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Second Party Opinion

City of Oslo Green Bond Framework

Feb. 24, 2025

Location: Norway

Sector: Local government

Alignment Summary

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✗

✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)

✓ Green Loan Principles, LMA/LSTA/APLMA, 2023

See [Alignment Assessment](#) for more detail.

Primary contact

Maria Myrvoll Knudsen

Oslo
+47-9414-3562
maria.knudsen
@spglobal.com

Dark green

Activities that correspond to the long-term vision of a low-carbon climate resilient future.

Our [Shades of Green Analytical Approach](#) >

Strengths

The green framework will chiefly be used to fund a new water supply project with solid environmental benefits. We assess the project as Dark green as it addresses climate change adaptation, will use renewable energy as the main energy source through the clean Norwegian grid, and has implemented initiatives to reduce emissions from the construction phase and materials used for the project.

The City of Oslo has been a pioneer in phasing out fossil fuel use at construction sites, and as of Jan. 1, 2025, it requires that all construction sites must be emission-free. Given the importance of deepening knowledge in the industry on how to decarbonize construction, it is positive that the City of Oslo is creating demand to encourage development of electric machinery in areas where there still is little access. In 2023, 77% of construction was performed by zero-emission machinery.

Weaknesses

No weakness to report.

Areas to watch

Eligible new construction projects are associated with high emissions. Positively, the City of Oslo addresses such emissions in the framework and these projects likely have a lower climate impact than business-as-usual. However, the methodologies and knowledge needed to reduce such emissions are still evolving and a significant reduction is required to meet 2050 targets.

Development on greenfield land can entail biodiversity and climate risk. Some greenfield land has been used in the construction of infrastructure related to Oslo's new water supply. According to the City of Oslo, the biodiversity of the areas affected by the project has been monitored, with particular attention to red-listed species. Although risk assessments have been done, deforestation inevitably contributes to climate change, and current practices may not adequately address biodiversity risks.

Shades of Green Projects Assessment Summary

Over the three years following issuance of the financing, the City of Oslo expects to allocate the majority of proceeds to sustainable water and wastewater management, a material share to green buildings, and the remainder to pollution prevention, waste management, and the circular economy.

The issuer expects a small proportion of proceeds to be allocated to refinancing projects, while the majority of proceeds will finance new projects.

Based on the project categories' Shades of Green detailed below, the expected allocation of proceeds, and consideration of environmental ambitions reflected in the City of Oslo's Green Bond Framework, we assess the framework as Dark green.

Green buildings	 Medium green
New construction	
Major renovations	
Sustainable water and wastewater management	 Dark green
New water supply project	
Upgrading and rehabilitating the existing water supply and sewerage infrastructure	
Pollution prevention, waste management and circular economy	  Dark to Medium green
Waste management projects	
Circular economy projects	

See [Analysis Of Eligible Projects](#) for more detail.

Issuer Sustainability Context

This section provides an analysis of the issuer's sustainability management and the embeddedness of the financing framework within its overall strategy.

Company Description

The City of Oslo is the capital of Norway, with approximately 700,000 inhabitants. Norway's municipalities are responsible by law for several areas that are vital to the public good. Responsibilities include water and wastewater management, schooling, social care, public transport, waste, energy supply, and environmental protection.

Material Sustainability Factors

Climate transition risks

The responsibilities of the City of Oslo leave it exposed to many sectors, including high emission sectors such as construction. The Norwegian government aims to become net zero by 2050 and reduce emissions by 55% in 2030 compared with 1990 levels. Further, Norway has a high carbon tax rate to incentivize emissions reduction in transport, energy, and other sectors. The Norwegian carbon tax is higher than the average EU Emission Trading System (ETS) price, and therefore represents one of the highest carbon taxes globally. The City of Oslo benefits from Norway's strategy to address climate and environmental issues, through central government grants and programs to support green initiatives.

The City of Oslo is responsible for the water and wastewater systems in Oslo. While the water systems are generally powered by renewable electricity, efficiency and leakage levels are important concerns. The city estimates that leakage levels in Oslo are generally high, at 33%. In comparison, in the EU, 23% of treated water is lost during distribution on average.

Construction projects contribute to global climate change largely via embedded carbon in key materials such as steel and concrete, as well as greenhouse gases emitted during the operational phase of building. Embodied emissions from building materials are a major source of emissions when assessing the carbon footprint of a building over its life cycle. As a member of the European Economic Area (EEA), Norway implements EU rules on energy efficiency in buildings and has more advanced regulations than most European countries regarding embodied emissions in terms of data collection.

Physical climate risks

Physical climate risks can affect many economic activities and increased greenhouse gas emissions will lead to more frequent and severe climate hazards, absent adaptation. While the physical impacts of climate change and extreme weather will continue to play out globally, the direct effects--including (but not limited to) heat waves, flooding, and wildfires--are more localized. The indirect impacts of such events will affect different channels (such as the volume and pricing of traded goods and services), going beyond administrative borders and cascading through multiple sectors.

Over the past century, Norway's average temperatures have risen. Norway faces a range of intensifying weather events related to climate change, notably changing snow/ice patterns, summer droughts leading to wildfire risk, and increased storms and other extreme weather. Historically, Norway has rarely experienced water shortages, but with the changing climate, droughts may occur more frequently. In the summer of 2022, the City of Oslo experienced water levels well below average, resulting in the need to introduce several water-saving measures.

The City of Oslo faces tangible risks from climate change and global warming, such as floods, landslides, and rising sea levels, which can damage property. During heavy rainfall in Oslo, excessive amounts of water results in flooding in several places in the city. Rainwater flows on the surface and finds its way to the lowest points of the terrain, causing flooding of buildings, properties, and infrastructure. Further, with large amounts of rainfall, pipes fill up and wastewater is discharged into overflows. Due to overflow, untreated but diluted wastewater is released into the Akerselva River and other urban waterways and into the fjord.

Other environmental factors

Securing safe and reliable drinking water usually requires management of land that is beneficial to biodiversity and nature conservation. Overflow of untreated wastewater poses a considerable risk to all life in the Oslofjord, a fjord already under strong environmental pressure. In general, the water quality in the inner Oslofjord has improved since the 1970s, due to the development of treatment plants and systems for pipelines and wastewater. Among other things, this has led to better visibility in the water. Emissions of nutrients from households via treatment plants still dominate the impact picture, but inputs from streams and rivers are also significant, and are likely to increase in the future with increased precipitation as a result of climate change. Wastewater in the overflow and discharge of boat septic tanks in the fjord also has an impact.

When building infrastructure and new developments, the City of Oslo is exposed to risks related to water, land use, pollution, and biodiversity loss. The challenge is to mitigate the impacts of these risks and safeguard Norway's natural environment. Preserving natural carbon stocks is key to meeting climate goals and many habitats, such as bogs and organic soils, store large amounts of carbon. Disturbing these can lead to significant emissions. Nature also absorbs carbon dioxide, so conserving 30%-50% of land, sea, and fresh water (as the Intergovernmental Panel on Climate Change recommends), is central to reducing greenhouse gases and adapting to climate change. Some ecosystems, including bogs and topsoil, take a long time to recover, and certain changes are irreversible.

Issuer And Context Analysis

We consider that eligible projects directly address sustainability factors that are material to the City of Oslo's activities, such as climate transition and climate change adaptation. The framework aims to finance Oslo's new water supply, addressing climate change adaptation. The framework's emphasis on green buildings is highly relevant to the region's efforts to reduce overall emissions. Buildings are also exposed to the impacts of climate change, making the management of physical climate risks a key consideration in our analysis.

The City of Oslo introduced a climate budget for the municipality from 2017. The City of Oslo uses this framework to ensure that climate action is integrated in the annual budgeting process, securing reporting, assessment of progress, and allocation of responsibilities across agencies. This approach has been proposed as a leadership standard for C40 cities, an international network of nearly 100 cities that are working on climate action.

The City of Oslo has a track record of emission reductions and is working on improving scope 3 considerations in reporting and strategies. Greenhouse gas emissions from Oslo's direct emissions decreased by 91% in 2023 compared with 2012. The change is mostly due to phasing out heating with fossil fuels, an increased adoption of biofuels, increased share of electric vehicles, and a renewed car fleet. Currently, the majority of Oslo's direct emissions stem from road traffic and waste incineration. Municipalities in general report territorial emissions, which are emissions that occur within the city boundary. These are direct emissions and the final consumption of households and government that are within the city boundaries. According to the City of Oslo, territorial emissions are projected to decrease by just under 70% by 2030 with the City of Oslo's adopted climate measures. Over the past few years, the scope of the climate budget has been expanded to include a wider range of goals and topics, such as energy, indirect emissions, and most recently climate adaptation and nature conservation. Many municipalities have low visibility on indirect emissions. While the City of Oslo does not have quantified emission reduction targets for all indirect emissions, it is positive that the City is increasing the quality of reporting and is implementing measures to address the most material. For example, the building and construction sector is the biggest contributor to the overall footprint for the City of Oslo, from the purchased materials. In this area, it is aiming to cut in half embodied carbon from building materials by 2030. From 2025, all municipal construction sites will be required to use zero emission construction equipment. Recently, the City of Oslo decided to implement the use of "Carbon Key," a tool that automatically calculates emissions from government purchases, to improve calculations of indirect emissions. Further, the city addresses such emissions through different strategies such as its strategy for the circular economy. Circular construction is a key priority in the City of Oslo's strategy, which was adopted by the city government in 2023. The plan

highlights the interrelationship between promoting a circular economy and mitigating consumption-based emissions.

By identifying its most material physical risks and assessing current preparedness through a climate vulnerability analysis, the City of Oslo plans to enhance its resilience for the future.

The climate adaptation strategy defines and prioritizes focus areas and measures in the short, medium, and long term and the city regularly updates it in line with increased knowledge about future climate changes and based on the experiences the municipality gains in the field. The climate vulnerability analysis shows that the city is relatively well-prepared to handle current weather conditions but not as well equipped for the changes to come. The City of Oslo has identified that there are challenges related to extreme precipitation and higher temperatures that require more knowledge and better preventive measures for hazards such as river flooding, landslides, storm surges, urban heat islands, and droughts. Furthermore, there remains a significant maintenance backlog in the road network and water and sewage systems. A key step is the integration of climate adaptation measures into the city's 2025 Climate Budget. The key investment under the framework, a new water supply, addresses physical risk mitigation by ensuring water security in the event of drought.

The loss of nature is a big environmental challenge, also evident in Oslo. With population growth of 14% over the past 10 years, Oslo is a city with strong growth, which leads to extensive development. Therefore, many nature areas will be exposed to significant development pressure. A survey of biologically valuable areas has been carried out in a large part of the municipality's area, where much of the green areas are protected from construction. The regulatory context of operating in Norway mitigates biodiversity risks to an extent. However, all deforestation negatively affects climate, and current practices might not sufficiently consider biodiversity and climate risks, even in stringent regulatory environments.

Alignment Assessment

This section provides an analysis of the framework's alignment to Green Bond and Green Loan principles.

Alignment Summary

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✕

- ✓ Green Bond Principles, ICMA, 2021 (with June 2022 Appendix 1)
- ✓ Green Loan Principles, LMA/LSTA/APLMA, 2023

✓ Use of proceeds

We assess all the framework's green project categories as having a green shade, and the issuer commits to allocating the net proceeds issued under the framework exclusively to eligible green projects. Please refer to the Analysis Of Eligible Projects section for more information on our analysis of the environmental benefits of the expected use of proceeds.

✓ Process for project evaluation and selection

The Green Investment Committee selects and evaluates eligible projects based on the municipality's approved budget. The Green Investment Committee consists of specialists from the Department of Finance, the Department of Culture and Business Development and the Department of Environmental Affairs which applies a multi-disciplinary approach and jointly selects eligible green projects. All decisions are guided by the current policies and guidelines adopted by the city council. There are requirements in place during the concept development stage of all projects, which determine what can be built and ensure alignment with the city's climate adaptation and circular economy strategies. Additionally, during the planning and design phase, projects are evaluated against the criteria for green classification. If a project does not meet these criteria, it will not qualify and will be excluded from the selection process.

The City of Oslo may consider "thematic" issuances, by focusing exclusively on one project category for an issuance. To ensure that such thematic issuances align with the City of Oslo's overarching climate strategy and the objectives of its various strategic frameworks, this process can be supported through the participation of relevant stakeholders in the steering committee responsible for project selection.

✓ Management of proceeds

The City of Oslo maintains a Green Bond Register which tracks the amounts of outstanding green bonds, as well as the value of the eligible project pool. An amount equal to the net proceeds from issued green bonds will be earmarked for financing and refinancing of eligible projects as defined in this Green Bond Framework. Unallocated proceeds will be held in accordance with its liquidity management policy and will be subject to the same exclusion list as allocated green proceeds.

✓ Reporting

The City of Oslo will publish public investor letters on an annual basis, including allocation and impact reporting, as long as there are green bonds outstanding under the framework. The City of Oslo will aim to apply the recommendations given in the Position Paper on Green Bonds Impact Reporting (Nordic Public Sector Issuers, March 2024), as applicable. The City of Oslo has included relevant impact indicators to report on. We note positively the inclusion of kilogram CO₂ equivalent per square meter for machinery and materials in new buildings, as it highlights often-overlooked construction emissions. This enhances transparency and provides a more comprehensive view of climate impacts of new building projects. Such granular metrics are rare in impact reporting, setting a stronger standard for evaluating the climate footprint of financed projects. For sustainable water and wastewater projects, the example impact indicators currently included in the framework do not include measures directly

relating to water or the final performance of the water supply, but address emissions in the construction of the project. For reporting on impact, transparency on material indicators for water projects will be important.

Analysis Of Eligible Projects

This section provides details of our analysis of eligible projects, based on their environmental benefits and risks, using the "[Analytical Approach: Shades Of Green Assessments](#)".

Overall Shades of Green assessment

Based on the project category shades of green detailed below, the expected allocation of proceeds, and consideration of environmental ambitions reflected in the City of Oslo’s Green Bond Framework, we assess the framework as Dark green.

Dark green

Activities that correspond to the long-term vision of a low-carbon climate resilient future.

Our [Shades of Green Analytical Approach](#) >

Green project categories

Green Buildings	
Assessment	Description
Medium green	<u>New buildings (projects approved by the Oslo City Council in the 2025 budget or later):</u> - Oslo municipality's own new buildings should meet the Plus-Energy Building standard. Where achieving this standard is not feasible, each project must assess which measures can be implemented to approach the goal of a Plus-Energy Building standard. Solar panels on roofs and façades should be installed where appropriate. As a minimum, new buildings must meet passive house standards. - Greenhouse gas emissions from materials used in new and renovated buildings must be reduced by at least 30% compared with the emission levels for materials in the FutureBuilt ZERO reference pathway. This target applies not to individual buildings but to the entire portfolio of new and renovated buildings. Therefore, the client, in dialogue with the contractor, must set a climate requirement for materials in the specific building to ensure that the overall portfolio target is achieved. The baseline assumption is that emissions from materials in each building should be reduced by 30% compared with the reference pathway. Any material choices that are detrimental to the environment must be justified. - Zero emission construction sites are required for all new buildings. - All new buildings should aim for solutions that facilitate the disassembly, reuse, and material recycling of building components during demolition or renovation. Special emphasis should be placed on preserving heavy load-bearing structures. When selecting materials, priority should be given to those that can be repaired, reprocessed, and reused. For renovation projects, new building components must be designed to enable future disassembly and reuse of these components.

- Each building project must explore alternatives to fossil-based plastics. Recycled and material-reprocessed plastics should be used instead of fossil-based plastics where market alternatives are available. Plastic packaging from building products must be minimized. All plastic packaging should be reusable and, at a minimum, recyclable.
- A greenhouse gas account must be prepared for the building in accordance with NS3720. As a minimum, the greenhouse gas account should cover the "basic" scope, "without location," and include modules A1-A5, B4, B5, B6, and C1-C4 as defined in NS3720.

Major renovations:

- All major renovations trigger requirements in accordance with TEK17. The project should aim for a Passive House Standard, in addition to evaluating the use of solar energy on roofs and facades. In the case of major renovations or refurbishments where for example cultural heritage considerations hinder passive house standard, the minimum requirements for building elements, components, and systems in the Passive House Standard must be met where technically feasible.
- After renovation, a building's primary energy demand (measured in kilowatt hours per square meter per year) must be at least 30% lower than it was before the renovation.

Analytical considerations

- For new construction and renovation projects, enhancing energy performance and minimizing embodied emissions from building materials and construction are central to achieving low-carbon objectives. Addressing physical climate risks is also key to strengthening climate resilience across all buildings.
- We assess the project category as Medium green. For new construction or major renovation projects, we consider the City of Oslo's criteria to be relevant to decreasing emissions because it aims to ensure energy efficiency and a reduction of embodied emissions. Further, all construction projects have considerations of physical climate risks. We view it as a strength that the City of Oslo expects half of the investments to go to renovation projects, as renovating the existing stock is highlighted as an important activity to reach net zero targets. Most buildings projects in the City of Oslo concern schools, focusing on expansion, rehabilitation, and upgrades. Oslobygg, the City of Oslo's property enterprise, is responsible for projects.
- To meet climate targets, the City of Oslo has seen that it needs to prioritize renovations over new construction. In the transition to a low-carbon society, it is essential to renovate and improve existing properties. With that in mind, we view as solid the ambition to reduce the energy consumption of renovated buildings by 30%, aiming for passive house standard, and the on-site production of renewable energy, while at the same time assessing embodied emissions. While we assess the project category as Medium green, the most ambitious renovation projects represent Dark green characteristics.
- For new buildings, we view the criterion for buildings to meet the plus-energy standard as a solid ambition, as buildings achieving the plus-energy standard represent buildings that are energy efficient but also produce more energy than they consume over a year. At a minimum, buildings need to meet the passive house standard. The criteria ensure that the energy performance of all buildings financed exceeds the minimum requirements for energy efficiency in Norway.
- Given the significant climate impacts associated with new construction, particularly embodied emissions, we note positively the City of Oslo's work to reduce the embodied emissions of all construction projects, through its circular economy strategy which includes setting targets for construction project. While construction projects still will entail high emissions in the near term, emissions from materials will likely be reduced compared with business-as-usual. The City of Oslo references a pathway outlining how emissions from material used in Norwegian building projects should decrease to reach zero by 2050. For its own projects, the City of Oslo mandates that material emissions must be 30% below this dynamic pathway. As it has chosen a portfolio approach, individual buildings could fail to meet the 30% improvement. However, the city aims to meet the improvement for all individual buildings. As it is vital to increase knowledge in the industry on how to decarbonize construction, we view it as a strength that the City of Oslo has been a pioneer in phasing out fossil fuel use at construction sites, and as of Jan. 1, 2025, it requires that all construction sites must be emission-free.
- When building on greenfield land, biodiversity risks are present, as well as climate risks. The location of projects is regulated through Oslo's spatial plan. There is currently a proposal to update the spatial plan, to include a principle of area neutrality, that

- would entail requirements for area compensation for the deterioration of areas with biodiversity. Norway's regulatory context mitigates biodiversity risks to an extent, as does the projects mainly being built on brownfield areas. In its projects, Oslobygg evaluates the potential for increasing green spaces, ensuring permeable surfaces, evaluating the use of blue-green roofs, protecting trees and endangered species, removing invasive alien species, and preserving green corridors.
- Oslobygg has requirements for stormwater management for new buildings and major rehabilitation projects, incorporating solutions such as green roofs, rain gardens, sunken sports fields, and more. All stormwater management must be open, natural, and local.

Sustainable Water And Wastewater Management

Assessment	Description
Dark green	• Zero emission construction is required for all new water and sewerage infrastructure projects, where applicable. <u>Existing water infrastructure:</u> • Upgrading and rehabilitating the existing water supply and sewerage infrastructure, to reduce leaks, expand capacity, and adapt to climate change. <u>New water supply project:</u> • Climate adaptation measures in relation to water and wastewater infrastructure. • Low emission concrete is required for all infrastructure development in the new water supply project, when applicable. The contracting strategy includes using tender award criteria on environmental performance, with emphasis on reducing indirect greenhouse gas emissions from the most important construction materials. • All contractors must provide greenhouse gas account budgets and reports, and contractors performance is monitored. Malus schemes are incorporated in contracts, to provide incentives for contractors to perform in accordance with the tender contract obligation over the contracting period.

Analytical considerations

- As a form of natural capital, water is necessary for economic activity, thriving ecosystems, and public health. Therefore, water supply systems are important from a climate change adaptation point of view, securing a future where everyone have reliable access to sufficient water of adequate quality. Systems are energy-intensive and, if not sufficiently managed, can generate significant waste, and exacerbate water stress for other stakeholders.
- The main investment under the framework is a new water supply project, which entails water supply infrastructure and a treatment plant. We assess the project as Dark green because it addresses climate change adaptation, will use renewable energy as the main energy source through the clean Norwegian grid in its operations, and has implemented initiatives to reduce the emissions from the construction and materials used for the project. The increased water withdrawals from the Holsfjord are not projected to affect local ecosystems or water supplies for other communities.
- The primary objective of the project is to ensure water security in the event of drought or disruptions to the existing water supply. Physical climate risks were considered when choosing Holsfjorden as the water source, where it was considered that there is no risk for water shortage because of the size of the water source. Further, with the design of the water treatment plant, flood risks have been assessed and mitigated.
- We view positively that the new water supply project has implemented initiatives to reduce the associated climate emissions from the construction phase of the project. Building out a water supply and associated infrastructure can entail high emissions from the materials used for the construction, the excavation and transport of large amounts of soil, and energy use. The City of Oslo has implemented initiatives to address the main emission sources, such as using low carbon concrete. Further, it has set requirements for all transportation, machinery, and equipment used, such as tunnel boring machines, to use electricity or

- biofuels. Additionally, the City of Oslo targets to reduce emissions from the excavation of soil by reusing as much of the masses as possible and choosing optimal transportation routes.
- An environmental impact assessment was performed before the start of the water supply project. Some greenfield land has been used in the construction of relating infrastructure. According to the City of Oslo, the biodiversity of the areas affected by the project has been monitored, with particular attention to red-listed species. Additionally, a closed wastewater treatment plant will be transformed into a park as a compensation for the greenfield land used in the project. Although risk assessments have been done, deforestation inevitably contributes to climate change, and current practices may not adequately address biodiversity risks.
 - Oslo's water system mainly relies on electricity as a power source. In this regard, we view positively that the electricity used to power the water systems comes from the Norwegian electricity grid which is composed of renewable energy.
 - In addition to the Oslo water supply project, the city has several smaller initiatives focused on climate change adaptation. These include projects related to stormwater management, particularly addressing challenges arising from Oslo's partially combined sewer system.
 - In line with the City of Oslo's responsibility to provide water services to the population, financing under this category addresses water infrastructure for public needs, rather than projects that serve water-intensive purposes such as industrial and agricultural use, or mining. The City of Oslo has confirmed that financed projects will not support fossil-linked or emission-intensive facilities. Further, desalination plants are not eligible for financing.

Pollution Prevention, Waste Management, And Circular Economy	
Assessment	Description
Dark to Medium green	<u>Waste management:</u> • Waste management, such as the reduction of the amount of waste, collection and sorting for material recycling, waste-to-energy (following a waste hierarchy to prioritize reuse and recycling before energy conversion), and improved infrastructure and recycling facilities (where at least 50%, in terms of weight, of the waste is converted into secondary raw materials). <u>Circular economy:</u> • Circular handling of materials, material selection, and reuse, including a digital reuse platform. • Instruments to reduce consumption of textiles, disposable plastics, IT, recreational equipment, tools, and furniture.

Analytical considerations

- Waste management is an important pollution prevention measure that can avoid harm to human health and local ecosystems. Facilitating the circular economy is key to a low-carbon future. Recycling, if done properly, will reduce emissions and benefit energy and natural-resource use. Such projects show Dark green characteristics. Due to the broad eligibility criteria, some financed projects may represent improvements over current practices but still carry climate risks, such as waste-to-energy (WtE) projects. Given the wide scope of this project category, we assess as Dark to Medium Green.
- The City of Oslo is currently not expecting any major investments under this project category. The waste management agency in Oslo has several ongoing feasibility studies, which may require large investments at a later date. Examples include a waste transfer facility, which will increase sorting and recycling rates, a material recovery facility aimed at improving sorting of plastics, and ensuring that WtE is treated with carbon capture and storage (CCS).
- The City of Oslo is working to fulfil national regulations to increase the sorting and recycling of household waste. For example, the new waste regulation requires that 55% of food waste be sorted from 2025, increasing to 60% by 2030 and 70% by 2035. Similarly, for plastic waste, the requirements are 50% by 2028, 60% by 2030, and 70% by 2035. Furthermore, the City of Oslo is following up new regulations to improve the sorting of metal and glass. Measures that are under consideration include: A

separate bin for food waste that can improve food waste collection, sending household waste to an advanced sorting facility, and installing more collection points for glass and metal.

- Waste management projects would not rely on fossil fuels. The City of Oslo sets requirements that fossil fuels cannot be used in its projects. Further, fossil fuel vehicles to be used for waste collection could not be financed.
- While eligible activities in the framework include WtE projects, we do not expect these to receive financing in the short term. The City of Oslo recognizes that unabated WtE plants that incinerate municipal waste create significant emissions and only represent near-term transition steps. The city has stated that continuation of unabated incineration of mixed residual household waste beyond 2030 is not compatible with its climate goals. The city currently hosts three waste incineration facilities, one of which, the main facility, at Klemetsrud, has a fully funded plan for CCS that is planned to be operational from 2029. The City of Oslo aims for all household waste being treated with CCS; it states that options that are being discussed are sending all household waste to the new Klemetsrud facility with CCS, sending household waste to another facility with CCS outside Oslo, or building a new facility with CCS at Haraldsrud. WtE plants using municipal waste as the fuel source and using CCS are typically viewed as Medium green.

S&P Global Ratings' Shades of Green

Assessments					
 Dark green	 Medium green	 Light green	 Yellow	 Orange	 Red
Description					
Activities that correspond to the long-term vision of an LCCR future.	Activities that represent significant steps toward an LCCR future but will require further improvements to be long-term LCCR solutions.	Activities representing transition steps in the near-term that avoid emissions lock-in but do not represent long-term LCCR solutions.	Activities that do not have a material impact on the transition to an LCCR future, or, Activities that have some potential inconsistency with the transition to an LCCR future, albeit tempered by existing transition measures.	Activities that are not currently consistent with the transition to an LCCR future. These include activities with moderate potential for emissions lock-in and risk of stranded assets.	Activities that are inconsistent with, and likely to impede, the transition required to achieve the long-term LCCR future. These activities have the highest emissions intensity, with the most potential for emissions lock-in and risk of stranded assets.
Example projects					
 Solar power plants	 Energy efficient buildings	 Hybrid road vehicles	 Health care services	 Conventional steel production	 New oil exploration

Note: For us to consider use of proceeds aligned with ICMA Principles for a green project, we require project categories directly funded by the financing to be assigned one of the three green Shades.

LCCR--Low-carbon climate resilient. An LCCR future is a future aligned with the Paris Agreement; where the global average temperature increase is held below 2 degrees Celsius (2 C), with efforts to limit it to 1.5 C, above pre-industrial levels, while building resilience to the adverse impact of climate change and achieving sustainable outcomes across both climate and non-climate environmental objectives. Long term and near term--For the purpose of this analysis, we consider the long term to be beyond the middle of the 21st century and the near term to be within the next decade. Emissions lock-in--Where an activity delays or prevents the transition to low-carbon alternatives by perpetuating assets or processes (often fossil fuel use and its corresponding greenhouse gas emissions) that are not aligned with, or cannot adapt to, an LCCR future. Stranded assets--Assets that have suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities (as defined by the University of Oxford).

Mapping To The U.N.'s Sustainable Development Goals

Where the Financing documentation references the Sustainable Development Goals (SDGs), we consider which SDGs it contributes to. We compare the activities funded by the Financing to the International Capital Markets Association (ICMA) SDG mapping and outline the intended linkages within our SPO analysis. Our assessment of SDG mapping does not impact our alignment opinion.

This framework intends to contribute to the following SDGs:

Use of proceeds	SDGs		
Green buildings		11. Sustainable cities and communities	
Sustainable water and wastewater management			6. Clean water and sanitation* 12. Responsible consumption and production
Pollution Prevention, Waste Management and Circular Economy			 8. Decent work and economic growth 11. Sustainable cities and communities 12. Responsible consumption and production

*The eligible project categories link to these SDGs in the ICMA mapping.

Related Research

- [Analytical Approach: Second Party Opinions: Use of Proceeds](#), July 27, 2023
- [FAQ: Applying Our Integrated Analytical Approach for Use-of-Proceeds Second Party Opinions](#), July 27, 2023
- [Analytical Approach: Shades of Green Assessments](#), July 27, 2023
- [S&P Global Ratings ESG Materiality Maps](#), July 20, 2022

Analytical Contacts

Primary contact

Maria Myrvoll Knudsen

Oslo
+47-9414-3562
Maria.Knudsen
@spglobal.com

Secondary contacts

Pierre-Brice Hellsing

Stockholm
+46-8440-5906
Pierre-brice.Hellsing
@spglobal.com

Kristina Alnes

Oslo
+47-9415-3114
Kristina.Alnes
@spglobal.com

Tim Axtmann

Oslo
+47-9415-7046
Tim.Axtmann
@spglobal.com

Second Party Opinion: City of Oslo Green Bond Framework

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