



The CESA Guide to the F-Gas Regulations

A down-to-earth guide to what it is and what it means to foodservice operators.

What's it all about?

The European Union is committed to the control of fluorinated greenhouse gas (F-gas) emissions, as part of the Kyoto Protocol. F-gas is widely used as a refrigerant in commercial catering refrigeration.

The European Fluorinated Gases Regulation (F-Gas), which came into force in July 2007, is currently under

revision. The most important new measure proposed is a phase down in the supply of hydrofluorocarbons (HFCs), the most widely used of the F-gases. This phase down is being managed by a freeze in supply, as of 2015. The freeze will be followed by several reduction steps so that, by 2030, European HFC supply would be 21% of 2015 levels.

What will the impact be?

Refrigeration equipment manufacturers are working with refrigerant suppliers to develop alternative gases that have much lower GWP (Global Warming Potential) and ODP (Ozone Depletion Potential). Obviously the Research and Development involved in launching new products may impact on the list prices.



Many refrigeration manufacturers already offer models using refrigerants with lower GWP and ODP, such as hydrocarbon, which is natural and non-toxic, has zero ODP and minimal GWP. It also has excellent thermal properties, making it a superior refrigerant. However, hydrocarbons are flammable and the refrigerant charge in a cabinet should be below the 150g threshold for safety reasons, otherwise there may be insurance issues, not to mention health and safety ones! Other alternative refrigerants, such as carbon dioxide and glycol, are also available but are only suitable in certain applications.

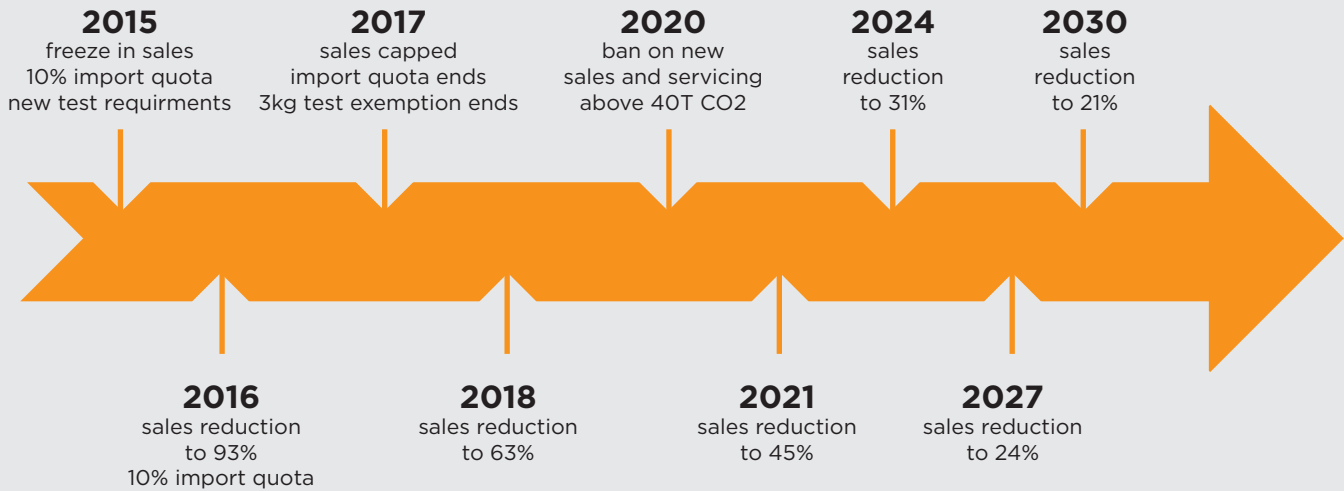
Operators buying new refrigeration should look for models offering energy savings and using low ODP and GWP refrigerants.

F-Gas Regulations: your responsibilities

The main focus of the F-Gas Regulations is to minimise emissions of F-gases from products and equipment, through containment, leak reduction and repair and recovery. When it comes to catering refrigeration, the responsibility for complying with the regulation lies with the caterers, operators and users (as opposed to those selling or servicing it).

- Prevent leakage - have leaks repaired as soon as possible by certified personnel and keep service and maintenance records detailing quantity and type of F-gas used.
- Carry out a regular fixed schedule of inspections for leaks on equipment with a circuit charge of 3kg or more, following the standard leak-checking procedure laid down by the Commission. This includes an obligation that any repairs made must be checked within one month.
- Where systems have a charge of over 300kg they must in addition install fixed leakage detection systems.
- Ensure the proper recovery of F-gases by certified personnel, to ensure their recycling, reclamation or destruction.

Timeline for reduction of F-gas with GWP above 2500



However, if the system contains less than 3kg of HFC refrigerant (6kg in a hermetically sealed system) then the obligations on leak checking and record keeping will not apply. If the refrigeration system does not use a refrigerant containing F-gases, then the regulations do not apply at all.

Companies who employ operatives undertaking activities within the scope of the F-Gas Regulations have to have obtained a Company Certificate to carry out this work -

caterers should check their service provider has this certificate. Amendments to the F-Gas Regulations will ensure that companies manufacturing or importing any equipment that uses hydrofluorocarbons will have to show that their products comply fully with the regulations. Buyers should check what refrigerant is used and ask if it is an HFC. If it is an HFC, they should ask to see the compliance documentation.



F-Gas Timeline

Professional Refrigeration Bans:
 GWP of 2500 or more from
 1 January 2020 (R404A)
 GWP of 150 or more from
 1 January 2022 (R134a)

Current Refrigerant Values:

HFC R404A - GWP 3922
 HFC R134a - GWP 1430
 HFC R407C - GWP 1774
*It is likely that the market will
 begin moving away from HFCs
 (R404A and R134a) in 2017.*

Hydrocarbon refrigerants
 have a much lower GWP than
 HFCs and zero ODP.

For example:

HC R290 (Propane) - GWP 3
 HC R-600a (Isobutene) - GWP 3

Glossary

F-Gas	Fluorinated greenhouse gases responsible for global warming.
GWP	Global Warming Potential.
Hydrocarbons	(Aka propane), popular 'green' alternative refrigerant gases.
Hydrofluorocarbons or HFCs	The most commonly used F-gases (greenhouse gases) in catering refrigeration.
ODP	Ozone Depletion Potential.
Refrigerant	Gas cooling agent used in refrigeration systems.

The Catering Equipment Suppliers Association represents over 180 companies who supply, service and maintain all types of commercial catering equipment - from utensils to full kitchen schemes. For more information on CESA visit www.cesa.org.uk