

Luxembourg, 15 June 2023

## Environmental and Social Data Sheet

### Overview

Project Name: *ENGIE GREEN CAPEX PROGRAM*

Project Number: *2022-0653*

Country: *France*

Project Description: *The project consists of the development of new district heating systems and the extension and refurbishment of existing district heating and cooling networks, including new heating/cooling generation facilities in various cities in France.*

EIA required: YES

Project included in Carbon Footprint Exercise<sup>1</sup>: YES

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

### Environmental and Social Assessment

#### Environmental Assessment

The project is a five-year (2022-2026) multi-component investment programme consisting of the rehabilitation, extension and development of district heating and cooling networks and associated heat and cold generation facilities in various cities in France.

It will accelerate the substitution of natural gas heating and of individual cooling options by more sustainable and centralised heating and cooling sources<sup>2</sup> as well as increase the reach of the district heating and cooling networks on existing building stock. The investments will thus generate environmental benefits by reducing emissions of greenhouse gas and air pollutants from heat/cold generation.

Each of the promoter's district heating and cooling networks in the project scope are also designed to be efficient per the Energy Efficiency Directive 2012/27/EU (as amended by (EU) 2018/2002) definition of an efficient DH system, with the share of renewable energy ranging from 60% to 90% at completion.

Some of the investments included in the programme fall within Annex II of the EIA Directive 2011/92/EC amended by Directive 2014/52/EU thus requiring a review by the competent authorities at the planning/consent.

- Under the national environmental regulations, the geothermal drilling components part of the project scope require a full EIA<sup>3</sup>. The EIA decision from the competent authorities was completed for some of the components, and is on-going for other components at the time of appraisal and will be followed-up with appropriate contractual conditions. The geothermal components are also subject to the requirements of the Water Framework Directive 2000/60/EC which the Promoter is applying for those activities.

<sup>1</sup> 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 CO<sub>2</sub>e/year absolute (gross) or 20,000 tonnes CO<sub>2</sub>e/year relative (net) – both increases and savings.

<sup>2</sup> Cooling production plants (electrical compressors, free cooling using cold from rivers, thermo-refrigerating pumps), biomass boilers and geothermal heat and cold plants.

<sup>3</sup> Geothermal deep drilling is subject to Annex II(2)(d)(i) of the EIA Directive.



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- The geothermal plants<sup>4</sup>.
- Two biomass plants in the project fall within Annex II of the EIA Directive due to their sizes<sup>5</sup>. In one, the project consists of the increase in wood combustion capacity, using wood category B, in an existing fluidized bed coal/wood combustion plant and was subject to a full environmental impact assessment, which obtained a positive decision from the competent authorities on the 30<sup>th</sup> of August 2018. The screening decision is not available yet for the second one.
- The district heating networks<sup>6</sup>.

The activities will be located in urban areas outside cultural heritage sites and protected nature sites including Natura 2000 sites and the works are subject to building permits to be provided by the local authorities.

The biomass combustion plants and associated wood storage, as well as the cooling production and equipment facilities in the project scope are classified as ICPE (*Installation Classée pour la Protection de l'Environnement*) under the French Law and as such are subject to regulatory operational controls by the DREAL (Direction Régionale de l'Environnement, de l'Aménagement et du Logement) and to access by the public to permitting and operational monitoring documentation. None of those components are subject to the IED Directive 2010/75/EU.

The biomass supplies to the project comply with the biomass sustainability criteria defined in the Directive 2018/2001. Although not all biomass supplies part of the project scope are PEFC/FSC certified, these will all be sourced from France and some from Germany, where forests are subject to mandatory sustainable forest management schemes. The supply plan may also be subject to review or control by ADEME<sup>7</sup> and the French competent authorities.

The environmental and social due diligence has followed the programme lending approach according to the EIB's procedures and standards. Under such approach, the due diligence focuses on the promoter's capacity and capability to implement the programme in line with EIB environmental and social standards and requirements. The Bank reviewed two Environmental Impact Assessments conducted for components part of the programme and found them to be satisfactory.

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 potential risk of legionella particularly in the district cooling systems under operation. The specific impacts related to geothermal drilling, such as aquifer contamination, air emissions or potential blow-outs are also expected to be limited with appropriate mitigation measures.

The promoter has the experience and capacity to implement the necessary mitigating measures at design, construction and operational stages. These typically include appropriate site organisation and construction management to minimize damages and disturbance, soil and flora restoration, traffic management measures and appropriate waste collection procedures. The promoter also has robust environmental management systems in place and is subject to reporting and monitoring controls from the national competent authorities for some of the programme components, such as ICPE facilities or geothermal plants.

For the geothermal components, the promoter will use electricity rather than diesel for drilling wherever necessary, minimizing environmental emissions and noise levels. Non-hazardous drilling mud made of clays and water or biodegradable polymers are expected to be used. Shallow aquifers will be isolated with cemented extended casings and subject to the regional water development and protection regulations. Corrosion, H<sub>2</sub>S emissions and anti-blowing prevention and mitigation measures will also be applied to the well designs and operations wherever necessary. The geothermal system will be designed, implemented, operated,

<sup>4</sup> Annex II(3)(a) of the EIA Directive

<sup>5</sup> Annex II(3)(a) of the EIA Directive

<sup>6</sup> Annex II (b) of the EIA Directive

<sup>7</sup> Agence De l'Environnement et de la Maîtrise de l'Énergie



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controlled, treated, maintained and regularly reported to the competent authorities, in line with the obligations pertaining to the research, drilling and exploitation permits.

The refrigerant fluids used in the district cooling systems comply with the national legislation requirements and the promoter closely monitors fluid losses, while committed to progressively switch to more environmental-friendly as regulations and technologies evolve.

The project will generate environmental benefits by reducing emissions of greenhouse gases through: (i) the progressive decarbonisation of its existing district heating networks; (ii) the replacement of individual natural gas heat sources with centralised renewable heat generation, including geothermal plants with lower surface footprints; and (iii) the implementation of energy efficient central cooling solutions vs. individual cooling alternatives. The project will also support the energy efficiency improvement of network infrastructures to be refurbished.

The project contributes to Bank's lending priority objectives on energy efficiency (53%) and renewable energy (47%) as well as on climate action (100% climate mitigation).

The project and the promoter have been assessed for Paris alignment and is considered to be aligned both against low carbon resilience goals against the policies set out in the Climate Bank Roadmap and in the EIB Energy Lending Policy (rehabilitation and development of energy efficient district heating and cooling networks and heating and cooling technologies using electricity and renewable sources).

### **EIB Carbon Footprint Exercise**

The estimated annual absolute emissions of the Project in a standard year of operation are 30 kT CO<sub>2</sub>eq<sup>8</sup> and the estimated emissions savings are 14 kT CO<sub>2</sub>eq/year<sup>9</sup>, through the substitution of natural gas mostly by geothermal and biomass heating, as well as through the extension of centralised efficient district cooling, which will reduce the intensity of emission of greenhouse gases and other air pollutants due to heating.

The absolute emissions include the emissions related to the interconnection with an existing network (for the supply of heat from a waste-to-energy plant), as well as the emissions related to electricity consumption to operate the geothermal systems and the district heating and cooling networks.

The baseline comprises of emissions related to: (i) new DH connections which could be supplied by individual air heat pumps (electricity consumption), (ii) existing DH connections continuing to be supplied with natural gas sources which will be displaced by the new renewable heat sources part of the project and (iii) the electricity consumption of individual cooling options for the new district cooling network connections.

The promoter is planning to use the refrigerant HFO at the new cooling plants part of the project, which is considered a more environmentally friendly fluid than the HFCs commonly used in district cooling applications, HFO. Conservatively, the individual cooling alternative also assumes the use of HFO. The resulting fugitive emissions were computed and are negligible for this project.

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, where applicable**

The promoter and its external partners follow the national regulations and industrial standards for the design, engineering and operations of its projects. In addition to procedures to meet

<sup>8</sup> Not accounting for the peak/back-up gas boilers which are not part of the project scope

<sup>9</sup> Taking into account the peak/back-up gas boilers which are not part of the project scope. When excluding these components, the estimated emissions savings amount to 24 kT CO<sub>2</sub>eq/year.



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regulatory requirements, the promoter have safety, health, emergency, environmental and risk management systems in place, which are applied to new projects and ongoing operations. The safety and reliability of the installations are also supported by inspection and maintenance programmes. The promoter is ISO 14001:2015, ISO 45001:2018 and ISO 50001:2018 certified for its district heating and cooling activities in the project scope.

Working hours on the drilling site are also subject to local regulations on environmental noise and public health and public access to the site will be restricted.

## **Public Consultation and Stakeholder Engagement**

As per the French environmental legislation, the environmental impact studies on the heat generation components concerned are being subject to public consultation as part of the EIA process.

During the implementation of the project, members of the public are informed as per national legislation requirements and via the promoter's platforms of communication. In urban areas, the promoter also establishes local interactions with the residents.

## **Other Environmental and Social Aspects**

The appraisal focused on the capacity of the promoter to manage environmental aspects of the programme. Previous monitoring experience from similar programmes financed by the EIB is deemed satisfactory.

The promoter is experienced in conducting works of this nature, and has dedicated teams responsible for the quality, safety, environmental and social aspects of projects. In addition to procedures to meet regulatory requirements, the promoter has a quality, safety as well as an environmental asset and risk management systems in place, which are applied to new projects and to the monitoring of ongoing operations.

Based on the aforementioned elements and the assessment undertaken, the promoter is deemed to have the experience and the capacity to manage the investment programme in line with EIB environmental and social standards and requirements and its environmental, social, health and safety procedures are deemed to be good.

## **Conclusions and Recommendations**

The environmental approach, organisation, processes and procedures taken by the promoter has been assessed by the Bank as satisfactory. 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, subject to the following conditions, to be included in the Finance Contract to be signed with the promoter:

The promoter undertakes not to allocate the Bank's funds to programme components that require an Environmental Impact Assessment (EIA) until the EIA Report and/or the appropriate assessment have been finalised, in form and substance satisfactorily to the Bank, and approved by the competent authority. When the EIA Report is made available to the public, an electronic copy shall be sent to the Bank.

The promoter undertakes to send to the EIB copies of all EIA screening decisions concerning the project components and/or decision/opinion with regards to their impact on Natura 2000 sites issued by the competent authority as soon as they are available.

The district heating network elements of the Project shall comply with the "efficient district heating and cooling" categorisation per the EU Energy Efficiency Directive 2012/27/EU.



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The project should not result in any increase in waste boilers capacity nor in any additional combustion of waste.

All the biomass sourced as a fuel for the project need to align with the EU biomass sustainability criteria principles as defined in the Directive EU 2018/2001 (Article 29) and with the EU Timber Regulation (EU/995/2010) and the EU Forest Law Enforcement Governance and Trade (FLEGT), as applicable.

Wood biomass supply chain and the underlying forest management practices are to be certified, or if not yet certified, they have to be aligned with and apply the same standards so as to be certifiable by internationally accredited certification schemes (e.g. FSC or PEFC).

Biomass coming from irrigated plantations or from areas with natural forest conversion and logging of primary moist and tropical forests is excluded.

If biomass feedstock from non-EU areas or from external suppliers not directly under the control of the Project Promoter is to be used, the Project shall prove its adherence to a recognised voluntary sustainability certification scheme for biomass and biofuels as established by the EC in the frame of Directive 2009/28/EC and any of its amending directives (RED+ and RED2+, as applicable).

The promoter undertakes, for the new district cooling components to be installed as part of the project, to use 100% HFO (hydrofluoro-olefins) fluids for the operations of these components.

The promoter undertakes to immediately inform the Bank should any materially adverse event occur during implementation or operation, which would prevent the Project to perform as planned, in particular with regards to environmental and social matters, biomass supply chain disruption, geothermal resource characterisation (including induced seismicity or other events related to the subsurface).