European Investment Bank

Luxembourg, 4 December 2023

**Public**

# Environmental and Social Data Sheet[1]

## Overview

| | |
|---|---|
| Project Name: | Printed Solar Cell Manufacturing Plant (IEU GT) |
| Project Number: | 2022-0366 |
| Country: | Sweden |
| Project Description: | The project concerns the development of a commercial scale manufacturing plant for dye-sensitized solar cells (DSC). The expansion aims to scale up the production capacity to meet market demand for Exeger's innovative DSC technology which is suitable for electronic applications with low power consumption. The unique product shows superior performance and characteristics compared to existing products on the market in both indoor and outdoor applications. |

| | |
|---|---|
| EIA required: | yes |
| Invest EU sustainability proofing required | yes |
| Project included in Carbon Footprint Exercise[2]: | no |

[1] The information contained in the document reflects the requirement related to the environmental, social and climate information to be provided to Investment Committee as required by the Invest EU Regulation and it represents the equivalent of the information required in the template of the InvestEU sustainability proofing summary

[2] 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 CO2e/year absolute (gross) or 20,000 tonnes CO2e/year relative (net) – both increases and savings.

European Investment Bank

Luxembourg, 4 December 2023

# Environmental and Social Assessment

## Environmental Assessment

The project concerns the development of a commercial scale manufacturing plant for dye-sensitized solar cells (DSC). The DSC cells are suitable for electronic applications with low power consumption. The unique product shows superior performance compared to existing products on the market in both indoor and outdoor applications. The project will be located in an existing building located in Kista, Stockholm.

The project has obtained an environmental permit according to the Swedish Environmental Code for the manufacture of solar cell material. The EIA Directive is transposed into Swedish legislation mainly by the Environmental Code (SFS 1998:808) and the Ordinance on Environmental Impact Assessments (SFS 1998:905).

### Environmental Impacts

The environmental consequences arising from Exeger's operations are mainly emissions to air, emissions to water and risks of accident linked to transport and handling of chemicals and flammable and toxic substances.

#### *Emissions to air*

The manufacturing process of solar cell materials includes steps where organic solvents (VOC) are used. Process venting can result in VOCs being released to air if it is not cleaned. Effective purification equipment will be installed for the purification of VOCs so that emissions to air will be limited. As the activity is an industrial emission activity and is covered by BAT requirements (best available technology), protective measures will be taken in accordance with these requirements.

#### *Emissions to water*

The manufacturing process uses process water which is municipal drinking water purified with reverse osmosis (RO) The reject water from the RO plant will be diluted before reaching the Edsviken and is judged to have negligible impact on the water quality.

Process water is cleaned prior to discharge by means of filtration and ion exchanger, it is then released into the municipal stormwater network where it is diluted with other water before finally reaching the Edsviken.

Exeger will comply with the BAT-AEL (Associated Emission Levels) as specified in the environmental permit.

#### *Risk and safety*

Exeger's manufacturing plant uses three types of flammable liquids as well as a fire-hazardous solid, which are dealt with in the performed risk investigation. No risks have been identified that are deemed unacceptable.

Luxembourg, 4 December 2023

***Positive Environmental Impacts***

The solar cell produced by Exeger is thin and flexible, and can be mounted on a variety of low power electronic equipment such as headphones, speakers, cars tags, electronic shopping labels, and work/bicycle helmets, etc.

The cells can be used to prolong the battery life or in many cases eliminate the need to plug in to charge the battery.

Rechargeable electronic devices such as headphones and portable speakers will no longer require charging cables to be supplied. Electronic devices with single use battery such as remotes, electronic shopping labels or IT peripherals will no longer require the replacement and disposal of batteries.

The Exeger cells will lead to less resource utilisation and reduce electronic waste.

**Climate Assessment**

The project's climate risks have been assessed as minimal. Climate change risk has been assessed as low for this project. The project supports climate change mitigation through generation of electricity using solar PV technology. The project is therefore considered to be 'Paris aligned', both against low carbon and resilience goals, and is in line with the EIB Group Climate Bank Roadmap 2021- 2025.

**EIB Paris Alignment for Counterparties (PATH) Framework**

The counterparty is in scope and screened out of the PATH framework, because it is not considered high emitting or high vulnerability.

## Social Assessment

The project does not have any significant negative social impacts. Environmental and social sustainability is high on the company's agenda. The project will generate significant employment opportunities in the area.

## Other Environmental and Social Aspects

EXEGER are compliant to the Regulation on the registration, evaluation, authorisation and restriction of chemicals (REACH) and the Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS). In addition, they are working on ISO 14001 certification by Q4 2023.

Luxembourg, 4 December 2023

## Conclusions and Recommendations

The project does not have any significant environment, climate, or social impacts.

The Exeger cells will generate renewable energy, lead to less resource utilisation and reduce electronic waste.

Sustainability proofing conclusion: the project is carried out in compliance with applicable national and EU environmental and social legislation. Based on the environment, climate and social (ECS) information and based on the review of the likely significant ECS risks and impacts and the mitigation measures and management systems in place, the project is deemed to have low residual ECS risks and impacts. No further sustainability proofing is required.

Considering the above, the project is acceptable for EIB financing in environmental and social terms.

There are no disbursement conditions related to environmental and/or social aspects of the project.