

# Stakeholder Seminar

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## Introducing the new F gas Regulation (517 of 2014)

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# Background

- Previous EU F-gas Regulation
  - In force since 2006
- Objectives
  - Containment of F-gases
  - Prevent and reduce F-gas emissions
- Wider context
  - Reducing emissions of greenhouse gases
  - Limiting climate change
- **Review** of the F-gas Regulation
  - Provided for under Article 10.

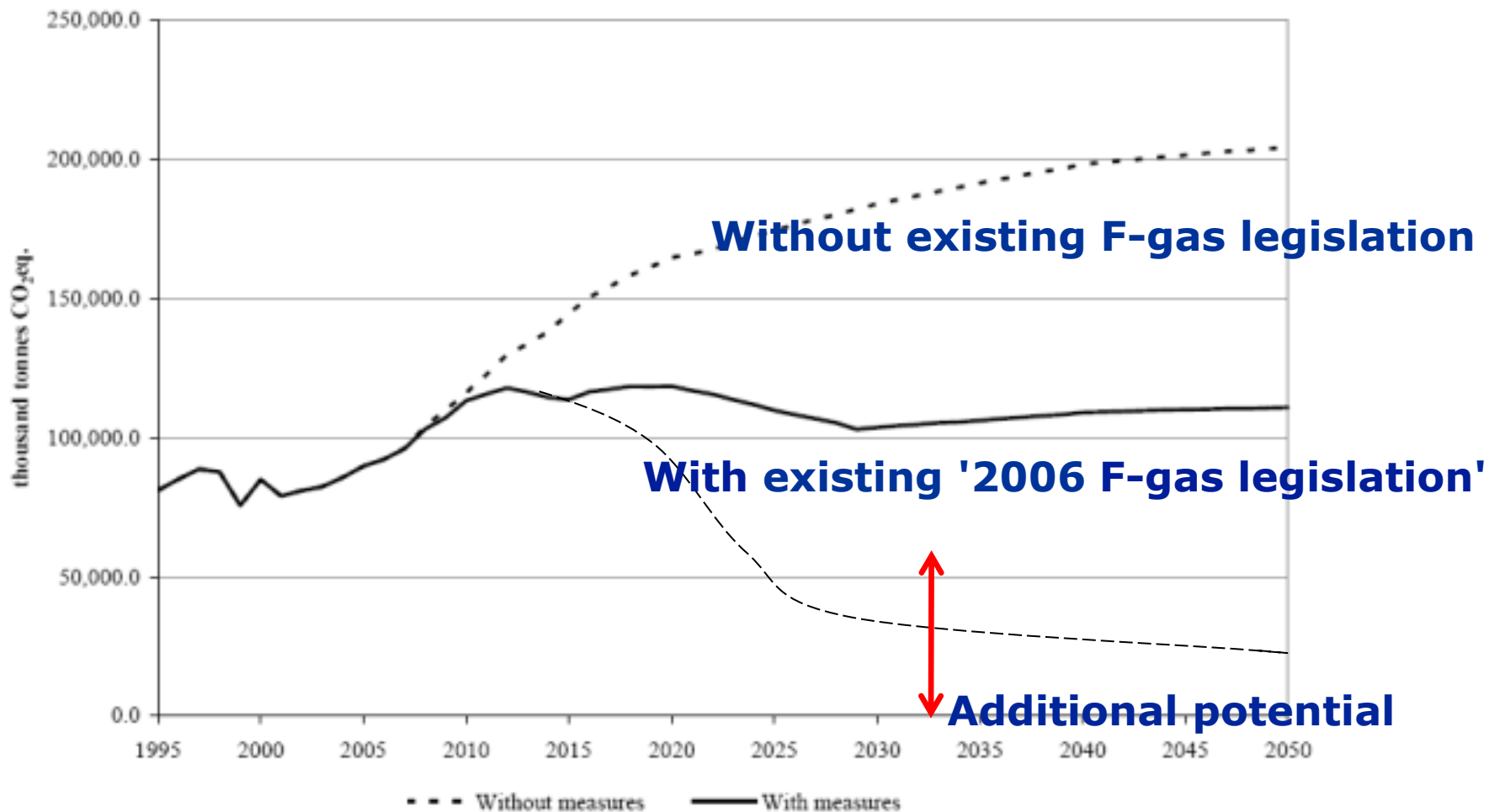


# The need and scope for further EU action

- EU 2050 climate target is to reduce GHG emissions by 80-95% (1990-level)
- EU Low Carbon Economy Roadmap: non-CO2 emissions (non-agricultural) must decline by 72-73% by 2030 and by 70-79% by 2050 (1990-level)
- EU F-gas emissions increased by 60% (1990-level)
- Suitable alternatives with low GWP are available for most F-gas applications
- International HFC phase-down proposals under the Montreal Protocol



# Scenarios EU F-gas emissions



# Two strategies to reduce emissions

- Prevent leakage and emissions
  - Emission prevention and leak checks - Art. 3 - 5
  - Control of by-production - Art. 7
  - End of life treatment of products and equipment - Art. 8
  - Training and qualification - Art. 10
  - Information for users (labelling, product info) - Art. 12
- Avoid the use of F-gases
  - Training and qualification – Article 10
  - Ban on new applications - Art. 11
  - Ban on uses - Art. 13
  - Phase-down of HFC supply - Art. 15



# Key Elements

- Extended containment provisions
- Service and maintenance ban using high-GWP refrigerants
- Extended placing on the market bans
- Phase down of HFCs
- Examine possibility of Producer Responsibility Schemes



# Containment and Leak Checking



# Containment measures

## Articles 3, 4 and 5

- Operators must prevent emissions (leakage)
- Leakage checks, frequency based on CO<sub>2</sub> eq
- Leak detection systems for larger charges

Applies to stationary refrigeration, air-conditioning, heat pumps, fire protection systems, refrigerated trucks and trailers, organic Rankine cycles and electrical switchgear with SF<sub>6</sub>





# Containment/Leak Checking

Some key differences

- Intentional release prohibited and operators must prevent leakage
- Frequency of leak checks based on GWP in CO<sub>2</sub> equivalents
- Persons and undertakings must be certified
- Operators and undertakings ( incl. contractors ) must keep records for at least **5 years**
- Records must be kept for each piece of equipment requiring leak checks



# Leak Checks – New Thresholds

Threshold Tonnes CO2 eq	Leak Checking Frequency	Frequency ( Leak Detection System Installed)
5 - 50	12 months	24 months
50 - 500	6 months	12 months
> 500	3 months	6 months

Applies to stationary refrigeration, A/C, heat pumps, fire protection, Refrigeration units of refrigerated trucks and trailers, electrical switchgear and organic rankine cycles



# Derogations

- Electrical switch gear – no leak checks required, subject to certain conditions
- Current leak checking regime continues until 31 December 2016 for small-charge equipment
  - 3kg non-hermetically sealed
  - 6kg hermetically sealed



# Change from kg charge to CO<sub>2</sub> equivalents

- New thresholds of 5, 50, 500 tonnes CO<sub>2</sub> are to encourage use of low GWP alternatives
- Will potentially bring more equipment into the leak checking regime depending on the refrigerant
- The old “3 kg category” now ranges for 1.3 kg for R404A to 7.2 kg for R32
- There will be ready reckoner available to assist with the conversion



# Change from Kg charge to CO<sub>2</sub> equivalents

HFC	GWP	Charge size in kg corresponding to tonnes CO <sub>2</sub> equivalent		
		5 t	50 t	500 t
R404a	3992	1.3 kg	12.7 kg	127.5 kg
R410a	2088	2.4 kg	23.9 kg	239.5 kg
R134a	1430	3.5 kg	35.0 kg	349.7 kg



# Record Keeping, Labelling and Reporting



# Record Keeping – Article 6

For each piece of equipment requiring leak checking:-

- Quantity and type of F gas installed
- Quantities added during installation, maintenance, or servicing or due to leakage
- Whether the quantities of installed F gases have been recycled or reclaimed, including name and address of the recycling or reclamation facility and where possible the certificate number
- Quantity of F gases recovered
- Identity of the undertaking which installed, serviced, maintained and where applicable repaired or decommissioned the equipment including where applicable the certificate number
- Dates and results of checks carried out
- If the equipment was decommissioned the measures taken to recover and dispose of the F gases



# Record Keeping

- **Suppliers of F gases must keep the following:-**
  - **Numbers of certificates of the purchasers**
  - **Quantities of F gases purchased**
- **All records must be kept for 5 years and made available to competent authority if requested**





# Labelling – Article 12

- All of the following product and equipment containing or whose functioning relies on F gases must be labelled:-
- Refrigeration, A/C and Heat pumps, fire protection equipment, electrical switchgear, aerosol containers, all F gas containers, f gas based solvent and organic rankine cycles
- Products or equipment exempted under Article 11.3 must be labelled accordingly and only used for that use



# Labelling

The following shall also be specifically labelled:-

- Foams and pre-blended polyols
- Reclaimed and recycled F gases
- F gases placed on the market for destruction
- F gases placed on the market for direct export
- F gases placed on the market for military use
- F gases placed on the market for the etching of semiconductor materials or the cleaning chemicals vapour deposition chambers within the semiconductor industry
- F gases placed on the market for feedstock
- F gases placed on the market for MDIs



# Labelling

The label must state the following:-

- A reference that the product or equipment contains F gases or that its functioning relies on F gases
- Accepted industry designation or the chemical name
- From 1<sup>st</sup> January 2017 the quantity expressed in weight and in CO2 equivalent of F gas or the quantity of F gases for which the equipment is designed and the GWP of those gases



# Reporting – Article 19

- Applies to importers, exporters and producers of 1 tonne or 100 tonnes CO<sub>2</sub> equivalent or more of F gases
- Destruction of 1 tonne or 1,000 CO<sub>2</sub> equivalent or more of F gases
- Undertaking 1000 tonnes CO<sub>2</sub> equivalent or more as feedstock
- POM of 500 tonnes CO<sub>2</sub> equivalent or more of F gases listed in Annex II
- F gases in pre-charged equipment where the gases have not been placed on the market before ( verification document to Commission)
- POM 10,000 tonnes CO<sub>2</sub> equivalent or more will require verification by independent accredited auditor



# Training and Certification



Comhshaol, Pobal agus Rialtas Áitiúil  
Environment, Community and Local Government



# Training and Certification

## Article 10

- Essentially the training regime remains the same and existing certification remains valid
- Certification is required for installation, servicing, repairing and decommissioning of specified equipment
- Persons who carry out recovery and leak checking must also be certified
- Certification of undertaking (companies) still required
- The existing implementing regulations ( 303- 307 of 2008) remain valid unless revised regulations are introduced



# Training and Certification

**Member States must ensure that all persons holding or becoming certified have access to:**

- **Technologies related to applicable regulations and standards, emission prevention, recovery of F gases, safe handling of equipment of the type and size covered by the equipment and information on relevant technologies to replace or to reduce the use of F gases and their safe handling.**
- **Existing regulatory requirements for working with equipment containing F gas alternatives**
- **Training has to be available to update knowledge**
- **The Commission has to be notified of the training and certification programmes by 1<sup>st</sup> January, 2017**



# Service and Maintenance, New Bans and Phase Down





# Ban on servicing with high GWP HFCs

## Article 13

1. Applies as of 2020
2. Large refrigeration equipment
  - Above 40 KW cooling capacity
  - Excluding equipment for temperatures below  $-50^{\circ}\text{C}$
3. HFCs above GWP 2500
  - Mainly R-404a
4. Recycled HFCs can be used until 2030



# New Bans – Article 11

Equipment	Date
Fire protection equipment that contains HFC-23	1 January 2016
Domestic refrigerators and freezers that contain HFCs with GWP of 150 or more	1 January 2015
Refrigerators and freezers for commercial use (hermetically sealed equipment) - that contain HFCs with GWP of 2500 or more	1 January 2020
that contain HFCs with GWP of 150 or more	1 January 2022
Stationary refrigeration equipment, that contains, or whose functioning relies upon, HFCs with GWP of 2500 or more except equipment intended for application designed to cool products to temperatures below -50°C	1 January 2020
Multipack centralised refrigeration systems for commercial use with a rated capacity of 40kW or more that contain, or whose functioning relies upon, fluorinated greenhouse gases with GWP of 150 or more, except in the primary refrigerant circuit of cascade systems where fluorinated greenhouse gases with a GWP of less than 1500 may be used	1 January 2022
Movable room air-conditioning equipment (hermetically sealed equipment which is movable between rooms by the end user) that contain HFCs with GWP of 150 or more	1 January 2020
Single split AC equipment containing less than 3 kg of F gases than contain or whose functioning relies upon F gases of GWP of 750 or more	1 January 2025
Foams that contain HFCs with GWP of 150 or more except when required to meet national safety standards – extruded polystyrene (XPS) other foams	1 January 2020 1 January 2023
Technical aerosols that contain HFCs with GWP of 150 or more, except when required to meet national safety standards or when used for medical applications	1 January 2018

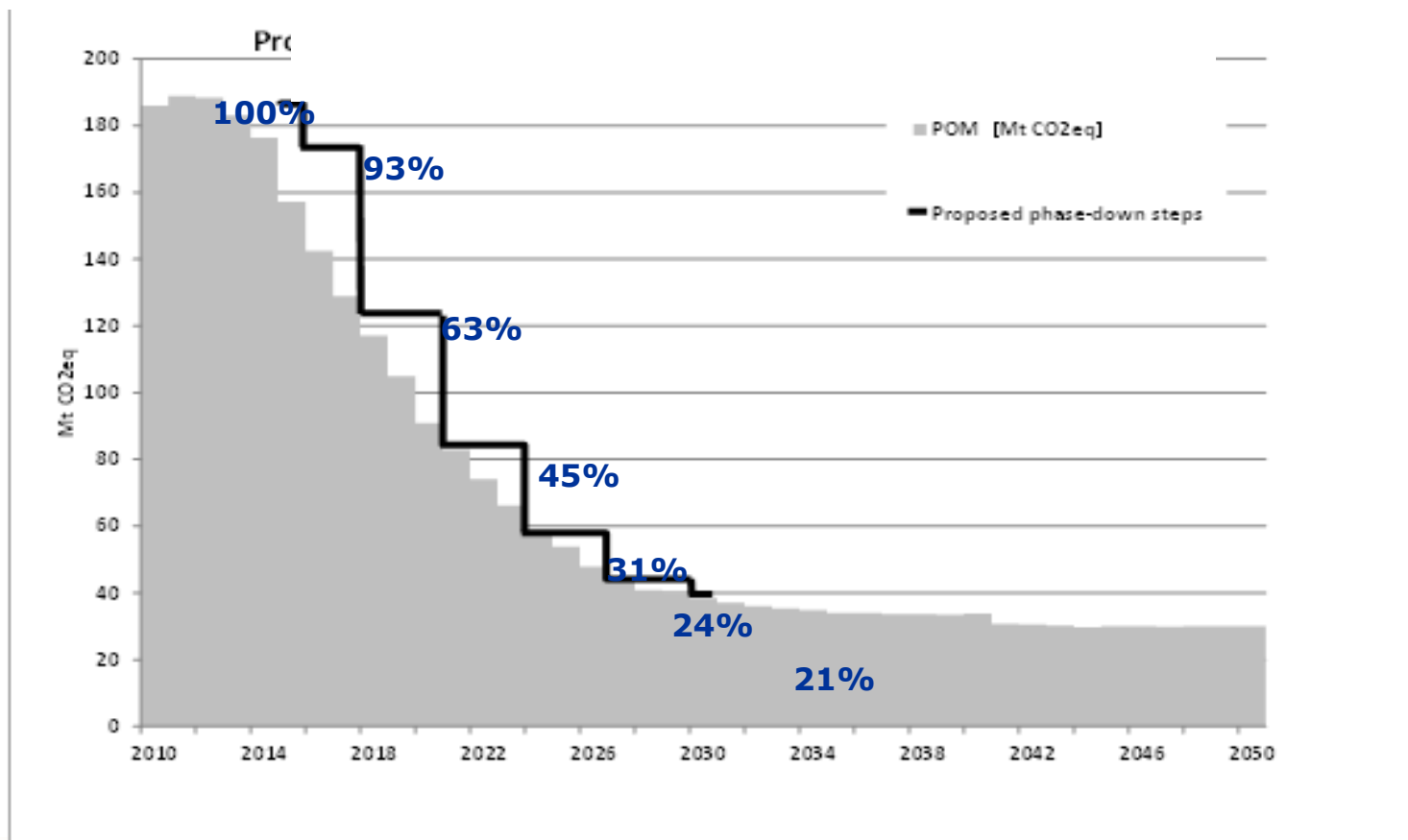
# HFC phase-down – key new element

## Article 15

- HFC bulk placed on the EU market
- Schedule: freeze 2015, first step 2016, reduction of HFC supply by 79% in 2030 (in CO<sub>2</sub> equivalent)
- Baseline: reported 2009-2012
- Quota allocation based on historical sales and new entrants reserve
- Monitoring: Independently verified reports



# Phase-down of HFC bulk supply



# HFCs in pre-charged equipment

## Article 14

- Of the EU HFC demand, **11%** is imported in pre-filled equipment, rising to **18%** in 2030
- If not addressed, risk of circumvention of the phase-down!

Solution: Obligation to ensure that all HFCs quantities filled in equipment are "accounted for" under the EU phase-down

- *Filling in the EU, or*
- *outside the EU, with HFCs bought in the EU, or*
- *from a non-EU HFC producer with own EU quota, or*
- *authorisation to use quota from a quota holder*

Verification through declarations of conformity and audited reports



# Quota Allocations

## Article 16

### Commission Priority

### Who will get a quota?

- *Reporter Companies (Incumbents / Established Players)*
  - *Reference Value + "Top-up"*
- \* *New Entrants* □ *Quota from Reserve, on basis of Declaration and Pro-Rata ( 11% initially for new entrants)*



# Allocation Process

- Incumbents have received letter from Commission
- **Notice** was published in EU journal on 21<sup>st</sup> May aimed at incumbents and new entrants intending to place HFCs on the market in 2015
- Process is only relevant if placing at least **100 tonnes CO<sub>2</sub>eq** on the market (Article 15)



# Incumbents

- Need to register – 2 forms attachment 1 signed statement and attachment 2 which is company contact details
- Attachment 3 – information on exempted uses
- Attachment 4 – Declaration Form on quota need in 2015

**Deadline is 1<sup>st</sup> July 2014**





# New Entrants

- Need to register with Commission
- Complete Form of Declaration of Intent to place HFCs on the market
- Information is outlined in the OJ notice

**Deadline 1<sup>st</sup> July, 2014**



# Programme 2014

## Enabling a Smooth Start of the Phasedown in 2015!

- Reference values, Quota Allocations
- Registry
- Reporting Format
- Some Guidance Documents (e.g. quota allocation process, company reporting, FAQs..)
- Prep work on Training & Certification
- Labelling



# Further information

## *Environmental Protection Agency*

- Caitríona Collins
- Celine Horner
- [www.fgases.ie](http://www.fgases.ie)
- [www.epa.ie](http://www.epa.ie)
- Lo Call 1890 33 55 99

## *Department of Environment, Community and Local Government*

- Jean Clarke
- Gary McGuinn
- [www.environ.ie](http://www.environ.ie)
- Tel 01 888 2000

