oekom research AKTIENGESELLSCHAFT

Second Party Opinion

Verification of the Sustainability Quality of the Green Bond 2015 issued by NRW.BANK

15 October 2015

Aim and Scope of this Second Party Opinion

NRW.BANK has commissioned oekom research to assist with the issuance of its Green Bond by verifying and confirming the sustainable added value of this bond using the criteria and indicators of a sustainability framework concept. The aim of this green bond issuance is to refinance loans disbursed during the calendar year 2015.

oekom research's mandate included the following services:

- Definition of a verification framework concept containing a clear description of eligible project categories and the social and environmental criteria assigned to each category for evaluating the sustainability-related performance of the projects financed through the proceeds of the bond.
- Verification of compliance of the refinanced projects with the verification framework criteria.
- Verification of the alignment of the refinanced projects with the Green Bond Principles.
- Review and classification of NRW.BANK's sustainability performance on the basis of the oekom Corporate Rating.

Overall Evaluation of the Green Bond

oekom's overall evaluation of the second Green Bond issued by NRW.BANK is positive:

- The Green Bond's formal concept, defined processes and (announced) disclosures are aligned with the Green Bond Principles (Part I of this Second Party Opinion).
- The overall sustainability quality of the bond and the sustainability performance of each of the funded assets in terms of sustainability benefits and risk avoidance and minimisation is good (Part II of this Second Party Opinion).
- The issuer itself shows a good sustainability performance (Part III of this Second Party Opinion).

However, one aspect for potential improvement of the sustainability quality of future Green Bonds issued by NRW.BANK can be mentioned: From oekom research's perspective, the selection criteria for wind power projects should include specifications that windmill manufacturers conduct life-cycle assessments and require high labour standards from their suppliers.

Part I – Green Bond Principles

1) Use of Proceeds

The proceeds of this Green Bond will be used exclusively to refinance loans which have already been granted and whose intended purposes are clearly defined and limited by the project categories and criteria specified below.

The following categories have been chosen for allocating the proceeds of this issuance:

	Project Area	Financed Projects	Percentage of Bond Issuance
Climate protection through energy efficiency and a transition towards a low carbon economy			
A	Energy efficiency in buildings (new builds and energy renovations)	€ 203.400.000 A and E combined 9 projects: Construction of energy efficient new public buildings and energy efficiency renovations of existing buildings (university buildings, police station)	40% (categories A and E combined)
B	Energy and resource efficiency in small and medium-sized enterprises	€ 9.100.000 24 projects: 22 energy efficiency and 2 resource efficiency	2%
C	Wind power	€ 148.400.000 16 projects	30%
D	Cogeneration power plants	€ 44.500.000 3 projects: 2 cogeneration power plants and 1 communal cogeneration unit	9%
Biodiversity and environmental quality of habitats			
E	Renovations to improve occupant health and ecological quality of public buildings	€ 203.400.000 A and E combined 9 projects: Renovations to remove construction materials harmful to health (university buildings)	40% (categories A and E combined)
F	Renaturation of watercourses and separate wastewater drainage and treatment	€ 94.600.000 2 projects: Emschergenossenschaft and Lippeverband	19%
Total		**€ 500.000.000**	**100%**

All project categories are positive from a sustainability perspective. The projects in categories A to D contribute to climate protection and foster the transition towards a low carbon economy, by limiting greenhouse gas emissions and/or bolstering renewable energy. Projects in category E reduce the prevalence of harmful substances in public buildings, and projects in category F facilitate adaptation to climate change but also enable the conservation/restoration of the environment.

Additionally, all projects meet specific environmental and social standards (see part II of this document). These criteria are clearly defined and verifiable using quantitative indicators. The criteria are designed to ensure a positive impact of the projects that is not impaired by adverse impacts and effects in other areas (e.g. environmental impacts, impacts on local communities).

2) Process for Project Evaluation and Selection

The selection of assets for inclusion in the Green Bond is carried out internally by NRW.BANK. Different departments carry out this selection: Capital Markets, Investor Relations and Sustainability.

The selection is based on a set of eligibility criteria defined by NRW.BANK. These criteria are the following:

- Contribution to the sustainability strategy of the German State of North Rhine-Westphalia
- Contribution to the fight against climate change
    - Mitigation: limiting greenhouse gas emissions in contribution to the goal of limiting temperature rises to two degrees Celsius above pre-industrial levels.
    - Adaptation: foster projects that help protect against the inevitable effect of already on-going climate change in North Rhine-Westphalia (heavy rainfalls and floods).

In addition, oekom research has defined a Green Bond Verification Framework (see Annex 1 of this document). For each eligible project/asset category, it comprises a list of specific sustainability criteria. On this basis, the sustainability quality of the financed projects has been verified and certified by oekom research.

3) Management of Proceeds

The proceeds of this Green Bond will be exclusively used to refinance loans disbursed in 2015 and which correspond to the above eligibility criteria. The chosen projects are thus internally earmarked and will be exclusively refinanced via this Green Bond. The proceeds are immediately allocated to the refinancing of the loans, which spares the issuer a specific ring-fencing.

At the same time, the term of the bond corresponds to the shortest single repayment term. Thus, no reinvestment of funds – topping up – will take place during the duration of the bond, rendering an assessment of additional loans and projects unnecessary.

4) Reporting

NRW.BANK commits to a regular reporting towards the Green Bond's investors via its dedicated web page (www.nrwbank.de/greenbond) and the 2015 Sustainability Report, which will be published in mid-2016.

The reporting includes an impact assessment on the following indicators relating to this Green Bond:

Category A: Energy efficiency in buildings (new builds and energy renovations)

- Average energy consumption of buildings (in kWh/m2) financed through the loans compared to the average energy consumption of comparable buildings in North Rhine-Westphalia, Germany.
- Average CO2 emissions of buildings (in kg/m2) financed through the loans compared to the average CO2 emissions of comparable buildings in North Rhine-Westphalia, Germany (based on the carbon intensity of the North Rhine-Westphalian energy mix).

Category B: Energy and resource efficiency in small and medium-sized enterprises

- Average energy consumption of projects (in kWh/product unit) financed through the loans compared to the average energy consumption prior to efficiency measures.
- Average CO_2 emissions of projects (in kg/product unit) financed through the loans compared to the average CO_2 emissions prior to efficiency measures.

Category C: Wind energy

- Annual energy production of windmills financed through the loans (in MWh).
- Annual avoidance of CO_2 emissions (in t) related to these loans (based on energy production and average carbon intensity of the North Rhine-Westphalian energy mix).
- Occurrence of fatal accidents since the beginning of construction.

Category D: Cogeneration power plants

- Annual energy production of cogeneration power plants (in MWh) financed through the loans.
- Annual avoidance of CO_2 emissions (in t) related to these loans (based on energy production and average carbon intensity of the North Rhine-Westphalian energy mix).
- Occurrence of fatal accidents since the beginning of construction.

Category E: Renovations to improve the occupant health and ecological quality of public buildings

- Contaminated materials removed (in t).
- Number of occupants benefiting from renovations.

Category F: Restoration of watercourses and separate wastewater drainage and treatment

- Watercourses restored during the last year (in km).

Part II – Sustainability Quality of the Green Bond

1) Green Bond Verification Framework

The Green Bond Verification Framework serves as a framework for verifying the sustainability quality and thus the social and environmental added value of the use of proceeds of this green bond issuance. The Framework comprises firstly a clear definition of eligible categories of projects offering environmental added value. Secondly, it encloses the specific sustainability criteria for each project category by means of which this added value and therefore the sustainability performance of the green bond can be clearly identified and verified. The sustainability criteria are complemented by specific and measurable indicators which not only make it possible to set ambitious targets but also enable quantitative measurement of the sustainability performance of the bond issue, as well as informative reporting.

Details of the individual criteria and indicators for the six project categories can be found in Annex 1 "Green Bond Verification Framework".

2) Verification of the Projects Refinanced by the Green Bond

Methods

oekom research has verified whether the projects funded through the bond match the criteria listed in the Green Bond Verification Framework.

The verification was carried out using information and documents provided to oekom research, partly on a confidential basis, by NRW.BANK (e.g. management decisions, certifications of loan recipients/project implementers, local public procurement laws, federal German laws, regulations and standards, land use plans, environmental declarations, etc.).

Further, the evaluation of social standards regarding wind power equipment manufacturing is based on (if available) relevant sections of the manufacturers' oekom Corporate Rating or on country-specific regulations of the relevant production sites. Regarding the supply chain, oekom research analysed the manufacturers' supply chain standards.

All percentages refer to the respective volume of the loan.

Findings

A. Energy efficiency in buildings (new builds and energy renovations)

Share in use of proceeds:	Project categories A and E jointly account for approx. €203m (40% of total credit amount)
Project types:	Construction of energy efficient new public buildings and energy efficiency renovations of existing buildings (university buildings, police station) as well as renovations to remove construction materials harmful to health (university buildings)
Loan recipient:	Bau- und Liegenschaftsbetrieb of North Rhine-Westphalia (BLB)

Sustainability Risks and Benefits of the Project Category

The main environmental benefit of energy efficiency projects comprises climate protection through the long-term reduction of energy consumption and therefore a transition towards a low carbon economy.

Regarding energy efficiency measures, the construction and renovation of public buildings can result in negative environmental impacts at construction sites, e.g. with respect to biodiversity, and negative social impacts on local communities. Further risks include potentially poor working conditions during construction and maintenance work as well as the use of construction materials potentially harmful to the environment and/or to human health.

- A.1. Achieved energy efficiency of the renovated or new building
  - ✓ For 100% of refinanced projects, energy efficiency indicators (primary energy consumption and heat transfer coefficient of the outer shell) following renovation or new construction will be 20-30% below those specified by the German Energy-Saving Ordinance (EnEV).
- A.2. Working conditions during construction and maintenance work
  - ✓ For 100% of refinanced projects, high standards regarding health and safety for both own employees and contractors are in place during construction and maintenance work (in accordance with e.g. the German Occupational Safety Act – Arbeitsschutzgesetz/ ArbSchG).
  - ✓ For 100% of refinanced projects, high labour standards regarding e.g. working time, periods of rest (in accordance with e.g. the German Working Hours Act – Arbeitszeitgesetz/ ArbZG), minimum wages (in accordance with e.g. the 9th Ordinance on Compulsory Working Conditions in the Construction Sector – Neunte Verordnung über zwingende Arbeitsbedingungen im Baugewerbe/ 9. BauArbbV), freedom of association, collective bargaining (in accordance with e.g. the German Works Constitution Act – Betriebsverfassungsgesetz/ BetrVG and the German Act on Collective Agreements – Tarifvertragsgesetz/ TVG) and non-discrimination are in place (in accordance with e.g. the German Anti-Discrimination Act – Allgemeines Gleichstellungsgesetz/ AGG).
  - ✓ For 100% of refinanced projects, construction companies and subcontractors have to confirm compliance with the Collective Bargaining and Public Procurement Act of North Rhine-Westphalia (TVgG-NRW) in writing. This procurement act contains additional standards regarding working conditions (e.g. minimum rates of pay (including overtime rates), minimum paid annual leave, maximum working hours and minimum rest periods, conditions relating to the subcontracting of workers, in particular through temporary employment agencies, safety, hygiene and health protection at work, protective measures in connection with the working and employment conditions of pregnant women and women who have recently given birth, children and young people, and the equal treatment of men and women, as well as other provisions on non-discrimination).
- A.3. No use of construction materials that are damaging to the environment and/or to human health

- ✓ For 100% of refinanced projects, the implementing construction companies and subcontractors have confirmed compliance with the Collective Bargaining and Public Procurement Act of North Rhine-Westphalia (TVgG-NRW) in writing, which contains standards regarding materials of environmental and health relevance (including a preference for wood and recycled building materials).

- A.4. Land use and biodiversity (new builds only)
  - ✓ For 100% of new-built projects, the implementing construction companies and subcontractors are required to comply with the EEC Habitats Directive and its implementation into German law. An environmental impact assessment in accordance with the Environmental Impact Assessment Act (UVPG) is only carried out when required by German law as a voluntary additional assessment would not be in accordance with budgetary laws.
- A.5. Community dialogue (new builds only)
  - ✓ 100% of refinanced projects comply with the regulations of the German Building Code (Baugesetzbuch/ BauGB). The regulations provide for the consideration of local residents' interests during the development of land-use plans and zoning maps (e.g. through public display of development plans, possibility to voice concerns, case-dependent compensation measures).

B. Energy and resource efficiency in small and medium-sized enterprises

Share in use of proceeds:	Approx. €9.1m (2% of the total credit amount)
Project types:	Energy and resource efficiency improvements of e.g. machinery, vehicles and/or processes
Loan recipients:	Small and medium-sized companies from sectors such as mechanical engineering, bakeries, carpentry, waste management

Sustainability Risks and Benefits of the Project Category

The main environmental benefit of energy efficiency projects comprises climate protection though the long-term reduction of energy consumption and therefore a transition towards a low carbon economy.

Negative impacts with respect to energy and resource efficiency measures in small and medium-sized enterprises are comparatively minor. However, a relevant social impact can be the financing of certain controversial business areas.

- B.1. Percentage improvement of energy and resource efficiency
  - ✓ For 100% of refinanced projects, the credit terms require efficiency improvements to reach or exceed 20% for energy efficiency and/or 10% for resource efficiency.
  - ✓ For 100% of financed projects, NRW.BANK received proof of use from the debtors' principle bank, confirming that energy/ resource savings have been accomplished.
- B.2. Exclusion of controversial business areas
  - ✓ For 100% of refinanced projects, NRW.BANK has ruled out projects and borrowers active in the following controversial business areas: Arms manufacture and trade, extraction of oil or coal, nuclear power generation and production of pesticides or tobacco. NRW.BANK provided written confirmation.

C. Wind energy

Share in use of proceeds:	Approx. €148m (30% of the total credit amount)
Project types:	Construction and operation of wind power plants
Loan recipients:	Public and private wind park operators and cooperatives

Sustainability Risks and Benefits of the Project Category

The environmental benefits of renewable energy projects comprise climate protection and the transition towards a low carbon economy. Further benefits are less environmental intervention (e.g. resource extraction, releases of waste streams to air, water or soil) and less need for cooling water in comparison to fossil fuel or nuclear power plants.

Regarding wind power, the construction and operation of power plants can result in negative impacts on the environment/wildlife and impacts on local communities. Further risks include potentially poor working conditions during construction and maintenance of power plants and during production processes of windmills. As the construction of these plants requires large amounts of raw materials and equipment, life cycle aspects are an important factor when assessing the overall environmental footprint of related projects.

- C.1. Consideration of environmental aspects during planning and operation
  - ✓ For 100% of refinanced projects, the regulatory act on planning and permission of wind power plants („Windenergieerlass“) of North Rhine-Westphalia applies. This law includes requirements regarding no-go areas, height restriction, land-use plans, environmental assessments, noise, conservation of nature and biodiversity.
  - ✓ 100% of refinanced projects comply with the German Federal Immission Control Act (Bundes-Immissionsschutzgesetz/ BImSchG), which provides for minimum standards regarding the assessment of possible environmental impacts of wind power plants (i.e. basic environmental screening).
  - ✓ None of the projects are located in key biodiversity areas such as Ramsar sites, UNESCO Natural World Heritage sites and IUCN protected areas I-IV.
- C.2. Environmental aspects of wind power plants
  - O For 10 projects, accounting for 46% of the loans' volume, wind power plant manufacturers carried out life-cycle assessments of the wind power plants and/or its components. No information is available on the remaining 6 projects, accounting for 54% of the loans' volume.
- C.3. Community dialogue
  - ✓ 100% of refinanced projects comply with the regulations of the German Building Code (Baugesetzbuch/ BauGB). The regulations provide for the consideration of local residents' interests during the development of land-use plans and zoning maps (e.g. through public display of development plans, possibility to voice concerns, case-dependent compensation measures).
- C.4. Working conditions during construction and maintenance work
  - ✓ For 100% of refinanced projects, high standards regarding health and safety for both own employees and contractors are in place during construction and maintenance work (in accordance with e.g. the German Occupational Safety Act – Arbeitsschutzgesetz/ ArbSchG).
  - ✓ For 100% of refinanced projects, high labour standards regarding e.g. working time, periods of rest (in accordance with e.g. the German Working Hours Act – Arbeitszeitgesetz/ ArbZG), minimum wages (in accordance with e.g. the 9th Ordinance on Compulsory Working Conditions in the Construction Sector – Neunte Verordnung über zwingende Arbeitsbedingungen im Baugewerbe/ 9. BauArbbV), freedom of association, collective bargaining (in accordance with e.g. the German Works Constitution Act – Betriebsverfassungsgesetz/ BetrVG and the German Act on Collective

Agreements – Tarifvertragsgesetz/ TVG) and non-discrimination are in place (in accordance with e.g. the German Anti-Discrimination Act – Allgemeines Gleichstellungsgesetz/ AGG).

- C.5. Social standards in the supply chain of wind power plants
  - ✓ For 12 projects, accounting for 72% of the loans' volume, the equipment is manufactured by companies that either show a good performance regarding working conditions (according to their oekom Corporate Rating) or that primarily produce (i.e. have more than 50% of production sites) in countries with high labour standards (e.g. European Union, United States). For 3 projects, accounting for 28% of the loans' volume, the companies show poor performance or produce in countries with low labour standards. For one project, accounting for less than 1% of the loans' volume, no information on social standards is available.
  - O Only for 3 projects, accounting for 7% of the loans' volume, wind power plant manufacturers require high social standards from their suppliers (e.g. regarding the prohibition of forced labour, wages, working time, health and safety). For 5 projects, accounting for 54% of the loans' volume, the manufacturers do not require high social standards from their suppliers. For 8 projects, accounting for 39% of the loans' volume, no information on the manufacturers' supplier standards is available.

D. Cogeneration power plants

Share in use of proceeds:	Approx. €45m (9% of total credit amount)
Project types:	Construction of cogeneration power plants
Loan recipients:	Public utility companies in North Rhine-Westphalia

Sustainability Risks and Benefits of the Project Category

One environmental benefit of natural gas fired cogeneration power plants is that, compared to conventional power plants, combined heat and power systems reach a much higher thermal efficiency, thereby reducing greenhouse gas emissions and primary energy consumption. Additionally, flexible power plants – such as cogeneration plants – foster the transition towards a low carbon economy as they provide a possibility to compensate fluctuations of renewable energy plants.

Nevertheless, the construction and operation of cogeneration power plants can entail negative environmental impacts at construction sites (e.g. biodiversity impairments, noise) and negative social impacts on local communities. Further risks include potentially poor working conditions as well as the possibility of (fatal) accidents during construction and maintenance of power plants.

- D.1. Thermal efficiency of cogeneration power plants
  - ✓ 100% of refinanced projects reach a thermal efficiency of 85% or above.
- D.2. Consideration of environmental aspects during planning and construction
  - ✓ For 2 projects, accounting for 98% of the loans' volume, the German Federal Immission Control Act (Bundes-Immissionsschutzgesetz/ BImSchG) requires environmental impact assessments at the planning stage. These provide for minimum standards regarding the assessment of possible environmental impacts of power plants (i.e. basic environmental screening) in accordance with the Environmental Impact Assessment Act (UVPG). No environmental impact assessment was conducted for the remaining project.
  - ✓ None of the projects are located in key biodiversity areas such as Ramsar sites, UNESCO Natural World Heritage sites and IUCN protected areas I-IV.

- D.3. Community dialogue (new builds only)
  - ✓ 100% of refinanced projects comply with the regulations of the German Building Code (Baugesetzbuch/ BauGB). The regulations provide for the consideration of local residents' interests during the development of land-use plans and zoning maps (e.g. through public display of development plans, possibility to voice concerns, case-dependent compensation measures).
- D.4. Working conditions during construction and maintenance work
  - ✓ For 100% of refinanced projects, high standards regarding health and safety for both own employees and contractors are in place during construction and maintenance work (in accordance with e.g. the German Occupational Safety Act – Arbeitsschutzgesetz/ ArbSchG).
  - ✓ For 100% of refinanced projects, high labour standards regarding e.g. working time, periods of rest (in accordance with e.g. the German Working Hours Act – Arbeitszeitgesetz/ ArbZG), minimum wages (in accordance with e.g. the 9th Ordinance on Compulsory Working Conditions in the Construction Sector – Neunte Verordnung über zwingende Arbeitsbedingungen im Baugewerbe/ 9. BauArbbV), freedom of association, collective bargaining (in accordance with e.g. the German Works Constitution Act – Betriebsverfassungsgesetz/ BetrVG and the German Act on Collective Agreements – Tarifvertragsgesetz/ TVG) and non-discrimination are in place (in accordance with e.g. the German Anti-Discrimination Act – Allgemeines Gleichstellungsgesetz/ AGG).
  - ✓ For 100% of refinanced projects, no fatal accidents (own employees and contractors) have occurred during construction at the project sites.

E. Renovations to improve the occupant health and ecological quality of public buildings

Share in use of proceeds:	Project categories A and E jointly account for approx. €203m (40% of total credit amount)
Project types:	Construction of energy efficient new public buildings and energy efficiency renovations of existing buildings (university buildings, police station) as well as renovations to remove construction materials harmful to health (university buildings)
Loan recipient:	Bau- und Liegenschaftsbetrieb of North Rhine-Westphalia (BLB)

Sustainability Risks and Benefits of the Project Category

The main benefit of these projects is a reduced exposure of occupants to materials harmful to health. As affected buildings are mainly university buildings as well as other public buildings a large number of people benefit from renovations, who would otherwise be exposed to harmful substances over extended periods of time.

Renovation works of public buildings can result in negative impacts at construction sites, e.g. potentially poor working conditions during construction work, and negative social impacts on local communities. Additionally, removed construction materials need to be disposed of safely.

- E.1. Working conditions during construction work
  - ✓ For 100% of refinanced projects, high standards regarding health and safety for both own employees and contractors are in place during construction work (in accordance with e.g. the German Occupational Safety Act – Arbeitsschutzgesetz/ ArbSchG).

- ✓ For 100% of refinanced projects, high labour standards regarding e.g. working time, periods of rest (in accordance with e.g. the German Working Hours Act – Arbeitszeitgesetz/ ArbZG), minimum wages (in accordance with e.g. the 9th Ordinance on Compulsory Working Conditions in the Construction Sector – Neunte Verordnung über zwingende Arbeitsbedingungen im Baugewerbe/ 9. BauArbbV), freedom of association, collective bargaining (in accordance with e.g. the German Works Constitution Act – Betriebsverfassungsgesetz/ BetrVG and the German Act on Collective Agreements – Tarifvertragsgesetz/ TVG) and non-discrimination are in place (in accordance with e.g. the German Anti-Discrimination Act – Allgemeines Gleichstellungsgesetz/ AGG).
- ✓ For 100% of refinanced projects, contractors need to confirm compliance with the Collective Bargaining and Public Procurement Act of North Rhine-Westphalia (TVgG-NRW) in writing. This procurement act contains additional standards regarding working conditions (e.g. minimum rates of pay (including overtime rates), minimum paid annual leave, maximum working hours and minimum rest periods, conditions relating to the subcontracting of workers, in particular through temporary employment agencies, safety, hygiene and health protection at work, protective measures in connection with the working and employment conditions of pregnant women and women who have recently given birth, children and young people, and the equal treatment of men and women, as well as other provisions on non-discrimination).

- E.2. Safe disposal of removed construction materials that are harmful to health
  - ✓ For 100% of refinanced projects, the implementing construction companies and subcontractors isolate and remove waste and pollutants in compliance with German law (German Penal Code (StGB), Closed Substance Cycle and Waste Management Act (KrW-/AbfG), Hazardous Substances Ordinance (GefStoffV), Nature Conservation Act (NatSchutzG), State Water Act (LWasserG)).
- E.3. Community dialogue (new builds only)
  - ✓ 100% of refinanced projects comply with the regulations of the German Building Code (Baugesetzbuch/ BauGB). The regulations provide for the consideration of local residents' interests during the development of land-use plans and zoning maps (e.g. through public display of development plans, possibility to voice concerns, case-dependent compensation measures).

F. Restoration of watercourses and separate wastewater drainage and treatment

Share in use of proceeds:	Approx. €95m (19% of the total credit amount)
Project types:	Restoration of the original natural state of watercourses, construction of modern wastewater system infrastructure
Loan recipients:	Local Water Cooperative of North Rhine-Westphalia (Emschergenossen-schaft and Lippeverband)

Sustainability Risks and Benefits of the Project Category

Environmental benefits of this category include the restoration of natural habitats thus strengthening biodiversity as well as a reduction of the risk of flooding.

However, the restoration of watercourses can result in negative environmental and social impacts at construction sites. Specifically, risks include potentially poor working conditions as well as environmental impairments during construction and maintenance.

- F.1. Social and environmental standards during construction and maintenance work
  - ✓ For 100% of refinanced projects, high standards regarding health and safety for both own employees and contractors are in place during construction and maintenance work (in accordance with e.g. the German Occupational Safety Act – Arbeitsschutzgesetz/ ArbSchG).

  - ✓ For 100% of refinanced projects, high labour standards regarding e.g. working time, periods of rest (in accordance with e.g. the German Working Hours Act – Arbeitszeitgesetz/ ArbZG), minimum wages (in accordance with e.g. the 9th Ordinance on Compulsory Working Conditions in the Construction Sector – Neunte Verordnung über zwingende Arbeitsbedingungen im Baugewerbe/ 9. BauArbbV), freedom of association, collective bargaining (in accordance with e.g. the German Works Constitution Act – Betriebsverfassungsgesetz/ BetrVG and the German Act on Collective Agreements – Tarifvertragsgesetz/ TVG) and non-discrimination are in place (in accordance with e.g. the German Anti-Discrimination Act – Allgemeines Gleichstellungsgesetz/ AGG).
  - ✓ For 100% of refinanced projects, construction companies and subcontractors have to confirm compliance with the Collective Bargaining and Public Procurement Act of North Rhine-Westphalia (TVgG-NRW) in writing. This procurement act contains additional standards regarding working conditions (e.g. minimum rates of pay (including overtime rates), minimum paid annual leave, maximum working hours and minimum rest periods, conditions relating to the subcontracting of workers, in particular through temporary employment agencies, safety, hygiene and health protection at work, protective measures in connection with the working and employment conditions of pregnant women and women who have recently given birth, children and young people, and the equal treatment of men and women, as well as other provisions on non-discrimination).
  - ✓ For 100% of refinanced projects, the Collective Bargaining and Public Procurement Act of North Rhine-Westphalia (TVgG-NRW) additionally requires that sustainability criteria such as energy and resource efficiency have to be taken into consideration in all public procurement contracts.
- F.2. Modelling on natural state of water bodies, scientific monitoring, structural quality mapping
  - ✓ For 100% of refinanced 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.
- F.3. Sustainability standards for the wastewater system
  - ✓ For 100% of relevant projects, the wastewater network is – based on the wastewater ingredients present – constructed so that it is corrosion-resistant for its intended service life.
  - ✓ For 100% of relevant projects, 90% of the generated sewage sludge is used as biomass and as a source of biogas for generating energy and 10% is re-used as a raw material in the cement industry.

Climate Bond Initiative Standard

All of the wind power projects that received loans to be refinanced by NRW.BANK's Green Bond 2015 meet the Wind Energy Generation eligibility criteria of the Climate Bonds Standard[1]:

Funds raised will be used to finance or refinance Wind Energy Generation, that is activities to generate energy from wind, specifically:

- The development and construction of wind farms
- Operational production or manufacturing facilities wholly dedicated to wind energy development
- Wholly dedicated transmission infrastructure for wind farms

[1] Climate Bond Standard, http://www.climatebonds.net/files/files/CB%20Standard%20V1_0(1).pdf

Part III – Assessment of NRW.BANK's Sustainability Performance

In the oekom Coporate Rating with a rating scale from A+ (excellent) to D- (poor), NRW.BANK was awarded a score of C and classified as "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 oekom research. In oekom research's view, the securities issued by the company thus all meet the basic requirements for sustainable investments.

Corporate Responsibility Prime
rated by oekom research

As at 15.10.2015, this rating puts NRW.BANK in place 14 out of 25 companies rated by oekom research in the Financials/Development Banks sector.

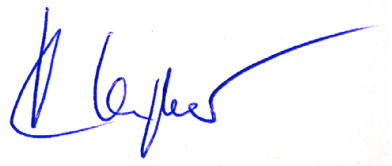
In this sector, oekom research has identified the following issues as the key challenges facing companies in term of sustainability management:

- Sustainability standards for the lending business
- Goal-oriented promotion of sustainability issues
- Climate change and related risks
- Employment conditions and employee wellbeing

In two of these four key issues, NRW.BANK achieved a rating that was above the average for the sector.

The company holds a stake in casinos and lotteries on behalf of the German State of North Rhine-Westphalia, accounting for less than 1% of net sales. Other than this, the company is not involved in any controversial areas of business or business practices and does not breach any of the other exclusion criteria frequently applied by sustainability-oriented investors.

More details on the rating of the issuer can be found in Annex 2 "Corporate Rating NRW.BANK".



oekom research AG

Munich, 15 October 2015

Disclaimer

1. oekom research AG 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.

2. 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 oekom research AG 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.

3. 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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About oekom research

oekom research is one of the world's leading rating agencies in the field of sustainable investment. The agency analyses companies and countries with regard to their environmental and social performance. oekom research has extensive experience as a partner to institutional investors and financial service providers, identifying issuers of securities and bonds which are distinguished by their responsible management of social and environmental issues. More than 100 asset managers and asset owners routinely draw on the rating agency's research in their investment decisionmaking. oekom research's analyses therefore currently influence the management of assets valued at over 600 billion euros.

As part of our Green 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 verify the compliance with the criteria in the selection of projects and draw up an independent second party opinion so that investors are as well informed as possible about the quality of the loan from a sustainability point of view.

Contact: oekom research AG, Goethestraße 28, 80336 Munich, Germany, tel: +49 / (0) 89 / 54 41 84-90, e-mail: info@oekom-research.com

Annex

- Annex 1: oekom Green Bond Verification Framework
- Annex 2: Corporate Rating NRW.BANK

Annex 1: Green Bond Verification Framework

Green Bond Verification Framework

The Green Bond Verification Framework serves as a structure for verifying the sustainability quality – i.e. the social and environmental added value – of the projects to be financed through the Green Bond issuance. Firstly, it comprises the definition of use of proceeds categories offering social and/or environmental added value. Secondly, it comprises the specific sustainability criteria by means of which this added value and therefore the sustainability performance of the Green Bond issue can be clearly identified and verified. The sustainability criteria are complemented by specific indicators, which can be used for both quantitative measurement of the sustainability performance of the Green Bond at the time of issuance as well as for meaningful reporting after the issuance.

Use of Proceeds

The proceeds of this Green Bond issued by NRW.BANK will be exclusively used for the following project categories:

Climate protection through energy efficiency and a transition towards a low carbon economy

A. Energy efficiency in buildings (new builds and energy renovations)

B. Wind power

C. Energy and resource efficiency in small and medium-sized enterprises

D. Cogeneration power plants

Biodiversity and environmental quality of habitats

E. Renovations to improve occupant health and ecological quality of public buildings

F. Renaturation of watercourses and separate wastewater drainage and treatment

Risks and Opportunities linked to the Project Categories

The project categories selected for the Green Bond 2015 offer opportunities and environmental benefits in the areas of climate protection and energy transition, economical and efficient management of energy and other resources, as well as ecology and biodiversity and thus also ecosystem services. The renovation of public buildings to remove contaminants and the improvement of natural flood protection also provide social/societal added value.

From a sustainability point of view, infrastructure projects also always involve risks, which need to be eliminated or at least minimised. In the case of the project categories concerned, these stem in particular from working conditions on construction sites, environmental and social standards in the supply chain, impacts on biodiversity and the use of materials that are damaging to the environment and/or to human health.

Where projects to improve energy and resource efficiency are concerned, not only the relative improvement but also the absolute efficiency achieved should ultimately meet high standards.

There are additional risks associated with companies involved in controversial business areas such as armaments, nuclear power, pesticides and tobacco, which are often excluded from portfolios by responsible investors.

Sustainability Criteria and Quantitative Indicators for Use of Proceeds

In order to ensure that the environmental and social risks linked to the financed projects are prevented and the opportunities clearly fostered, a set of sustainability criteria has been established for each project category. A possible quantitative indicator, allowing for measurement of progress and regular reporting, completes each criterion.

Project category A: Energy efficiency in buildings (new builds and energy renovations)

A.1. Achieved energy efficiency of the renovated or new building

Quantitative indicator:

- Percentage of funds allocated to projects for which energy efficiency indicators (primary energy consumption and heat transfer coefficient of outer shell) following renovation or new build will be 20-30% below EnEV [German Energy-Saving Ordinance] specifications.

A.2. Working conditions during construction and maintenance work

Quantitative indicator:

- Percentage of funds allocated to projects for which binding high labour and health and safety standards are applied for both own employees and contractors.

A.3. No use of construction materials that are damaging to the environment and/or to human health

Quantitative indicator:

- Percentage of funds allocated to projects for which the implementing construction companies, subcontractors and suppliers are required to comply with appropriate standards concerning the use of ecological and healthy materials.

A.4. Land use and biodiversity (new builds only)

Quantitative indicator:

- Percentage of funds allocated to new-built projects that underwent environmental impact assessments at the planning stage.

A.5. Community dialogue (new builds only)

Quantitative indicator:

- Percentage of funds allocated to new-built projects that feature community dialogue as an integral part of the planning process and the operational phase (e.g. sound information of communities, community advisory panels and committees, surveys and dialogue platforms, grievance mechanisms and compensation schemes).

Project category B: Energy and resource efficiency in small and medium-sized enterprises

B.1. Percentage improvement of energy and resource efficiency

Quantitative indicator:

- Percentage of funds allocated to projects for which the efficiency improvement reaches or exceeds 20% for energy efficiency and/or 10% for resource efficiency.

B.2. Exclusion of controversial business areas

Quantitative indicator:

- Percentage of enterprises that are not involved in controversial business areas, such as for example armaments, crude oil, coal, nuclear power, pesticides and/or tobacco.

Project category C: Wind energy

C.1. Consideration of environmental aspects during planning and operation

Quantitative indicators:

- Percentage of funds allocated to projects that underwent environmental impact assessments at the planning stage.

- Percentage of funds allocated to projects that meet high environmental standards and requirements during the construction phase (e.g. noise mitigation, minimisation of environmental impact during construction work).
- Percentage of funds allocated to projects for which the location in key biodiversity areas can be excluded (e.g. exclusion of Ramsar sites, UNESCO Natural World Heritage, IUCN protected areas I-IV).

C.2. Environmental aspects of wind power plants

Quantitative indicator:

- Percentage of funds allocated to projects that carried out life-cycle assessments of the wind power plants and/or its components.

C.3. Community dialogue

Quantitative indicator:

- Percentage of funds allocated to new-built projects that feature community dialogue as an integral part of the planning process and the operational phase (e.g. sound information of communities, community advisory panels and committees, surveys and dialogue platforms, grievance mechanisms and compensation schemes).

C.4. Working conditions during construction and maintenance work

Quantitative indicator:

- Percentage of funds allocated to projects for which binding high labour and health and safety standards are applied for both own employees and contractors.

C.5. Social standards in the supply chain of wind power plants

Quantitative indicator:

- Percentage of funds allocated to projects for which the suppliers are required to comply with appropriate social standards.

Project category D: Cogeneration power plants

D.1. Thermal efficiency of cogeneration power plants

Quantitative indicator:

- Percentage of cogeneration power plants that will reach a thermal efficiency of 85% or above.

D.2. Consideration of environmental aspects during planning and construction

Quantitative indicators:

- Percentage of funds allocated to projects that underwent environmental impact assessments at the planning stage.
- Percentage of funds allocated to projects for which the location in key biodiversity areas can be excluded (e.g. exclusion of Ramsar sites, UNESCO Natural World Heritage, IUCN protected areas I-IV).

D.3. Community dialogue (new builds only)

Quantitative indicator:

- Percentage of funds allocated to new-built projects that feature community dialogue as an integral part of the planning process and the operational phase (e.g. sound information of communities, community advisory panels and committees, surveys and dialogue platforms, grievance mechanisms and compensation schemes).

D.4. Working conditions during construction and maintenance work

Quantitative indicators:

- Percentage of funds allocated to projects for which binding high labour and health and safety standards are applied for both own employees and contractors.
- Occurrence of fatal accidents related to construction and maintenance work (own employees and contractors) at project sites.

Project category E: Renovations to improve the occupant health and ecological quality of public buildings

E.1 Working conditions during construction work

Quantitative indicator:

- Percentage of funds allocated to projects for which binding high labour and health and safety standards are applied for both own employees and contractors.

E.2. Safe disposal of removed construction materials that are harmful to health

Quantitative indicator:

- Percentage of funds allocated to projects for which the implementing construction companies and subcontractors and suppliers are required to comply with appropriate standards (e.g. German Penal Code (StGB), Closed Substance Cycle and Waste Management Act (KrW-/AbfG), Hazardous Substances Ordinance (GefStoffV), Nature Conservation Act (NatSchutzG), State Water Act (LWasserG)).

E.3. Community dialogue (new builds only)

Quantitative indicator:

- Percentage of funds allocated to new-built projects that feature community dialogue as an integral part of the planning process and the operational phase (e.g. sound information of communities, community advisory panels and committees, surveys and dialogue platforms, grievance mechanisms and compensation schemes).

Project category F: Restoration of watercourses and separate wastewater drainage and treatment

F.1. Social and environmental standards during construction and maintenance work

Quantitative indicator:

- Percentage of funds allocated to projects for which the commissioned construction companies and subcontractors are required to comply with appropriate social and environmental standards.

F.2. Modelling on natural state of water bodies, scientific monitoring, structural quality mapping

Quantitative indicator:

- Percentage of funds allocated to projects for which the relevant plans are scientifically monitored and are modelled on the natural state of the water body.

F.3. Sustainability standards for the wastewater system

Quantitative indicators:

- Percentage of funds allocated to projects for which the wastewater network is planned and implemented so as to resist corrosion.
- Percentage of funds allocated to projects for which the sludge generated from the wastewater treatment is used and/or disposed of responsibly.

oekom Corporate Rating

NRW.BANK

Industry:	Financials/Development Banks
GICS Industry:	#N/A
Country:	Germany
ISIN:	DE000NWB1939
Bloomberg Ticker:	NRWB GR Equity

Status **Prime**

Rating **C**

Prime Threshold **C**

Corporate Responsibility Prime rated by oekom research

D-	D	D+	C-	C	C+	B-	B	B+	A-	A	A+

poor | medium | good | excellent

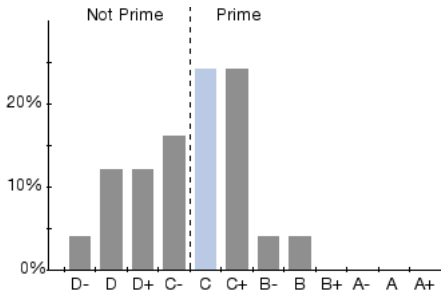
Competitive Position

Industry Leaders
(in alphabetical order)

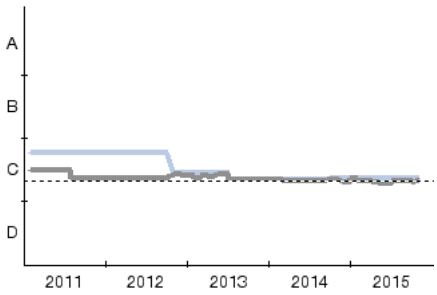
- Asian Development Bank (PH) C+
- EBRD (GB) B-
- Netherlands Development Finance Company (NL) B

Company Industry

Distribution of Ratings
(25 companies in the industry)

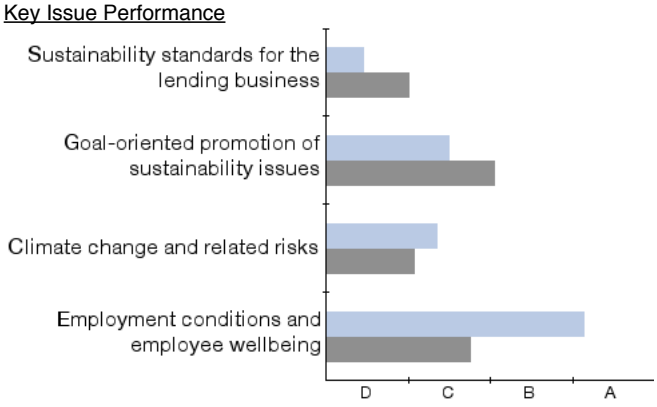


Rating History



Key Issues

Key Issue Performance



Strengths and Weaknesses

+ reasonable programmes with high social benefit
+ group-wide implementation of a strategy for addressing climate change and some related sector-specific risks
+ reasonable integration of environmental and social aspects into lending to private customers
+ transparency regarding forms of non-regular employment

- no environmental and social lending guidelines for corporate and public sector customers
- insufficient measures to ensure goal-oriented financial services

Controversy Monitor

Company

Controversy Score -2

Minor

Minor	Moderate	Significant	Severe

Industry

-16

Controversy Risk Minor

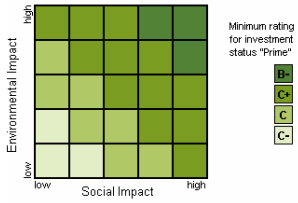
Minor	Moderate	Significant	Severe

Contact details: oekom research AG, Munich / Germany. Phone: +49 89 544184 90. Email: info@oekom-research.com

NRW.BANK

Methodology - Overview

oekom Corporate Rating	The oekom Universe comprises more than 3,500 companies (mostly companies in important national and international indices, but also small & mid caps drawn from sectors with links to sustainability as well as significant non-listed bond issuers). The assessment of the social and environmental performance of a company is generally carried out with the aid of approx. 100 social and environmental criteria, selected specifically for each industry. All criteria are individually weighted, evaluated and aggregated to yield an overall score (Rating). In case there is no relevant or up-to-date company information available on a certain criterion, it is graded with a D-. In order to generate a comprehensive picture of each company, our analysts collect information relevant to the rating both from the company itself and from independent sources. During the rating process, considerable importance is attached to cooperating extensively with the company under evaluation. Companies are regularly given the opportunity to comment on the results and provide additional information. An external rating committee assists the analysts at oekom research with the content-related design of industry-specific criteria and carries out a final plausibility check of the rating results at the end of the rating process.
Controversy Monitor	The oekom Controversy Monitor is a tool for assessing and managing reputational and financial risks associated with companies' negative environmental and social impacts. The controversy score is a measure of the number and extent of the controversies in which a company is currently involved: all controversial business areas and business practices are assigned a negative score, which varies depending on the significance and severity of the controversy. Both the score of the portrayed company and the maximum score obtained in the industry are displayed. For better classification, the scores are assigned to different levels: minor, moderate, significant and severe. The industry level relates to the average controversy score. Only controversies, for which reliable information from trustworthy sources is available, are recorded. It should be noted that large international companies are more often the focus of public and media attention and available information is often more comprehensive than for less prominent companies.
Distribution of Ratings	Overview of the distribution of all company ratings of an industry from the oekom Universe (company portrayed in this report: light blue). The industry-specific Prime threshold (vertical dotted line) is also shown.
Industry Classification	The social and environmental impacts of industries differ. Therefore, subject to its relevance, each industry analysed is classified in a Sustainability Matrix. Depending on this classification, the two dimensions of the oekom Corporate Rating, i.e. the Social Rating and the Environmental Rating, are weighted and the sector-specific minimum requirements for the oekom 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 oekom Universe at the time of generation of this report.
Key Issue Performance	Overview of the company's performance with regard to important social and environmental issues that are key to the industry, compared to the industry average.
Rating History	Trend in 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. Overview of the range of scores achieved in the industry (light blue) and display of the industry-specific Prime threshold (vertical dotted line).
Sources of Information	Data for the Bloomberg Ticker, Company Name, Country, GICS Industry and ISIN was sourced from Bloomberg.
Status & Prime Threshold	Companies are categorised as Prime if they achieve/exceed the minimum sustainability performance requirements (Prime threshold) defined by oekom for a specific industry (absolute best-in-class approach) in the oekom Corporate Rating. Prime companies rank among the leaders in that industry.
Strengths & Weaknesses	Overview of selected strengths and weaknesses of a company with regard to relevant social and environmental criteria.



Please note that all data in this report relates to the point in time at which the report was generated.