

Environmental and Social Data Sheet

Overview

Project Name:	CORRIDOR H2 - OCCITANIE
Project Number:	20200163
Country:	France
Project Description:	Création d'un corridor routier utilisant de l'hydrogène vert en région Occitanie. La BEI soutient un programme régional de développement d'infrastructures locales de production, de transport et de distribution d'hydrogène, ainsi que le développement d'une flotte de véhicules lourds (autocars, camions et remorques réfrigérées) fonctionnant à l'hydrogène.
EIA required:	requirements might vary
Project included in Carbon Footprint Exercise ¹ :	yes

Environmental and Social Assessment

The project concerns the deployment of zero-emission heavy-duty vehicles and fuelling (production, distribution and refuelling) infrastructure in the Occitanie Region over the 2020-2023 period, which will enable the deployment of hydrogen fuelled vehicles for the large quantities of fresh produce transported annually from Spain and southern France to the rest of Europe.

The Occitanie Region has the ambition to become the first Positive Energy Region in Europe. Hydrogen technologies are fully integrated into its strategy for renewable energy production, and large-scale production of green hydrogen (produced only from renewable energy sources) underpins the Region's strategy for decarbonising heavy transport, including maritime and port applications as well as road transport.

The infrastructure will consist of two green hydrogen production sites and a network of 8 Hydrogen refuelling stations (HRS) that will serve a fleet of up to of 40 fuel cell trucks (FCT) and associated refrigerated units and trailers and up to 15 retrofitted hydrogen powered intercity coaches. The logistics chain will use innovative containers HDS, in order to provide and guarantee the continuity of H2 distribution service for the customers. The HRS will be located along the significant flows heavy duty traffic and provide initial coverage of the strategic roads in the Occitanie region, allowing operations of local/regional vehicles, as well as serving passing international traffic between Spain and Northern Europe. These HRS will be on either the TEN-T Core network on the North Sea Mediterranean corridor, or on the TEN-T Comprehensive network connection linking this Corridor with the Atlantic Corridor at Bordeaux.

Hydrogen technologies such as those to be deployed in the context of this project have been demonstrated in other applications and are considered proven and fully commercial technologies but not at this scale, in particular for the main production site. This is one of the first time that these technologies are deployed as part of an ecosystem (production, distribution, vehicles and refrigerated trailers). The conversion of conventional vehicles to hydrogen entails potentially experimental development risks at this early deployment phase.

¹ 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 hydrogen produced by the project will be dedicated to other hydrogen powered vehicles: urban, rail and maritime usages that can migrate to zero emissions are already targeted in the coming years. There are several ongoing demonstration projects in maritime and port applications, notably the HyDROMER hydrogen-hybrid dredger, the GreenHarbour project using hydrogen barges for cold-ironing (supply of power to vessels in port) and the HyBARGE project. The Corridor project, with its focus on road freight and refrigerated transport, is highly complementary to these maritime initiatives, helping to decarbonise the 'onward chain' after the arrival and processing of freight at ports and airports. Urban buses in Toulouse and Montpellier may also benefit from the hydrogen produced in the project.

The main production site can produce up to 7.2 t/day of green hydrogen from mid-2023 to supply 7 HRS. A second on-site electrolyser will produce up to 600 kg/day close to the Toulouse Croix-Daurade HRS. Six of the HRS will have distribution capacities of up to 600 kg/day, with two larger ones of up to 1.2 tons/day. The average daily demand forecasted by 2024 is about 2.3t H₂/day.

By 2030, it is envisaged that 54% of the total hydrogen produced will be used as alternative fuel for FCT, 13% for the intercity services coaches and urban buses, 18% for maritime vessels and 15% for fuel cell vehicles (Light duty vehicles and passengers cars).

Environmental Assessment

The Competent Authority is the DREAL Occitanie (Direction Régionale de l'Environnement, de l'Aménagement et du Logement).

The main hydrogen production will be located in Port-la-Nouvelle in the Occitanie Region. An SPV will own and operate the main production unit. The Occitanie Region expects AREC (the regional energy and climate agency of the Occitanie Region) to become a strategic equity partner within this SPV. AREC has already gained prior experience in the deployment of H₂ technologies in the region along with ENGIE Cofely and two sites are being deployed with no foreseen issues with a commercial opening in 2021 (HyPort project²). AREC will also ensure an external engineering, with technical and regulatory expertise, to be mandated as project manager, responsible for the supply of the complete installation including (environmental) performance guarantees.

The implementation of the production facilities falls under Annex II of the EIA Directive 2014/52/EU amending the EIA Directive 2011/92/EU meaning that a screening decision from the Competent Authority is required. The Initial planned storage capacity is below the lower-tier threshold (5 tons) of the SEVESO III Directive (Directive 2012/18/EU). Expansion may take place in the future; however, it is not part of the project scope. But the competent authority will decide on how to consider the project, with or without its extension.

The construction and the exploitation of the production site will have to respect the following legislation. Site in ICPE under the IED directive heading 3420 (hydrogen production) and 4715 (hydrogen storage). Article L512-1 of the Environment Code introduces the notions of authorization, registration or declaration). By being classified under heading 3420, the hydrogen production unit will be subject to authorisation (storage being subject to declaration if the threshold is between 100kg and 999kg and authorisation if it exceeds 1t).

² AREC is shareholder in the HyPort project, a public-private partnership designed to develop a hydrogen ecosystem at Toulouse Blagnac and Tarbes airports. The partnership will produce and distribute green hydrogen for airport applications, including future ground power and auxiliary power units (APUs) in aircraft and transport of passengers to and from the airports.

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If the 5t threshold for hydrogen production is exceeded, the hydrogen production unit will be classified SEVESO low threshold in the sense of section 9 of chapter V of the environment code. Above 50t, the unit will be classified SEVESO high threshold; this introduces specific safety features and even the obligation to have land control in the surrounding area. DREAL will indicate whether a procedure ICPE simple declaration or authorization must be engaged.

As regards the authorizations necessary for the operation of the production unit, this concerns the Single Environmental Authorization ICPE, which covers different compartments such as the building permit, the water law, the exemption for the destruction of protected species, land clearing.

In accordance with Art 122-1 of the Environmental Code, the project is subject to the notion of a project and must therefore take into account all the work impacting the natural environment, such as the construction of the electrical link from the Port-La Nouvelle substation.

The closest Natura 2000 area to Port-la-Nouvelle is located in the vicinity of the main production site and mitigation measures will be put in place, if any likely significant impacts are identified at the environmental assessment.

As far as the HRS are concerned, the applicable regulations cover three themes: (i) compliance with local building rules, (ii) the application of safety rules related to the presence hydrogen on site and (iii) the conformity certification of the equipment of the station and service to vehicles.

Several SPVs will built and operate the Corridor H2 stations. The HRS will be subject to a screening decision. The HRS will also have to comply with the technical specifications for hydrogen refuelling points for motor vehicles set out in the AFID Directive (Directive 2014/94/EU). Given the expected storage size (below 2 tons) and the location. major environmental impacts related to the HRS are not likely at this stage.

The hydrogen refuelling infrastructures will be located at about 200 m from the nearest residential building, and at 800m km from the nearest Natura 2000 site (for the electrolyser at Port-La-Nouvelle which will be constructed in the existing port), and are thus expected not to entail meaningful negative impacts or risks for these. The promoter will be required to provide a written confirmation from the Competent Authority.

All the other components (fuel cell vehicles) of the project do not fall under the Annexes of the EIA Directive.

Construction and maintenance contracts of the assets will be performed for the first few years of operation by leading hydrogen equipment manufacturers with proven experience with the type of infrastructure, including a transfer of skills to the SPV teams in the operations department for the Port-La-Nouvelle production site.

All relevant and applicable building, environmental, and safety permits for the infrastructure will be provided by the Promoter before disbursement against these components.

Hydrogen production will use electricity source from the central grid, supplemented by the purchase of guarantee of origin (GO) . The promoter plans to use only electricity generated from renewable energy sources. In the medium term (2025/27), a PV solar farm (20MW capacity - potential 30 GWh production per year) on the Port-La-Nouvelle site is expected to be built and could be able to supply the H2 production plant (i.e. onsite production and consumption of electricity). The project will thus contribute, in line with the AFID Directive (Directive 2014/94/EU), to provide for a solution to decarbonise the transport sector and to make larger-scale hydrogen-powered motor vehicle deployment possible with positive impacts on environment in terms of air quality improvement, greenhouse gas emissions and noise reduction.

At the current stage, no environmental assessment has been undertaken, and the Bank will require an approval by the competent authority prior to the start of construction of the components of the project.

The effects of climate change will be considered in all aspects of the design and operation of the HRS and the vehicles.

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EIB Carbon Footprint Exercise

For consistency purposes, the standard Bank's standard methodology has been applied and leads to an estimate of the annual emissions savings of the project of some 18 kT CO₂e/year in a standard year of operation.

In fact, in line with the Bank's standard methodology, the standard grid factors were used for the carbon footprint calculations even if green energy is expected to be used for the production of the hydrogen.

In a standard year, the project is expected to reduce CO₂ emissions as it will enable the operation of hydrogen-powered vehicles replacing end of life diesel trucks, buses and other vehicles that will otherwise emit 24 Kt CO₂e/year (well-to-wheel emissions, including production and distribution of diesel fuel). In 2030, the promoter forecasts that hydrogen powered light duty vehicles/personal cars will cover 25 million km on average in 2030 and trucks and coaches, some 12 million km per year in 2030.

Overall, using the Bank's standard methodology, the project is estimated to lead to a net increase of 6.1 Kt of CO₂ equivalent per year. This calculation is deemed conservative as the standard grid factors have been taken into account not properly reflecting the project's key features. In fact, the promoter intends to use of renewable energy sources for the production of the hydrogen for the Port-la-Nouvelle site and in any case will commit to buy green certificates equivalent to the energy consumption. FCT are also implemented for the distribution of the hydrogen. Therefore, if a zero emission grid factor is considered for that production site, the project is expected to lead to a net reduction (-24 ktCO₂e/yr) in GHG emissions. Furthermore, additional CO₂ savings are expected once hydrogen-driven vehicles become available on competitive terms in Europe.

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.

Public Consultation and Stakeholder Engagement

Requirements in terms of public consultation under the EIA process will be known once environmental procedures will be carried out.

Conclusions and Recommendations

Hydrogen production will be produced through electrolysis using renewable energy sources. The project will thus contribute, in line with the AFID Directive (Directive 2014/94/EU), to provide for a solution to decarbonise the transport sector and to make larger-scale hydrogen-powered motor vehicle deployment possible with positive impacts on environment in terms of air quality improvement, greenhouse gas emissions and noise reduction.

Environmental impacts of the implementation of the hydrogen production and distribution infrastructure are not fully known yet as environmental procedures will take place at a later stage.

Conditions

Before disbursing against the infrastructure components, namely the production sites and each of the refuelling stations, the Promoter shall provide to the EIB:

- All screening decisions issued by the Competent Authority for nature and environment concerning the component and the different reports and studies that supports the decision (Danger study (Art R122.13) and the Building, environmental and safety permits.
- If applicable, the Environmental Impact Assessment (EIA) and/or the biodiversity assessment under the EU Habitats and Birds Directives (and the Protected Species Destruction Exemption File).
- A written confirmation from the competent authority that the Project and/or the component will have no impact on Natura 2000 (and the Appropriate Assessment if applicable).

The Promoter undertakes not to allocate the Bank's funds to any investment under this project that requires an Environmental Impact Assessment (EIA) until the EIA and/or the biodiversity assessment have been finalised and approved by the competent authority. An electronic copy of the EIAs must be placed on the website of the Promoter from the moment the EIAs are made available to the public and maintained until completion of reporting.

Based on the information provided by the Promoter and with appropriate conditions in place, the project is considered acceptable for EIB financing in environmental and social terms.