oekom research AKTIENGESELLSCHAFT

Second Party Opinion

Annual Assessment of the Sustainability Quality of the Second Green Bond Programme of Deutsche Kreditbank

17 April 18

Aim and Scope of this Second Party Opinion

In 2017, Deutsche Kreditbank (DKB) commissioned oekom research[1] to assist with its first Green Bond Programme (the programme) by assessing and confirming the sustainable added value of an asset selection to be financed by these bonds. The assessment is conducted using the criteria and indicators of the oekom Green Bond KPI[2].

Additionally, DKB commissioned oekom research to carry out an annual assessment in order to provide investors with assurance that the financed projects still comply with the eligibility criteria and that possible new projects are selected accordingly.

oekom research's mandate included the following services:

- Re-evaluation of compliance of the financed projects with the oekom Green Bond KPIs.
- Annual review and classification of DKB's sustainability performance on the basis of the oekom Corporate Rating.
- The projects analysed in this annual assessment are those that have been marked within DKB's core bank system for refinancing with the second green bond of DKB (DE000GRN0016).

Overall Evaluation of the Green Bond Programme

oekom's overall evaluation of the Green Bond Programme issued by DKB remains positive:

- The overall sustainability quality of the asset selection in terms of sustainability benefits and risk avoidance and minimisation remains good (Part II of this Second Party Opinion).

[1] On March 15, 2018, oekom research joined Institutional Shareholder Services Inc. ("ISS"). oekom research will be renamed ISS-oekom.
[2] In the initial Second Party Opinion of 2015, the oekom Green Bond KPI was referred to as "Green Bond Verification Framework".

- The issuer itself shows a very good sustainability performance (Part III of this Second Party Opinion).

Total CO_2 Performance of the Green Bond Programme

The proceeds of this programme are used exclusively to refinance renewable energy loans for the construction and operation of onshore wind power plants and solar power plants.

The following table contains the CO_2 performance of the power plants refinanced through the Green Bond Programme[3]. The calculations on energy production and CO_2 data were by DKB and oekom research has carried out a basic plausibility check. More information on the calculations can be found in Part II of this document.

Category	Number of Projects	Nominal Capacity	Predicted Annual Energy Production	Predicted CO_2 Emissions Avoidance[4]
A. Renewable energy loans for the construction and operation of onshore wind power plants	35	142 MW	349 GWh	184 kt
B. Renewable energy loans for the construction and operation of solar power plants	55	146 MW	134 GWh	70 kt
Total	90	288 MW	483 GWh	254 kt

The predicted annual energy production of the projects refinanced by the Green Bond Programme approximates the annual electricity need of about 144.588 2-person households in Germany.[5]

[3] The projects analysed in this annual assessment are those that have been marked within DKB's core bank system for refinancing with the second green bond of DKB (DE000GRN0016).
[4] Based on the carbon intensity of the German electricity mix: CO2 emissions of electricity were 527 g/kWh in 2016 (Source: German Federal Environmental Agency).
[5] Based on the annual average electricity use of 3,343 kWh per 2-person household in Germany (estimations for 2016; source: German Federal Office of Statistics).

Part I – Green Bond Principles

1) Use of Proceeds

The proceeds of this programme are used exclusively to refinance renewable energy loans. All assets are situated in Germany.

The following categories have been chosen for allocating the proceeds of issuances within this Green Bond Programme (the percentages relate to volume and a respective asset pool of EUR 502.076.376)[6]:

Project Category	A. Renewable energy loans for the construction and operation of onshore wind power plants	B. Renewable energy loans for the construction and operation of solar power plants	Total
Number of Projects	35	55	90
Share of Asset Pool	53%	47%	100%
Project Costs refinanced through the Asset Pool	EUR 267.068.819	EUR 235.007.557	EUR 502.076.376

2) Process for Project Evaluation and Selection

Details regarding the Process for Project Evaluation and Selection can be found in the initial Second Party Opinion from 2017.

3) Management of Proceeds

Details regarding the Management of Proceeds can be found in the initial Second Party Opinion from 2017.

[6] The projects analysed in this annual assessment are those that have been marked within DKB's core bank system for refinancing with the second green bond of DKB (DE000GRN0016).

4) Reporting

DKB has published its annual reporting on their Green Bonds website[7]. The reporting includes information on the amounts allocated to the project categories and expected/ actual impacts. http://dok.dkb.de/pdf/dkb_green_bond_en.pdf

[7] https://www.dkb.de/ueber_uns/verantwortung/green-bond-english/

Part II – Sustainability Quality of the Green Bond Programme

1) oekom Green Bond KPIs

Details on the individual criteria and indicators for the two project categories can be found in Annex 1 "Green Bond Verification Framework" of the initial Second Party Opinion from 2017.

2) Assessment of the Projects refinanced by the Green Bond Programme

oekom research has re-assessed compliance of the financed projects with the oekom Green Bond Analysis Framework criteria

The re-evaluation was carried out using information and documents provided to oekom research, partly on a confidential basis, by DKB (e.g. Green Bond portfolio including data on location, equipment manufacturers).

All percentages refer to the respective volume of the project loans.

Findings

Findings from the initial assessment can be found in the original Second Party Opinion from 2017. The following solely contains updated information.

A. Renewable energy loans for the construction and operation of onshore wind power plants

Sustainability Risks and Benefits of the Project Category

The environmental benefits of wind power 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 environmental impacts at construction sites (e.g. biodiversity, noise) and impacts on local communities. Further risks include potentially poor working conditions during construction and maintenance of power plants as well as in the production processes of wind power plants. 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.

All projects selected for the Green Bond asset portfolio are located in Germany, a country with high level of social and environmental regulations.

- A.1. Consideration of environmental aspects during planning and operation
  - ✓ 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.
  - ✓ 100% of the 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).
  - O No information is available on the number of projects, which underwent individual and in-depth environmental impact assessments (i.e. assessments including the consideration of all relevant natural goods, elaboration of alternatives etc.) in addition to or within the compliance requirements with the German Federal Immission Control Act.
  - ✓ 100% of the projects meet high environmental standards during the construction phase. For example, waste management is provided for by regulations within the German waste legislation. Noise emissions are regulated by the German Federal Immission Control Act which sets maximum noise emission levels.
  - ✓ 100% of the projects comply with the regulations of the German Federal Immission Control Act and have adequate measures in place to protect habitat and wildlife during operation of the

plant (project-dependent measures include turbine turn-off times, monitoring of bats, consideration of birds' flight paths).

- A.2. Environmental aspects of wind power plants
  - ✓ For 26 projects, accounting for 69% of the loans' volume, wind power plants are manufactured by companies, which carried out life-cycle assessments of the wind power plants and/or its components. For 9 projects, accounting for 31% of the loans' volume, wind power plant manufacturers did not carry out such assessments or no such information is available.
- A.3. Community dialogue
  - ✓ 100% of the projects comply with the regulations of the German Federal Immission Control Act, which provides for minimum standards regarding the consideration of local residents' interests during the planning phase (possibility to voice concerns, for example).
  - O No information is available on the number of projects for which the active involvement of local residents (e.g. through official public dialogue platforms) is ensured.
- A.4. Working conditions during construction and maintenance work
  - ✓ For 100% of the projects, high standards regarding health and safety for both own employees and contractors are in place during construction and maintenance work (in accordance with local regulations).
  - ✓ 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.
- A.5. Social standards in the supply chain of wind power plants
  - ✓ For 32 projects, accounting for 94% of the loans' volume, the equipment is manufactured by companies which primarily produce (i.e. have more than 50% of production sites) in countries with high labour standards (e.g. European Union), are a signatory of the United Nations Global Compact, or adhere to the ILO core conventions. For 3 projects, accounting for 6% of the loans' volume, the companies show poor performance or no such information is available.
  - O Only for 1 project, accounting for 5% 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 34 projects, accounting for 95% of the loans' volume, the manufacturers do not require high social standards from their suppliers or no such information is available.

Controversy assessment

- ✓ A controversy assessment on the underlying assets did not reveal any controversial activities or practices that could be attributed to DKB.

Impact indicator 1: Energy performance[8]

The loans refinance wind power plants with a total predicted annual energy production of 349 GWh/year. This calculation is based on energy yield assessments carried out by independent assessors. DKB requires a minimum of two different assessments for wind power projects. These assessments cover, for example, long-term wind measurements and site- and/or plant-specific predictions regarding wind resources.

Impact indicator 2: CO_2 emissions performance[9]

The predicted total avoidance of CO_2 emissions (through renewable energy generation) related to the loans is 184 kt CO_2/year (based on the carbon intensity of the German electricity mix: CO_2 emissions of electricity generation were 527 g/kWh in 2016; source: German Federal Environmental Agency).

DKB provided all data on impact indicators, oekom research AG has carried out the CO_2 performance calculations.

[8] The projects analysed in this annual assessment are those that have been marked within DKB's core bank system for refinancing with the second green bond of DKB (DE000GRN0016).

B. Renewable energy loans for the construction and operation of solar power plants

Sustainability Risks and Benefits of the Project Category

The environmental benefits of solar power generation projects comprise the contribution to climate protection and to the transition towards a low-carbon economy. Further benefits are less environmental degradation and pollution (e.g. resource extraction, releases of waste streams to water or soil) in comparison to fossil fuel or nuclear power plants. From a social perspective, the transition from fossil fuels to solar power reduces negative human rights impacts of oil, gas and coal production (e.g. land-use conflicts, resettlement). In addition – different from fossil fuels combustion - solar power does not negatively impact air quality.

With respect to potential risks, the manufacturing of solar panels in countries with low levels of social and environmental regulations (e.g. China) can have negative social and environmental impacts. As the production of solar panels requires scarce raw materials and as the panels contain hazardous substances, aspects such as recyclability, management of hazardous substances and conversion efficiency are relevant to evaluate the overall environmental performance of related projects. However, in comparison with other renewable energy sources, social and environmental risks related to solar power are deemed to be low.

All solar power projects selected for the Green Bond asset portfolio are located in Germany, a country with a high level of social and environmental regulations.

- B.1. Consideration of environmental aspects during planning and construction
  - ✓ None of the projects are located in key biodiversity areas such as Ramsar sites, UNESCO Natural World Heritage Sites or IUCN protected areas I-IV.
  - ✓ 100% of projects comply with the German Renewable Energy Act (Erneuerbare Energien Gesetz/ EEG). Therefore, all solar power plants have to be located in areas that are either next to motorways or railways; areas that were already sealed; areas that were formerly used for commercial, traffic-related, residential or military purposes and that were not declared nature reserves.
  - O No information is available on the number of projects, which underwent individual and in-depth environmental impact assessments (i.e. assessments including the consideration of all relevant natural goods, elaboration of alternatives etc.) in addition to or within the compliance requirements with the German Renewable Energy Act.
  - ✓ 100% of the projects meet high environmental standards during the construction phase. For example, waste management is provided for by regulations within the German waste law. Noise emissions are regulated by the German Federal Immission Control Act which provides for maximum noise emissions.

- B.2. Environmental aspects of solar power plants
  - ✓ 53 solar power plant projects, accounting for 97% of the loans' volume, have a performance ratio of at least 80%. 2 projects, accounting for 3% of the loans' volume, have a performance ratio below 80%.
  - O No information is available on the share of projects for which the conversion efficiency of solar panels is at least 15%.
  - ✓ 100% of projects meet high standards regarding take-back options. All debtors are required by DKB to either submit a take-back guarantee by the solar module manufacturer or to use solar modules by manufacturers that are member of the photovoltaic waste management initiative PV Cycle.
  - O No information is available on the percentage of loans allocated to projects that are in line with the European Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive).

- B.3. Community dialogue (not applicable for PV roof systems)
  - ✓ 100% of the 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.4. Working conditions during construction and maintenance work
  - ✓ For 100% of projects, high standards regarding health and safety are in place during construction and maintenance work. Contractors have to be supervised by the projects' commissioners (in accordance with local regulations).
  - ✓ For 100% of projects, high labour standards regarding e.g. working time, periods of rest, minimum wages, freedom of association and collective bargaining and non-discrimination (in accordance with local regulations) are in place.

- B.5. Social standards in the supply chain of solar modules and inverters
  - O Only for 1 project, accounting for 2% of the loans' volume, solar modules are manufactured by companies that primarily produce (i.e. have more than 50% of production sites) in countries with high labour standards (e.g. European Union), are a signatory of the United Nations Global Compact, or adhere to the ILO core conventions. For 54 projects, accounting for 98% of the loans' volume, the companies show poor performance or no such information is available.
  - O 55 projects, accounting for 100% of the loans' volume, manufacturers do not require high social standards from their suppliers (e.g. regarding the prohibition of forced labour, wages, working time, health and safety) or no such information is available.
  - ✓ For 40 projects, accounting for 76% of the loans' volume, the solar inverters are manufactured by companies that primarily produce (i.e. have more than 50% of production sites) in countries with high labour standards (e.g. European Union), are a signatory of the United Nations Global

Compact, or adhere to the ILO core conventions. For 15 projects, accounting for 24% of the loans' volume, the companies show poor performance or no such information is available.

- ✓ For 40 projects, accounting for 76% of the loans' volume, solar inverter manufacturers require high social standards from their suppliers (e.g. regarding the prohibition of forced labour, wages, working time, health and safety). For 15 projects, accounting for 24% of the loans' volume, manufacturers do not require high social standards from their or no such information is available.

Controversy assessment

- ✓ A controversy assessment on the underlying assets did not reveal any controversial activities or practices that could be attributed to DKB.

Impact indicator 1: Energy performance[10]

The loans refinance solar power plants with a total predicted annual energy production of 134 GWh/year. This calculation is based on energy yield assessments carried out by independent assessors. DKB requires at least one assessment for solar power projects. For example, these yield assessments refer to technical specifications of the system such as module capacity and orientation and to site-specific parameters such as shade levels.

Impact indicator 2: CO2 emissions performance

The predicted total avoidance of CO_2 emissions related to the solar loans is 70 kt CO_2/year (based on the carbon intensity of the German electricity mix: CO_2 emissions of electricity were 535 g/kWh in 2015; source: German Federal Environmental Agency).

DKB provided all data on impact indicators, oekom research AG has carried out the CO_2 performance calculations.

[10] The projects analysed in this annual assessment are those that have been marked within DKB's core bank system for refinancing with the second green bond of DKB (DE000GRN0016).

Part III – Assessment of DKB's Sustainability Performance

In the oekom Corporate Rating with a rating scale from A+ (excellent) to D- (poor), DKB is awarded a score of B- 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 17.04.18, this rating puts DKB in place 1 out of 89 companies rated by oekom research in the "Financials/Public & Regional Banks" sector.

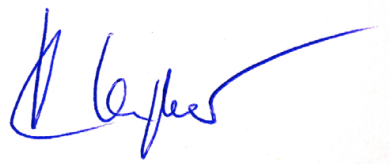
In this sector, oekom research has identified the following issues as the key challenges facing companies in term of sustainability management:

- Sustainability impacts of lending and other financial services/products
- Costumer and product responsibility
- Sustainable investment criteria
- Employment security and employment wellbeing
- Business ethics

In all of these key issues, DKB achieved a rating result that is well above the average of the sector.

Further, oekom research's analysis did not reveal that DKB is involved in any controversies and the company's controversy score is zero.

More details on the rating of the issuer can be found in Annex 1 "Corporate Rating DKB".



oekom research AG

Munich, 17 April 2018

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.

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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 1.5 trillion 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 assess 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 Corporate Rating DKB

oekom Corporate Rating

Deutsche Kreditbank AG

Industry	**Financials/Public & Regional Banks**	**Status**	**Prime**
Country	**Germany**	**Rating**	**B-**
ISIN	**DE000DKB0176**	**Prime Threshold**	**C**

Corporate Responsibility Prime rated by oekom research

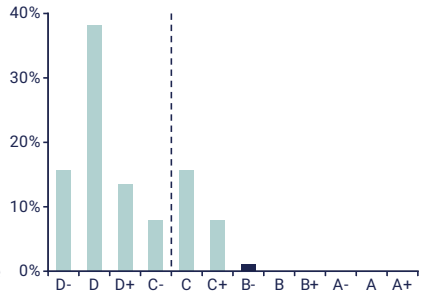
D-	D	D+	C-	C	C+	B-	B	B+	A-	A	A+
poor			medium			good			excellent		

Industry Leaders

Company name (in alphabetical order)	Country	Grade
Deutsche Kreditbank AG	DE	B-
La Banque Postale S.A.	FR	C+
Norddeutsche Landesbank Girozentrale	DE	C+

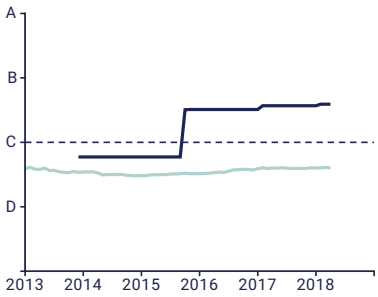
Distribution of Ratings

89 companies in the industry



Legend: Industry Company --- Prime

Rating History



Key Issue Performance

Strengths and Weaknesses

+ reasonable integration of environmental and social aspects into the lending business
+ reasonable policy on responsible marketing and transparent contracts
+ comprehensive programmes regarding financial services to companies/projects with high social benefit
+ reasonable code of conduct covering important aspects of business ethics
+ integration of environmental and social aspects into the asset management business

- no comprehensive measures taken to ensure and monitor responsible sales practices

Controversy Monitor

Company		Industry	
Controversy Score	0	Maximum Controversy Score	-16
Controversy Level	Minor	Controversy Risk	Minor

Minor	Moderate	Significant	Severe

Minor	Moderate	Significant	Severe

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

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

Deutsche Kreditbank AG

Methodology - Overview

oekom Corporate Rating - The oekom Universe comprises more than 3,800 companies (mostly companies in important national and international indices, but also small and mid caps drawn from sectors with direct links to sustainability as well as significant non-listed bond issuers).

The assessment of a company's social and environmental performance is based on approximately 100 environmental, social and governance criteria, selected specifically for each industry. All criteria are individually weighted and evaluated and the results are aggregated to yield an overall score (rating), in which the key issues account for at least 50 per cent of the total weight. In case there is no relevant or up-to-date company information available on a certain criterion and no assumptions can be made based on predefined standards and expertise, e.g. known and already classified country standards, the criterion is graded 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 itself as well as information from 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.

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.

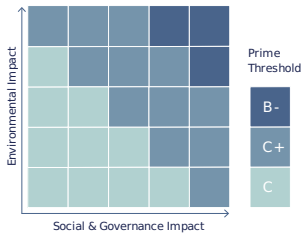
The controversy score is a unit of measurement for the number and severity of a company's current controversies. All controversial business areas and business practices receive a negative score, which can vary depending on the significance, number and severity of the controversies. Both the company's score and the maximum score obtained in the industry are displayed.

For better classification, the scores are assigned 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. In addition to proven misconduct and activities of companies, alleged misconduct and activities are also assessed when the facts and circumstantial evidence provided by those sources, taking into account the experience of specialised analysts for each topic, is estimated to be sufficiently reliable. It should be noted that large international companies are more often the focus of public and media attention. Thus, the information available on those companies is often more comprehensive than for less prominent companies.

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

Industry Classification - The social and environmental impacts of industries differ. Therefore, based on its relevance, each industry analysed is classified in a Sustainability Matrix.
Depending on this classification, the two dimensions of the oekom Corporate Rating, 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 the key social and environmental issues in the industry, compared to the industry average.

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).

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 sustainability leaders in that industry.

Strengths & Weaknesses - Overview of selected strengths and weaknesses of a company with regard to the key issues of the industry from a sustainability point of view.

