



**Training on Alternative Refrigerants**  
**New opportunities and cooperations in**  
**HVAC INDUSTRY**

**Date : 26/6/2025**

**Time : 17.35**

**Place : WRD SOCIAD Istanbul**

**THANOS BIRIS**

**Mechanical Engineer Msc Ntua**

**Area Treasurer HUGAS**

**president**



## TRAINING IN ALTERNATIVE REFRIGERANTS

HFC HFO CO<sub>2</sub> NH<sub>3</sub>

New opportunities and cooperations for designing, producing, servicing  
in air conditioning cooling and heat pump industry

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Area Treasurer HUFGAS President

# *MAIN TARGET*



The success of the new 573/2024 F-Gas 3.0 Regulation, which was designed to minimize the environmental impact of fluorinated gases (F-Gases) used in refrigeration, air conditioning, and heat pump systems, hinges significantly on the effective implementation and enforcement of comprehensive training and certification programs for alternative refrigerants.

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## **BRIEF INTRODUCTION**



- Global commitment to reducing greenhouse gas emissions and combating climate change.
- The role of alternative refrigerants with lower global warming potential (GWP) in this transition and the challenges they pose in terms of **flammability, toxicity, and pressure levels.**
- Proper training ensures that technicians and engineers are proficient in **best practices for their safe handling, installation, maintenance, and disposal,** keeping a standardized level of competence across the industry in all EU countries.

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## **BRIEF INTRODUCTION**



- Effective training and certification can, reduce incidences of refrigerant leakage, improve system performance, and ultimately lead to greater adoption of alternative refrigerants.
- In conclusion, investing in training and certification programs is indispensable for the successful implementation of the new 573/2024 F-Gas Regulation. It ensures that industry professionals are well prepared to navigate the complexities of alternative refrigerants.

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# **REGULATION (EU) 2024/2215**



## • of 6 September 2024

Establishing, pursuant to Regulation (EU) 2024/573 of the European Parliament and of the Council, minimum requirements for the issuance of certificates to natural and legal persons and the conditions for the mutual recognition of such certificates, as regards stationary refrigeration, air conditioning and heat pump equipment, organic Rankine cycles and refrigeration units of refrigerated trucks, refrigerated trailers, refrigerated light-duty vehicles, intermodal containers and train wagons containing fluorinated greenhouse gases or their alternatives, and repealing Commission Implementing Regulation (EU) 2015/2067

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# *CERTIFICATION*



## **Certificates for natural persons**

Natural persons carrying out the activities referred to in Article 2(1) shall hold a certificate of the type set out in paragraph 2 of this Article.

Six New Certificates A1 A2 B C D F now in place.

Member States may allow for the issuance of separate certificate types or a certificate combining any of the certificate types, identifying the activities it covers.

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# REAL Alternatives for Life

## blended learning for low gwp refrigerants

[www.realalternatives.eu](http://www.realalternatives.eu)

- **Flammables** (HCs - HFOs - low GWP blends), **CO<sub>2</sub>**, **Ammonia**
- **9 Modules**
- **Free learning material** available for download
- **Multi-lingual** programme (17 languages – 21 EU or 25 tot countries)
- **Licensed training providers (around 30) in each country:**
  - **Best Practices** in fully equipped laboratories, focusing on the safety issues
  - **Theory** in classroom or remote
- **Certification (theory and practice)** consistent and recognized among project members (more than 2000 certificates so far)



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# *CECTORS*

- INDUSTRY - PRODUCTION
- INSTALLATION
- MAINTENANCE
- END OF LIFE RECLAIM & RECYCLE



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# INDUSTRY

- New line of production
- Danger from high pressure, flammability, toxicity
- Energy efficiency
- Training programs are important for professionals in the industry in order to be equipped with the necessary skills and knowledge to safely handle and transition to eco-friendly alternatives.



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# INSTALLATION



- Difficulties in the use of the new alternative refrigerants
- Risk assessment for high pressure, flammability, toxicity
- Leak detection
- Proper training ensures that technicians and engineers are not only aware of the properties and risks associated with alternative refrigerants but are also proficient in **best practices for their safe handling.**

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# MAINTENANCE

- Leak checks
- Energy efficiency
- Retrofit
- Proper training ensures that technicians and engineers have a standardized level of competence across the industry in all EU countries.



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## *END OF LIFE – RECLAIM - RECYCLE*



- RECLAIM
- DESTRUCTION
- RECYCLE & REUSE
- Training programs for professionals in the industry equip with the necessary skills and knowledge to recycle and reuse f-gases with high GWP, since the use of such virgin f-gases is not allowed from the beginning of 2027.

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## *AREA BOARD & MEMBERS ACTIONS*

- AREA provides guidance for it's members and communicates with DG Clima to make sure that the transition to alternative refrigerants and the new certification scheme will be available on time
- Safe installation, service and operation of all types of RACHP systems are essential and the new certification system should deliver it
- Members of AREA are working with their Member States representatives to make it happen

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*Thank you for your attention*

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