

Environmental and Social Data Sheet

Overview

Project Name:	France Biomasse - Dalkia
Project Number:	2011-0203
Country:	France
Project Description:	Financing of four biomass fired combined heat and power plants in France (Lens, Rennes, Brest, Angers), developed by Dalkia and selected as winners in a tender programme of the national electricity and gas regulator (CRE).

EIA required: YES

Project included in Carbon Footprint Exercise¹: YES

(Details are provided in section: "Carbon Footprint")

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

The operation contributes to an increased utilisation of renewable energy sources. Heat and power generation from sustainably supplied forest based biomass consumes less fossil energy resources and emits less greenhouse gases than conventional heat and power generation from fossil fuels. Further, the use of regional forest residues helps the sustainable management of EU forests.

Two out of the four schemes are located in existing industrial sites. Two sites are located in urban areas. No scheme is located inside a Natura 2000 site.

All schemes fall under Annex II of the Environmental Impact Assessment (EIA) Directive 2011/92/EU. Therefore they can be subject to an EIA on a case by case basis decision or defined criteria set by the competent authority. Based on the criteria defined in France ("Code de l'Environnement") all schemes under this investment programme require an EIA in order to get an environmental authorization for operation.

The Bank has received and reviewed to date the Environmental Impact Studies (EIS) and the environmental permits for operation for two schemes (Angers, Lens). These EISs conclude that the CHP plants have no significant negative environmental and social impacts. The most relevant residual impacts originate from initial construction works and, during operation, from pollutant emissions of the combustion process, increased traffic due to biomass transports, and the visual appearance of the CHP plants.

It is proposed that presentation of the Environmental Impact Studies for the schemes in Rennes and Brest is made conditional to the disbursement related to these schemes. The promoter should also commit to provide the Bank with the environmental permits for operation once available for these two schemes.

The two schemes that have finalised their permitting process at the time of appraisal comply with emission limit values which are equal to or below (dust, NOx) those defined by French law. All CHP plants apply best-available-technique boiler systems and flue gas cleaning.

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.

Additional constructive measures are taken to effectively limit dust emissions during biomass handling and storage onsite.

All schemes consume forest based biomass, primarily from the regions where they are located. Detailed supply plans have been defined for each project and approved by regional prefectures. One scheme also uses imported biomass in its forest based biomass mix which is expected to be primarily sourced from EU countries. The promoter intends to continuously reduce the use of imported biomass if the corresponding amounts of forest based biomass can be mobilised regionally. There are no sustainability criteria existing yet for power and/or heat generation from biomass on EU level. However, the EU Commission is working on this matter and sustainability criteria may be defined in the lifetime of the four biomass CHP plants. **Corresponding undertakings have been proposed.**

When operated in cogeneration mode, all schemes generate electricity at “high efficiency” as defined by the EU legislation on combined heat and power (Directive 2004/8/EC and subsequent Decisions 2007/74/EC and 2008/952/EC). On a full year basis, i.e. seasonal condensing mode operation included, all schemes still ensure net primary energy savings when compared to a separate generation of heat and electricity.

Based on the environmental authorisation processes undertaken, the environmental management capacity of the promoter, the techniques chosen, and the location of the sites, the project is considered acceptable for Bank financing from a social and environmental point of view.

Environmental and Social Assessment

Environmental Assessment

All schemes follow an environmental authorisation process which is defined by French law (“Code de l’Environnement”) for this particular category of projects (combustion plant above 20 MW_{th}). Under French law a construction permit could be granted at a relatively early stage but it only allows for construction to start after:

- Full impact study and risk studies have been carried out and submitted to the authorities
- The competent authority (“Direction régional de l’environnement, de l’aménagement et du logement”) has analysed the impact and risk studies and the environmental aspects of the project and issued its favourable advice which is added to the studies for the public consultation.
- A public consultation in line with the “Code de l’Environnement” has been concluded.

An operational permit is granted in a subsequent step by the departmental prefecture, based upon the outcome of public consultation as concluded by a “Commissaire Enquêteur” and after consultation of relevant authorities including the “Commission Départementale de l’Environnement et des Risques Sanitaires et Technologiques” (CODERST).

Both environmental studies received are comprehensive studies, identifying and quantifying potential impacts of the CHP plant during construction and operation, including on protected species and Natura 2000 sites. Each EIS also proposes preventative and mitigation measures for the operating period in order to avoid and/or minimize potential impacts.

All schemes combust non-contaminated forest based biomass with only 0.2% of fuel input anticipated as fossil fuel for auxiliary purpose. The promoter has provided detailed studies about the origin of all biomass, its regional availability, expected transport distances, and its compatibility with the wood processing industry. These studies are based on official forest statistical data and have been reviewed by the regional prefecture. All schemes are obliged to

stick to their initially proposed biomass supply plans with only limited deviations allowed according to CRE rules. The promoter has to report biomass consumption on an annual base to the regional prefecture.

Ashes from the boiler, from the multi-cyclone and from filter bags are collected separately. They contain different concentrations in substances. Coarse ashes especially from the boiler contain considerable amounts of sodium and potassium and are potentially usable as fertiliser in agriculture and forestry. Fine ashes in particular are typically richer in heavy metals and need to be land-filled. The promoter cooperates with external specialists in ensuring an optimised use of ashes.

One scheme comprises the installation of a new private district heat system which effectively extends an existing public system into a new district. The permit to implement and operate this system has been granted by the local authority under conditions. The system is located inside an existing urban environment and no significant negative environmental and social impacts are expected from it.

All CHP plants have thermal input capacities of below 50 MWth which is the threshold to fall under the Industrial Emissions Directive (2010/75/EC).

EIB Carbon Footprint Exercise

The direct emissions of the four schemes under this investment programme are estimated at around 23 kt CO₂e/yr. This emission is caused by the combustion of fossil fuel for ramping up processes in the biomass CHP plants and by importing biomass mainly from other EU countries.

In accordance with the Bank's Carbon Footprint methodology it is calculated that the total relative effect of the four biomass CHP plants is a net reduction in CO₂ equivalent emissions by 222 kt CO₂e/yr. This calculation assumes that 50% of generated electricity substitute power generation in existing fossil fuel based power plants whilst 50% substitute power generation in new gas-fired combined cycle power plants. It is further assumed that cogenerated district heat substitutes heat generation in individual gas and fuel oil fired boilers at consumers' sites. Steam delivered to an industry site is assumed to substitute a gas-fired industrial steam boiler.

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.

Social Assessment, where applicable

Occupational and Community Health and Safety issues are deemed appropriately addressed in the authorisation process. The promoter has a health and safety policy in place.

All schemes make a substantial contribution to securing jobs in the regional forestry sectors.

The operation serves as an example on how to modernise existing district heat infrastructure and to secure affordable heat supply to consumers on the basis of regional energy resources.

Public Consultation and Stakeholder Engagement, where required

Consultation of the public and relevant authorities is an integral part of the authorisation process. Amongst others, full project documentation, including the NTS, is published locally for a period of 4 weeks. Responses from public and consulted authorities are accounted for in the authorisation process.

Explicit support of the biomass supply concepts through the regional prefectures was a necessary pre-condition for participation in the CRE tender programme.

Other Environmental and Social Aspects

Comprehensive monitoring and reporting requirements are included in the environmental authorisations.

The promoter is obliged to report the CHP plants' efficiency, availability, and biomass consumption to the regional prefecture on an annual basis. The promoter has only limited rights to deviate from performance standards that were proposed initially in its bids under the CRE tender programme.

The promoter has substantial experience in the implementation and operation of energy infrastructure. It is expected that the promoter has a high environmental and social management capacity.

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