

Non Melting energy project



In 2018, Verallia initiated a process to identify and activate levers for reducing the energy consumption of the industrial processes implemented at its sites (excluding melting).

Starting date of the project	2018 (deployment until end of 2021)	
Project Localisation Places of implementation of the project at this stage and targeted geography if replicable.	The project is being implemented worldwide in all VERALLIA plants.	
Project objectives Type of climate innovation of the project with a description of the problem/issue addressed	Identify and activate levers for reducing energy consumption in industrial processes (excluding melting) for glass production. production processes (excluding melting).	
Detailed project description	<p>The approach initiated by Verallia consists of analyzing the energy consumption of the main non-melting equipment: air compressors, fans and annealing arches.</p> <p>This analysis makes it possible to compare current consumption with theoretical consumption calculated using digital models. The difference is then analysed in detail to identify the origin of the losses; for each identified loss, technical solutions for improvement are proposed and an efficiency calculation is made for each proposed action. A methodology is applied to enable a systematic and detailed analysis of all aspects of consumption. The maximum value of unidentified losses is set at 5% of the theoretical consumption value. An efficiency calculation incorporating the cost of CO2 is used to prioritise investments.</p> <p>This approach then makes it possible to optimise energy consumption, electricity and natural gas, on compressors, fans and annealing arches.</p> <p>The reduction in emissions remains modest for each project but the number of projects is significant:</p> <ul style="list-style-type: none"> - Dozens of projects concerning annealing arches - More than 100 projects concerning compressed air production <p>For example:</p> <ul style="list-style-type: none"> • The reduction of heat loss from the arches and the improvement of their operating conditions has 150 tCO2/year by limiting gas consumption. • Optimisation of electricity consumption for the production of compressed air and ventilated air, but also, more simply, of the consumption of electricity. 	
Main project's drivers for reducing the greenhouse gas emissions	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	Energy consumption optimisation
	<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		
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 .	
Reduction of the company's carbon dependency		
Scope 1 <i>Direct emissions generated by the company's activity.</i>	Reduction of fossil fuel of fossil fuels from heat loss arches and improvements in their	Example for an arch : -150 tCO2/year

		conditions of use	
	Scope 2 <i>Indirect emissions associated with the company's electricity and heat consumption.</i>	Optimisation of the power consumption of compressed production of compressed air and air production.	Examples: For a compressor : - 527 tCO2/year For a compressor fleet in a factory : -1104 tCO2/year
	Scope 3 <i>Emissions induced (upstream or downstream) by the company's activities, products and/or services in its value chain.</i>		
	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: The reduction in emissions is modest for each project but the number of projects is significant: - Several dozen projects concerning annealing arches- More than 100 projects concerning compressed air production			
Modality of verification of the quantification.	Calculation standard used (ADEME base, GHG protocol, etc.): : GHG Protoco		
	Verification of the calculation (internal or external): Internal verification		
Other environmental and social benefits of the project	This project contributes to SDG 9: Innovation, industry, infrastructure.		
Project maturity level	<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 Remarks: click here to enter the level of maturity of the project		
Capacity and conditions of the project reproducibility, with associated climate impact mitigation potential	The deployment of the methodology is replicable to all VERALLIA sites. The success of these projects depends on the impetus given by the general management and the availability of limited CAPEX.		
Amount of investment made (in €)	Very variable depending on the site, this can represent 400 to 500 k€ per site		
Economic profitability of the project (ROI)	<input checked="" type="checkbox"/> ST (0-3 years) <input type="checkbox"/> MT (4-10 years) <input type="checkbox"/> LT (> 10 years) Remarks: The payback period for the solutions proposed in this process is on average between 1.5 and 2.5 years. process is on average between 1.5 and 2.5 years.		
Engaged partnerships	No partnerships are involved in this project.		
Open comments from the project owner	/		
More about the project			
Contact the company carrying the project	corporate.communication@verallia.com		
Project URL links	/		

Illustrations of the project

