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Second Party Opinion

# Vulcan Green Financing Framework

**Oct. 25, 2024**

**Location:** Germany **Sector:** Mining


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## Alignment With Principles

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.

**Dark green**

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

Our Shades of Green Analytical Approach >

## Strengths

**Vulcan's co-production of lithium and geothermal energy has a lower impact on the climate and environment than traditional lithium-extraction technologies.** The main measures Vulcan employs to reduce emissions are using geothermal heat to process the lithium, avoiding fossil fuels, and using electrochemical conversion instead of reagent-intensive processing.

**Vulcan expects that close to 100% of end uses will be in electric vehicles (EVs).** Offtake contracts up to 2036 cover 95% of estimated production volumes and are for lithium use in EVs (excluding hybrids). Vulcan expects the remaining 5% to also be used in EV batteries, or possibly battery energy storage systems. The framework adheres to the International Capital Market Association's (ICMA's) Green Enabling Projects Guidance.

## Weaknesses

No weaknesses to report.

## Areas to watch

**Currently available studies do not show how the environmental performance of Vulcan's direct lithium extraction (DLE) technology compares with that of other projects using similar technology.** While available lifecycle assessments cover DLE, hard rock mining, and evaporation, they do not provide a basis for comparison with other projects using the specific technologies that Vulcan employs.

## Eligible Green Projects Assessment Summary

Vulcan has not provided a breakdown of its allocation of proceeds over the next three years between the green enabling project and the renewable energy project, but it expects to allocate proceeds first to the green enabling project. Vulcan expects to direct the majority of the proceeds to finance new projects.


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

Our Shades of Green Analytical Approach >

### Overall Shades of Green assessment

Based on the project category shades of green detailed below, and consideration of the environmental ambitions reflected in Vulcan's Green Financing Framework, we assess the framework Dark green.

Eligible projects under issuer's green finance framework are assessed based on their environmental benefits and risks using Shades of Green methodology.

| | |
|---|---|
| **Green enabling project – clean transportation and stationary battery storage** | **Dark green** |
| Investments in the development, construction, operation, and maintenance of Vulcan's assets dedicated to the extraction and processing of lithium hydroxide monohydrate (LHM). | |

| | |
|---|---|
| **Renewable energy** | **Dark green** |
| Investments in the development, construction, operation, and maintenance of Vulcan's assets dedicated to the production of heat and energy from geothermal energy. | |

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

Vulcan Energy Resources (Vulcan), founded in 2018, owns the largest combined geothermal energy and lithium resource in Europe, located in the Upper Rhine Valley in Germany and France.

Vulcan produces both renewable energy and lithium from the same sub-surface brine source. Brine is water with a high concentration of salt. By enhancing the existing technology for the efficient production of lithium from geothermal brine, Vulcan aims to create a local source of sustainable lithium for Europe.

Vulcan's licensed area comprises 17 zones with a total area of 2,234 square kilometers (km2). In phase one of the project, lithium extraction and renewable geothermal energy production will take place in the Upper Rhine Valley Brine Field in Rhineland-Palatinate and lithium conversion will take place at the Frankfurt Höchst Industrial Park. Vulcan could expand production to other areas in the future.

# Material Sustainability Factors

## Climate transition risk

Mining and processing metals is energy intensive, particularly primary metals versus recycled metals. The energy used in mining and processing often comes from fossil fuels, further contributing to greenhouse gas emissions. For lithium mining, which is vital for use in EV batteries and renewable energy storage, the energy and emissions intensity varies by extraction method. Lithium production using adsorption-type DLE technology powered by renewable energy sources can lower the carbon emissions further.

The power generation sector is the largest direct source of greenhouse gas emissions globally, making this sector highly susceptible to growing public, political, legal, and regulatory pressure to accelerate action on climate goals. As they have no direct emissions, renewable energy technologies have a vital role to play in reducing the emissions associated with power and heat, which will be key to limiting the global temperature rise to 1.5°C. In terms of clean transportation, the EU has adopted legislation to reduce carbon dioxide (CO2) emissions from new cars by 55% and from new vans by 50% between 2030 and 2034, and to only allow fully electric vehicles from 2035.

## Physical climate risk

Such large and widespread fixed mining and geothermal assets are highly exposed to acute physical climate risks, especially since extreme weather events, including heatwaves and storms, are becoming more frequent and severe. Over time, both acute and chronic risks--such as changing temperature and precipitation patterns and increasing water stress--may shorten the useful life of infrastructure, which applies to all types of mining including DLE. Disruption can occur to both the direct operations and throughout the value chain, since mining involves extensive logistics, from the transportation of fuel and equipment to the mining site, to the shipment of resources for further processing or to the end consumers. Germany in particular is exposed to heatwaves, drought, and flooding, which could affect mining operations directly and throughout the value chain. Climate change can alter the temperature and composition of underground reservoirs, potentially affecting the viability and efficiency of geothermal projects. Furthermore, lithium extraction involves injecting water into the ground to extract heat, which can induce seismic activity in some cases.

## Biodiversity and resource use

Mining often implies the transformation of large areas of land at all phases of a mine's life. More specifically, mining involves the removal of vegetation and soil, the movement of considerable volumes of rock, the conversion of land plots into waste disposal sites, and sometimes the diversion of watercourses. DLE can affect biodiversity through the disruption of fauna and flora, primarily due to factors such as noise and vibration. Mining operations often require large quantities of water for processing, dust suppression, and cooling machinery. Lithium mining, particularly in arid regions, is associated with the depletion of local water resources at the expense of nearby communities and ecosystems. Although DLE aims to minimize the environmental impact, the high consumption of potable water in many of its processes can be problematic unless the water is recycled in the plant.

Geothermal energy generation can have some adverse effects, including habitat disruption during construction, noise and vibration, and changes in water quality or temperature. However, overall, geothermal energy is generally considered to have a lower impact on biodiversity than other forms of energy generation, such as fossil fuels or large-scale hydroelectric projects.

## Pollution, waste, and recycling

DLE can generate waste materials, including wastewater from well sites and solid waste, which require adequate disposal. Improper disposal and management of these waste materials can lead to the contamination of water sources and the surrounding environment. Furthermore, noise pollution associated with the geothermal industry primarily arises from its drilling operations.

## Social factors

The mining sector's impact on communities is typically pronounced. Mining activities can engender dissent, especially when mining sites encroach on natural or agricultural land. The mining industry's hazardous nature poses risks to workers' safety, as the International Labor Organization has highlighted. DLE and geothermal energy generation both involve drilling and high-temperature processes and can create risks that need appropriate management. Safety incidents can result in operational

disruptions, lengthy remediation, or even human casualties. This is especially true for low-probability events such as equipment failures.

# Issuer And Context Analysis

**Vulcan's investments in phase one of the project relate to the development, operation, and maintenance of assets for geothermal energy production, in addition to the mining and processing of lithium and the production of LHM, all of which aim to address climate transition risk**. LHM is predominantly used in lithium-ion batteries for EVs and battery energy storage systems. This supports the electrification and decarbonization of the transportation sector while also meeting the growing need for electricity storage. The framework projects introduce other environmental risks, including those relating to water, physical risks, and biodiversity, as well as to social factors, including health and safety risks.

**Vulcan believes that the likeliest scenario is that 100% of the LHM's end use will be for green purposes due to the regulatory push for the electrification of transportation in Europe.** However, Vulcan does not have a strategy to supply LHM only for green end uses. Vulcan has offtake contracts for more than 95% of its estimated product volumes by 2036. Most of the projected demand for Vulcan's LHM comes from EVs. According to the European Critical Raw Materials Act, the region needs to become self-sufficient in battery-grade lithium by building 10% more domestic capacity by 2030. Phase one of Vulcan's project aims to support this through the production of approximately 24,000 tonnes of LHM per year, sufficient to supply around 500,000 EVs.

**Vulcan has not yet set any overall climate targets and has focused on identifying the main sources of emissions from its extraction and production of lithium.** The issuer follows the greenhouse gas protocol in its emissions calculations and aims to set greenhouse gas targets aligned with Science Based Target Initiatives by 2025. According to the lifecycle assessment, phase one of the project could have a carbon footprint of 7 kilograms of CO2 equivalent per kilogram of LHM. However, the excess geothermal electricity and heat exported to the grid and district heating systems are a low-carbon energy source.

Vulcan's scope 2 emissions will relate to power consumption for lithium extraction and processing. Its 2023 lifecycle assessment, which is based on projected data, assumes equal reliance on both renewable energy and fossil fuel-based electricity from the German grid. Vulcan is pursuing green power purchase agreements for 100% of its scope 2 emissions.

Furthermore, the emissions breakdown by scope is not available in the latest lifecycle assessment. Direct emissions will primarily stem from internal transportation and the diesel backup generator used in case of grid issues. The current scope 3 emissions reporting does not include important categories of downstream transportation, distribution, and processing, which Vulcan plans to incorporate in its future reporting.

**Vulcan is expanding its climate change risk assessment to incorporate a broad range of climate scenarios and financial implications**. In 2023, Vulcan conducted a climate risk assessment analyzing 11 locations under two climate scenarios and six hazards. According to the issuer, the assessment showed overall low exposure to many hazards, but revealed the potential exposure of its assets to river flooding and wildfires, which may necessitate reassessment. Vulcan also stated that the risk of severe drought is unlikely to materially affect its assets by 2050. We understand that Vulcan is expanding the existing climate change risk assessment to incorporate a wider range of climate scenarios and understand the financial implications. This is to be completed by the first quarter of 2025 and be subject to an external review. Vulcan is aware that geothermal energy plants can induce seismic activity and has implemented a seismic risk analysis and mitigation measures to prevent any potential induced seismicity.

**Vulcan is exposed to other environmental risks, including those relating to pollution, waste and recycling, water, and biodiversity and resource use.** For more information, please see the "Analysis Of Eligible Projects" section.

**A stakeholder engagement plan is in place to engage with local communities.** Phase one of the project does not contemplate the displacement of the local population, although some of the sites will operate close to the community. Vulcan did not receive any community grievances in 2023. However, there have been community fears of potential seismic risks in Landau. According to Vulcan, managing natural and induced seismicity is part of the normal operation of any geothermal project around the world. Vulcan has taken out an insurance policy for the local communities in the case the project has an impact and has implemented a stakeholder engagement plan. Vulcan has been using a qualitative stakeholder management system to document its discussions with various stakeholders and has taken a proactive and transparent approach to educate and address any community concerns regarding potential seismicity.

**Employee health and safety is a core priority following unfavorable metrics in 2023**. Despite Vulcan's target of zero lost time incidents, in 2023, the lost time injury frequency rate was 5.7. This was due to heightened construction activity and rig refurbishment works. This risk will tend to increase as construction activity progresses. Vulcan has implemented a safety training program that targets both employees and contractors at all construction sites. It also closely monitors the health, safety, and environmental performance of its contractors, taking necessary actions to mitigate risks and improve performance.

# Alignment Assessment

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

## Alignment With Principles

Aligned = ✓ Conceptually aligned = o Not aligned = ×

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

### ✓ Use of proceeds

All the framework's green project categories are shaded green, and the issuer commits to allocate the net proceeds issued under the framework exclusively to eligible green projects. Please refer to the "Analysis Of Eligible Projects" section below for more information on our analysis of the environmental benefits of the expected use of proceeds and adherence to ICMA's Green Enabling Projects Guidance. We consider that the projects adhere to the green enabling guidance as they follow the guidance's specific criteria and transparency on end use.

Vulcan may allocate some of the proceeds to the acquisition of a majority share of a pure-play company that derives a minimum of 90% of its revenues or balance sheet from eligible projects. The risk of this pure-play company becoming no longer eligible for investment or using the financing for activities not considered to be green is limited by the fact that Vulcan will have significant operational control of the company. We understand from Vulcan that it has eliminated the risk relating to the residual 10% of the investee's noneligible activities by applying fossil-fuel exclusions. Vulcan may, in future, use the proceeds for projects beyond its global licensed areas, in line with the eligibility criteria specified in the framework.

### ✓ Process for project evaluation and selection

The framework outlines the process to select and approve eligible projects and assets. The audit, risk and ESG committee, which meets on a quarterly or ad-hoc basis, is responsible for defining and evaluating the eligibility of the project categories. The committee has the right to exclude any funded eligible green project if it no longer meets the eligibility criteria defined in the framework.

Furthermore, Vulcan integrates the identification and assessment of the environmental and social risks of phase one of the project into its overall risk management framework that the board oversees. Risk management occurs through an environmental

and social impact assessment, in line with internationally recognized standards, such as the International Finance Corporation's (IFC's) Performance Standards on Social and Environmental Sustainability (2012), the Equator Principles IV (2020), the IFC General Environmental, Health and Safety Guidelines, and German regulatory requirements, in addition to ISO certifications of project operations. We consider that Vulcan is managing the environmental and social impacts and risks that it has identified appropriately, and that it has measured the material impact of phase one of the project by benchmarking it against industry standards.

### ✓ Management of proceeds

Vulcan commits to managing and earmarking future green funds for allocation to eligible green projects. In addition, pending full allocation, it may temporarily hold unallocated proceeds in cash and cash equivalents or short-term liquid instruments and manage them according to its financial policy. While the proceeds are outstanding, the issuer commits that it will periodically adjust the tracked net proceeds to match allocations to eligible projects. The framework includes a 24-month deadline for the issuer to allocate all the proceeds after issuance, which we view as being in line with the market practice. We take a positive view of the fact that there is external verification of the internal tracking method for the green financing proceeds.

### ✓ Reporting

Vulcan will provide annual public reports on the allocation of proceeds and the impact of eligible green projects until the full allocation of proceeds or in the event of material changes. The allocation reporting will include net proceeds, allocated and unallocated proceeds, a list of eligible projects and their allocation, the state of advancement of the project, and the proportion of proceeds used for financing versus refinancing. The impact report will include data on the actual and estimated environmental impacts at the project category level. Furthermore, we view as positive Vulcan's intention to publish the key underlying calculation methodologies and the assumptions used to calculate the quantitative performance, as well as to subject the annual allocation report to an external review.

# Analysis Of Eligible Projects

This section provides details of our analysis of eligible projects, based on their environmental benefits and risks, using the Shades of Green methodology.

## Green project categories

**Green enabling project – clean transportation and stationary battery storage**

| Assessment | Description |
|---|---|
| **Dark green** | Investments in the development, construction, operation, and maintenance of Vulcan's assets dedicated to the extraction and processing of LHM that are subject to a demonstration of their alignment with all the following criteria:<br><br>Necessary for an enabled green project's value chain:<br><br>• LHM is a necessary component of the green project's value chain consistent with net-zero scenarios. A green project is one that delivers a clear environmental benefit, as described in the Green Bond Principles.<br><br>Clear, quantifiable, and attributable environmental benefit:<br><br>• Vulcan expects that 100% of its contracted revenues (representing on average more than 95% of estimated produced volumes) from the sale of LHM will be used in lithium- |

ion batteries in EVs or battery energy storage systems.

- Improved environmental performance in terms of carbon emissions and water and land use relative to other comparable forms of lithium hydroxide production and based on project lifecycle assessment considerations.

No carbon lock-in:

- The main production process should not lead to locking in activities with high greenhouse gas emissions relative to other technologically feasible and/or commercially viable solutions.

Mitigated adverse social or environmental impacts:

- No significant environmental or social impacts after implementing mitigation measures, evident from an independent ESIA aligned with Equator Principle 4 and IFC Performance Standards.

**Analytical considerations**

- Although not all end uses of lithium hydroxide are aligned with a low carbon climate resilient future, LHM is an important component in the manufacture of batteries for EVs and battery energy storage systems. These technologies are, in turn, important for the decarbonization of the transportation and electricity sectors, respectively.
- We assign a Dark green shade to this project category since Vulcan expects 100% of the end use of the LHM to be EV batteries and possibly battery energy storage systems. The Dark green shade also reflects Vulcan's measures to reduce emissions from the extraction and production of LHM and the appropriate management of the environmental and social risks associated with production. The main measures that Vulcan is employing to reduce emissions from its DLE process are using geothermal heat for the lithium processing, strictly excluding fossil fuels as a direct energy source, and using electrochemical conversion instead of reagent-intensive processing. The use of the geothermal heat removes the need to use natural gas.
- Vulcan expects 100% of its contracted LHM sales to be used in lithium-ion batteries, mostly in EVs, with the potential for a minor share to be used in battery energy storage systems. Vulcan estimates that it will enable the production of 500,000 EVs yearly by 2040. Vulcan's customers focus on full electrification to meet regulatory requirements, and therefore Vulcan does not expect the LHM to be used in hybrid vehicles. Vulcan's offtake contracts represent more than 95% of its estimated product volumes by 2036. It will sell the remaining 5% on the market, but expects the end uses of these sales to also be batteries.
- Vulcan's physical climate risk assessment, performed in 2023, concluded that it may have growing exposure to river flooding and wildfire risk. It also concluded that although a risk of severe drought is emerging in Germany, it is unlikely to materially affect Vulcan's assets by 2050. Vulcan is reassessing its physical climate risk to incorporate a broader range of climate scenarios and financial risks. Vulcan is preparing a climate change risk assessment for phase one of the project to include a greater focus on the financial implications of physical climate risk events under a broader range of climate scenarios. This is due in the first quarter of 2025.
- The lifecycle assessment results show a lower climate and environmental footprint than other lithium production technologies (hard rock mining and evaporation ponds). However, the study does not include a comparison with a project employing the same technology as Vulcan and the data on the other technologies is from 2020, which we see as limitations. Although there is co-production of geothermal energy, Vulcan will sell the electricity to the German grid and use electricity from this grid, which is still highly dependent on fossil fuels (78% of total generation sources in 2023, according to the International Energy Agency). However, Vulcan is pursuing green power purchase agreements for 100% of its scope 2 emissions.
- According to Vulcan, the extraction and production process has been designed to minimize the use of chemicals and the generation of waste. For instance, lithium chloride is converted into LHM through electrolysis, reducing the use of chemicals generally used in lithium processing. Another example is the reuse of hydrochloric acid, which is sourced from a by-product of electrolysis and then used for lithium extraction.

- Vulcan's extraction process will involve the closed-loop recycling of fresh water, reducing its water use, and the reinjection of all the brine back into the subsurface aquifer once the lithium has been extracted. Vulcan's geothermal power plant has been reinjecting brine into deep reservoirs for well over a decade, and, according to the issuer, this has not had a negative impact on the local hydrology. The reinjection of the brine is a regulatory requirement aimed at maintaining a balance between production and reinjection. In addition, according to Vulcan, its own in-house lithium extraction sorbent, VULSORB, uses less water for lithium extraction than commercially available DLE sorbents.
- Land-use impacts are lower than for other forms of lithium extraction. Vulcan's 16 licenses will cover a total area of 1,771 km2 and 300 km long. For Vulcan's adsorption-type DLE, land use encompasses well sites, temporary pipelines, power plants, and processing facilities. Vulcan has committed to mitigating the impact on biodiversity during construction and operation by minimizing habitat disturbance, protecting sensitive areas, supporting local species, and implementing a land and habitat rehabilitation and restoration plan.
- The ESIA for phase one of Vulcan's project concluded that there would be no more than a "minor" negative impact after the implementation of mitigation measures. This assessment is aligned with Equator Principle 4 and IFC Performance Standards. Vulcan aims to implement an Environmental and Social Management Plan (ESMP) based on the ESIA's recommendations. Vulcan has conducted a systematic independent environmental and social review to assess its adherence to local environmental and social legislative requirements, the Equator Principles. It will implement mitigatory actions to resolve the issues raised by the review.

**Renewable energy**

| Assessment | Description |
|---|---|
| **Dark green** | Investments in the development, construction, operation, and maintenance of Vulcan's assets dedicated to the production of heat and energy from geothermal energy with lifecycle greenhouse gas emissions lower than 100 grams of CO2 equivalent per kilowatt hour (g CO2e/kWh). |

**Analytical considerations**

- Renewable energy projects are key elements in limiting global warming to well below 2ºC, providing their negative impact on the local environment and physical risks are sufficiently mitigated.
- We assess Vulcan's investments in geothermal energy as Dark green, considering the importance of renewable energy and the fact that the issuer's comprehensive processes address biodiversity risks. The geothermal plants that Vulcan finances will have lifecycle emissions below 100g CO2e/kWh, in line with the EU taxonomy's substantial-contribution technical screening criteria for the climate-mitigation objective. The estimated greenhouse gas emissions intensity for Vulcan's geothermal energy production is 30g CO2e/kWh.
- Vulcan is reassessing its physical climate risk to incorporate a broader range of climate scenarios and financial risks. An external consultant is preparing a climate change risk assessment for phase one of the project to include a greater focus on the financial implications of physical climate risk events under a broader range of climate scenarios. This assessment is due in the first quarter of 2025.
- The geothermal assets are in the scope of the integrated ESIA for phase one, excluding the geothermal production well site in Landau (20% of phase one's total brine production), because Vulcan did not own this site at the time of the assessment. Vulcan has confirmed that it will include this production site in the next updates of the ESIA and ESMP. The ESIA includes the mitigation measures that need to be implemented and the monitoring requirements covered in the ESMP. Vulcan also commits to comply with all applicable environmental regulations in the jurisdictions where it operates.
- Vulcan will sell phase one's renewable electricity to the grid via a feed-in tariff. It is also finalizing an offtake agreement for phase one's supply of heat to Landau. The project will supply up to 560 gigawatt hours (GWh) of heat and up to 275 GWh of electricity to the German grid per year. Considering the average per capita heat consumption in Germany, the project will provide heat for approximately 90,000 people.

## 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 |

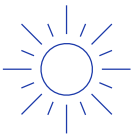
Note: For us to consider use of proceeds aligned with ICMA Principles for a green project, we require project categories directly funded by the financing to be assigned one of the three green Shades.

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 enabling project - Clean transportation and stationary battery storage |  **13. Climate action** |
| Renewable 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: 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

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