

Luxembourg, 12 December 2017

Environmental and Social Data Sheet

Overview

Project Name: SCALING SOLAR PV ZAMBIA I
 Project Number: 2017-0004
 Country: ZAMBIA
 Project Description: *The project comprises the construction and operation of a PV plant with a rated capacity of 34MWp (28MWac) and includes connection to the adjacent 30/33 kV substation located via 33kV underground cable. The PV plant will be located within the Lusaka South Multi-Facility Economic Zone (LS MFEZ), about 15 km to the South and East of the Lusaka Central Business District.*

EIA required: yes
 Project included in Carbon Footprint Exercise¹: yes
 (details for projects included are provided in section: “EIB Carbon Footprint Exercise”)

Environmental and Social Assessment

Environmental Assessment

If the project was located within the EU, it would fall under Annex II of the EU EIA Directive, requiring the competent authorities to determine whether an EIA is required. In line with Zambian EIA requirements and IFC Performance Standards, an EIA process was followed, an Environmental and Social Impact Assessment (ESIA) study, including an Environmental and Social Management Plan (ESMP), was prepared for the project and its grid connection and public consultation meetings were held in 2016. Consequently, the environmental permit was issued on this basis by the competent authority (ZEMA) in 2017.

The area, within which the project site is located, was an inhabited forest reserve until it was de-gazetted in 2007 and designated as the Lusaka South Multi Facility Economic Zone (LS MFEZ) in 2010. This land use change (which preceded the project) brought upon involuntary resettlement that was managed by the relevant governmental agencies (please see below the Social Assessment section for more information). Currently, the proposed project site, which occupies 52 ha – about 2.5 % of the overall 2100-hectare LS MFEZ, is an open space with tall grass, shrubs and regenerating trees. The site is adjacent (shares a boundary) to the Lusaka National Park. A 200m buffer exists within the Lusaka National Park for the purpose of demarcation and proactively managing any project negative impact. The ESIA has taken into consideration the possible impact of the proposed site in close proximity of the national park. According to the ESIA study, the project site has no flora and fauna species that can be classified as rare, threatened or endemic to the area or that are of special scientific value. Furthermore, an additional 11ha required for the project is gazetted as a national park although it falls outside the perimeter fence of the Lusaka South National Park. In consultation with all the relevant stakeholders regarding the additional 11ha, the Ministry of Tourism stated

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.

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that it is agreeable to grant consent to the Ministry of Finance which would then lease the additional Land to the IDC and in turn sub-lease it to the project. Competent environmental authority (ZEMA) is fully aware of the status of this process and have included it as a condition throughout the ESIA Process.

The main environmental impacts are expected during construction. During construction and operation, the potential environmental impacts relate to the water supply as solar panels will have to be cleaned to avoid reduced efficiency due to dust built-up. Water for construction and operation will have to be sourced either through dedicated boreholes or through extending the supply from nearby ZESCO substation.

Project will also have positive environmental impacts as solar generated electricity will displace a significant volume of gaseous pollutants such as particulate matter, SO₂, NO_x and CO₂, compared with thermal generation. The project is also expected to increase the country's electricity supply, reduce load shedding, diversify the country's energy mix away from hydro and thus avoid, or at least reduce, the need for fossil fuel generation in the country.

EIB Carbon Footprint Exercise

PV power plant is expected to produce an average of ca. 64 GWh/a, and will not generate any absolute CO₂ emissions. 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 Zambia (75% operating margin and 25% build margin), will result in relative emissions of minus 46 kt CO₂-e/a (i.e. savings of 51 kt CO₂-e/a). 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

The project's main social risks and impacts relate to legacy resettlement, traffic, security and labour risks.

The establishment of the LS MFEZ following its designation in 2010 involved two phases of government-managed resettlement – the first in 2012/13 and a second, subsequent resettlement of further claimants in 2014/2015. Both phases of Government-managed resettlement pre-date the project and are not directly attributable to the project, which only covers a small fraction of the area. Recognising however that legacy government-managed resettlement may have led to residual social risks in the project's area of influence, the promoter has committed to addressing such risks on a best efforts basis by providing community-level benefits, such as improved social services or livelihood improvement measures, focusing, where possible, on the households previously displaced from the project site and located in the vicinity of the project site boundaries. This will be done through the development and implementation of a targeted Community Development Plan (CDP), in coordination with the Lenders.

Increased traffic associated with the project, in particular during the construction phase, may pose some safety risks to surrounding communities. During the operational phase, the site will be fenced and public access to the solar plant will be restricted. In addition, the LS MFEZ is an area with controlled security access involving armed Zambia Police Force personnel and unarmed private security personnel. Site security will be managed by a private security firm. The project will assess the risks posed by its security arrangements and ensure that the

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security contractor operates in line with EIB requirements. The development and implementation of a Traffic Management Plan and of a Security Management Plan is expected to reduce any community risks linked to traffic and security aspects.

About 100 workers are expected during construction, most of which will be recruited locally. When fully operational, the project is expected to employ a limited number of employees. Employment terms and conditions will be aligned with the promoter's Human Resources Policy. Specifically, during construction, workers will be subject to a Project Labour Agreement, which will also be applicable to sub-contractors and which will incorporate information such as working hours, conditions of service, minimum wage requirements and information on access to a workers' grievance mechanism. A procedure to ensure that contractors' labour and working conditions comply with Lenders' requirements and Zambian Laws will be further put in place.

Public Consultation and Stakeholder Engagement

Initial stakeholder consultations on the project were conducted in October 2015. Public consultation meetings within the context of the ESIA process were first held in March 2016 as part of the scoping stage and further in July 2016 on the draft ESIA. Stakeholders were invited to attend meetings by way of written invitation letters and by public notices in publicly and privately-owned print media. The main questions raised during the meetings touched upon community benefits stemming from the project, roles and responsibilities for addressing E&S risks throughout the project's lifecycle, electricity tariffs and potential impacts on wildlife in the Lusaka National Park.

More focused consultations with surrounding communities took place during the socioeconomic baseline surveys. As noted above, the project will develop and implement a Community Development Plan, in consultation with the relevant communities.

The project will further develop and implement a Stakeholder Engagement Plan (SEP), including a grievance mechanism, and hire a Community Liaison Officer (CLO) to ensure the continuous and effective engagement of affected and interested parties, in particular surrounding communities.

Other Environmental and Social Aspects

Key safety concern is the presence of sink holes in proximity to the site and sub surface karstic features and cavities within the site itself. Further detailed investigations into karstic features and cavities are required which will then influence the detailed design of the project. Rock outcrops and subsurface pinnacles will impact on earthworks and the type of foundation required and constitutes a moderate risk. The promoter has a strong commitment to sustainable development highlighted in its new Environmental and Social Policy approved in 2016 that requires the implementation of an integrated management system in all activities and operations carried out by the Enel Green Power. The proper implementation of its own E&S Policy and the relevant managements systems put in place are recognised and audited by relevant external bodies and the group is certified ISO 9001, ISO 14001 and ISO 18001.

In addition, an Environmental and Social Management System (ESMS) for the construction and operational phases will be developed and implemented for the project. The ESMS will outline the set of management processes and procedures, including the roles and responsibilities and measures to be developed/taken by the various actors for duly addressing any project-related environmental and social risks and impacts.

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Conclusions and Recommendations

The ESIA study and process carried out to date are considered satisfactory in light of the EIB's Environmental and Social Standards. The project's financing contract will include an Environmental and Social Action Plan (ESAP) that will provide the subsequent measures and actions required in line with the Bank's Environmental and Social Standards. Progress monitoring on compliance with the ESAP will further be included as requirement in the financial contract. The implementation of the ESAP will be monitored by the Lenders' Technical Advisor (LTA) and the Bank.

Specific conditions that will be included in the ESAP are:

- Environmental and Social Management System prepared to the satisfaction of the EIB;
- Community Development Plan prepared to the satisfaction of the EIB;
- Stakeholder Engagement Plan prepared to the satisfaction of the EIB;
- Security Management Plan prepared to the satisfaction of the EIB;
- Evidence of the land use rights for additional 11 ha to be leased by the Ministry of Tourism to the Ministry of Finance which would then lease the additional land to the IDC and in turn sub-lease it to the project.

The finance contract will also contain an undertaking that the project will be implemented and operated in compliance with EIB's Environmental and Social Standards, including in line with the measures and actions outlined in the ESIA Study/ESMP, the ESAP and the environmental permit.

With above conditions, the project is acceptable for EIB financing in E&S terms.

PJ, 29.11.17