

## Public Environmental and Social Data Sheet

### Overview

Project Name:	IREN Climate Action & Circular Economy Loan
Project Number:	2019-0156
Country:	Italy
Project Description:	Financing of the Promoter's 2018-2022 climate action and circular investments in the solid waste and hydroelectric sectors.
EIA required:	Multi-investment operation where some components will require EIA

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 comprises investments in the waste and hydro sector.

The investments in the waste sector include the construction of (i) two anaerobic digestion plants for bio-waste, ii) one waste wood to pallets production plant; and iii) purchase of new electric waste collection vehicles). The project also include hydroelectric investments in about 16 plants in four rivers comprising (i) rehabilitation of existing hydro power plants; ii) increase of operational efficiency, safety and reliability of existing units; and iii) construction of three new mini-hydro power plants). The waste sector investments will be carried out in the main service area in the north-western and central parts of Italy in Piedmont, Reggio Emilia (Emilia Romagna), and La Spezia (Liguria), while the hydroelectric investments focus on 16 sites located in four different areas/valleys (three in Piedmont, one in Campania).

The three waste facilities fall under Annex 2 of the EIA directive (Directive 2014/52/EU amending the EIA Directive 2011/92/EU). The two bio-waste treatment plants have been screened in and EIA is under preparation. For the waste wood to pallets plant the promoter waits for the screening decision which is not expected to require a full EIA since there is a permit for a similar plant issued for the same site.

None of the project components will have an impact on sensitive or protected areas as defined in the Habitats directive (92/43/EEC) and Birds Directive (79/409/EEC).

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<sup>1</sup> Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB draft 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.

Luxembourg, 5.7.2019

The new waste treatment plants will contribute to meeting targets for diversion of waste from landfills and material recycling in the target regions. They will also contribute to the circular economy transition in line with EU and national objectives and to achieving climate change objectives by reducing direct GHG emissions from organic waste and by substituting energy generated from fossil sources.

The shift to electric vehicles will reduce CO<sub>2</sub> emissions and noise in the central city areas where they will be employed.

The hydroelectric components consist in the refurbishment of a number of hydro plants, as well as the construction of four new mini-hydro power plants (one is a complete reconstruction of an old plant), in Piedmont and Campania.

The investments concerning existing assets will generate minor environmental impacts that are basically restricted to the construction phase. None of these investments are expected to require an EIA. The investments in the new mini-hydro plants may require an EIA and are subject to the screening procedure compliant to applicable legislation. Two of the plants (Valle Dora Energia, located in Piedmont, and Giffoni / Vassi, in Campania) have already been screened out by the competent authorities (in 2013 by the Ministry of Environment for the former, in 2017 by the Campania Region for the latter). The decision concerning two other plants (Finestra Zero, San Mauro, both in Piedmont) is still pending. However, they are also expected to be screened out because of the characteristics of the future plant, the site in which they will be built, and the expected environmental impact.

The Finestra Zero future mini-hydro power plant is located a few hundred meters from the border of the Gran Paradiso National Park, in Piedmont, at the exit of an existing derivation tunnel of the nearby Ceresole dam. The input water is provided directly from the dam. In between the future plant and the border of the national park there are already a few houses and the main local road, thus creating additional separation from the park. The visit of the site also highlighted that the future plant is likely to have a limited or no visual impact, as it is even difficult to see from the nearby accessible areas.

The San Mauro future mini-hydro power plant will be located along the Po river, in correspondence to the already existing small dam which feeds the intake channel for the Stura power plant. The future plant will exploit the existing ~4.5m height difference between the upper and lower river level. The Promoter confirmed that among others the plant will include a fish passage.

In case some of the project components do require an EIA, the Promoter shall submit the EIA and its NTS (non-technical summary) to the Bank before the Bank funds are allocated. In case any of the schemes may potentially have impacts on nature conservation sites, the Promoter shall receive the relevant consent from the competent authority regarding the Habitats and Birds Directives and inform the Bank of such consent having been obtained.

### **EIB Carbon Footprint Exercise**

The greenhouse gas emissions savings achieved by implementing the project have been estimated to be 45,500 tonnes of CO<sub>2</sub> equivalents per year considering the impact of bio-waste treatment plants and the new hydroelectric components.

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'.

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The baseline emissions for the waste components have been calculated using a simple MBT with biostabilisation. The baseline emissions for the hydro power plants have been calculated considering 75% Operating Margin and 25% Build Margin, in that Italy is a power market in equilibrium with demand growing at less than 5% per year, and gas supply is available.

Therefore, a CCGT is taken as reference for the Build Margin, while Italy's value for the Operating Margin is used as reported in the Carbon Footprint Methodology v11.

### **Social Assessment, where applicable**

The social impacts of the projects include possible impact on traffic, noise, as well as safety hazards during the construction phase, which will be addressed as part of the planning for each sub-operation.

While improper storage and treatment of bio-waste may give rise to odours, the two anaerobic digestion plants will be designed and operated to minimise the risk for odour generation. They have also been located at least 500m from the nearest resident. Considering its past experience of organic waste treatment, the Promoter is judged to be well positioned to properly operate the plants and mitigate the odour risks.

The new waste treatment plants will create employment both in the construction and operation stages, and the outputs produced will support economic activities in transport and agriculture. The hydro-electric plants will create employment both in the construction and operation stages. The operation concerning the hydropower plants (e.g. maintenance, monitoring, control centre) are a relevant source of employment for the areas where the plants are located (particularly for relatively isolated mountain valleys). The dams can also provide support to downstream economic and social activities that need water, specifically in case of droughts.

### **Public Consultation and Stakeholder Engagement**

The Promoter will be requested to ensure compliance with national and European environmental legislation and facilitate public access to environmentally relevant information in accordance with the Aarhus Convention in line with Italian regulations.

## **Conclusions and Recommendations**

The Bank requires that the Promoter shall not commit any EIB funds against schemes that require an EIA according to EU and national law without, prior to commitment, submitting the full EIA report to the Bank after the final approval by competent Authority for publication on the Bank's website. In lieu of the document itself, the Promoter can also provide a link to its own or a relevant authority's website where such document can be found. Furthermore, the Promoter shall not commit any EIB funds against any scheme that impacts nature conservation sites, without receiving the consent from the competent authority regarding the Habitats and Birds Directives and informing the Bank of such consent having been obtained.

In summary, the Project is considered to have positive environmental impact by reduction of emissions, recovering renewable energy from waste and production of bio-methane for injection into the gas grid. The project will thus reduce emissions of greenhouse gases from fossil replaced fossil fuels. The project will also have significant positive social aspect considering its employment and economic impact. The flue gas treatment system upgrade will reduce emissions from the incineration plant to the benefit from the population in the area.

Based on the above conclusions and subject to the conditions mentioned above, the Project is considered acceptable for financing by the Bank in environmental and social terms.