

Luxembourg, 21<sup>st</sup> March 2024

## Environmental and Social Data Sheet

### Overview

Project Name:	<i>REN-GAS GREEN LIQUID FUELS PRODUCTION</i>
Project Number:	<i>2022-0056</i>
Country:	<i>FINLAND</i>
Project Description:	<i>Design, implementation and operation of several large-scale (~40 to 50 MW per facility, totalling to up to 300 MW) renewable hydrogen production facilities for the production of synthetic methane, to be co-located at various combined heat and power stations at several sites in Finland.</i>
EIA required:	yes
Project included in Carbon Footprint Exercise:	no

### Environmental and Social Assessment

The project concerns a Lending Envelope (LE) dedicated to support the development, installation and operation of a portfolio of very large-scale (~40 to ~50 MW) renewable hydrogen/synthetic fuel production facilities. The hydrogen (H<sub>2</sub>) would serve as a basis for synthetic e-methane production for distribution to offtakers operating in the transport sector. CO<sub>2</sub> sourcing would be from flue gases of existing Combined Heat and Power (CHP) plants, operating on the basis of either biomass or refuse derived fuels (waste). The hydrogen/synthetic fuel production facilities would hence be located next to the existing CHP plant sites in Finland. Excess process heat from the hydrogen and synthetic fuel production could be supplied into existing district heating networks.

Each investment by the Bank into a hydrogen facility (sub-operation) to be allocated to this LE, will be subject to individual appraisal and approval.

#### Environmental Assessment

Production and storage of H<sub>2</sub> falls under item 6a,c of Annex II of EIA Directive 2011/92/EU (as amended by Directive 2014/52/EU), for which Member States shall determine whether the project shall be made subject to a mandatory EIA based on defined criteria.

According to the national legislation governing the procedure for Environmental Impact Assessment ("EIA Act" 252/2017) and the Government Decree on the Environmental Impact Assessment Procedure (EIA Decree 277/2017) hydrogen production falls under the category 6c "*chemical industry integrated production facilities for industrial scale production of organic or inorganic compounds*", for which an EIA is legally mandatory.

Further, H<sub>2</sub> production needs to demonstrate compliance with applicable industrial safety regulations related to the handling and storage of chemical products in terms of safety and accident prevention, such as the SEVESO directive.

Renewable H<sub>2</sub> production needs to be aligned with the sustainability and GHG emission savings criteria of relevant EU directives and regulations, incl. the threshold for substantial contribution to climate mitigation, set by the EU Taxonomy.

In view of the generic design of a hydrogen facility, it is assumed that main impacts on the environment will include noise, dust and increased traffic during the construction phase and visual and land use impacts during operation. The nature of these potential impacts allows, with the appropriate mitigation measures in place, to mitigate significant negative effects to the environment.

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According to the Bank's procedures, an "EIB Carbon Footprint Exercise" is not required at the level of the Lending Envelope, rather it will be performed at the level of each sub-operation. Thus, the following is reported for general information and purely indicative.

In case the LE will contribute to deployment of the entire envisaged electrical capacity of electrolyser, it is calculated for base case hydrogen production volumes - in accordance with the Bank's current Carbon Footprint methodology - that the expected hydrogen and subsequent synthetic fuel ("e-methane") volumes would avoid natural gas consumption and lead to reduction of CO<sub>2</sub> equivalent emissions of ~175 kt CO<sub>2</sub>e/year, over the lifetime of sub-operations allocated to the LE. Furthermore, the excess process heat supplied to existing district heating system in a sub-operation's area would avoid average natural gas and biomass consumption for domestic heating, leading to reduction of CO<sub>2</sub> equivalent emissions of ~110 kt CO<sub>2</sub>e/year, over the lifetime of sub-operations allocated to the LE.

**Social Assessment**

The hydrogen/synthetic fuel production facilities are expected to be built next to the existing CHP plants, located in industrial areas. Thus, expropriation or resettlement is very unlikely to occur for sub-operations to be allocated to the LE. In case the LE will contribute to deployment of the entire envisaged capacity, about 800 person-years of temporary employment would be created during implementation. Further, 60 full time equivalent (FTE) posts are expected to be created for the operational phase. The employment conditions and the level of inclusion will be in line with national regulations.

**Public Consultation and Stakeholder Engagement**

According to the national legislation, the type of hydrogen/synthetic fuel production facilities, envisaged to be funded by this LE, are subject to a mandatory EIA including public consultation. Hence, any facility to be allocated to this LE will have to successfully pass an EIA process. The promoter will be required to share an electronic copies of the EIA programmes (scoping and associated decisions) and EIA reports to the Bank for publication on its website. The Bank will request the competent authority's decisions from the promoter as well as the authorities' decisions concerning the need for an appropriate assessment of potential impacts on the integrity of Natura 2000 sites.

**Other Environmental and Social Aspects**

The national EIA process comprises a scoping exercise ("EIA programme"), defining the framework of the actual environmental impact assessment, to which the competent authorities opine, including the considerations collected through a public hearing.

The assessment itself, based on the scoping report, will have to present the sub-operation's characteristics, technical solutions, and the unified assessment of its environmental impact. The report of the assessment will be equally subject to public hearings. The EIA procedure ends when the competent authority issues a Reasoned Conclusion including statements and opinions of other stakeholders. The Reasoned Conclusion forms the basis for a subsequently needed environmental permit in accordance with the Environmental Protection Act (527/2014) and the Government Decree on Environmental Protection (713/2014) to be issued by a different (permit) authority. For the permit the sub-operation needs to meet the requirements of the Environmental Protection Act and other legislation. An environmental permit can only be granted when the EIA procedure is completed.

Based on the current generic design, for a hydrogen/synthetic fuel production plant to be allocated to this LE, it would be considered a facility pursuant to sections 4a and 4b of Appendix 1 of the Environmental Protection Act, hence requiring an environmental permit. Further necessary permits comprise those required by (a) the national Act on the Safety of the Handling of Hazardous Chemicals and Explosives (390/2005), if the hydrogen production facility would



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involve large-scale storage of hazardous chemicals; (b) the SEVESO III directive, as a hydrogen production facility is estimated to exceed the threshold for a major accident hazard.

## Conclusions and Recommendations

Subject to the following (and other, specific to particular projects) conditions, the LE is expected to be acceptable for EIB financing in E&S terms.

Each hydrogen/synthetic fuel production facilities, to be allocated to this LE as a sub-operation will be subject to individual appraisal and approval by the Bank.

The Bank will require the promoter to undertake:

- to obtain positively approved Opinions and Reasoned Conclusions of the EIA procedures, granted by the competent authorities, and subsequent environmental permits prior to that the Bank's funds are allocated to a hydrogen production facility;
- to send electronic copies of a facility's EIA programme and report to the Bank for publication on its website;
- to send to the Bank copies of all EIA decisions and environmental permits issued by the competent authorities and concerning a facility to be allocated to the LE;
- to provide the competent authorities' decisions concerning the need for an appropriate assessment of potential impacts by a facility on the integrity of Natura 2000 sites and the corresponding appropriate assessment, if applicable;
- to take into account and implement conditions expressed in any screening decision, Opinion, Reasoned Conclusion, or environmental permit granted by the competent authorities for a hydrogen production facility;
- to store and keep updated any documents as may be relevant for a hydrogen production facility, supporting the compliance with the provisions under the EU Environmental acquis;
- to promptly deliver, upon request, such documents to the Bank.

A separate ESDS will be published for each sub-operation to be allocated to this LE.