



The Voice of European Air-Conditioning, Refrigeration and Heat Pumps Contractors

Proposal for the extension of the F-Gas training and certification scheme to alternative refrigerant greenhouse gases

March 2021

Introduction

As the European association of refrigeration, air conditioning and heat pump (RACHP) contractors, AREA is pleased with this opportunity to present its views on the current review of Regulation (EU) No 517/2014 (F-gas Regulation). AREA supports the ambitions and goals of the Regulation in view of the high Global Warming Potential (GWP) of many fluorinated greenhouse gases and their effects on global warming.

The contractors whom, through their membership of AREA's constituent associations, we represent, provide services which are absolutely indispensable in many industries. AREA is fully aware of its responsibility to provide information, based on many decades of combined experience, which contributes to both sensible European policies focusing on combating climate change, as well as to the assurance of continued safe and effective work by our respective members, thereby ensuring the continuity of RACHP services.

In this light, we raise the issue of the importance of proper training and certification regarding the use of alternative low GWP refrigerants. As a result of the phase-down, the availability of F-gases will continue to wane, while the demand for refrigeration and related services will remain strong. Consequently, the use of alternative refrigerants will continue to grow, compensating for a decrease in availability of F-gases on the market. Natural refrigerants, such as carbon dioxide, certain hydrocarbons and ammonia, as well as others such as HFOs, have the characteristics required to efficiently transport heat energy. Although alternative refrigerants do not contribute significantly to climate change, there are other issues which present safety-related challenges.

Different alternative refrigerants pose different challenges. Some are highly flammable, others are toxic when inhaled or exposed to skin, or are employed in systems which operate at high pressures. These characteristics are mostly absent in HFCs, which, considering their current prevalence, means that many contractors are less familiar with them. This unfamiliarity, combined with growing use, leads to an increasing level of risk.

The successful achievement of the F-gas Regulation's objectives greatly depends on a large uptake of alternative low GWP refrigerants. Such an uptake relies itself on sufficient knowledge and competence from the RACHP contracting sector on these alternative low GWP refrigerants. Currently, the proportion of F-Gas certified personnel trained on alternative refrigerants ranges from 3.5% to 7% depending on the type of alternative refrigerant¹. This is far below market potential, creating a gap that limits alternative refrigerants uptake.

¹ [AREA internal survey](#), January 2021

Extending the current F-Gas training and certification scheme to alternative refrigerants would address this issue and therefore directly contribute to achieving the Regulation's objectives. It seems absolutely necessary so that the Regulation can achieve its full potential.

In this context, AREA wish to put forward concrete proposals on how the current F-Gas training and certification scheme can be extended to include alternative low GWP refrigerants. Indeed, this is the only approach that would provide a rapid, clear and efficient solution, and this for several reasons:

- Although the 2016 Commission's report² concludes that the existing legislative framework is appropriate, the reality is that the proportion of F-gas certified personnel competent on alternatives remains dramatically low, which shows the inadequacy of the existing framework. The problem is acknowledged, and the matter is among the priority issues assessed in the F-Gas Regulation's review.
- Addressing the matter through a stand-alone piece of legislation would take several years. This would only delay the establishment of an appropriate framework and the consequent increase in RACHP contractors' competence on low GWP alternatives.
- There is an intrinsic connection between fluorinated greenhouse gases and alternative refrigerants. EU policies on the former have an immediate impact on the latter, and ultimately it is the same market.
- The F-Gas Regulation already has a mandatory training and certification scheme that only needs to be complemented to include alternative low GWP refrigerants.

Our concrete proposals are divided into 3 blocks:

Annex I Proposed amendments to the F-Gas Regulation 517/2014

Annex II Proposed amendments to Implementing Regulation 2067/2015

Annex III An updated set of minimum competence requirements (Implementing Regulation 2067/2015, Annex I) based on state-of-the-art standards EN 13313 and ISO/DIS 22712

Finally, it should be noted that to ensure continued energy efficiency, climate protection and safety of RACHP systems working with low GWP alternative refrigerants, these should also be submitted to leakage checking requirements. AREA will elaborate in this point and others in a separate position paper.

About AREA

AREA is the European association of refrigeration, air conditioning and heat pump (RACHP) contractors. Established in 1989, AREA voices the interests of 24 national associations from 21 countries representing 13,000 companies employing 110,000 people and with an annual turnover approaching € 23 billion.

² [Commission's report on availability of training for service personnel regarding the safe handling of climate-friendly technologies replacing or reducing the use of fluorinated greenhouse gases](#), November 2016

ANNEX I

Draft amendment to the F-Gas Regulation 517/2014

Proposed changes are highlighted in yellow.

Recital (7)

Certification and training programmes, covering both fluorinated greenhouse gases and their alternatives, should be established or adapted taking account of those established under Regulation (EC) No 517/2014 and may be integrated into the vocational training systems.

Article 2 – Definitions

'Alternative refrigerant greenhouse gases' means refrigerating substances with a greenhouse effect used as alternatives to fluorinated greenhouse gases. They include hydrocarbons, ethers, carbon dioxide and unsaturated hydro(chloro)fluorocarbons ;

Article 10 – Training and certification

(...)

2. Member States shall ensure that training programmes for natural persons recovering fluorinated and alternative refrigerant greenhouse gases from air-conditioning equipment in motor vehicles falling within the scope of Directive 2006/40/EC are available, on the basis of the minimum requirements referred to in paragraph 5.

3. The certification programmes and training provided for in paragraphs 1 and 2 shall cover the following:

- (a) applicable regulations and technical standards;
- (b) emission prevention;
- (c) recovery of fluorinated greenhouse gases;
- (d) safe handling of equipment of the type and size covered by the certificate;

~~(e) information on relevant technologies to replace or to reduce the use of fluorinated greenhouse gases and their safe handling.~~

(...)

6. Member States shall establish or adapt certification programmes on the basis of the minimum requirements referred to in paragraph 5 for undertakings carrying out installation, servicing, maintenance, repair or decommissioning of the equipment listed in points (a) to (d) of Article 4(2), and of the equipment listed in the points (a), (b), (c) and (e) of article 4(2) that contains alternative refrigerant greenhouse gases, for other parties.

(...)

8. Member States shall ensure that all natural persons holding certificates under certification programmes provided for in paragraphs 1 and 7 have access to information regarding each of the following:

(a) technologies referred to point (e) of paragraph 3; and

(b) existing regulatory requirements for working with equipment containing alternative refrigerants to fluorinated greenhouse gases.

(...)

ANNEX II

Draft amendment to Implementing Regulation 2015/2067

Proposed changes are highlighted in yellow. Comments are in italics.

TITLE

COMMISSION IMPLEMENTING REGULATION (EU) 2015/2067 of 17 November 2015 establishing, pursuant to Regulation (EU) No 517/2014 of the European Parliament and of the Council, minimum requirements and the conditions for mutual recognition for the certification of natural persons as regards stationary refrigeration, air conditioning and heat pump equipment, and refrigeration units of refrigerated trucks and trailers, containing **fluorinated** greenhouse gases and for the certification of companies as regards stationary refrigeration, air conditioning and heat pump equipment, containing **fluorinated** greenhouse gases

Recital (1)

Regulation (EU) No 517/2014 includes obligations concerning the certification of companies and natural persons. In contrast to Regulation (EC) No 842/2006 of the European Parliament and of the Council (2), the equipment covered also includes, with regard to the certification of natural persons, refrigeration units of refrigerated trucks and trailers. Regulation (EU) No 517/2014 also includes requirements for the content of the certification programmes, **on alternative refrigerant greenhouse gases containing information on relevant technologies to replace or to reduce the use of fluorinated greenhouse gases and their on the safe handling of those technologies.**

Recital (new)

In view of the decreasing use of fluorinated greenhouse gases and the resulting increase of solutions relying on alternative refrigerant greenhouse gases, it is necessary to extend the existing qualification and certification schemes to include these alternative refrigerant greenhouse gases and thereby ensure their safe and efficient handling.

Article 1 – Subject Matter

This Regulation establishes minimum requirements for the certification of natural persons carrying out the activities referred to in Article 2(1) in relation to refrigeration units of refrigerated trucks and trailers, stationary refrigeration, air conditioning and heat pump equipment containing fluorinated **and alternative refrigerant** greenhouse gases and certification of companies carrying out the activities referred to in Article 2(2) in relation to stationary refrigeration, air conditioning and heat pump equipment containing fluorinated **and alternative refrigerant** greenhouse gases as well as the conditions for mutual recognition of certificates issued in accordance with those requirements.

Article 6 – Company certificates

1. A certification body as referred to in Article 7 shall issue a certificate to a company for one or more of the activities referred to in Article 2(2) provided that it fulfils the following requirements:

(a) employment of natural persons certified in accordance with Article 3, for the activities requiring certification, in a sufficient number to cover the expected volume of activities,

(b) proof that the necessary tools and procedures are available to the natural persons engaged in activities for which certification is required. In the case alternative refrigerant greenhouse gases, the company must notably have specific safety procedures in place to address the safety risks posed by the different types of alternative refrigerant greenhouse gases.

(...)

Annex I - Minimum requirements as to the skills and knowledge to be covered by the evaluation bodies

The definitions and categories of certification provide the clarity needed in order for the Regulation to translate into practices and behaviour in line with our European climate ambitions.

Building on annex I, AREA makes a new proposal to define different activities according to international standards such as ISO/DIS 22712. Next to the existing categorisation (cat. I – IV, listed in 2015/2067) of F-gas certification for persons, we propose to introduce new categories for alternative refrigerant greenhouse gases: flammables small ($\leq 1\text{kg}$ refrigerant), flammables large ($> 1\text{kg}$ refrigerant) and CO_2 ³. The threshold for flammables is based on EN378, Annex C.

Sufficient competence of the contractor is an indispensable risk-mitigating factor, and therefore a precondition for a successful transition from F-gasses to alternative low GWP refrigerants.

Updated minimum requirements proposed by AREA are in a separate annex to this document (annex III).

Certification on alternative refrigerant greenhouse gases would only be a top-up requirement for personnel already F-gas certified who wish to work with these alternative refrigerants. For personnel that is not F-gas certified and wishes to work with alternative refrigerant greenhouse gases, the entire certification would have to be acquired in view of the relevance and importance of a number of F-gas-related requirements for systems working with alternative refrigerant greenhouse gases.

³ Ammonia is not included since it is not an alternative refrigerant greenhouse gas.