



European Commission

Innovation Fund Programme



Overview of ongoing projects in Finland

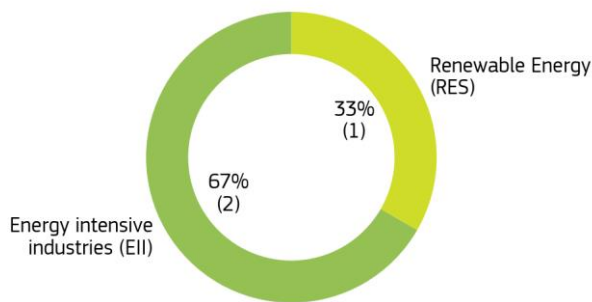
Funded by the revenue of the EU Emissions Trading System, the Innovation Fund's goal is to help businesses investing in innovative low-carbon technologies with significant GHG emissions reduction potential.

The Innovation Fund currently supports **3 projects** located in Finland, which will contribute to the decarbonisation of European industries with a total expected GHG emission reduction of **14.4 Mt CO₂ equivalent in the first 10 years of operation**.

The total **Innovation Fund grant in Finland is of EUR 226.0 million**, out of the **total relevant costs of EUR 882.7 million**, as defined in Art 5 of the Delegated Regulation 2019/856 on the Innovation Fund¹.

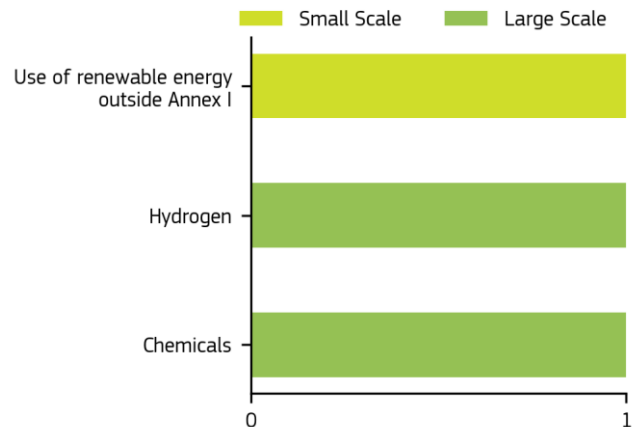
Projects per category

Number of projects and percentage of the total



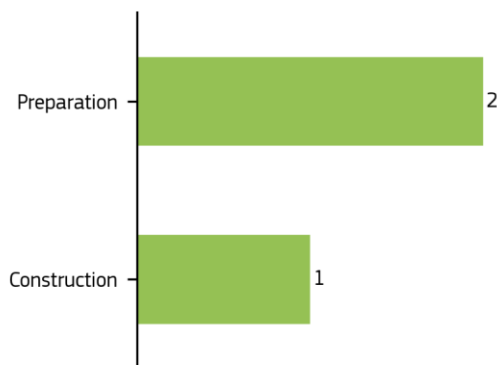
Projects per sector

Number of Small and Large-Scale projects



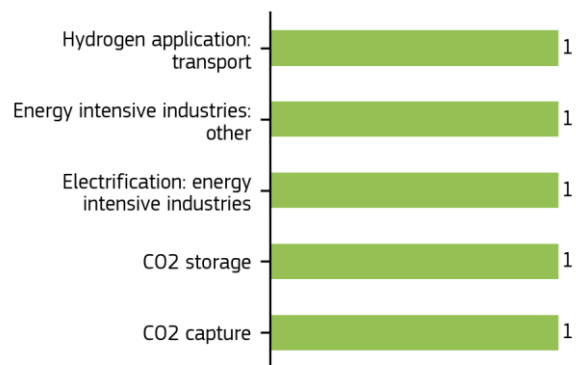
Projects per phase²

Number of projects



Top 5 technology pathways³

Number of projects



¹ OJ L 140, 28.5.2019, p. 9.

² Preparation means the period before financial close is reached; construction means the period between financial close and entry into operation; operation means that the construction is finished and the project has already started production.

³ Projects may employ several technological pathways, only the top 5 per country are kept in the graph.

List of ongoing Innovation Fund projects in Finland

Acronym	Title	Sector	Start date	Project phase	Beneficiaries	Innovation Fund grant (EUR million)	Expected GHG emission avoidance (t CO2eq)
Large Scale						223.3	14,374,232
PULSE	Pretreatment and Upgrading of Liquefied waste plastic to Scale up circular Economy	Chemicals	01/04/2022	Preparation	NESTE OYJ	135.0	10,337,331
SHARC	Sustainable Hydrogen and Recovery of Carbon	Hydrogen	01/03/2022	Construction	NES NESTE OYJ	88.3	4,036,901
Small Scale						2.8	44,815
eMETHANOLxWSolution	Next Generation tanker vessel powered by e-methanol and wind assisted propulsion	Use of renewable energy outside Annex I	01/10/2023	Preparation	Terntank	2.8	44,815

Project overview

Acronym	Title	Description
PULSE	Pretreatment and Upgrading of Liquefied waste plastic to Scale up circular Economy	Project PULSE (Pretreatment and Upgrading of Liquefied waste plastic to Scale up circular Economy) implements Neste's proprietary technologies for chemical recycling of waste plastic and gradually integrates them into the company's refinery operations in Porvoo, Finland. PULSE will reach a processing capacity of 400,000 tonnes of liquefied waste plastic per year. It will contribute to EU climate neutrality objectives by a total of 10.3 Mt greenhouse gas emission avoidance during its first 10 years of operation.
SHARC	Sustainable Hydrogen and Recovery of Carbon	The SHARC (Sustainable Hydrogen and Recovery of Carbon) project will reduce emissions at the Porvoo oil refinery in Finland, by moving away from the production of grey (fossil-fuel based) hydrogen towards both green hydrogen production (through the introduction of electrolysis facilities) and blue hydrogen production (by applying carbon capture technology). Combined with the offshore storage of carbon dioxide (CO2), this project will maximise the environmental impact and development of a strong supply chain covering the oil refinery, the CO2 capture and transport facilities and the storage site. It will also lay the foundation for a European hub for renewable hydrogen and CO2 utilisation. In the first ten years of operation, the SHARC project will avoid more than 4 Mt CO2.
eMETHANOLxWSolution	Next Generation tanker vessel powered by e-methanol and wind assisted propulsion	<p>The objective of the eMETHANOLxWSolution project is to demonstrate an innovative combination of foldable suction sails and a dual-fuel engine uniquely designed to fit the new hybrid tanker, thus enabling the use of e-methanol as fuel and wind for increased energy efficiency. The project will have a 100 % relative greenhouse gas (GHG) emission avoidance, as the technology used will be able to replace the conventional technology that uses fossil fuels, contributing to the decarbonisation of the shipping industry and customer's zero-emission supply chains of renewable fuels in the Baltic Sea and the North Sea.</p> <p>The project aims to produce one of the first coastal tankers in Europe that uses e-methanol as a main energy source in its operations. In addition, a wind assisted propulsion system (WPS) will be demonstrated for the first time in the newly built vessel, which will enable the best possible optimisation of the system. The project demonstrates the use of several technologies to push the emissions to zero in a novel stepwise combination and system integration in a real operational environment. Furthermore, the project promotes action towards improved energy efficiency in the maritime transport, especially with the WPS. In absolute terms, the combination of e-methanol and wind in a tanker will result in a larger annual emission avoidance compared to a state-of-the art newbuilt tanker.</p> <p>By contributing to the decarbonisation of the maritime sector, the project supports the development and deployment of innovative low-emission solutions and reaching the climate targets set by the International Maritime Organisation and the European Union, for instance through the EU Emission Trading System and the new FuelEU Maritime regulation. The project will set an example and share acquired knowledge to other shipping companies about innovative emission reduction technologies.</p> <p>Scaling these clean technologies to other vessels would further strengthen the available technologies for e-methanol and WPS as well as the e-methanol supply chains. The project will scale itself and convert the technologies to the other newly built and existing vessels in the future. Additionally, there is a high scalability potential to deploy both these clean technologies onboard different types of cargo ships.</p>