

Public

Environmental and Social Data Sheet

Overview

Project Name:	OLSZTYN WASTE-TO-ENERGY PLANT
Project Number:	2016-0662
Country:	Poland
Project Description:	Construction of a waste-to-energy plant that will produce electricity and heat for the municipality of Olsztyn. The plant is included in the Waste Management Programme for Warminsko-Mazurskie Voivodship.
EIA required:	yes
Project included in Carbon Footprint Exercise ¹ :	no

Environmental and Social Assessment

Environmental Assessment

The project concerns the design, construction, operation and maintenance of a medium-scale refuse-derived fuel (RDF) incineration plant in the city of Olsztyn, implemented under a public-private partnership (PPP). The co-generation plant will replace an obsolete coal-fired heat plant, due to close in 2020. The plant will treat approx. 100,000 t/year of RDF, co-generating electricity (turbine capacity, gross ~11 MW) and heat (32 MW). The RDF will be supplied and the heat will be off-taken by the municipal district heating company (MPEC). Construction of a peak-only reserve boilers of 70 MW capacity fuelled with natural gas or oil is also planned.

The plant will be compliant with the Waste Framework Directive (2008/98/EC) and with the relevant requirements of the EU Industrial Emissions Directive 2010/75/EC incorporating best available technique for waste incineration and air emission abatement.

The project was subject to a mandatory Environmental Impact Assessment (EIA), which was carried out in 2015. Public consultation took place in November-December 2015. The environmental decision was obtained from the competent authority in December 2015.

The main expected environmental impacts of the project as identified in the EIA are noise, dust and increased traffic during the construction of the plant, and process waste (ash, slag and waste water), noise and airborne pollutants during its operation. The assessment concludes credibly that these impacts will be unlikely to cause any significant negative residual effects to the environment.

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.

Luxembourg, 16.05.2018

Emissions impact and mitigations

Emission limits of the plant will be in line with the regulatory standards for incineration of the combustible fraction of waste. The combustion of RDF will result in preventing uncontrolled emissions of greenhouse gases - mainly methane, released during waste storage and disposal.

Mitigating measures will include:

- The use of semi-dry flue gas desulphurisation system with the use of lime or hydrated lime for reduction of the emissions of sulphur dioxide and other acid components (HF, HCl) with an expected efficiency of 90%;
- Application of a SCR or SNCR de-NO_x system with expected efficiency of about 50%;
- Application of high performance dust removing bag filter that will reduce emissions with an expected efficiency of 99.98%;
- Ensuring appropriately high temperature in the boiler furnace chamber (minimum 850 °C) and residence time (minimum 2s) will result in decomposition of dioxins, furans and their precursors;
- Application of active carbon injection to reduce emissions of dioxins, furans and mercury to the atmosphere, with an expected efficiency of about 97%;
- To avoid any uncontrolled release of odours and pollution, negative pressure will be applied in the hall and in the bunker. The air collected from the bunker and from the hall will be used in the combustion process, which ensures that odours and pollution will not escape from the installation;
- Transports will be carried out in a manner to minimise the risks for dust emissions to the atmosphere;
- Application of airtight sorbent unloading system, equipped with a leak proof installation for pneumatic transport of lime or hydrated lime, and flexible pipes for connecting the compressed air pipeline;
- Application of an airtight system for sorbent and ash storage (tank);
- Equipping the dust and sorbent retention tank with a dust removal device, making it possible to maintain dust emission at the level of 20 mg/m³.

Impact on NATURA 2000

The plant is located outside the boundaries of areas listed as NATURA 2000. The area situated closest to the plant is the Napiwodzko-Ramucka Forest, NATURA 2000 PLB280007 area – a bird sanctuary of European significance, located 6 km from the plant. According to the environmental documentation, the planned project will have no negative effect on protected areas, and particularly on NATURA 2000.

Fly ash and slag

Fly ash and flue gas treatment residues are considered as hazardous waste and will be managed in compliance with the applicable regulations. Such waste will be stored in a retention tank, and then solidified/stabilized and removed for further utilization. Slag will be processed on the premises of the plant and then transferred for recycling or disposal.

Luxembourg, 16.05.2018

Waste water

During the operation of the installation for thermal processing of the combustible fraction, the industrial waste water and household sewage will be produced. It is expected that industrial waste water (after pre-treatment) and household sewage will be discharged to the sewage system of the Water and Sewage Company (PWIK). Parameters of sewage discharged to the sewage system will satisfy requirements specified by law.

Impact on the road traffic

Intensified road traffic in the area of the investment is expected both at the construction and operation phase. An advantage of the location of the investment is the proximity of the Municipal Waste Management Company (ZGOK), providing the largest part (40-50%) of the RDF. In order to limit the impact, it was assumed that combustible fraction of waste will not be transported at night.

Public Consultation and Stakeholder Engagement

Public consultation was carried out under the EIA process from 20 November to 10 December 2015. None of the parties participating in the EIA process filed their objections or opinions on the project in question.

Furthermore, in 2015 MPEC carried out a series of meetings with stakeholders and launched information campaigns which aim was to share the information on the project with wider society.

Conclusions and Recommendations

It is expected that best available technique for waste incineration and pollutant abatement will be implemented. This will come along with a high energy conversion efficiency compared to the existing coal-fired plant due to the possibility of co-generation of heat and electricity. Given that the project site will be adjacent to the existing waste treatment facilities, the project is expected to benefit from established collection and transportation practices.

Conditions

- Before the first disbursement the promoter will provide to the Bank the opinion from the competent authority that carrying out Appropriate Assessment in line with Habitats Directive 92/43/EEC was not required and that there is no risk of significant effects on Natura 2000 areas.

Undertakings

- To guarantee the environmental sustainability of the project the promoter shall not use any fossil fuels, except for the peak-only reserve gas or oil boiler and start-up operations of the WtE plant.