Luxembourg, 05/02/2020

Public

Environmental and Social Data Sheet

Overview

Project Name:	MYTILINEOS SA - AGIOS NIKOLAOS POWER PLANT
Project Number:	2019-0291
Country:	Greece
Project Description:	Construction of an 826 MW natural gas fired CCGT at Agios Nikolaos, Viotias, Greece.
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 comprises the design, construction, operation and maintenance of an 826 MWe Combined Cycle Gas Turbine (CCGT) power plant to be located at Mytilineos (ex-Aluminium of Greece - AoG) Agios Nikolaos industrial complex north-west of Athens, Greece. The plant will use natural gas as its main fuel. The Project will also involve the construction of a new, circa 15km, electricity transmission line (400kV), and the modification of the connection of the existing transmission 400kV line.

The Project assumes a particular importance in the light of the Greek government announcement at the UN Climate Summit, in September 2019 in New York, to close all its lignite-fired power plants by 2028 at the latest - around 4,000 MW of capacity. In this context, the development of thermal capacity to provide secure and flexible power is very relevant for the Greek electricity system.

By virtue of its technical characteristics, the Project falls under Annex I of the EIA Directive (Directive 2014/52/EU amending 2011/92/EU) and as such the Promoter undertook a full environmental impact assessment for the power plant within the framework of the Greek environmental legislation. The EIA was based on an initial plant capacity of 775MW. Subsequently this capacity was increased to 826MW and an amendment to the original EIA was prepared to capture this change. The modified EIA was approved, by the competent authority, on December 9th 2019. An EIA for the transmission connection (400kV) will also be carried out by the Promoter, but at the time of appraisal this had not yet commenced. In this regard, appropriate conditionality will be included in any finance contract (FC), should an FC be concluded with the Promoter. The transmission system operator has to make a routing modification to the existing transmission connection (it owns) in the vicinity of the new power plant site. An EIA has been carried out for this modification and it was approved on November 13th 2019.

The proposed power plant site borders, and is adjacent to, a site of the NATURA 2000 network, more specifically to the site GR2530007 "Corinthian Gulf". For this reason, a Specific Ecological Assessment was carried out and included in the Environmental Impact Assessment Study. Extensive literature review and field work by specialised scientists was undertaken as part of the Specific Ecological

[1] Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO_2e/year absolute (gross) or 20,000 tonnes CO_2e/year relative (net) – both increases and savings.

Assessment in order to collect sufficient, documented and reliable data on the existing environmental status in the coastal area in the vicinity of the project area. The Specific Ecological Assessment aims to provide a detailed ecological background of the proposed Project area and the wider study area, as per Article 6 of the Habitats Directive for the evaluation of the potential impact of the project on protected areas and the ecological integrity of the sites.

Based on the evaluation of the particular physical characteristics of the proposed site of Community Importance 'GR2530007-Corinthian Gulf', the environmental conditions of the Project area, and the technical characteristics of the proposed Project, it is concluded that subject to the successful implementation of the mitigation measures incorporated in the design of the Project, the Project will have no adverse impact, or cumulative impact, on the integrity of the site in terms of protected objects, ecological functions and their role in the cohesion of the Natura 2000 Network.

It is noted that within the environmental monitoring activities, the Promoter monitors every year the aquatic flora of the wider area of the Agios Nikolaos coastal area in order to prevent and mitigate any potential impact associated with the company's activities.

Air emissions associated with the operation of the examined CCGT plant are related mainly to NOx. According to the European Reference Document on Best Available Techniques for Large Combustion plants (edition of July 2017) natural gas is a clean fuel causing practically no sulphur dioxide (SO_2) or particulate matter (PM) emissions. Dry low-NOx burners will be used in the plant in order to reduce NOx emissions. The Promoter monitors, on a continuous basis, air emission values (NOx, CO and O_2). The EIA includes a NOx dispersion study, that takes in consideration all the industrial units in operation (AoG and 2 power plants), and positive conclusions (the NOx concentration remain lower than the environmental limits).

Wastewater associated with the operation of the plant relate to industrial wastewater, cooling tower (sea water) discharge, sanitary wastewater, rainwater and fire protection run off.

Industrial wastewater will be collected and directed through underground pipes to the wastewater treatment plant of the Industrial Complex of AoG (existing operating facilities of the Project Owner in the area). The discharged waste water is monitored (pH, TSS, temperature, heavy metals) at treatment plant of AoG. The total flow, including the wastewater flow of the new CCGT, will remain lower than the permitted maximum wastewater flow, and the capacity of the treatment plant is higher than the permitted flow.

Sanitary water is collected and directed through underground pipes to the biological treatment plant of the industrial complex of Aluminium of Greece.

It is noted that regarding the operation of the cooling towers of the plant, no fresh seawater will be pumped. Cooling water will be provided by the existing circuit of the adjacent Gas-Fired Combined Cycle Thermal power plants; thus, the operation of the new power plant will not have any qualitative or quantitative impacts on the adjacent marine environment and taking into consideration the sea water evaporation, the thermal charge to Corinthian gulf will be decreased.

Sea water used for the cooling tower is discharged through the existing pipeline system back to Antikyra Gulf. The discharged waste sea water is monitored (pH, temperature and flow).

Solid wastes classified in hazardous and non-hazardous wastes, are collected to dedicated areas and then delivered to licensed solid waste collectors according to the provisions of the prevailing national and European legislation for the solid waste management.

EIB Carbon Footprint Exercise

In accordance with the Bank's current Carbon Footprint methodology it is calculated that based on the avoidance of electricity generation from a combination of existing and new power plants in Greece (50% operating margin and 50% build margin), the total relative effect of the Project is a net reduction in CO_2 equivalent emissions by around 1,000 kt CO_2e/yr. The absolute emissions from the plant are estimated at around 1,600 kt 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.

The Emissions Performance Standard (EPS) of the plant is estimated at 321 gCO_2/kWh which is below the lending policy EPS of 550 gCO_2/kWh in force at the time of project was approved for the Bank's appraisal.

Public Consultation and Stakeholder Engagement

The EIA, according to the prevailing legislation, was distributed by the permitting authorities to the competent authorities for the review and opinions, to the Regional Authorities, local community, and stakeholders for open public consultation.

All interested parties and stakeholders were able, during the public consultation period, to state their opinion according to national legislation. The opinion of the local Prefecture was issued after a public session where no negative opinion was expressed by interested parties and stakeholders. Following the collection and review of the opinions of competent authorities and the results of the Public consultation, the approval of the EIA by the Ministry of Environment and the issuance of the Decision for the Approval of Environmental Terms (DAET), for 775MW was taken on September 17th 2019 and for 826MW on December 9th 2019.

Other Environmental and Social Aspects

The Promoter applies a documented Environmental, Safety, Occupational Health and Safety, Human Resources (HR), and Corporate Social Responsibility (CSR) Policy for all its activities, in order to prevent and mitigate any potential environmental and social impacts and enhance the sustainable development at local, regional and national level. In particular, the Promoter has implemented an Integrated Management System certified in compliance with ISO 9001, ISO 14001, OHSAS 18001. All the activities of the Company are covered under the scope of the above mentioned Management Systems.

Diversity: The Promoter acknowledges the significance of promoting the principle of diversity in the composition of its governance bodies as well as in its executives and administrative personnel. In this regard, in 2017, the Promoter introduced a specific Diversity Policy with clearly defined vision and objectives.

Conclusions and Recommendations

Considering the environmental information and assessments provided by the Promoter, the Project is deemed to be acceptable for Bank financing in environmental terms. The Bank will require the Promoter to submit Project monitoring reports in line with Bank requirements during Project implementation and the first year of operations.

Finance contract environmental conditions:

- The Promoter shall undertake, satisfactory to the Bank, an environmental impact assessment for the electricity transmission line and shall obtain the necessary environmental permit prior to first disbursement for that component.