International Finance Corporation
Green Bond Second Opinion

February 11, 2022

**IFC** is a member of the World Bank Group and is the largest global development institution focused on the private sector in developing countries. IFC is owned by 185 member countries and is one of the world’s largest financiers of climate-smart projects for developing countries.

**IFC allocates the proceeds from its Green Bond Program to select categories of IFC’s published Definitions and Metrics for Climate-Related Activities.** However, IFC affirms that the Green Bond Program focuses its financing on renewable energy, green buildings and energy efficiency. IFC includes in the project categories Dark Green projects such as renewable energy, and land use/forestry/agriculture related projects, but also Medium and Light Green projects, such as buildings and energy efficiency measures.

**While IFC excludes projects with direct fossil fuels as “core energy,” a benchmark is not defined for the amount of non-fossil fuels.** With the update of IFC’s former green bond framework, IFC has excluded efficiency improvements of fossil fuel based power production, projects where the core source of energy is based on fossil fuels, large hydro power, power projects with energy intensities of more than 100gCO₂eq/kWh, livestock and new hybrid vehicle fleets. Some projects could be exposed to fossil fuels and could lead to rebound effects, such as improved industry processes and certified green buildings with fossil fuel heating which constitutes a risks for potential lock-in of fossil fuels. IFC defines “core energy” as an energy source that a project cannot operate without. In the absence of specific thresholds, the issuer is responsible for ensuring the ambition level of the project categories and the overall framework.

**Further, IFC is investing in green bonds that have received a second opinion and the issuer commits to publicly report on the use of proceeds.** This signals contributions to demand for green financing but respective frameworks could represent projects with varying ambition levels. According to IFC, if a green bond investment does not meet the eligibility criteria, for example in cases where a project’s “core energy” is derived from fossil fuels, efforts will be made to ensure that it will not be funded by proceeds under this framework. CICERO Green encourages the issuer and IFC to be transparent about associated impacts of these green bonds.

**IFC has more than 10 years of experience issuing green bonds and has an established track-record on climate activities.** In 2018, IFC piloted its climate risk assessment and reports in accordance with the TCFD. IFC has an elaborate impact reporting scheme, receives external audit and has had on average 35% climate investments target over the period FY21-25.

Based on an assessment of the framework’s alignment with the Green Bond Principles, the project categories and IFC’s governance, IFC’s green bond framework receives the overall CICERO Medium Green shading and a governance score of Excellent. IFC could improve the framework by further defining and tightening eligibility criteria for the categories energy efficiency, green buildings, climate-related product investments and the exclusion criteria of “core energy” fossil fuel. In addition, IFC could clarify climate resilience screenings as well as mitigation through Financial Intermediaries.
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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 July 2021. This second opinion remains relevant to all green bonds 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:

<table>
<thead>
<tr>
<th>CICERO Shades of Green</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dark green</strong></td>
<td>Wind energy projects with a strong governance structure that integrates environmental concerns</td>
</tr>
<tr>
<td><strong>Medium green</strong></td>
<td>Bridging technologies such as plug-in hybrid buses</td>
</tr>
<tr>
<td><strong>Light green</strong></td>
<td>Efficiency investments for fossil fuel technologies where clean alternatives are not available</td>
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</table>

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 IFC’s green bond framework and related policies

IFC is a member of the World Bank Group and is the largest global development institution focused on the private sector in developing countries. IFC is owned by 185 member countries and is one of the world’s largest financiers of climate-smart projects for developing countries. Since 2005 - when IFC started to track climate-smart components of our investments and advisory services - IFC has provided more than $28 billion in long-term financing and raised over $22 billion in core mobilization through partnerships with investors for climate-related projects (end of FY 2020).

The World Bank Group has set two goals for the world to achieve by 2030: end extreme poverty and promote shared prosperity in every country. IFC’s goal is creating markets that address development issues through application of financial resources, technical expertise, experience and innovative thinking.

Environmental Strategies and Policies
IFC discloses aggregated greenhouse-gas (GHG) emissions reductions from its investments as well as project-level emissions for projects with more than 25ktCO2e emissions. Since 2009, IFC has been carbon neutral in Scope 1 and 2 emissions incl. business travel. In addition, IFC has a target to reduce its facility related emissions by 20% by 2026 compared to 2016.

IFC’s main mission is to secure social and economic development in the host countries of their projects. IFC’s climate business is focused on five strategic focus areas—clean energy, climate-smart cities, climate-smart agribusiness, green buildings, and green finance. Energy efficiency and resilience, as well as new technologies and innovations, cut across all five focus areas. IFC has a detailed climate implementation plan focusing on market-based solutions to mobilize external private capital for investment products that contribute to climate change mitigation and adaptation.

IFC has a Sustainability Framework in place, which promotes environmental and social practices as well as transparency and accountability. This framework entails a Policy on Environmental and Social Sustainability which defines IFC’s commitments to environmental and social sustainability. It also includes IFC’s Performance Standards, which define clients' responsibilities for managing their environmental and social risks, as well as the Access to Information Policy, which articulates IFC’s commitment to transparency.

In line with the World Bank Group’s climate targets, IFC’s climate investments will target, on average, 35% of IFC’s own-account investment volume over the fiscal years 2021–2025 period. In 2020, USD 3.3 billion (30% of total) of own account investments was dedicated to climate-smart financing. According to IFC, these investments supported the avoidance of 8.1 million tCO2e. In April 2021 the Bank Group announced that it is committed to aligning financing flows with the objectives of the Paris Agreement. IFC will align 85% of new direct investments with the objectives of the Paris Agreement starting July 1, 2023 (FY24), and 100% of these investments starting July 1, 2025 (FY26).

IFC was one of the first issuers of green bonds and launched its Green Bond Program in 2010. As of June 30, 2020, IFC had issued USD 10.4 billion across 172 bonds in 20 currencies. Cumulatively, IFC reports an avoidance of 21.8 million tCO2e per year through these bonds. According to IFC, projects eligible for green bond financing in FY20 amounted to USD 1.2 billion with an expected avoidance of 3.4 million tCO2e per year. In the last three
years, more than 50% of green bond proceeds went to renewable energy projects. As of publication date, IFC chairs the Green Bond Principles and as a member of the IFI Framework for a Harmonized Approach to Greenhouse Gas Accounting, IFC takes part in developing guidelines and procedures for the green bond market. In this Second Opinion, CICERO Green has not validated already financed projects but rather assessed the updated Green Bond Framework’s ability to support a low-carbon and climate resilient growth for future eligible projects.

As part of IFC’s general activities, IFC also focuses on building the green bond market by investing in green bonds, e.g., through the Amundi Planet Emerging Green One (EeGO) Fund and the HSBC REGIO Fund. Launched in March 2018, the EGO Fund is the largest green bond fund in the world and helps scale up climate finance in emerging markets. In addition, IFC has established the Green Bond Technical Assistance Program (GB-TAP). The GB-TAP provides training on green bonds to potential issuers, knowledge-sharing and advisory services on green bond issuances and impact reporting in line with the Green Bond Principles.

Since 2018, IFC has reported in accordance with the TCFD. In addition, IFC and the World Bank act as the Secretariat for the Carbon Pricing Leadership Coalition, which works with governments, corporations, and civil society to advocate for effective ways to price carbon. IFC does not provide loans to financial institutions for coal-related activities and no longer provides general purpose loans to financial institutions in order to avoid coal exposure. As part of the climate investment opportunity series, IFC has identified an investment opportunity of almost USD 25 trillion for green buildings in emerging markets and has created the building certification scheme EDGE which is applicable in more than 150 countries. Within five years, IFC’s investment in green buildings have risen from USD 160 million to USD 1.37 billion in FY18 and grew by USD 761 million in FY19.

Use of proceeds

Definitions of eligible activities are based on the “IFC’s Definitions and Metrics for Climate-Related Activities” from April 2017 covering a multitude of mitigation and adaptation projects. Being included in these definitions is necessary, but not sufficient in itself for IFC Green bond financing. IFC’s climate business has five strategic focus areas: clean energy, climate-smart cities, climate-smart agribusiness, green buildings, and green finance. IFC’s green bond will only finance a sub-section of IFC’s climate business. IFC affirms that the Green Bond Program focuses its financing of renewable energy, green buildings and energy efficiency.

IFC includes in their framework indirect investments that aim to ensure that climate finance is available for smaller activities that IFC cannot reach directly, such as small and medium enterprises. These investments fall under the strategic focus area of “green finance”. The partner financial intermediaries assess climate impacts of their loan portfolio in real time with the support of the online CAFI platform (Climate Assessment for Financial Institutions) for the evaluation, selection and reporting process. The CAFI platform has been reviewed by EY which has provided reasonable assurance confirming that it aligns to the IFC Definitions and Metrics for Climate Related Activities.

Only loan portions of projects are eligible for funding via green bond proceeds; equity investments and other financial products such as guarantees, rights, etc. are ineligible. IFC excludes the following from funding with proceeds from an IFC Green Bond:

- Projects involving new or existing extraction, production and distribution of fossil fuels, including improvements and upgrades.
- Projects where the core source of energy is based on fossil fuels and other projects that support carbon intensive activities
- Hydropower projects with an installed capacity larger than 10MW.
- Any power project with a carbon intensity above 100gCO2eq/kWh.
- Greenfield assets that partly combusts fossil fuels (e.g., hybrid vessels). (Only replacement of existing fleets with electric, hybrid or hydrogen-based fleets is eligible, in addition to new EV fleets.)
- Livestock projects.

**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.

Eligible projects are a subset of IFC’s overall climate-related portfolio that comply with IFC’s Sustainability Framework, i.e. IFC’s Performance Standards on Environmental and Social Sustainability and IFC’s Corporate Governance Framework. It means that these projects have been evaluated by IFC’s social and environmental specialists at an early stage and screened for potential environmental and social impacts. If necessary, policies and concrete actions are put in place to mitigate any such impacts in accordance with IFC Environmental, Health, and Safety Guidelines. A subsection of this portfolio (of “sustainability-cleared” and climate-related projects) will be eligible for green bond funding.

IFC’s climate-related projects are classified in iDesk, IFC’s record-keeping system, by the Climate Business Department (CBD) team through the fiscal year before project commitment. All climate-related projects are subject to review by the CBD in collaboration with regional and global climate change teams to determine a project’s eligibility based on IFC Definitions and Metrics for Climate Related Activities. The issuer informed us that the portfolio will be additionally screened for any potential controversial issues including negative/high ESG risks and removed from the list of green bond eligible projects. The selection of eligible green bond projects is primarily done by the climate metrics staff, and the final list is cleared by the CBD manager and agreed with Treasury. According to IFC, ultimately around eight staff (six from CBD and two from Treasury) are wholly involved in the decision-making process.

IFC supervises all its investments – including green bond investments – on a project level. The supervision process comprises regular reports by the investee company on project activities and performance and is monitored by IFC throughout the lifetime of the investment. If supervision reveals any sustainability and/or financial problems in a project funded by a green bond, it may be replaced in the green bond portfolio. According to IFC, lifecycle emissions are calculated only in limited cases (e.g., product to product comparison) where reliable information is available. In addition, IFC has an Anticipated Impact Measurement and Monitoring (AIMM) system in place. This enables IFC to estimate the expected development impact of its investments and select projects with the greatest potential for financial sustainability and development impact.

In addition, the World Bank Group’s Independent Evaluation Group (IEG) assesses the performance of about one out of four projects, measuring outcomes against original objectives, sustainability of results and institutional development impact. The IEG has evaluated the World Bank Group’s experience in climate change on a sector-wide basis and IFC continues to implement IEG’s recommendations to scale impact. The Office of the Compliance Advisor/Ombudsman (CAO) oversees investigations of IFC’s social and environmental due diligence at the project-level and addresses complaints by communities affected through projects. According to the issuer, projects

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will be replaced in the green bond portfolio in case the Office of Compliance receives a complaint in a specific project which has been funded with proceeds from green bonds.

Management of proceeds

CICERO Green finds the management of proceeds of IFC to be in accordance with the Green Bond Principles. The proceeds from IFC’s green bonds are allocated to a sub-portfolio in Treasury Liquid Assets that is linked to lending operations for climate-related activities. All proceeds from IFC green bonds are set aside in a special sub-portfolio for investing exclusively in renewable energy, energy efficiency, and other climate-related projects in developing countries (IFC invests exclusively in for-profit projects in developing countries). Disbursements are often made over a period of time, depending on a project’s amortization schedule. As green bond proceeds are disbursed, corresponding amounts are adjusted from the sub-portfolio accordingly. The eligible project must be funded through IFC’s general liquidity account. In a few cases of back-to-back financing, proceeds from green bonds are on-lent by IFC directly to an individual eligible project through a specific funding program such as a Masala or other local currency bond, discount note, blended finance, etc. Local currency loans funded via a cross-currency swap or project-related green bond issuance are eligible.

Unallocated proceeds are invested in accordance with IFC’s conservative liquidity policy until disbursement to eligible projects which are subject to an exclusion list. The liquidity policy includes an exclusion list that is adapted to Treasury’s holdings which lists production, trade, storage, or transport of significant volumes of hazardous chemicals, or commercial scale usage of hazardous chemicals (Hazardous chemicals include gasoline, kerosene, and other petroleum products). IFC does not expect to have significant amount of unallocated proceeds as issuance volume is projected by the pipeline of eligible projects. IFC tends to issue somewhat less than projected commitment volume in order to manage the disbursement lag.

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.

On an annual basis, IFC publishes the list of projects that have received funding from green bond proceeds. Subject to confidentiality approvals, the list of projects includes: a brief description of the project, the amount committed, the expected climate impact(s) and links to relevant public documents about the project. According to the issuer, IFC reports on all projects that have received funding from an IFC green bond. In the rare case where project details cannot be disclosed due to confidentiality reasons, the project will be removed from the green bond portfolio. IFC’s annual Green Bond Impact Report is based on the recommendations of the Green Bond Principles’ Handbook – Harmonized Framework and are published on IFC’s website.

IFC lists four key indicators to be reported:

- Annual energy savings
- Annual greenhouse gas emissions reduced or avoided
- Annual renewable energy produced
- Capacity of renewable energy plant(s) constructed or rehabilitated

The impact indicators are tracked on a project level basis and are not pro-rated for the portion of IFC’s contribution. Impact of direct investments is based on ex-ante estimates (developed prior to project implementation) of expected annual results for a representative year once a project is completed and operating at normal capacity. Impact of
indirect investments (i.e. through financial intermediaries) are conservatively estimated based on the likely allocation of use of proceeds among the eligible project types. IFC also link the green bond projects to relevant Sustainability Development Goals.

Allocation reporting and impact reporting follows a thorough in-house vetting process through which several levels of internal reviews and audits take place. This reporting is also linked to the aggregate reporting in the annual report which undergoes an external audit.

In addition to Green Bond reporting, IFC’s climate-related portfolio – from which green bond-eligible projects are selected – is reported through several channels, e.g., in the annual report. In addition, IFC also participates in the Joint Report on Multilateral Development Banks’ Climate Finance which utilizes harmonized climate definitions.
3 Assessment of IFC’s green bond framework and policies

The framework and procedures for IFC’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 IFCs 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 IFC’s green bond framework, we rate the framework CICERO Medium Green.

Eligible projects under the IFC’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”.

<table>
<thead>
<tr>
<th>Category</th>
<th>Eligible project types</th>
<th>Green Shading and some concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable energy</td>
<td>a. Renewable energy in electricity generation</td>
<td>Dark Green</td>
</tr>
<tr>
<td>(greenfield and brownfield)</td>
<td>i. Wind power</td>
<td>✓ According to IFC, all renewable energy projects have to be below 100gCO₂/kWh, but lifecycle emissions are calculated only in limited cases.</td>
</tr>
<tr>
<td></td>
<td>ii. Geothermal power</td>
<td>✓ According to IFC, biomass is a very minor fraction of climate business and even less in the Green Bond Program. Bioenergy is widely seen as a renewable energy source due to its reliance on tree growth which absorbs CO₂ in the growing phase. However, bioenergy assets emit CO₂ at combustion – often at levels comparable to coal. All biomass projects must be based on a sustainable supply of biomass (e.g., FSC certified) and IFC Performance Standards ensure there is no deforestation. IFC requires positive climate benefits from biomass related projects and IFC is responsible for its sustainable sourcing.</td>
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<tr>
<td></td>
<td>iii. Solar power (concentrated solar power, photovoltaic power)</td>
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<td></td>
<td>iv. Biomass or biogas power</td>
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<td></td>
<td>v. Ocean power (e.g., wave, tidal, ocean currents, salt gradient)</td>
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<td></td>
<td>vi. Hydropower plants</td>
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<td></td>
<td>vii. Renewable energy power plant retrofits</td>
<td></td>
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<tr>
<td></td>
<td>b. Heat production or other renewable energy application</td>
<td>Dark Green</td>
</tr>
<tr>
<td></td>
<td>i. Solar water heating and other thermal applications of solar power in all sectors</td>
<td>✓ According to IFC, all renewable energy projects have to be below 100gCO₂/kWh, but lifecycle emissions are calculated only in limited cases.</td>
</tr>
<tr>
<td></td>
<td>ii. Thermal applications of geothermal energy, including space and district heating, heating of</td>
<td>✓ According to IFC, biomass is a very minor fraction of climate business and even less in the Green Bond Program. Bioenergy is widely seen as a renewable energy source due to its reliance on tree growth which absorbs CO₂ in the growing phase. However, bioenergy assets emit CO₂ at combustion – often at levels comparable to coal. All biomass projects must be based on a sustainable supply of biomass (e.g., FSC certified) and IFC Performance Standards ensure there is no deforestation. IFC requires positive climate benefits from biomass related projects and IFC is responsible for its sustainable sourcing.</td>
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</tbody>
</table>
greenhouses, heating soils and facilities for agriculture, heating aquaculture ponds

iii. Wind-driven pumping systems or similar

iv. Thermal applications of sustainably produced bioenergy in all sectors, including efficient, improved biomass stoves if no associated deforestation

c. Measures to facilitate integration of renewable energy into grids

i. New, expanded, improved transmission systems (lines, substations)

ii. Storage systems (battery, mechanical, thermal storage, pumped storage)

iii. New information and communication technology, smart-grid and mini-grid

✓ According to IFC, only small (max 10MW) run-of-the-river hydro is eligible.
✓ Construction of transmission lines are only eligible if they exclusively serve renewable energy supply. According to IFC, storage systems are eligible if they enable renewable energy integration into the grid. They are usually on-site and help manage the intermittency of RE projects.

<table>
<thead>
<tr>
<th>Lower-carbon and efficient energy generation</th>
<th>Light to Medium Green</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Transmission and distribution systems</td>
<td>According to IFC, the degree of improvement of transmission lines depends on the state of the grid before the project and may reduce electricity losses by as much as 20 percent.</td>
</tr>
<tr>
<td>i. Retrofit of transmission lines or substations and distribution systems (software and hardware changes) to reduce energy use and technical losses per unit of end-use consumption, including improving grid stability and reliability (only if net emission reductions can be demonstrated)</td>
<td>If fossil fuel is the main user of a transmission line, then the investment is not eligible to be included in IFC’s Green Bond Program. However, while the grid is not necessarily under IFC’s project influence it could be to a large extent fossil fuel based and could lead to lock-in if the grid is not decarbonized accordingly.</td>
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<thead>
<tr>
<th>Energy efficiency</th>
<th>Energy efficiency in industry</th>
<th>Light Green</th>
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<tbody>
<tr>
<td>i. Industrial energy efficiency improvements in existing facilities through the installation of more-efficient equipment, changes in processes, reduction of heat losses, and greater waste heat recovery</td>
<td>IFC has set no minimum efficiency improvement threshold. However, the issuer informed us that IFC follows the Joint MDB Methodology which requires that a substantial reduction is to be demonstrated.</td>
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</tr>
<tr>
<td>ii. Installation in existing facilities of co- or tri-generation equipment</td>
<td>Cement and steel (and other) manufacturing using coke/coal will not be eligible for funding under IFC’s Green Bond Program.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>While fossil fuel-based systems and equipment are excluded, efficiency</td>
<td></td>
</tr>
</tbody>
</table>
iii. Implementation of greenfield manufacturing facilities that exceed global energy use standards.

iv. More-efficient facility replacement of older facility (old facility retired)

b. Energy efficiency improvements in existing industrial, commercial (including warehouses), public, and residential buildings

i. Energy efficiency improvement in lighting, appliances, and equipment

ii. Substitution of co- or tri-generation plants that generate electricity in addition to providing heating and cooling for existing heating and cooling systems for buildings

iii. Retrofit of existing buildings: architectural or building changes that enable reduction of energy consumption

c. Energy efficiency improvements in the utility sector and public services

i. Energy efficiency improvement in utilities and public services through the installation of more-efficient lighting or equipment

ii. Reduction of losses in utility water

iii. Utility natural gas loss reduction

iv. Utility auxiliary electricity consumption reduction

d. Vehicle energy efficiency fleet retrofit

i. Existing vehicles, rail or boat fleet retrofit or replacement (e.g., use of lower-carbon fuels, electric or hydrogen technologies)

e. Energy efficiency in new commercial, public, and residential buildings

i. Green buildings

ii. Use of highly efficient architectural designs, energy-efficient appliances and equipment, and building techniques that reduce building energy consumption, exceeding available standards and improvements can indirectly be tied to fossil fuels, e.g., heating of buildings. According to IFC, the lowest emissions solution has to be implemented but heating solutions sometimes need to use fossil fuels to minimize the emissions. The issuer informed us that the benchmark for defining low energy intensity should be based on available documentation for the global or regional top tier of efficient production as applicable.

In addition, projects where the core source of energy is based on fossil fuels and other projects that support carbon intensive activities cannot be financed which mitigates concerns. Energy efficiency of natural gas and auxiliary plants are not eligible.

✓ The vehicle category only refers to replacement of existing fleets with new fleets that are electric, hybrid or hydrogen based according to IFC, or new fleets that are electric or hydrogen based. This could be cars, but also vessels and other hybrid vehicles. Hybrid vehicles can still feature substantial emissions.

✓ IFC is applying its EDGE building certification scheme which serves as an asset rating instrument that defines whether the building has met the minimum standard of 20 percent less energy, 20 percent less water and 20 percent less embodied energy in materials compared to a base case building. However, IFC has made the decision to meet client demand for the certification type of existing stock and does not decide which certification scheme is used.

✓ According to IFC, an eligible Green Building Project complies with green buildings standards if buildings are at least 20% more energy efficient than a baseline building without energy-efficient design. In addition, building certification systems such as EDGE, BREEAM, LEED, DGNB and GREEN STAR are accepted if they deliver on at least 20% improvement. However, IFC does not require specific certification levels (e.g., “Excellent”, “Outstanding” etc.) in addition to the 20% improvement.
Complying with high energy efficiency certification or rating schemes

- For buildings, IFC is developing a new tool for Building Resilience Index and piloting it in the Philippines, and this can be rolled out to wider projects in future. However, currently this is not generally applied. For example, IFC could be financing energy efficient new construction in zones where flooding could be a substantial climate risk. Public transportation is covered when there is a master plan design under the Green Urban Development tool within IFC, but individual building public transport is not considered.

### Agriculture, Forestry, and Land Use

**Activities that contribute to Climate Smart Agriculture**

1. Reduction in energy use in traction (e.g., efficient tillage) and other agricultural processes
2. Reduction in water consumption (efficient irrigation), laser soil leveling, switching to less-water-intensive crops, water harvest and storage facilities
3. Agricultural projects that improve existing carbon pools (e.g., rangeland management; collection and use of bagasse, rice husks, or other agricultural waste; reduced tillage techniques that increase carbon contents of soil; rehabilitation of degraded lands; peatland restoration)
4. Reduction of non-carbon dioxide GHG emissions from agricultural practices (e.g., paddy rice production, fertilizer use)
5. Livestock and aquaculture projects that reduce methane and other GHG emissions (e.g., improved animal health, animal husbandry, manure management with biodigesters, improved nutrition, increased productivity, etc.)

**Medium Green**

- Activities introducing new fossil fuel-based technologies such as fossil fuel based agricultural machinery are not eligible.
- Climate Smart Agriculture is an excellent approach for tackling both climate mitigation and adaptation in global food production systems. However, it is a broad term which can easily be misrepresented.
- IFC informed us that at least 20% improvement in water, N₂O fertilizer emissions, or reduction of food losses are required. In general, in cases of small improvements, projects might have overall adverse effects. The issuer is responsible for ensuring a high ambition level of the project.
- Afforestation with plantations could come with associated environmental risks. However, according to the issuer, these issues are heavily addressed by IFC’s Sustainability Framework and Performance Standards.
- Livestock is not eligible for green bond financing.
- In the assessment of projects, IFC applies the Performance Standards to the supply chain to avoid deforestation, and other negative environmental and social impacts. This is also the case for the production of biofuels. Biofuels should be fully certified and limited to second-generation or higher advanced biofuels. Production facilities should be powered by renewable energy.
- Mitigating water consumption can be an important climate resiliency strategy.
ii. Reforestation on previously forested land

iii. Sustainable forest management activities that increase carbon stocks or reduce the effect of forestry activities

iv. Reduced emissions from deforestation and forest degradation

v. Biosphere conservation projects (including payments for ecosystem services) targeting reduction of emissions from the deforestation or degradation of ecosystems

c. Biofuels

i. Production of biofuels (including biodiesel and bioethanol)

<table>
<thead>
<tr>
<th>Nonenergy GHG reductions</th>
<th>c. Air conditioning and refrigeration</th>
<th>Light Green</th>
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<td>i. Replacement of refrigerants with high global warming potential in existing industrial, commercial, or residential infrastructure with solutions with lower global warming potential</td>
<td>✓ Investments in fossil fuel assets, including reduced flaring and carbon capture and storage are excluded from financing. According to IFC, category a) and b) of climate-related activities are therefore not relevant for green bond financing.</td>
</tr>
<tr>
<td>d. Industrial processes</td>
<td>i. Reduction in GHG emissions resulting from industrial process improvements and cleaner production (e.g., cement, chemical), excluding carbon capture and storage</td>
<td>✓ The industrial process category refers to non-combustion processes in industry, and not new fossil fuel infrastructure, e.g., modifying the chemistry of cement so it produces less CO₂. While this can deliver substantial emission reductions it is tied to emission intensive activities and is therefore rated Light Green. According to IFC this is only applied to brownfield activities that are already emitting and the investments are targeting substantial reduction in emissions, for example installing N₂O destruction equipment in existing facilities. Fossil fuel industries that partly use coke or coal as well as projects that are directly supporting fossil fuel intensive activities such as within mineral mining and steel/aluminum production are excluded from financing according to the issuer.</td>
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</table>

IFC informed us it aims to avoid projects with minimal efficiency improvements. Please note that in case of small efficiency improvements, projects might have overall adverse effects. In the absence of specific thresholds, the issuer is
According to IFC, replacement of refrigerants is focused on refrigerants of the lowest greenhouse warming potential (GWP), which can be seen Medium to Dark Green. IFC listed some examples, where a maximum of GWP=6 was mentioned but does not define a maximum GWP for agents. Investments in substitutes substantially reduce climate impact but can still involve other greenhouse gases. However, these represent an insignificant share of the overall life cycle impact of products.

### Waste and wastewater

- a. Waste and wastewater
  - i. Treatment of wastewater if not a compliance requirement (e.g., performance standard or safeguard) as part of a larger project that reduces methane emissions
  - ii. Waste management projects that capture or combust methane emissions
  - iii. Waste-to-energy projects
  - iv. Waste collection, recycling, and management projects that recover or reuse materials and waste as inputs into new products or as a resource (only if net emission reductions can be demonstrated)

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<thead>
<tr>
<th>Medium to Dark Green</th>
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<tr>
<td>✓ With regards to the type of waste used for the waste-to-energy category, IFC stated that projects that produce, capture and then use methane for energy purposes are eligible. For example, this may include landfill gas that is used to produce energy and wastewater treatment with biogas capture and use for generating heat and/or power.</td>
</tr>
<tr>
<td>✓ Waste incineration is excluded under the framework.</td>
</tr>
<tr>
<td>✓ There is a risk of increased waste production incentivized to utilization of methane and energy.</td>
</tr>
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</table>

### Transport

- a. Urban transport modal change
  - i. Urban mass transit
  - ii. Nonmotorized transport (bicycles and pedestrian mobility)
- b. Transport-oriented urban development
  - i. Integration of transport and urban development planning (e.g., dense development, multiple land use, walking communities, transit connectivity) leading to a reduction in use of passenger cars
  - ii. Transport demand management measures dedicated to reducing GHG emissions (e.g., speed limits, high-occupancy-vehicle lanes, etc.)

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<th>Light to Medium Green</th>
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<tr>
<td>✓ This category refers to modal shift, such as mass transit projects that avoid emissions by displacing private vehicles and other of less occupancy and efficiency. Projects selected for IFC green bond financing need to be electric hybrid or hydrogen. Hybrid vehicles can still run partly on fossil fuels with potentially substantial emissions (e.g., hybrid vessels), but can only be financed to replace existing vehicles fleet.</td>
</tr>
<tr>
<td>✓ Some concerns regarding sustainability of sourcing and production of equipment as well as emissions of, e.g., battery production.</td>
</tr>
</tbody>
</table>
congestion charging or road pricing, parking management, restriction or auctioning of license plates, car-free city areas, low-emission zones)

✓ Large construction projects, e.g., for new railway tracks can have substantial emissions associated with it and broader environmental impacts.

✓ IFC informed us that if the primary objective of a transport project is to transport fossil fuel, the project will be deselected.

c. Interurban transport
   i. Railway transport ensuring a modal shift of freight and passenger transport from road to rail (improvement of existing lines or construction of new lines)
   ii. Waterway transport ensuring a modal shift of freight and passenger transport from road to waterways (improvement of existing infrastructure or construction of new infrastructure)

Climate-Related

a. Manufacture and sale of finished products that when used result in increased renewable energy generation by others
   ✓ The category relates to production of inter alia solar panels, high energy efficiency standard equipment.

b. Manufacture and sale of finished products that when used result in energy efficiency in others’ operations
   ✓ According to IFC, this includes new manufacturing plants that could possibly partly be based on fossil fuels. IFC informed us that they use efficiency benchmarks under the Performance Standards to ensure high production efficiency.

c. Manufacture and sale of finished products that when used enable others to decrease or destroy GHGs
   ✓ No minimum improvements have been specified, but IFC requires ex-post emission reduction monitoring.

Light to Medium Green

Intermediary investments require financial institutions to show at least 15% energy savings and reporting within the loan agreement. To enable the operationalization of these conditions, IFC provides clients access to the CAFI platform. This platform was recently externally audited.

✓ The fossil fuel industry is excluded from IFC green bond financing, also for SMEs in the fossil fuel industry. However, green buildings that are heated by fossil fuels could be included.

✓ When IFC invests in a third-party green bond, it is required that the green bond is aligned with the Green Bond Principles, has a second
party opinion and that the issuer is committed to publicly report on use of proceeds. However, financed green bonds can have varying ambition levels.

- IFC invests in green bonds issued by clients and often provides the capacity and technical assistance required to enable a client to enter the green bond market. IFC is encouraged to scrutinize the green credentials of the bonds before they are included in the green pool.
- IFC is transparent about investing in green bonds in the impact report.
- If IFC is lending to PE or Venture, it would be the same eligibility criteria that is applied for other IFC lending.

Climate Adaptation

Adaptation projects are IFC investments or advisory services that incorporate information about climate change risks into decision-making (ex-ante) and directly address identified risks, vulnerabilities, or effects while avoiding inadvertent increases in vulnerability of systems or social groups and avoiding placing assets or systems in harm’s way. An adaptation project should:

i. reduce risk, exposure, or sensitivity to climate change;
ii. increase climate resilience;
iii. build problem-solving capacity to develop responses to identified risks, vulnerabilities, or effects; or iv. address effects directly linked to climate change.

Light to Medium Green

- Some projects might require increased energy, such as desalination plants in low-lying islands. Projects might be large infrastructure projects with potentially significant emissions. According to IFC, lowest emissions solutions are considered.
- According to the issuer, roads are not eligible for financing under this category. However, components that make roads weather resilient may be considered, which is considered a Light Green element of this category as these currently and for the foreseeable future support fossil fuel infrastructure. If combined with clear goals and targets on zero emission vehicles penetration, a higher shading could be possible.
- Fossil fuel-based projects are excluded as per the exclusion criteria as well as climate adaptation projects for the oil & gas industry, fossil fuel intensive industries and mining, according to the issuer.

Table 1. Eligible project categories
Background
Under the Paris Agreement, 189 countries committed to nationally-determined contributions (NDCs) to transform multiple carbon-intensive sectors.\(^3\) Also as part of the Paris Agreement, developed countries committed to providing financial resources to assist emerging markets with respect to both mitigation and adaptation and achieving their NDCs. An IFC (2016) study suggests that future growth in greenhouse-gas emissions is expected to come mainly from emerging markets – which require $4 trillion per year to build and maintain infrastructure.\(^4\) Indeed, estimates suggest that about 70% of the infrastructure investment needed for the low-carbon transition will have to be deployed in the emerging markets and developing economies (EMDEs).\(^5\)

Governance Assessment
Four aspects are studied when assessing IFC’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.

IFC has a Sustainability Framework in place and has been carbon neutral in Scope 1 and 2 emissions incl. business travel since 2009. In addition, IFC has a target to reduce its facility related emissions by 20%. The issuer has extensive experience working on climate-related issues and has an established Green Bond Program since 2010. In addition, IFC has a target for climate investments to comprise, on average, 35% of IFC’s own-account investments over the years 2021–2025 period. In addition, IFC also focuses on building the green bond market in emerging markets. In 2018, IFC began reporting in accordance with the TCFD. The selection process for green bond eligible projects is primarily done by the climate metric staff, and the final list is cleared by CBD manager and agreed with Treasury. According to IFC, ultimately around eight staff (six from CBD and two from Treasury) are wholly involved in the decision-making process, but decisions will be made in consensus by the selection staff. IFC supervises all its investments – including green bond investments – on a project level. The portfolio will be additionally screened for any potential controversial issues including negative/high ESG risks and removed from the list of green bond- eligible projects according to IFC. It is a strength that some projects are subject to independent review through World Bank’s Independent Evaluation Group IEG. Allocation reporting and impact reporting follows a thorough in-house vetting process through which several levels of internal reviews and audits take place. This reporting is also linked to the aggregate reporting in the annual report which is undergoes an external audit. IFC also participates in the Joint Report on Multilateral Development Banks’ Climate Finance which utilizes harmonized definition criteria. The overall assessment of IFC’s governance structure and processes gives it a rating of Excellent.

Strengths
It is a strength that IFC has updated and strengthened its green bond framework with regards to fossil fuels and addressing pressing issues in the global strive to mitigate and adapt to climate change by adding additional aspects to the green bond framework. With the update, IFC’s Green Bond Program has excluded investments with

\(^3\) https://unfccc.int/topics/climate-finance/the-big-picture/climate-finance-in-the-negotiations
potentially large risks of lock-in of emissions, such as within upstream fossil fuel production, projects where the core source of energy is based on fossil fuels, large hydro power, power projects with energy intensities of more than 100gCO$_2$ eq/kWh, livestock and new hybrid vehicle fleets. In addition, IFC informed us that energy efficiency of natural gas and auxiliary plants as well as new roads would not be eligible.

IFC has informed us that the green bond portfolio is additionally screened for any potential controversial issues including negative/high ESG risks and removed from the list of green bond eligible projects.

Definitions and Metrics for Climate-Related Activities provide a transparent and publicly available guidance. This transparent approach helps providing confidence in IFC’s climate-related activities. In addition, IFC has extensive experience issuing green bonds and supporting emerging markets with green bond programs.

It is a strength that IFC applies by default the IFI GHG Accounting Methodologies and calculates carbon effects. In addition, it is a strength that IFC applies its Anticipated Impact Measurement and Monitoring (AIMM) system, launched in July 2017, dedicated to assessing projects’ development impact. This assessment tool broadly enables IFC to assess a project’s outcomes as well as its effect on market creation and project beneficiaries, including employees, customers, and suppliers.

**Weaknesses**
Projects where the core source of energy is based on fossil fuels and other projects that support carbon intensive activities are excluded from financing under this framework. According to the issuer, “core energy” refers to a fuel without which a facility could not operate, but does not include a benchmark for amount of non-fossil and is up to expert judgement, which leaves some room for interpretation. In addition, while direct investments in fossil fuels are excluded, some projects could indirectly be exposed to fossil fuels (e.g., new buildings with fossil fuel heating, energy efficiency in industry processes).

**Pitfalls**
While IFC takes efforts to improve the consistency and availability of reported metrics over time, projects with climate impact can span over a wide diversity of sectors and sub-sectors, making complete harmonization of reporting metrics challenging. IFC focuses on four core impact indicators and is making several assumptions to estimate respective impacts. The methodologies used are publicly available and IFC informed us that methodologies and calculations are shared with investors when requested.

For IFC’s investments in buildings, IFC is applying its EDGE building certification scheme which serves as an asset rating instrument that defines whether the building has met the minimum standard of 20 percent less energy, 20 percent less water and 20 percent less embodied energy in materials compared to a base case building. However, IFC also accepts a limited number of certifications that might be less ambitious provided that the certificate requires at least 20 percent improvement compared to local regulation or baseline. While EDGE has a minimum energy efficiency criterion, IFC does not require specific levels of certification levels (e.g., “Excellent”, “Outstanding” etc.) in addition to the 20% improvement. Voluntary environmental certifications such as LEED or equivalents provide varying levels of measurement of environmental footprints for a building. While the energy efficiency requirement provides some safeguard the current certification requirements do not guarantee a substantial reduction in GHG emissions, e.g., building materials. In addition, IFC does not generally take into account the type of building, the heating type of the building as well as public transport access to the buildings.

According to IFC, lifecycle emissions are calculated only in limited cases (e.g. product to product comparison) where reliable information is available. In addition, IFC does not assess the full impact of the supply chain for all
of its projects. Rebound effects could occur, e.g., for investments in projects such as efficiency improvements in production facilities and industrial processes. While this concern is mitigated through exclusion of direct investments in fossil fuel infrastructure, rebound effects might still occur indirectly and a risk of lock-in remains. We encourage IFC to vigilantly follow life cycle impacts of investments and to avoid investments in projects where rebound effects are likely to occur. In addition, in the absence of specific thresholds, the issuer is responsible for ensuring the ambition level of the project categories and the overall framework.

IFC includes financing through financial intermediaries in the framework. IFC Green Bond Program includes investments in third-party green bonds from the corporate and financial sectors, requiring that the green bond is aligned with the Green Bond Principles, proceeds are not used for fossil fuels, has a second party opinion and that the issuer is committed to report on use of proceeds. The reporting is not required to be publicly available (e.g., for private placements). According to IFC, only third-party green bonds that are entirely dedicated to renewable energy or green buildings are recommended to be included in IFC Green Bond Program. However, respective frameworks can represent projects with different ambition levels. IFC informed us that IFC often acts as an anchor investor in green bonds where it had assisted the issuer in meeting best practice standards before issuance. In addition, if an IFC green bond investment does not meet the green eligibility criteria under IFCs green bond framework, it will not be funded by proceeds under this framework.

IFC started mainstreaming climate risk screening of new projects in FY19, starting with projects in sectors that include ports, waterways, roads, airports, forestry, pulp and paper, and insurance. This was followed by the expansion to other sectors, such as hydropower, mining, railways, urban transport, and financial institutions, with planned further expansion with the objective of reaching full coverage. However, it constitutes a pitfall that IFC is not screening all of its projects for climate risks. This pitfall is mitigated by the fact that IFC reports in accordance with the TCFD and has substantial experience with climate risk assessments. In addition, IFC is also in a pilot program for increasing resilience in the building sector.
## Appendix 1:
### Referenced Documents List

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<tr>
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<th>Document Name</th>
<th>Description</th>
</tr>
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<tr>
<td>1</td>
<td>IFC’s Green Bond Framework, July 2021</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Procedure: IFC Green Bond Program</td>
<td>Internal procedure and responsibilities with respect to IFC’s Green Bond Program: use of proceeds, process for project evaluation and selection, management of proceeds (allocation procedures), and reporting.</td>
</tr>
<tr>
<td>3</td>
<td>IFC Climate Implementation Plan, April 2016</td>
<td>IFC’s climate strategy</td>
</tr>
<tr>
<td>4</td>
<td>Climate Change Action Plan 2021-2025</td>
<td>World Bank Group’s action plan on climate</td>
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<tr>
<td>5</td>
<td>Annual Report 2019 and 2020</td>
<td>IFC’s annual report 2019 and 2020</td>
</tr>
<tr>
<td>7</td>
<td>IFC’s Definitions and Metrics for Climate-Related Activities, April 2017</td>
<td>Document outlining the eligibility criteria for IFC’s climate-related activities</td>
</tr>
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</table>
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).