Environmental and Social Data Sheet

Overview

Project Name:	*COMBINED HEAT AND POWER PLANT KIEL*
Project Number:	*2013-0557*
Country:	*Germany*
Project Description:	*Construction and operation of a cogeneration (heat and power) plant with around 200 MW capacity (power) and 200 MW capacity (heat) in the city of Kiel, capital of the German Federal State of Schleswig Holstein. The plant shall replace an old coal fired facility.*
EIA required:	yes

Project included in Carbon Footprint Exercise[1]: yes
(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Environmental and Social Assessment

Environmental Assessment

The project will be constructed at brownfield site with immediate access to the local district heating system. The project site has had a high risk of unexploded ordnance device (UXO) and prior soil contamination given its historic use. However, it has been professionally cleaned by Explosives Ordnance Disposal (EOD) experts und surveyed by EOD-Department of the police during the years 2014 and 2015. The site is now free of UXO. The corresponding certificate has been accepted by the authority. The soil contamination was removed in the manner that the power plant can be built on the site. The relevant authority surveyed the process. The ground water monitoring is about to be phased out in the next years.

The closest residential buildings are ca. 350 m away.

The project shall substitute an existing coal fired CHP plant (GKK – Gemeinschaftskraftwerk Kiel) which is jointly owned by the promoter and a third party. It is located adjacent to this obsolete coal facility and thereby contributing to lower emission levels of gaseous pollutants. The coal CHP plant is planned to be shut-down until the end of 2018 in order to ensure district heat generation until the project takes over.

The project falls under Annex I of the EIA Directive 2011/92/EU. It has therefore undergone a mandatory environmental impact assessment.

The Environmental Impact Studies (EIS) submitted to the national competent authorities in April 2014 found the project's impact on environment to be non-significant. The project's main environmental impacts after mitigation are noise, dust and increased traffic during the construction of the plant, and noise and airborne pollutants during its operation. In addition, the project has some visual impact. In order to minimise risks, the project complies with the atmospheric emission limits as defined by the Directive 2010/75/EU on Industrial Emissions and utilises Best-Available Technique. The flue gas cleaning of the gas engines, for instance, comprises an oxidation catalyst for the reduction of CO emissions and an SCR (selective catalytic reaction) catalyst with urea injection for the reduction of NOx emissions. Further, industry practice measures are taken to reduce fire risk, protect soil and ground water from contamination, and to minimise noise emission and vibration.

The project is located in the vicinity of protected sites. The nearest Natura 2000 sites are SCI "Untere Schwentine" (DE 1727-322) and SCI "Gorkwiese Kitzeberg" (DE 1627-322) with

[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.

around 1.6 km distance to the project each. An Appropriate Assessment has been pursued as part of the EIA and concludes that the project has no significant negative impact on any Natura 2000 site.

The competent authority has issued a first partial consent to the project in March 2015. This first partial consent confirms the acceptability of the project as a whole, defines preliminary conditions, and allows for first works to be pursued. The acceptability of the project as a whole is declared because the project's environmental aspects are deemed consistent to the applicable national and international environmental law. Additional partial consents are required to commence construction of the remainder of the project and to operate it. These will contain final consent conditions.

Minor components of the overall project underwent separate environmental authorisation: An electric boiler, a gas grid connection of ca. 6 km length, and an electricity cable connection of ca. 8 km length. Given the low environmental risks related, they underwent an authorisation process without EIA. Consent was granted in the period from 2013 until 2014.

EIB Carbon Footprint Exercise

Estimated absolute CO_2 emissions from the plant in a standard year of operation will amount to 344 kT of CO_2e/year (the current obsolete hard coal-fired unit would emit 800-900 kT of CO_2 per year generating the same amount of heat and less electricity).

The baseline emissions for the plant are calculated assuming that electricity is generated separately from heat. Electricity-related baseline emissions result from the fact that the plant will displace existing (mostly coal fired) and new (CCGT) power generators in Germany. Heat-related baseline emissions of CO_2 are emissions from a gas-fired boiler, the most likely alternative heat generator. Taking these assumptions into account, baseline emissions are 609 kT CO_2e/yr resulting in estimated emission savings of 264 kT of CO_2e/yr.

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

The project has undergone a public consultation process during which no objection was put forward.

Other Environmental and Social Aspects

The project promoter is a municipal utility and has a high capacity to manage environmental risks.

The project generates electricity from high-efficient cogeneration as defined in Directive 2012/27/EU on Energy Efficiency.

The project's unique design allows for a very flexible provision of heat and electricity, thus facilitating the integration of fluctuating renewable energy into the regional electricity system.

Conclusions and Recommendations

The project is deemed acceptable for Bank financing, subject to the below listed conditions:

Disbursements related to those parts of the project that depend on partial consent no. 2, shall not take place prior to partial consent no. 2 being granted.
The Promoter undertakes to provide partial environmental consents no. 3 and no. 4, as soon as they become available.

The promoter undertakes to take the GKK – Gemeinschaftskraftwerk Kiel out of operation no later than commercial operation of the project has commenced.

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