






## THE PROJECT

Fit4Micro 'Clean and efficient microCHCP by micro turbine based hybrid systems' is a four-year Horizon Europe Research and Innovation Action started on 1st October 2022. The overall budget of Fit4Micro is € 4.993.387,50.

Fit4Micro aims at developing a new generation of combined **heat**, **power** and **cooling** system, based on a novel technology of **micro gas turbine** working on renewable energy.

Website



 Fit4Micro Project  
 Fit4Micro Project  
 @Fit4Micro

## CONSORTIUM

Coordinator



etaflorence  
renewable  
energies



### Contacts

Michel Delanaye - Project Coordinator  
michel.delanaye@mitis.be

info@fit4micro.eu



Funded by  
the European Union

Funded by the European Union (Grant n. 101083536). Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.



# MicroCHCP hybrid heating and cooling system running on sustainable liquid biofuels

## EUROPEAN CONTEXT

The European building sector is **hard-to-decarbonise**: almost 80% of existing buildings have to reach **net-zero emissions** by 2050, in order to meet the EU objectives in terms of GHG emissions.

Flexible **solutions** are required for adapting the **building sector** to climate change requests and increase the use of renewables.

## PROJECT ACTIVITIES

The main aim of Fit4Micro is to design a **technology** for stand-alone (off-grid) applications, running on RED2 compliant **biofuels**.

The system will comprise a double shaft **micro gas turbine** and a humidification unit. This unique combination is expected to drive **high electrical efficiencies (>40%)** and have a very flexible heat-to-power ratio.

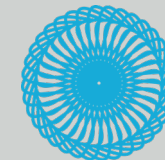
## EXPECTED RESULTS



Higher levels of socioeconomic and environmental sustainability in the household sector



Increased availability of renewable fuels for domestic usage



Micro Turbine integrated with solar-PV to allow a flexible power operation

