

REHASKEEN®, UN PRODUIT INNOVANT D'INDUSTRIALISATION AU SERVICE DE LA MASSIFICATION DE LA RÉNOVATION ÉNERGÉTIQUE

REHASKEEN

Simple, economical, fast and durable, REHASKEEN® makes it possible to industrialise and accelerate the renovation of energy-intensive buildings. In addition, our prefabricated facades are specially designed to meet the fire standards of collective housing and establishments open to the public, thus enabling the thermal renovation of high-rise buildings.

Starting date of the project	01/01/2019		
Project Localisation Places of implementation of the project at this stage and targeted geography if replicable.	Metropolitan France / Europe		
Project objectives Type of climate innovation of the project with a description of the problem/issue addressed	Massifying thermal renovations to accelerate the ecological transition		
Detailed project description	Large prefabricated panels for external insulation in rehabilitation		
Main project's drivers for reducing the greenhouse gas emissions Enter the information in the appropriate boxes	Reduction levers	Details on the aspects of the project	
	<input type="checkbox"/> Energy and resource efficiency (including behaviour)		
	<input type="checkbox"/> Energy Decarbonisation		
	<input checked="" type="checkbox"/> Energy efficiency improvements	Improvement of the thermal insulation of renovated buildings by external insulation.	
	<input type="checkbox"/> Improving efficiency in non-energy resources		
	<input checked="" type="checkbox"/> Emissions absorption: creation of carbon sinks, negative emissions (BECCS, CCU/S, ...)	Possibility of installation with bio-sourced insulation (wood wool).	
	<input type="checkbox"/> Financing low-carbon producers or disinvestment from carbon assets		
Emission scope(s) on which the project has a significant impact and quantification of GHG emission reductions per emission scope 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. Indicate the main hypotheses and calculation steps in the intended section (below the table) For further details, please refer to the methodology guidelines.	<input checked="" type="checkbox"/> Reduction of other greenhouse gases emission	Improving the thermal insulation of buildings reduces the use of heating and cooling systems and therefore the emissions associated with heat transfer fluids.	
		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 .
	Reduction of the company's carbon dependency		
	Scope 1 <i>Direct emissions generated by the company's activity.</i>		Over the entire life cycle of the product, the associated greenhouse gas emissions (production, transport, installation, end of life) are of the order of 100 tCO ₂ /energy renovation project, i.e. about 25% less than a conventional renovation solution.
	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</i>	Better energy efficiency The product has been designed to be completely dismantled (in parts or as a whole) and recyclable.	

	<i>and/or services in its value chain.</i>		
	Increase of carbon sinks		
	Emissions Absorption <i>Carbon sinks creation, (BECCS, CCU/S, ...)</i>	Possibility of using bio-based insulation (wood wool).	
	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>	On average, upgrade from an E to a C energy label depending on the demands of the clients. All performances can be targeted, including passive buildings.	Changing the energy label from E to C reduces the emissions of a house by an average of 3 tCO ₂ /year in France.
<p>Clarification on the calculation or other remarks: merci de préciser The environmental impact was calculated using the simplified Life Cycle Assessment methodology established by VINCI and validated by a scientific committee.</p> <p>According to this method, the emissions associated with the production of the product (materials, design, assembly) are evaluated at 8.7 teCO₂; the emissions due to the installation of the product are evaluated at 1.46 teCO₂ and at the end of life the materials can be recycled which would bring a benefit evaluated at 0.77 teCO₂.</p> <p>Changing the energy label from E to C allows for an average energy saving of 16,000 kWh/year on a dwelling in France for heating and cooling. With an average emission factor of 188 geCO₂/kWh for heating and cooling in France, we obtain avoided emissions of 3 teCO₂/year on average for a dwelling.</p>			
Modality of verification of the quantification.	<p>Calculation standard used (ADEME base, GHG protocol, etc.): VINCI's internal calculation framework, based on Life Cycle Assessment</p> <p>Verification of the calculation (internal or external): external (Quantis)</p>		
Other environmental and social benefits of the project If possible, list the impacts and Sustainable Development Objectives concerned	<p>Circular economy The design of the product, which can be completely dismantled (by elements or in its entirety) and recycled, allows it to be integrated into value chains for the management of the end of the building's life and for the recycling and reuse of construction waste. The first Rehaskeen projects are currently being installed. Their design makes it possible to dismantle them and integrate them into the recycling chains, as practiced by the Group's businesses. At this stage, no product has had to be dismantled and recycled. It is therefore premature to illustrate this example in greater detail, as the first cases of use will come in possibly 20 to 30 years.</p>		
Project maturity level Tick the corresponding current maturity level	<div> <input type="checkbox"/> Prototype laboratory test (TRL 7) <input type="checkbox"/> Real life testing (TRL 7-8) <input type="checkbox"/> Pre-commercial prototype (TRL 9) <input type="checkbox"/> Small-scale implementation <input checked="" type="checkbox"/> Medium to large scale implementation </div> <p>Remarks: click here to enter the level of maturity of the project</p>		
Capacity and conditions of the project reproducibility, with associated climate impact mitigation potential	The first prefabrication workshop was set up in the Ile de France region. Eventually, a national deployment is planned with a prefabrication workshop in each region. The model can be replicated in Europe.		
Amount of investment made (in €)	2M€		
Economic profitability of the project (ROI)	<div> <input type="checkbox"/> ST (0-3 years) <input checked="" type="checkbox"/> MT (4-10 years) <input type="checkbox"/> LT (> 10 years) </div> <p>Remarks: click here to enter the information</p>		
Engaged partnerships	-		
Open comments from the project owner	-		
More about the project			
Contact the company carrying the project Please specify an ad hoc e-mail address that will allow the reader to contact the project company directly	rehaskeen@vinci-construction.fr		

Project URL links	https://www.vinci-construction.fr/sites/default/files/brochures/rehaskeen_vcf_pap.pdf	
Illustrations of the project 3 photos/videos minimum (in HD format to be attached)		