oekom research AKTIENGESELLSCHAFT

Second Party Opinion

Verification of the Sustainability Quality of the
Green Bond
issued by BNP Paribas SA

15 November 2016

Aim and Scope of this Second Party Opinion

BNP Paribas commissioned oekom research to assist with the issuance of its debut Green Bond by verifying and evaluating the sustainable added value of an asset selection (the "Eligible Green Assets") to be refinanced by this Green Bond. The verification is conducted using the criteria and indicators of a sustainability framework concept developed by oekom research.

oekom research's mandate included the following services:

- Definition of a Green Bond Verification Framework ("oekom Green Bond Verification Framework") containing a clear description of eligible project categories and the social and environmental criteria attributed to each category for evaluating the sustainability-related performance of the projects financed through the proceeds of the bond
- Verification of compliance of the selected Eligible Green Assets with the oekom Green Bond Verification Framework criteria
- Verification of the alignment of BNP Paribas Green Bond Framework procedures and the description of Eligible Sectors with the Green Bond Principles
- Review and classification of BNP Paribas' sustainability performance on the basis of the oekom Corporate Rating

Overall Evaluation of the Green Bond Eligible Green Assets

oekom's overall evaluation of the Green Bond issued by BNP Paribas 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 selected Eligible Green Assets in terms of sustainability benefits and risk avoidance and minimisation is good (Part II of this Second Party Opinion).
- All projects selected for the Green Bond are located in highly regulated and developed countries. Legislative frameworks in those countries set minimum standards, which reduce environmental and social risks.
- The issuer's sustainability performance has been classified as 'Prime' by oekom research and the assessed controversy level has been classified as 'low' (Part III of this Second Party Opinion).

There is one aspect for which more specific selection or performance criteria would be recommended as it could still add to the overall quality of the Green Bond:

- Definition of sustainability criteria for investment of unallocated funds in order to align the processes with the Green Bond Principles

As described in the BNP Paribas Green Bond Framework, all the assets of this Green Bond and future issuances will be managed within a common single pool. The issuer has undertaken to replace assets in the pool, for example due to early repayment of loans. In this event, preference will be given to replacement with other assets from the project categories wind, photovoltaic and CSP. However, the issuer also reserves the right to replace with projects from the additional projects categories described in Annex 3. According to the BNP Green Bond Framework, any replacement with products from additional project categories would require a prior additional Second Party Opinion and audit.

The process for potentially replacing assets in the asset pool is very transparently described, although at the time of issuance, there cannot be complete certainty on whether and to what extent over the tenor of this first Green Bond projects of alternative project categories as described in BNP Paribas Framework as Eligible Sectors (other than wind, photovoltaic and CSP) will actually replace the projects that have been subject of this Second Party Opinion.

Total CO_2 Performance of the Eligible Green Assets

The Green Bond by BNP Paribas will refinance renewable energy projects at issuance. Electricity generated from wind and solar power positively contributes to the prevention of global warming by avoiding CO_2 emissions. For the selected Eligible Green Assets assessed in the SPO, BNP Paribas has calculated CO_2 avoidance achieved by the projects based on the European Investment Bank's Project Carbon Footprint Methodologies[1] and reports CO_2 avoidance which corresponds to its share of investment included in the selected Eligible Green Assets. oekom research has carried out a plausibility check of the expected energy generation and CO_2 avoidance as well as of their attribution to the investment by BNP Paribas in the selected Eligible Green Assets and has found the calculations valid.

Project Category	Estimated CO_2 Avoidance/Year at Project Level	Estimated CO_2 Avoidance/Year (Share Financed by BNP Paribas)
Wind Power (on- and offshore)	5,908,554 t	604,428 t
Photovoltaic and Concentrated Solar Power	119,629 t	13,043 t
Total	6,028,182 t	617,471 t
t CO_2 avoidance per EUR 100m		92,238

The CO_2 avoidance is derived from the conservatively estimated annual energy production of each power plant. The emissions associated with the amount of energy generated by each power plant are calculated based on the energy mix of the country of location. In principle, this equals the amount of CO_2 avoided by renewable sources. For Concentrated Solar Power, a portion of the energy generation is deducted due to potential energy generation from non-renewable sources (e.g. natural gas). BNP Paribas reports the CO_2 avoidance associated with its share in the project cost financing (based on the project costs estimated at financial close).

[1] http://www.eib.org/attachments/strategies/eib_project_carbon_footprint_methodologies_en.pdf

Part I – Green Bond Principles

1) Use of Proceeds

BNP Paribas has defined a Green Bond Framework in which the different use of proceeds categories are defined.

The inaugural Green Bond by BNP Paribas shall amount up to 500 m€ and has a planned tenure of at least 5 years. The Eligible Green Assets as of end of October 2016 amount to 627m€ (drawn amounts) and the average residual maturity is 6.5 years. Oekom has performed a review based on the committed amounts of the Eligible Green Assets which amount to 669m€.

At issuance, the proceeds of this first Green Bond will be exclusively used to refinance wind power, photovoltaic and concentrated solar power projects as defined by the oekom Green Bond Verification Framework. The sustainability added value of Eligible Green Assets selected for the Green Bond issuance by BNP Paribas has been reviewed according to the oekom Green Bond Verification Framework by oekom research (Part II of the SPO). All selected projects are located in the European Union. The table below details the shares of each category of the selected Eligible Green Assets based on committed limits of project loans at the time of green bond issuance.

Project Category	Number of Projects	Number of Parks	Share of Selected Assets
Wind Power (on- and offshore)	15	68	90%
Photovoltaic and Concentrated Solar Power	3	3	10%

As the BNP Paribas Green Bond Framework indicates, during the tenure of the Green Bond, individual project loans might be replaced by new assets that have not been subject to the verification of projects in the scope of this Second Party Opinion.

Apart from the above project categories, BNP Paribas' Green Bond Framework also contains Renewable Energies, Energy Efficiency, Mass & Public Transportation, Sustainable Water Management & Water Treatment and Recycling as additional project categories for future Green Bond issuances or for reallocation of proceeds of this first bond emission. The additional categories are among those broad categories of eligibility recognised by the Green Bond Principles.

In order to provide investors with a first information on the eligibility of potential future projects, oekom has carried out an evaluation of the potential sustainability risks and benefits that could serve as basis for sustainability criteria of a framework for the assessment of Eligible Assets in these additional categories. This information is provided in Annex 3 at the end of this document as no assets from these additional categories have yet been selected and thus could not be verified in the scope of this Second Party Opinion.

Yet, the BNP Paribas Green Bond Framework requires an additional Second Party Opinion and an audit to be carried out before any new assets from the additional project categories will be admitted to the pool.

2) Process for Project Evaluation and Selection

BNP Paribas selected projects based on internal guidelines and internal CSR reviews, the sector and geographical location of the projects and narrowed the selection down by applying criteria such as financial performance.

BNP Paribas' asset pool of selected Eligible Green Assets, which the Green Bond upon issuance will initially refinance underwent a controvery screening by oekom research,

If necessary, new transactions will be added to the asset pool. To this end, BNP Paribas will maintain a Green Bond status in its loan database. To be marked "selected" for inclusion in the Green Bond programme, loans should meet sustainability requirements as defined in the BNP Paribas Green Bond Framework. The internal Green Bond Committee, formed by various departments including Corporate Social Responsibility, will review the status twice a year.

3) Management of Proceeds

BNP Paribas has established an internal information system to earmark net proceeds from its inaugural and future Green Bond issuances and to track their use. Following additional Green Bond issuances, proceeds will no longer be managed at bond level but as a single pool for all issuances under the BNP Paribas Green Bond Programme. If proceeds cannot directly be allocated to Eligible Green Assets, the proceeds may be directed to short-term investments. BNP Paribas has not defined sustainability criteria for the latter case.

4) Reporting

BNP Paribas intends to report at least annually on the projects refinanced by the Green Bond programme in line with the comprehensive and progressive recommendations of the Harmonized Framework for Impact Reporting[2] and to make it publicly available on the BNP Paribas investors' website. BNP Paribas will report on the use of proceeds and on impact indicators (energy generation and CO_2 avoidance) as described in the BNP Paribas Green Bond Framework on a consolidated basis by eligible sectors.

[2] http://treasury.worldbank.org/cmd/pdf/InformationonImpactReporting.pdf

Part II – Sustainability Quality of the Green Bond Eligible Green Assets

1) oekom Green Bond Verification Framework

The oekom Green Bond Verification Framework serves as a framework for verifying the sustainability quality and thus the social and environmental added value of projects to be refinanced by a Green Bond issuance. In case BNP Paribas issues similar bonds, the oekom Green Bond Verification Framework can be used for future issuances. The oekom Green Bond Verification Framework comprises firstly a clear definition of eligible categories of projects offering environmental added value. Secondly, it contains the specific sustainability criteria for each project category by means of which this added value and therefore the sustainability performance of the selected Eligible Green Assets 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 issuance, as well as informative reporting. In addition, impact indicators have been defined for each project category, which BNP Paribas intends to use for its reporting on the Green Bond. Details on the individual criteria and indicators for the project categories can be found in Annex 1 "oekom Green Bond Verification Framework".

2) Verification Methods of the Projects Refinanced by the Green Bond

oekom research has verified whether the selected Eligible Green Assets included in the Green Bond match the project categories and criteria listed in the oekom Green Bond Verification Framework. The verification was carried out using information and documents provided to oekom research on a confidential basis by BNP Paribas (e.g. project-related due diligence reports). Further national legislation and standards, depending on the project location, and information from oekom Corporate Ratings were drawn on to complement the information provided by BNP Paribas.

For each category, committed limits of project loans were used to calculate the share of projects which fulfil an indicator requirement. If only parts of a project fulfilled the requirements of the oekom Green Bond Verification Framework, the respective number of turbines or the capacity was used as a proxy. Additionally, the assessment "no information is available" either indicates that no information was made available to oekom research or that the information provided did not fulfil the requirements of the oekom Green Bond Verification Framework.

Findings

A. Wind Power (on- and offshore)

Sustainability Risks and Benefits of the Project Category

The environmental benefits of wind 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. through 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 wind power lowers negative human rights impacts of oil, gas and coal production (e.g. land-use conflicts, resettlement). In addition – different from fossil fuels combustion - wind power does not negatively impact air quality.

However, the construction and operation of wind power plants can result in negative environmental impacts (e.g. noise and other negative impacts on biodiversity) and impacts on local communities. Further risks include potentially poor working conditions during construction and maintenance of power plants (especially with respect to worker safety) as well as in the production processes of wind power equipment. 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 wind power projects selected for the Green Bond are located in highly-regulated and developed countries.

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

- ✓ For 100% of projects, environmental impact assessments have been conducted (i.e. assessments taking into consideration all relevant natural goods).
- ✓ 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.
- ✓ For (parts of[3]) 9 newly built projects, accounting for 66% of the respective Eligible Green Assets' volume, good environmental standards are applied during the construction phase (e.g. specific construction periods, soft-start). No information is available for (parts of) 6 projects, accounting for 34% of the respective Eligible Green Assets' volume.
- ✓ For (parts of) 13 projects, accounting for 75% of the Eligible Green Assets' volume, measures are in place to protect habitat and wildlife during operation of the plants (e.g. continuous monitoring of birds and bats, turbine turn-off times). No information is available on the remaining (parts of) 7 projects, accounting for 25% of the Eligible Green Assets' volume.

[3] Since several projects comprise multiple windfarms, it can be the case that some farms of one project fulfil the requirements while for others the information was either not made available or they did not fulfil the requirements. This is indicated by the phrase "parts of".

A.2. Environmental aspects of wind power plants

- ✓ For (parts of) 10 projects, accounting for 50% of the Eligible Green Assets' volume, the manufacturer carried out life-cycle assessments of the wind turbines. No information is available on the remaining (parts of 10) projects, accounting for 50% of the Eligible Green Assets' volume.

A.3. Community dialogue (onshore wind power projects only)

- ✓ "For (parts of) 5 newly built onshore projects, accounting for 56% of the respective Eligible Green Assets' volume, community dialogue was conducted at the planning stage (e.g. information provided to households) or was required by national law. No information is available on the remaining (parts of) 4 newly built onshore projects, accounting for 44% of the respective Eligible Green Assets' volume."
- ✓ For 5 onshore projects, accounting for 54% of the respective Eligible Green Assets' volume, national law requires a grievance mechanism during the operational phase. No information is available on the remaining 5 projects, accounting for 46% for the respective Eligible Green Assets' volume.

A.4. Working conditions during construction and maintenance work

- ✓ For 100% projects, high labour standards regarding e.g. freedom of association and collective bargaining, non-discrimination and occupational health and safety are in place (in accordance with national legislation).

A.5. Social standards in the supply chain

- O For (parts of) 10 projects, accounting for 44% of the Eligible Green Assets' volume, wind power plants are manufactured by companies that demonstrate good performance regarding working conditions of own employees and contractors (according to respective grades in the companies' oekom Corporate Rating or according to an analysis based on the location of manufacturing sites). For at least 3 projects accounting for 32% of the Eligible Green Assets' volume, the manufacturers show at least a medium performance regarding own employees and contractors. For (parts of) 5 projects, accounting for 23% of the Eligible Green Assets' volume, the manufacturers demonstrate an insufficient performance.
- ✓ For (parts of) 12 projects, accounting for 68% of the Eligible Green Assets' volume, wind power plant manufacturers require high social standards from their suppliers (e.g. regarding the prohibition of forced and child labour, freedom of association and collective bargaining, non-discrimination, occupational health and safety). No information is available for the remaining (parts of) 7 projects, accounting for 32% of the Eligible Green Assets' volume.

Controversies

- During construction, occupational accidents occurred at 3 wind power plants, accounting for 4% of the Eligible Green Assets' volume. At least one worker and several unrelated persons have been hurt; however, there has been no indication of severe injuries.
- At 3 windfarms, accounting for 3% of the Eligible Green Assets' volume, parts of single turbines came off and were projected into the area. No harm was reported and, notably, no person was reported to be hurt.
- At 2 windfarms, accounting for 1% of the Eligible Green Assets' volume, there are indications that noise levels exceed the usual level. However, only single cases of noise disturbances have been reported in each case.

Impact indicator 1: Energy production

The selected wind power plants feature a total predicted annual energy production of 10,975 GWh/year. The share of energy production attributable to BNP Paribas is 1,071 GWh/year.

Impact indicator 2: Avoidance of CO_2 emissions

Based on the Eligible Green Assets' energy generation and the carbon intensity of the relevant countries' energy mix, the selected wind power plants feature a total predicted annual CO_2 avoidance of 5,908,554 t at project level. The share of CO_2 avoidance attributable to BNP Paribas is 604,428 t.

B. Photovoltaic (PV)

Sustainability Risks and Benefits of the Project Category

The environmental benefits of PV 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 PV 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 - PV power does not negatively impact air quality.

With respect to potential risks, the manufacturing of PV panels in developing countries such as China can have negative social and environmental impacts. As the production of PV 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 PV power are deemed to be low.

All PV projects selected for the Green Bond are located in highly-regulated and developed countries.

B.1. Consideration of environmental aspects during planning and construction (not applicable for PV roof systems)

- ✓ 100% of loans are allocated to projects that underwent environmental impact assessments at the planning stage.
- ✓ 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 loans are allocated to projects that meet high environmental standards and requirements during the construction phase (e.g. noise mitigation, avoidance of breeding period).

B.2. Environmental aspects of PV power plants

- ✓ 100% of loans are allocated to projects that have a performance ratio of at least 80%.
- O No information is available whether the conversion efficiency of solar panels is at least 15%.
- ✓ For 100% of the projects, take-back options for used solar panels are available (in accordance with European WEEE-legislation).
- O No information is available on the percentage of loans allocated to projects that voluntarily fulfil the requirements of the European Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive).[4]

B.3. Community dialogue

- ✓ 100% of loans are allocated to projects for which national law requires community dialogue as a part of the planning process and during the operational phase (e.g. information of affected communities, surveys and dialogue platforms, grievance mechanisms).

B.4. Working conditions during construction and maintenance work

- ✓ For 100% projects, high labour standards regarding e.g. freedom of association and collective bargaining, non-discrimination and occupational health and safety are in place (in accordance with national legislation).

B.5. Social standards in the supply chain of solar modules

- O Like the majority of solar panel manufacturers, the suppliers selected for the projects do not show a good performance regarding working conditions (according to their oekom Corporate Rating) or do not report on their labour standards at all (e.g. regarding health and safety, freedom of association, working hours, minimum wages).
- O It remains unclear whether the projects' solar module manufacturers require high social standards from their suppliers (e.g. regarding the prohibition of forced and child labour, minimum wages, working hours, health and safety).

Impact Indicators:

Please refer to the impact indicator of section C. Concentrated Solar Power (p. 12)

[4] Compliance with the RoHS Directive is not a legal requirement for PV systems.

C. Concentrated Solar Power (CSP) (parabolic trough technology)

Sustainability Risks and Benefits of the Project Category

The environmental benefits of CSP generation comprise the contribution to climate protection and to the transition towards a low carbon economy. Since CSP plants generate electricity from thermal energy, energy can be stored with comparatively little loss to better match production with consumption. In addition, this flexibility supports the integration of PV and wind power into the energy mix. Further – different from fossil fuels combustion - CSP does not negatively impact air quality.

However, the construction and operation of CSP plants can result in negative environmental impacts (e.g. noise, heat transfer fluid leakage) and impacts on local communities. The large need for cooling water constitutes another risk and may negatively impact on ecosystems and on local communities' access to water. A thorough assessment of water impact is therefore necessary. Further risks include potentially poor working conditions during construction and maintenance of power plants as well as in the production processes of equipment.

All CSP projects selected for the Green Bond are located in highly-regulated and developed countries.

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

- ✓ 100% of projects underwent environmental impact assessments.
- O For none of the projects, the environmental impact assessment assesses the impact of project-related water withdrawal.
- ✓ 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 apply good environmental standards during the construction phase (e.g. minimisation of environmental impact during construction work, monitoring).

C.2. Environmental aspects of CSP power plants

- O In 2015, 1 project, accounting for 46% of the Eligible Green Assets' volume, achieved a capacity factor of more than 25%. The remaining project, accounting for 54% of the Eligible Green Assets' volume, achieved a capacity factor of 20% in 2015.
- O No information is available on whether the conversion efficiency of projects is at least 15%.
- ✓ 100% of projects generate at least 85% of electricity using solar energy.
- O 1 project, accounting for 46% of the Eligible Green Assets' volume, has a thermal energy storage system for at least 6 hours in place. The remaining project, accounting for 54% of the Eligible Green Assets' volume, does not have a thermal energy storage system.
- ✓ 100% of projects have reasonable heat transfer fluid management in place (e.g. overflow containers, responsible disposal procedures).

C.3. Community dialogue

- ✓ 1 project, accounting for 46% of the Eligible Green Assets' volume, has a grievance mechanism for stakeholders in place. No information is available on the remaining project, accounting for 54% of the Eligible Green Assets' volume.

C.4. Working conditions during construction and maintenance work

- ✓ For 100% projects, high labour standards regarding e.g. freedom of association and collective bargaining, non-discrimination and occupational health and safety are in place (in accordance with national legislation).

C.5. Social standards in the supply chain

- O The suppliers selected for the projects do not show a good performance regarding working conditions (according to their oekom Corporate Rating or according to an analysis based on the location of manufacturing sites) or do not report on their labour standards at all (e.g. regarding health and safety, freedom of association, working hours, minimum wages).
- ✓ For parts of 2 projects, accounting for 50% of the Eligible Green Assets' volume, the manufacturer requires good standards of its suppliers regarding freedom of association and collective bargaining, non-discrimination and prohibition of forced and child labour and high standards regarding occupational health and safety. No information is available on supplier standards of further manufacturers.

Impact indicator 1: Energy production

The selected PV and CSP plants feature a total predicted annual energy production of 270 GWh/year. The share of energy production attributable to BNP Paribas is 28 GWh/year.

Impact indicator 2: Avoidance of CO_2 emissions

Based on the Eligible Green Assets' energy generation and the carbon intensity of the relevant countries' energy mix, the selected PV and CSP plants feature a total predicted annual CO_2 avoidance of 119,629 t at project level. The share of CO_2 avoidance attributable to BNP Paribas is 13,043 t.

Part III – Assessment of BNP Paribas's Sustainability Performance

In the oekom Corporate Rating with a rating scale from A+ (excellent) to D- (poor), BNP Paribas SA 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.

As at 15.11.2016, this rating puts BNP Paribas SA in place 15 out of 250 companies rated by oekom research in the Commercial Banks & Capital Markets sector.

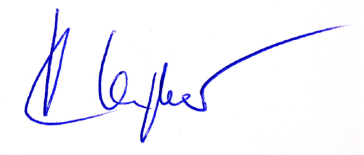
In this sector, oekom research has identified the following issues as the key challenges facing companies in term of sustainability management:

- Sustainability standards for the lending business
- Customer and product responsibility
- Sustainable investment criteria
- Employee relations and work environment
- Business ethics

In four out of five of these key issues, BNP Paribas achieved a rating that was above the average for the sector. A very significant outperformance was achieved in "Sustainable investment criteria", whereas in the area "Business ethics", the company lags behind the industry's average performance.

The company has a controversy level that is comparatively low. Yet, major controversies relating to settlements on breaches of US sanctions, allegations on anti-competitive behaviour and of aiding tax evasion in the US have been revealed.

Details on the rating of the issuer can be found in Annex 2 "Issuer rating results".



oekom research AG

Munich, 15 November 2016

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 decision-making. 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.

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Annexes

- Annex 1: oekom Green Bond Verification Framework
- Annex 2: oekom Corporate Rating of BNP Paribas SA
- Annex 3: Information on Additional Project Categories

Annex 1: oekom Green Bond Verification Framework

oekom 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 an asset pool from which the Green Bond will be issued. This Framework comprises firstly a 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 asset pool can be clearly identified and verified.

The sustainability criteria are complemented by specific and measurable indicators which enable to set ambitious targets and to evaluate the sustainability performance of the bond issue. Further, they provide the basis for informative reporting. In addition, impact indicators were defined for each project category, thus providing investors to with concrete information of environmental added value.

Use of Proceeds

A. Wind Power (on- and offshore)
B. Photovoltaic (PV)
C. Concentrated Solar Power (CSP)

Sustainability Criteria and Quantitative Indicators for Use of Proceeds

A. Wind power (on- and offshore)

1. Consideration of environmental aspects during planning and operation

Possible quantitative indicators:

- Percentage of loans allocated to projects that underwent environmental impact assessments at the planning stage.
- Percentage of loans allocated to projects for which the location in key biodiversity areas can be excluded (e.g. exclusion of Ramsar sites, UNESCO Natural Word Heritage, IUCN protected areas I-IV).
- Percentage of loans 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 loans allocated to projects for which measures to protect habitat and wildlife are in place (e.g. measures to protect birds and bats during operation of the power plant, environmentally friendly anti-rust protection).

2. Environmental aspects of wind power plants

Possible quantitative indicator:

- Percentage of loans allocated to projects for which life-cycle assessments of the wind power plants have been carried out.

3. Community dialogue

Possible quantitative indicator:

- Percentage of loans allocated to 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).

4. Working conditions during construction and maintenance work

Possible quantitative indicator:

- Percentage of loans allocated to projects with high labour and health and safety standards for construction and maintenance work conducted by own employees and contractors (e.g. ILO core conventions).

5. Social standards in the supply chain

Possible quantitative indicator:

- Percentage of loans allocated to projects for which high labour and health and safety standards are applied in the supply chain (e.g. ILO core conventions).

Controversies

- Description of controversial projects (e.g. due to labour rights violations, environmental incidents, adverse biodiversity impacts).

Impact indicators: Energy production and avoidance of CO_2 emissions

- Total annual energy production by the wind power projects (in GWh).
- Total annual avoidance of CO_2 emissions through the wind power projects (in t), based on the carbon intensity of the relevant country's / region's energy mix

B. Photovoltaics

1. Consideration of environmental aspects during planning and construction

Possible quantitative indicators (not applicable for PV roof systems):

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

2. Environmental aspects of PV plants

Possible quantitative indicators:

- Percentage of loans allocated to projects for which the performance ratio of PV plants is at least 80%.
- Percentage of loans allocated to projects for which conversion efficiency is at least 15%.
- Percentage of projects that meet high environmental standards regarding take-back and recycling of PV modules at end-of-life stage.
- Percentage of loans allocated to projects for which the thresholds defined by the European Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive) are voluntarily fulfilled.

3. Community dialogue (not applicable for PV roof systems)

Possible quantitative indicator:

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

4. Working conditions during construction and maintenance work

Possible quantitative indicator:

- Percentage of loans allocated to projects with high labour and health and safety standards for construction and maintenance work conducted by own employees and contractors (e.g. ILO core conventions).

5. Social standards in the supply chain

Possible quantitative indicator:

- Percentage of loans allocated to projects for which high labour and health and safety standards are applied in the supply chain (e.g. ILO core conventions).

Controversies

- Description of controversial projects (e.g. due to labour rights violations, environmental incidents, adverse biodiversity impacts).

Impact indicators: Energy production and avoidance of CO_2 emissions

- Total annual energy production by the PV projects (in GWh).
- Total annual avoidance of CO_2 emissions through the PV projects (in t); based on the carbon intensity of the relevant country's / region's energy mix.

C. Concentrated solar power (parabolic trough technology)

1. Consideration of environmental aspects during planning and construction

Possible quantitative indicators:

- Percentage of loans allocated to projects that underwent environmental impact assessments (e.g. covering water, avifauna and other wildlife) at the planning stage.

- Percentage of loans allocated to projects for which the location in key biodiversity areas can be excluded (e.g. exclusion of Ramsar sites, UNESCO Natural Word Heritage, IUCN protected areas I-IV).
- Percentage of loans 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).

2. Environmental aspects of CSP power plants

Possible quantitative indicators:

- Percentage of loans allocated to projects for which the capacity factor of CSP plants is at least 25%
- Percentage of loans allocated to projects for which conversion efficiency is at least 15%.
- Percentage of loans allocated to projects that generate at least 85% of electricity using solar energy.
- Percentage of loans allocated to projects with a thermal energy storage system for at least 6 hours in place.
- Percentage of loans allocated to projects with adequate management of heat transfer fluids (i.e. leakage prevention, end of life treatment).

3. Community dialogue

Possible quantitative indicator:

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

4. Working conditions during construction and maintenance work

Possible quantitative indicator:

- Percentage of loans allocated to projects with high labour and health and safety standards for construction and maintenance work conducted by own employees and contractors (e.g. ILO core conventions).

5. Social standards in the supply chain

Possible quantitative indicator:

- Percentage of loans allocated to projects for which high labour and health and safety standards are applied in the supply chain (e.g. ILO core conventions).

Controversies

- Description of controversial projects (e.g. due to labour rights violations, environmental incidents, adverse biodiversity impacts).

Impact indicators: Energy production and avoidance of CO_2 emissions

- Total annual energy production by the CSP projects (in GWh).
- Total annual avoidance of CO_2 emissions through the CSP projects (in t); based on the carbon intensity of the relevant country's / region's energy mix

oekom Corporate Rating

BNP Paribas SA

Industry:	Financials/Commercial Banks & Capital Markets
Country:	France
ISIN:	FR0000131104

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

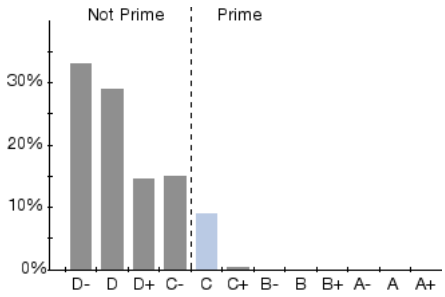
Competitive Position

Industry Leaders
(in alphabetical order)

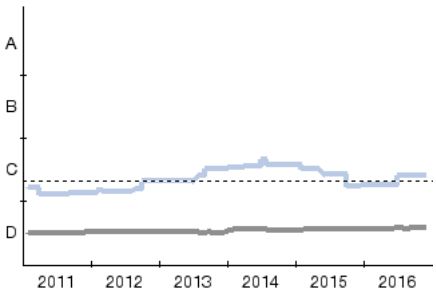
- DNB ASA (NO) C+
- HVB Group (DE) C
- SNS Bank NV (NL) C

Company Industry

Distribution of Ratings
(250 companies in the industry)



Rating History



Key Issues

Key Issue Performance

Strengths and Weaknesses

+ reasonable sector-specific environmental and social guidelines
+ reasonable integration of environmental and social aspects into the asset management business
+ comprehensive programmes regarding financial services with high social benefit
+ reasonable measures taken to grant access to financial services without discrimination

- only limited integration of environmental and social aspects into the credit rating process with regard to private clients
- several recent settlements and/or fines in the area of business malpractice and customer and product responsibility

Controversy Monitor

Company

Controversy Score -13

Controversy Level Significant

Minor	Moderate	**Significant**	Severe

Industry

Maximum Controversy Score -36

Controversy Risk Significant

Minor	Moderate	**Significant**	Severe

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Annex 3: Information on Additional Project Categories

BNP Paribas has developed a Green Bond Framework defining eligible sectors from which assets can be chosen for Green Bond issuances. These sectors contain not only the categories from which assets have been chosen for the present first issuance, but also additional ones for future issuances. BNP Paribas has commissioned oekom research to evaluate the sustainability benefits and risks of these additional categories to be addressed in the verification of future Green Bonds or of reallocations of proceeds.

At issuance, the inaugural Green Bond of BNP Paribas does not refinance any projects from the additional categories. oekom research has performed a review of the additional project categories (called 'Eligible Sectors' in the BNP Paribas Green Bond Framework) and has identified the following general and potential benefits and risks of sectors.

According to the BNP Paribas Green Bond Framework, specific projects from these sectors will be evaluated externally if any assets from the categories are chosen for future Green Bonds or if proceeds are to be reallocated.

The environmental benefits of **Renewable Energy** sources other than solar (photovoltaic and concentrated solar power) and wind, e.g. hydropower, bioenergy, and geothermal energy as well as development and production of renewable energy equipment, 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. through resource extraction, releases of waste streams to water or soil) in comparison to fossil fuel or nuclear power plants. In addition, hydropower and geothermal power do not negatively impact air quality.

However, there are also considerable sustainability risks linked to the value chain of these additional renewable energy sources. The construction and operation of renewable power plants, especially of large-scale hydropower projects, can result in negative environmental impacts at construction sites (e.g. on the hydrological regime, biodiversity or even climate change through methane emissions) and impacts on human rights of local communities (e.g. through land use conflicts and involuntary resettlement). Geothermal power generation can potentially lead to unintended vibrations, gaseous emissions and/or ground water contamination. Biocrop and biofuel production carries the risk of conventional agriculture (pesticide use, degradation of soils, loss of biodiversity, elevated water and energy consumption and labor rights issues). In addition, the use of agricultural goods for energy production can contribute to food shortages and rises in food prices. Finally, hazardous substances used in manufacturing of renewable energy equipment such as solar panels pose a risk of environmental pollution during the production and disposal phases of these products.

Energy Efficiency measures, which the issuer in its framework limits to the construction of green buildings, retrofit buildings, improved infrastructure, and smart grids are environmentally beneficial as they contribute to climate protection through reduced energy use and enable a transition towards a low carbon economy. Green and retrofit buildings help to conserve natural resources as well as air quality.

Environmental risks stem from inadequate improvements in energy use and resource efficiency but also from possible environmental impacts (e.g. on biodiversity at construction sites or from hazardous substances in electronics) during construction and retrofitting of buildings and the upgrading of the existing electrical grid. Social risks of smart grids arise from privacy and security issues for consumers.

Assets for **Mass and Public Transportation,** according to the issuer's definition may include vehicles and infrastructure projects (excluding aviation and shipping). The production and operation of energy efficient vehicles or vehicles with alternative propulsion as well as infrastructure projects is positive from an environmental point of view as it helps to foster climate protection through lower carbon emissions, to minimise traffic and strain on transport infrastructure.

Risks arise from: public transportation fleets with combustion engines, noise emissions, energy-intensive rail systems, alternative fuels such as hydrogen and the negligence of environmental impacts throughout the whole lifecycle. Social risks concern the health and safety of passengers and operators.

Water Management and Water Treatment, according to the issuer's definition include water treatment plants, flood defence, water use minimisation and recycling, leakage prevention as well as irrigation and wastewater. Wastewater treatment and recycling help to provide water for human use, optimise resource recovery and, as water use minimisation and leakage prevention, help to provide a solution to water shortages as well as to decrease diversion of water from sensitive ecosystems. Furthermore, wastewater treatment can safeguard water sources and the ground from contamination through wastewater. Flood prevention is beneficial as floods can endanger humans and other species; cause soil erosion and contaminate habitats. By remodelling water bodies (e.g rivers) to their natural states, consequences of floods are prevented without restricting the water body, natural habitats are restored and biodiversity strengthened. Sensible irrigation helps increase food production and decrease food shortages as well as water use for production.

Environmental risks of wastewater treatment and recycling stem from environmental impacts of wastewater treatment processes, e.g. leakage of sewage or inappropriate sewage sludge disposal Also, quality standards for treated or recycled water need to be considered when evaluating wastewater treatment projects or (agricultural) irrigation. Irrigation can not only lead to contamination but also increase water shortage. Risks of construction works due to leakage and conventional flood prevention can negatively impact wildlife and natural water flows.

Recycling may, according to the issuer's definition, include projects for urban solid waste recycling or energy generation from waste. Recycling conserves natural resources, reduces negative effects of resource extraction and the amount of waste sent to landfills. Waste to energy reduces the number of landfills, the emission of greenhouse gases, and the extraction of fossil fuels for energy production.

Environmental risks stem from possible environmental impacts of energy to waste plants (i.e. air pollution and misuse of recyclable resources) and of inadequate recycling standards (i.e. handling of hazardous substances) but also from negligence of environmental impacts during planning and construction.

There are **social risks** concerning all project categories above. Social risks are mainly posed by working conditions, especially regarding workers' health and safety, from nuisance of local residents, and a lack of community dialogue, which omits to inform affected communities and/or to incorporate feedback mechanisms for public consultation.