European Investment Bank

Luxembourg, 06 January 2026

Environmental and Social Data Sheet

Overview

Project Name:	LINZ VERSORGUNGSINFRASTRUKTUR
Project Number:	2024-0660
Country:	Austria
Project Description:	Rehabilitation of water and wastewater infrastructure and heat exchanger for district heating and district cooling in the City of Linz
E&S Risk categorisation	*Low/Medium/ as per paragraph 4.18 of E&S Policy*

Project included in Carbon Footprint Exercise[1]: yes

(Details for projects included are provided in section: “EIB Carbon Footprint Exercise”.)

Environmental and Social Assessment

Environmental Assessment

This is the fourth operation with Linz AG (or the “Promoter”), headquartered in Linz in Austria, that provides utility services to around 400,000 inhabitants within its service area. The proposed operation is developed by an experienced Promoter, well known to the Bank who takes into consideration environmental and social aspects as required by European and national legislation. The proposed operation will co-finance investment schemes that form part of the Promoter's investment programme for 2025-2030.

Energy components

The project consists of two components entailing investments in **district** heating (DH) and district cooling (DC) in Linz:

- Construction of two flue gas condensation units and heat pumps cascade in the existing waste incineration and biomass power plants in Linz Mitte. The investments’ objective is to utilise the residual heat from the flue gas and deliver the “recovered heat” to Linz’s district heating network, thereby increasing the network’s efficiency. The investment will result in 35 MW of “additional” heating capacity and will allow to deliver up to 168.3 GWh of heat per year to the DH system. The network fulfils the definition of efficient district heating system (60% co-generated heat and 40% renewable heat) in line with article 26 of the Energy Efficiency Directive 2023/1791/EU.

[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.

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- Construction of the district cooling centre FHKW Mitte (20 MW) and the associated DC network. The network's final connection load is 47 MW and includes a multipurpose technical tunnel ("Klimatunnel") in Linz with a nominal diameter (DN) of 2,500 mm. The objective of this investment is to provide sustainable cooling services and create underground infrastructure to enable cooling and other services in the dense city environment. The project will increase the cooling capacity by 20 MW which will result in 15,000 MWh of cold yearly supplied to the customers. Moreover, waste heat recovery will be part of the district cooling project: waste heat from the chillers will be fed into the district heating system, which is expected to recover 9,500 MWh per year. The DC network will achieve the status of efficient district cooling system (52% of the waste heat utilised as cold source) in line with article 26 of Energy Efficiency Directive 2023/1791/EU.

Water and wastewater components

In the field of water supply, the project will finance the construction or rehabilitation of water reservoirs, water treatment plants and pumping stations, as well as the renewal of water mains. The wastewater components mainly consist of rehabilitation or replacement of combined sewers and upgrading of the wastewater treatment plant (WWTP), including the replacement of one biogas CHP[2] and a new small rooftop photovoltaic (PV) plant. These measures contribute to water security, resilience against climate change and to reduced discharges of untreated wastewater to receiving bodies during heavy rain, thereby contributing to achieving the environmental objective of the Water Framework Directive 2000/60/EC (WFD), whilst reducing flood risks.

These components will ensure continued compliance with the Drinking Water Directive 2020/2184/EU, the Urban Wastewater Treatment Directive 91/271/EEC (and 2024/3019 as applicable[3]) and improve the quality of water bodies as required by the River Basin Management Plan (RBMP), implementing the requirements of the WFD.

Strategic Environmental Assessment

Only relevant for water component
Linz is part of the international Danube River basin districts. In April 2022, the Austrian Government published the RBMP for the period from 2022 to 2027[4], which was subject to a Strategic Environmental Assessment (SEA)[5], in accordance with Directive 2001/42/EC.

Environmental Assessment

Energy components

Based on the technical description provided by the Promoter, neither of the two energy components will require an Environmental Impact Assessment (EIA). The heat recovery component will not result in an increase of the existing unit's capacity that would require to carry out an EIA amendment procedure, based on Austria's Environmental Impact Assessment Act 2000 (UVP-G 2000). The Promoter confirmed that such a change is not subject to a screening-out decision by the competent authority. The cooling component is not subject to any Annexes of the EIA Directive (2011/92/EC amended by Directive 2014/52/EC).

[2] Combined heat and power plant
[3] The new directive came into force in 2024 but has not yet been transposed into Austrian law.
[4] BUNDESMINISTERIUM FÜR LAND- UND FORSTWIRTSCHAFT, UMWELT UND WASSERWIRTSCHAFT: NGP 2021 - Textdokument
[5] NATIONALER GEWÄSSERBEWIRTSCHAFTUNGSPLAN 2021 - UMWELTBERICHT IM RAHMEN DER STRATEGISCHEN UMWELTPRÜFUNG GEM. RL 2001/42/EG GEM. EUWRRL

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Water and wastewater components

According to the Promoter, none of the schemes fall under Annexes I or II of the EIA Directive (2011/92/EC), as amended by Directive 2014/52/EC. The works are almost all on existing premises or under public roads. Should an EIA be required, the Promoter will be obliged to make the EIA available to the Bank, for publication on its website. None of the water or wastewater schemes is expected to have an impact on nature conservation sites.
Projects are in any case screened with respect to the need for an appropriate assessment under the EU Habitats (92/43/EEC) and Birds (2009/147/EC) Directives.

Environmental Impacts

Energy components

In the heat recovery component, the heat carried with flue gas from the biomass and waste incineration plants will be recovered and using heat pump its temperature will be elevated to supply the DH network. Due to the installation of a flue gas condenser the efficiency of the plant will exceed 100% without increasing fuel consumption. The heat recovery infrastructure will be located next to the existing heat generation units (biomass CHP and waste incineration), in Linz Mitte powerplant.
The biomass utilised in the existing CHP is delivered by a wide range of suppliers primarily from Austria with the remaining approximately 15-20% coming from Germany and the Czech Republic. The purchasing radius is approximately 100 km. The promoter has been SURE certified according to the revised Renewable Energy Directive (RED II, EU 2023/2413) which assures that the biomass fuel aligns with the EU biomass sustainability criteria.
The waste incineration power plant mainly uses stabilised sludge and residues from mechanical waste treatment. The plant is operated in compliance with the requirements of the Waste Framework Directive 2008/98/EC.
The cascade-connected heat pumps (4-9 pcs) will use 100 % renewable electricity and HFO-refrigerants R1234ze or R1233zd which have a Global Warming Potential (GWP) 7 and 4.5 respectively. The heat pump's average Coefficient of Performance (COP) will be 6.1.

The second component (cold generation and supply infrastructure) consists of a cooling centre which will also be located in the Linz Mitte powerplant. The expected Seasonal Energy Efficiency Ratio (SEER) of the compression chillers is approximately 4. HFO (hydrofluoroolefin) refrigerant is expected to be used. Its GWP is below 10. As an enabler of cold supply in the dense city centre, the 3 km long, 2.5 m diameter tunnel at a depth of approximately 25 m will house two DN600 DC pipelines, the 110 kV high-voltage systems, and several medium-voltage and data lines. To minimise environmental impact, it will be built using the microtunneling method.

The negative environmental impacts of the above components are expected to be minor and related mainly to noise, vibration, dust, and traffic disruption during the construction period (these concern mostly the investments in the district cooling network, above all the tunnel). 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 of excavation works and of transportation and disposal of excavated soil and rocks, special construction procedures to minimize damages and disturbance, traffic management measures.

The positive environmental impact of these components results from reduced emissions thanks to using heat pumps and Renewable Energy (RE) fuel instead of fossil fuels.
These components are to be implemented in urban environment. Therefore, no impact on biodiversity and protected areas is expected.

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Water and wastewater components

Due to the nature of the works to be implemented it is anticipated that the negative environmental impacts will mainly be only associated with the period of construction and will be mainly localised and temporary and reversible such as (i) minor disturbance due to pipe replacement techniques and (ii) temporary increase of traffic around the construction sites. These negative impacts will be mitigated with appropriate measures such as working outside the general breeding season within nature protected areas. The main long-term positive environmental impacts of the operation can be summarised as follows:

- The protection of surface and groundwater bodies and a more efficient and sustainable use of water resources.
- The continued maintenance and management of nature protection areas around the abstraction areas will continue fostering biodiversity and ensuring minor disturbance of bird areas and habitats of vulnerable species.
- The reduction of water losses along the transport and distribution network will have a positive impact on the usage of raw water resources.

Climate Assessment

- ***Climate change mitigation***

The project contributes to reduction dependency on imported fossil fuels and the RE objectives as it supports waste heat recovery from renewable-fired CHPs as stated in Austria's National Energy and Climate Plan[6] (NECP 2021-2030), which sets a target of 53.7% of renewable energy share in the gross final energy consumption in the heating/cooling sector in 2030.

Absolute emissions of the project are 3.4 kt of CO2 per year, while relative emissions are negative and reach 33.6 kt of CO2 per year, therefore, the project has been included in the Carbon Footprint Exercise.

- ***Climate change adaptation****:*

Energy components

The DC component including the tunnel contributes to climate change adaptation by reducing the negative impact of increasing temperatures on the customers and the city's residents.

Water and wastewater components

• Strengthening the production and storage facilities for drinking water increases the resources available in the event of heat wave or drought.

• Combating leaks in the drinking water network and modernizing the plants will enable more rational use of water and thus preserve resources.

• Strengthening Linz's sewerage network and increasing retention volumes helps collect and store a greater proportion of rainwater and thus reduce the risk of flooding caused by torrential rains.

- ***Paris Alignment of projects***

The project has been assessed for Paris alignment and is considered to be aligned both against low carbon and resilience goals, against the policies set out in the Climate Bank Roadmap (cooling technologies using electricity, new DC networks meeting the criteria for efficient DC defined in the revised EU Energy Efficiency Directive 2023/1791, energy efficiency of industrial facilities).

[6] Austria - Final updated NECP 2021 - 2030 (submitted 2024) - European Commission

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EIB Paris Alignment for Counterparties (PATH) Framework

The Promoter - LINZ AG - is an experienced multi-utility company providing electricity, water, sewerage, gas and district heating services. It also runs the public transport system, and manages waste collection and treatment, swimming pools and funeral grounds in Linz and its surroundings.

Heat generation - currently based on natural gas, biomass, and Waste to Energy (WtE) - is listed as high emitting sector (i) and is in scope for the PATH framework but has been screened out given that the share of the revenues generated by heating based on natural gas in annual consolidated revenues is below the assumed 20% threshold as per the PATH procedures manual.

EIB Carbon Footprint Exercise

From all generation assets, the PV plant, the biogas-based CHP as well as recovered heat (waste heat) are considered as renewable sources of energy, therefore CO2 emissions associated with their operation are zero. Heat pumps and cooling machines will be powered with renewable electricity from the electricity network. However, according to the EIB Project Carbon Footprint Methodologies, the emissions need to be calculated using the country specific electricity emission factor. That is why yearly emissions associated with heat pumps and cooling machines operation will be 3.4 kt CO2e.

HFO-refrigerant leakage is estimated to contribute to a negligible amount of CO2 release into the atmosphere. Assuming that the alternative to the project would be a gas-fired boiler, or grid electricity (for PV and biogas-based CHP) the CO2 savings reach 33.6 kt CO2e 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 proposed investments will yield lasting positive social benefits. They stem from improved living conditions for the inhabitants within the Promoter’s service area and from the provision of high-quality utility services at affordable prices. The works will also contribute to local employment creation during the construction period. The negative social impacts of the project are only temporary such as the possible disruption of water services and traffic, and noise and temporary occupation of public and private space. They are common for this type of projects and will be addressed as part of the planning permission for the relevant components.

Other Environmental and Social Aspects

LINZ AG is an experienced multi-utility company, with an in-house team responsible for the environmental and social aspects of projects. The company has implemented an environment management system (EMAS) and holds an ISO 14001 certificate (environmental management). The Bank reviewed the environmental and social capacity of the Promoter, including its organisation and procedures, and deemed them to be good.

There are several areas of suspected UXO (unexploded ordnance) concern throughout the city of Linz. The Promoter is fully aware of this risk and follows the applicable national legislation. In 2008, the Promoter put in place a corresponding corporate guideline to minimise corresponding risks to workers and the public further. The guideline is being updated from time to time.

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Public Consultation and Stakeholder Engagement

The Promoter will be requested to ensure compliance with national and European environmental legislation, notably to facilitate public access to environmental information and guarantee public consultation during the environmental decision-making process, where relevant, in accordance with the Aarhus Convention.

Conclusions and Recommendations

The Bank reviewed the environmental and social capacity of the Promoter including its organisation, processes and procedures, and deemed them to be good.

The project will be carried out in compliance with applicable national and EU environmental and social legislation.

None of energy components included in the project require environmental assessment as the heat recovery units will be sub-elements of the existing installations (biomass plant and Waste to Energy) an will not result in the existing units capacity increase of more than 50 or 100 % of a threshold or change that require to carry out an EIA amendment procedure in line with the Directive 2011/92/EU and under the Austrian implementing law (UVP-G 2000). The cooling component is not the subject to any Annexes of the Environmental Impact Assessment Directive (2011/92/EC amended by Directive 2014/52/EC).

None of the water or wastewater require an environmental assessment; either.

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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 not to allocate the Bank's funds to components that require an Environmental Impact Assessment (EIA) until the EIA and the necessary appropriate assessment, if required, have been finalized and approved by the relevant competent authority. Once any EIA is finalized, the Promoter will provide the Bank with an electronic copy of the EIA, for publication on the EIB website.
- The Promoter shall not commit any EIB funds against any scheme that impacts nature conservation sites, without receiving from the relevant competent authorities the confirmation that there are no significant effects and informing the Bank of such confirmation having been obtained.
- 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.
- All the biomass sourced as a fuel for the project need to align with the EU biomass sustainability criteria principles as defined in Directive EU 2018/2001 (Article 29) and with the EU Timber Regulation (EU/995/2010).
- The wood supply chain and the underlying forest management practices are to be certified, or if not yet certified, they have to be aligned with the standards so as to be certifiable by internationally accredited certification schemes (e.g., FSC or PEFC).
- The Promoter undertakes not to invest in incompatible activities, in line with the EIB's PATH framework.