

## **CRYOPLANE – HYDROGEN VS. KEROSENE AS AIRCRAFT FUEL**

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Liquid Hydrogen is the only known fuel suitable for aircraft to be produced from renewable energy and offering extremely low emissions (zero CO<sub>2</sub>, very low NO<sub>x</sub>). Use of Liquid Hydrogen can: eliminate the dependency of aviation upon dwindling crude oil resources; eliminate, or at least reduce dramatically, the contribution of aviation to the anthropogenic greenhouse effect. The CRYOPLANE project shall provide a comprehensive analysis of the complex interrelated aspects, the feasibility of safety and environmental compatibility. It shall produce technical solutions and tools and indicate possible strategies for Europe for a smooth transition to the new fuel. Life Cycle Analysis (LCA) of kerosene is the first step for comparing the environmental impacts with those from different production chains of hydrogen fuel. A complete and accurate identification and quantification of air emissions, water effluents, and other life-cycle inputs and outputs has been performed. The environmental performance of kerosene that has been determined by the LCA study will be used as a reference point for the evaluation of hydrogen as an aviation fuel.