



KommuneKredit

Green Bond Second Opinion

February 15, 2022

KommuneKredit provides lending and finance leases to Danish municipalities, regions, inter-municipal partnerships and to companies undertaking municipal or regional tasks. KommuneKredit operates as a non-profit organization regulated by a law on credit institutions for local and regional authorities, with the objective of providing cost efficient financing to its clients. All Danish municipalities and regions are members of KommuneKredit and are jointly and severally liable for all KommuneKredit's obligations.

The 2022 green bond framework of KommuneKredit is an update of the 2017 framework, rated Medium Green at the time. The categories covered by the updated framework are: Clean transportation; Green buildings; Sustainable water and wastewater management; Pollution prevention and control; Renewable energy and energy efficiency; and Climate change adaptation. KommuneKredit expects the Energy category to be the largest category alongside Water and wastewater management. They expect a large share of their leasing activities to be in the Clean transport category. The majority of the assets will be new financing, with the possible exemption of the first year (2022), in which KommuneKredit will include refinanced assets across all categories.

CICERO Shades of Green has carried out a light-touch assessment of those eligible activities that are covered by the EU taxonomy against the Technical screening criteria for Substantial contribution to climate change mitigation (not the DNSH criteria). While the activities in the Energy and Clean transportation categories are likely aligned, several of the Water and wastewater activities are likely not aligned due to lack of quantitative criteria. Several activities in other categories are not covered by the EU taxonomy.

While an analysis of the physical climate risk is part of Danish rules and regulations of the municipalities, it is unclear whether the framework can allow for financing of projects with high climate risks. These risks reside with KommuneKredit's customers (members). Secondary impacts of projects on e.g., local transport solutions (access to public transport) and potential rebound effects of energy efficiency investments are also less well covered by the criteria in the framework.

Overall, KommuneKredit has an Excellent governance structure in place. The issuer has set mostly quantifiable selection criteria and requirements for the eligible projects categories, and has a well-defined selection process. The issuer further has solid allocation and impacts reporting practice. KommuneKredit has conducted a high-level assessment of the financial implications of climate-related risks and opportunities to KommuneKredit's business.

Based on the overall assessment of the project types in KommuneKredit's framework, governance and transparency considerations, the green finance framework receives an overall **CICERO Medium Green** shading and a governance score of **Excellent**. The framework could be improved by having more ambitious eligibility criteria in the green buildings and energy efficiency categories.

SHADES OF GREEN

Based on our review, we rate the KommuneKredit'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 KommuneKredit's framework to be **Excellent**.



GREEN BOND PRINCIPLES

Based on this review, this framework is found to be aligned 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 February 2022. 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 KommuneKredit's green bond framework and related policies

[KommuneKredit](#) provides lending and finance leases to Danish municipalities, regions, inter-municipal partnerships and to companies undertaking municipal or regional tasks. KommuneKredit was established in 1898 by a [special Act](#) and is legally organized as a credit association under Danish law with headquarter in Copenhagen. Membership is limited to Danish municipalities and regions. Currently, all local governments - 98 municipalities and 5 regions - are members. KommuneKredit is supervised by the Ministry for Industry, Business and Financial Affairs and is exempt from the EU's banking directive, which implies that KommuneKredit is not subject to EU regulation of credit institutions. KommuneKredit operates as a non-profit organization with the objective of providing cost efficient financing to its clients. Members of KommuneKredit are jointly and severally liable for all KommuneKredit's obligations.

Environmental Strategies and Policies

Being a credit institution, the most important environmental impacts are impacts related to the lending portfolio. KommuneKredit supports the green transition ambitions of the municipalities and regions by providing funding at the lowest possible cost. KommuneKredit funds green loans by issuing green bonds. A previous framework for green bonds was issued in 2017 and was shaded Medium Green. From 2017 to year-end 2020, KommuneKredit's Green Committee had by year end 2020 approved a total of 504 green loans worth DKK 22.4 billion. Of these, 94 loans with a total project cost of more than DKK 3 billion were approved in 2020. Compared to 2019, 2020 saw a slight increase in green loan volume approved for financing projects in district heating and water and wastewater management, which constitutes the majority (>90%) of the green loans. KommuneKredit saw a small decrease in green loans granted for public transportation and in 2020, they had few green loans in the energy efficiency category.

Following from its Strategy 2025, KommuneKredit is committed to an ambitious sustainability approach aiming at high standards in operational and development activities as well as in its reporting. It is a strategic priority to integrate sustainability throughout the organization and the association has formulated sustainability development initiatives for the coming years, including: a) improve the digital support of the green lending process, b) strengthen the association's work with ESG data, c) capacity building within the area of sustainable finance, including ensuring the right competencies and resources for sustainable finance customer advice, and d) mapping the climate data of KommuneKredit's loan portfolio.

In 2021, the association has, with assistance from external sustainability consultants, updated its ESG data collection methodology and strengthened the ESG workflow. The ESG data collection method has been updated to follow the Danish Business Authority's new guidelines for ESG key figures (May 2021) as well as "ESG key figures and key figures in the annual report" published by The Danish Finance Society, Nasdaq Copenhagen and FSR - Danish auditors (as of December 2020). In 2020, for the second year in a row, KommuneKredit received a best-in-class ESG rating from the Institutional Shareholder Services (ISS) ESG placing them in the ESG Prime category within their industry. Companies are categorized as Prime, if they achieve or exceed the sustainability performance requirements defined by ISS ESG for a specific industry in their ESG Corporate Rating. The ISS ESG rating scale ranges from D- to A+. Since 2018, KommuneKredit's rating has improved from first D+ to C in 2019 and subsequently from C to C+ in 2020.



KommuneKredit reports scope 2 CO₂ emissions of 16 tCO₂ in 2020, down from 18 tCO₂ in 2019. Scope 1 emissions are insignificant in comparison and are therefore not reported. The scope 2 emissions, which relates to the consumption of energy, have thus slightly decreased in 2020. The decrease is primarily ascribed to the fact that the employees have been working remotely from home. All the electricity is from renewable energy resources (the offshore wind farm Rødsand II).

KommuneKredit supports recognized principles of responsible corporate governance, the UN 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDG), UN Climate Targets for Reduction in Greenhouse Gas Emissions (the Paris Agreement), Denmark's climate targets and EU Sustainable Financing Action Plan. The association is moreover committed to a number of principles that guide its work with social responsibility and sustainability in its Policy for Corporate Social Responsibility and Sustainability, which on an annual basis is implemented in environmental, social and governance goals that are decided by the Executive Board and overseen by the sustainability function for example specific goals aimed at minimizing the company's own climate impact and supporting the ambitions of its members for sustainable change through sustainable finance solutions. Goal achievement is reported upon on an annual basis in the company's responsibility report.

KommuneKredit has a detailed green bond impact reporting based on recommendations from the Nordic position paper¹. KommuneKredit's share of impacts of disbursed green loan over the period 2017-2019 includes 1,732 ktCO₂ reductions/avoidance from district heating, 0.083 ktCO₂ from water management projects, 2.8 ktCO₂ from clean public transportation and 3.8 ktCO₂ from energy efficiency measures.

Sustainability, including environmental and social responsibility, is a factor in any procurement process when selecting potential suppliers and choosing the supplier with whom an agreement is concluded. As sustainability can take widely differing forms depending on the different industries in which the suppliers operate, it is up to the department responsible for purchasing to assess whether a supplier has specifically committed itself to a relevant sustainable agenda. The purchasing department should, as a minimum, obtain documentation in one form or another from the supplier for its commitment/efforts within sustainability.

Use of proceeds

An amount equal to the net proceeds of the green bonds will finance or refinance, through loans or financial leasing agreements, in whole or in part, investments undertaken by the customer of KommuneKredit that promote the transition towards a low-carbon, climate resilient and environmentally sustainable society ("Green Loans"), in each case as determined by KommuneKredit in accordance with the green loan categories defined in table 1 below. The categories covered by the framework are: Clean transportation; Green buildings; Sustainable water and wastewater management; Pollution prevention and control; Renewable energy and energy efficiency; and Climate change adaptation.

Historically, the majority of proceeds have been going to the Energy category including renewable energy and energy efficiency (approximately 60%) and water management (approximately 30%). Based on the current green loan portfolio, approximately 60% of the Energy category is renewable energy (including biomass), 30% is district heating, and 5% is a mix of renewable energy and district heating. Going forward, KommuneKredit expects the Energy category to be the largest category alongside Sustainable water and wastewater management. They expect a large share of their leasing activities to be in the Transport category. The smallest category will potentially be Climate change adaptation, also due to it being a part of other categories. The majority of the assets will be new financing, with the possible exemption of the first year (2022), in which KommuneKredit will include refinanced assets across the categories.

¹ [NPSI Position paper 2020 final.pdf \(kommunekredit.dk\)](#) (Green Bond Impact Report | KommuneKredit)



Green loans will form a portfolio of assets (“Green Loan Portfolio”), used as basis for green bond financing. The green loans are pre-financed by KommuneKredit until the total disbursed green loan volume is sufficient to justify a green bond issue.

All loans and financial leasing agreements granted to a customer as a green loan under KommuneKredit’s green bond framework will be in accordance with the executive orders regulating lending to the Danish regions and municipalities as well as relevant national sector legislation pertaining to each green loan category.

Green bond net proceeds may be used for both existing and new green loans financed by KommuneKredit. New financing is defined as the committed volume of green loans during the reporting year. Refinancing is defined as the committed volume of green loans before the reporting year. This approach follows the recommendations for a complementary approach from the Nordic position paper. Furthermore, KommuneKredit has the ambition to additionally report according to the definition in the latest version of the EU GBS². The distribution between new financing and refinancing, according to both approaches, will be reported on in KommuneKredit’s annual Green Bond Impact Report.

Direct fossil fuel heating is excluded from green financing under the framework (with the exemption of back-up generators). There can, however, be investments in improving existing infrastructure used for district heating, which currently contains substantial fractions of fossil fuel-based heating³.

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 process of evaluating and selecting eligible green loans under KommuneKredit’s green bond framework comprises the following steps:

1. The customer contacts the KommuneKredit Lending and Leasing Department with a request for a lease or loan proposal. The department will, in their review, then consider if the application made by the customer could potentially meet the criteria of a green loan. If the project description is considered to have such potential, the loan or lease receives an internal status as a potential green loan.
2. A customer with a potential green loan will be notified and asked to submit a standardized green loan form for the relevant green loan category. If further information on the potential green loan is required, the Sustainability Finance team will contact the customer in order to obtain the necessary information.
3. The Sustainable Finance team will evaluate the potential green loans’ compliance with the green loan categories presented in KommuneKredit’s green bond framework. If the potential green loan is

² At the time of publication, the proposed European Green Bond Standard published by the European Commission (“European Green Bond Standard” or “EUGBS”) in July 2021, request issuers to report on a) the share of financing (i.e., the allocated amount to projects financed after bond issuance) and b) the share of refinancing (i.e., the allocated amount to projects financed before bond issuance). According to this definition, all loans will be classified as refinancing.

³ However, the last two coal power plants in Denmark will be closed in 2028 and 2030, respectively.



considered to be in accordance with the green loan eligibility criteria, the potential green loan receives a new internal status as a preliminary green loan.

4. A list of the preliminary green loans is presented to KommuneKredit's Green Bond Committee ("GBC"). The GBC will meet 2-4 times a year or when otherwise considered necessary. The GBC is solely responsible for the decision to acknowledge the loan or lease as green and in line with the green loan criteria. A decision to include a green loan in the green loan portfolio, making it available for green bond funding, will require a consensus decision by the GBC. If it comes to the knowledge of the GBC that a project is facing a controversy, the topic will be discussed, and this can result in the exclusion of the concerned project from the portfolio. All decisions made by the GBC are documented and filed.

The KommuneKredit GBC consists of at least four members, hereof two external members and two internal KommuneKredit members. The GBC members shall be appointed by KommuneKredit's Management.

External members of the GBC shall be employed by, or in a sector related to, the Danish local government sector and targeted towards individuals with relevant expert knowledge of the lending sectors proposed within this green bond framework and with considerable knowledge of the environment and/or climate changes and/or climate adaptation. One of the internal members will be appointed by KommuneKredit's Management Board and represent KommuneKredit's Management while the other internal member will be from KommuneKredit's Treasury and Sustainability Department.

Management of proceeds

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

An amount equal to the green bond net proceeds will be credited a separate portfolio, allowing KommuneKredit to track the green bond net proceeds. The green bond portfolio will finance the green loans. The outstanding notional amount of KommuneKredit's green loans are tracked under the green loan portfolio.

KommuneKredit intends to build up principal in the green loan portfolio before a green bond is issued. However, if a customer makes a larger unexpected redemption of a green loan, and the green bond portfolio is temporarily larger than the green loan portfolio, the residual will temporarily be invested in accordance with KommuneKredit's general investment policy. The ambition is to maintain an adequate outstanding notional in the green *loan* portfolio to more than match the outstanding notional in the green *bond* portfolio even with a suitable buffer to absorb unexpected redemptions.

Temporary holdings is invested in liquid fixed-income securities issued by OECD Zone A country risk classified governments, states, regional governments, multilateral development banks, and financial institutions rated 'AA-' or higher, and will not be placed in entities with a business plan focused on fossil energy production or infrastructure, nuclear energy generation, research and/or developments within weapons and defense, potentially environmentally harmful resource extraction (such as rare-earth elements or fossil fuels), gambling or tobacco.

For the avoidance of doubt, green projects financed under the previous green bond framework will constitute a separate green loan portfolio ("Green Loan Portfolio 2017"). The Green Loan Portfolio 2017 is financed with a portfolio constituting green bonds issued under the previous 2017 green bond framework.



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.

To enable investors and other stakeholders to follow the development, to monitor the performance and to provide insights into prioritized areas of the green loans funded by green bonds, KommuneKredit commits to annually and until maturity of the green bonds issued provide transparent reporting (“Green Bond Report”). The first report will be published in the first half of 2023. The Sustainable Finance Team drafts the report, with head of Treasury and Sustainability being responsible. The management board makes the final approval. The Green Bond Report will be linked to individual bonds, will report on a category level, and will be made available on KommuneKredit’s website and include both allocation and impact reporting. Allocation reporting will include the following information:

- A summary of KommuneKredit’s green bond developments
- The outstanding amount of green bonds issued, presented per type of green loan category
- The distribution between new financing and refinancing
- The total aggregated proportion of green bond net proceeds used per green loan category
- Mapping of the contribution to the EU environmental objectives, on a category level

KommuneKredit’s impact reporting provides a list of green loans, including allocated amount and a brief project description alongside a selection of project examples financed under the framework and discloses the associated environmental impact of the green loans, based on KommuneKredit’s financing share. The impact report also discloses which environmental objectives the green loans contribute to. As KommuneKredit can finance a large number of smaller green loans in the same green loan category, impact reporting will, to some extent, be aggregated. The impact assessment is provided with the reservation that not all related data can be obtained and moreover that reported impact is the customers’ ex ante estimate of impacts.

A portfolio approach is applied in the impact reporting. A dynamic portfolio path is applied where a breakdown of impact attributable to each green bond using a simple pro-rata allocation is provided, meaning a proportionate allocation of impact per issuance to equal green bond volume.

The impact assessment will, where applicable, be based on the impact reporting principles of the Nordic Public Sector Issuers Position Paper on Green Bond Impact Reporting and, where applicable, be based on the impact indicators presented in the framework. To the extent feasible, the impact report will include a section on methodology, baselines and assumptions used in impact calculations.

KommuneKredit will on an annual basis, assign an independent external party to provide an annual statement that an amount equal to the Green Bond net proceeds has been allocated to loans in line with the framework. The green bond framework and the second party opinion will be publicly available on KommuneKredit’s website together with the independent external party annual statement and the annual Green Bond Impact Report once they have been published.



3 Assessment of KommuneKredit's green bond framework and policies

The framework and procedures for KommuneKredit'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 KommuneKredit 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 KommuneKredit's green bond framework, we rate the framework **CICERO Medium Green**.

Eligible projects under the KommuneKredit'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".



Category	Eligibility criteria. In parathesis activities according to taxonomy regulation Annex 1 ⁴ .	Assessment of alignment with the EU taxonomy technical screening criteria for substantial contribution to climate change mitigation	Green Shading and some concerns
Clean transportation 	<ul style="list-style-type: none"> Urban and suburban transport vehicles for passengers and road passenger as well as passenger cars and light commercial vehicles with zero direct (tailpipe) CO₂ emissions. (6.3, 6.5) Infrastructure required for zero tailpipe CO₂ operation of zero-emissions road transport and operating urban transport. (6.15) Sea and coastal passenger water vessels with zero direct (tailpipe) CO₂ emissions. (6.11) Infrastructure required for zero tailpipe CO₂ operation of vessels or the port's own operations. (6.16) Electrified trackside infrastructure and associated subsystems. (6.14) 	<p>For the five listed taxonomy activities: Likely aligned.</p>	<p>Dark Green</p> <ul style="list-style-type: none"> ✓ Electrification and the use of hydrogen are key avenues for decarbonizing the transport sector. ✓ According to the issuer, the infrastructure is not dedicated to the transport of fossil fuels. ✓ Charging stations for electric vehicles may also be used by hybrid vehicles, thus involving some fossil fuel elements. ✓ Zero emission port operations will also support ships running on fossil fuel. ✓ For infrastructure projects, efforts should be made to reduce construction phase emissions as well as life cycle impacts of chosen materials.
Green buildings 	<p>New buildings (built in or after 2021) classified as low energy buildings (Danish: 'lavenergi bygning') which is (7.1)</p> <ul style="list-style-type: none"> Designed to achieve a net primary energy demand that is at least 10% lower than the level required by the Danish building regulation (BR18); or 	<p>New buildings: Likely partially aligned, difficult to assess DGNB and BREEAM buildings.</p> <p>Renovation: Likely aligned.</p>	<p>Light Green</p> <ul style="list-style-type: none"> ✓ Although this category contains many good elements, is also has criteria that are not very strong or uncertain energy wise. In addition, there are no systematic considerations of life cycle emissions from

⁴ https://ec.europa.eu/finance/docs/level-2-measures/taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf



<ul style="list-style-type: none"> Required to have or are designed and intended to receive a certification in any of the following building certification schemes at the defined threshold level or better: DGNB “Gold”, The Nordic Swan Ecolabel certification, BREEAM “Very Good”, LEED “Good”. 	<p>Energy efficient equipment: Likely aligned.</p>	
<p>Renovation of existing buildings that (7.2):</p> <ul style="list-style-type: none"> Meet the energy performance requirements in the applicable national and regional building regulations for major renovations; or Lead to an overall reduction in primary energy demand per square meter and year (kWh/m²/year) by at least 30% compared to the pre-investment decision. 	<p>Renewable energy: Likely aligned.</p> <p>Energy efficient projects: Likely not aligned as ESCO projects allows not aligned projects.</p>	<p>new construction, renovation nor energy efficiency measures.</p> <p>✓ According to the issuer, direct fossil fuel heating is excluded (with the exemption of back-up generators). Most often buildings are or will be connected to the district heating system. Today, 61% percent of district heating is considered to be green energy, the rest comes from: 8% waste incineration, 10% oil and coal and 18% natural gas⁷.</p>
<p>Energy efficient equipment in one of the following individual measures (7.3):</p> <ul style="list-style-type: none"> addition of insulation to existing envelope components, such as external walls (including green walls), roofs (including green roofs), lofts, basements and ground floors (including measures to ensure air-tightness, measures to reduce the effects of thermal bridges and scaffolding) and products for the application of the insulation to the building envelope (including mechanical fixings and adhesive); replacement of existing windows with new energy efficient windows; 	<p>Existing buildings: Likely aligned.</p> <p>However, formally we lack a government decision on what constitutes the top 15% of the Danish building stock. The issuer informs us that they will use 95 kWh/m²/year added 2,200 kWh/year divided by the heated floor area as a limit for the top 15% of the national or regional building stock until an official level is announced. It is expected that EPC A and EPC B buildings will be part of the top 15%⁶. We consider this “adequate evidence”.</p>	<p>As of 2023, a life-cycle assessment (LCA) requirement will be introduced for all new construction. For new construction over 1000 m² a requirement for a CO₂ threshold is introduced corresponding to 12 kgCO₂e/ m²/year seen over a period of 50 years⁸.</p> <p>✓ The listed building certification criteria reflect a high environmental standard, however the points-based system of voluntary certifications like DGNB and BREEAM may not guarantee low climate impact. These certification schemes do not impose energy efficiency thresholds.</p> <p>✓ ESCO projects under the category Energy efficiency projects are not possible to assess beyond the general description provided</p>

⁶ [Realkredit Danmark A/S Endelige vilkår serie 12U \(rd.dk\)](https://www.realkredit.dk/Endelige_vilkar_serier/12U_rd.dk)

⁷ <https://www.bolius.dk/fjernvarmen-er-stadig-kun-lysegroen-90847>

⁸ In a limited survey reported by Build - Department of Construction, Urban and Environment, Aalborg University last year, the researcher found a median of 9.5 kg CO₂e/m²/year for 60 different buildings ranging from single-family houses to apartments and offices.



- replacement of existing external doors with new energy efficient doors;
- installation and replacement of energy efficient light sources;
- installation, replacement, maintenance and repair of heating, ventilation and air-conditioning (HVAC) and water heating systems, including equipment related to district heating services, with highly efficient technologies.

Renewable energy technologies in one of the following individual measures, if installed on-site as technical building systems (7.6):

- solar photovoltaic systems and the ancillary technical equipment;
- solar hot water panels and the ancillary technical equipment;
- heat pumps and the ancillary technical equipment;
- solar transpired collectors and the ancillary technical equipment;
- thermal or electric energy storage units and the ancillary technical equipment;
- high efficiency micro CHP (combined heat and power) plant;
- heat exchanger/recovery systems.

Energy efficient projects where:

- The whole initiative constitutes an ESCO⁵ project
- The initiative is part of an ESCO project.

(e.g., profitable energy saving projects). It is estimated that on average the CO₂-reduction in Danish ESCO-projects to date is in the range of 20 – 40%⁹, but the criteria does not guarantee this going forward.

- ✓ We note that from a climate perspective, refurbishment is preferred before new constructions. 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 degree C’ target. One of the criteria for major renovation is aligned with this target.
- ✓ The Danish energy performance requirement in the building regulation for renovation of existing buildings are: 1) The need for supplied energy must be reduced by at least 30.0 kWh/m²/year. 2) The building's energy consumption after the renovation must be <70.0 kWh/m²/year added 2,200 kWh/year divided by the heated floor area. For offices, schools, institutions and other buildings the limit is 95 kWh/m²/year added 2,200

⁵ ESCO-projects are projects where an Energy Service Company (ESCO) provides energy saving solutions to the customers with the overall aim of achieving energy cost reductions.
<https://sparenergi.dk/offentlig/bygninger/esco/introduktion-til-esco>

⁹ <https://new.siemens.com/dk/da/produkter/bygningsteknologi/esco-og-energiefterbejling/hvad-er-esco.html>



Existing buildings (for buildings built before 2021) with dedicated energy management systems in place, proven by meeting one of the following criteria (7.7):

- Buildings with an Energy Performance Certificate (EPC) with energy class A.
- Buildings otherwise determined to belong in the top 15% of the national or regional building stock through e.g., a specialist study.

kWh/year divided by the heated floor area.
3) There must be a share of renewable energy in the total energy supply to buildings. This last requirement is met for all buildings heated by district heating and also for buildings that have additional contributions from wind power, solar cells, solar heat or heat pumps.

Sustainable water and wastewater management



- Water collection, treatment and supply systems, as well as renewal which reduces energy consumption or environmental impacts or improves the water quality. This also includes measures to reduce water hardness and avoidance of limescale deposits. (5.1, 5.2)
- Facilities and technologies designed to treat, distribute and conserve water, such as water purification processes, improved drinking water quality, improved reliable fresh water supply, water loss prevention and increased water use efficiency. (5.1, 5.2)
- Land procurement for protecting of groundwater wells from pollution.
- Facilities, systems and technologies designed for wastewater collection (sewer network) and treatment, including capacity expansion and upgrades reducing energy consumption (5.3, 5.4)
- Local rainwater harvesting and utilization systems (LAR and LUR)

Likely not aligned due to lack of quantitative criteria for several of the activities like construction and renewal of water collection, treatment and supply systems, facilities and technologies designed to treat, distribute and conserve water, such as water purification processes, improved drinking water quality, improved reliable fresh water supply, water loss prevention and increased water use efficiency.

Anaerobic digestion of sewage sludge: **Likely aligned.**

Land procurements and rainwater harvesting are **not covered** by the EU taxonomy.

Light to Medium Green

- ✓ Within the water and wastewater sector, the level of maintenance of existing infrastructure is generally too low. Whenever maintenance is planned, it is highly needed for public health and climate resilience reasons.
- Several of the activities in this category are difficult to assess due to lack of quantitative criteria. However, activities like using sewage sludge as biomass, rainwater harvesting, and separation of wastewater and rainwater are likely to have a positive climate impact.
- ✓ The climate impact of water treatments, conservation measures and avoidance of limescale deposits are uncertain, although in some parts of Denmark, water softening due to lime scale deposits are considered necessary as it prolongs lifetimes, reduces energy emissions and results in fewer emissions of chemicals. The climate impact



- Anaerobic digestion of sewage sludge treatment, resulting in the production and utilization of biogas and that meets the following criteria (5.6):
 - A monitoring and contingency plan is in place in order to minimize methane leakage at the facility
 - The produced biogas is used directly for the generation of electricity or heat, or upgraded to bio-methane for injection in the natural gas grid, or used as vehicle fuel.

of land procurements to avoid or reduce water pollution and rainwater harvesting activities is also uncertain.

- ✓ 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.

Pollution prevention and control



- All separately collected and transported non-hazardous waste that is segregated at source and is intended for preparation for reuse or recycling operations. (5.5) Separately collected and transported non-hazardous waste that is segregated at source is **likely aligned**.
- Recycling facilities, including prevention, collection, treatment and processing of all types of waste, with the purpose to re-use and minimizing the amount of waste to landfill, bringing back valuable raw material to the market (5.9) Recycling **likely aligned** since the practice in Denmark is that minimum 50% is converted into secondary raw materials. This follows from the Statutory Order on Waste¹⁰.
- Improvements of existing waste-based energy facilities, where waste incineration follows a waste hierarchy to ensure that as much of the waste as possible is reused and recycled before being converted to energy which is then used in district heating. Waste-to-energy is **not included** in the list of activities that can be considered as sustainably by making a substantial contribution to climate change mitigation.
- Carbon capture facilities and integration of captured CO₂, where (5.12): CO₂ capture facilities **likely aligned**. Note that transport of CO₂ is not included.

Light to Medium Green

- ✓ While some eligible projects may deserve a Dark Green shading, other criteria in this category are very broad and hence difficult to assess with respect to their climate impacts.
- ✓ Waste prevention, re-use and recycling are important elements of a low carbon future.
- ✓ While incineration of waste to produce energy is a more climate friendly solution than landfilling, it is not fully in line with a low carbon future.

¹⁰ Affaldsbekendtgørelsen, BEK nr 2159 af 09/12/2020



- appropriate leakage detection systems are implemented and;
- a monitoring plan for the injection facilities is in place

**Energy
(Renewable
energy and
Energy
efficiency)**



- District heating distribution, pipelines and associated infrastructure for an energy efficient distribution of district heating, demonstrated through compliance with the EU Energy Efficiency Directive¹¹. System modifications to lower temperature regimes or advanced pilot systems (such as control and energy management systems and Internet of Things) are eligible without a specific threshold (4.15)
- Solar energy technologies, such as Photovoltaic systems (PV) and Concentrated Solar Power (CSP) (4.1, 4.2, 4.21).
- Facilities producing heat from solar thermal heating technology (4.21)
- Electric heat pumps that (i) meet energy efficiency requirements in the EU Eco-design Framework Directive and is (ii) below the refrigerant threshold (GWP) of 675. (4.16)
- Geothermal energy generation facilities and geothermal heating systems that operate at lifecycle emissions lower than 100gCO₂e/kWh (4.22)
- Facilities producing heat from biomass, biogas or bio liquids provided that the greenhouse gas emission savings from the use of biomass are at least 80% in relation to the GHG emission saving methodology and

The activities in this category are **likely aligned**.

Medium Green

- ✓ In this category some activities are Dark Green (e.g., renewable energy, heat pumps) while others are Light Green (e.g., district heating with fossil fuels and waste as fuel).
- ✓ District heating plants in Denmark produce heat and electricity for 1.7 million households, 64% of all Danish homes (2019 figures). Approximately 40% of the energy mix in the country's district heating system is currently, however, fossil fuels, mainly coal and gas¹². Also, waste fractions in waste-to-heat systems will contain plastics, and thus contribute to fossil-based CO₂ emissions. The plan is to have fossil free district heating by 2030.
- ✓ Be aware of potential rebound effects following energy efficiency improvements. The criteria do not explicitly prohibit efficiency measures in fossil fuel-based systems. Utilizing waste heat is energetically sound but may lock in unwanted technologies if the heat source is running on fossil fuels.

¹¹ Compliance means that the system uses at least 50% renewable energy or 50% waste heat or 75% cogenerated heat or 50% of a combination of such energy and heat.

¹² <https://www.danskfjernvarme.dk/maerkesager/for-kommuner-subsection/v%c3%a6rd-at-vide>




	<p>relative fossil fuel comparator set out in Annex VI to Directive (EU) 2018/2001 (4.24)</p> <ul style="list-style-type: none"> • Agricultural biomass used in the activity complies with the criteria laid down in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001. Forest biomass used in the activity complies with the criteria laid down in Article 29, paragraphs 6 and 7 of that Directive (4.24) • Facilities that produce heat using waste heat, such as excess energy from data centers (4.25) • Facilities storing thermal energy (4.11) 		<ul style="list-style-type: none"> ✓ Some types of bioenergy can be unsustainable. The issuer informs us that the biomass is either from wood chips, wood pellets or straw. All Danish energy companies have signed the Industry Agreement on Sustainable biomass with 8 criteria guiding the sourcing of the biomass. This is supported by 3 approved certification schemes: FSC, PEFC and SBP. According to the issuer, they will explicitly ask whether the biomass is sustainably sourced. ✓ Construction of energy wells may lead to heavy mineral pollution if not managed carefully.
<p>Climate change adaptation</p> 	<p>Investments to strengthen an asset or activity to withstand identified physical climate risks over its lifetime, such as adaptation measures aimed at reducing flood risks, e.g., rainwater drainage systems, lake and stream management, coastal protection such as drains, paving and elevated quayside.</p>	<p>Not covered by the EU taxonomy as a climate change mitigation activity.</p>	<p>Medium Green</p> <ul style="list-style-type: none"> ✓ The wideness of this category renders it Medium Green. ✓ Buildings and other infrastructure are meant to last for a long time, exposing them to higher climate change physical risks than more short-lived structures. Climate adaptation actions can mitigate these risks. ✓ The issuer is encouraged to assess life cycle climate footprint impacts of the chosen solutions.

Table 1. Eligible project categories



Background

The Danish Government has placed the green transition at the heart of its policy with, among other things, a national climate goal to reduce greenhouse gases by 70% by 2030, relative to 1990 levels. With the adoption of a national Climate Act in December 2019, the target has become binding. The climate ambitions of the regional authorities are high too with an overarching climate goal to reduce CO₂ emissions by 75% by 2030. In addition, the municipalities have committed to indicate how they plan to adapt and improve resilience towards climate change based on expected climate scenarios on short, medium and long-term using as a minimum an IPCC's medium scenario for emissions.

Clean transportation

The transport sector is one of the largest emitters of greenhouse gases in Denmark, where most of the sector's emissions are linked to road transport. In order to reach ambitious emission targets by 2030, reductions in the transport sector are essential. Therefore, major investments are needed in the electrification of cars, buses and trains and in infrastructure supporting the transformation. For major investments in infrastructure, the Danish Planning Act requires environmental assessments to be carried out and climate protection is moreover an integrated part of the construction process. For other investments, Danish municipalities normally conduct a screening, which specifies whether an environmental assessment has to be completed. In general, the Danish environmental legislation is rather extensive, which, inter alia, originates from EU legislation and other international legislation in this field.

Green buildings

Buildings make a significant contribution to society's climate impact, especially in the production of building materials and in energy consumption for operation. Denmark has one of the highest shares of private households that are connected to district heating in the EU. There are still optimization opportunities in the overall building design and in cold bridges, installations and constructions. In recent times, voluntary certification schemes, in particular DGNB and the Nordic Swan Ecolabel certification, have gained more traction, and more recently, Life Cycle Analysis has become more prevalent. With the National Strategy for Sustainable Construction (2021), it was announced that from 2023 there will be a requirement for LCA for all buildings, and there will be a limit value for buildings over 1000 m² and a "CO₂ class" will be introduced with a lower limit value.

Sustainable water and wastewater management

The Danish government has an ambition for the water sector to be climate neutral at latest by 2030. Investments in water collection, treatment and supply systems contribute to energy and GHG emissions savings as well as securing and optimized water supply in Denmark. Securing the groundwater resource and preventing water losses is a targeted and continuous task for the water companies. The supply of drinking water in Denmark, in contrast to nearly all other countries, is based 100 per cent on groundwater. Water treatment of groundwater usually undergoes a simple water treatment consisting of oxygenation and filtration before sent out to consumers as drinking water. In certain parts of Denmark, water treatment processes include water softening due to intense lime content. The Danish water sector is regulated through a larger legal complex, all of which has references to the environmental protection act and the water sector law. Investments in wastewater and sludge treatment systems may contribute to both energy/GHG savings and renewable energy production by making use of by-products from the wastewater treatment process. Additionally, sustainable and efficient management of water and wastewater treatment contribute to other positive environmental effects related to water resources and pollution. The wastewater companies also work to install measures for climate adaptation.



Pollution prevention and control

In Denmark, the EU Waste Directive is implemented in a number of collection schemes for recyclable waste, a steadily increasing degree of utilization of energy by incineration of waste through establishing district heating systems and utilization of flue gas condensation, as well as a ban on landfilling of organic waste since 1999. In addition, taxes have been imposed on incineration of fossil waste to minimize the climate impact of incineration. Denmark now faces a new threshold induced by EU's objectives and requirements for member states as well as the national legislation for waste management plans and ambitions to reduce climate impact and promote circular economy in waste management from citizens. Combined, this has increased the demands on the municipalities for increased recycling. The Danish parliament has agreed on a climate plan for a green waste sector and circular economy. Moreover, the Danish Waste Association has drawn up a strategy to secure a climate neutral waste sector by 2030. The Danish waste sector is primarily regulated by the Statutory Order on Waste, which is based on the EU Waste Directive. Furthermore, the directives concerning waste incineration plants and landfills have been implemented in separate executive orders. The Waste Directive establishes the "waste hierarchy", wherein waste prevention is preferred, followed by reuse, recycling, other recovery (incineration) and at the end of the hierarchy is disposal (landfill).

Energy

In Denmark district heating is seen as a future-proof and flexible collective heat supply, that is distributed to 1.8 million households (approximately 64% of all households) through more than 60,000 kilometers of district heating pipes. Construction and modification of production facilities and distribution networks in the district heating area must be approved by the municipal council, where the most socio-economic advantageous projects will be approved. This requires assessment, screening and most often an environmental assessment of the project. Within renewable energy, Life Cycle Analysis is performed on a voluntary basis. However, through a project proposal, the district heating company will always try to optimize the lifetime costs and environmental impact over a 20-year period (costs for establishment and operation and possible disposal) as it affects the socio-economics of the project and thus the authorities' approval of the project. Denmark has just decided to reduce the waste incineration capacity by 30%¹³.

Climate change adaptation

In Denmark climate adaptation measures is widely related to water and flood risks. In 2013, all Danish municipalities has committed to make plans for climate adaptation measures. With the Danish climate initiative DK2020, which is a partnership between Local Government Denmark (LGDK), Danish Regions and Realdania, 95 out of 98 Danish municipalities have committed to developing climate action plans in line with the objectives of the Paris Agreement. Herein, the municipalities have committed to indicate how they plan to adapt and improve resilience towards climate change based on expected climate scenarios on short, medium and long-term using as a minimum an IPCC's medium scenario for emissions.

EU Taxonomy

In April 2021, EU published its delegated act to outline proposed criteria for climate mitigation and adaptation, which it was tasked to develop after the EU Taxonomy Regulation entered into law in July 2020¹⁴.

The Taxonomy regulation contain six environmental objectives¹⁵. Any eligible activity must substantially contribute towards one or more of these objectives, while at the same time not significantly harm any other environmental objective.

¹³ <https://www.kl.dk/media/25893/klimaplan-for-en-groen-affaldssektor-og-cirkulaer-oekonomi-16-juni-2020.pdf> (p.10)

¹⁴ [Sustainable finance taxonomy - Regulation \(EU\) 2020/852 | European Commission \(europa.eu\)](#)

¹⁵ The objectives are: Climate change mitigation; Climate change adaptation; Sustainable use and protection of water and marine resources; Circular economy and waste prevention and recycling; Pollution prevention and control; Protection and restoration of biodiversity and ecosystems.



Furthermore, the taxonomy defines sustainable economic activities through categorization, Technical Screening Criteria (“TSC”), Do-No-Significant-Harm criteria (“DNSH”) and minimum safeguards¹⁶. The mitigation criteria in the EU taxonomy includes specific thresholds for several activities relevant for KommuneKredit¹⁷.

Where an activity as determined in the taxonomy corresponds to an activity in KommuneKredit’s framework, CICERO Green has assessed eligible projects against the climate change mitigation technical screening criteria in the delegated acts published in April 2021. We find the two most important categories in the framework, Energy (more specifically district heating) and Sustainable water and wastewater management to be likely aligned and likely not aligned, respectively. The non-alignment of the water and wastewater management criteria is due to a lack of quantification of the criteria for several of the activities like construction and renewal of water collection, treatment and supply systems, facilities and technologies designed to treat, distribute and conserve water, such as water purification processes, improved drinking water quality, improved reliable fresh water supply, water loss prevention and increased water use efficiency. The category also contains activities (rainwater harvesting and land procurement) not covered by the taxonomy. A similar lack of quantified criteria also makes the Pollution prevention and control category difficult to assess vis a vis the taxonomy. The Energy efficiency category allows for projects not aligned with the taxonomy, as does some of the sub-activities under the Green building category. On the other hand, we find that the example activities listed under the categories Clean transportation and Energy efficient equipment and Renewable energy projects as well as Renovations to be likely aligned with the taxonomy.

CICERO Green has not conducted an assessment of the DNSH criteria or of the minimum safeguards (social aspects) of the EU Taxonomy. Comments on likely alignment of the activities covered by the framework are given in Table 1.

Governance Assessment

Four aspects are studied when assessing the KommuneKredit’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.

KommuneKredit’s clients are all municipalities and regions, which are directly dependent on national policies for the different sectors. KommuneKredit’s sustainability goals are covered in their Strategy 2025. The Strategy is overarching and quite general, but unambiguously in support of promoting sustainable development. It is however difficult to quantify the progress towards such general goals, although sustainable activities are reported, and detailed impact reporting quantifies the climate impacts of each green loan.

KommuneKredit has a solid selection process. In addition, KommuneKredit has its own internal sustainable procurement policy, which states that sustainability, including environmental and social responsibility, should be a factor in any procurement process when selecting potential suppliers. Moreover, Danish municipalities also have procurement policies and in the joint municipal procurement strategy 2020-2024, sustainability (including environmental and social responsibility and life cycle costs) is one of three thematic focus areas, which should be considered by the municipalities in connection with their procurement.

¹⁶ The safeguards entail alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights, including the International Labour Organisation’s (‘ILO’) declaration on Fundamental Rights and Principles at Work, the eight ILO core conventions and the International Bill of Human Rights.

¹⁷ [taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf \(europa.eu\)](https://ec.europa.eu/economy_finance/taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf)

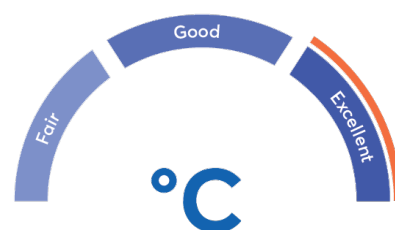


Due to regulation, KommuneKredit cannot finance (potentially controversial) wind projects. Moreover, there are procedures for consultation processes at the local authority level, cf. for example the Planning Act, which is a Danish law that sets out the basic rules that public authorities (including KommuneKredit's members) must follow in their planning. The law, among other things, aims to involve the public as far as possible in the planning work.

Following the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), KommuneKredit has conducted a high-level assessment of the financial implications of climate-related risks and opportunities to KommuneKredit's business, including an assessment of the relevance of TCFD-reporting in the light of the association's particular business model. This work was facilitated by external sustainability consultants and founded in the management. Conclusions from this work remains to be drawn.

Management of proceeds is in accordance with the Green Bond Principles and the planned annual reporting is very good. The impact assessment is provided with the reservation that not all related data can be obtained and moreover that reported impact is the customers' ex ante estimate of impacts. To the extent feasible, the impact report will include a section on methodology, baselines and assumptions used in impact calculations.

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



Strengths

As KommuneKredit is the main provider of finance for local public purpose infrastructure in Denmark, the high sustainability ambitions of KommuneKredit's members imply a strong foundation for KommuneKredit's issuance of green bonds. Support to municipal and regional green investments is an important element in the green transition. Thus, KommuneKredit's focus on sound green projects is a valuable and perhaps indispensable part of a Danish green solution. In addition, Energy (Renewable energy and Energy efficiency) and Water and wastewater management, the two main categories in the framework, are both solid and hence a strength of the framework. We note, however, that the energy category contains financing of district heating. While district heating is in principle a good and future oriented solution, it currently allows for use of fossil fuels for heating (see below) and waste to energy containing plastic fractions. The green bond framework of KommuneKredit is based on the strong Danish legislation when it comes to environmental issues and the use of a competent Green Bond Committee including environmental and/or climate change expertise.

Weaknesses

While financing for fossil fueled related infrastructure is excluded from green financing, there can be investments in improving existing infrastructure used for district heating, which currently contains substantial fractions of fossil fuel-based heating. In Denmark approximately 40% of the energy mix is currently waste or fossil fuels, mainly coal and gas. Waste fractions in waste-to-heat systems will contain plastics, and thus contribute to fossil-based CO₂ emissions. However, we note that the plan is to have fossil free district heating by 2030.

Pitfalls

Pitfall of a green bond framework are potential environmental risks. These are enhanced the broader the set of eligible projects is. Perhaps partly due to the mandate and nature of KommuneKredit's activities, the list of criteria for eligible projects contains some vaguely defined project types without quantitative criteria where it is difficult ex ante to judge the climate impacts. Examples are in particular projects under the Sustainable water and



wastewater management category. Climate change adaptation activities are also quite general and hence difficult to assess.

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 biomass and biofuel projects could be the use of non-certified wood or wood products. However, this is mitigated by the eligibility criteria in the framework, the signed Industry Agreement on Sustainable biomass with 8 criteria guiding the sourcing of the biomass, and the issuer's dialogue with its clients on this.

Buildings and infrastructure like harbors 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 issuer informs us that on large projects such as building harbors etc. an environmental impact assessment is made at the request of the municipal authorities, assessing whether the project is adapted to future climate scenarios.

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. Also, the criteria for new buildings include certification schemes without explicit energy requirements and embodied emissions are not systematically addressed. Our grading of this type of projects therefor is 'Light green' – a reasonable 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. An example could be the establishment of a municipal health care centre that may affect the surrounding traffic patterns in unintended ways if not controlled for.



Appendix 1:

Referenced Documents List

Document Number	Document Name	Description
1	0902 KommuneKredit GBF 2022_TC	KommuneKredit's Green bond framework dated January 2022
2	strategy-2025-2	KommuneKredit's Strategy 2025
3	KommuneKredit_GBIR_Report_2021_web	KommuneKredit's Green bond impact report 2021 (Green Bond Impact Report KommuneKredit)
4	KK_ResponsibilityReport_2020_UK_print	Report outlining KommuneKredit's responsibilities in 2020, including ESG reporting
5	Retningslinjer for bæredygtighed i indkøbsprocesser	KommuneKredit's sustainable procurement policy
6	KommuneKredit_AR20_DK_print	KommuneKredit's Annual report 2020
7	KK_KYC_AML_OnePager_UK_vs.-1	A one-page presentation of KommuneKredit
8	Eligible-Loans-as-of-31122020	Excel sheet with list of eligible loans in 2020, including impact indicators.
9	https://www.kl.dk/media/25893/klimaplan-for-en-groen-affaldssektor-og-cirkulaer-oekonomi-16-juni-2020.pdf	Agreement between the government (Social Democracy) and the Liberal Party, the Radical Left, the Socialist People's Party, the Unity List, The Conservative People's Party, the Liberal Alliance and the Alternative on the Danish municipalities' plan for reduction of waste-to-energy capacity (in Danish)



10	Ny aftale: CO2-krav til nybyggeri fra 2023 Ingeniøren	Article on new CO ₂ requirements for new buildings from 2023 (in Danish)
11	faelleskommunal-indkoebsstrategi-2020-2024	Joint municipal procurement strategy, https://www.kl.dk/media/23572/faelleskommunal-indkoebsstrategi-2020-2024.pdf
12	faelleskommunal-handleplan-2020-2024	Joint municipal procurement action plan, https://www.kl.dk/media/24329/faelleskommunal-handleplan-2020-2024.pdf
13	A20200115729	The Danish planning act. https://www.retsinformation.dk/eli/lt/2020/1157



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, the International Institute for Sustainable Development (IISD) and the School for Environment and Sustainability (SEAS) at the University of Michigan.

