






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



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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.

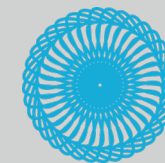
EXPECTED RESULTS



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

