


The initial project aimed to test on existing freight locomotives the substitution of non-road diesel (NRD) by Oleo100 bio-fuel derived from French rapeseed residues on Europorte freight locomotives (GETLINK group) which reduces greenhouse gas emissions on the routes concerned by about 60%. The tests of this first-of-a-kind innovation being successful, Getlink is now developing the project, from 2022, on a medium scale.

Starting date of the project	6 july 2021 – extension starting in summer 2022																	
Project Localisation Places of implementation of the project at this stage and targeted geography if replicable.	In 2021 : Experiment on the routes Nogent-sur-Seine (10) / Dunkerque (59) and Nogent-sur-Seine / Sotteville-lès-Rouen (76). In 2022 : continuation of this path and extension to traffic to other rail routes in France: Nogent (10)/Salaise (69)																	
Project objectives Type of climate innovation of the project with a description of the problem/issue addressed	The project must confirm the technical feasibility of replacing Non-Road Diesel (NRD) with biofuel despite logistical and commercial constraints.																	
Detailed project description	<p>The non-road diesel (NRD) consumed for locomotive traction represents the first item of the GETLINK group GHG inventory (24000 tonnes CO_{2e} in 2021 for 9 million liters diesel consumed). The reduction of these emissions related to traction fuel is a key issue for the Group. The replacement of NRD with agrofuels in current locomotives reduces these emissions by at least 60% from well to wheel.</p> <p>The initial project in 2021 made it possible to confirm the feasibility of using Oleo100 biofuel on Euro4000 locomotives during a full-scale test over a period of 3 months (and not on a test bench because the group does not have the operational latitude to be able to demobilize one of its locomotives) and to specify the prerequisites operational (positioning of fuel tanks and supply, identification of possible operational impacts, adjustment of driving and maintenance procedures, etc.).</p> <p>As the test was quite successful without identifying any limiting obstacles, this second phase should make it possible to expand the fleet and the train paths concerned in order to significantly reduce the emissions of this item. This project represents both a logistical challenge (supplying biofuel at the right pace and in the right places) and a commercial challenge (finding the relevant flows and ensuring the economic equation).</p> <p>The fuel used is developed from 100% French rapeseed by SAIPOL, subsidiary of the AVRIL group. The product used is a co-product resulting from the transformation of rapeseed into edible oil and protein-rich oil serving as a cake for the nutrition of livestock. Link to biofuel: https://oleo100.com/oleo-assets/uploads/2020/02/oleo_1911161_brochure_oleo_210x297mm_8pages-2.pdf</p>																	
Main project's drivers for reducing the greenhouse gas emissions Enter the information in the appropriate boxes	<table border="1"> <thead> <tr> <th>Reduction levers</th> <th>Details on the aspects of the project</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Energy and resource efficiency (including behaviour)</td> <td></td> </tr> <tr> <td><input checked="" type="checkbox"/> Energy Decarbonisation</td> <td>Decarbonization of locomotive traction energy</td> </tr> <tr> <td><input type="checkbox"/> Energy efficiency improvements</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Improving efficiency in non-energy resources</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Emissions absorption: creation of carbon sinks, negative emissions (BECCS, CCU/S, ...)</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Financing low-carbon producers or disinvestment from carbon assets</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Reduction of other greenhouse gases emission</td> <td></td> </tr> </tbody> </table>	Reduction levers	Details on the aspects of the project	<input type="checkbox"/> Energy and resource efficiency (including behaviour)		<input checked="" type="checkbox"/> Energy Decarbonisation	Decarbonization of locomotive traction energy	<input type="checkbox"/> Energy efficiency improvements		<input type="checkbox"/> Improving efficiency in non-energy resources		<input type="checkbox"/> Emissions absorption: creation of carbon sinks, negative emissions (BECCS, CCU/S, ...)		<input type="checkbox"/> Financing low-carbon producers or disinvestment from carbon assets		<input type="checkbox"/> Reduction of other greenhouse gases emission		
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Emission scope(s) on which the project has a significant impact and quantification of GHG emission reductions per emission scope		Aspects of the project contributing to the reduction of emissions by emission category	Quantification of associated GHG emissions by emission category Please follow the quantification methodology used in the Afep guidelines .
Indicate the aspects of the project that contribute to the reduction of emissions per category of emissions considered (left-hand column) and the quantification of associated emissions.	Reduction of the company's carbon dependency		
Indicate the main hypotheses and calculation steps in the intended section (below the table)	Scope 1 <i>Direct emissions generated by the company's activity.</i>	Reducing emissions from burning biofuel in locomotives	Scope 1 before-project (project-wide) = 1542 tCO2 - 600 000 litres - EF NRD : 2.57 kgCO2/l Scope 1 after-project = 664 tCO2 - 600 000 litres - EF Oleo 100 : 1.106 kgCO2/l 878 tCO2 reduction (for the annual consumption indicated above)
For further details, please refer to the methodology guidelines.	Scope 2 <i>Indirect emissions associated with the company's electricity and heat consumption.</i>		
	Scope 3 <i>Emissions induced (upstream or downstream) by the company's activities, products and/or services in its value chain.</i>	Reducing emissions from upstream biofuel in locomotives.	Scope 3 before-project (project-wide) = 354 tCO2 - 600 000 litres - EF GNR : 0.59 kgCO2/l Scope 3 after-project = 0 t - 600 000 litres - EF Oleo 100 : 0 kgCO2/l 354 tCO2 reduction (for the annual consumption indicated above)
	Increase of carbon sinks		
	Emissions Absorption <i>Carbon sinks creation, (BECCS, CCU/S, ...)</i>		
	GHG emissions avoided by the company at third parties		
	Avoided Emissions <i>Emissions avoided by the activities, products and/or services in charge of the project, or by the financing of emission reduction projects.</i>		
	Clarification on the calculation or other remarks: By totaling the gain in Scope 1 and Scope 3, the project saves 1232 tons of CO2 over 12 rolling months (i.e. 4% of Group's emissions). The Oleo100 emission factor (EF) of 1.106kgCO2/l is the result of a durability calculation as part of the Saipol certification scheme audited by Bureau Veritas. It should be noted that according to the carbon accounting rules of the GETLINK group (based on public benchmarks and in particular the ADEME database), emissions related to the combustion of Oleo100 (like all biofuels) will be counted as zero. Nevertheless, the overall gain (scope Scopes 1 and 3) will remain the same as in the approach adopted in this sheet.		
Modality of verification of the quantification.	Calculation standard used (ADEME base, GHG protocol, etc.): click here to enter the information The emission factor used for non-road diesel is that of the ADEME database available on the date of the Group reporting, like most of the Group's emission factors. Verification of the calculation (internal or external): The calculation was reviewed by Carbone 4 at the end of 2020. In addition, the reduction in the GHG balance is attested by a sustainability certificate provided by the producer to the user (GETLINK) but also to the French authorities.		
Other environmental and social benefits of the project	The biofuel used improves air quality by significantly reducing emissions of fine and ultrafine particles. The rapeseed used is part of a trajectory of progress, particularly on its environmental balance with a real policy of defense of biodiversity (cultural rotation, pollinating activity, non-irrigated culture...). The production		

<p>If possible, list the impacts and Sustainable Development Objectives concerned</p>	<p>of traction energy from food residues is also a successful example of a circular economy contributing to national energy independence.</p> <p>In this sense, the project contributes to the following SDGs:</p> <ul style="list-style-type: none"> • SDG 3 Good Health and well-being • SDG 11 Sustainable Cities and Communities • SDG 13 Climate Action 
<p>Project maturity level</p> <p>Tick the corresponding current maturity level</p>	<p><input type="checkbox"/> Prototype laboratory test (TRL 7)</p> <p><input type="checkbox"/> Real life testing (TRL 7-8)</p> <p><input type="checkbox"/> Pre-commercial prototype (TRL 9)</p> <p><input type="checkbox"/> Small-scale implementation</p> <p><input checked="" type="checkbox"/> Medium to large scale implementation</p> <p>Remarks: click here to enter the level of maturity of the project</p>
<p>Capacity and conditions of the project reproducibility, with associated climate impact mitigation potential</p>	<p>This test project aims to be able to expand the use of Oleo100 to about 1.1 million liters per year by 2023, which will eventually represent a reduction of 2340 tons of CO2 per year.</p>
<p>Amount of investment made (in €)</p>	<p>No hardware investment cost. Costs are operating costs related to the purchase and supply of the biofuel</p>
<p>Economic profitability of the project (ROI)</p>	<p><input type="checkbox"/> ST (0-3 years)</p> <p><input type="checkbox"/> MT (4-10 years)</p> <p><input checked="" type="checkbox"/> LT (> 10 years)</p> <p>Remarks: <input type="checkbox"/> At this stage the project is not profitable given the unit price per litre of biofuel and the unfavourable tax gap between RNG and Oleo100 click here to enter the information</p>
<p>Engaged partnerships</p>	<p>Partnerships with EUROPORTE, AVRIL/SAIPOL and STADLER have been initiated through this project.</p>
<p>Open comments from the project owner</p>	<p>/</p>
<p>More about the project</p>	
<p>Contact the company carrying the project</p> <p>Please specify an ad hoc e-mail address that will allow the reader to contact the project company directly</p>	<p>Romain.dufour@getlinkgroup.com</p>
<p>Project URL links</p>	<p>https://presse.getlinkgroup.com/actualites/europorte-et-saipol-unis-pour-decarboner-le-rail-avec-oleo100-f582-f6b8a.html</p>
<p>Titre SEO</p>	<p>Substitution of non-road diesel by Oleo100 on freight trains</p>
<p>Méta Description</p>	<p>Getlink is replacing Non-Road Diesel (NRG) with Oleo100 biofuel made from French rapeseed for its freight trains.</p>
<p>Illustrations of the project</p> <p>3 photos/videos minimum (in HD format to be attached)</p>	