

Environmental and Social Data Sheet

Overview

Project Name:	GLUCOSE AND ETHANOL PLANT
Project Number:	2014-0571
Country:	Germany
Project Description:	The project consists of 2 subprojects: (i) the construction and operation of a new Glucose and Gluten production unit and (ii) an adaptation of parts of the existing bio-ethanol plant to widen the range of food and industrial products in Zeitz, Eastern Germany. Both sub-projects will share central facilities with the existing units at the industrial complex and the extension to the existing WWTP of the bioethanol plant is required to accommodate increased waste water flows.
EIA required:	yes, for the modification of the bio-ethanol plant and the new WWTP.
Project included in Carbon Footprint Exercise ¹ :	yes

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

Based on the technical characteristics, the sub-projects fall under Annex II of EIA Directive 2011/92/EU. Following the German permitting procedure the promoter has submitted project documentation, including a preliminary Environmental Impact Assessment, to the competent authorities of the Region of Sachsen-Anhalt. After completion of the corresponding public consultation procedure, authorities have screened the Glucose and Gluten production plant out; i.e. no full environmental impact assessment is required for the permitting. The sub-project for modification of the existing Bio-ethanol plant to accommodate the Extra Neutral Alcohol (ENA) plant and the increased WWTP capacities requires a full Environmental Impact Assessment according to the Environmental German legislation that transposes the EIA and the Industrial Emissions (2010/75/EC) Directives. Potential integrated or cumulative effects have been taken into consideration by the authorities in their assessment. Screening decisions have been published. An Environmental Impact Study (EIS) was submitted in early 2014 for the extension project of the Bio-Ethanol plant and both projects are currently awaiting the issuance of final integrated permits by end of 2014. Following the provisions of the German legislation the authorities granted an early construction permit to the glucose and gluten production plant project in July 2014 and to the modification of the Ethanol plant in June 2014. Clauses to the finance contract have been proposed, to ensure that the project components receive the relevant environmental permits within a reasonable timeframe.

The plant will be built within the existing industrial facilities and will thus have only negligible additional visual impact on the landscape. Because of the project's location any significant negative impact on any site of nature conservation is considered unlikely to occur. There are no Natura 2000 sites in the surroundings of the plant and the closest nature conservation site is 6 km away. Both plants will be equipped with best available techniques for air and water pollution abatement to meet the corresponding emission limits. Wheat will be procured locally from the wider region around Zeitz.

¹ 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 CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

With the appropriate environmental management systems in place, the project is considered to be acceptable for Bank financing from an environmental perspective.

Environmental and Social Assessment

Environmental Assessment

For the sub-project of the Glucose and Gluten production plant the following interventions are subject to the permit application submitted to the German competent authority:

Despite having been screened out, an integral permit for implementation and operation for the plant is still required. The German legislation foresees a one-step authorisation for both, the construction and the operation of the plant under the provisions of the transpositions of both the EIA Directive 2011/92 EC and the Industrial Emissions Directive 2010/75/EC. Complementary to these authorisations the Promoter had also to seek environmental authorisation for the diversion of the Hassel creek and the increase of the water intake from the river Weiße Elster that will take place through the existing capture point of the sugar factory.

In the case of the extension of the Bioethanol plant, the permit application pursues the authorisation of the construction of the ENA facilities, including the associated tank farm, the necessary plant integration measures and the extension of the existing WWTP to process effluents also from the Glucose and Gluten production plant. The Promoter also seeks authorisation for the increased water flows returning to river that will result from the increased capacity of the WWTP. After the screening of the preliminary environmental data submitted by the Promoter in the frame of the permitting procedure for the plant, Environmental Authorities required an EIA. The scoping decision put the focus on the water pathways.

In order to discard any unacceptable cumulative environmental effects the Promoter has commissioned complementary studies to evaluate acceptability of additional emissions due to the new glucose and gluten facility in terms of maximum allowable concentrations cumulative effects of emissions to air, water and noise have been carried out for the whole industrial site.

EIB Carbon Footprint Exercise

- The estimated annual emissions attributable to the project in a standard year of operation are 166 kt of CO₂. These are predominantly due to the heat and power demand from the Glucose and Gluten plant and the ENA production processes which will draw their energy needs from the lignite fired CHP units and an oil fired auxiliary boiler that are already existing at the industrial sites from the promoter in Zeitz and currently underutilised. These energy units are all of recent construction, and comply with the emission limits established in the IED Directive. The auxiliary fuel oil fired boiler unit, though, is planned to be modified into a gas fired unit at the time that the glucose and gluten production project will enter into commercial operation. This modification will improve the emission profile of the power and heat unit of the sugar mill but is not part of the scope of the EIB operation.

Once operational around 63% of the heat demand will be generated from lignite while 37% from natural gas. Relative to the baseline scenario without the project emission savings of ~25 kt CO₂ are expected. The emission savings are achieved through the better utilisation rates of the existing combined heat and power and gas boiler facilities which offset part of emissions from Glucose and Gluten production that would have to be produced elsewhere to meet the demand the project plant is going to service. As the ENA market is mature and stable, for the purpose of the calculation of the base scenario it is considered that the ENA plant will fully substitute existing, gas fired production units.

- 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.

Public Consultation and Stakeholder Engagement

Public consultation was carried out during the screening phase for the Glucose and Gluten production plant project:

- The project and the opening to the public of the documentation were announced to the public in the official journal of the region of Sachsen Anhalt as well as in local and regional newspapers.
- The screening decision was announced through the same channels in September 2013.
- Permit application documentation has been disclosed to the public at the offices of affected regional and local authorities during the months from 22.10.2013 until 21.11.2013.

The project did not receive any objections during this process. As a result the authorities decided not to organise further formal public hearing sessions.

The project design was subject to a substantial change after first submission of the documentation. The changes consisted in the inclusion into the projects of the newly acquired, grain silo complex placed on a neighbouring plot to the original plant perimeter and the exclusion of a 50 MW power and heat generation unit from the original plan. Authorities decided that a new public consultation cycle was not required because the changes did not have additional environmental impacts of the plant but in the contrary, due to the exclusion of the energy unit improved the profile of the plant.

The sub-project for modification of bio-ethanol plant consisting in the construction of a new ENA plant, including additional storage facilities for the neutral alcohol and the expansion of its existing WWTP has undergone public consultation in the frame of its environmental assessment process:

- The project and the corresponding exposition of the permit documentation were announced to the public in the official journal of the region of Sachsen Anhalt as well as in local and regional newspapers in March 2014.
- Permit application documentation has been disclosed to the public at the offices of the regional and local authorities concerned with the project during one month from 26.03.2014 until 25.04.2014.

The project did not receive any objections during this process. As a result the authorities decided not to organise further formal public hearing sessions.