



European Investment Bank (EIB)

Luxembourg, 22.07.2021

Environmental and Social Completion Sheet (ESCS)

Overview

Project Name:	EGP-POWERCROP BIOMASS PROGRAMME
Project Number:	2013-0554
Country:	Italy
Project Description:	Construction and operation of 2 biomass plants in Russi (Emilia Romagna region) and Avezzano (Abruzzo region).

Summary of Environmental and Social Assessment at Completion

EIB notes the following key Environmental and Social outcomes at Project Completion.

The operation was an investment loan for the construction and operation of two similar 30MWe biomass power plants located in two existing industrial sites (former sugar refineries) in Russi (Emilia Romagna Region) and Avezzano (Abruzzo Region). The Russi power plant included also a 1MWe biogas plant based on the anaerobic digestion of corn silage and pig manure. Both plants included also a rooftop solar PV installation.

Over the implementation period, the initial project scope was significantly reduced as the promoter decided to abandon the Avezzano project, which did not achieve relevant permitting authorisations.

The promoter of the project, a joint venture between the renewable energy utility Enel Green Power (EGP) and the industrial group SECI Energia (SECI), relies on strong expertise in renewable energy generation from biomass and in agribusiness.

The project fell under Annex II of the EIA Directive 2011/92/EC. The competent authority screened in the power plant and required that a full EIA was carried out. The EIA was extensively discussed with the public and all relevant stakeholders. A number of mitigation measures were agreed during the EIA process to reduce environmental impacts. The EIA was approved by the relevant competent authorities and consequently the project received the construction permit.

The main impacts identified, related to atmospheric emissions (including nitrogen and sulphur oxides, ammonia, hydrogen chloride and particulate matter), liquid emissions, production of solid waste (in particular combustion ashes) and noise have been adequately mitigated. Since the scheme had a thermal input capacity above 50 MWth, the EU Directive on industrial emissions (2010/75/EU) applies and therefore Best Available Techniques (BAT) as defined in the corresponding BREF document for large combustion plants have been employed. Emissions of the above mentioned air pollutants have been therefore reduced below the limits required by national and EU Law.

The Russi power plant is located next to a Natura 2000 SPA/SCI ("Bacini di Russi e Fiume Lamone" – IT4070022) and, for the project, an Appropriate Assessment under Article 6(3) of the Habitats Directive was carried out and concluded that there are no significant effects.



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The plant requires ~265000 t/year of wood chips (non-dried with moisture around 35%). The biogas plant needs a further 32000 t/year of agricultural biomass, such as manure and maize silage. The forest biomass is typically sourced locally within a 70-150 km radius of the plant. The local wood resource base is currently underutilised with no significant existing demand. The forest resources are estimated to be large enough for sustainably supplying chips for the plant. The country has domestic and regional sustainability regulations and standards for forestry management. Contractual clauses included in the Finance Contract to ensure sustainability and traceability of biomass have been abided by. In 2019, following the request for help from the Veneto region, the Emilia Romagna region (where the project is located) has granted the promoter a temporary derogation in order to be able to use virgin wood chips from the areas affected by the extreme climate event “Vaia storm” in its own electricity production plant from woody biomass. The event took place during the night between 28 and 29 October 2018 and affected part of the Dolomites in the Veneto and the Trentino Alto - Adige territory. The exemption issued is valid for three years and for a maximum quantity of 40% of the annual requirement and for a total quantity in the period of 350000 tons.

During its appraisal, the Bank estimated that the project displaced around 187 tonnes of CO₂ equivalent per year. The baseline emissions were calculated assuming that the electricity system in Italy was considered in equilibrium (not high growth) and that RE generation from biomass is firm. Therefore, it was assumed that the displaced emission would be 50% based on the emission factor of the operating fossil fuel plants (580 tCO₂/GWh) and 50% based on that of the new builds (CCGT: 354 tCO₂/GWh). The resulting emission factor that was therefore considered is 467 tCO₂/GWh. At project completion, taking into account the significantly reduced project scope, the avoided GHG emissions amount to 86 tCO₂/year, hence a nearly 44% lower positive impact to climate than expected at appraisal stage.

Summary opinion of Environmental and Social aspects at completion:

EIB is of the opinion, based on reports from the promoter, that the Project has been implemented in line with EIB Environmental and Social Standards, applicable at the time of appraisal.