Green Agro Service solar project non-technical summary

1 Introduction

This document provides an overview of the project of Porogi Solar power plant construction in Vinnitsa Oblast of Ukraine proposed by private company Green Agro Service the proposed development plans in a non-technical manner (*Section 2*). It also presents a summary of potential environmental and social impacts and other environmental and social issues relevant to the proposed activities (*Section 3).* Appropriate measures to mitigate key adverse environmental and social effects that may arise during project construction and operation are also provided (*Table 1*).

This NonTechnical Summary (NTS) document will be placed in the locations shown below for public review and comment. Anyone can provide comments and recommendations on the environmental, social and other aspects of the project.

Environmental and social documents will be available for review during normal business hours at the following location:

- *Green Agro Service company offices*
  Address: Vinnitsa, 14A, Voinov Internatsionalistov str, 2nd floor, Phone: +380 432 508 380

- *Porogi Village Council Hall*
  Address: 29, Lenina Str, Porogi village, Yampol district, Phone: +380 04336 2 57 45

- *Yampil District Administration*
  Address: 132, Lenina Str., Yampil town, Vinnitsa Oblast, Phone: +380 4336 2 14 63

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2 Description of the Proposed Development

The project developer Green Agro Service Limited Liability Company was established in 2010 and at present is registered in the village of Porogi of Vinitsa Oblast. Main business focus of the company is the development of solar energy projects in central/southern Ukraine, including the Porogi solar power plant.

The project is located just outside the Porogi village of Yampil district in Vinnitsa Oblast. *Figure 1.1* shows the location of the site for the solar plant.

The project will install 18,348 solar photovoltaic (PV) modules totalling installed capacity of 4.5 megawatt, which will provide an annual gross electricity generation of approximately 5.369 million kilowatt-hours.

Electricity generated at the solar plant will be connected to the 110 kV distribution grid via a 110/35/10kV substation and 100m long of 10 kV aerial transmission line, and will be sold to the grid at the feed-in tariff under the "Green Tariff Law".

The solar power plant will be operated on an area of close to 10 hectares that is leased for the construction of a solar power plant by Green Agro Service LLC.

By using the renewable solar power, the project will have significant environmental benefits over other types of energy generation, such as those utilising fossils fuels (gas, coal) or nuclear. It will contribute to the reduction of emissions of greenhouse gases (expected annual emission reductions are 5,003 tCO_2/a), as well as create new jobs and improve security of energy supply in the area.

Figure 1: Location of the project site

General map view

Close-in sattelite image

Environmental, Health, Safety and Social Review

3.1 Project studies and documents

Solar energy power plants can be considered as having perhaps the least impact on the environment and the biodiversity of the surroundings, In addition to this Non-Technical Summary, the other materials include the following documents.

Local Environmental Impact Assessment (OVNS)

A local-style Environmental Impact Assessment (OVNS in Ukrainian) of the project has been prepared in summer 2012 as part of the project planning documentation, meeting the national regulatory requirements. In addition, the Developer plans to prepare a separate OVNS report which would examine the matter in more depth and have a scope over and above of what is normally sufficient for permitting purposes in Ukraine. This is a fully voluntary process and the Developer plans to complete this report before the end of the construction process.

3.2 Sensitive locations

The project is situated in an area of low environmental sensitivity.

There are no protected areas in the immediate vicinity of the project . The site has a slope towards south and east, and is facing the Dnister river passing 450 m to the south, which constitutes the border between Ukraine and Moldova. Having a maximum of 2m height above the ground the solar modules are not immediately visible from the residential properties laying approximately 500m from the site. No noise or flickering is expected during the operaration of the solar plant which may disturb the residents of the nearby village.

3.3 Project impacts and their mitigation

An evaluation of potential environmental and social impacts determined that, in addition to its benefits, the project could have negative impacts on the environment and people, if not managed carefully. Therefore, Green Agro Service willimplement certain actions (called "mitigation measures") to prevent, reduce, or mitigate negative impacts of this project. A summary of key impacts and mitigation measures that have been identified, is provided in *Table 1* below.

Table 1. Overview of Key Potential Project Impacts and Their Mitigation

No	Issue	Potential impact	Mitigation measures
1	General construction impacts	Impacts during construction of the main (solar modules and inverter stations) and associated (transmission line) project facilities, such as land excavation, dust, noise, air emissions from vehicles involved, etc.	- Prepare and implement construction management plan to reduce and mitigate general construction impacts, including noise, air emissions, waste generation and disposal, erosion. - Include relevant enviornmental and social rquirements in bidding documents and contracts. - Continuously monitor impacts to comply with appropriate national environmental standards and EBRD requirements. - After construction, revegetate the site with native grass or shrubs where applicable and maintain vegetative cover throughout operations.
2	Transmission line	Associated 10kV 100m long transmission line will be crossing the village road leading to the local substaion.	- Ensure appropriate design and routing of the transmission line to avoing residential properties and other sensitive locations; - Comply with relevant sanitary and environmental requirements and norms.
3	Surveillance and security systems	Potential alarms during night time.	- Correctly installing and regularly maintaining the equipment - Installing such survailance/security system which will minimize impact on third parties, and will be consisent with industry standard best practice;