

## Environmental and Social Data Sheet

### Overview

Project Name: *ENEL HYDROPOWER GENERATION*  
 Project Number: *2014-0016*  
 Country: *Italy*  
 Project Description: *Investment programme for the revamping and repowering of hydropower plants in Italy.*

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”)

### Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The project concerns the modernization, revamping and construction of hydropower plants in Italy from 2014 to 2019. The programme includes 60 different hydropower schemes that can be grouped into four main types of interventions: (i) 26 power facilities (13 MW) aimed to exploit the minimum environmental water flow released downstream by existing dams/weirs; (ii) 17 power facilities (19 MW) aimed to produce electricity through the utilization of existing water transfers (e.g. channels etc) between two or more different existing water basins (iii) the revamping of 11 existing hydropower plants (1070 MW) aimed to improve efficiency, security and operation in general and (iv) 4 new hydropower plants (23 MW). The project will also include a small pilot scheme of 300 kW energy storage system in the Ventotene island (46 km off the coast at the border between Lazio and Campania).

The sub-schemes of this investment programme will assist in mitigating climate change. The individual schemes to be financed are of small to medium-size and are expected to have limited environmental impacts with no significant negative residual effects. The main impacts (if any) from such investments usually come from construction works, are temporary and considered to have minor significance. Due to their technical characteristics, the sub-schemes are likely to fall under Annex II of the EIA Directive, leaving it to the national competent authority to determine according to Annex III of the said Directive whether an environmental impact assessment is required.

The Bank has assessed the promoter's capacity and procedures with regard to compliance with national and European environmental and biodiversity regulations as well as its capacity to support the Bank's Public Disclosure Policy.

At the time of appraisal a total 27 schemes had environmental approval: 5 projects had completed EIAs, 3 an acoustic study, 8 an appropriate assessment and 11 had been screened. Out of the 59 schemes 17 fall in Natura 2000 sites. The non-technical summaries of any EIAs will be published on the Bank's website as and when the allocations for individual projects are approved by the Bank.

A pilot investigation (6011/14/ENVI) has been launched by the Commission with regard to hydropower plants in Italy (which covers the Water Framework, EIA and Habitat Directives).

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<sup>1</sup> Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO<sub>2</sub>e/year absolute (gross) or 20,000 tons CO<sub>2</sub>e/year relative (net) – both increases and savings.

To mitigate the risk of environmental impacts associated with new hydropower plants and of those using the minimum environmental flow, the Bank proposes a number of undertakings.

- The promoter shall be required not to allocate any funds to projects subject to EIA until such assessment (including cumulative impact assessment) has been determined acceptable by the Bank. The promoter will also submit a copy of the Non-Technical Summary for publication in the Bank's public register.
- The promoter shall be required not to allocate any funds to projects subject to Appropriate Assessment under the Habitats Directive until such assessment has been determined acceptable by the Bank and the relevant confirmation (Form A/B), completed and signed by the competent authority responsible for monitoring Natura 2000 sites, is submitted to the Bank.
- For new hydropower plants and schemes using the minimum environmental flow:
  - The promoter shall be required not to allocate any funds to projects falling under Annex II of the EU 2011/92/EC EIA Directive until the screening, performed according to the criteria defined in Annex III of the same Directive, has been determined acceptable by the Bank.
  - The promoter shall be required to provide evidence that the investments will either not lead to the modification of the physical characteristics of the affected water bodies or, if so, not cause their deterioration or, if so, fully comply with all requirements under Article 4(7) of the Water Framework Directive (2000/60/EC). In case any assessment determines that the project does have impacts, an assessment complying with Article 4(7) of the directive will have to be provided to the Bank.

As part of its standard due diligence work, the promoter is screening environmental and social aspects of its projects, including compliance with relevant national and regional environmental and social legislation.

Under these terms, it is considered that the environmental procedures carried out for individual schemes will appropriately address environmental issues and ensure that the schemes to be part-financed meet the Bank's requirements.

**Carbon Footprint exercise:**

The project is expected to displace around 130 tonnes of CO<sub>2</sub> equivalent per year. The baseline emissions are calculated assuming that the electricity system in Italy can be considered in equilibrium (not high growth). Therefore it is assumed that the displaced emission will be 75% Operating margin (fossil fuel grid emission factor: 580t CO<sub>2</sub>/GWh) and 25% Build margin (CCGT: 354tCO<sub>2</sub>/GWh). The resulting emission factor to be considered: 523.5 t CO<sub>2</sub>/GWh. A total 250 GWh of electricity are expected to be produced from the hydropower plants, which are non-CO<sub>2</sub> emission sources.