

Environmental and Social Data Sheet

Overview

Project Name: VLADIVOSTOK CHP PROJECT
 Project Number: 2012-0284
 Country: Russian Federation
 Project Description: The Project involves construction of a new gas-turbine CHP plant (with 140 MW of electric and 500 MW of heat output) in the city of Vladivostok to replace production from existing coal fired plants.

EIA required: yes

Project included in Carbon Footprint Exercise¹: yes

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

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

The project consists of a modern combined heat and power (CHP) plant, built on industrial brownland, to supply heat to the Vladivostok city district heating network. The project is part of a larger scheme to change from coal-fired generation to natural gas-fired generation in Russian Far East. The project is co-financed with EBRD, which is as well providing Technical Assistance for the project.

This project, if implemented inside EU, would have fallen under Annex 1 of the EU ESIA Directive, requiring a full ESIA to be implemented. The promoter has concluded an ESIA of the project according to the Russian regulations, and EBRD has recruited a consultant who has established a gap analysis and supplementary analysis and mitigationsto the identified gaps. The compliance summary comparing the ESIA to the EU regulations provides the conclusion of the consultants report. This compliance review highlights the remaining E&S issues, which are the necessity to perform monitoring measurements of NOx ambient levels, and completion of the Stakeholder Engagement Plan. The noise levels of the ready power plant need as well be assured with measurements. These compliance review requirements are suggested to be further endorsed as loan conditions.

The project is implemented on brownfield site that is at present housing a heat exchanger station and a derelict coal-fired power plant that has been out of operation since late 80s. The project activities remain inside this industrial area fence, with both gas and electricity connections being available in immediate vicinity. The demolishing, clearing and landscaping works of the obsolete plants are part of the project scope.

The Promoter's ESIA has been done and submitted in 2012 to the state expertise as part of the building permit process. The building permit has not yet been issued. It is suggested to require this conclusion of state expertise and issuance of the building permit as the loan disbursement condition, and mitigating measures arising from both Russian ESIA and EBRD consultant's analysis are suggested as undertakings.

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.

Environmental and Social Assessment

Environmental Assessment

The Promoter's ESIA has been done according to Russian legislation. The EBRD consultant has performed the gap analysis between Russian ESIA and EU requirements, and supplemented the ESIA with additional analysis and supplementary measures, notably with supplementary air quality modelling, cumulative impact assessment, noise management, waste management, hydrology effects and treatment of the contamination land.

The main impacts during the implementation are the noise, dust and traffic. The mitigation measures are typical to a large construction site situated in populated area, consisting of appropriate work methods and work scheduling. The legacy of the industrial brownland requires as well measures of contaminated land cleaning and removal. The project does not have negative effects to biodiversity or to any protected areas.

The main impacts during the operation are Nox emissions and the noise in nearby residential areas (see social assessment). The dispersion modelling of the NOx pollutants show that on a small area (app 2 ha) the ambient levels are in specific weather conditions close to the acceptable limit values. The modelling includes uncertainties that are mostly related to the cumulative impacts with the emissions from other sources. The project plans to utilize low-NOx technology (to both the gas turbines and to heat-only boilers), and these measures are expected to keep the ambient levels acceptable. In order to confirm the compliance, it is required to perform a field measurements after the commissioning of the plant.

The project, as part of a larger project to convert the Russian Far East energy generation from coal to natural gas, and by utilizing modern, high-efficiency technology in district heat production, reduces the greenhouse gas emissions from arising from power and heat generation in the region.

The district heating network of Vladivostok is mainly from Soviet times and the technical losses are high on level of 25-30%. There does not exist an alternative to the district heating as the natural gas has been brought to the city just 2011, and the distribution network to individual houses or households does not exist. The heat distribution network is owned and operated by a municipality-owned company. There is no clear distribution network development plan, and this project does not include loss-reduction or demand-side-management measures. The recent Russian legislation (2011) has on the other hand required the key heat distribution refurbishment (changeover from open system to closed system) to be implemented by 2020. Half of the Vladivostok system is still open type, so the implementation of this federal legislation is considered to change the network to more efficient in medium term.

EIB Carbon Footprint Exercise

- Estimated emissions savings are 893 kilotons of CO2 equivalent per year.
- The baseline has been taken with district heating needs produced with coal in existing combined heat and power plant; the project is part of large program to convert coal-based production to natural gas.
- 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

The project is taking place inside of the fence of an existing industrial facility, and is not causing any resettlements. The company is an experienced utility with existing power plants, established labour standards, health and safety planning and employment policies. The

implementation of the project is not expected to raise significant social issues, that would differ from and large construction site.

The nearest residential housings are situated 100-120 m from the site boundary, and some 150-170 m from the planned power plant. This requires some noise mitigating measures like inlet/exhaust attenuators and acoustic enclosures for gas turbines to ensure that noise levels remain below norms. These shall as well be ensured by measuring program after commissioning.

Public Consultation and Stakeholder Engagement, where required

The promoter has held two public hearing meetings related to the project and its land-use category change. The promoter has still disclosed some detail project information (Non-Technical Summary of Russian ESIA) on their website. The main public consultations and the feedback from the stakeholders has not yet taken place. The consultant has prepared a Stakeholder Engagement Plan to complete the public consultation up to the financiers requirement. The consultation activities include the public meeting to present a non-technical summary (NTS), the Environmental and Social Action Plan (ESAP) and the Environmental and Social Management Plan (ESMP) as well as construction schedules. This meeting is scheduled take place in the City of Vladivostok on February 20th, 2013.

Other Environmental and Social Aspects

None