- Review in 2026 and 2029 to **accelerate process** to end of **2035**

■ Hard coal-fired power plants:

- phasing out by 2038 (2035)
- Up to 2026: Auction -> degressive compensation rates
From 2027 on: residuals shut down by law
- 1st round of auctions Jan. 2021:
NRW -> 2830 MW (out of 6650 MW)
DE -> 4785 MW (out of 22758 MW)

2 German CO₂ Pricing

An integral part of Germany's Climate Action Programme 2030

- CO₂ pricing for transport and heating sector - not covered by the EU emissions trading system
- Goal: promote climate-friendly transport and energy-efficient buildings

What will be priced?

- Petrol, diesel, heating oil, natural gas

Who will be priced?

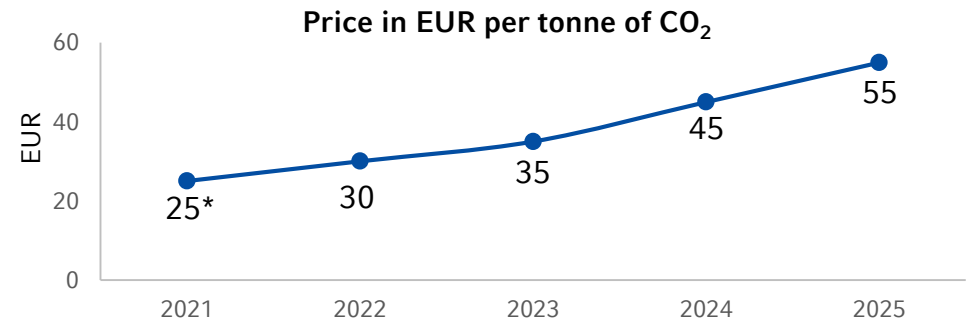
- Companies that put fuels into circulation or suppliers of the fuels (upstream approach)

To reduce burden on households/companies:

- proceeds from CO₂ pricing to reduce renewable energy levy (ie electricity prices)
- for a transitional period tax-deductible long-distance commuting allowance increased

2021 - 2025

- Fixed price:



*Corresponds to: 7 cents per liter petrol, 8 cents per liter diesel, 8 cents per liter heating oil and 0.5 cents per kilowatt hour natural gas

2026

- Pollution rights auction
 - limited number of CO₂ emissions certificates
 - Price corridor: EUR 55-65 per tonne CO₂

2027 and onwards

- Market price

2 German Climate Protection Act Amendment

Landmark ruling by Constitutional Court on 29.04.2021 found:

- intergenerational burden sharing must be balanced
- timeline beyond 2030 is missing

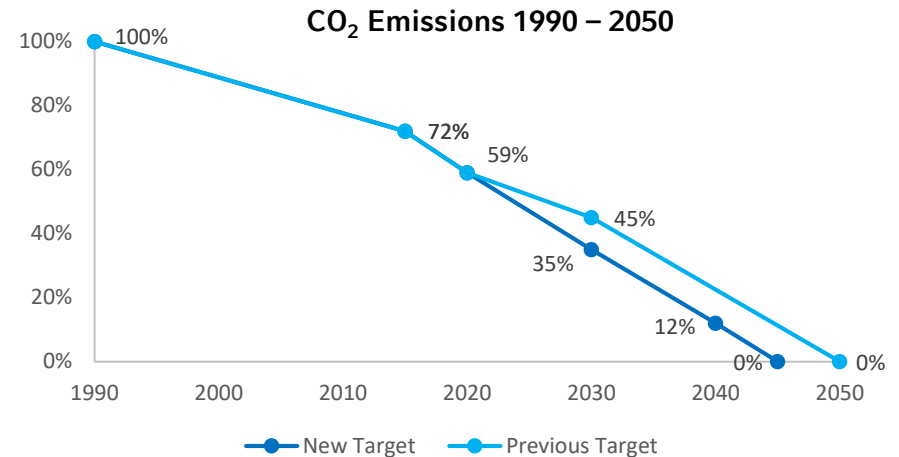
Amended version passed by Bundestag by 25.06.2021

- New steeper targets set
- 2045: CO₂ neutral* -> Stricter than EU Green Deal

Next steps: concretize activities

- Energy:
 - accelerate coal exit
 - accelerate renewable capacities
- Transport:
 - ban (new) combustion engines
 - incentivize alternative drive systems
 - e-mobility
 - hydrogen technology

* Natural CO₂ storages counts for 3-5%

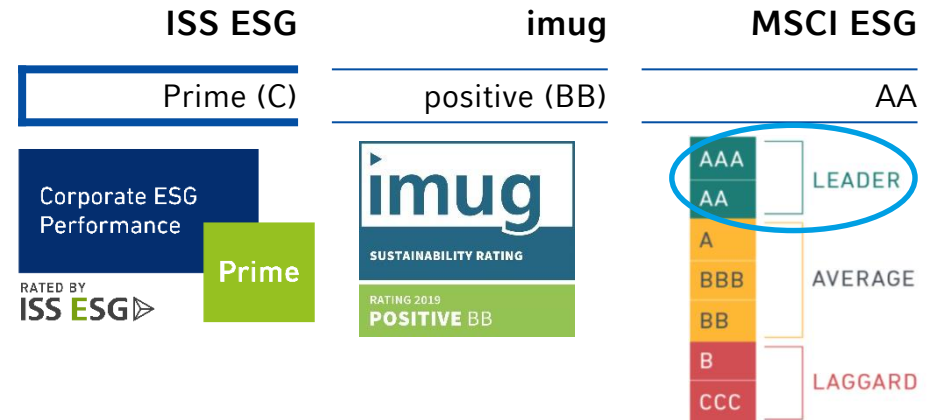


Revised CO₂ Emission Reduction Targets 2030 - 2050

	New Target	Old Target
2030	-65%	-55%
2040	-88%	Not specified
2045	-100%	Not specified
2050		-100%

2 “Greening” of NRW.BANK

- Annual Sustainability Report
- Sustainability Guidelines
 - Exclusion: Controversial business practices
 - Human rights violation
 - Child labour
 - Animal testing
 - etc.
 - Exclusion: Controversial business fields
 - Weapons (NBC, cluster, mass destruction)
 - Environment violation
 - Research on human embryos
 - Coal supply chain
 - etc.
 - Screening of liquidity portfolio: MSCI ESG
- Sustainable Bond Investment Portfolio

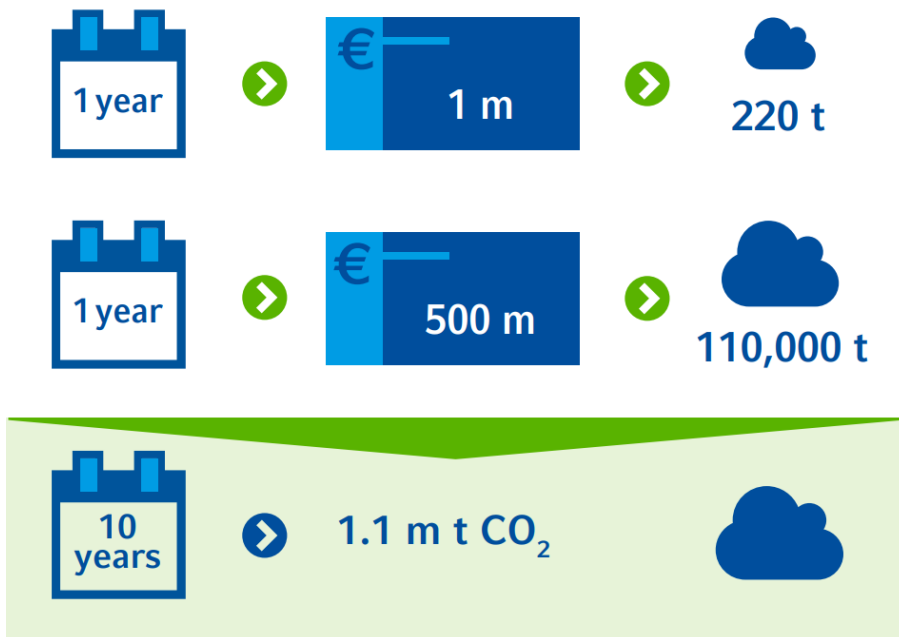


- **Green** Refinancing Curve based on EU Taxonomy
- **Green** Bond Programme
 - Active since 2013
 - 2021: adopt EU GBS (TEG)
- **Social** Bond Programme
 - Active since 2020
 - ICMA Social Bond Principles

2 NRW.BANK Green Bond Reporting 2020

Mitigation Highlights:

CO₂ savings per year



Adaptation Highlights:

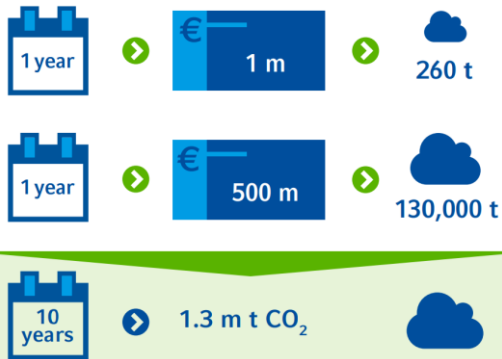
- EUR 163.2 million (of the total of EUR 500 million)
- The renaturation of the Emscher continued to progress in 2020:
 - Emscher sewer (AKE): Completed
 - Sewers in the Emscher catchment area: 402.64 km of 435.78 km completed
 - Renaturated river course: 148 km of 328 km completed
 - New retention volumes/replacement floodplains: 1,110,000 m³
 - New floodplains: 151,300 m³
 - Biodiversity: 278 species

<https://www.nrwbank.de/export/.galleries/downloads/Dafuer-stehen-wir/Nachhaltigkeit/sustainability-report-2020.pdf>

2 NRW.BANK Green Bond Reporting

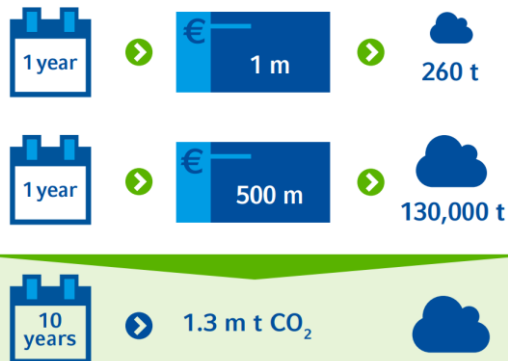
NRW.BANK.Green Bond #1-2019

CO₂ savings per year



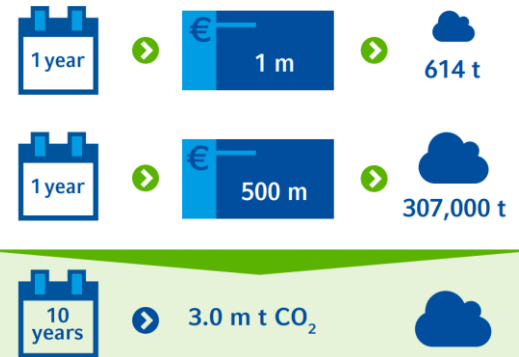
NRW.BANK.Green Bond #2-2019

CO₂ savings per year



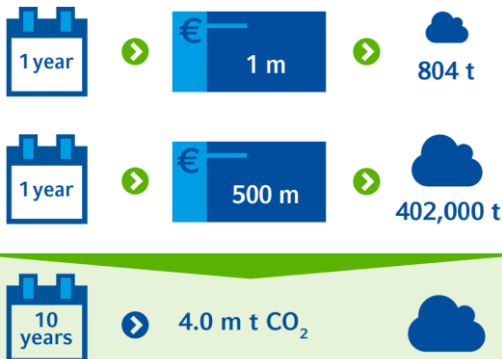
NRW.BANK.Green Bond 2018

CO₂ savings per year



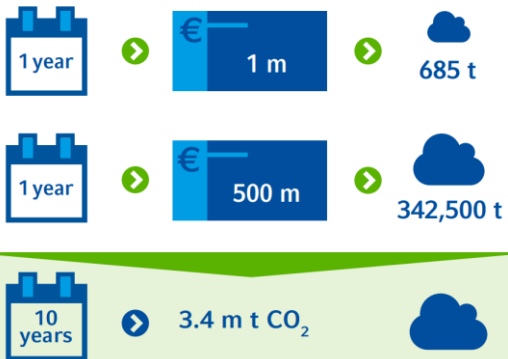
NRW.BANK.Green Bond 2017

CO₂ savings per year



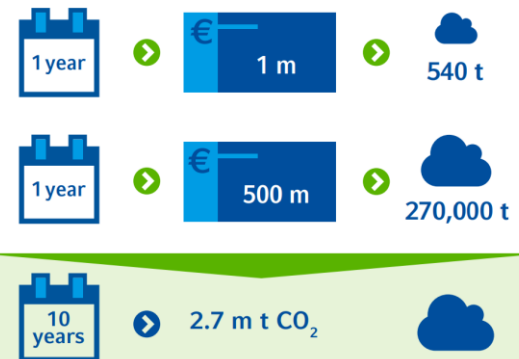
NRW.BANK.Green Bond 2016

CO₂ savings per year



NRW.BANK.Green Bond 2015

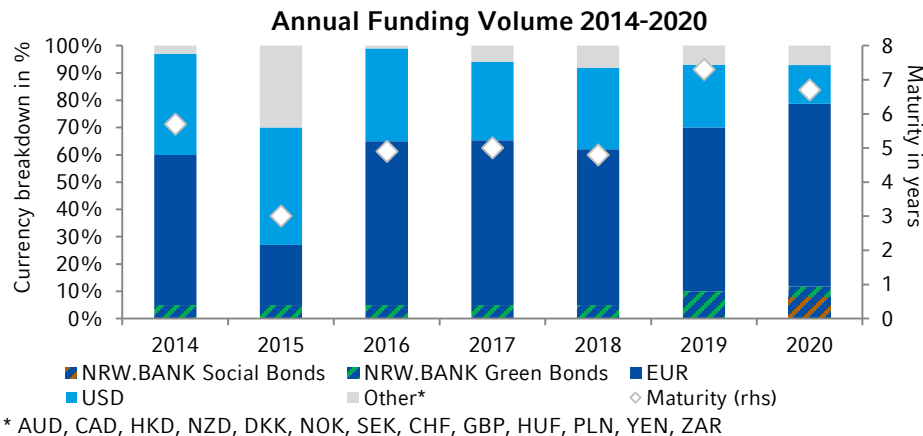
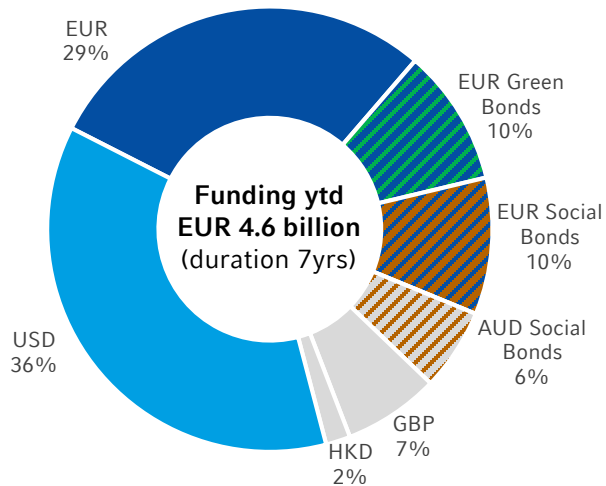
CO₂ savings per year





3 NRW.BANK Green Bond #2-2021 – EU GBS (TEG)

3 Our Added Value – Funding Strategy



— Funding volume **target 2021**: EUR 11 - 12 billion

— Debt Issuance Programme

— Formosa

— SSD/NSV

— Kangaroo/Kauri

— GCP

— Benchmarks (EUR and USD)

— Green Bond (EUR)

— Social Bond (EUR, AUD or other)

— Zeros

— Single/Multi Callables

— Multi-tranches

— Plain Vanilla

— Syndicate

— Blockchain@nrwbank.de

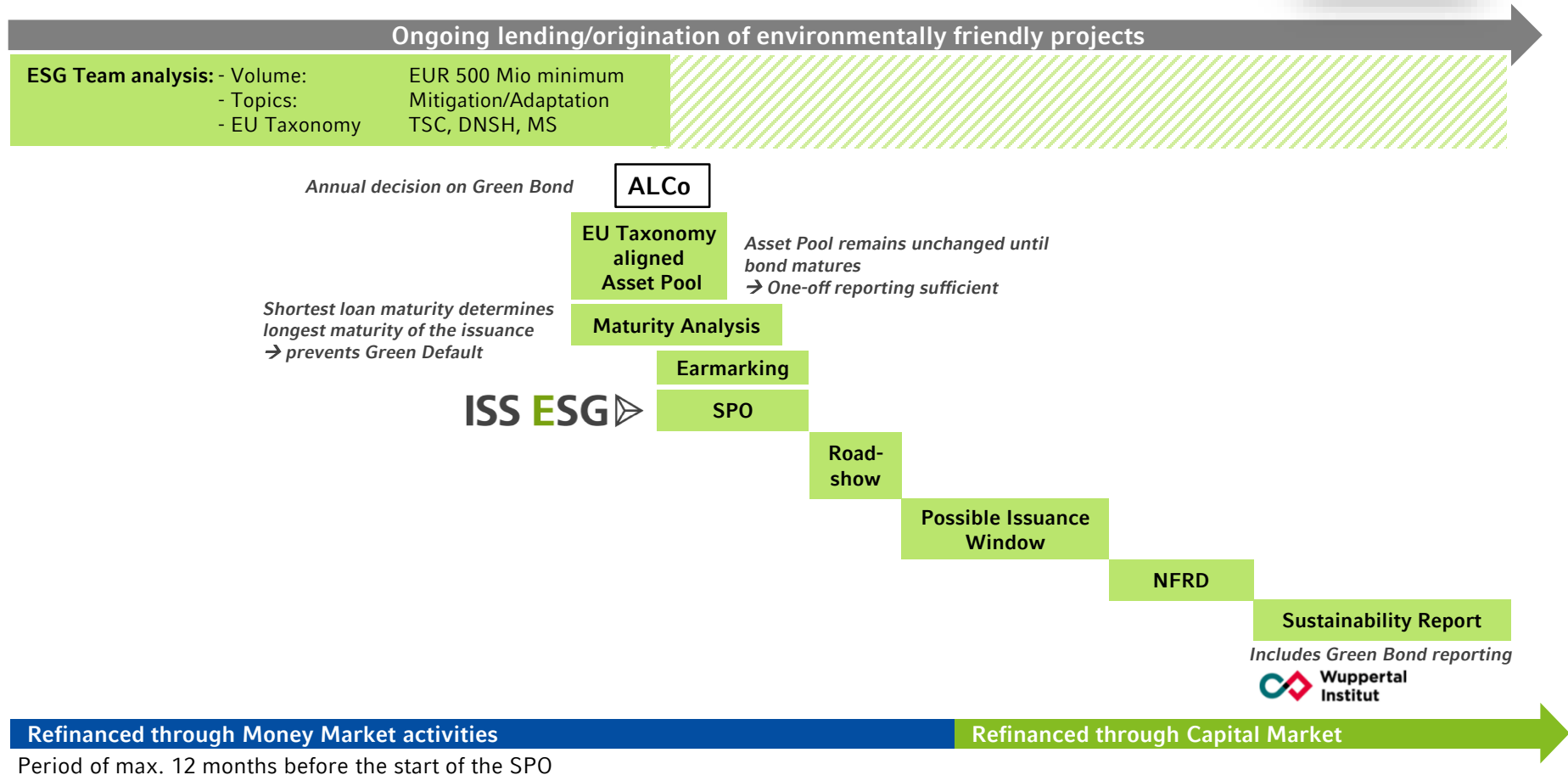
3 NRW.BANK Green Bond – Concept: EU GBS (TEG)

- Framework 2020 outlined strategy and rational
- Process for Selection of Green Projects
 - Second Party Opinion (SPO): Projects EU Taxonomy aligned
 - Technical Screening Criteria (TSC)
 - Do No Significant Harm (DNSH)
 - Comply with Minimum Standards (MS)
- Green Projects
 - Mitigation & adaptation
 - Loan-to-bond
 - Shortest loan maturity determines length of issue maturity
- Management of Use-of-Proceeds
 - Static asset pool
 - (re)financing loans not older than 12 months before the initiation of the SPO
- Reporting
 - Allocation
 - Impact Reporting compliant with MDB Harmonised Framework



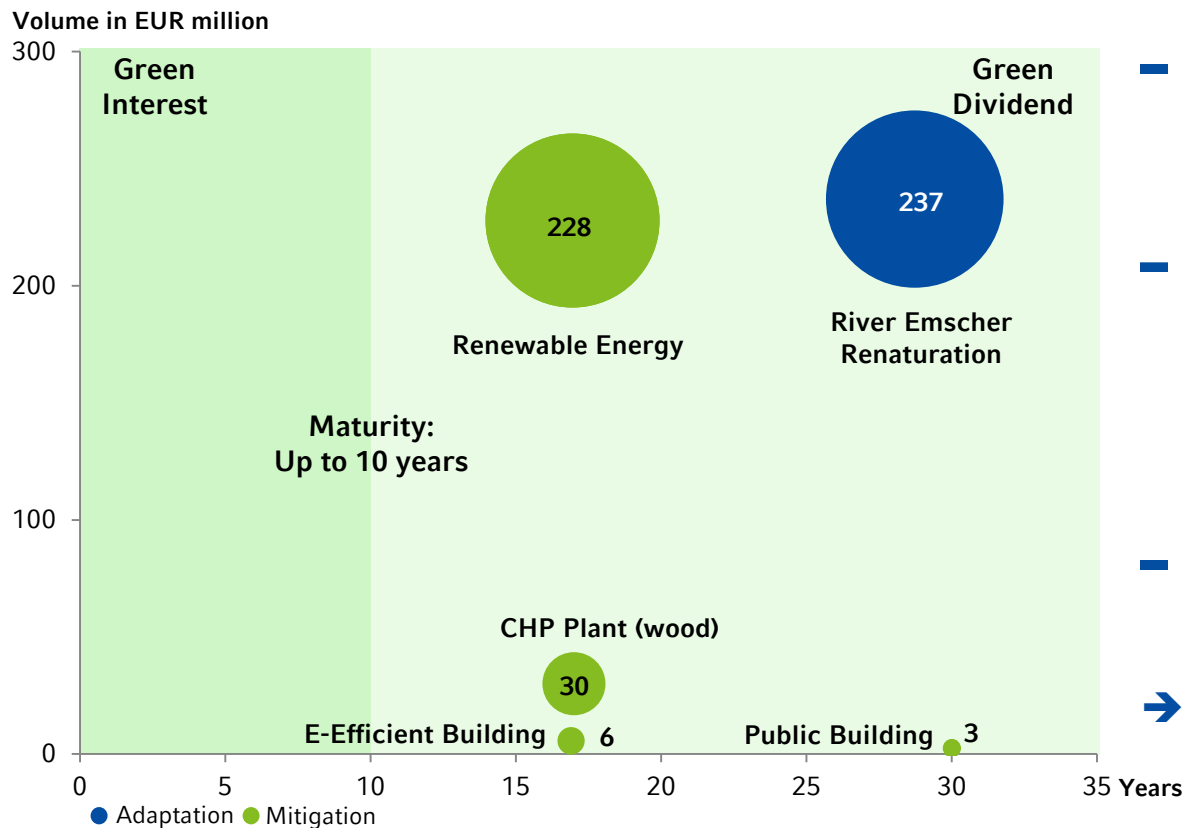
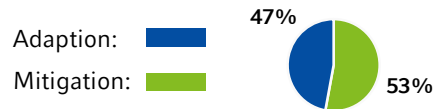
Second Party Opinion
ISS ESG
Impact Report
Wuppertal Institut
Non-Financial
Reporting Directive

3 NRW.BANK Green Bond – Process



3 NRW.BANK Green Bond #2-2021

Volume: EUR 500 million



- Loans disbursed between December and May 2021
- Maturity
 - Green Bond: up to 10 years
 - Loan: on average 22 years
- Green dividend
 - Average: 12 years
 - Marginal: 20 years
 - Technical maturity significantly exceeds the repayment maturity
- Green Leverage
 - Reinvestment after 10 years
- ➔ New Green Projects

3 NRW.BANK Green Bond #2-2021

Asset Allocation

EU Taxonomy Conform: Mitigation		Project Category	EUR 266 mn
Green Buildings		Energy Efficient Building Renovation	2.1%
		Public Building	0.9%
Renewable Energy		Onshore Wind Parks, Photovoltaic Systems and Grids	85.7%
Biomass Energy		CHP Plant (wood)	11.3%
EU Taxonomy Conform: Adaptation		Project Category	EUR 237 mn
Resilience and Diversity		River Renaturation (Emscher and Lippe)	100%

- The “Use of Proceeds” used for NRW.BANK’s Green Bond #2-2021 will be documented in the Final Terms of the Green Bond:
„The Issuer will be investing an amount equal to the estimated net proceeds of the Notes in loans for energy efficiency, renewable energy, biomass energy and resilience subject to and in accordance with the lending standards of the respective loan programmes. (If the estimated net proceeds cannot be applied to these projects, a corresponding amount will be used for thematically corresponding projects within the business operations of the Issuer in accordance with the Act on NRW.BANK and its mandate of providing promotion loans.)”

3 NRW.BANK Green Bond #2-2021

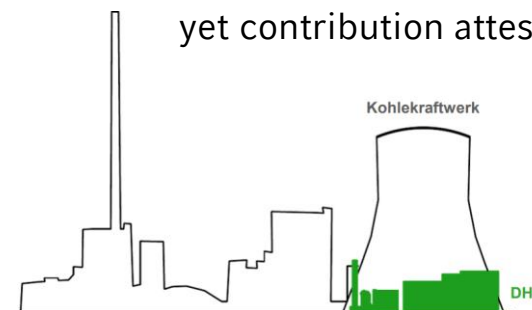
ISS ESG Second Opinion – Positive

- ☑ Assess alignment with draft EU GBS (TEG)
 - ☑ Framework
 - ☑ Reporting
 - ☑ External Reviewer
 - ☑ EU Taxonomy conform
 - ☑ Technical Screening Criteria
 - ☑ Do No Significant Harm
 - ☑ Comply with minimum safeguards
- ☑ Good sustainability performance of NRW.BANK
- ☑ SDGs are explicitly targeted
 - ☑ 4 – Quality Education
 - ☑ 6 – Clean Water and Sanitation
 - ☑ 7 – Affordable and Clean Energy
 - ☑ 13 – Climate Action



CHP Plant:

- ☑ Aligned with EU Taxonomy (TEG)
 - ☑ Aligned with SDGs: 7, 13
- yet contribution attested as: *no net impact*



Replaces hard coal-fired power plant Steag Walsum 9
Annual savings:
125,500 t CO₂.
Dinslaken Public Utilities

3 NRW.BANK Green Bond #2-2021

— Main details of the transaction

- Issuing volume: EUR 500 million
- Date of issuance: QIII 2021
- Denomination: 1,000
- ISIN: DE000NWB0AN7
- Listed on LGX



— Included in the main green indices

- ICE Green Bond Index
- Solactive Green Bond Index
- S&P Green Bond Index
- Barclays MSCI Green Bond Index

— Debt Issuance Programme

- Senior preferred bond
- Explicit guarantee

— Leads:

— 2nd Opinion



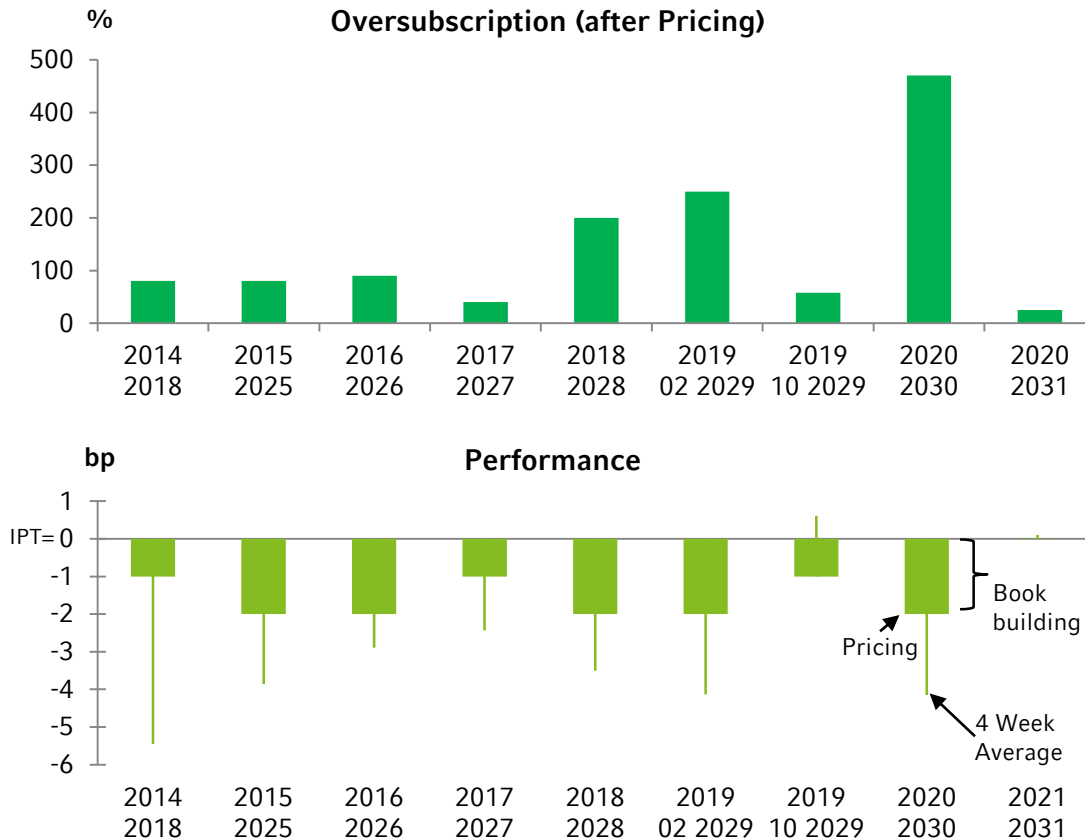
- Result: positive
- Sustainability performance: good
- Aligned with EU GBS (TEG)
- Aligned with Green Bond Principles
- Aligned with SDGs: 4, 6, 7, 13,

— Impact Report



— Non-Financial Reporting Directive

3 NRW.BANK Green Bond Secondary Market α Performance



- Bonds tightened
 - Defensive pricing
 - High-grade syndicates
 - Realistic market views
 - Excellent Timing
 - Green value chain
 - Coherent concept
 - Significant over subscription
- Fair balance of interest
 - Investor
 - Intermediate
 - NRW.BANK
- Open mandate
 - Continuity
 - Predictability
 - Reliability
 - Confidence



4 NRW.BANK Green Bond #2-2021 – Project Examples

4 NRW.BANK Green Bond #2-2021

Renewables

- All projects meet the eligibility criteria of the EU Taxonomy (TEG)
- Investments in green energy infrastructure
 - Wind power onshore
 - Ca. 50 wind turbines
 - All located in North Rhine-Westphalia
 - Roof-mounted photovoltaic systems
 - Grids
- Loan amount: between EUR 426,000 and EUR 20 million
- Maturity: up to 20 years



4 NRW.BANK Green Bond #2-2021

Resilience and Diversity

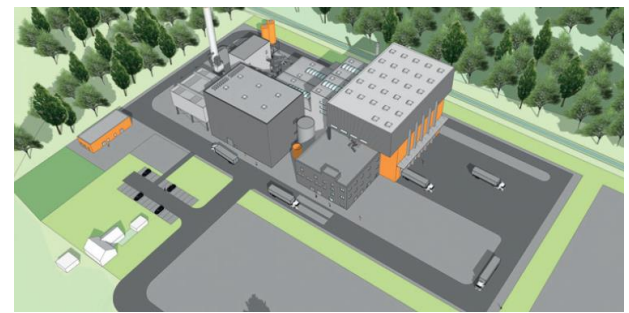
- All projects meet the eligibility criteria of the EU Taxonomy (TEG)
- Restoration projects: Rivers Emscher and Lippe
 - The largest water management project in the EU
 - Green Emscher Lippe
 - Total capital expenditure: EUR 3.2 billion
 - EUR 1.6 billion financed by NRW.BANK
 - Loan disbursements until 2025
 - Maturity: up to 30 years



4 NRW.BANK Green Bond #2-2021

Biomass Energy

- Project meets the eligibility criteria of the EU Taxonomy (TEG)
- CHP: 2x 50MW boilers
 - Wood suppliers and processors are located within a radius of 100km
 - CO₂ neutral: wood class A-I (i.e. untreated wood, pallets, furniture)
 - Scheduled to start operations in 2023
- Replaces hard coal-fired power plant Steag Walsum 9 (800gr CO₂ e/kWh)
- CO₂ savings according to RED II is 736gr CO₂ e/kWh
- Loan amount: EUR 30 million
- Maturity: 17 years



4 NRW.BANK Green Bond #2-2021

Public Building

- Project meets the eligibility criteria of the EU Taxonomy (TEG)
- Recipient: High school (Rietberg)
 - Construction started in 2020; completion is expected in early 2024
 - EPC A Building
 - 10,891m², three-storey high school
 - Ca. 2000 students
- Loan amount: EUR 2.5 million
- Maturity: 30 years

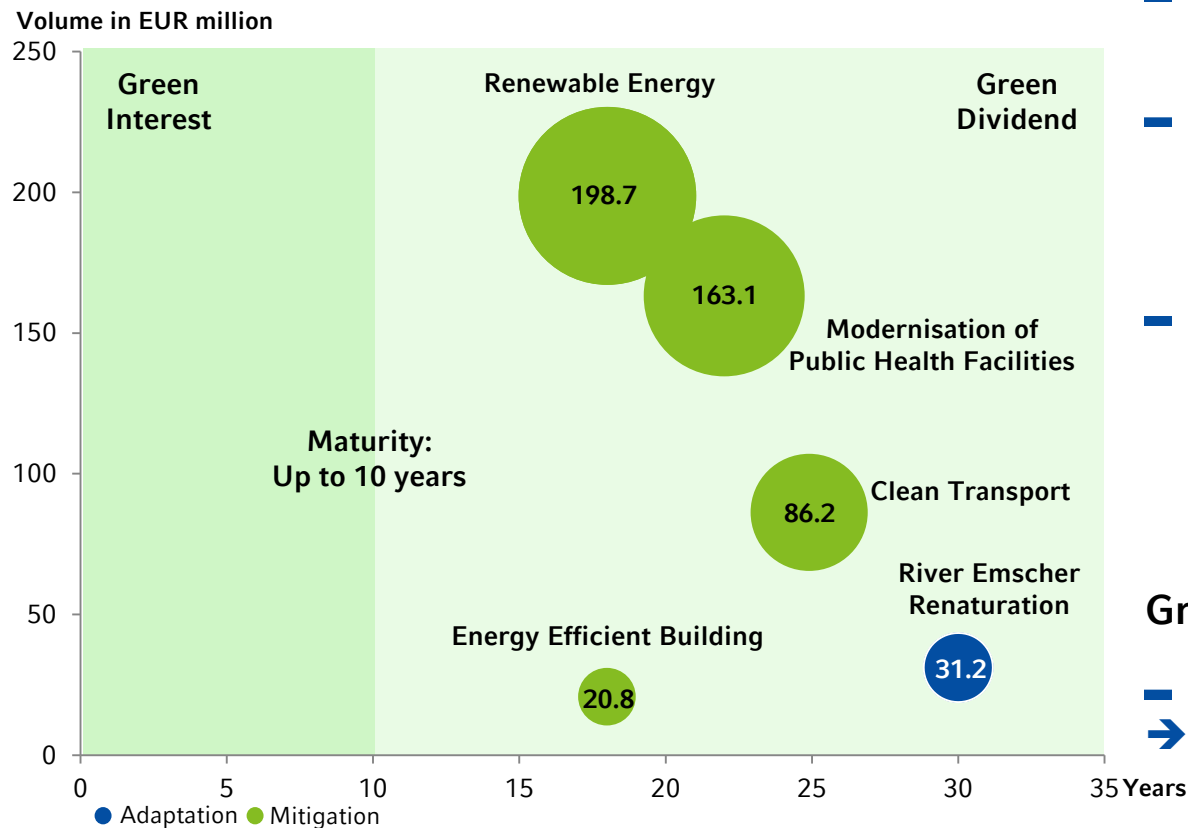
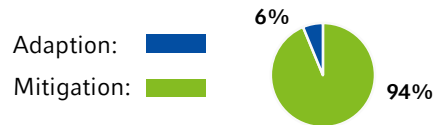




5 NRW.BANK Green Bonds – Review

5 NRW.BANK Green Bond #1-2021

Volume: EUR 500 million



Significant Green Dividend

- Loans disbursed between January and November 2020
- Maturity
 - Green Bond: up to 10 years
 - Loan: on average 21 years
- Green dividend (with 10 years)
 - Average: 11 years
 - Marginal: 20 years
 - Technical maturity significantly exceeds the repayment maturity

Green Leverage

- Reinvestment after 10 years
- ➔ New Green Projects

5 NRW.BANK Green Bond #1-2021

Asset Allocation

EU Taxonomy Conform: Mitigation		Project Category	EUR 468.8 mn
Green Buildings		Energy Efficient Building Renovation	5%
		Modern University Hospitals	35%
Renewable Energy		Onshore Wind Parks, Photovoltaic Systems and Grids	42%
Clean Transport		Public Transport, Electric Cars, Freight Transport	18%
EU Taxonomy Conform: Adaptation		Project Category	EUR 31.2 mn
Resilience and Diversity		River Renaturation (Emscher and Lippe)	100%

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5 NRW.BANK Green Bond #1-2021

ISS ESG Second Opinion – Positive

- ☑ Assess alignment with draft EU GBS
 - ☑ Framework
 - ☑ Reporting
 - ☑ External Reviewer
 - ☑ EU Taxonomy conform
 - ☑ Technical Screening Criteria
 - ☑ Do No Significant Harm
 - ☑ Comply with minimum safeguards
- ☑ Good sustainability performance of NRW.BANK
- ☑ SDGs are explicitly targeted
 - ☑ 3 – Good Health and Well-being
 - ☑ 6 – Clean Water and Sanitation
 - ☑ 7 – Affordable and Clean Energy
 - ☑ 11 – Sustainable Cities and Communities
 - ☑ 13 – Climate Action



5 NRW.BANK Green Bond #1-2021

— Main details of the transaction

- Issuing volume: EUR 500 million
- Date of issuance: Q1 2021
- Denomination: 1,000
- ISIN: DE000NWB0AL1
- Listed on LGX



— Included in the main green indices

- ICE Green Bond Index
- Solactive Green Bond Index
- S&P Green Bond Index
- Barclays MSCI Green Bond Index

— Debt Issuance Programme

- Senior preferred bond
- Explicit guarantee

— Leads:



— 2nd Opinion



- Result: positive
- Sustainability performance: good
- Aligned with draft EU GBS
- Aligned with Green Bond Principles
- Aligned with SDGs: 3, 4, 6, 7, 11, 13

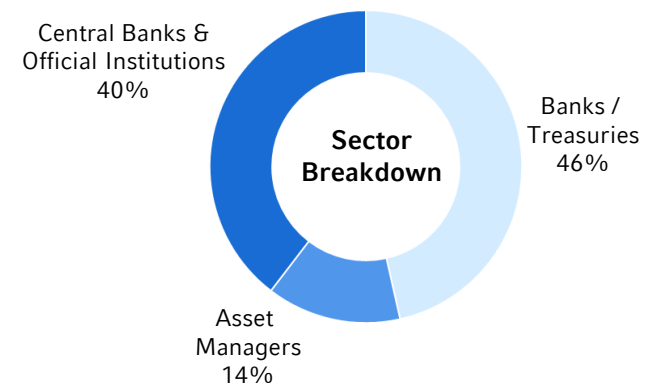
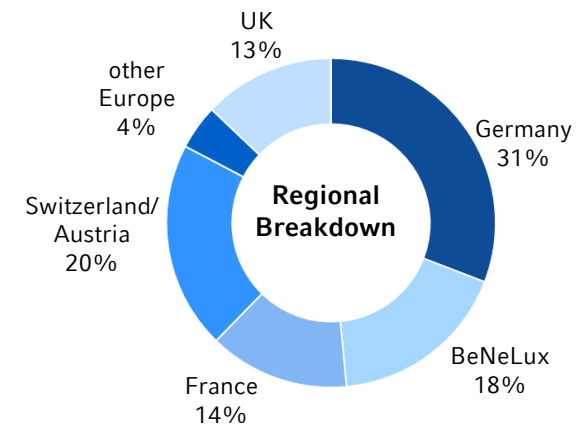
— Impact Report



— Non-Financial Disclosure

5 NRW.BANK.Green Bond #1-2021 – due 2031

- Volume: EUR 500 million
 - Alignment with Draft EU GBS and EU Taxonomy (March 2020)
 - 6% adaptation: river renaturation
 - 94% mitigation: renewable energy, energy-efficient buildings and clean transport projects
 - SPO by ISS ESG: positive
- Steady demand throughout the book-building process
 - Oversubscribed
 - 36 individual orders
 - Just over 50% allocated to green investors
- Pricing
 - Midswaps -1 bp
 - 31 bps over DBR 0% Feb-2031



ISIN: DE000NWB0AL1	Coupon: 0%
Maturity: 3 Feb 2031	Leads: DZ BANK, TD Securities

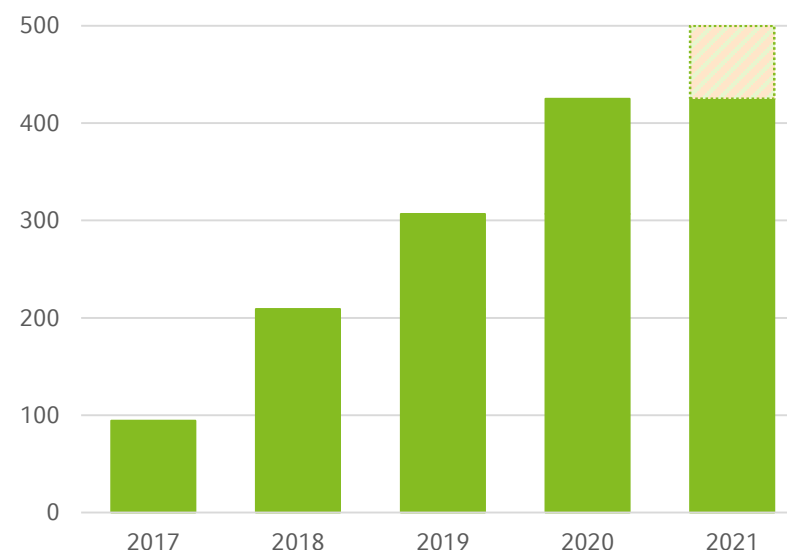


Appendix

Appendix – Greening of NRW.BANK Assets: Sustainability Guidelines

- **Capital Markets** → Best in Class
 - MSCI ESG Research
 - AAA to BBB is sustainable compliant
 - Traffic light signal indicates reaction requirements
 - Monthly status report to ALCo
 - Green
 - Yellow
 - Red
 - Portfolio optimization is possible
 - Red flagged bonds are frozen
- **Sustainable Bond Investment Portfolio**
 - Integral part of the portfolio
 - Compliance with GBP/SBP/SBG
 - Dark and medium green
 - SPO
 - Impact reporting

- Target: EUR 500 million until 2021



- **Conclusion: Entire asset-side is covered by sustainability guidelines!**

Appendix – NRW.BANK DIP-Programme



NRW.BANK

Debt Issuance Programme

BNP PARIBAS

DEUTSCHE BANK

BARCLAYS

DEUTSCHE BANK

NATWEST MARKETS

BNP PARIBAS

DZ BANK AG

NRW.BANK

BofA Securities

HSBC

RBC CAPITAL
MARKETS

CITIGROUP

J.P.MORGAN

UNICREDIT BANK

COMMERZBANK

LANDESBANK
BADEN-WÜRTTEMBERG

DAIWA CAPITAL
MARKETS EUROPE

MORGAN STANLEY

Appendix – Green Bond Benchmarks

- ICE Green Bond Index
 - Classification by BofA Merrill Lynch Global Research
 - Minimum issue size: EUR 250 million, USD 250 million
 - Residual maturity at least 18 months
- Barclays MSCI Green Bond Index
 - Classification by Barclays, MSCI ESG Research
 - Minimum issue size: EUR 300 million, USD 250 million
 - Residual maturity at least 1 year
- Solactive
 - Classification by the Climate Bonds Initiative (CBI)
 - Minimum issue size: USD 100 million
 - Residual maturity at least 6 months
- S&P Green Bond Index
 - Classification by the Climate Bonds Initiative (CBI)
 - No minimum issue volume
 - Residual maturity at least 1 month

Appendix – Sustainability Milestones

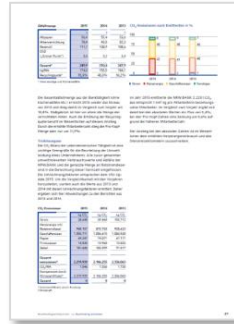
Sustainability Report –
since 2004



Public Corporate Governance Code
enters into force



Life cycle assessment
CO₂ neutral banking
operations since 2013



Sustainability Ratings



Accession to the initiatives:



2005

Introduction of the Social Bond programme



Second Opinion
ISS ESG

Impact Report
Wuppertal Institut

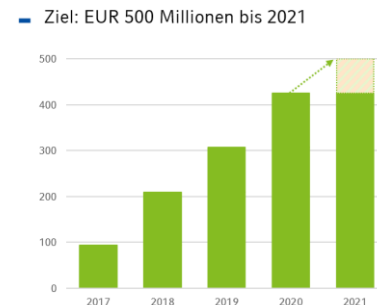
NFRD



Sustainability Guidelines



Sustainable Bond Investment Portfolio



Introduction of the Green Bond programme



Second Opinion
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Impact Report
Wuppertal Institut



Appendix – Shades of Green: Definition and Examples

SHADES OF GREEN		EXAMPLES	
	Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future.		Wind energy projects with a governance structure that integrates environmental concerns
	Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet.		Plug-in hybrid busses
	Light green is allocated to projects and solutions that are environmentally friendly but do not by themselves represent or contribute to the long-term vision.		Efficiency in fossil fuel infrastructure that decrease cumulative emissions
	Brown for projects that are in opposition to the long-term vision of a low carbon and climate resilient future.		New infrastructure for coal

Source: <https://www.cicero.oslo.no/en/posts/single/cicero-shades-of-green>

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