

SECOND PARTY OPINION (SPO)

Sustainability Quality of the Issuer and Green Bond Asset Pool

NRW.BANK

04 September 2019

CONTENTS

Overall Evaluation of the Green Bond	3
ISS-oekom ASSESSMENT SUMMARY.....	3
Contribution of the Green Bond to the UN SDGs	4
ISS-oekom SPO ASSESSMENT.....	6
PART I: GREEN BOND PRINCIPLES	6
PART II: SUSTAINABILITY QUALITY OF THE GREEN BOND ASSET POOL.....	11
PART III: ASSESSMENT OF NRW.BANK'S ESG PERFORMANCE	23
ANNEX 1: ISS-oekom Corporate Rating	25
ANNEX 2: Methodology	30
About ISS-oekom SPO	31

Overall Evaluation of the Green Bond

NRW.BANK commissioned ISS ESG to assist with its Green Bond by assessing three core elements to determine the sustainability quality of the Bond:

1. NRW.BANK's Green Bond Framework – benchmarked against the International Capital Market Association's (ICMA) Green Bond Principles (GBPs).
2. The asset pool – whether the projects aligned with ISS ESG's issue-specific key performance indicators (KPIs) (See Annex 2).
3. NRW.BANK's sustainability performance, according to the ISS ESG Corporate Rating.

ISS ESG ASSESSMENT SUMMARY

SPO SECTION	SUMMARY	EVALUATION ¹
Part 1: Performance against the GBPs	The issuer has defined a formal concept for its Green Bonds regarding use of proceeds, processes for project evaluation and selection, management of proceeds and reporting. This concept is in line with the ICMA GBPs.	Positive
Part 2: Sustainability quality of the asset pool	<p>The overall sustainability quality of the asset pool in terms of sustainability benefits, risk avoidance and minimisation is good, based upon the ISS ESG Green Bond KPIs. The Green Bond KPIs contain a clear description of eligible asset categories which include wind energy, solar energy, energy efficiency, clean transportation, green residential buildings, education & public health facilities and river restoration projects.</p> <p>All assets of the asset pool are located in the federal state of North Rhine-Westphalia in Germany, a highly regulated and developed country. Legislative frameworks in this country set minimum standards, which reduce environmental and social risks.</p>	Positive
Part 3: Issuer sustainability performance	<p>The issuer itself shows a good sustainability performance and has been classified as 'Prime' within the methodology of the ISS ESG Corporate Rating.</p> <p>It is rated 4th out of 35 companies within its sector as of 4th September 2019.</p>	<p>Status: <i>Prime</i></p> <p>Rating: <i>C</i></p> <p>Prime threshold: <i>C</i></p>

¹ The ISS ESG's present evaluation will remain valid until any modification of the Green Bond Framework or addition of new assets into the asset pool by the issuer and as long as the issuer's Corporate Rating does not change (last modification on the 13.08.2019). The controversy check of the underlying assets has been conducted on the 20.08.2019.

Contribution of the Green Bond to the UN SDGs

Based on the assessment of the sustainability quality of the green bond asset pool and using a proprietary methodology, ISS ESG assessed the contribution of the NRW.BANK's green bond to the Sustainable Development Goals defined by the United Nations (UN SDGs). This assessment is displayed on 5-point scale (see Annex 2 for methodology):

Significant Obstruction	Limited Obstruction	No Net Impact	Limited Contribution	Significant Contribution
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Each of the green bond's Use of Proceeds categories has been assessed for its contribution to, or obstruction of, the SDGs:

USE OF PROCEEDS CATEGORY	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS		
Wind energy	Significant contribution	7 AFFORDABLE AND CLEAN ENERGY	13 CLIMATE ACTION	
Solar energy	Significant contribution	7 AFFORDABLE AND CLEAN ENERGY	13 CLIMATE ACTION	
Pumped-storage plant (hydro energy)	Significant contribution	7 AFFORDABLE AND CLEAN ENERGY	13 CLIMATE ACTION	
Electric vehicles (electric cars)	Limited contribution	7 AFFORDABLE AND CLEAN ENERGY	13 CLIMATE ACTION	
Public transportation (electric buses)	Limited contribution	7 AFFORDABLE AND CLEAN ENERGY	11 SUSTAINABLE CITIES AND COMMUNITIES	13 CLIMATE ACTION
Public transportation (electric trams)	Limited contribution	7 AFFORDABLE AND CLEAN ENERGY	11 SUSTAINABLE CITIES AND COMMUNITIES	13 CLIMATE ACTION
Transport infrastructure (charging stations)	Limited contribution	7 AFFORDABLE AND CLEAN ENERGY	13 CLIMATE ACTION	

SECOND PARTY OPINION

Sustainability Quality of the
Green Bond Asset Pool

Green buildings	Significant contribution	11 SUSTAINABLE CITIES AND COMMUNITIES
Education and public health facilities	Significant contribution	3 GOOD HEALTH AND WELL-BEING 4 QUALITY EDUCATION 11 SUSTAINABLE CITIES AND COMMUNITIES
Municipal climate projects	Significant contribution	6 CLEAN WATER AND SANITATION
	Limited contribution	3 GOOD HEALTH AND WELL-BEING 15 LIFE ON LAND

ISS ESG SPO ASSESSMENT

PART I: GREEN BOND PRINCIPLES

1. Use of Proceeds

An amount equal to the net proceeds of any NRW.BANK Green Bond will be allocated to refinance existing projects which have been identified as eligible by the internal ESG-Team and which are not older than 12 months before the initiation of the SPO for the respective green bond. These projects have a focus on the areas climate mitigation and climate adaptation. Climate mitigation projects aim to support the 2-degree-target of the Paris Agreement by avoiding/reducing CO₂-emissions, whereas climate adaption projects deal with the already existing impacts of climate change, e.g. by raising resilience against heavy precipitation events. All projects need to be internally classified as dark and medium green according to the CICERO Shades of Green. Since 2016, NRW.BANK excludes any light green assets.

NRW.BANK has invested an amount equal to the net proceeds of the notes in loans for projects belonging to eligible green categories mentioned in the table below. These loans are subject to and in accordance with the lending standards of the respective loan programmes.

PROJECT AREA	FINANCED PROJECTS	SHARE OF BOND ISSUANCE
Renewable energy		
A Wind power	€ 105,720,000 31 onshore projects	21%
B Solar power	€ 4,734,000 9 PV roof-top projects	1%
Energy efficiency		
C Pumped-storage plant	€ 25,000,000 Renovation of one existing pumped-storage plant	5%
Clean transportation		
D Electric vehicles (electric cars)	€ 1,254,170 14 electric vehicles	<1%
E Public transportation (electric buses)	€ 4,820,000 7 electric buses	1%
F Public transportation (electric trams)	€ 96,841,850 Several trams	19%
G Transport infrastructure (charging stations)	€ 256,300 25 charging stations	<1%

Green buildings

		€ 29,816,178	
H	Loans for energy efficient residential buildings	Several energy efficiency renovations of residential buildings	6%
I	Modernisation of educational and public health facilities	€ 151,536,880 4 university hospitals	30%
F	Municipal climate projects	€ 80,020,622 Several river renaturation projects	16%

Opinion: ISS ESG considers the Use of Proceeds description provided by NRW.BANK's green bond framework as aligned with the GBPs. The environmental benefits are described and quantified, including the link to the 2-degree global goal, demonstrating the positive impact of each Use of Proceeds category.

2. Process for Project Evaluation and Selection

The NRW.BANK ESG-Team selects projects with the highest contribution to the climate policy of the agency, the Federal State of North Rhine-Westphalia and the Federal Republic of Germany. The focus of each bond is on dark green assets (Renewable Energy, Clean Transportation, etc.). Medium green assets (Residential and Public Green Buildings) are only added to the pool in order to reach the minimum size of EUR 500 million. NRW.BANK classifies these assets as climate mitigation projects.

The climate adaptation part includes fluvial projects with the focus on flood protection and on the improvement of biodiversity (e.g. the restoration of the river Emscher and its tributaries) as well as municipal climate projects including (waste) water management and treatment.

Although these assets could be classified as dark green, NRW.BANK considers them as "blue" (climate adaptation) assets. The optimal asset mix of the green bond would include 70% climate mitigation and 30% climate adaptation projects.

In a next step, the ESG-Team looks at the maturity of the respective assets. NRW.BANK follows the approach of a static asset pool: there will not be any changes made during the lifetime of the green bond. In order to achieve this, the shortest loan maturity determines the longest possible maturity of the bond.

Opinion: ISS ESG finds that the process for Project Evaluation and Selection aligns with the GBPs, including the definition and breakdown of climate adaptation and climate mitigation projects.

3. Management of Proceeds

Since the asset pool of NRW.BANK.Green Bonds is static and does not change during the lifetime of the respective bond, tapping does not fit into this approach and is therefore excluded. 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, in case of changes in the project structure.

Ring-fencing of the proceeds is not necessary: the underlying loans were already disbursed and are not older than 12 months before the initiation of the respective SPO. The entire asset-pool is earmarked in the agency's systems.

Opinion: *ISS ESG finds that the Management of Proceeds according to NRW.BANK's green bond framework is aligned with the GBPs. This particularly involves the earmarking of the asset pool in the agency's systems.*

4. Reporting

The Green Bond Principles require issuers to keep investors updated about the expected ecologic impact of the issuances. NRW.BANK reports about each single green bond on a bond-by-bond-basis annually within the agency's Sustainability Report in order to achieve full transparency. The issuer works together with different institutions and authorities in order to guarantee scientifically accurate figures about the impact of its green bonds:

Climate Mitigation

For calculating the CO₂-savings of the green bond, NRW.BANK cooperates with the Wuppertal Institute (WI), an academic research institution which is specialised in topics regarding climate, environment and energy. From 2019 onwards, the CO₂-savings of renewable energy projects are calculated based on three different benchmarks: the energy mix of North Rhine-Westphalia, Germany and the EU. In doing so, NRW.BANK reacts to requests from investors to provide comparable figures for CO₂-savings. Furthermore, the WI reports about the annual energy generation of renewable energy projects. This impact reporting is fully aligned with the current MDB Harmonised Framework.

Climate Adaptation

River Restoration

In order to measure the ecologic and economic impact of river restoration projects, NRW.BANK is in close contact with the respective municipalities and water boards. In the case of the Emscher, the figures for the reporting are delivered by the Emscher Association (Emschergenossenschaft und Lippeverband EGLV). Besides ecologic KPIs like the number of animal species returning to the rivers, the reporting also includes economic parameters, e.g. the monetary value of prevented annual flooding damages (see table below).

The table below shows examples of KPIs that can be used in the reporting of the respective green bond. This list can be updated from time to time by the ESG-team.

ELIGIBLE GREEN PROJECTS	EXAMPLES OF ENVIRONMENTAL KPIS
Renewable Energy	<ul style="list-style-type: none"> • Total CO₂ emissions reduced/avoided in tonnes* • Annual Energy Generation in GWh/a and MW • Length of grids in km
Clean Transportation	<ul style="list-style-type: none"> • Total CO₂ emissions reduced/avoided in tonnes* • Number of refinanced vehicles • Number of charging stations, fuel stations, etc. • Length of the tracks in km
Residential Green Buildings	<ul style="list-style-type: none"> • Total CO₂ emissions reduced/avoided in tonnes* • Number of refurbished houses
Public Green Buildings	<ul style="list-style-type: none"> • Total CO₂ emissions reduced/avoided in tonnes* • Number and usage of refurbished buildings (m²)
Terrestrial and Aquatic Biodiversity Conservation and Climate Change Adaptation	<ul style="list-style-type: none"> • Km of sewers in the river and in the catchment area • Km of renatured parts • Number of species in the aquatic and terrestrial biodiversity (animals, plants, fungus, etc.) • Number of species in the Macroenthos • Annually prevented flooding damages in EUR • (Re-)Created retention basins in m³ • (Re-)Created water areas, floodplains and adjacent land areas (real wetlands) in m²
Sustainable (Waste) Water Management	<ul style="list-style-type: none"> • Number of persons benefiting directly from access to clean drinking water provided by local waterworks and sewage treatment plants
Energy Efficiency	<ul style="list-style-type: none"> • Percentage of increase in energy efficiency
Pollution Prevention and Control	<ul style="list-style-type: none"> • Waste prevented, minimised, reused or recycled in % of total waste or in tonnes p.a. • Kg of raw material per produced unit before and after • Percentage of reduction in resource consumption
Sustainable Management of Living Natural Resources and Land Use	<ul style="list-style-type: none"> • Forest and agriculture area in hectares, net carbon sequestration • Preserved natural landscapes in hectare
Eco-efficient and/or Circular Economy adapted Products, Production Techniques and Processes	<ul style="list-style-type: none"> • Total CO₂ emissions reduced/avoided in tonnes* • Reusable and/or recycled product elements • Amount of reduced resource input

* The avoided / reduced CO₂-emissions are calculated against the energy mix of North Rhine-Westphalia, Germany and the EU. The total savings will furthermore be shown as: per year and million EUR, per year and per bond volume and during the total lifetime of the bond

Opinion: ISS ESG finds that the reporting is fully aligned to the requirements of the GBPs. This includes publishing on a regular basis and disclosure of the type of content that will be reported.

External review

Second Party Opinion (SPO)

Before the green bond issuance, NRW.BANK will publish an external review in form of an SPO on its website. This independent review will provide investors with the following information:

- Alignment with the Green Bond Principles (GBP)
- SDGs targeted by the asset categories of the respective bond
- Consideration of environmental aspects during planning and construction of the projects
- Performance of essential KPIs: lifecycle and supply chain analyses, compliance with national law, fulfilment of social standards and workers' rights, etc.
- Overview of NRW.BANK's overall sustainability performance

Verification

Furthermore, NRW.BANK follows the recommendation of the GBP of including an external verification by having its Non-Financial Disclosure (NFD) reviewed by an external auditor. The NRW.BANK Green Bond Programme is part of its NFD.

PART II: SUSTAINABILITY QUALITY OF THE GREEN BOND ASSET POOL







Evaluation of the assets

A. Wind energy

Share of Use of Proceeds: € 105,720,000 (21.14% of the total credit amount)

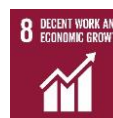
As a Use of Proceeds category, wind energy has a significant contribution to SDG 7 “Affordable and Clean Energy” and SDG 13 “Climate Action”. Additionally, when considering the deeper ESG management, wind energy can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGS
Site selection	
<ul style="list-style-type: none"> ✓ None of the projects are located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV). 	
<ul style="list-style-type: none"> ✓ 100% of the loans' volume underwent an environmental impact assessment at the planning stage in line with the Bundesimmissionsschutzgesetz legislation. 	
Community dialogue	
<ul style="list-style-type: none"> ✓ Over 90% of the assets feature community dialogue as an integral part of the planning process (sound information of communities, community advisory panels and committees, surveys and dialogue platforms, grievance mechanisms and compensation schemes). For the remaining assets, communities were consulted at the planning stage and could have veto the construction plan according to local legislation. 	 
Environmental aspects of construction and operation	
<ul style="list-style-type: none"> ✓ Over 90% of the loans' volume meet high environmental standards during the construction phase (e.g. noise mitigation, minimisation of environmental impact during construction work). 	
<ul style="list-style-type: none"> ✓ Over 90% of the loans' volume provide for measures to protect habitat and wildlife during operation of the power plant (e.g. measures to protect birds and bats). 	

Working conditions during construction and maintenance work

- ✓ 100% of the projects are located in Germany, which provides for high labour and health and safety standards for construction and maintenance work (e.g. ILO core conventions).



Controversy assessment

A controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to NRW.BANK.

B. Solar energy (roof-top mounted solar panels)

Share of Use of Proceeds: € 4,734,000 (0.95% of the total credit amount)

As a Use of Proceeds category, roof-top mounted solar panels have a significant contribution to SDG 7 “Affordable and Clean Energy” and SDG 13 “Climate Action”. Additionally, when considering the deeper ESG management, solar power can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGS
Site selection	
<ul style="list-style-type: none"> ✓ None of the projects are located in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV). 	
Supply chain standards	
<ul style="list-style-type: none"> ○ No information is available on high labour and health and safety standards in the supply chain of the deployed solar modules (e.g. ILO core conventions). 	
Environmental aspects of construction and operation	
<ul style="list-style-type: none"> ○ No information is available on projects that feature a conversion efficiency of at least 15%. 	
<ul style="list-style-type: none"> ○ No information is available on projects that provide for high environmental standards regarding takeback and recycling of solar modules at end-of-life stage (e.g. in line with WEEE requirements). 	

- No information is available on projects that provide for high standards regarding the reduction or elimination of toxic substances within solar panels (e.g. in line with RoHS requirements or other relevant standards).



Working conditions during construction and maintenance work

- ✓ 100% of the projects are located in Germany, which provides for high labour and health and safety standards for construction and maintenance work (e.g. ILO core conventions).



Controversy assessment

A controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to NRW.BANK.

C. Pumped-storage plant (hydropower)

Share of Use of Proceeds: € 25,000,000 (5.00% of the total credit amount).

As a Use of Proceeds category, hydropower has a significant contribution to SDG 7 “Affordable and Clean Energy” and SDG 13 “Climate Action”. Additionally, when considering the deeper ESG management, pumped-storage plant can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGS
Site selection	
✓ 100% of assets are not in key biodiversity areas (Ramsar sites, IUCN protected areas I-IV).	
○ No information is available on whether assets underwent an environmental impact assessment at planning stage.	
Community dialogue	
✓ 100% of assets feature community dialogue as an integral part of the planning process (e.g. sound information of communities, community advisory panels and committees, surveys and dialogue platforms, grievance mechanisms and compensation schemes).	

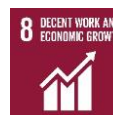
Environmental aspects of construction

- ✓ 100% of assets meet basic environmental standards during construction stage (e.g. noise mitigation). No information is available on compliance with higher standards.
- For 100% of assets, no information is available on creation of appropriate compensation areas.
- ✓ 100% of assets provide basic measures to protect habitat and wildlife during operation of the power plant (e.g. provision of fish passes, management of erosion risks). No information is available on further measures provided.



Working conditions during construction and maintenance work and dam safety

- ✓ 100% of assets are located in Germany, which provides for high labour and health and safety standards for construction and maintenance work (e.g. ILO core conventions).
- For 100% of assets, no information is available on dam security (e.g. management of dam security, monitoring, inspections, emergency plans, etc.).



Controversy assessment

A controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to NRW.BANK.


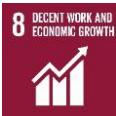



D. Electric vehicles (electric cars)

Share of Use of Proceeds: € 1,254,170 (0.25% of the total credit amount)

As a Use of Proceeds category, electric vehicles (cars) has a limited contribution to SDG 7 “Affordable and Clean Energy” and SDG 13 “Climate Action”.

Additionally, when considering the deeper ESG management, electric cars can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI		ASSOCIATION WITH THE SDGS
Production standards		
✓	10 assets, accounting for 54% the applicable loan volume, provide for a comprehensive environmental management system at the vehicle manufacturing sites. For the remaining assets, no information is available.	
✓	100% of assets provide for high labour and health and safety standards at the manufacturing sites (e.g. ILO core conventions).	
Environmental aspects of vehicles		
○	For 3 assets, accounting for 12% of the applicable loan volume, a comprehensive life-cycle assessment has been conducted. For the remaining assets, no information is available.	
✓	All assets are electric cars and therefore energy efficiency during operation is optimised.	
Social aspects of vehicles		
✓	For 10 projects, accounting for 54% of the applicable loan volume, product safety is ensured (minimum 3 Starts rating on NCAP crash test). For the remaining assets, no information is available.	
Controversy assessment		

Due to the nature of the project, ISS ESG did not retain necessary conducting a controversy assessment.


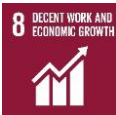



E. Public transportation (electric buses)

Share of Use of Proceeds: € 4,820,000 (0.96% of the total credit amount)

As a Use of Proceeds category, public transportation (electric buses) has a limited contribution to SDG 7 “Affordable and Clean Energy”, SDG 11 “Sustainable Cities and Communities” and SDG 13 “Climate Action”.

Additionally, when considering the deeper ESG management, electric buses can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGS
Production standards	
<ul style="list-style-type: none"> ✓ 77% of the assets have a comprehensive environmental management system in place at the vehicle manufacturing sites. For the remaining assets, no information is available. 	
<ul style="list-style-type: none"> ✓ All assets provide for high labour and health and safety standards at the manufacturing sites (e.g. ILO core conventions). 	
Environmental aspects of vehicles	
<ul style="list-style-type: none"> ○ None of the assets have information on comprehensive life-cycle-assessments. 	
<ul style="list-style-type: none"> ✓ All assets are electric buses and therefore energy efficiency during operation is optimised. 	
Social aspects of vehicles	
<ul style="list-style-type: none"> ✓ All assets ensure health and safety for both passengers and operators (e.g. fire protection, minimisation of noise exposure, accessibility). 	
Controversy assessment	
<ul style="list-style-type: none"> ✓ A controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to NRW.BANK. 	

F. Public transportation (electric trams)

Share of Use of Proceeds: € 96,841,850 (19.37% of the total credit amount)

As a Use of Proceeds category, public transportation (electric trams) has a limited contribution to SDG 7 “Affordable and Clean Energy”, SDG 11 “Sustainable Cities and Communities” and SDG 13 “Climate Action”.

Additionally, when considering the deeper ESG management, electric trams can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGS
Production standards	
✓ All assets provide for a comprehensive environmental management system at the manufacturing site.	
✓ All assets provide for high labour and health and safety standards at the manufacturing sites (e.g. ILO core conventions).	
Environmental aspects of vehicles	
○ None of the assets have information on comprehensive life-cycle-assessments.	
✓ All assets are electric trams and therefore energy efficiency during operation is optimised.	
Social aspects of vehicles	
✓ All assets ensure health and safety for both passengers and operators (e.g. vigilance control, minimisation of noise exposure, accessibility).	
Controversy assessment	


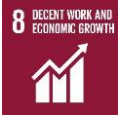
A controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to NRW.BANK.

G. Transport infrastructure (charging stations)

Share of Use of Proceeds: € 256,300 (0.05% of the total credit amount)

As a Use of Proceeds category, transport infrastructure (charging stations) has a limited contribution to SDG 7 “Affordable and Clean Energy” and SDG 13 “Climate Action”. Additionally, when considering the deeper ESG management, charging stations can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGS
Environmental aspects of charging stations	
○ None of the assets have information on comprehensive life-cycle-assessments.	
Working conditions during construction and maintenance work	
✓ All assets provide for high labour and health and safety standards for construction and maintenance work (e.g. ILO core conventions).	
Controversy assessment	
A controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to NRW.BANK.	



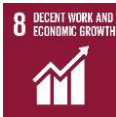

H. Loans for energy efficient residential buildings

Share of Use of Proceeds: € 29,816,178 (5.96% of the total credit amount)

As a Use of Proceeds category, green residential buildings have a significant contribution to SDG 11 “Sustainable Cities and Communities” when achieving high standards regarding energy efficiency.

Additionally, when considering the deeper ESG management, energy efficient residential buildings can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI		ASSOCIATION WITH THE SDGS
Energy efficiency of buildings		
○	No information is available on the annual primary energy consumption for space heating and domestic water of financed buildings.	
✓	For 100% of loans allocated to residential buildings, the credit terms require that building regulations of the Energy Saving Ordinance (Energieeinsparverordnung / EnEV) must always be observed in the version applicable at the time of credit application.	
Responsible treatment of customers with debt repayment problems		
○	NRW.BANK has preventive measures and sustainable solutions for customers with debt repayment problems in place (e.g. pro-actively approaching customers potentially at risk, internal debt counselling and support for external debt counselling and foreclosure as a last resort). However, due to NRW.BANK’s business model as a development bank these loans are granted by the client’s principle bank and not NRW.BANK directly. Therefore NRW.BANK’s measures do not apply and no statement on the share of loans ensuring preventive measures and sustainable solutions for customers with debt repayment problems can be made.	 
Controversy assessment		







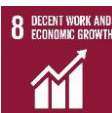


A controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to NRW.BANK.

I. Modernisation and extension of education and public health facilities

Share of Use of Proceeds: € 151.536.880 (30.31% of the total credit amount)

As a Use of Proceeds category, education and public health facilities has a significant contribution to SDG 3 “Good Health and Wellbeing”, SDG 4 “Quality Education” and SDG 11 “Sustainable Cities and Communities” when achieving high standards regarding energy efficiency. Additionally, when considering the deeper ESG management, education and public health facilities can be associated to other SDGs.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

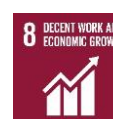
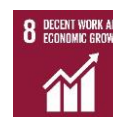
ASSESSMENT AGAINST ISS ESG KPI	ASSOCIATION WITH THE SDGs
Achieved energy efficiency (modernisations only)	
○ No information is available on achieved energy efficiency of financed projects.	 
✓ For 100% of financed projects, the German Energy Saving Ordinance (Energieeinsparverordnung / EnEV) requires stringent energy performance standards.	 
Safe disposal of removed construction materials (modernisations only)	
✓ For 100% of financed projects, the implementing construction companies and subcontractors isolate and remove waste and pollutants in compliance with local regulation.	
Working conditions during construction work	
✓ For 100% of projects high labour standards regarding e.g. working time, periods of rest, minimum wages, freedom of association, collective bargaining and non-discrimination (in accordance with local regulations) are in place.	
○ In 2015, before construction/modernisation began, there was a fatal accident in connection with the maintenance of an onsite generator in one project. Liability cannot be attributed to NRW.BANK.	
Consideration of environmental aspects during planning and construction (new builds only)	
✓ For 100% of financed projects, the Collective Bargaining and Public Procurement Act of North Rhine-Westphalia (Tariftreue- und Vergabegesetz NRW/TVgG-NRW) bindingly requires consideration of energy efficiency and other environmental aspects.	 

- No information is available on the number of projects where specific and comprehensive environmental standards are applied (e.g. noise mitigation, environmental impact minimisation during construction).



Social and environmental standards in the supply chain (new builds only)

- ✓ For 100% of financed projects, the Collective Bargaining and Public Procurement Act of North Rhine-Westphalia (Tariftreue- und Vergabegesetz NRW/TVgG-NRW) applies. It requires compliance with the ILO core conventions in the supply chain.
- ✓ For 100% of financed projects, the Collective Bargaining and Public Procurement Act of North Rhine-Westphalia (Tariftreue- und Vergabegesetz NRW/TVgG-NRW) requires that sustainability criteria such as energy and resource efficiency have to be taken into consideration in all public procurement contracts.
- No information is available on the number of projects for which comprehensive and specific environmental supply chain standards are applied.



Community dialogue (new builds only)

- ✓ 100% of financed projects comply with the German Building Code (Baugesetzbuch/BauGB) regulations, which provide for the consideration of local residents' interests during the development of land-use plans and zoning maps (e.g. public display of development plans, possibility to voice concerns, compensation measures).



Controversy assessment

A controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to NRW.BANK.

J. Municipal climate projects (river restoration)

Share of Use of Proceeds: € 80.020.622 (16.00% of the total credit amount).

As a Use of Proceeds category, municipal climate projects have a significant contribution to SDG 6 "Clean Water and Sanitation" and limited contribution to SDGs 3 "Good Health and Well-Being" and 15 "Life on land". Additionally, when considering the deeper ESG management, municipal climate projects can be associated to other SDGs. In the contemplated issuance, municipal climate projects includes river restoration projects and related waste water assets.

The table below presents the findings of an ISS ESG assessment of the assets (re-) financed against KPIs and the association with SDGs based on a mapping methodology.

ASSESSMENT AGAINST ISS ESG KPI

ASSOCIATION WITH THE SDGS

Consideration of environmental aspects during planning and construction

- ✓ For 100% of projects, the Collective Bargaining and Public Procurement Act of North Rhine-Westphalia (TVgG-NRW) requires that sustainability criteria such as energy and resource efficiency have to be taken into consideration in all public procurement contracts.



Modelling on natural state of water bodies, scientific monitoring, structural quality mapping (only to applicable projects)

- ✓ For 100% of applicable projects, appropriate planning, implementation and subsequent monitoring for ten years are based on the European Water Framework Directive (WFD) and thus modelled on the natural state of watercourses.



Sustainability standards for the wastewater and water supply systems (only to applicable projects)

- No information is available on projects that feature measures to reduce the environmental impacts of sewage sludge disposal (e.g. exclusion of introduction into waterways and landfill, exclusion or standards for agricultural use, utilisation of energy).
- ✓ 100% of applicable assets provide for high standards regarding the quality of treated and drinking water (as provided by legislation Wasserhaushaltsgesetz (WHG)).



Environmental aspects of plantings (only to applicable projects)

- ✓ 100% of applicable projects for which plants originate from sources that provide for sustainable soil and biodiversity management along the whole value chain (e.g. strong position on pesticide and chemical fertiliser use, deforestation, soil degradation, biodiversity).



Working conditions during construction and operations

- ✓ For 100% of projects, high labour and health and safety standards for both own employees and contractors are in place (provided for by national legislation).



Controversy assessment

A controversy assessment on the included projects did not reveal any controversial activities or practices that could be attributed to NRW.BANK.

The methodology for the asset evaluation can be found in Annex 2.

PART III: ASSESSMENT OF NRW.BANK'S ESG PERFORMANCE

The ISS ESG Corporate Rating comprises a rating scale from A+ (excellent) to D- (poor).

COMPANY	RATING	STATUS
NRW.BANK	C	PRIME

This means that the company performed well in terms of sustainability, both compared against others in the industry and in terms of the industry-specific requirements defined by ISS ESG. In ISS ESG's view, the securities issued by the company therefore all meet the basic requirements for sustainable investments.

As of 04.09.2019, this rating places NRW.BANK 4th out of 35 companies rated by ISS ESG in the Financials/Development Banks sector.


Key Challenges facing companies in term of sustainability management in this sector are:

- Sustainability standards for financial products and services
- Goal-oriented promotion of sustainability issues
- Climate change and related risks
- Labour standards and working conditions

In two of the key issues, NRW.BANK rates above the average for the sector. A significant outperformance was achieved in "Labour standards and working conditions", while the bank lags the industry's average performance in "Sustainability standards for financial products and services"

The company has a minor controversy level, which is in line with the average sector controversy risk.

Details on the rating of the issuer can be found in Annex 1.



Robert Hassler, Head of ISS ESG
London/Munich/Rockville/Zurich

DISCLAIMER

1. Validity of the SPO: For NRW.BANK's first issuance following the SPO release date.
2. ISS ESG uses a scientifically based rating concept to analyse and evaluate the environmental and social performance of companies and countries. In doing so, we adhere to the highest quality standards which are customary in responsibility research worldwide. In addition, we create a Second Party Opinion (SPO) on bonds based on data from the issuer.
3. We would, however, point out that we do not warrant that the information presented in this SPO is complete, accurate or up to date. Any liability on the part of ISS ESG in connection with the use of these SPO, the information provided in them and the use thereof shall be excluded. In particular, we point out that the verification of the compliance with the selection criteria is based solely on random samples and documents submitted by the issuer.
4. All statements of opinion and value judgements given by us do not in any way constitute purchase or investment recommendations. In particular, the SPO is no assessment of the economic profitability and credit worthiness of a bond but refers exclusively to the social and environmental criteria mentioned above.
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ANNEX 1: ISS ESG Corporate Rating

The following pages contain extracts from NRW.BANK'S 2019 ISS ESG Corporate Rating.

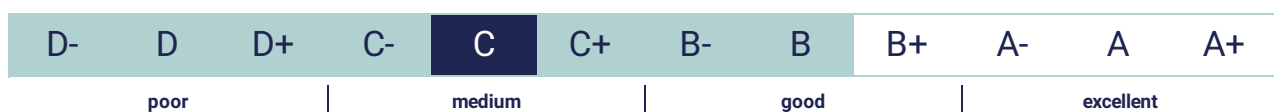
ESG Corporate Rating

NRW.BANK

Industry	Financials/Development Banks	Status	Prime
Country	Germany	Rating	C
ISIN	DE000NWB1939	Prime Threshold	C
		Decile Rank	4



Absolute Rating



The assessment of a company's sustainability performance is based on approximately 100 criteria, selected specifically for each industry. A company's failure to disclose, or lack of transparency, regarding these matters will impact a company's rating negatively

Decile Rank



Low relative performance

High relative performance

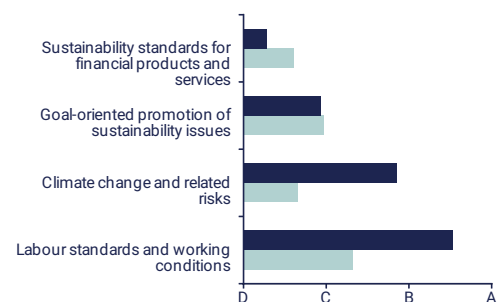
Indicates decile rank relative to industry group. A decile rank of 1 indicates a high relative ESG performance, while a 10 indicates a lower relative ESG performance.

Industry Leaders

Company name (in alphabetical order)	Country	Grade
Asian Development Bank	PH	B
Council of Europe Development Bank	FR	B-
International Bank for Reconstruction and Development	US	B-

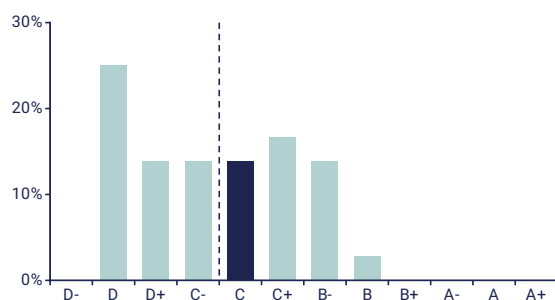
Legend: ■ Industry ■ Company --- Prime

Key Issue Performance

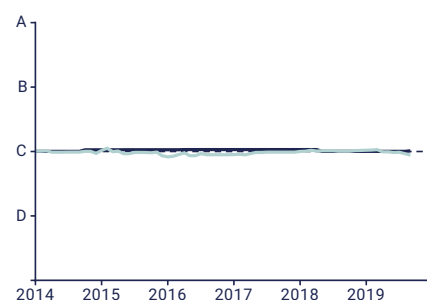


Distribution of Ratings

36 companies in the industry



Rating History



NRW.BANK

Analyst Opinion

Johanna Schmidt
Sector specialist



Sustainability Opportunities

NRW.BANK is the promotional bank of the German federal state of North Rhine-Westphalia. Its three developmental focus areas lie in the promotion of housing, municipalities and infrastructure; SMEs, start-ups and exports; and the environment, climate, energy, innovation and education. As a promotional bank, NRW.BANK directly contributes to the UN's Sustainable Development Goals (SDGs).

Sustainability Risks

NRW.BANK manages the social and environmental risks associated with financed activities to some extent. Its various promotional programmes demand certain environmental and/or social prerequisites in order to be eligible for support. There is, however, no comprehensive ESG lending guideline that ensures the inclusion of a similar level of environmental and social standards across all financing activities, although the company excludes certain business areas from its lending portfolio. In addition, the bank does not further elaborate on the application processes of its environmental and/or social prerequisites. NRW.BANK carries out monitoring and evaluation efforts regarding the sustainable development impacts of minor parts of its promotional activities. It does provide some transparency on its promotional business on an aggregated level, displaying volumes, sectors and regions it has supported throughout a specific year. However, no disclosure is given on the level of the project or the client. Finally, on behalf of the German state of North Rhine-Westphalia, NRW.BANK is majority owner of numerous regional casinos and lottery companies.

In contrast, as regards its own operations, NRW.BANK is advanced in the provision of good working conditions for its staff and the environmental management of its buildings and operations.

Governance Opinion

NRW.BANK is wholly owned by the German federal state of North Rhine-Westphalia. While separate persons are holding the positions of CEO and chair of the board of directors, its governance structure does not ensure effective oversight of the executive management. The chairman of the board of directors (Andreas Pinkwart, as at August 2019) is not considered independent as he is a minister in the government of North Rhine-Westphalia and thus represents the only shareholder of the company. In addition, the majority of board directors is not independent, and neither are the established board committees charged with audit, remuneration and nomination. The company discloses its remuneration policy for executives, including variable and long-term components, which incentivise sustainable value creation.

Regarding the bank's governance of sustainability, there is no indication of an independent board committee on sustainability matters. However, NRW.BANK has several business ethics related guidelines in place, which cover the most important topics to some extent. These are accompanied by several relevant compliance procedures, although measures for whistleblower protection are still missing.

NRW.BANK

Methodology - Overview

The ESG Corporate Rating methodology was originally developed by oekom research and has been consistently updated for more than 25 years.

ESG Corporate Rating - The ESG Corporate Rating universe, which is currently expanding from more than 8,000 corporate issuers to a targeted 10,000 issuers in 2020, covers important national and international indices as well as additional companies from sectors with direct links to sustainability and the most important bond issuers that are not publicly listed companies.

The assessment of a company's social & governance and environmental performance is based on approximately 100 environmental, social and governance indicators per sector, selected from a pool of 800+ proprietary indicators. All indicators are evaluated independently based on clearly defined performance expectations and the results are aggregated, taking into account each indicator's and each topic's materiality-oriented weight, to yield an overall score (rating). If no relevant or up-to-date company information with regard to a certain indicator is available, and no assumptions can be made based on predefined standards and expertise, e.g. known and already classified country standards, the indicator is assessed with a D-.

In order to obtain a comprehensive and balanced picture of each company, our analysts assess relevant information reported or directly provided by the company as well as information from reputable independent sources. In addition, our analysts actively seek a dialogue with the assessed companies during the rating process and companies are regularly given the opportunity to comment on the results and provide additional information.

Analyst Opinion - Qualitative summary and explanation of the central rating results in three dimensions:

- (1) Opportunities - assessment of the quality and the current and future share of sales of a company's products and services, which positively or negatively contribute to the management of principal sustainability challenges.
- (2) Risks - summary assessment of how proactively and successfully the company addresses specific sustainability challenges found in its business activity and value chain, thus reducing its individual risks, in particular regarding its sector's key issues.
- (3) Governance - overview of the company's governance structures and measures as well as of the quality and efficacy of policies regarding its ethical business conduct.

Controversial Business Practices - The assessment of companies' sustainability performance in the ESG Corporate Rating is informed by a systematic and comprehensive evaluation of companies' ability to prevent and mitigate ESG controversies. ISS ESG conducts research and analysis on corporate involvement in verified or alleged failures to respect recognized standards for responsible business conduct through Norm-Based Research.

Norm-Based Research is based on authoritative standards for responsible business conduct such as the UN Global Compact, the OECD Guidelines for Multinational Enterprises, the UN Guiding Principles for Business and Human Rights and the Sustainable Development Goals.

As a stress-test of corporate disclosure, Norm-Based Research assesses the following:

- Companies' ability to address grievances and remediate negative impacts
- Degree of verification of allegations and claims
- Severity of impact on people and the environment, and systematic or systemic nature of malpractices

Severity of impact is categorized as Potential, Moderate, Severe, Very severe. This informs the ESG Corporate Rating.

Decile Rank - The Decile Rank indicates in which decile (tenth part of total) the individual Corporate Rating ranks within its industry from 1 (best – company's rating is in the first decile within its industry) to 10 (lowest – company's rating is in the tenth decile within its industry). The Decile Rank is determined based on the underlying numerical score of the rating. If the total number of companies within an industry cannot be evenly divided by ten, the surplus company ratings are distributed from the top (1 decile) to the bottom. If there are Corporate Ratings with identical absolute scores that span a division in decile ranks, all ratings with an equal decile score are classified in the higher decile, resulting in a smaller number of Corporate Ratings in the decile below.

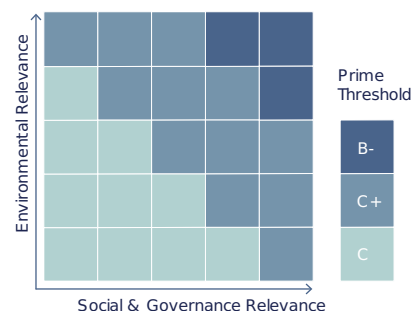
Distribution of Ratings - Overview of the distribution of the ratings of all companies from the respective industry that are included in the ESG Corporate Rating universe (company portrayed in this report: dark blue).

NRW.BANK

Methodology - Overview

Industry Classification - The social and environmental impacts of industries differ. Therefore, based on its relevance, each industry analyzed is classified in a Sustainability Matrix.

Depending on this classification, the two dimensions of the ESG Corporate Rating, the Social Rating and the Environmental Rating, are weighted and the sector-specific minimum requirements for the ISS ESG Prime Status (Prime threshold) are defined (absolute best-in-class approach).



Industry Leaders - List (in alphabetical order) of the top three companies in an industry from the ESG Corporate Rating universe at the time of generation of this report.

Key Issue Performance - Overview of the company's performance with regard to the key social and environmental issues in the industry, compared to the industry average.

Major Shareholders & Ownership Summary - Overview of the company's major shareholders at the time of generation of this report. All data as well as the categorisation system for the investor types is based on information from S&P Capital IQ.

Rating History - Development of the company's rating over time and comparison to the average rating in the industry.

Rating Scale - Companies are rated on a twelve-point scale from A+ to D-:

A+: the company shows excellent performance.

D-: the company shows poor performance (or fails to demonstrate any commitment to appropriately address the topic).

Overview of the range of scores achieved in the industry (light blue) and indication of the grade of the company evaluated in this report (dark blue).

Sources of Information - A selection of sources used for this report is illustrated in the annex.

Status & Prime Threshold - Companies are categorized as Prime if they achieve/exceed the sustainability performance requirements (Prime threshold) defined by ISS ESG for a specific industry (absolute best-in-class approach) in the ESG Corporate Rating. Prime companies are sustainability leaders in their industry and are better positioned to cope with material ESG challenges and risks, as well as to seize opportunities, than their Not Prime peers. The financial materiality of the Prime Status has been confirmed by performance studies, showing a continuous outperformance of the Prime portfolio when compared to conventional indices over more than 14 years.

ANNEX 2: Methodology

ISS ESG Green Bond KPIs

The ISS ESG Green Bond KPIs serve as a structure for evaluating the sustainability quality – i.e. the social and environmental added value – of the use of proceeds of NRW.BANK'S Green Bond.

It comprises firstly the definition of the use of proceeds category offering added social and/or environmental value, and secondly the specific sustainability criteria by means of which this added value and therefore the sustainability performance of the assets can be clearly identified and described.

The sustainability criteria are complemented by specific indicators, which enable quantitative measurement of the sustainability performance of the assets and which can also be used for reporting.

To review the KPIs used in this SPO, please contact Federico Pezzolato (details on next page) who will send them directly to you.

Asset evaluation methodology

ISS ESG evaluates whether the assets included in the asset pool match the eligible project category and criteria listed in the Green Bond KPIs.

All percentages refer to the amount of assets within one category (e.g. wind power). Additionally, the assessment “no or limited information is available” either indicates that no information was made available to ISS ESG or that the information provided did not fulfil the requirements of the ISS ESG Green Bond KPIs.

The evaluation was carried out using information and documents provided to ISS ESG on a confidential basis by NRW.BANK (e.g. Due Diligence Reports). Further, national legislation and standards, depending on the asset location, were drawn on to complement the information provided by the issuer.

Assessment of the contribution and association to the SDG

The 17 Sustainable Development Goals (SDGs) were endorsed in September 2015 by the United Nations and provide a benchmark for key opportunities and challenges toward a more sustainable future. Using a proprietary method, ISS ESG identifies the extent to which NRW.BANK's Green Bond contributes to related SDGs and has a positive association with their respective sub-targets.

The contribution assessment is split into two Levels:

1. **Level 1:** Contribution and/or obstruction of the Use of Proceeds categories to be financed through the bond to the UN SDGs
2. **Level 2:** Association of the assets' ESG performance with further SDGs

About ISS ESG SPO

ISS ESG is one of the world's leading rating agencies in the field of sustainable investment. The agency analyses companies and countries regarding their environmental and social performance.

As part of our Sustainable (Green & Social) Bond Services, we provide support for companies and institutions issuing sustainable bonds, advise them on the selection of categories of projects to be financed and help them to define ambitious criteria.

We assess alignment with external principles (e.g. the ICMA Green / Social Bond Principles), analyse the sustainability quality of the assets and review the sustainability performance of the issuer themselves. Following these three steps, we draw up an independent SPO so that investors are as well informed as possible about the quality of the bond / loan from a sustainability perspective.

Learn more: <https://www.isscorporatesolutions.com/solutions/esg-solutions/green-bond-services/>

For Information about SPO services, and this Green Bond, contact:

Federico Pezzolato

Federico.Pezzolato@isscorporatesolutions.com

SPO@isscorporatesolutions.com

+44.20.3192.5760