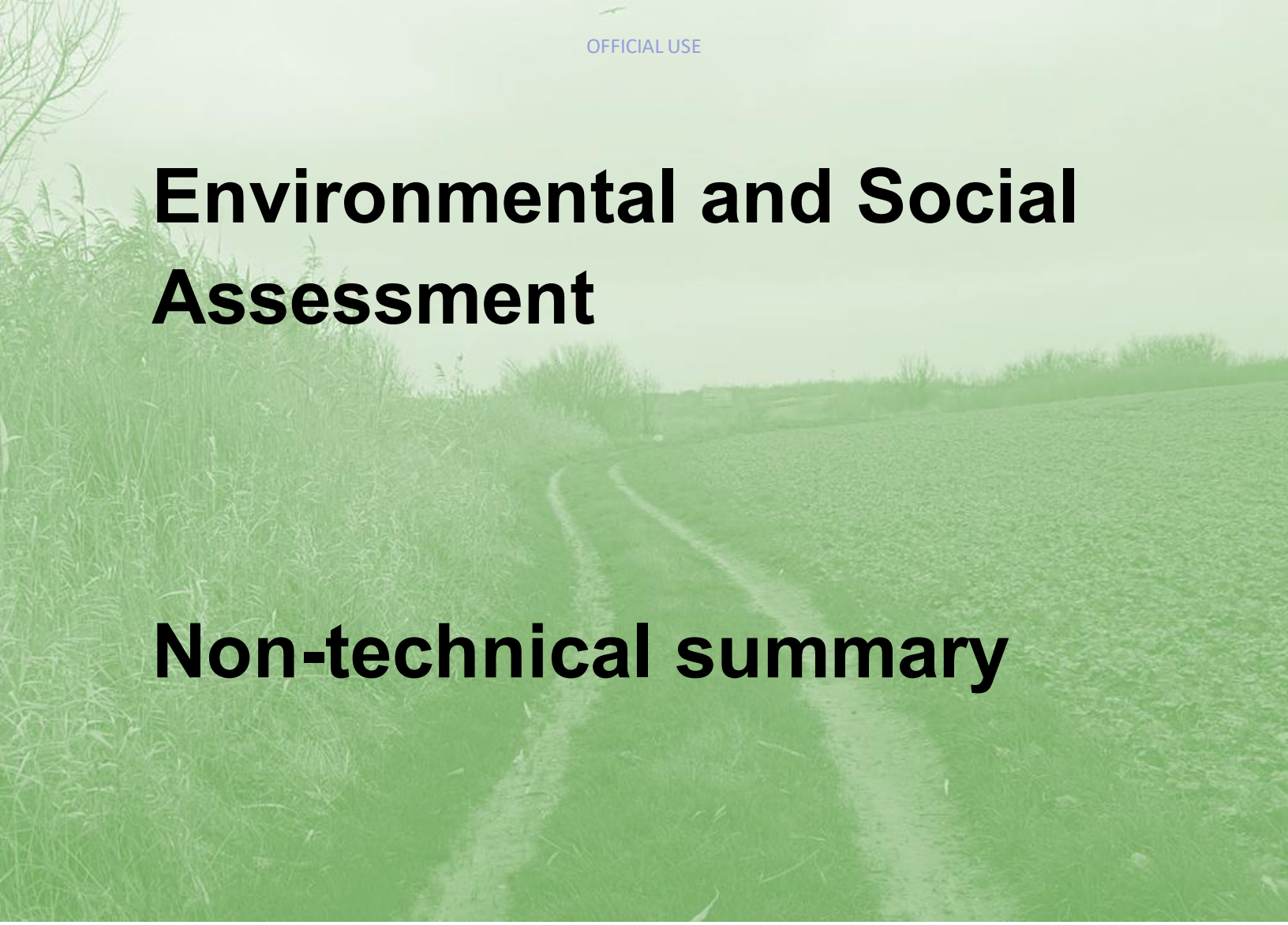

Environmental and Social Assessment

Non-technical summary

Project: Mihăilești - Bulbucata (68.115 MW) of solar PV and 70 MW of BESS (140 MWh) capacity, Giurgiu County, Romania

Client: Enna Solar, part of Enna Group

Prepared by Green Partners Ltd.

June, 2026

1 | Project description

The Mihăilești – Bulbucata Solar photovoltaic **(**PV) and Battery Energy Storage System (BESS) Project is a renewable energy development located in Giurgiu County, Romania, implemented by Enna Solar (part of Enna Group) through the Special Purpose Vehicle (SPV) PVP Cepheus Ltd.

The Project involves the construction, operation, and maintenance of:

- a **solar photovoltaic (PV) power plant with an installed capacity of 68.115 MW**, and
- a **co-located BESS with 70 MW power and 140 MWh storage capacity**.

The Project is located within Mihăilești and Bulbucata ATUs, in a predominantly agricultural landscape characterised by intensively cultivated land and limited ecological connectivity.

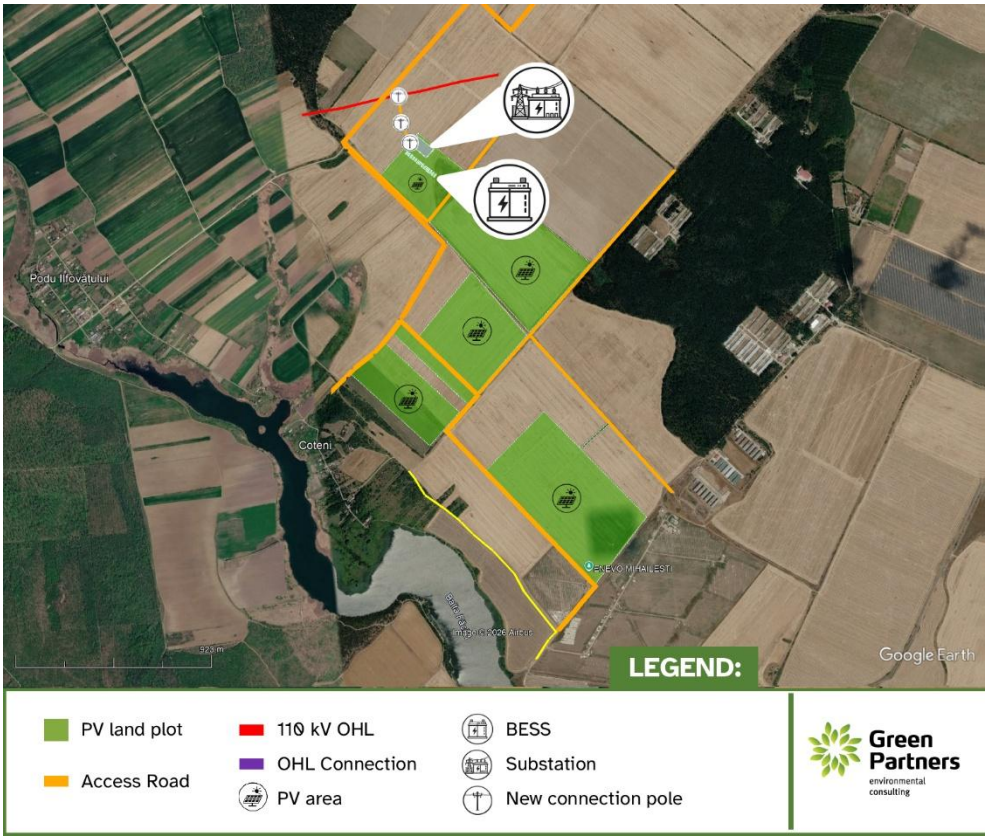

Figure 1 Project components and their location

The development will be **implemented in three phases**. The **first phase** includes the construction of the **solar PV park and the project's main 33/110 kV substation**. The solar park will comprise photovoltaic panels installed on **single-axis tracking systems**, together with inverters, transformer stations, internal access roads, underground cabling, and monitoring and security systems. Electricity generated by the panels will be collected through underground cables and transmitted to the substation.

The **second phase** includes the **construction of a new 110 kV connection substation** and the associated grid connection works. This infrastructure **will be financed by the Project** (through PVP Cepheus Ltd.) and impl**emented in coordination with the distribution system operator**, who will own and operate the substation. The Project will be **connected to the existing 110 kV Mihăilești–Clejani transmission line**, and additional grid reinforcement works will be carried out to ensure safe integration into the national electricity system.

The third phase consists of the **installation of the BESS**, which will be connected to the project substation. The BESS will use l**ithium iron phosphate battery technology in a modular, containerized configuration**, improving grid stability and operational flexibility.

Once operational, the Mihăilești – Bulbucata Solar and BESS Project will contribute significantly to Romania's renewable energy targets and the transition to a low-carbon energy system. **Construction for both PV Plant and 110/33 kV Substation Mihailesti-Bulbucata started in December 2025, while the BESS component is still under permitting process.** The Project is expected to reach **commercial operation in 2027** and will have an **operational lifetime of at least 25 years**, supported by regular maintenance activities to ensure long-term performance.

2 | Background

Mihăilești – Bulbucata Solar and BESS Project supports Romania's commitments under **EU climate policies, the European Green Deal, and the country's National Energy and Climate Plan (NECP)**, which targets increased renewable energy production. It also aligns with the financing requirements of the **European Bank for Reconstruction and Development (EBRD)**, ensuring compliance with international best practices for environmental and social responsibility.

The Project location was chosen based on **several key factors**, including **high solar irradiation levels, suitable land conditions, accessibility to existing transmission infrastructure, and minimal environmental constraints**. The selection process included an evaluation of alternative locations, assessing their potential environmental and social impacts. The final location was selected as it posed the **least risk to local biodiversity, communities, and land use compatibility**, while providing an efficient grid connection point.

3 | Legal process

Key permitting processes for the Project included e**nvironmental approvals, land use authorizations,** and **construction permits**, all of which have been obtained in accordance with Romanian legislation.

The Project underwent the applicable **Environmental Impact Assessment (EIA) procedures**, including screening for the solar PV park, substations, and underground transmission lines. These processes were carried out **in line with national legislation and relevant EU directives**, ensuring that potential environmental and social impacts were identified and appropriately addressed during the design stage.

Grid connection permits have also been **obtained**, confirming the technical solution for integration into the national electricity network.

Public consultations were conducted **to engage local communities and stakeholders, gather feedback, and address concerns**. The Company has implemented a transparent **grievance mechanism**, allowing affected stakeholders to raise concerns throughout the Project's lifecycle.

An Environmental and Social Due Diligence (ESDD) assessment was conducted by an external consulting company. This was done in line with EBRD ESP 2024 and included:

- A site visit to the project location
- Discussions with the representatives of the EPC contractor
- A review of Project permitting, legal, and cultural heritage documentation
- Development of an ESDD report, the Environmental and Social Action Plan (ESAP), Stakeholder Engagement Plan (SEP), and the current NTS.

The ESDD process covered the main Project components, including the PV panels and auxiliary equipment, underground transmission line, substations for grid connection, and BESS, and considered potential impacts related to water use, construction traffic, community and occupational health and safety, cultural heritage, biodiversity, land use, stakeholder engagement, and cumulative impacts etc.

Based on the outcomes of the ESDD process, the Project is classified as **Category B** under the EBRD ESP (2024), as the assessment undertaken indicates that **potential environmental and social impacts are expected to be limited**, **site-specific**, largely associated with the construction phase, and **manageable through good international practice and project-specific mitigation measures**..

4 | Summary of environmental benefits, potential adverse impacts, mitigation, and management measures

Mihăilești – Bulbucata Solar and BESS Project represents an important contribution to Romania's transition toward a low-carbon economy. By harnessing solar energy and integrating large-scale energy storage, the Project will support the reduction of GHG emissions, decrease reliance on fossil fuel-based electricity generation, and contribute to Romania's renewable energy and climate targets in line with the European Green Deal, the Renewable Energy Directive, and the EU Climate Law.

The Project is expected to generate substantial **environmental benefits**, including:

- **Clean energy generation,** replacing conventional fossil fuel-based electricity with renewable solar power from a large-scale photovoltaic installation;

- **Climate change mitigation,** through zero-emission electricity generation during operation and improved grid flexibility through energy storage;
- **Improved land management,** as agricultural land used for solar installations will be converted into managed grassland areas between panel rows;
- **Reduced chemical inputs,** due to the elimination of intensive agricultural practices such as pesticide and fertilizer use within the PV park footprint;
- **Potential biodiversity benefits,** as the conversion from intensive agriculture to managed vegetation may improve habitat conditions for certain species.

An **Environmental and Social Management Framework (ESMF)** will be implemented for the Project, and **Construction Environmental and Social Management Plans (CESMPs)** will be prepared and implemented by the Engineering, Procurement, and Construction (EPC) Contractor(s) to address Project-specific environmental and social risks and mitigation measures. These plans will ensure alignment with Romanian legislation, the EBRD's Environmental and Social Policy (2024), and Good International Industry Practice (GIIP).

Potential adverse impacts and mitigation measures

Potential **environmental impacts are generally limited** and **mainly associated** with the **construction phase**. These include **temporary increases in dust, noise, and traffic**, as well as **minor risks of soil disturbance and accidental spills**. Such impacts are short-term and reversible.

The Project is located in an **agricultural landscape** with relatively **low ecological value**, and **no Natura 2000 sites or critical habitats are present within the project footprint**. Nearby water bodies and habitat features may support common species, but overall biodiversity sensitivity is low.

Mitigation measures will be implemented to minimise impacts. These include dust control, traffic management, restrictions on working hours, proper waste management, and measures to prevent soil and water contamination. The Project design also incorporates **environmental protection features** within substations, such as oil containment systems and drainage controls.

Cumulative impacts with other projects in the area have been assessed and **are not expected to be significant**, given the distance between projects and the limited scale of overlapping activities.

Overall, **Mihăilești – Bulbucata Solar and BESS Project** has been designed and will be implemented in a way that maximizes environmental benefits and minimizes negative impacts through a structured system of risk management, mitigation measures, and compliance monitoring. Through its contribution to clean energy production, improved land use, and biodiversity stewardship, the Project supports both local and national goals for sustainable development and environmental protection.

5 | Summary of social benefits, potential adverse impacts, mitigation measures

The Mihăilești – Bulbucata Solar PV and BESS Project are expected to generate a range of **positive socio-economic effects** at **local and regional level**, while potential **adverse impacts are limited, mainly temporary**, and can be effectively **managed through appropriate mitigation measures**.

Social benefits

During the **construction phase**, it is estimated that around 70 to 150 persons will be working daily on site. TheProject will create **temporary employment** opportunities for both skilled and unskilled workers. **Local hiring** will be encouraged where feasible, contributing to local income generation and economic activity. In addition, the Project is expected to generate **indirect economic benefits** through demand for local goods and services, including transport, accommodation, catering, and supply of construction materials.

During the **operational phase**, a number of **permanent jobs** will be required for activities such as technical maintenance, monitoring of the PV installation and BESS, vegetation management, and site security. Local hiring will be also encouranged during operation, whenever possible and feasible.

The Project may also **contribute to knowledge transfer** and skills development in the renewable energy sector.ENNA is committed and looking for new opportunities to invest in Romania.

The Project is expected to **support local infrastructure improvements**, particularly through the upgrading of access roads used during construction, which may continue to benefit local communities after completion of the works.

Potential social impacts and mitigation measures

The potential **adverse social impacts** associated with the Project are **limited in scale** and are mainly **related to the construction phase**.

Temporary disturbances may occur for nearby communities due to increased **traffic, noise, and dust** generated by construction activities and transportation of equipment. These impacts will be **managed through careful planning and implementation of mitigation measures**, including traffic management, scheduling of works, and application of good construction practices to reduce emissions and disturbance.

Occupational health and safety risks are associated with construction and installation activities, including the use of heavy machinery and electrical equipment. These risks will be managed through the implementation of established **health and safety management plans provisions**, **training** of workers, use of appropriate personal protective equipment, and regular **monitoring** and supervision in line with national legislation and international standards.

The Project does **not require physical displacement of people or economic resettlement**. The land required for the Project has been secured through lease agreements with landowners, and agricultural activities outside the project footprint will not be significantly affected.

With respect to cultural heritage, no significant impacts have been identified within the project area. However, a **chance-find procedure will be implemented during construction** to ensure that any unexpected archaeological discoveries are managed in accordance with applicable legislation and in coordination with the relevant authorities.

6 | Summary of ESAP

A number of environmental and social management improvements have been identified, inter alia: establishment of a project-level Environmental and Social Monitoring Framework and full operationalisation of the ESMS at SPV level; development and implementation of Construction and Operational Environmental and Social Management Plans (CESMPs and OESMPs), including resource efficiency, pollution prevention, waste management, biodiversity protection and cultural heritage controls; strengthening of contractor management and labour arrangements, including worker grievance mechanisms and GBVH-related training; implementation of traffic management, community health and safety and emergency preparedness measures; and development of a robust supply chain management system incorporating risk-based due diligence, traceability and verification processes for solar PV and BESS components. The ESAP also includes requirements to obtain remaining permits for the BESS component and to establish ongoing monitoring and reporting arrangements to ensure compliance with EBRD standards.

7 | Monitoring and Engagement

The project's construction phase has started and the EPC contractor as well as ENNA are already working on ensuring that all the environmental and social provisions foreseen in the permits obtained and the current ESDD documentation. An Environmental and Social Monitoring Framework for the project is available as well as a Construction Environmental and Social Management Plan. These two documents are guiding the environmental and social monitoring programme for the project.

The Project sponsor and its EPC contractor ensures transparent communication with all stakeholders. A Stakeholder Engagement Plan (SEP) has been developed which identifies the key stakeholders, effective engagement methods and will ensure that the requirements and opinions of stakeholders, including citizens, are understood and included within the design, development and execution of the project, as appropriate.

To date, the project has primarily engaged stakeholders through the formal permitting process and during the process of securing the necessary land for the project. During the Environmental Impact Assessment (EIA) screening, project documentation was disclosed via the Giurgiu County Environmental Protection Agency and local municipality websites, complemented by announcements in local newspapers. Notably, no grievances were received during this public consultation period. Beyond regulatory requirements, the developer has conducted one-on-one meetings and direct consultations with private landowners to secure land rights, as well as with local authorities in Mihăilești and Bulbucata to assess community perceptions. News about the project have been published online via ENNA's website. Also, the project has gained national media attention as a significant international investment in the Romanian energy sector. During the ESDD process, the engagement process was mostly focused on direct interaction with the newly appointed EPC contractor. Several meetings (online and face-to-face) were organised, and a site visit was performed by the consultants. A community liaison officer has been appointed for the project and is active since the start of the construction.

The SEP also contains details for the Grievance Mechanism (GM) which can be used by all stakeholders including community members for submitting anonymously any Project-related complaints, concerns or questions.

For any enquiries, seek further information or any clarifications, please use the contact information below:

Boban Atanasov, Project Manager

M: +385 99 165 3807

Email: boban.atanasov@enna.hr