



Environmental and Social Data Sheet

Overview

Project Name:	DECARBONISING HEAT SUPPLY KIEL
Project Number:	2023-0887
Country:	Germany
Project Description:	The Project consists of several investments in the Kiel district heating system, the main elements are the installation of a large heat pump (50 MW _{th}), a 1 500 MWh heat storage tank; and the expansion and modernisation of the heat distribution network.

EIA required: may be required

Project included in Carbon Footprint Exercise¹: yes

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

Environmental and Social Assessment

The Project concerns the construction of a large heat pump using sea water and electricity from the grid, heat storage hot water tank, and modernisation of existing and construction of new heat distribution pipelines in Kiel, Germany. The investment's objective is to increase heat production from a renewable source replacing currently used fossil-based plants, to improve generation flexibility by adding a heat storage unit, and to modernise and extend the district heating service to new users. The project will contribute to the reduction of economic heat generation costs and greenhouse gas emissions.

Already 75% of heat provided to the district heating system in Kiel comes from cogeneration plants, therefore the system is considered efficient based on the EU Energy Efficiency Directive definition.

Environmental Assessment

One of the investments comprising the Promoter's investment program, a heat pump, falls under Annex II of Environmental Impact Assessment (EIA) Directive², however, it does not require a screening under the German Law. The decision on the need for screening is taken on a case-by-case basis depending on the opinion of authorities responsible for permitting. None of preliminary contacted authorities responsible for permitting required an EIA, however, no official screening out decision was issued. The Project is at early stages of development, and certain features of the design to be developed in the future may trigger EIA process once more information is available and the Promoter applies for the permits.

¹ 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.

² ENERGY INDUSTRY (a) Industrial installations for the production of electricity, steam and hot water (projects not included in Annex I).



Overall, the environmental impacts of the Project are expected to be minor and related mainly to noise, vibration, dust, and traffic disruption during the construction and accidental spill of refrigerant during the operation of a heat pump. The Promoter has the capacity and is committed to implement the necessary mitigating measures at the design, construction, and operation stages. They include, for example, an appropriate planning and special construction procedures to minimize damages and disturbance, and traffic management measures.

The Project's potential positive environmental and social impacts result from advantages of district heating over individual boilers and from advantages of using heat pumps instead of fossil fuels.

The Project is to be implemented in urban or industrial environment, therefore, no impact on biodiversity and protected areas is expected. The nearest Natura 2000 sites to the future heat pump are "Untere Schwentine" (DE 1727-322) and "Gorkwiese Kitzeberg" (DE 1627-322), around 1.6 km distance to the Project each. The potential negative impact of potential spill of refrigerant from the heat pump on these sites is considered negligible.

The Promoter is an experienced district heating generation and distribution company, with an in-house team responsible for the environmental and social aspects of projects. The Eco-Management and Audit Scheme (EMAS) is currently being introduced in the company. The Bank reviewed the environmental and social capacity of the Promoter, including its organisation and procedures, and deemed them to be good.

EIB Carbon Footprint Exercise

Part of the heat provided by the heat pump will be considered as renewable, however, the pump will use electricity from the grid, and the related emissions from the use of electricity will amount to 28.6 kt of CO_{2eq} per year.

The heat provided by the heat pump will replace heat generated by gas-fired boilers. Resulting net CO_{2eq} savings (taking into consideration emissions related to use of electricity to operate the heat pump) will reach 20.6 kt CO_{2eq}/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.

EIB Paris Alignment for Counterparties (PATH) Framework

- The counterparty is in scope and screened into the PATH framework, because it is considered high emitting and high vulnerability.
- The counterparty is deemed to meet the requirements of the PATH framework with its existing alignment plans.

Public Consultation and Stakeholder Engagement

Public consultations, when necessary, are organised by the competent authority, as part of the permitting process.



Conclusions and Recommendations

Based on the information available, the Project is expected to have minor negative residual impacts and thus is acceptable for Bank financing from an environmental and social perspective provided the fulfilment of the following undertakings:

- The Promoter undertakes to send to the EIB copies of all EIA screening decisions or permits, if no screening process official records are available, concerning the programme components issued by the competent authority for nature and environment as soon as they are issued.
- The Promoter undertakes not to allocate the Bank's funds to programme components that require an Environmental Impact Assessment (EIA) until the EIA and/or the biodiversity assessment have been finalised, satisfactorily to the Bank, and approved by the competent authority. When the EIA is made available to the public, an electronic copy of the full EIA study shall be sent to the Bank.
- The Promoter undertakes to take into account and implement conditions expressed in any screening-out decision, EIA consent or permit granted by the competent authority for nature and environment.
- The Promoter undertakes to store and keep updated any documents as may be relevant for the Project supporting the compliance with the provisions under the EU Habitats and Birds Directives and shall upon request promptly deliver such documents to the Bank.
- The Promoter undertakes not to invest in incompatible activities, in line with the PATH framework.
- The Promoter undertakes to ensure that the heat pump will use a refrigerant of a Global Warming Potential below 675.