

Luxembourg, 23rd November 2023**Public**

Environmental and Social Data Sheet¹

Overview

Project Name:	FS1 E-METHANOL (CATALYST)
Project Number:	2023-0502
Country:	Sweden
Project Description:	<i>The design, construction and operation of the FlagshipONE industrial facility that will produce renewable electro-methanol (e-methanol) from electricity and waste CO₂. The plant will be located in Örnsköldsvik in Northern Sweden, and will have the capacity to produce ca. 55 kt/y of e-methanol per annum, to be used as green fuel for the shipping industry.</i>

EIA required: yes

Invest EU sustainability proofing required yes

Project included in Carbon Footprint Exercise²: yes

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

Environmental and Social Assessment

Environmental Assessment

The Project entails the implementation and operation of a 55kt/yr methanol production plant in Örnsköldsvik, Sweden. The Project comprises of (i) electrolyzers, (ii) a carbon capture unit, (iii) a methanol synthesis reactor and (iv) the necessary balance of plant infrastructure (storage units, control room, pipeline).

The Project falls, by virtue of its technical characteristics, under the scope of Annex I of EIA Directive 2014/52/EU (amending 2011/92/EU), requiring a full EIA process. In addition, the Project falls under the provisions of the Industrial Emissions Directive and it is below the thresholds set in the Seveso Directive in terms of amount of chemicals processed/stored, hence not captured under the Seveso safety requirements.

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.



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The permitting procedure was undertaken for capacity up to 65kt of methanol per year. Public consultation was conducted as part of the EIA process, following which an environmental permit was issued. According to the ESIA and the environmental permit, the Project is not expected to entail significant negative impacts.

The Project is located within an industrial activities area, which also hosts among others biorefineries, a biomass combined heat and power plant (CHP) and a fuel storage facility. Due to the small size of the Project, cumulative impacts are not significant. The protected sites in the vicinity according to the EIA are (i) Hörsjön lake natural reserve 1km northeast, (ii) Veckefjärden nature reserve 2.5km northwest, (iii) Alneskogen nature reserve, and (iv) the Moälven Natura2000 site 1km south. The EIA and the environmental permit do not expect impacts extending on the protected areas.

The main inputs of the Project are electrical energy, steam, process and cooling water and the flue gases which are collected from the neighbouring CHP plant for the carbon capture process. The CHP Plant is existing and in operation (not part of the scope to be financed by the EIB). The grid connection area of the CHP plant will be used for the grid connection of the Project.

The main outputs of the Project are (i) methanol which will be stored in a neighbouring (existing) storage facility prior to being sold, (ii) steam which will be provided to the district heating system at times of demand, (iii) gaseous and liquid residual compounds which will be provided to the CHP plant for combustion, (iv) and the return of the cooling and process water.

The EIA and the environmental permit treat among others, the topics of safety, noise, emissions to the environment and in particular the impacts due to the cooling water circuit. Safety specific requirements are established in the environmental permit. As the process requires cooling, this will be performed from the existing cooling water circuit. Supplementary studies have been performed and suggest that no significant impacts are expected from the cooling water and water quality will not deteriorate.

The environmental permit establishes restrictions on noise impacts, water discharge thermal energy, and water discharge quality. A trial period commences at the Project's implementation completion date, whereby the promoter is required to perform additional tests for discharges into the environment (air emissions and cooling water). Such results will be communicated to the competent authorities to determine the allowed conditions for the water discharge.

The aforementioned monitoring plan and the Promoter's action for complying with the requirements of the environmental permit will be reported to the Bank in the context of the finance contract.

Climate Assessment

The Project qualifies as a climate change mitigation activity, in line with the EU Taxonomy definition. It will comply with the relevant provisions for hydrogen and hydrogen based fuels, arising from the Renewable Energy Directive and the relevant delegated acts, including the use of renewable electricity and biogenic CO₂. The Project has been assessed for Paris alignment and is considered to be aligned both against low carbon and resilience goals against the policies set out in the Climate Bank Roadmap (*Table A: Energy - Production, storage and transport of low-carbon gaseous, liquid and solid energy carriers, including related infrastructure*) and the EIB Energy Lending Policy.



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EIB Carbon Footprint Exercise

Estimated annual emissions of project in a standard year of operation: – absolute (gross) 22.4kTCO₂/yr and relative (net) -66.7 ktCO₂e/yr. The assumptions are based on the Bank's carbon footprint methodologies. The Project absolute emissions stem from the consumption of electrical energy (assumed as per Sweden's grid factor) and steam from the neighbouring CHP plant (assumed to run 15% on peat and 85% on eligible biomass based on information provided by the Promoter; to be noted that peat is expected to be fully phased out). The produced methanol is assumed to replace diesel oil as shipping fuel.

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

As the Project is implemented in an area of existing industrial activity, it is not expected to entail relevant negative social impacts.

Occupational, public health, safety and security issues are addressed in the permits of the Project. The EIA suggests that the accident scenarios which were examined do not entail impacts beyond the boundaries of the Project in residential areas or the neighbouring industrial activities.

The Promoter has adopted a quality, health, safety and environment policy at group level. As the final design of the installation is maturing, project specific environment, social, governance, health and safety management plans will be developed for the operation phase. The development progress of such plans will be required to be reported to the Bank as a contractual undertaking.

Public Consultation and Stakeholder Engagement

The Promoter and the authorities undertook consultation in the context of the EIA process. The consultation included (i) key authorities with whose consultation was via meetings, (ii) additional authorities and organisations via written process and (iii) local residents and the public with direct post mail with invitation to participate and publications in newspapers. The stakeholder engagement process is described in the ESIA and the environmental permit.

For the implementation and operation phase of the Project, the Promoter has channels of contact for affected people on social responsibility, sustainability and environmental matters.

Other Environmental and Social Aspects

The Promoter is known to the Bank from previous operations and has the capacity to implement the project in line with the Bank's E&S requirements. The promoter has a solid organisational structure and has certified its environmental management systems.

Conclusions and Recommendations

The finance contract will require the Promoter to report on the implementation of the ESG-H-S management plan during the implementation phase and the trial period.

The overall impact of the Project is acceptable for EIB financing in ECS and InvestEU Sustainability Proofing terms.