Cinis Fertilizer

GREEN FINANCING FRAMEWORK

November 2024

1. Introduction

1.1. About Cinis

Cinis Fertilizer ("**Cinis**" or the "**Company**") is a Swedish green tech company aiming to produce an environmentally friendly mineral fertilizer, potassium sulphate, by, among other things, recycling industrial waste products from the EV battery manufacturing industry as well as the pulp & paper industry. The patent protected procedure will use half as much energy as today's production methods and the result is a fossil-free produced fertilizer with a close to zero carbon footprint. Cinis Fertilizer's mineral fertilizer is a unique and circular contribution enabling sustainable agriculture.

Cinis have close collaboration with relevant parties in the industries and will use the waste products as raw material in its production. Further, the Company's existing and planned production plants are and will be strategically located next to raw material suppliers and in areas with access to fossil free energy at a favourable price, and with logistic hubs and ports in close proximity.

To produce the environmentally friendly mineral fertilizer, Cinis will build six production plants located in the Nordics and Kentucky, so far, (the "**Green Project**"), of which two of them are briefly described in Table 1.

	Plant 1 (Production started in May 2024)	**Plant 2 (Planned production start 2026)**
Production capacity *tonnes p.a.*	100,000	Up to 300,000
Location	Strategically beneficial location in Örnsköldsvik, Sweden, close to pulp and paper mill suppliers	Strategically located in Hopkinsville, Kentucky, US next to Ascend Elements production facility
Secured milestones	✓ Land purchased ✓ Civil construction well advanced ✓ Environmental permit approved ✓ Building permit approved ✓ Proclamation announced ✓ Secured offtake and intake agreements ✓ Production and customer deliveries started	✓ Land allocation agreement signed ✓ General contractor selected ✓ DD for the site in progress ✓ Secured offtake and intake agreements and LOIs

Table 1. Overview of Cinis' planned production plants

1.2. Cinis' sustainability contribution

1.2.1. The mineral fertilizer market today – an inefficient and unsustainable market

Today, agriculture account for almost 25 percent of the global greenhouse gas emissions[1] and the global fertilizer market is dominated by unsustainable and inefficient production processes.

Mineral fertilizers are plant nutrients, crucial for crops to grow. The three primary nutrients essentially used in mineral fertilizers are nitrogen, phosphorous, and potassium. The potassium-based fertilizers are vital for the photosynthesis for crops as it increases crop quality and help the soil resist drought, disease, and lodging.

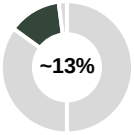
The predominate sources of potassium-based fertilizers are Muriate of Potash ("**MOP**") and Sulphate of Potash ("**SOP**"). SOP as a mineral fertilizer provides several benefits compared to MOP as SOP does not contain any chloride which increase the salinity levels in the soil and is suitable in drought-prone regions and applicable on sensitive crops. Other benefits of SOP compared to using MOP include improvements of taste and appearance, it's a chloride-free products that does not add to the salinity level in soils, as well as increasing shelf life and crop yield by approximately 20 percent.

Overview of the main SOP production methods today and current market share:

Secondary – Mannheim process

Old fossil based chemical process where sulphuric acid is mixed with KCl and heated to react at 700°C – highly dependent on fossil fuels for the operations as well as for raw material supply.

Hazardous by-product in hydrochloric acid (HCl)



Secondary – Sulphate salt reaction

Salt-based and rely on indirectly produced potassium salts as raw material input

Low energy usage due to low reaction temperature

Similar processes as Cinis'

Primary – Natural Brine

Scarce and only naturally occurs in a few remote locations (i.e., Australia, China)

Mined at remote sites – utilize steam, large amounts of water and power based on fossil fuels

Primary – Natural Ore

Natural ore containing pure SOP is rare – only available in one or two geographical locations

Today's main SOP production methods are highly unsustainable. The current production of SOP relies heavily on the use of crude oil and coal and about 50 percent of today's SOP market volume (4 million tonnes per year) is produced with the energy-consuming and fossil-fuel based Mannheim process. The Mannheim process is an old industrial chemical process where sulphuric acid is mixed with potassium chloride ("**KCl**"), heated to react at a temperature of 700°C to produce SOP. Further, sulphuric acid is produced from burning sulphur, which is derived from desulphurization of crude oil. To produce enough sulfuric acid needed, an estimated amount of approximately 280 million barrels of oil is used per year, which produces more than 120 million tons of CO_2 emissions annually. Besides SOP, the dangerous by-product hydrochloric acid ("**HCl**") is produced when KCl reacts with sulphuric acid, which limits the

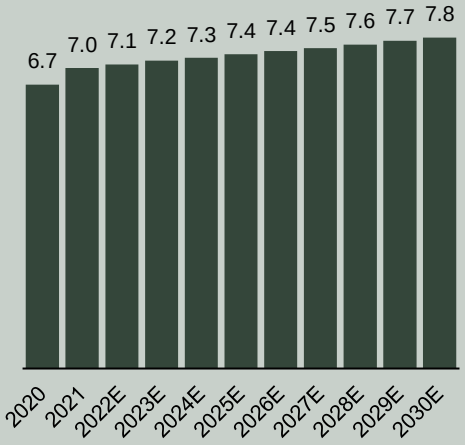
[1] Food and Agriculture Organization of the United Nations

use of the Mannheim process. Further, 3.6 billion litres of fresh water are annually consumed and needed to absorb the chlorine gas for producing HCl[2].

The total volume of the SOP production in the world today amounts to around 7 million tonnes per year, of which approximately 50 percent is produced using the Mannheim process. The production of SOP from the Mannheim process annually causes 1 million tonnes of greenhouse gas emissions (CO_2) only from the energy input to drive the operations, consumes natural gas of 300 million Nm^3, or 2 million barrels of crude oil

The global demand for the SOP market is estimated to grow by 2 percent p.a. between 2020-2023E, reaching almost 8 million tonnes per year in 2030.[3]

Global SOP consumption
Million tonnes



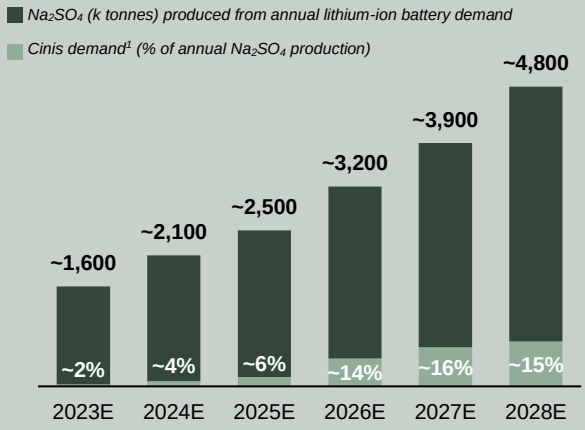
To limit the environmental impact caused by SOP production, alternative production methods will be preferred going forward and fossil-free mineral fertilizers will be crucial for sustainable agriculture. Further, the market for water soluble fertilizers for fertigation is expected to grow at 10% p.a. until 2026. USD 70bn support from executive arms is expected to be an important catalyst towards a more sustainable and efficient agricultural industry.

1.2.2. Cinis will contribute to sustainable agriculture by producing sustainable, circular, and fossil-free SOP

Enabling sustainable agriculture by producing an environmentally friendly and more circular SOP using a fossil fuel free production process is the aim of Cinis' business. Further, the Company's technology will use 50 percent less energy compared to the Mannheim process and the CO_2 footprint will be reduced by close to 100 percent compared to the Mannheim process. Cinis will contribute to a more sustainable agricultural process, increase the circular approach in production of SOP, and decarbonize the fertilizer industry by having a product with a close to zero carbon footprint.

The raw materials used in Cinis' process for SOP production are KCl together with sodium sulphate ("**Na_2SO_4**"). Na_2SO_4 can come from electrostatic precipitator ("**ESP**") dust (waste ash) from pulp and paper mills, from the electric vehicle battery manufacturing industry, from naturally occuring sodium sulphate sources or from other industrial manufacturing. Cinis will take advantage of the ESP dust created from pulp and paper plants, which today is dumped into seas and oceans. The waste chemicals generated by the pulp and paper industry annually corresponds to 3 million tonnes of ESP dust, including 1.5 million tonnes of sulphates and 0.2 million tonnes of potassium. Moreover, the ash contains chemicals and metals which pollute the environment. By utilising the ESP dust as a raw material for the Cinis process, this pollution can be prevented.

2 USGS, Agri-footprint, Company information
3 Argus Potash Analysis, Fertilizer international



Na_2SO_4 as a waste product from EV battery production will increase quickly as the lithium-ion battery demand is forecasted to grow significantly due to increase of electric vehicles. The global EV battery market will produce 1,500 GWh in 2028, which will generate several million tonnes of Na_2SO_4. The growing EV battery aftermarket will also produce a vast amount of waste sodium sulfate.

Cinis' SOP production process can be divided into the following major steps:

1. (Optional dependent on raw material input) Waste products from industrial production containing Na_2SO_4 are mixed with water to a saline solution
2. (Optional dependent on raw material input) Potential chemicals and metals (e.g., cadmium) are separated from the saline solution and the metal sludge created is concentrated and deposited
3. The saline solution is mixed with KCl formation of Glaserite (double salt of Potassium and Sodium sulphate) crystals
4. SOP and the by-product sodium chloride ("**vacuum salt**") are separated from the Glaserite crystals and concentration of brine to partially crystallize and separate NaCl
5. The circular, water soluble, and fossil-free produced SOP together with the vacuum salt are then dried in separated dryers. Further, the SOP is packed and sold in 25-kilogram bags, 1,000-kilogram bags, or bulk containers. The circular and fossil-free vacuum salt is packed and sold as traditional industrial salt. The main product, SOP, corresponds to approximately 60 percent of the total volume produced, measured in tonnes per annum

Separating metals from the ash occurs at a temperature around 50°C and the reaction temperature of creating SOP is 25-30°C, which means significantly lower levels than the reaction temperature of creating SOP from the Mannheim process (heated to react at a temperature of 700°C). Further, the implementation of Cinis' production plants will reduce the emissions of metals in the water and will contribute to a more circular economy as the metals are separated and taken care of in the process.

Main environmentally sustainable advantages with Cinis' SOP production are:

- ✓ 50 percent lower energy consumption than the Mannheim process
- ✓ Powered by fossil fuel free electricity (low CO_2 footprint), cogeneration waste heat to be sold for district heating
- ✓ Works in a fossil free context as opposed to today's Mannheim production of SOP which is based on a continued use of fossil fuels for energy input for driving the production process as well as for upstream raw materials
- ✓ Process water recycled

- ✓ Upcycling of waste materials e.g., chemicals and metals created from the production/recycling of EV batteries, battery materials, pulp production and other industries
- ✓ No hazardous by-products (vacuum salt instead of HCl)
- ✓ No high pressures or temperature in the process, low risk production.

Overview of the environmental impact of different SOP production processes:

Key Performance Measurements[4]	Cinis	Mannheim
Current market share	n.a.	~50%
Carbon footprint, CO_2 tonnes	1,400	39,000
Fossil fuel used in production, million litres per year	-	~875
Clean water use, m^3 per year	-	~9,000,000
Hazardous raw materials used, tonnes	-	~57,500 (98% H_2SO_4)
Hazardous by-product produced, tonnes	-	~130,000 (30% HCl)
Pressure and temperature in production	25-30°C	700°C
Energy use, kWh/year	45,000,000	98,000,000

Table 2. Environmental impact overview of different SOP production processes, plant nameplate capacity equals 100,000 tonnes p.a. SOP.

1.2.3. The green agricultural shift and fundamental market drivers

The green agricultural shift is driving more sustainable and efficient food production processes, based on sustainable agriculture. There are today about 8 billion people to feed and with forecasts of an increase of 2 billion by 2050, 70 percent more food will be needed[5]. The increasing demand for food will increase the demand for mineral fertilizers. To minimise the environmental impact of food production and agriculture there will especially be a growing demand for circular mineral fertilizers with low carbon footprint. Consequently, the key issues driving the need for sustainable SOP are, in addition to population growth, decreased arable land per capita, changing eating habits, under-application of mineral fertilizers in developing countries, and water availability.

Initiatives from executive arms aim to solve significant environmental issues by improving the overall agricultural industry. For instance, the U.S. Department of Agriculture ("**USDA**") has set ambitious goals to increase agricultural production by 40 percent to ensure future food demand, while cutting the environmental footprint of U.S. agriculture by 50 percent by 2050[6]. Further, several targets have been set as part of the EU Green Deal 2030 e.g., 25 percent of agricultural land under organic farming, 20 percent reduction in usage pf chemical fertilizers, and 25 percent transition of all member state farms to organic[7].

[4] Source: Vendor information, agri-footprint, Company information. Cinis figures refers to first production plant in Örnsköldsvik, Carbon footprint calculated via Ecoinvent
[5] United Nations world population prospects (2015)
[6] https://www.usda.gov/sites/default/files/documents/AIS.508-01.06.2021.pdf
[7] European Commission

Cinis will enable the agriculture to meet the green shift by providing a circular, chloride free, fossil-free, and soluble mineral fertilizer, that will facilitate sustainable precision agriculture and will not increase soil salinization.

1.2.4. Cinis' alignment with the UN Sustainable Development Goals

Cinis' operations will address 9 of the 17 Sustainable Development Goals of the United Nations[8] ("**UN SDGs**"). The Company's operations will, direct or indirect, have a positive impact on the environment and the society, according to each of the targeted UN SDGs.

2 Zero hunger

Cinis will produce fertilizers that helps grow crops and SOP in particular will help increase available land for cultivation by 20%.

3 Good health and well-being

SOP fertilizers will help to grow fruits and vegetables and hydroponic agriculture that increase in-demand and consumption due to changed eating habits to more healthy food and locally produced fruits and vegetables.

6 Clean water and sanitation

Cinis product will prevent waste salts from being dumped into the rivers and seas and thus improve local water quality. Reducing the need for water used to flush salts and fresh water needed in the dominant Mannheim production.

8 Good jobs and economic growth

Future production plants providing good quality jobs that impact economic growth in regions in demand.

9 Industry, innovation, and infrastructure

Cinis' product is produced in an innovative way and with new context for production of circular and fossil free fertilizers with close to zero carbon footprint.

12 Responsible consumption and production

Circular, upcycling, and end of waste solution.

13 Climate action

Cinis' production is preventing waste, off-setting fossil-based production and reducing demand for fossil fuel.

14 Life below water

No waste in the oceans from production and preventing waste from other industries to be flushed in seas.

17 Partnership for the goals

Strong industrial collaboration built on trust and alignment of interest in creating value adding and upcycled waste materials into new products for a fossil-free future.

[8] https://sdgs.un.org/goals

1.2.5. Sustainability management and policy

Cinis' operations and all decisions made within the organisation shall follow the Company's Sustainability Policy (2022), approved by the Board of Directors. Cinis Sustainability Policy forms the foundation for the Company's efforts to promote sustainability and is supplemented by the Code of Conduct and additional policies. The precautionary principle is particularly relevant in how the Company manages its emissions to air and water as well as the use of chemicals.

- ✓ Sustainability is fully integrated into the Company's strategy and the Company aims to run the business such that the impact on people, the environment and properties are minimised
- ✓ Transparent sustainability work – the Company aims to have a continual dialogue with all stakeholders to develop ways of working and set relevant priorities and expect the same transparency from suppliers and partners
- ✓ Focus on increasing resource efficiency and reducing carbon emissions – from own operations and within the agricultural sector in general through the Company's products
- ✓ Continuously evaluating the environmental impact of the Company's products in different phases of their life cycles and involve suppliers and customers in this process. Active cooperation with suppliers and customers to improve sustainability outcomes in the industry
- ✓ Constantly identify opportunities, risks, and improvement potential throughout the value chain from various perspectives, e.g., health and safety, the environment and climate, ethics, working conditions and social impact
- ✓ The Company shall be an inclusive employer that embraces diversity and where employees can reach their full potential. Constantly working on improvement on the professional development of the employees to achieve the Company's goals and long-term strategy
- ✓ The Company shall develop alongside the local communities where the Company operates and shall be a responsible partner that contributes to a more sustainable future

Further, the Company has set up a Code of Conduct (2022) including guidelines from UN Global Compact, as well as commitments regarding human rights, business ethics and anti-corruption, environmental responsibility, community relations, information security and a whistleblower function, which all Cinis' employees must adhere to. The Code of Conduct is approved by the Board of Directors. Cinis chooses to work with actors who share the principles set out in their Code of Conduct and who are also working towards a more sustainable society.

1.3. The Green Financing Framework

As part of Cinis Fertilizer's continued commitment to sustainability, this framework (the "**Framework**") has been developed. The structure of the Framework is developed to be in line with both the ICMA Green Bond Principles 2021 ("**GBP**")[9], (with June 2022 Appendix 1) as well as the APLMA/LMA/LSTA Green Loan Principles 2023[10] ("**GLP**"). Under the Green Financing Framework, Cinis will be able to issue bonds, loans, and other debt instruments (collectively, the "**Green Financing Instruments**").

It is Cinis' intention to follow the best practices, in relation to Green Bonds and Loans, as the market standards develop and as the EU classification of environmentally sustainable economic activities enter into force. Therefore, Cinis' Framework may be amended and/or updated to reflect the changes in market practice. Further, the Company will be transparent and disclose accurate information according to the key components of the GBP:

1. Use of Proceeds
2. Process for Project Evaluation and Selection
3. Management of Proceeds
4. Reporting

The Green Financing Framework will be used as a policy document within the Company, formally approved by the Board of Directors. In the event of a material change of the Green Financing Framework, it shall be approved by the Company's Board of Directors.

[9] https://www.icmagroup.org/assets/documents/Sustainable-finance/2022-updates/Green-Bond-Principles-June-2022-060623.pdf
[10] https://www.lsta.org/content/green-loan-principles/#

2. Use of Proceeds

The net proceeds from Cinis' issuance of Green Financing Instruments will exclusively be used to finance and/or refinance, in whole or in parts, the construction of Cinis' SOP production plants together with related investments and/or reinvestment that are aligned with the GBP Project Categories and falls under the Eligible Green Projects described in Table 3. Cinis will contribute to the circular economy by producing an environmentally friendly mineral fertilizer by, to the furthest extent possible, recycling waste from industrial production, which will support the shift towards sustainable, circular, and fossil-free agriculture.

The Eligible Green Projects are based on the project categories outlined in the GBP and are evaluated taking the relevant UN SDGs into account as well as the EU Taxonomy related objectives.

The net proceeds from the Green Financing Instruments will not be linked to fossil energy production, nuclear energy generation, scarce resource extraction, fossil fuels, gambling, or tobacco.

GBP Project Category	Eligible Green Projects/Assets	UN SDGs	EU Taxonomy Related Objectives
Eco-efficient and/or circular economy adapted products, production technologies and processes	✓ Construction of Cinis' SOP production plants (the "**Green Project**")		✓ The transition to a circular economy ✓ Climate change adaption
Pollution prevention and control	✓ Recycling/upcycling of industrial waste products from Swedish industrial production ✓ Reduction of greenhouse gas emission in production compared to traditional SOP processes, using only fossil fuel free energy ✓ Improving water treatment and quality by reducing the emissions of chemicals and metals dumped into seas and oceans		✓ The transition to a circular economy ✓ Pollution prevention and control
Environmentally sustainable management of living natural resources and land use	✓ Circular and fossil fuel free production process of fertilizer, enabling environmentally sustainable agriculture		✓ Climate change adaption ✓ Pollution prevention and control

Table 3. Eligible green projects categories under the framework

The initial GBP Project Category “Eco-efficient and/or circular economy adapted products, production, technologies and processes” will primarily relate to construction of the plants, i.e. capital expenditures, whereas the other two will mainly relate to operations of plant. Cinis expects that a majority of the Use of Proceeds for Green Financings will relate to the first category, i.e. construction and/or refinancing of SOP production plants.

3. Process for project evaluation and selection

Cinis has established a Green Financing Committee to evaluate and select assets that are in line with the criteria set out in the use of proceeds section. The committee meets at least on an annual basis or when needed. The Green Financing Committee is comprised of representatives from Jakob Liedberg (Group CEO and Founder), Henrik Andersson (Group CFO) and Charlotte Becker (Investor Relations, Marketing, Communication and ESG Director). The sustainability representative will have veto to refuse projects that do not fulfil the criteria. The Green Financing Committee is responsible for evaluating the compliance of proposed assets with the eligibility criteria outlined in the Use of Proceeds sections above.

The primary objectives of the Green Financing Committee are to:

1. Evaluating the compliance of proposed assets with the eligibility criteria outlined in the Use of Proceeds section above
2. Provide the market with relevant information regarding the Green Project and Use of Proceeds
3. Choose relevant KPIs for reporting
4. Review the Green Financing Framework and manage any future updates of this document to reflect relevant changes in the Company’s corporate strategy and technology
5. Reflect changes in the market and update the Green Financing Framework when necessary (e.g., introduction of the EU Green Bond Standards)

Further, the Green Financing Committee will select the Eligible Green Projects in compliance with the Eligible Green Categories outlined in Table 3, and the decisions connected to the selection of the Eligible Green Projects will be made in consensus. The Green Financing Committee will also replace investments that no longer meet the eligibility criteria (e.g. following divestment, liquidation, concerns regarding alignment of underlying activity with eligibility criteria etc.). The Green Financing Committee is also able to replace investments that no longer meet the eligibility criteria (e.g., following divestment, liquidation, concerns regarding alignment of underlying activity with eligibility criteria, etc.).

In the process of selecting eligible Green Projects and allocating net proceeds, the Green Financing Committee will also consider aspects such as human and labour rights and the avoidance of significant harm to the other environmental objectives defined in the EU Taxonomy, to the extent possible.

4. Management of proceeds

An amount equal to the net proceeds from the issuance of the Green Financing Instruments will be credited to an earmarked account that will support Cinis’ lending to Eligible Green Assets, as described

under Use of Proceeds. As long as any Green Financing Instrument is outstanding and the earmarked account has a positive balance, funds may be deducted from the earmarked account and added to Cinis' lending pool in an amount up to all disbursements from the pool made in respect of Eligible Green Assets. The earmarked account will ensure monitoring and track the Eligible Green Assets. Group CFO is responsible for allocation of proceeds. If, for any reason, an Eligible Green Asset ceases to comply with the requirements set out in this Framework, such asset will be removed from the earmarked pool.

Proceeds yet to be allocated towards Eligible Assets will be placed in the liquidity reserves and managed as such. If the Green Account has a positive balance the unallocated funds may be invested in short-term interest-bearing securities pending investment in Eligible Projects and Assets. Such allowed investments are Swedish treasury bills and highly rated short-term bank notes (A+ from S&P or an equivalent rating from Moody's or Fitch). The ambition is to use the proceeds within one year and no later than two years from the time of issuance of Green Financing Instruments.

5. Reporting

Cinis will annually until full allocation, and in the event of any material developments, provide investors with a detailed report regarding the allocation of the net proceeds from the issuance of the Green Financing Instruments. The first report will be published within one year from the first issue date and will be available on the Company's website[11] and in the event Cinis would have other Green Debt than bonds outstanding, the company may choose to report, in relation to these other financial instruments, directly and non-publicly to the lenders or counterparties. The Company will in the report disclose the following information related to the Green Project:

1. A Description of the portfolio of Eligible Green Assets
2. Type of financing instruments utilised and respective outstanding amounts
3. Information on the split between new financing and re-financing
4. A list of Eligible Assets including the amounts allocated, including allocated and disbursed amounts per category

Cinis will strive to report on environmental impact of Eligible Assets financed by Green Financing Instruments in the abovementioned report. Hence, the report will also outline several selected Key Performance Indicators ("**KPIs**") and/or future performance levels. The KPIs will be selected by the Green Financing Committee based on the GBP Project Categories set under the Green Financing Framework. Potential KPIs that will be measured are:

1. Processed sodium sulphate waste from industrial manufacturing
2. Prevented CO_2 emission/CO_2 reduction/CO_2 savings
3. Water use
4. Energy consumption
5. Hazardous waste recycled

[11] [http://cinis-fertilizer.com/]

The impact reporting aims to disclose environmental impact of such Eligible Assets financed under this Green Financing Framework, based on Cinis' financing share of each project. As Cinis can finance large and small Eligible Assets in the same project category impact reporting will be provided for a selection of projects within the Eligible Assets, the information may be provided in an aggregated project basis due to confidentiality agreements, competitiveness considerations or numerous projects limiting the amount of detail that can be made available. Cinis intends to report on quantitative impact indicators such as the ones outlined above where feasible and when relevant data is available. When reporting on quantitative indicators, the methodology for calculating the impact indicators will be described in the report.

6. External review

S&P Global Ratings has provided a second-party opinion to the Green Financing Framework, verifying its credibility, impact, and alignment with the ICMA and LMA Principles. The second-party opinion is publicly available on the Company's website.

S&P Global Ratings has in the second-party opinion report rated all Eligible Green Projects as Dark Green highlighting that the eligible projects are aligned with a low-carbon climate-resilient future given their positive climate impact and contribution to a more circular economy.