



Kommunalbanken AS (KBN) Green Bond Second Opinion

March 24, 2021

Kommunalbanken AS (KBN) finances important welfare services through providing credit to the local authorities in Norway. KBN is defined as a state instrumentality, having a public policy mandate from the central government to provide low-cost financing to the Norwegian local government sector. KBN raised its first green funding in 2010 and published its first Green Bond Framework in 2013 followed by a public green bond issuance that was a first amongst financial institutions in the Nordic region. KBN has a lending product specifically designed to finance investment in climate-friendly projects by the local government sector with an interest rate lower than KBN's ordinary floating rate. This second opinion is on KBN's updated Green Bond Framework that includes several Green Bond Principles (2018) categories.

The vast majority of the proceeds is expected to go to the Green building category. The proportion of KBN's green portfolio for green buildings was 73% in 2020, followed by water and wastewater management with 15%. The rest of the categories received between 1 and 5% each (e.g., renewable energy, clean transportation, adaptation etc.). The criteria are broad and varied and capture many aspects important for the green transition (e.g., material use in buildings). However, on occasion it is difficult to assess climate benefits beyond those following from current regulations.

Sustainability work is comprehensively integrated in KBN and the selection of eligibility criteria is based on independent expert advice. All projects financed by KBN are subject to the Public Procurement Act, which obliges local governments to consider the environment as well as human rights and social impacts in their procurement processes. Management of proceeds is well aligned with the Green Bond Principles and reporting is excellent. Starting from 2019, KBN is reporting on climate-related risks in line with the TCFD framework and they report climate-related data to the CDP. In 2020, KBN introduced a quantitative climate target of reducing their emissions by 50% by 2030 relative to 2019 emissions.

Based on the overall assessment of the project types that will be financed by the green finance, governance, and transparency considerations, KBN's green bond framework receives a **CICERO Medium Green** shading and a governance score of **Excellent**. Although the framework contains many Dark Green elements and features an excellent governance structure, the main category, Green buildings, contains elements that allows for projects not rated Dark Green. Tighter control of the energy efficiency of new and renovation of existing buildings would be needed for a darker overall shading.

SHADES OF GREEN

Based on our review, we rate the KBN's green bond framework **CICERO Medium Green**.

Included in the overall shading is an assessment of the governance structure of the green bond framework. CICERO Shades of Green finds the governance procedures in KBN's framework to be **Excellent**.



GREEN BOND PRINCIPLES

Based on this review, this Framework is found in alignment with the principles.





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1 Terms and methodology

This note provides CICERO Shades of Green's (CICERO Green) second opinion of the client's framework dated March 2021. This second opinion remains relevant to all green bonds and/or loans issued under this framework for the duration of three years from publication of this second opinion, as long as the framework remains unchanged. Any amendments or updates to the framework require a revised second opinion. CICERO Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

The second opinion is based on a review of the framework and documentation of the client's policies and processes, as well as information gathered during meetings, teleconferences and email correspondence.

Expressing concerns with 'Shades of Green'

CICERO Green second opinions are graded dark green, medium green or light green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement. The shades are intended to communicate the following:

CICERO Shades of Green



Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Ideally, exposure to transitional and physical climate risk is considered or mitigated.



Medium green is allocated to projects and solutions that represent steps towards the long-term vision, but are not quite there yet. Fossil-fueled technologies that lock in long-term emissions do not qualify for financing. Physical and transition climate risks might be considered.



Light green is allocated to projects and solutions that are climate friendly but do not represent or contribute to the long-term vision. These represent necessary and potentially significant short-term GHG emission reductions, but need to be managed to avoid extension of equipment lifetime that can lock-in fossil fuel elements. Projects may be exposed to the physical and transitional climate risk without appropriate strategies in place to protect them.

Examples



Wind energy projects with a strong governance structure that integrates environmental concerns



Bridging technologies such as plug-in hybrid buses



Efficiency investments for fossil fuel technologies where clean alternatives are not available

Sound governance and transparency processes facilitate delivery of the client's climate and environmental ambitions laid out in the framework. Hence, key governance aspects that can influence the implementation of the green bond are carefully considered and reflected in the overall shading. CICERO Green considers four factors in its review of the client's governance processes: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of proceeds and 4) the reporting on the projects to investors. Based on these factors, we assign an overall governance grade: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.



2 Brief description of KBN's green bond framework and related policies

Kommunalbanken AS (KBN) finances important welfare services through providing credit to the local authorities in Norway. KBN is defined as a state instrumentality, having a public policy mandate from the central government to provide low-cost financing to the Norwegian local government sector. Significant changes to this mandate must be submitted to the Norwegian parliament (Storting). The Storting is responsible for all decisions concerning the KBN's capital structure and size of dividends and also adopts the institution's required rate of return. The Government's proposed dividend is determined as a separate item in the state budget.

KBN has a lending product specifically designed to finance investment in climate-friendly projects by the local government sector. The interest rate on this 'green loan' product is lower than KBN's ordinary floating rate. The proportion of KBN's lending portfolio represented by lending at this green rate increased from 3.6% in 2013 to 8.2% in 2020. Of this 73% was for green buildings, followed by water and wastewater management with 15% and clean transportation with 5%. The rest of the categories received between 1 and 3% each. KBN prepares an annual environmental report which details its performance in relation to a range of established criteria. KBN applies environmental criteria to its suppliers of goods and services, and actively prefers suppliers that have environmental certification.

KBN raised its first green funding in 2010 and published its first Green Bond Framework in 2013 followed by a public green bond issuance that was a first amongst financial institutions in the Nordic region. The Green Bond Framework was launched in an updated version in 2016 which received a Dark Green shading from CICERO in their second party opinion. This second opinion is on the 2021 update to KBN's Green Bond Framework.

Environmental Strategies and Policies

KBN is committed to following best practice in their sustainability work and in their reporting of this work. KBN is a certified Eco-Lighthouse company¹ and publish annual climate- and environmental reports as part of the (re)certification process. They have integrated sustainability disclosures in their annual reports in accordance with the GRI Standard since 2018. Starting from 2019, KBN is reporting on climate-related risks in line with the TCFD framework². From 2020 onwards, they also report climate-related data to the CDP. KBN is working to establish a model apparatus for assessment of the municipalities' exposure to various forms of climate risk. The next phase will be to analyse how the municipalities' climate risk affects KBN's loan portfolio. As of now and in the short term (three years), it is assumed that climate-related risk has a limited effect on the municipalities' finances as a whole. In individual municipalities, however, individual incidents, for example related to floods or landslides, can lead to increased costs that reduce financial freedom of action. In the medium term (2030) and long term (2050), it must be assumed that both physical climate change and a stricter climate policy will increase the municipal sector's costs and at the same time entail a need for significant investments. A more extreme and wetter climate may mean that investments financed by KBN will have a shorter lifespan than originally assumed. For KBN's customers, this will be an additional financial cost. These general reflections have recently been studied in more detail by use of climate scenarios as reported in KBN's Annual report for 2020.

¹ Eco-Lighthouse is Norway's most widely used certification scheme for enterprises seeking to document their environmental efforts and demonstrate social responsibility. The scheme generally corresponds to international eco-labelling schemes EMAS and ISO 14001.

² CICERO Center for international climate research has supplied climate scenarios to KBN.



As a contribution to the vision of building a sustainable society, KBN offers a climate risk tool on their website³ that allows municipalities to assess their exposure to physical climate risk and transition risk, both in terms of geography and dependency on certain industries and economic sectors. KBN's own climate risk disclosures can be found in the Annual Reports.

The overall responsibility for KBN's sustainability efforts, including on climate and the environment, lies with the Board of Directors. The Board of Directors determines the Overall Guidelines for Sustainability as well as targets and activities per year.

KBN has started work (since 2020) on incorporating climate risk assessments in their credit assessments (risk assessments) of all municipalities and counties. KBN's risk lies with the client and not the project itself. Hence, the client's overall climate risk resilience is what is important to KBN. KBN does not include climate resilience assessments in each loan application for non-green loans. The aim is before 2025 to develop a set of indicators of sufficient quality to be included in an externally communicated credit model and in completed climate risk assessments of all municipalities. KBN has reported in accordance with the Task Force on Climate-related Financial Disclosures framework since 2019.

In 2020, the Board of Directors set an emission reduction target for KBN of 50% within 2030, compared to a 2019 level of 192 tonnes of CO₂e. In 2020, the emissions decreased to 74.5 tonnes CO₂e. Of these two third was classified as Scope 2 emissions, almost one third as Scope 3 emissions and only a very minor part as Scope 1 emissions⁴. The reduction in emissions from 2019 to 2020 was mainly due to a corona virus-related decrease in air travel, and partly a 30% drop in the use of electricity due to data centre outsourcing which is presently not covered by Scope 3 accounting. As the shutdown has accelerated the digital transformation, KBN expects digital meetings to replace a share of the physical meetings after the pandemic.

Progress towards the 2030 target is reported in KBN's quarterly financial reports. The CEO is responsible for implementation of the guidelines, targets and activities set out by the Board of Directors and decides on supplementary guidelines for the daily sustainability work in the Administration.

It should be noted that since KBN is a credit institution, the most important environmental impacts are not own emissions, but impacts related to the lending portfolio. Thus, KBN's Green Finance Program, which converts proceeds from KBN Green Bonds to Green Loans, is a core element of KBN's strategic positioning.

KBN has expectations towards their suppliers that they:

- Measure and report their greenhouse gas emissions (scope 1, 2 and 3), have an emission reduction target that is at least as ambitious as the national climate goals and a credible plan to achieve these, and have a vision and timeline for achieving net zero emissions.
- Buy climate quotas, carbon credits, etc. of high quality, which at least compensates for their remaining emissions.
- Map their own climate risk and have a strategy for managing it.
- Analyse whether their business model will be profitable in a low-emission scenario and seek to adjust it to be profitable in a low-emission society.

The most important suppliers in terms of volume are 1) IT and technical solution providers, 2) audit providers, 3) financial counterparties, 4) legal service providers and 5) food/drinks/canteen service providers.

³ <https://klimarisiko.kbn.com/en/>

⁴ Scope 1 is the company's direct emissions. For KBN, this applies to petrol and diesel from the use of private cars on business trips. Scope 2 is the companies' indirect emissions from electricity purchased and used. For KBN, this applies to district heating, cooling and electricity use in their premises. Scope 3 is all other indirect emissions. KBN only has reliable Scope 3 data related to residual waste and business travel (flights).



Use of proceeds

As a general rule green loans are granted to projects that were finalized within the last 12 months. Clients may apply for refinancing if a green loan matures within the economic lifetime of the project, but the projects will then be assessed against the current Criteria Document. So far, this has not yet happened, as none of the green loans have yet matured.

KBN's green bond framework specifies the following Green Bond Principles (2018) categories: Green buildings, Renewable energy, Clean transportation, Pollution prevention and control, Sustainable water and wastewater management, Environmentally sustainable management of living natural resources and land use (with some elements of pollution prevention and control), Climate change adaptation and an Other category. Eligibility criteria is described in the latest "Criteria Document for Green Loans"⁵ and in table 1 below. This document (the green loan criteria), available through <https://www.kbn.com>, is subject to annual reviews by KBN's Green Expert Committee. This is a panel of external and highly skilled individuals from climate research, the local government sector, environmental organisations and the Norwegian state's administration, who suggest updates to the criteria based on recent technological and regulatory developments. It should be noted that any future updates to the "Criteria Document for Green Loans" represent further tightening of the criteria and/or adjustments to correspond to the EU Taxonomy on Sustainable Activities. KBN's assessment of the criteria's alignment with the EU taxonomy requirements will be made public. However, it is not an explicit goal in itself to reach full alignment of the criteria with the EU taxonomy requirements.

KBN recognizes that, given the annual review and adjustments of the Criteria Document for Green Loans, some of the existing green loans which were issued under previous versions of the green loan criteria may not be fully aligned with the current (2021) version of the criteria, and thus not aligned with the framework. KBN will make sure that proceeds from bonds issued under the 2021 framework will only be allocated to loans which satisfy the 2021 eligibility criteria.

KBN does not explicitly exclude investments in/lending to fossil fuel related activities and infrastructure, as the municipalities and counties generally do not undertake these types of activities. Such projects are however de facto excluded through the detailed criteria summarised in table 1. Thus, energy related projects have to be renewable, transport projects have to be fossil-free (with the exemption of ferries, which may still be hybrid in the current version of the criteria), etc.

Selection

The selection process is a key governance factor to consider in CICERO Green's assessment. CICERO Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for green finance funding. The broader the project categories, the more importance CICERO Green places on the governance process.

The 2021 green bond framework and the most recent Criteria Document⁶ place greater emphasis on climate-related risks. Physical risk assessments are now part of the documentation that is collected for all physical structures to be financed through KBN's Green Loans.

The KBN selection and evaluation process for eligible projects may be summarised as follows:

1. The project owner proposes a potential project by submitting the application form for the relevant project category, supported by any required documentation as listed in the Criteria Document.

⁵ <https://www.kbn.com/en/customer/green-loans/criteria-for-green-loans/>

⁶ Document no 6 in Appendix 1.



2. The application and any additional documentation are first assessed by the customer's Relationship Manager, who nominates projects for green loan financing.
3. The project is then assessed by one of KBN's Climate Advisers, who checks the project's eligibility against the relevant eligibility criteria and proposes the project's approval, alternatively rejection.
4. Finally, the decision is controlled by a KBN Climate Controller, who signs the final approval of the project to be added to the green project portfolio.
5. In cases of doubt or where eligibility criteria are not fully covering the project in question, the final decision is made by KBN's Chief Lending Officer.
6. KBN's Internal Auditor will perform an internal audit on a yearly basis covering the design, implementation and operating effectiveness of the process.

Should eligible projects for whatever reason become controversial before or after approval, such projects will be removed from the Green Project Portfolio and replaced by other eligible projects.

Management of proceeds

CICERO Green finds the management of proceeds of KBN to be in accordance with the 2018 Green Bond Principles.

KBN applies a portfolio approach to their green bond program, meaning that a portfolio of green bonds finances a portfolio of eligible green projects. KBN maintains a Green Project Register tracking outstanding amounts to all eligible projects in the project portfolio for the purpose of monitoring the allocation of the net green bond proceeds to these projects.

KBN generally seeks to qualify eligible projects prior to green bond issuances, so that investors may be assured that under normal circumstances, all proceeds from KBN green bonds are immediately channelled into eligible projects. If required, any unallocated proceeds will be managed according to KBN's ordinary liquidity management policy which allows fixed-income investments in states, local governments and national and multilateral development banks, all located in OECD countries.

Due to unexpected repayments or other unforeseen issues, there may be periods when the total outstanding net proceeds of green bonds exceed the value of the eligible projects in the Green Project Register. Any such portion will be held in accordance with KBN's normal liquidity management policy. This policy does not permit investments in assets, companies or instruments directly connected to fossil energy.

The Green Project Register will form the basis for the impact reporting.

Reporting

Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green finance programs. Procedures for reporting and disclosure of green finance investments are also vital to build confidence that green finance is contributing towards a sustainable and climate-friendly future, both among investors and in society.

KBN will annually publish a report on the allocation and environmental impacts of green bonds issued under this framework. A list of all projects financed is publicly available. KBN's climate advisers are responsible for the reporting. The annual green bond report will contain two types of reporting: allocation reporting and impact reporting. Where relevant KBN will seek to align the reporting with the latest standards and practices as identified



by ICMA Green Bond Principles and the guidelines in the Nordic Public Sector Issuer's Position Paper on Green Bond Impact Reporting⁷.

In addition to the annual green bond report, KBN will disclose the volume of a) outstanding green loans and b) outstanding green bonds in its quarterly and annual financial reports. The KBN annual report will also include a summary of the information in the green bond report.

The allocation reporting will, to the extent feasible, include the following components:

- Proceeds allocated to eligible projects on project level and project category level
- Number of projects financed per KBN green lending program category
- Amount and share of unallocated proceeds
- The relative share of new financing versus refinancing, according to the definition set out in the EU Green Bond Standard (when applicable).

KBN will strive to report on the environmental impacts of the investments financed by the green bonds on an ex-ante basis. Data is provided on project level, project category level and for the entire KBN green project portfolio.

On project level, the impact reporting may include the following information:

- Borrower, project name and short description of the project
- Construction period/year of completion and year of last green loan disbursement
- Total project cost, total green loan disbursed, and outstanding green loan at reporting date
- Share of project financed with KBN green loan
- Selected impact information and metrics relevant to the project category, calculated according to KBN's share of the project financing. For examples of metrics, see KBN's Green Bond Framework.

Additionally, the reporting might contain detailed descriptions and case studies of selected eligible projects financed.

On a best-effort-basis, the reporting will include KBN's own assessment of the project portfolio's alignment with the EU Taxonomy on sustainable activities. The impact report will, to the extent feasible, also include a section on methodology, baselines and assumptions used in impact calculations.

The annual impact report will be made available for download from KBN's web pages in PDF and Excel formats. Additionally, KBN's web pages will contain a list of disbursed green loans to be updated on a quarterly basis. KBN commits to having the allocation part of the reporting verified by their internal auditor, currently Deloitte.

⁷ https://www.kbn.com/globalassets/dokumenter/npsi_position_paper_2020_final_ii.pdf



3 Assessment of KBN’s green bond framework and policies

The framework and procedures for KBN’s green bond investments are assessed and their strengths and weaknesses are discussed in this section. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised in this section to note areas where KBN should be aware of potential macro-level impacts of investment projects.


Overall shading

Based on the project category shadings detailed below, and consideration of environmental ambitions and governance structure reflected in KBN’s green bond framework, we rate the framework **CICERO Medium Green**.

Eligible projects under the KBN’s green bond framework

At the basic level, the selection of eligible project categories is the primary mechanism to ensure that projects deliver environmental benefits. Through selection of project categories with clear environmental benefits, green bonds aim to provide investors with certainty that their investments deliver environmental returns as well as financial returns. The Green Bonds Principles (GBP) state that the “overall environmental profile” of a project should be assessed and that the selection process should be “well defined”.

KBN defines eligible project categories and criteria for eligible projects as shown in table 1. Eligibility criteria is also described in the latest “Criteria Document for Green Loans”⁸. The document (the green loan criteria) is subject to annual reviews by KBN’s Green Expert Committee, a panel of external experts who suggest updates to the criteria based on recent technological and regulatory developments.

Category	Eligible project types	Green Shading and some concerns
Green buildings 	<i>New buildings:</i> <ul style="list-style-type: none"> • New low-energy buildings, defined as buildings calculated to have a 20% lower net energy demand than the limit stipulated for the relevant building category in the building regulations that are in force during the design phase (currently TEK17). • Extensive use of climate-friendly materials, e.g., timber-based superstructures/ weight-bearing structures (e.g., mass timber), low-carbon concrete (class A), or extensive use of previously used materials. • New buildings that will be certified according to the Nordic Swan Ecolabel or 	Medium Green <ul style="list-style-type: none"> ✓ This is the dominant category in the current green portfolio. Currently, new buildings with low energy demand make up 14 bn. NOK out of the total volume 19.5 bn. NOK (73%). This may change over time. Direct fossil fuel heating of new buildings is banned in Norway. ✓ KBN’s green loans as a main rule finance green projects finalised within the last 12 months. All new projects accepted under this framework will be built according to TEK17 or better. The

⁸ <https://www.kbn.com/en/customer/green-loans/criteria-for-green-loans/>



as BREEAM-NOR Excellent or Outstanding “Paris proof” with an Energy Performance Certificate of A, sustainable materials and an associated mobility plan and climate resilience requirements⁹. Other relevant verifiable definitions of a very high level of performance from a climate, environmental or energy perspective will also be considered.

- Buildings that produce energy from renewable sources equivalent to at least 70% of their energy demand. This also includes energy-plus buildings.
- Use of DFØ’s (The Norwegian Agency for Public and Financial Management, previously Difi) Criteria Wizard for Sustainable Public Procurement¹⁰. Accepted requirements from DFØ’s wizard are one of the following:
 - Energy: “Energy Efficiency and Impact”: Advanced level
 - Materials: “Greenhouse Gas Accounts for Entire Building”: Advanced level;

Renovations:

- Minor measures that help reduce energy consumption, e.g., installing a Central Operational Control System (COCS), re-insulating external walls, conversion from electric room heating to water-borne heating or EPC contracts – the list is not exhaustive. When switching to waterborne heating, the heat source must be based on renewable energy or district heating. Electric boilers and bio-oil do not qualify as renewable energy.
- Major renovation projects that meet one of the following criteria:
 - The building’s estimated energy demand will be 30% lower than before the project.
 - Extensive use will be made of climate-friendly materials, e.g., mass timber/glulam, low-carbon

criteria on top of this varies and can be difficult to assess from a climate point of view.

- ✓ Refurbishment of existing buildings are often better than new constructions from a climate point of view. IPCC recommends ‘deep refurbishment’ with 50% or more improvements in energy efficiency.
- ✓ Similarly, criteria for use of climate friendly materials and re-useability are important contributions to a low carbon future.
- ✓ According to the IEA, a 30% reduction would be necessary to be in line with the IEA ‘well below 2 C’ target. One of the criteria for major renovation is aligned with this target.
- ✓ The listed building certification criteria reflect a high environmental standard, however the points-based system of voluntary certifications like the BREAM New construction ‘Excellent’ may not guarantee low climate impact. The requirement of being “Paris proof” rectify this.
- ✓ The Nordic ecolabel require a maximum energy use of 85% of TEK17 for small houses and buildings for pre-schools and schools and 90% of TEK17 for apartment buildings.
- ✓ The use of the DFØ criteria wizard for new buildings under the Energy section ensures that the building shall be built as a passive house according to the passive house standard NS3700 / NS3701. In addition, measures must be taken to reduce simultaneous power consumption, such as load reduction, load transfer and local energy storage
- ✓ The use of the DFØ criteria wizard for new buildings under the Materials section ensures that the climate impact of material use is from 15% to 25%

⁹ These are some of the requirements for being “Paris proof” in the BREEAM system, see e.g. <https://byggalliansen.no/wp-content/uploads/2019/04/Notat-Paris-Proof-bygg.pdf>

¹⁰ https://kriterieveiviseren.difi.no/nb/wizard?stage=category&group=12-17-18_19&group_depth=2&criteria=220_218-231_229



- concrete (class A), or extensive use of previously used materials.
 - The building will be certified with the Nordic Swan Ecolabel or as BREEAM-NOR Excellent or better.
 - The renovation project helps the building to produce energy from renewable sources equivalent to at least 70% of its energy demand. This also includes energy- plus buildings.
 - Climate change adaptation measures, such as green roofs, rain gardens, damp proofing, etc.
 - Installation of renewable energy in buildings, such as bioenergy, solar power, heat pumps, or connection to district heating.
 - Installation of solutions for storing locally produced renewable energy, e.g., batteries.
 - Use of DFØ’s Criteria Wizard for Sustainable Public Procurement when renovating buildings: sustainable building materials: Using the “Greenhouse Gas Calculations for Selected Building Elements” criterion for materials, level “Advanced”.
The criterion is currently found under “Construction” in the Criteria Wizard, but can also be applied for renovation.
- ✓ lower than the climate impact from using standard materials in accordance with current regulations (TEK17).
 - ✓ Extensive use of climate-friendly materials must at least include materials for the supporting structure.
 - ✓ Be aware of potential rebound effects following energy efficiency improvements. The criteria do not explicitly prohibit efficiency measures in fossil fuel-based systems. But, as fossil fuel-based energy systems in buildings have been banned since 1st January 2020, in practice, it will not be applied to fossil fuel-based systems.
 - ✓ Construction projects consisting of both renovation and new construction may qualify, but then they must meet the criteria for their respective categories.
 - ✓ Installation of geothermal power may be accompanied by unwanted pollution from the soil.
 - ✓ District heating often contains fossil fractions from unwanted plastics in waste.
 - ✓ Buildings are meant to last for a long time, exposing them to climate change physical risks. Climate adaptation actions can mitigate these risks.

Renewable energy



- Renewable energy production:
 - Plants for biogas production
 - Geothermal wells
 - Solar cells or solar thermal collectors
 - Pellet or wood chip heating systems
 - Other renewable energy sources.
- Storage of locally generated energy by one of the following methods:
 - Electric storage, e.g., batteries
 - Thermal storage
 - Storage as hydrogen
- The municipalities’ contribution to the development or upgrading of the grid capacity, e.g., construction contribution.

Medium to Dark Green

- ✓ Except for biogas plants (which in Norwegian municipalities’ case procure biogas from organic waste or sewage sludge), all energy production facilities covered by the framework are small-scale, such as solar panels installed on a building’s roof.
- ✓ There is no restriction on the type of bioenergy, e.g., pellets and wood chips, for small scale use in buildings. Some types of bioenergy can be unsustainable.
- ✓ Storage of produced energy only applies to renewable energy – the storage facility should be connected to



- Production plant or distribution network for district heating or cooling. The plant must use renewable energy sources for both base and peak loads. Use of electricity to meet peak loads is acceptable. Energy from waste incineration or surplus heat/cold generated by other processes can also be used. The use of mineral-based emergency fuel can only be accepted for clearly defined emergency situations. ✓
- one of the production facilities mentioned in the criteria. ✓
- Construction of energy wells may lead to heavy mineral pollution if not managed carefully. ✓
- Regarding the point on ‘Other renewable energy sources’, KBN informs us that the criterion may be used to cover other renewable energy sources we have not explicitly mentioned above, but with the same general considerations applying. KBN does not finance commercial energy production such as hydropower, wind power etc. One concrete example of a project that could be considered under this criterion is 'fjord heating plants' based on heat exchange from fjord/sea water. ✓
- The municipalities’ contribution to the development or upgrading of the grid capacity is most often in connection with installation of charging stations for electrical vehicles, etc., and thus small in scale. ✓
- Be aware that district heating will partially be based on waste containing residual plastics. All separately collected/sorted plastic waste in Norway is exported, according to Grønt punkt Norge and no sorted plastic may (legally) be incinerated in these plants. ✓

Clean transportation



- Bicycles and pedestrian:
- Procurement of electric scooters, bicycles and electric bicycles.
 - Facilitating walking and cycling: This can, for example, be construction of new pedestrian and bicycle paths, outdoor lighting for footpaths/bicycle paths, and bike parking facilities/stations.
- Land transport:
- Procurement of light or heavy vehicles, including buses that run on electricity, biogas or green hydrogen (produced using renewable energy). Plug-in hybrids do not qualify for green loans. For vehicles that use

Medium to Dark Green

- ✓ The issuer informs us that plug-in hybrid vehicles do not qualify for green loans.
- ✓ Charging stations can also be used by plug-in hybrid vehicles, which will involve fossil fuel use. Similarly, hybrid ferries will have some use of fossil fuel, although the criteria cap this to maximum 50% of the operating time.
- ✓ Fossil-free transportation includes use of electricity, biogas or green hydrogen. If biogas is used, it will be stipulated in the contract that fossil fuels must not be used.



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- Procurement of new carriage and other equipment for rail-based public transport. The fleet must run on either electricity, green hydrogen (produced using renewable energy) or biogas. For vehicles that use biogas, there must be a contractual agreement that fossil fuels will not be used.
- Maritime transport:
- Procurement of ferries, high-speed craft and other types of maritime transport vessel that run on electricity, biogas, green hydrogen/ammonia (produced using renewable energy) as fuel. For vessels that use biogas, there must be a contractual agreement that fossil fuels will not be used. A fossil-fuel back-up solution is permitted. Hybrid solutions will be considered, but in normal operations propulsion must be zero-emissions for at least 50% of operating hours.
- Construction machinery:
- Purchase of construction machinery that only uses electricity, biogas or green hydrogen (produced using renewable energy). If biogas is used, there must be a contractual agreement that fossil fuels will not be used.
 - Using the DFØ's Criteria Wizard's "Reduction in emissions from construction machinery, vehicles and equipment" criterion when procuring machinery, level "Advanced". The criterion is currently found under "Emissions from the construction site" in DFØ's Criteria Wizard.
- Infrastructure:
- Installing new or upgrading existing charging points for electric cars. Includes both high-speed chargers and normal chargers. High-speed chargers should meet the minimum requirements in the 'Technical requirements' section of Enova's program criteria for support for charging infrastructure for electric cars.
 - Construction of green hydrogen (produced using renewable energy) or biogas filling stations that are open to the public. The
- ✓ KBN only finances projects within the Norwegian local government sector, meaning that heavy vehicles under this criterion are used in services by the local governments. This typically includes public transportation, waste collection and transportation, waste handling on-site in collection points and sorting centres, etc. All sea transport is for passenger transport only.
 - ✓ Emission-free port infrastructure will serve all type of shipping including cruise ships. National regulations and incentives are needed to deal with the emissions from the shipping vessels. KBN only finance infrastructure and equipment for public ports – the oil and gas sector run its own shipping terminals which are predominantly used for their shipping needs.
 - ✓ KBN may only finance local public transport (not intercity trains etc.). None of the current rail-based public transport solutions in Norwegian cities are diesel-driven.
 - ✓ Use of the DFØ Criteria Wizard's "Reduction in emissions from construction machinery, vehicles and equipment" implies a general requirement for fossil-free construction sites. It is supplemented with requirements for emission-free individual machines (i.e., electric or hydrogen-powered) according to what is possible for the market to deliver. Many elements in these criteria are Dark Green, but allowance of ferry hybrid solutions with a requirement that normal operations propulsion must be zero-emissions for at least 50% of operating hours, is an element of a lighter shade.
-



filling station should meet the minimum requirements in the ‘Technical requirements’ section of Enova's program criteria for investment in hydrogen infrastructure.

- Equipment for operating public transport services, such as ticketing systems, real-time display systems and information equipment as well as tram depots. The vehicle(s) must run on either electricity, green hydrogen (produced using renewable energy) or biogas. For vehicles that use biogas, there must be a contractual agreement that fossil fuels will not be used.
- Trackway, electrical systems and other infrastructure for public transport services. The vehicle(s) must run on either electricity, green hydrogen (produced using renewable energy) or biogas. For vehicles that use biogas, there must be a contractual agreement that fossil fuels will not be used.
- Installation of shore-side power connections/charging points for ferries, ships etc.
- Zero-emission port infrastructure that only uses electricity or green hydrogen (produced using renewable energy), e.g., cranes.
- Infrastructure associated with the use of zero-emission heavy machinery, e.g., charging points and energy stations.

Pollution prevention and control



Waste prevention and reuse:

- Measures that contribute to waste prevention, e.g., setting up a new reuse centre.

Waste collection, processing and treatment:

- Measures that help increase the waste sorting rate at the point of collection, e.g., introducing a collection scheme for a new waste fraction.
- Measures that reduce the transportation requirement associated with collecting waste. Example projects include automated vacuum collection systems, underground waste solutions, or containers that compress waste.

Medium to Dark Green

- ✓ While many eligible projects here deserve a Dark Green shading, other criteria in this category are very broad and hence difficult to assess with respect to their climate impacts.
- ✓ Since landfilling of most waste fractions was prohibited in Norway in 2009, managing these sites are all about reducing their negative impacts for their remaining lifetime – correcting past wrongs to the extent possible.
- ✓ The issuer informs us that carbon capture and storage is for waste incineration only.



- Setting up new waste sorting facilities for which there is a clear ambition from a climate and environmental perspective, e.g., residual waste sorting plants.
- Setting up new waste treatment facilities for which there is a clear ambition from a climate and environmental perspective, e.g., facilities that help increase the material recovery rate.
- Facilities for treating organic waste as a precursor to biogas production. Covers both the construction of new processing facilities and upgrading existing facilities.
- Upgrading existing waste facilities with a clear climate and environmental ambition. Example projects include measures that increase the recycling rate or improve waste quality.
- Measures that reduce methane emissions or leakage at existing landfill sites.
- Measures in the area of carbon capture and storage.

Sustainable water and wastewater management



Separate pipes for surface runoff that carry the surface water to a watercourse/fjord.

Water supply pipes that are replaced at the same time as the separate surface runoff pipes are installed and that use the same route can also be included as part of applications.

- Installations for recovering heat from wastewater.
- Energy recovery from gravity distribution networks.
- Measures at an existing water facility that achieve one of the following: a) Delivers a 20% increase in energy efficiency, b) adapts the facility in response to a need for climate change adaptation, c) reduces the use of chemicals or leakages.
- Measures at existing wastewater facilities that achieve one of the following: a) Delivers a 20% increase in energy efficiency, b) adapts the facility in response to a need for climate change adaptation, c) reduces the use of chemicals or the facility's pollution.

Dark Green

✓ Within the water and wastewater sector, the level of maintenance of existing infrastructure is generally too low, and that whenever maintenance is planned, it is highly needed for public health and climate resilience reasons.

✓ The production of chemicals for use in water and wastewater treatment accounts for a substantial greenhouse gas footprint, meaning that reducing chemicals is a measure to reduce greenhouse gas emissions from the treatment process.



- Facilities or installations that recover plant-available phosphorus from wastewater without using precipitant chemicals. At least 30% of the phosphorus must be able to be recovered. Covers both the installation of new facilities and upgrading existing processing facilities.
- Facilities for treating sludge as a precursor to biogas production. Covers both the construction of new facilities and upgrading existing processing facilities. The sludge must be used to produce biogas to meet the criteria.
- New drinking water or wastewater facilities that meet one of the following criteria: a) The facility is 20% more energy efficient than the previous solution or a likely other solution, or b) the facility is built in response to a need for climate change adaptation, or c) the facility uses less chemicals or has a smaller adverse impact on the local environment.
- Excavation projects that are completed using zero-emission heavy machinery and vehicles (bulk haulage).
- Pipe/cable replacement carried out using no-dig methods.

Environmentally sustainable management of living natural resources and land use



- Measures against pollution on land: Example include measures that reduce runoff from roads, cleaning measures to prevent the spread of microplastics or other measures against local pollution.
- Measures that improve the water quality status classification from ‘good’ to ‘very good’. Other measures that help improve water quality or strengthen biological diversity where the status classification is not relevant will also be considered.
- Sustainable area development: Example projects include major new residential, commercial or recreational developments that are clearly and comprehensively ambitious from a climate and environmental perspective. For KBN to receive information on the management of nature-, climate- and environmental risk, the risk

Medium to Dark Green

- ✓ The definition of a ‘green area’ is based on a subjective assessment.
- ✓ Ecological compensation projects can often be quite controversial. KBN does not screen for these.
- ✓ Sustainable area development covers development projects of various sizes, but where the common denominator is a holistic approach to sustainability. As an example, KBN’s two current projects under this criteria are 1) Repurposing of a court from parking lot to public multi-use space that encourages people to walk or bike and meet, with built-in local stormwater management solutions, and 2) the planning and construction of a new residential area, a school and a kindergarten, designed as a “Zero



and vulnerability assessment for the planning area should be provided.

- Converting an area into a green space. Example projects include compensation for the construction of a road by converting a separate area in another location (ecological compensation). For KBN to receive information on the management of nature-, climate- and environmental risk, the risk and vulnerability assessment for the planning area should be provided.

Emission Neighbourhood” where energy solutions, materials requirements, transport systems etc. are designed for the area as a whole, with the aim of reducing the area’s footprint and motivate residents to a climate friendly lifestyle.

✓ While the criteria contain many good elements, it is occasionally difficult to assess the climate benefit of the actions, hence the Medium to Dark Green shading.

Climate change adaptation



- Measures to manage surface runoff that are not financed by wastewater charges, e.g., opening streams, constructing flood bypasses, local surface runoff disposal measures through artificial swales, etc.
- Protecting buildings, facilities, infrastructure and cultural heritage sites against natural disasters such as floods, landslides, avalanches and storm surges.
- Moving infrastructure or other built structures as a preventative measure to protect against climate-related damage.
- Warnings systems and other emergency preparedness measures in areas with a risk of natural disasters such as floods, avalanches, landslides and storm surges.

Medium Green

- ✓ Construction of green areas in city development projects are very useful to absorb excess water from flooding of natural creeks/ponds or stormwater from heavy rainfalls. Also, green roofs, green walls, urban biotopes, flowerbeds, trees, and parks have a positive effect on reduced noise levels, binding air pollution and strengthens ecological values.
- ✓ Currently there are no fossil fuel-based limitations to the securing or relocation of infrastructure criteria. The projects currently financed includes e.g., securing residential and city centre areas and relocation of infrastructure so that an alternative water source can be accessed, as the previous was very vulnerable to landslides and changing weather patterns (winter droughts and less inflow from glacier). Roads can potentially be included. Airports are not financed by municipalities or regions, and are hence outside the scope of KBN’s financing.
- ✓ On a general basis, municipalities and regions are only permitted to finance investments (defined as tangible assets with an economic lifetime exceeding 5 years) with debt.

Other

- Projects that are highly innovative and solutions that are not yet well known in the market can qualify under “Other”.

Light Green

- ✓ The issuer informs us that this is a little used category. It is given a



Documentation that demonstrates that the project has a significant climate or environmental impact must be provided. As a general rule, the level of ambition for projects under this category has to be similar to the other criteria.

Light Green shade due to uncertain nature of projects in this category.
✓ If external advice is considered to determine eligibility, this category could be Medium Green.

Table 1. Eligible project categories

Background

In February 2020, Norway released updated targets for 2030 to cut emissions by 50-55% from 1990 levels¹¹, and has outlined necessary steps to achieve this through the 'Klimakur 2030' document¹². This document covers targets from the energy, land use, industrial processes and product use, agriculture, land-use change and forestry, and waste sectors. Norway is projected to miss its 2020 emissions reductions target by around 4.5 million tCO₂e and needs fast action to reach the new 2030 goal.

Emissions reductions measures within road transport will make up about one-third of the total Norwegian non-ETS emissions reductions between 2021-2030. This includes the full electrification of personal vehicles and city buses by 2025, the transformation of 50% of the truck fleet being fuelled by hydrogen or electricity, the increased use of biofuel for road transport, as well as improved logistics for trucks. Concurrent investments in charging infrastructure and battery technology for these vehicles are also necessary, as well as considerations for construction materials, operations and maintenance of road and rail infrastructure¹³.

Globally, agriculture, forestry and land use account for around 23% of total human activity caused greenhouse gas (GHG) emissions¹⁴. According to the emission projections from the Norwegian national budget 2020, 20% of GHG-emissions in the non-quota sector in the period 2021-2030 will come from agriculture. To reduce the emissions from the agricultural sector, Klimakur 2030 identified measures related to i.a. improvement of production and resource utilization in agriculture and carbon storage in soil.

The Klimakur 2030 further mentions the need for energy efficiency measures in residential housing. The energy efficiency of buildings is dependent on multiple factors including increasing affluence and expectations of larger living areas, growth in population and unpredictability of weather, and greater appliance ownership and use¹⁵. All of these factors should be considered in the project selection process. Voluntary environmental certifications such as LEED and BREEAM or equivalents measure or estimate the environmental footprint of buildings and raise awareness of environmental issues. These points-based certifications, however, fall short of guaranteeing a low-climate impact building, as they may not ensure compliance with all relevant factors e.g., energy efficiency, access to public transport, climate resilience, sustainable building materials. CICERO Shades of Green assesses all of these factors when evaluating the climate impact of buildings.

Norway's electricity supply is primarily composed of pump and storage hydropower (98%). Norwegian power demand is estimated to increase by 5.8 TWh to account for the electrification of many sectors towards 2030. In 2019, Norway total consumption amongst all sectors was 126 TWh, while in 2030, it is expected consumption will increase to 159 TWh. Considering expansions in generation capacity from wind and hydropower, this will be well

¹¹ <https://www.regjeringen.no/no/aktuelt/norge-forsterker-klimamalet-for-2030-til-minst-50-prosent-og-opp-mot-55-prosent/id2689679/>

¹² <https://www.miljodirektoratet.no/globalassets/publikasjoner/m1625/m1625.pdf>

¹³ <https://energiogklima.no/kommentar/transport-klimakur-rapporten-lite-relevant-for-nokkelsektor/>

¹⁴ https://www.ipcc.ch/site/assets/uploads/2019/08/4.-SPM_Approved_Microsite_FINAL.pdf

¹⁵ <https://www.iea.org/fuels-and-technologies/building-envelopes>



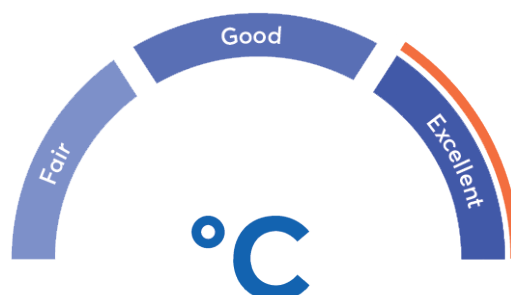
within Norway's expected generation capacity of 174 TWh. Electricity generation is expected to increase until 2022 due to investments in wind power. This additional renewable energy capacity contributes to greater grid decentralization and localization, which enhances grid flexibility and resilience.

Governance Assessment

Four aspects are studied when assessing the KBN's governance procedures: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify eligible projects under the framework; 3) the management of proceeds; and 4) the reporting on the projects to investors. Based on these aspects, an overall grading is given on governance strength falling into one of three classes: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.

KBN has recently in 2020 introduced a quantitative climate target of reducing their emissions by 50% by 2030 relative to 2019 emissions. Sustainability work is comprehensively integrated in KBN and the selection of eligibility criteria is based on independent expert advice. For time efficiency reasons, the selection of eligible project is done through an in-house process, but where environmental competence has veto power. As KBN solely finances a highly regulated and monitored sector, they do not dive into the specific decisions that are made related to e.g., subcontractors or value chains in the specific eligible projects. All projects financed by KBN are subject to the Public Procurement Act (Lov om offentlige anskaffelser), which obliges local governments to consider the environment as well as human rights and social impacts in their procurement processes. Management of proceeds is well aligned with the Green Bond Principles and reporting is excellent, although on a best effort basis. Starting from 2019, KBN is reporting on climate-related risks in line with the TCFD framework. From 2020 onwards, they also report climate-related data to the CDP.

The overall assessment of KBN's governance structure and processes gives it a rating of **Excellent**.



Strengths

KBN as a funder of a variety of projects in Norwegian municipalities faces a challenge when it comes to defining what should be counted as eligible projects for green finance. KBN answers this challenge in a good manner in document no. 7 (see Appendix 1): "KBN Kriteriesett grønne lån – mars 2021", and summarized in table 1. Here, examples, criteria and required documentation is spelled out in details mostly convincing us that green funding from KBN goes towards securing good long-term solutions required for a climate friendly and resistant society in the future.

A project's eligibility is assessed by KBN's Climate Adviser and approved by the Climate Controller thus securing a "green veto" in the selection of projects – a clear strength of the governance structure. In cases of doubt or where Eligibility Criteria are not fully covering the project in question, the final decision is made by KBN's Chief Lending Officer. KBN's Internal Auditor performs an annual review of the allocation of proceeds. The assessments will be publicly available on KBN's website.

When it comes to transparency and reporting, KBN has in place a comprehensive system for allocation and impact reporting that secure a positive sharing of good experiences among investors as well as municipal project owners. The guidelines from TCFD are followed. We see this as a very positive element of the green bond framework.



Weaknesses

We find no material weaknesses in KBN's Green Bond Framework.

Pitfalls

Pitfall of a green bond framework are potential environmental risks. These are enhanced the broader the set of eligible projects is. KBN's list of criteria for eligible projects contains some vaguely defined project types where it is difficult ex ante to judge the climate impacts. Examples are projects that 'reduce pollution' under the Sustainable water and wastewater management category as well as reduced run-off from roads. Also, fossil free harbours will handle many kinds of ships, including fossil fuelled traffic, e.g., highly polluting cruise ships.

The use of biomass and waste for energy purposes are associated with potential pitfalls when it comes to supporting a low carbon and climate resilient future. A potential pitfall of waste incineration projects could be the transportation of waste over long distances to the incineration point and waste streams containing residual plastics. A potential pitfall of biofuel projects could be the use of non-certified wood or wood products. KBN does not currently require wood pellets/chips to be made from certified wood.

KBN does not actively screen for controversial projects. However, the eligibility criteria effectively exclude many of the possible controversial sectors/project types, such as hydropower, wind power, etc. We also note that all large construction projects are subject to environmental impact assessments and public feedback according to national law (The Planning and Building Act, i.e., Plan- og bygningsloven).

Buildings and infrastructure like harbours are uniquely vulnerable to risks from climate change. Increased dangers from wind, precipitation (including snow loads) and flooding should be taken into account before investing in such long standing structures.

The criteria for energy efficiency projects in existing building do not go all the way towards best possible practices as non-passive housing is included among eligible projects. Our grading of this type of projects therefor is 'medium green' – a good grading for projects on the way to a low carbon society, but not quite there yet.

A specific project is likely to have interactions with the broader community beyond the project border. These interactions may or may not be climate-friendly, and thus need to be considered with regards to the net impact of climate-related investments. A typical example is establishment of a municipal centre that will affect the surrounding traffic patterns in unintended ways if not controlled for.

Improved energy efficiency of a dwelling and lower energy costs may induce tenants to increase the indoor temperature, partly offsetting the initial anticipated energy and carbon dioxide savings. It is important that issuers are aware of these potential rebound effects and seek to minimize them.



Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	kbn-green-bond-framework-21	KBN's green bond framework dated March 2021
2	kbn-impact-report-2020	KBN's Environmental impact report 2020. Link
3	kbn-impact-report-2019-in-short	A brief English version of KBN's Environmental impact report 2019
4	2020-impact-report	Spreadsheet showing environmental impacts 2020. Link
5	kbn-arsrapport-2020	KBN's Annual report 2020. Link
6	strategi_2020-2022_1spalte_eng	KBN Strategy: Building a Sustainable Society Integrated report. Link
7	Criteria-document	Criteria Document for Green Loans (updated March 2021). Link
8	Code of conduct - KBN	Code of Conduct (2020). Link
9	Diversity and equality - KBN	Guidelines for Diversity and Equality. Link
10		General Guidelines for Procurement. Link
11		Overall Guidelines for Sustainability. Link
12	The Norwegian Agency for Public and Financial Management (DFØ): Criteria Wizard for Sustainable Public Procurement	Link
13	taxonomy-alignment-assessment-2020	Spreadsheet showing 2020 alignment with proposed technical screening criteria in the EU taxonomy. Link



14	20210310_Oversikt DFØkriterier	Overview of selected DFØ criteria for sustainable procurement.
15	Notat-Paris-Proof-bygg	A document explaining the concept of “Paris proof” buildings. Link



Appendix 2: About CICERO Shades of Green

CICERO Green is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Green.

CICERO Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO Green is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University and the International Institute for Sustainable Development (IISD).

