

Luxembourg, 24 June 2024

Public

Environmental and Social Data Sheet¹

Overview

Project Name:	<i>RONDO DEMONSTRATION PIPELINE (IEU GT2)-CATALYST</i>
Project Number:	<i>2023-0665</i>
Country:	<i>Denmark, Germany, Portugal</i>
Project Description:	<i>The project consists of the deployment of the European demonstration pipeline of RONDO's power-to-heat energy storage solution to decarbonize industrial heat supply. It includes the construction and operation of three Rondo Heat Batteries (RHB100) with 100MWhth storage capacity each in Denmark, Portugal and Germany and the related research and development activities.</i>

EIA required:	no
Invest EU sustainability proofing required:	yes
Project included in Carbon Footprint Exercise ² :	yes

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Environmental and Social Assessment

The project is the European deployment of an electric thermal energy storage technology, the Rondo Heat Battery (RHB), that allows long duration storage of electric energy in the form of heat. Radiant heaters powered by electricity rapidly and uniformly heat up to high temperatures the refractory bricks that can store heat for hours or days. The RHB discharges the stored energy in the form of dispatchable high temperature gas or steam for industrial heat supply or cogeneration. The RHB units will be implemented by three subprojects on existing brownfield industrial sites in Denmark, Germany and Portugal.

Environmental Assessment

Due to its technical characteristics, the subprojects fall under Annex II³ of Directive 2014/52/EU amending EIA Directive 2011/92/EU, leaving it to the national competent authority to determine whether an environmental impact assessment is required. The subprojects are in early phase of preparation. The Promoter will provide project-specific information for each subproject to the

¹ The information contained in the document reflects the requirement related to the environmental, social and climate information to be provided to Investment Committee as required by the Invest EU Regulation and it represents the equivalent of the information required in the template of the InvestEU sustainability proofing summary

² Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO₂e/year absolute (gross) or 20,000 tonnes CO₂e/year relative (net) – both increases and savings.

³ Item 3 (a) Industrial installations for the production of electricity, steam and hot water (projects not included in Annex I).



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respective authorities for evaluation based on criteria outlined in the EIA directive and screening decision. Based on the preliminary assessment of the Promoter and its consultant on environmental matters the subprojects are not expected to meet the requirements for an EIA. This conclusion, however, must be confirmed by the screening decision of the competent authorities based on the formal submittal of applications and review of relevant project documentation. Therefore, a condition will be included in the finance contract demanding that the Promoter submits all the necessary information for screening decision and if required, completes any EIA or nature conservation area impact assessment and receives approval from the competent authorities prior to allocating the Bank's funds to the project scheme, and that copies of the relevant documents, including the studies, screening decisions and consents, are provided to the Bank.

Based on the information provided by the Promoter the subprojects are expected to have limited residual environmental impact. All three subprojects will be located within the sites of established industrial facilities operating under the necessary authorizations obtained during the development and operation phases. On these sites the presence of flora and fauna which may be impacted is negligible and no significant impact on the surrounding landscape is expected. The RHB units do not require significant consumption of natural resources. Concerning steam generation, the water consumption would not be different from the current situation because the RHB units will only replace the current steam generation sources, which are based on natural gas. The Project does not involve significant emissions of hazardous substances to air, water, soil or groundwater. The impact of noise in the surroundings is not significant. The generation of waste materials is limited. The technology does not require a continuous supply of materials, therefore the subprojects are not expected to induce changes in traffic in the area.

Most environmental and social impacts of the Project are expected to be limited, site-specific, temporary during construction and largely reversible with no significant negative residual effects after the implementation of mitigation measures.

Climate Assessment

This operation intends to bring environmental benefits by supporting decarbonization of industrial heat supply. The Project will contribute to increased use of renewable energy and integration of renewable energy in the grid, displacing heat production from fossil fuels and helping to mitigate climate change.

The counterparty is a corporate that exclusively develops and manufactures thermal energy storage modules and provides renewable energy storage service to its customers. The renewable energy stored in the RHB units will be used by the customers to provide decarbonized industrial heat supply, therefore the project is in line with the focus area of the EIB's Climate Bank Roadmap promoting clean energy deployment of low-carbon energy, as a basis for the further electrification of the economy. The project contributes to the Bank's lending priority objectives on Energy (Energy Storage), Environmental Sustainability and Climate Action (Mitigation) as well as it is considered under the Innovation provisions of the Energy Lending Policy (Innovative technologies and new types of energy infrastructure).

Physical climate change risks are mitigated in the design stage by the product design, project siting, and site integration by adapting the design of the RHB units as needed considering the local conditions. The RHB units are inherently robust in the face of climate change by nature of its materials, structural protection/housing, and process technology. Rondo heat batteries are designed to be resilient to extreme weather fluctuations with two layers of insulation to mitigate the impact of external temperature-variations. Additionally, components are housed within weather-resistant enclosures to withstand extreme weather conditions and excessive precipitation. RHB units are expected to have reliable performance and be resilient to cold weather extremes. Rigorous planning, maintenance, and cold weather procedures will protect



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equipment and enable uninterrupted operation. Steam turbine subsystems will not be sensitive to low ambient temperatures as they will be housed in a weatherized enclosure along with the generator and electrical equipment. The promoter considers that appropriate design solutions make the RHB units resilient against heatwaves, deep freezes, droughts, storms, hurricanes and fires as well.

The project and the counterparty have been assessed for Paris alignment considering both low carbon and resilience goals as defined by the policies set out in the Climate Bank Roadmap and associated guidance. Based on criteria on size and physical climate risk the counterparty is screened out for being considered high emitting or high vulnerability.

EIB Carbon Footprint Exercise

The estimated annual absolute emissions of project in a standard year of operation are considered zero, because the RHB batteries will be charged by electricity from renewable sources (wind, solar). Since the batteries will replace gas-fired industrial heat generation the project is expected to result in estimated emissions savings of 35,600 tonnes of CO₂ equivalent per year. For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

Social Assessment

The project does not entail resettlement, nor does it affect the livelihood of local population.

The Bank will implement contractual obligations to ensure that the project and the promoter are in line with applicable labour and social legislation including labour and working conditions, occupational, public health, safety and security.

Other Environmental and Social Aspects

The Bank reviewed the environmental and social capacity of the promoter including its organisation, process and procedures and deemed them to be satisfactory. The promoter supports its business strategy by establishing ESG goals that are informed by stakeholder engagement efforts. These goals and programs are regularly reviewed and updated by senior management. Rondo is focused on Process Safety Management with dedicated staff. The safety staff makes regular visits to facilities, to conduct Program Quality Verification reviews, respond to complaints, conduct incident investigations, evaluate hazards, and take immediate actions to remediate. The promoter carries out training programs for employees and contractors, covering safety protocols, hazard identification, emergency response, and proper use of safety equipment. Regular safety audits and inspections are conducted during construction and operations to identify and address potential safety issues promptly. In accordance with the Environmental, Social and Governance Policy of the promoter while building its operations and partnerships for the European projects they plan to establish and maintain a formal supplier qualification program, which includes formal ESG evaluation criteria. Local engineering consultants have been contracted by the promoter to support preliminary engineering process and permitting of the subprojects.



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Conclusions and Recommendations

Based on the information available the subprojects are expected to have limited residual environmental impact. Meanwhile they will bring environmental benefits related to climate change mitigation by decarbonization of industrial heat supply through displacement of heat production from fossil fuels, and by increased use and integration of renewable energy. Therefore, with appropriate conditions (see below) and monitoring in place, the Project is acceptable for Bank financing in environmental and social terms.

Project Conditions:

- In accordance with the project implementation progress the disbursements of the EIB funds will be conditional on evidence provided by the promoter respectively that (i) the environmental authorization process for the relevant subprojects is in progress, (ii) the application for the screening decision has been submitted and (iii) finally, all necessary authorizations, including environmental screening decisions and authorizations are obtained before starting the construction.
- The Promoter undertakes (i) to fulfil the requirements of the EIAs, where applicable, and Environmental Permits, (ii) to keep them available to the Bank and (iii) to provide the Bank with a copy of the environmental reporting, as required by the permits, as soon as available.
- The Promoter shall ensure that the Environmental Social Health and Safety management team is adequately staffed with appropriately qualified and experienced staff to meet the E&S requirements of the project.
- The Promoter will verify and respect the relevant EU Directives and national laws. The Promoter will further develop an integrated Environmental Social Management System (ESMS) which will include occupational health and safety ("OHS") policy and procedure and will be adherent to the EIB's environmental and social requirements.

Following the environmental, climate and social screening of the project against the InvestEU sustainability proofing requirements it is not expected to have significant negative environmental and social residual impacts, it will contribute to climate mitigation, and it is projected to be resilient to climate change. The legal compliance will be verified for each subproject prior to disbursement. No further sustainability proofing is required.