



European
Commission

LIFE ZEROGWP: 'New generation of air conditioners'

The first double duct residential air conditioner with near-to-zero Global Warming Potential natural refrigerant

Costs of inaction overweight costs of action

Some refrigerants like hydrofluorocarbons (HFCs) are major pollutants with a thousand times greater global warming potential than carbon dioxide. HFCs are being used worldwide in a variety of equipment like heating, ventilation, air conditioning and refrigeration.

Furthermore, the refrigerants sector is affected on the one hand by both regulations and increasing customer awareness, and on the other hand by a growing demand which is also caused by the negative effects of climate change. Therefore, the whole sector must change to fulfil the demand as well as the upcoming regulatory requirements and the growing requirements of customers who are aware of the costs of pollutants to society and the environment as a whole.

The pollution is not only connected to the production of the equipment, but also to its operation, and since Europe is looking to achieve a zero-emission economy by 2050, innovative technologies are required to reach the Green Deal objectives.

Sustainable solution for air conditioning

The LIFE ZEROGWP consortium was led by INNOVA S.R.L. (the company), which is responsible for the commercialisation of the solution and demonstrated the technical feasibility, full safety, and commercial viability of the innovative monobloc residential air conditioning system called Double Duct (DD) technology, which can be charged by R290 (Propane) and provides unprecedented environmental performance. The results of the project led to the development of the first DD-AC R290 system, which is now successfully established on the market.

Furthermore, the project has confirmed that the solution reduces i) greenhouse gas (GHG) emissions, thanks to the lower energy consumption and the avoidance of high GWP refrigerants; and ii) energy consumption for cooling/heating thanks to the improved performance of the developed product.

The solution offers a pleasing design, however, what is a real game changer is the outdoor installation which is represented by just two barely noticeable air vents. Therefore, it does not affect the appearance of the building since the air vents are almost invisible when painted the same colour as the wall.

INNOVA 2.0NR could be defined as a "plastic-free" machine since nearly all its components are made of metal. Moreover, the materials used to make the machine are all recyclable at the end of its life, adding an extra feature to its already high level of sustainability.

Finally yet importantly, the company is committed to improving the well-being of people, at home and everywhere. It creates an environment, which reduces consumption, increases efficiency and promotes sustainable development. Therefore, the company is also active in the development of Valle dei Laghi where it operates and significantly contributes to the retention of talents in the valley by employing and involving them in ongoing innovation, cooperation with Trento University and the fact that a completely new R&D facility with a modern high-level laboratory has recently been built.

LIFE ZEROGWP 2.0NR (a message from the coordinating beneficiary – INNOVA S.R.L.)

"An air conditioner, which will become an ambassador of the European values of environmental and economic sustainability in the world. It shows how air conditioning can become part of the solution instead of a cause of the climate change issue by demonstrating what technological results can be achieved and how economic and environmental objectives can go hand in hand in the same product."

Learn more

Project acronym: LIFE ZEROGWP

Reference: LIFE17 CCM/IT/000026

[Project website](#)

Do you want to benefit as well from support to commercialise your innovative solution?

Contact us at:

