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Second Party Opinion

HM Treasury Green Financing Framework

Nov. 26, 2025

Location: United Kingdom

Sector: Sovereign

Alignment Summary

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✗

✓ Green Bond Principles, ICMA, 2025

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

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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 framework's eligible expenditures align well with the U.K.'s environmental objectives.

This includes, for instance, contributions to the country's clean power 2030 action plan and the 2021 transport decarbonization plan, but also the national adaptation program. We believe the high share of proceeds going to electric transport and low-carbon energy can have a significant impact on the country's decarbonization journey.

Several project categories demonstrate social co-benefits in addition to environmental ones.

The projects leverage building efficiency and decarbonized transport to reduce heating costs, cut air pollution, and improve public access to essential services. The role of the public sector is also for funding climate adaptation projects, which are essential for limiting the negative social impacts of climate change but are rarely financed by the private sector.

Weaknesses

No weakness to report.

Areas to watch

The broad scope of the framework and numerous project categories create some uncertainty when it comes to the specific future projects that will be financed. Several project categories have broadly defined criteria. For example, there is not a specific savings threshold to determine eligibility under the energy efficiency category. Similarly, the natural and living resources category includes a variety of potential projects, leading to some uncertainties on final actual impact.

Some eligible projects have indirect links to fossil-based energy. For instance, some building-related projects may receive grants to finance insulation measures, despite their reliance on natural gas boilers. Other eligible expenditures within transport, agriculture, or water treatment are also likely to partly rely on fossil fuel-based equipment.

Shades of Green Projects Assessment Summary

In line with past allocations, HM Treasury expects, under this updated framework, to allocate a significant share of proceeds to the clean transportation category. The nuclear energy category is also expected to receive a significant share of proceeds, initially around 20% of the total. The pollution prevention and control category will receive a higher share of proceeds compared with past years, notably with the planned spending toward the country's carbon capture, utilization, and storage (CCUS) infrastructure. We note that around 15% of past green allocations have been made as part of the "Multiple" category, which is predominantly allocated to U.K. official development assistance. The issuer informed us that this category's share of overall green financing is expected to decrease in the future. Such allocations correspond to various international climate finance programs that fall under multiple project categories under the framework.

The issuer commits to finance at least 50% of net proceeds to current and future expenditures, which are those incurred between the year of issuance and up to two years after. Conversely, no more than 50% of proceeds may be allocated to expenditures occurring prior to issuance, with a look-back period of one year maximum.

Based on the project categories' shades of green detailed below, the expected allocation of proceeds, and consideration of environmental ambitions reflected in HM Treasury's green financing framework, we assess the framework dark green.

Clean Transportation	 Dark green
Low and zero emission mobility, including vehicles, incentives, infrastructure, and alternative fuels	
Research and development (R&D) for low and zero emission transportation technologies	
Renewable Energy	  Dark to Medium green
Support development of renewable energy generation capacity such as wind, solar and hydrogen	
Schemes for renewable heat use, including heat networks, heat pumps and hydrogen heating	
Support for energy storage systems, such as batteries, compressed air/liquid air, and gravitational storage	
R&D for the commercial viability of renewable energy technologies	
Energy Efficiency	  Dark to Medium green
Support schemes for energy efficiency programs for the commercial, public, and industrial sectors	
Support schemes for residential energy efficiency programs (including heating, retrofit, and insulation)	
R&D for new energy efficiency technologies	
Pollution Prevention and Control	  Dark to Medium green
Reduction of air emissions and greenhouse gas control	

Waste prevention, waste reduction, waste recycling, and energy/emission-efficient waste to energy

Living and Natural Resources **Medium to Light green**

- Protection and enhancement of terrestrial and marine biodiversity, ecosystems, and natural capital
- Sustainable land use and protection, including environmentally sustainable agriculture
- Environmentally sustainable clean water, water storage, and wastewater management initiatives
- Funding for environmental activities of public sector arms-length bodies

Climate Change Adaptation **Medium green**

- Flood protection, resilience, and other risk-mitigation programs
- Data-driven climate monitoring solutions
- Engineering activities and technical consultancy dedicated to adaptation to climate change

Nuclear Energy **Medium green**

- Electricity and/or heat (including co-generation) from nuclear fission: Support for the design, development, construction, commissioning, safe operation, lifetime extension, or supporting infrastructure of new or existing nuclear power generation assets, including:
- Enabling fuel cycle activities
 - Radioactive waste and spent fuel storage, management, and final disposal
- R&D for future fission and fusion energy technologies

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.

Issuer Description

The United Kingdom (U.K.) is an island country situated off the northwestern coast of mainland Europe, encompassing a geographically diverse landscape across England, Scotland, Wales, and Northern Ireland. It has a surface area of 243,610 square kilometers and a population of 69.22 million. The U.K. is a high-income country with a GDP per capita of around £40,172 and a very high human development index of 0.946 in 2024. The services industry, including the U.K.'s important financial, information and communications sectors, accounts for the majority of the U.K.'s economy, (around 80% of the U.K.'s total gross value added), followed by the manufacturing industry (18%). The U.K.'s top five exports include medicinal and pharmaceutical products, mechanical power generators (intermediate), cars, crude oil, and aircraft.

The country's entire landmass is within 75 miles (120 km) of the coast and heavily influenced by the maritime environment. The country hosts a diverse mix of habitats and species. According to the Organization for Economic Cooperation and Development, in 2023, U.K. land use consisted of 45.2% permanent meadows and pastures, 25.2% cropland, 13.3% forests, and 16.4% other areas. It also possesses fertile land that supports a highly mechanized agricultural sector, producing approximately 60% of its food needs.

Material Sustainability Factors

Climate transition risks

Policymakers have a key role to play in bringing about the drastic cuts in greenhouse gas emissions needed to address climate change. Although the breadth of existing country signatories to the 2015 Paris Agreement provides a basis for global action, current climate pledges fall significantly short of the reductions needed to reach net zero by 2050. Governments can stimulate climate action from public and private, personal, and industrial actors through regulations, incentives, and various price signals--including broad and material carbon taxes, subsidies, and penalties. Policymakers' incentives to act on climate vary widely and can change rapidly with the level of public support for action; international agreements; tangible evidence of climate change in the region; short-term economic costs of the transition; social acceptance; competitive pressures; the perceived impact a country or region can have on global emissions; and the perceived imbalance between local and global risks from climate change.

The U.K.'s current share of global annual greenhouse gas emissions is under 1%, excluding emissions from imported goods, international shipping, and aviation emissions. However, we note that the U.K. has historically contributed to a higher share of global cumulative emissions than its current footprint. The U.K.'s emission reduction is primarily driven by reduced fossil fuel reliance, including the phasing out of coal, and a growing reliance on low-carbon energy sources. As part of its nationally determined contributions, the U.K. has set a target to reduce all greenhouse gas emissions by at least 81% by 2035 compared with 1990 levels (excluding international aviation and shipping emissions). Domestic transport is the largest greenhouse gas emitter, accounting for 30% of all emissions in 2024. In comparison, 21% of emissions were from the buildings and product uses sector, 13% from the industry sector, 12% from the agriculture sector, and 10% from the electricity supply sector. The remaining 13% is attributed to the fuel supply, waste, and land use, land-use change, and forestry sectors.

Physical climate risks

Physical climate risks can affect many economic activities, absent adaptation. If greenhouse gas emissions increase and are unabated, this will drive more frequent and severe climate hazards. Although the physical impact of climate change and extreme

weather events will continue to play out globally, the direct impact of climate hazards—including heat waves, flooding, and wildfires—are typically localized. Meanwhile, the indirect impact of such events may materialize through different channels (such as the volume and pricing of traded goods and services), extend beyond administrative borders, and cascade through multiple sectors.

The U.K.'s traditionally temperate oceanic climate is becoming increasingly unstable due to anthropogenic climate change, exposing the country to significant physical climate risks. According to the U.K.'s national weather and climate service, the Met Office, rising global temperatures are translating into more frequent and intense heatwaves, drier summers, wetter winters, and heavier rainfall. These changes manifest as a higher likelihood of severe flooding and coastal erosion, driven by increased rainfall intensity and rising sea levels. Consequently, the physical impacts of climate change pose substantial threats to public health, critical national infrastructure, agricultural productivity, and the resilience of natural ecosystems. As the U.K.'s climate is becoming more volatile, the implementation of adaptation measures across all sectors is crucial to effectively manage the physical climate impacts.

Other environmental factors

Governments play a key role in protecting biodiversity, and containing land, air, and water pollution. Economic development goals may exert considerable pressure on natural ecosystems, locally and for trading partners. Environmental factors are often intertwined with other factors, such as climate transition and physical climate risks.

The U.K. is exposed to various environmental factors, including air, water, and waste pollution, land use changes, and biodiversity loss. Air pollution is currently the most significant environmental threat to public health in the U.K., linked to an estimated 28,000 to 36,000 premature deaths annually. The U.K. has various targets to reduce air pollution by 2040, notably related to fine particulate matter levels. Waste is also a significant environmental issue in the U.K., driven by high levels of total waste and plastic and reliance on incineration over recycling. About half of England's municipal waste is incinerated while recycling rates have plateaued. Water quality is under pressure from agricultural runoff, industrial discharge, and sewage overflows. Although this is a global trend, the U.K. has experienced a dramatic decline in biodiversity, with 16% of its species considered under threat of extinction. The country targets achieving effective conservation and management of at least 30% of land and sea, (with an emphasis on biodiversity and ecosystem function and services). According to the government's initial review, around 14% of land would currently count toward the 30% target.

Social factors

Governments play a crucial role in ensuring the development of society and economy. Depending on national and local socioeconomic circumstances, governments may prioritize issues of economic advancement, poverty, hunger, or inequality reduction, access to essential services or infrastructure, access to clean water and sanitation, or other social goals.

The U.K. is a high-income economy with a human development index of 0.946 (2024), ranking 13th out of 193 countries. The country has made significant progress in improving prosperity over the past decades, although challenges remain. According to the Joseph Rowntree Foundation (JRF) U.K. Poverty 2025 report, a major risk is persistent poverty, affecting more than one in five of the working population. Since 2021, the country has also been experiencing a severe cost-of-living crisis, where rising costs for energy, food, and housing are outpacing wage growth and pushing more families into precarious financial situations and food insecurity. This economic strain is intrinsically linked to an acute housing crisis, characterized by a shortage of affordable homes, soaring rents, and rising homelessness.

Issuer And Context Analysis

The eligible project categories aim to address the U.K.'s material sustainability factors, including climate transition and physical climate risk. Expenditures include projects within categories, such as clean transportation renewable energy, energy efficiency, and nuclear

energy. These investments aim to address climate transition risk. The pollution prevention and control category, with its focus on CCUS, also primarily aims to mitigate climate change. Projects within living and natural resources focus on protecting land and marine biodiversity, with some projects tackling water-related issues. In addition, we consider investments in the adaptation projects highly important in boosting the U.K.'s resilience against climate change.

The U.K.'s national climate strategy relies on five-year carbon budgets to guide its transition toward the achievement of its long-term 2050 net zero target. The U.K. Climate Change Act, passed in 2008, mandates an 81% reduction in greenhouse gas emissions by 2035 compared with 1990 levels, with the country having already achieved a 54% reduction by 2024. The act also establishes a framework for setting legally binding five-year caps on total greenhouse gas emissions, known as carbon budgets. The country relies on key policies and programs to progress on this strategy, notably on the decarbonization of transport, power, and buildings. For example, the U.K.'s Clean Power 2030 Action Plan focuses on expanding low-carbon energy sources (accounting for 53.3% of generation in 2024) including offshore wind, solar, and nuclear. Regarding transport, the country aims for the complete phase-out of new purely fossil-fuel-fired vehicles by 2030, and by 2035 for new fossil fuel-electric hybrid vehicles, while encouraging zero-emission vehicle sales. Heat use in buildings is also a major contributor to overall emissions and the country has various programs to support energy efficiency measures and heating sources switching to low-carbon solutions, such as the Boiler Upgrade Scheme, for instance. However, we note the country has scrapped the ban on gas boilers that was supposed to apply to new buildings as of 2035. The U.K. government has committed up to £21.7 billion to support domestic CCUS and hydrogen infrastructure development.

The U.K.'s Third National Adaptation Program (NAP3) projects more frequent and intense summer heatwaves, wetter winters, and increased flood risk across the country. Every five years, the U.K. government conducts climate risk assessments and reports on key adaptation measures through the NAP3. For the 2023-2028 period, it identified key resilience measures to address potential physical climate impacts. These measures include building flood defenses against rising sea levels, incorporating more green spaces in urban areas for cooling, developing drought-resistant crops for agriculture, and constructing climate-resilient infrastructure capable of withstanding extreme heat and flooding. However, according to the Climate Change Committee, progress in strengthening resilience in the U.K. has been insufficient to address growing climate risks across the country.

The U.K.'s Environmental Improvement Plan (EIP) addresses a wide range of environmental issues, including air, water, and waste pollution, as well as biodiversity loss. The EIP provides a framework with legal targets for cleaner air and water, waste reduction, and biodiversity protection. It seeks to ensure clean air by reducing harmful emissions, introducing clean air zones in cities, and regulating polluting domestic fuels. By tackling agricultural run-off, reducing sewage overflows, and improving river health, it aims to improve water quality. Furthermore, the EIP also focuses on waste management and plastic pollution by minimizing waste generation, increasing resource efficiency, and banning single-use plastics. Additionally, to address biodiversity issues, the government has established a legally binding target to halt the decline in species abundance by 2030. It also mandates a biodiversity net gain mechanism, requiring developers to enhance biodiversity by at least 10%, either on-site or through off-site habitat creation secured for a minimum of 30 years. Furthermore, U.K. agricultural policies are transitioning to environmental land management schemes that incentivize farmers to deliver environmental goals, such as soil enrichment and pollution reduction, to help reverse historical declines caused by intensive farming.

Although the framework is focused on green objectives, we believe some eligible projects have substantial social co-benefits for the U.K. population. This is the case for building-related projects, such as insulation and retrofit support schemes, which may decrease heating costs for beneficiaries. Similarly, the growth of decarbonized transport, notably through the financing of public trains and private vehicles, should contribute to reducing air pollution and improving access to essential infrastructure and services. Adaptation projects are also key to limiting the negative social impact of climate change on the U.K.'s population. Such adaptation investments

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are rarely funded by the private sector; thus, we consider the public sector's role particularly important. The various programs and schemes eligible under the framework are also expected to contribute to economic growth and employment generation for local populations.

Alignment Assessment

This section provides an analysis of the framework's alignment to green bond principles.

Alignment Summary

Aligned = ✓ Conceptually aligned = ○ Not aligned = ✗

✓ Green Bond Principles, ICMA, 2025

✓ Use of proceeds

We assess all the framework's green project categories as having a green shade. 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. The issuer will allocate the proceeds raised from any green gilt, green savings bonds, or other specified green finance instrument to finance or refinance, the expenditures that meet the environmental eligibility criteria outlined in the framework. Furthermore, the issuer commits to refinance no more than fifty percent of the eligible green expenditures falling within a one-year lookback period. The issuer also commits to a one- to two-year look-forward period for newly financed projects, which we view favorably. The framework excludes activities such as the production of weapons-grade nuclear material or facilities with primarily military applications, vehicles reliant on fossil fuel combustion and ethanol, fossil fuel exploration and exploitation, large-scale hydroelectric projects exceeding 25 megawatts, weapons, tobacco, gaming, palm oil, and the direct manufacture of alcoholic beverages.

✓ Process for project evaluation and selection

HM Treasury, in consultation with other government departments, will evaluate and select eligible green expenditures. To verify these expenditures, HM Treasury will engage bilaterally with relevant departments, including the Department for Energy Security and Net Zero; Department for Environment, Food, and Rural Affairs (DEFRA); and the Department for Transport; among others. Each department will annually provide HM Treasury with updated longlists of potential expenditures within their respective areas. HM Treasury will then update ministers on the complete list of eligible green expenditures at least annually, with the Treasury ministers retaining final authority over any material changes. Furthermore, the issuer will use the Orange Book, a general risk management framework, to identify and manage environmental and social risks associated with the eligible expenditures. However, the primary responsibility for identifying and managing perceived environmental and social risks related to green expenditures rests with the respective spending departments.

✓ Management of proceeds

The funds raised under the framework will be transferred to a general account by HM Treasury and are intended to be allocated within two budget years of the financing being raised. HM Treasury will also conduct an annual review to ensure proper allocation of the proceeds and make adjustments as needed. The HM Treasury confirmed, if the projects fail to meet the eligibility criteria, the respective spending departments will inform HM Treasury of the eligibility issues, allowing it to adjust in the subsequent financing as needed. Unallocated proceeds are managed in accordance with HM Treasury's standard cash management guidelines, consistent with its long-standing debt management policy.

✓ Reporting

U.K. Treasury commits to report allocation and impact on its eligible green expenditure annually until full allocation. The allocation reporting will include an overview of the allocation of the proceeds of green financing to the main eligible green expenditures categories, a breakdown of green expenditure subcategories, share of financing versus refinancing, and percentage share of co-financing where relevant, and the amount of unallocated proceeds, among others. The impact reporting will include information on potential environmental impacts and associated social co-benefits of the eligible green expenditures

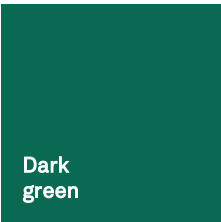
as well as case studies. Furthermore, HM Treasury will primarily use publicly available impact data for green financing projects, following Green Book and Magenta Book guidelines.

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 categories' shades of green detailed below, the expected allocation of proceeds, and consideration of environmental ambitions reflected in HM Treasury's green financing framework, we assess the framework 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

Clean Transportation

Assessment	Description
 Dark green	- Low and zero emission mobility, including vehicles, incentives, infrastructure, and alternative fuels. - R&D for low and zero emission transportation technologies.

Analytical considerations

- Electrification and supporting infrastructure play a key role in decarbonizing the transport sector to align with a 2050 future. The transport sector represents over one-third of the U.K.'s energy-related emissions. Thus, efforts to finance its decarbonization through electrification are key to the country's long term climate goals. This project category is also the one that received the greatest proceeds from the U.K.'s previous green issuances, with most proceeds allocated to the enhancement and renewal of electric railway infrastructure. HM Treasury confirmed it expects this category will keep receiving significant funding from future issuances.
- The U.K. expects that expenditures concerning the modernization and electrification of railway infrastructure, as well as the purchase of new rolling stock with zero tailpipe emissions, will represent the main allocation to this category. The issuer also intends to keep financing various mobility solutions, including funding and grants to support the deployment of electric vehicle (EV) charging infrastructure, cycling and walking initiatives, and the purchase of electric buses. Other minor expenditures may relate to ultra-low emissions solutions such as the Plug-In Van Grant or some hydrogen policies. We assess this category dark green, reflecting the key role of transport electrification and that most proceeds are expected to finance electric rail.
- While transportation electrification will greatly support climate change mitigation efforts, there are also potential risks related to indirect greenhouse gas emissions from a life cycle perspective (material sourcing, manufacturing), as well as fossil fuel-generated electricity for charging. Regarding lifecycle emissions, spending departments are responsible for implementing relevant guidelines in line with policies. For example, the electric car grant scheme reduces the cost of

- acquiring new EVs depending on their upstream emissions performance. It provides different grant amounts that vary depending on the car's emissions stemming from the battery production and vehicle assembly stage.
- Regarding emissions from electricity used for charging, the U.K.'s grid has shown significant progress in recent years thanks to phasing out coal and growth in wind power. According to the International Energy Agency, the U.K. electric grid in 2024 was dominated by renewable energy sources, which account for 53.3% of generation, significantly surpassing the 31.7% share held by all fossil fuels combined. Individually, the two largest contributors are wind (29.5%) and natural gas (30.3%), followed by nuclear (14.2%) and biofuels (12.2%).
 - The issuer confirms that transportation infrastructure, including railway and metro lines, as well as the acquisition of rolling stock, focuses exclusively on fully electrified modes of transport. Also, HM Treasury confirmed that it doesn't directly finance rolling stock dedicated to the transportation of fossil fuels.
 - The country's current car fleet remains significantly dominated by internal combustion engine vehicles, though this is evolving with new car registrations. In 2024, 58.5% of new registrations were pure fossil fuel-burning cars, while fully electric cars represented 19.6% of the total, and hybrids (plug-in hybrid electric vehicles and hybrid electric vehicles) accounted for 21.5%. We note that plug-in vehicles grants are also eligible under this category, as well as potential fuel-cell hydrogen vehicles-related investments. With no visibility on the type of hydrogen used, such projects are assessed medium green, while plug-in hybrids are assigned a light green shade, accounting for the associated emission intensity criteria (for example, carbon dioxide emissions of less than 50 grams per kilometer for vans). This does not impact the category shade of dark green, due to the significant majority of proceeds expected to focus on electric rail.
 - HM Treasury does not perform its own climate risk assessment of potentially eligible projects for financing. It relies on the various spending departments, which assess whether projects are meeting the applicable policy requirements.

Renewable Energy

Assessment	Description
Dark to Medium green	• Support development of renewable energy generation capacity such as wind, solar and hydrogen • Schemes for renewable heat use, including heat networks, heat pumps, and hydrogen heating • Support for energy storage systems, such as batteries, compressed air/liquid air, and gravitational storage • R&D for the commercial viability of renewable energy technologies

Analytical considerations

- Renewable energy projects such as solar photovoltaic and wind are key elements in limiting global warming to well below 2°C, provided their negative impacts on the local environment and physical risks are sufficiently mitigated. Similarly, projects supporting renewable heat projects are needed to reduce reliance on fossil fuel systems. While the U.K. has made significant progress in decarbonizing its electric grid in recent years, its buildings sector remains a significant contributor to the country's total climate footprint, responsible for over one-fourth of its energy emissions.
- Most proceeds under this category are destined to support businesses' and homes' phase-out fossil fuel boilers, to be replaced with biomass and heat pumps, as well as the development of existing and new low-carbon heat networks. We understand from the issuer that expenditures under this program related to energy storage, renewable power generation (e.g., wind and solar), or hydrogen are not expected to be material. This category of projects received about 14% of total allocated proceeds in 2022-2024. We assess this category dark to medium green, reflecting the clear climate benefits of direct fossil fuel heating replacement with low-carbon sources, but also that part of the heating networks may have residual carbon-intensive energy sources, such as waste-to-energy.
- Within this category, an important commitment in the 2025 spending review relates to the Warm Homes Plan. This is a comprehensive plan that includes various mechanisms, such as local grants for insulation and low-carbon heating measures, the social housing fund, and the boiler upgrade scheme. For example, the scheme provides significant grants to

support the switch, for eligible homeowners in England and Wales, from gas boilers to heat pumps. It may also provide grants for the switch to biomass boilers in some specific circumstances, such as in rural locations.

- We consider the investments supporting the switch from natural gas boilers to electric heat pumps to be dark green because these measures will directly reduce greenhouse gas emissions and reliance on fossil fuels. The issuer may also finance the heat distribution networks, notably through the heat networks transformation program. The heat networks in the country remain dominated by fossil fuel feedstock, notably natural gas. As such, we view positively that HM Treasury commits to only finance existing or new networks that are low carbon. Indeed, to be eligible for Green Heat Network Fund grants, eligible projects need to meet various metrics, including regarding the carbon intensity of heat delivered. The threshold on that metric is set at 100 grams of carbon dioxide equivalent per kilowatt hour of thermal energy delivered to consumers, which we view positively. Such projects are assessed medium green, reflecting that there may be some residual carbon-intensive energy sources in those systems, such as waste-to-energy for example.
- Due to their fixed characteristics and relatively long lifespans, eligible assets could be vulnerable to physical climate risks. HM Treasury does not perform physical climate risk analysis on such projects as part of the project selection process. However, it relies on the assessment performed by the spending department, which must meet the requirements of applicable programs.

Energy Efficiency

Assessment	Description
Dark to Medium green	• Support schemes for energy efficiency programs for the commercial, public, and industrial sectors • Support schemes for residential energy efficiency programs (including heating, retrofit, and insulation) • R&D for new energy efficiency technologies

Analytical considerations

- Decarbonizing existing buildings is a key measure to achieving global climate objectives. Under this category, the issuer will finance various schemes and funds that are focused on the decarbonization of residential, public, commercial, and industrial buildings. In the past couple of years, this category received less than 10% of total green allocations. We understand from the issuer that similar proportions are expected in future allocations. We assess the category as dark to medium green. This accounts for the fact that such projects support greater energy efficiency of the existing building stock's carbon footprint, thus requiring less emissions than new-build projects. At the same time, the actual climate mitigation impact may vary due to the variety of eligible efficiency measures and that some eligible buildings may still use fossil fuel heating systems.
- In addition to retrofits and insulation investments, projects will also have a focus on decarbonizing heat-related emissions. For example, the Public Sector Decarbonisation Scheme (PSDS), which received most proceeds under that category in past years, provides grants to public sector organizations to replace fossil-fuel-based boilers with low-carbon solutions. It also finances the associated measures, such as insulation, to ensure the switch to low-carbon heat systems is effective.
- Another significant past allocation under this category relates to the Social Housing Decarbonisation Fund, now called Social Housing Fund under the Warm Homes Plan. The fund provides grants to social housing providers, such as housing associations and local authorities, to raise homes to an Energy Performance Certificate of C or better. This primarily involves insulation measures to drastically reduce heat demand, followed by the installation of low-carbon heating systems like heat pumps. As of May 2025, this program had reached 41,500 households. Public statistics show that the bulk of measures related to insulation (54% of wave 2.1), electricity measures such as solar photovoltaic (23%), and window and door upgrades (14%). In addition to carbon emission reductions, such grants can have significant social co-benefits, by ensuring homes are warmer and cheaper to heat for vulnerable tenants.
- The Industrial Energy Transformation Fund is also eligible under this project category. This fund focuses on industrial activities, such as manufacturing, data centers, and mining. The objective of the fund is to support decarbonization of these companies' processes, notably through energy source switches, electrification, or carbon capture solutions, for example. The fund provides grants to directly finance these measures, but also feasibility and engineering studies, to

facilitate innovation and accelerate the adoption of low-carbon technologies by the U.K.'s industrial actors. There may be some environmental risks in the value chain of the supported industries, such as local pollution and biodiversity impacts from mining activities or water use needed to operate data centers.

- Efficiency measures are key to reducing the existing building stock's climate footprint. However, we understand there are no strict requirements to finance only those measures where the heating source of the building is already decarbonized. Moreover, there are some uncertainties around the life-cycle considerations related to emissions from the upgrades and on the range of potential energy savings from the upgrades.

Pollution Prevention and Control

Assessment	Description
  Dark to Medium green	- Reduction of air emissions and control of greenhouse gases - Waste prevention, waste reduction, waste recycling, and energy/emission-efficient waste-to-energy

Analytical considerations

- The role of CCUS will be critical, according to the Intergovernmental Panel on Climate Change, in the transition to a low-carbon and climate-resilient future, especially for hard-to-abate sectors. Carbon dioxide may be directly removed from the air or captured at power generation or industrial facilities. However, it is important for these projects to have adequate leakage monitoring and detection systems and to be subject to a comprehensive life-cycle emissions assessment. Significant initial infrastructure investments are needed to enable the deployment of carbon capture projects, notably on transport and storage solutions for captured carbon. Most proceeds under this category are expected to contribute to the deployment of this needed infrastructure in various U.K. industrial clusters. We believe these investments are key to facilitate the scale-up of innovative decarbonization technologies, which are key to achieving a low-carbon future.
- From 2022 to 2024, this project category received less than 1% of total allocated proceeds, focused on two project types. The first type of projects financed related to the country's CCUS infrastructure. The share of total proceeds allocated toward CCUS is expected to grow significantly in future allocations. Indeed, the government has committed £21.7 billion over the next 25 years to support selected projects, including in energy, hydrogen, and cement, in addition to the transport and storage infrastructure in the Northwest and Northeast of England. The U.K. is approaching these investments in a phased approach, where various industrial clusters are being prioritized. The first clusters that were identified as eligible for CCUS infrastructure funding include HyNet in the Northwest of England and North Wales, and the East Coast Cluster in Teesside. The issuer also confirmed that it is not currently permitted for carbon dioxide to be removed from a carbon dioxide transport and storage network for the purposes of utilization, and the CCUS business models do not provide funding for capture of carbon dioxide for utilization. We view carbon dioxide storage more positively than usage projects with regard to long-term climate-change mitigation potential.
- We view the various CCUS projects differently, depending on which activity they are applied to. For example, we assess as dark green the CCUS project tied to a cement plant in Hanson Padeswood, reflecting this should help decarbonize industrial processes where limited technological alternatives exist. We also consider transport and storage infrastructure investments dark green, reflecting their role in facilitating the scale-up of innovative technology important to the low-carbon climate-resilient future. For instance, the Endurance saline aquifer in the Southern North Sea is planned to be one of the largest carbon dioxide storage sites globally. It will handle captured carbon dioxide from industrial emitters in the East Coast Cluster. However, investments related to blue hydrogen or CCUS tied to new natural gas power plants are assessed as light green. We believe low-carbon alternatives for power generation are already available and that CCUS technology has more positive impacts on existing power plants. Our assessment of dark to medium green reflects this facilitating role for financed transport and storage solutions, despite the financing of certain projects that we view as light green.
- Under this category, funding was also used to support the U.K.'s emission trading scheme, which the issuer plans to keep financing under the updated framework, although this should be a very minor share of overall proceeds. We view this

scheme positively, because it is an important policy mechanism to incentivize businesses to cut greenhouse gas emissions. The emissions trading scheme currently covers around 25% of the country's total emissions, including power generation, energy-intensive industries (e.g., refineries, steel, and cement, etc.) and aviation. Because the environmental benefit from this scheme is relatively indirect and difficult to evaluate, we assess it as light green.

- Waste management is an important pollution prevention measure that can help avoid harm to human health and local ecosystems from waste streams. While no allocations were made to this subcategory in the past, expenditures such as recycling and waste-to-energy remain eligible under the framework. HM Treasury confirmed no expenditures in this subcategory were identified for future allocations; thus, this subcategory does not impact the shade assigned to this category. According to U.K. statistics, the recycling rate for waste from households was 44.6% in 2023, increasing from 44.1% in 2022, but significant efforts are still needed to reach the 65% recycling rate target for 2035, as stipulated by the Environment Act 2021. This varied significantly by country, as the recycling rate for England was 44.0% (provisional), 50.2% in Northern Ireland, 42.1% in Scotland, and 57.0% in Wales. We view waste-to-energy focused on feedstock that is not recyclable as light green if not accompanied by a specific emissions threshold requirement. Recycling activities are assessed medium green, highlighting their key role in limiting pollution.

Living and Natural Resources

Assessment	Description
Medium to Light green	- Protection and enhancement of terrestrial and marine biodiversity, ecosystems, and natural capital - Sustainable land use and protection, including environmentally sustainable agriculture - Environmentally sustainable clean water, water storage, and wastewater management initiatives - Funding for environmental activities of public sector arms-length bodies

Analytical considerations

- Healthy ecosystems and biodiversity, agricultural and forestry practices that reduce climate emissions and enhance soil health and water quality, and water and wastewater systems that protect natural capital and reduce pollution are crucial for a low-carbon, climate resilient future. Managing risks along these value chains is important to ensure benefits. These risk include greenhouse gas emissions from livestock, chemical inputs, and equipment, local pollution in the case of agriculture. The water and wastewater management is impacting ecosystems as a risk, as well.
- We assign a medium to light green shade to this project category, reflecting the natural resource use benefits of biodiversity conservation, more sustainable agricultural and forestry practices, water and wastewater management, and environmental oversight. The shading interval reflects the broad range of eligible activities, as well as potential links to greenhouse gas emissions, intensive livestock and other agriculture of forestry with unknown other sustainability features, and water and wastewater management that is focused primarily on regulatory compliance.
- HM Treasury plans to focus allocation under this category on national programs such as the Countryside Stewardship Offer, Future Plant Health, Environmental Land Management, the Green Recovery Challenge Fund, the Nature for Climate Fund, and DEFRA's green finance program. These include measures such as financial incentives to farmers and forest managers to implement more sustainable practices. Such practices include pollinator and bird habitat or water protections; plant pest and disease prevention, and management to reduce food loss and waste; investments in nature restoration; technical assistance for sustainable forestry and agriculture such as regenerative, agroforestry, or silvopastoral systems (combining the benefits of forestry and livestock production), outside the U.K. as part of international aid programs; tree planting and peat restoration schemes; investments in sustainable forestry research; and promotion of private investment in nature such as through environmental attribute credits.
- Biodiversity conservation and restoration projects are a particularly positive aspect of the category to support healthy ecosystems and species, as well as co-benefits such as water and soil management, carbon sequestration, and increased climate resilience. We consider this a medium green criterion within the project category.

- We view positively more sustainable agriculture and forestry practices in the U.K. and abroad, which can reduce local pollution from chemical inputs, improve water management and soil health, enhance carbon stocks, and support biodiversity. At the same time, we note projects related to emissions-intensive livestock are eligible, increasing climate risks. Financed activities may improve one aspect of sustainable management but leave others unaddressed, making this a light green element.
- Sustainable water and wastewater management is important for managing natural resources while supporting local ecosystems and avoiding pollution. Eligible projects are primarily related to regulatory compliance, limiting this criterion to a light green aspect of the category.
- Arms-length bodies eligible for green financing include the U.K.'s Environment Agency, which manages programs related to waste, pollution, water, and natural resources. HM Treasury has not specified what specific activities within the agency green financing could be allocated to. Given the goals of the Environment Agency are well-aligned with positive environmental outcomes, we consider this criterion green in the context of a sovereign issuer, but the broad nature of possible eligible activities constrains this element to light green given uncertainties around ultimate impacts.
- Environmental risks and physical climate risks for this project category are managed through a broad range of U.K. policies and regulations, including the Farming and Countryside Program that replaced EU regulations and subsidies, the Environmental Act and Environmental Improvement Plan focused on improving nature and environmental quality since Brexit, the Water (Special Measures) Act that aims to reduce wastewater pollution, and environmental impact assessment requirements. Although some projects may involve some fossil fuel vehicle or equipment use, HM Treasury does not expect this to be directly financed under this project category, reducing greenhouse gas emissions risks.

Climate Change Adaptation

Assessment

 Medium green

Description

- Flood protection, resilience, and other risk mitigation programs
- Data-driven climate monitoring solutions
- Engineering activities and technical consultancy dedicated to adaptation to climate change

Analytical considerations

- Climate scientists have been clear that some degree of climate change will take place, even in the most optimistic scenarios. This makes it crucial to plan for and mitigate potential risks to reduce the financial and environmental effects. Implementing adaptation solutions can also reduce resources and emissions linked to rebuilding damaged assets. The U.K.'s Climate Change Committee projects that heatwaves, flooding, and coastal erosion will likely worsen in the country with accelerating climate change over the coming decades.
- We assign a medium green shade to this project category to reflect the climate adaptation benefits of flood protection measures, monitoring solutions, and supporting engineering and consultancy activities that have good potential to help avoid resource use and greenhouse gas emissions associated with repairs or rebuilding in the absence of adaptation. These positive aspects are balanced against the embodied emissions risks of eligible resilience projects that require larger-scale construction.
- HM Treasury expects most of the proceeds under this category to be allocated to investments into flood and coastal erosion risk management programs overseen by DEFRA. These activities target regions exposed to flooding throughout the country to protect homes and nonresidential properties including businesses, industrial premises, schools, and hospitals; and infrastructure including rail and road transportation networks. Eligible measures may include raising riverbanks, seawalls and other barrier construction, gates and trash screens, drainage improvements, and reservoirs and pumping stations, as well as green infrastructure such as habitat restoration of estuaries or shorelines. While they are not expected to receive the majority of allocation, we view that these nature-based solutions may be financed as particularly positively, given resilience benefits, low emissions relative to conventional infrastructure, and potential biodiversity co-benefits.

- Eligible financing includes adaptation and resilience measures that require construction, which can lead to substantial greenhouse gas emissions from the use of fossil fuel-powered equipment and emissions-intensive materials, such as cement. There are no clear policies to manage these emissions, which weighs on the benefits of such projects.
- It is important to identify and manage the potential risk of maladaptation--that is, shifting vulnerability to other parties of climate-related events, and eligible projects' impacts on local biodiversity. The U.K. government manages this through strategic planning and regulatory compliance, including environmental impact assessments managed by local planning authorities.
- HM Treasury's framework excludes adaptation measures associated with fossil fuel exploration and extraction, which we view positively to support a green shade. HM Treasury does not necessarily employ additional screening to avoid adaptation for assets associated with higher emissions, for example because roads which facilitate continued fossil fuel vehicle use, and industrial sites are eligible for support from flood and coastal erosion risk management programs. The issuer confirms green financing will be allocated only to adaptation measures, rather than the entire asset with which an adaptation measure is associated, such as the construction of a new road, reducing risks.
- As part of requirements in the Climate Change Act of 2008, the U.K. government undertakes a climate change risk assessment, including physical climate risks followed by a national adaptation program every five years, with the most recent updates from 2022 and 2024, respectively. Priorities include increasing resilience data, funding, and evidence; making adaptation measures more integrated and systemic across departments and activities; and implementing related action steps more quickly.

Nuclear Energy

Assessment

 Medium green

Description

- Electricity and/or heat (including co-generation) from nuclear fission: Support for the design, development, construction, commissioning, safe operation, lifetime extension, or supporting infrastructure of new or existing nuclear power generation assets, including:
 - Enabling fuel-cycle activities
 - Radioactive waste and spent fuel storage, management, and final disposal
- R&D for future fission and fusion energy technologies.

Proceeds may only finance measures that are fully aligned with the applicable U.K. legislative framework, including but not limited to:

- Nuclear Installations Act 1965 and Energy Act 2013 (regulation of site licensing and liability)
- Energy Act 2004 and Environmental Permitting Regulations (England and Wales) 2016 (decommissioning and waste management)
- Nuclear Safeguards Act 2018 (security and safeguards)

Analytical considerations

- Nuclear power is a low-carbon source of electricity with a smaller land-use footprint than other low-carbon energy sources, such as renewables. However, general uncertainties around the long-term storage of radioactive waste in the nuclear sector, and the low-probability/high-impact risk of accidents, lead us to assess these activities medium green. The issuer expects, initially, around 20% of future proceeds to be allocated to this category.
- While nuclear power contributed around 25% of total annual electricity generation in the U.K. in the mid-1990s, its share in the power mix currently stands at around 15%. This is explained by the ageing of the country's fleet, which is today

composed of nine operational nuclear reactors, eight of which are reaching the end of their useful life. Within the existing fleet, only the Sizewell B power station will keep operating after 2030. However, the government has an ambitious plan for new nuclear projects. Toward this objective, the government has announced major funding commitments, most notably £14.2 billion for the Sizewell C nuclear power station and over £2.5 billion to enable one of Europe's first small modular reactor programs. Moreover, the government is also investing in R&D for nuclear fusion.

- Nuclear energy requires uranium to operate. Uranium mining, as well as other hard-rock mining, carries high environmental and social risks. The risks of uranium mining include radioactive contamination, water pollution, and land degradation. The Office for Nuclear Regulation (ONR) regulates the supply chain for civil nuclear security and safeguards. Its role includes ensuring the safety and security of the transport of civil nuclear and radioactive materials. Licenses must be obtained by entities importing or exporting any nuclear-related items and they must report inventory changes to the ONR to ensure compliance with international obligations. The U.K. is also a signatory of the Nuclear Non-Proliferation Treaty and has bilateral nuclear cooperation agreements with key partners. In line with its exclusion list, the issuer confirmed that the framework excludes the financing of any systems, services, or components specifically intended for the manufacture, distribution, or delivery of nuclear weapons. Notably the following elements are excluded from financing: production of highly enriched uranium, weapons-grade plutonium, tritium for warheads, naval reactor cores, or warhead assembly/disassembly. However, the issuer also clarified that some eligible facilities could have some exposure to military uses if the facility is unequivocally civil in purpose and capability. For example, the Nuclear Decommissioning Authority manages some defense-origin wastes within civil facilities, which could be eligible for financing. Considering the issuer's commitment that any dual-purpose facility in scope would not be eligible if it supports military capacity or enables military production, this does not impact our assessment negatively.
- The radioactive waste disposal process is highly regulated. The U.K. takes a risk-informed approach to managing its radioactive waste. This means considering the properties of the waste (radiological, chemical, and physical), the hazard those properties pose to people and the environment, and the risk of harm to people and the environment from managing this waste. Low-level waste and less hazardous intermediate level waste can be disposed of in near surface disposal facilities such as Drigg, Cumbria, in engineered vaults. The high-level radioactive waste, spent fuel, and intermediate-level waste are currently stored above ground at nuclear sites awaiting disposal. In the long term, the U.K. is pursuing a geological disposal facility--a permanent repository located up to 1,000 meters underground for the most hazardous radioactive waste and spent fuel. However, under U.K. government policy this facility requires a willing host community, will require detailed site investigations, and is not expected to be operational until the 2050s at the earliest. Therefore, safe interim storage of different kinds of radioactive waste will be key, especially if the source of waste grows with the planned site additions.

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

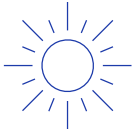
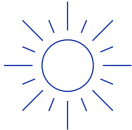
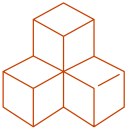
Note: For us to consider use of proceeds aligned with ICMA Principles for a green project, we require project categories directly funded by the financing to be assigned one of the three green Shades.

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 SDG mapping and outline the intended linkages within our SPO analysis. Our assessment of SDG mapping does not affect our alignment opinion.

This framework intends to contribute to the following SDGs:

Use of proceeds	SDGs
Clean transportation	 11. Sustainable cities and communities*
Renewable energy	 7. Affordable and clean energy*
Energy efficiency	 7. Affordable and clean energy*  9. Industry, innovation and infrastructure*
Pollution prevention and control	 12. Responsible consumption and production*

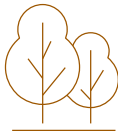
Living and natural resources



6. Clean water and sanitation



14. Life below water*



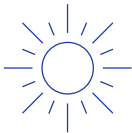
15. Life on land*

Climate change adaptation



13. Climate action*

Nuclear energy



7. Affordable and clean energy

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

Related Research

- [Analytical Approach: Second Party Opinions](#), March 6, 2025
- [FAQ: Applying Our Integrated Analytical Approach For Second Party Opinions](#), March 6, 2025
- [Analytical Approach: Shades Of Green Assessments](#), July 27, 2023

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Second Party Opinion: HM Treasury Green Financing Framework

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