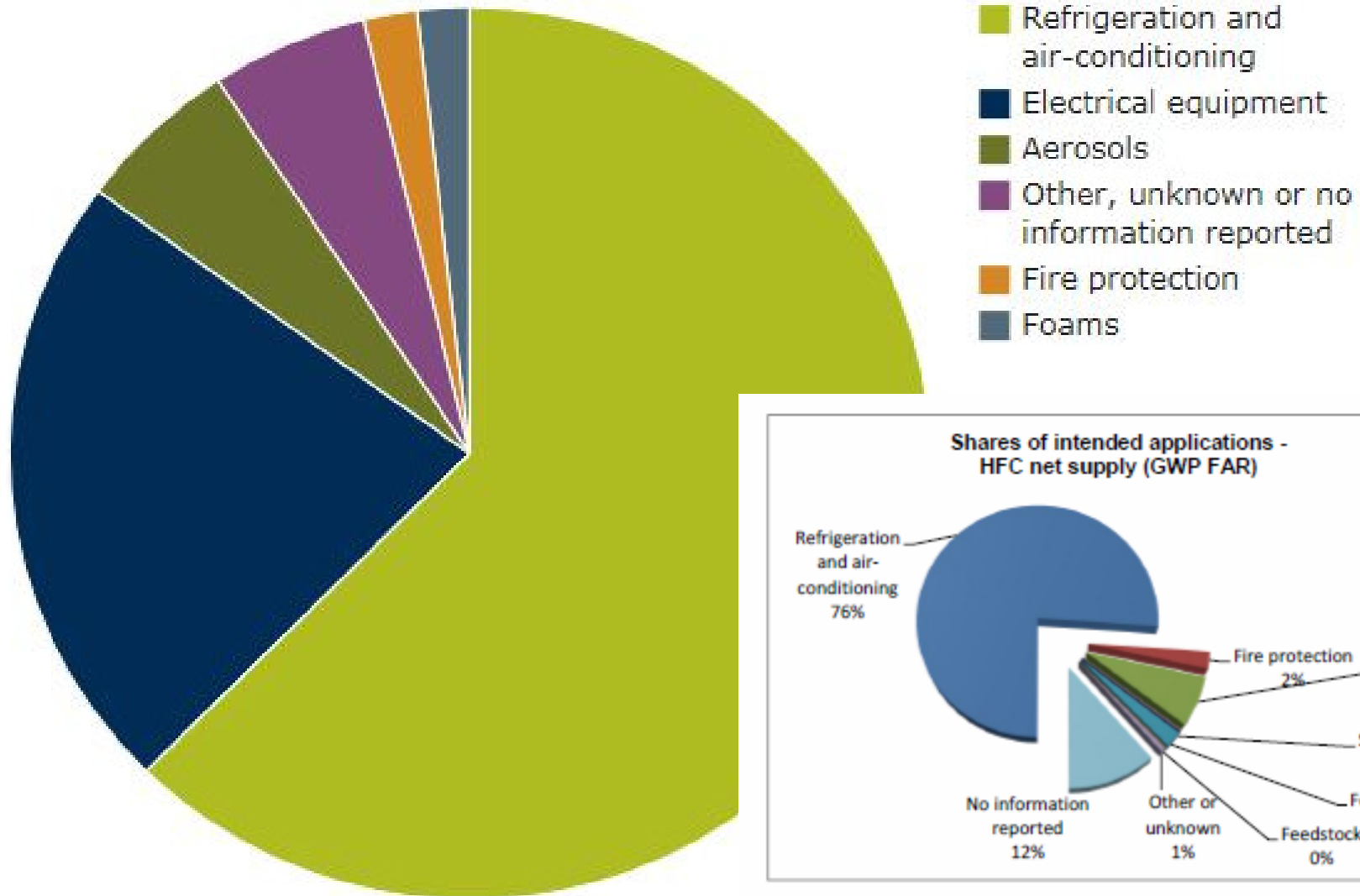




# Implementing the new EU Regulation on F-Gases

**Arno Kaschl**  
**European Commission – DG Climate Action**  
**EPEE – 26 March 2014**

**Mt CO<sub>2</sub>-equivalents (GWP FAR) – Percentages of the main intended applications of fluorinated gases (F-gases) sales, as reported by companies**



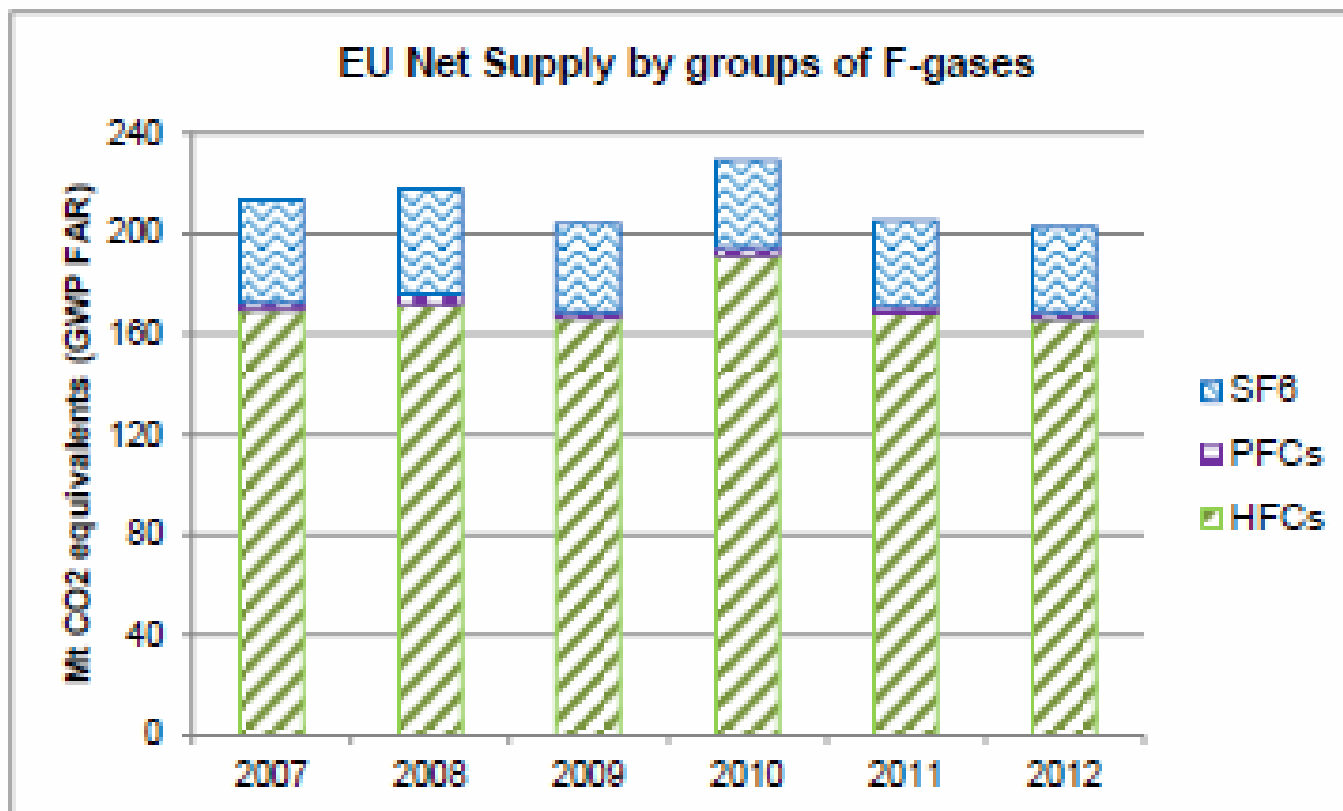
Source: European Environmental Agency, 2014

<http://www.eea.europa.eu/data-and-maps/indicators/emissions-and-consumption-of-fluorinated/assessment>





European  
Commission

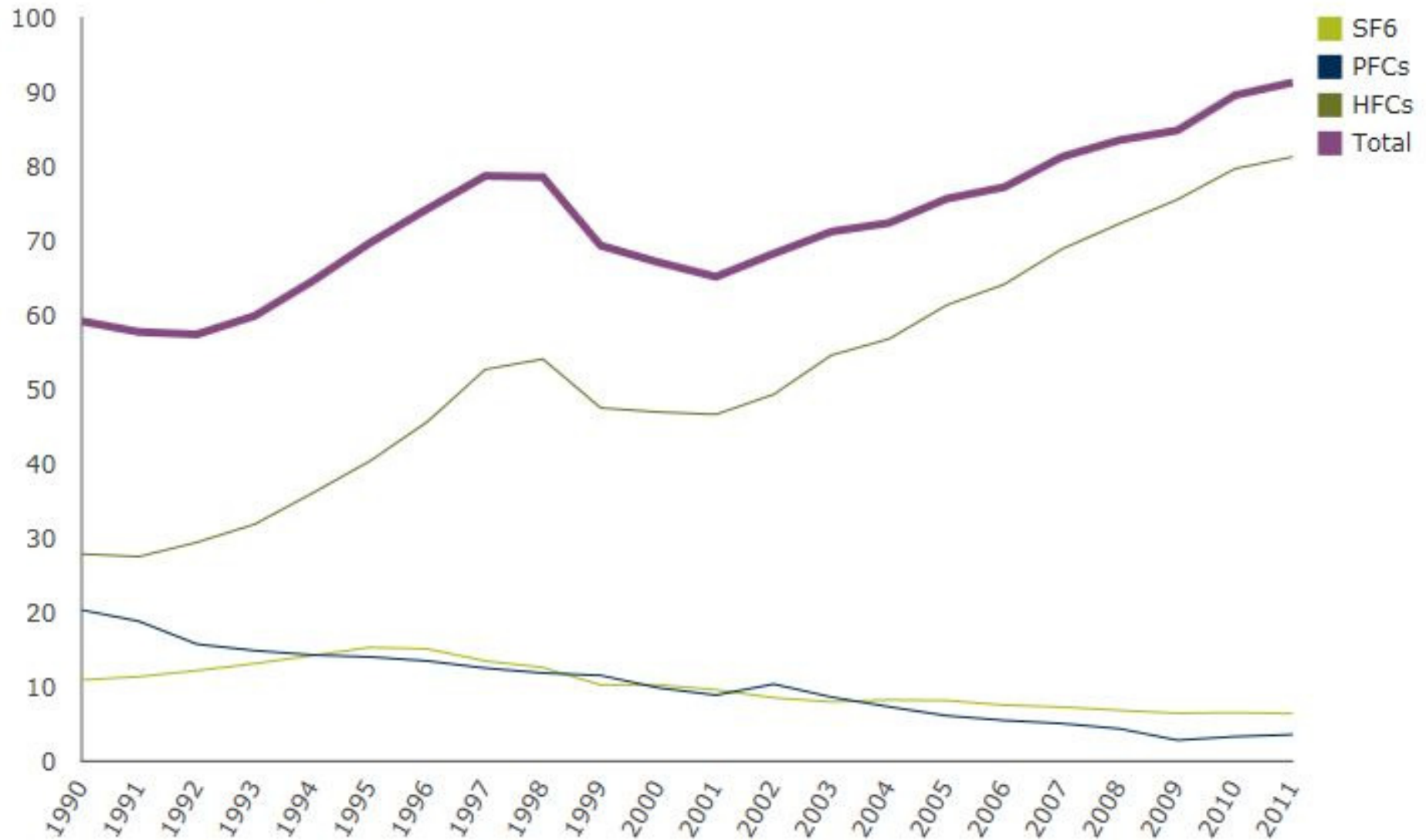


Source: European Environmental Agency, 2014

<http://www.eea.europa.eu/data-and-maps/indicators/emissions-and-consumption-of-fluorinated/assessment>



Chart – (F-gases) emissions

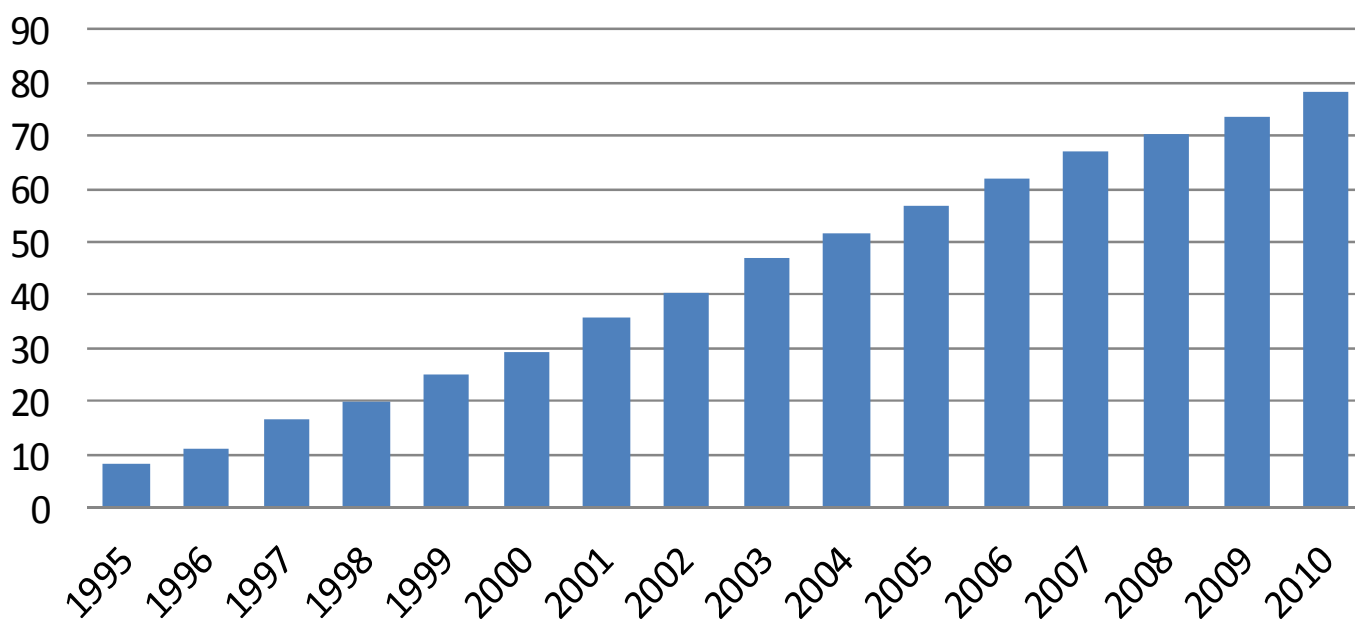


Source: European Environmental Agency, 2014

<http://www.eea.europa.eu/data-and-maps/indicators/emissions-and-consumption-of-fluorinated/assessment>



## Emmissions: HFCs without HFC-23 (EU)



Source: Based on Greenhouse gas viewer, EEA  
(UNFCCC reporting data)



# New Regulation



# The legislative process

- 7 November 2012: Commission proposal to Council and European Parliament
- 16 December 2013: Agreement reached after 4 informal trialogue meetings
- 12 March 2014: Adoption in EP (644 for, 19 against)
- 14 April 2014: Formal adoption by the Council
- Mai 2014: Publication and entry into force 21 days later
- **1 January 2015: Date of application of the new Regulation**



# The new proposal:

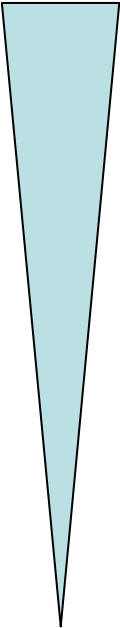
## Two strategies to reduce emissions

- Prevent leakage and emissions
  - Emission prevention and leak checks -> Art. 2 - 6
  - Control of by-production -> Art. 7
  - End of life treatment of products and equipment -> Art. 8-9
  - Training and qualification -> Art. 10
  - Information for users (labelling, product infos) -> Art. 12
- Avoid the use of F-gases
  - Training and qualification
  - Ban on new applications -> Art. 11
  - Ban on uses -> Art. 13
  - **Phase-down of HFC supply** -> Art. 14 ff.



# Overview Implementation 2014

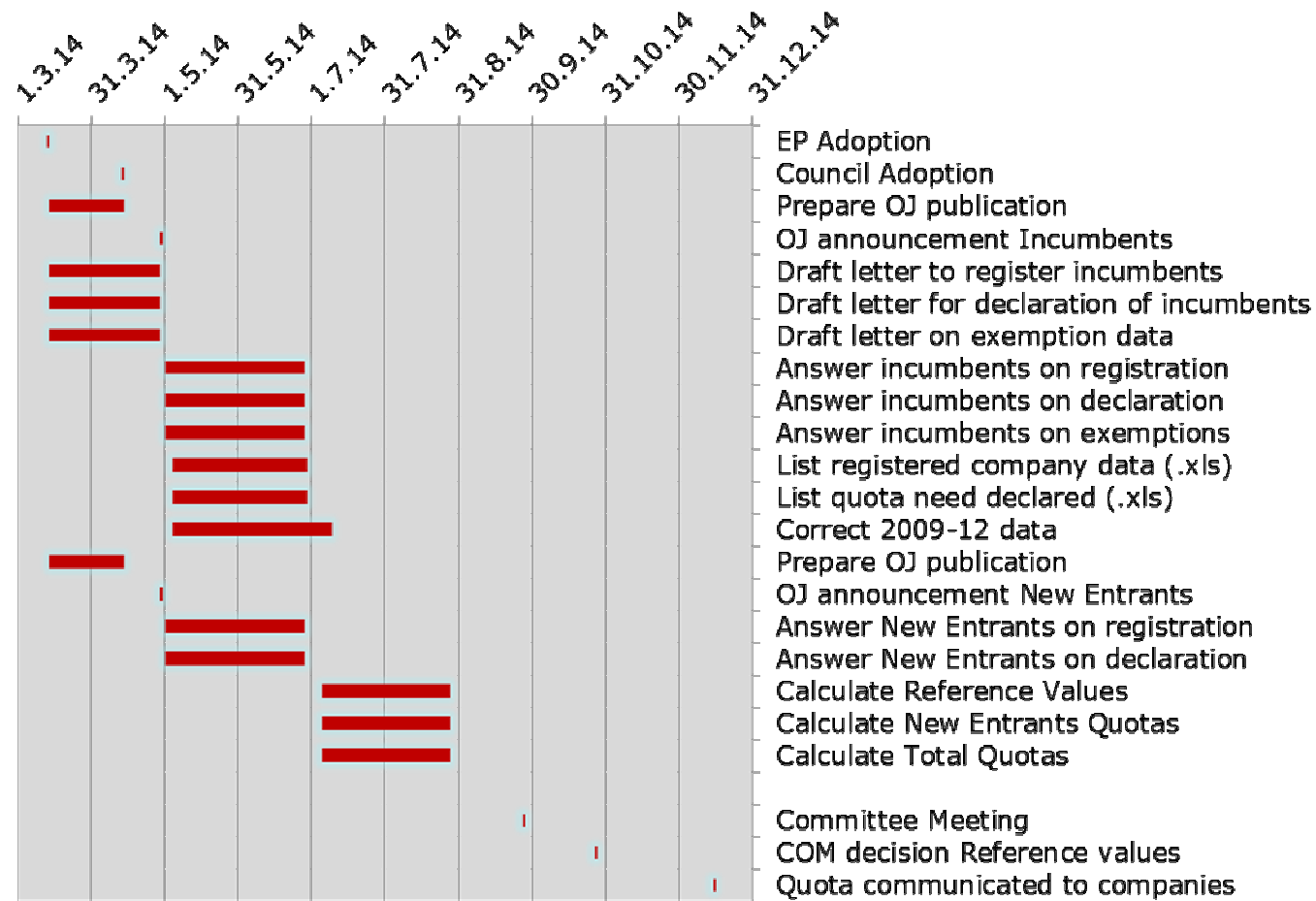
*Main Priority: Enabling a Smooth Start of the Phasedown in 2015!*

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



# Establishing Quota Allocations

## Allocation Process 2014



# Priority 1: Quota Allocations

\* *Reporter Companies* (Incumbents / Established Players) → Reference Value + "Top-up"

\* *New Entrants* → Quota from Reserve, on basis of Declaration and Pro-Rata



## New Entrants Reserve

*New market players apply for new market reserve, makes declaration:*

*11% of "maximum quantity" initially*

*1<sup>st</sup> round: Quota given to maximum ProRataShare*

*2<sup>nd</sup> round: All bidders not yet satisfied*

*Repeat until all satisfied or quantity <500t CO<sub>2</sub>eq.*

*From 2018: all companies bid in 1<sup>st</sup> round (incl. reporters)*

# New Entrants Reserve

*Declaration relative open, but  
→ Quota has limited use*

- **Since transfers are not allowed**
- **Autorisation only if gas is physically supplied**

**Hence having a quota from the  
reserve is useful only if you are  
dealing in bulk gases!**

## HFCs in pre-charged equipment

- 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



# Setting up the Registry





# Priority 1: Registry

- *First functionality: communicate quotas to companies (end-2014)*
  - **Collection of company registration data, declarations and data on exemptions off-line**
  - **Calculation of Reference values and Quotas off-line**

# Registry functions

*Timing: Winter 2014*

*(1) Upload company data (incumbents + new entrants) & quotas from off-line xls-sheet (result of "workaround")*

*from 2015 onwards*

*(2) INPUT TEMPLATE (remains open for any new players, equipment importers), asking for company data*

*(3) Store Suppliers/Receivers of exempted gases imports for destruction, feedstock use, export, military use, semiconductor manufacture, MDIs*

*(4) Store Equipment importers*



# Other Functionalities

*from 2015 onwards*

- *Give access to national authorities incl. Customs to all company data & quota (import from ODS DB for MS contacts, registering for customs?)*
- *Allow for transfers of quotas between registered companies - Track transfers*



# New reporting format

# Good reporting data will be crucial!

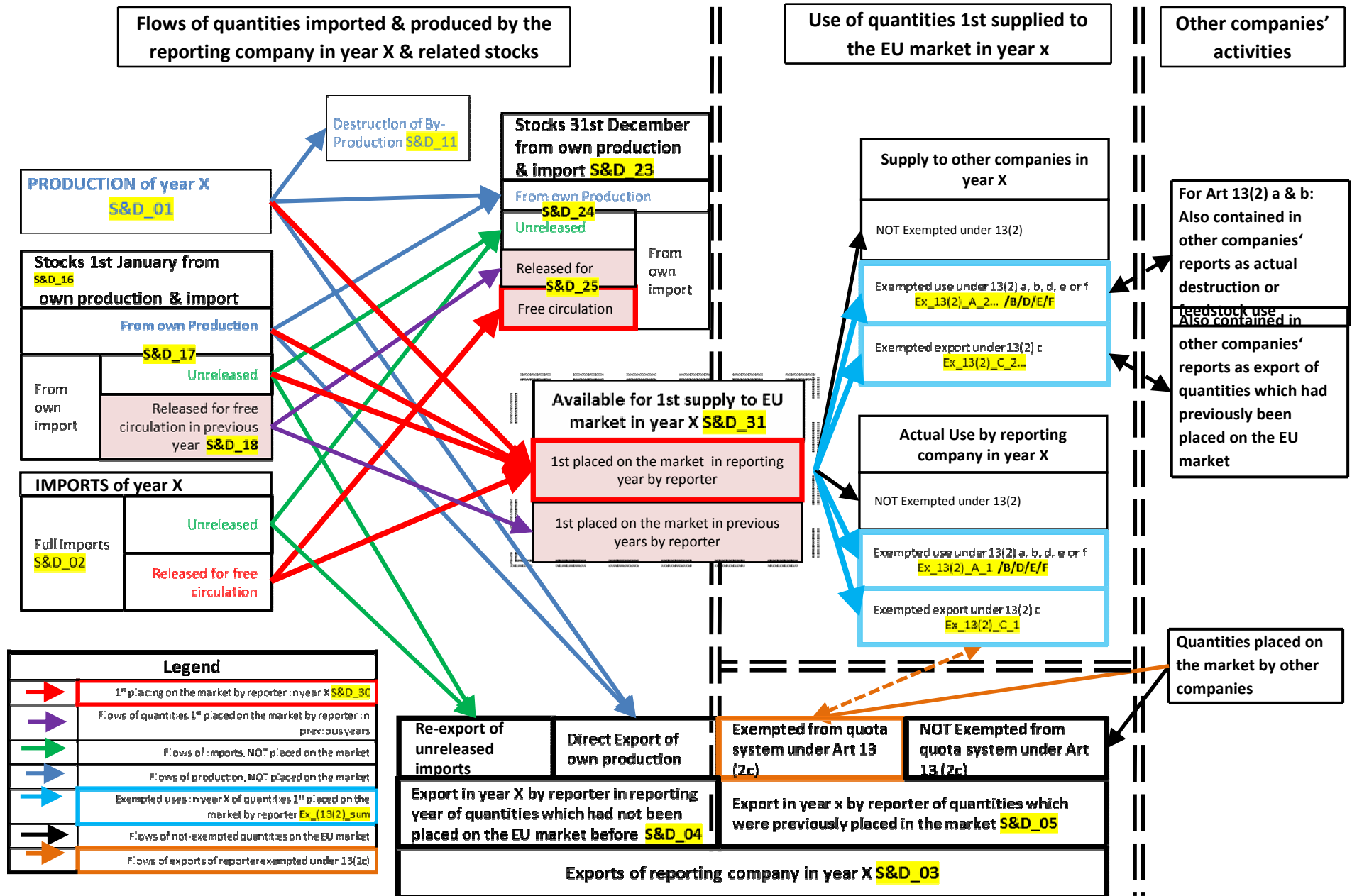
- *Policy impacts: Yearly updates / Indicators  
Inform on market trends*

*But also:*

- *Quota Allocation: after recalculation for 2018,  
based on **POM!***
- *Verification: Quota use, gas imports inside  
equipment, exemptions etc.*

# Reporting of HFC flows in 2015 ff

Relevant for the determination of Placing on the market and exemptions under Art 13(2)





No	Contents	Reporting actors	Objective	Gases
1	Bulk 'supply & demand': Production, Import, Export, Feedstock use, Reclamation, Destruction + Stocks	P, I, E, FU, D	Quota system & market trends	All Annex I & Annex II [t]
2	Quota exemptions under Art 13(2)	P, I	Quota system	HFCs [t]
3	Intended applications	P, I	Market trends	All Annex I & Annex II [t]
4	Authorisations issued to equipment importers & Quota compliance calculation scheme	Quota holders	Quota system	HFCs [Co2-eq]
5	Bulk supplies by NER actors	P & I from NER only	Assure art. 18.2	HFCs [t]
6	Imports of products and equipment	Eq-I	Quota system & market trends	All Annex I & Annex II [t]
7	Exports for precharging RAC equipment	Eq-I of RAC equipment	Covering gases in imported RAC equipment	HFCs [t]
8	Quota coverage equipment	Eq-I of RAC equipment	Covering gases in imported RAC equipment	HFCs [CO2-eq]



# Peer Review

*Will finish an updated version*

*Send to you for review...*

*Keep in mind these are conceptual designs only, the IT version in the BDR will be much more user-friendly:*

*→ intro sheet where company specifies what is relevant (e.g. for equipment importer), and will then only see that!*

*However, to build the IT version (2<sup>nd</sup> half of year), we need to get the concept right! → implementing act by September*

*Let`s be constructive and make it as user friendly as possible!*





# Restrictions

# Proposed bans and their context

## 1. Addressing non-HFCs and by-production

- Use bans for SF<sub>6</sub> in magnesium production
- Recovery/Destruction of HFC-23 by-production

## 2. Steering the HFC phase-down

- Ban to service existing equipment with high GWP HFCs,
- Additional placing on the market bans for new equipment

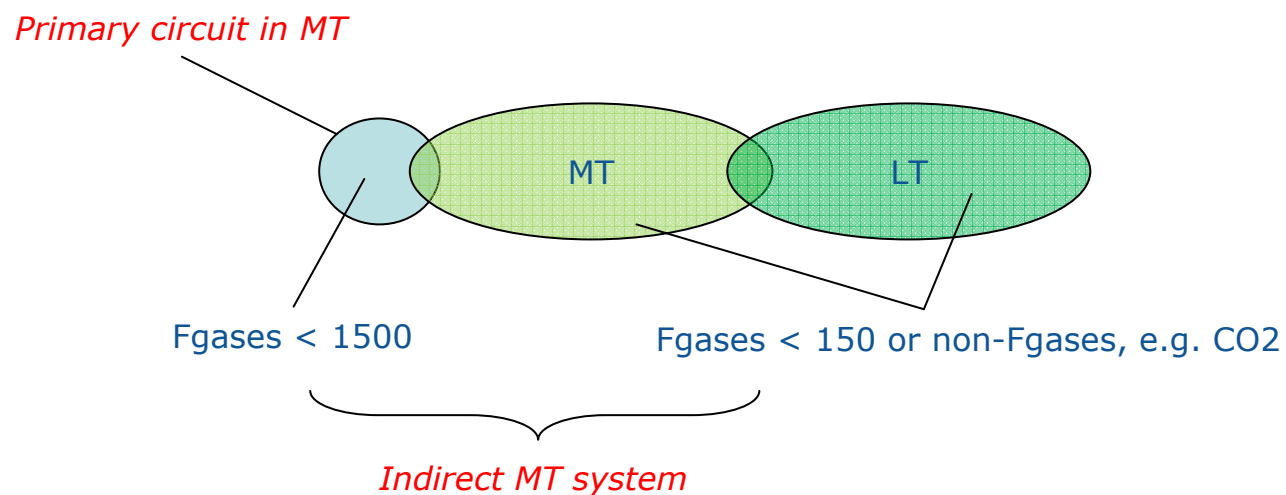
### *Guiding principles:*

- Existing equipment should not become obsolete
- Bans only when alternatives are available (= safe, energy efficient, economically viable)

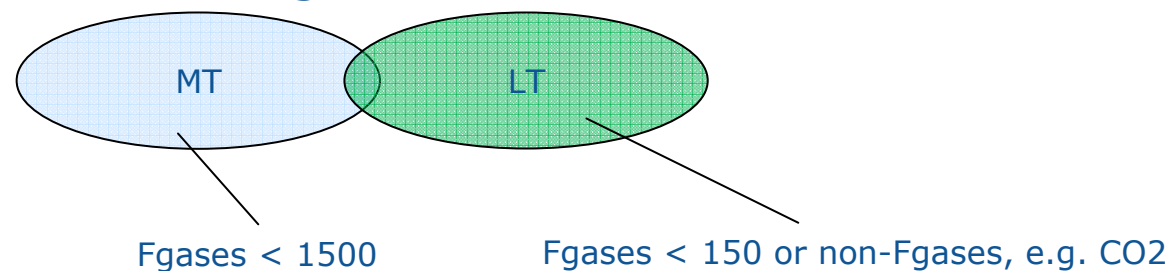
## Some clarifications on bans

- *Bans 10/11 include wine/beer/soda coolers*
- *GWP levels in bans 10/11 etc. not limited to refrigerants → also foams included*
- *AC movable (ban 14) includes window units*
- *Refrigeration does not include AC (service ban)*
- *Ban 12 (stationary refrigeration) includes the multipacks*
- *What are indirect cascade multipacks?*

## Cascade allowed, according to ban 13:

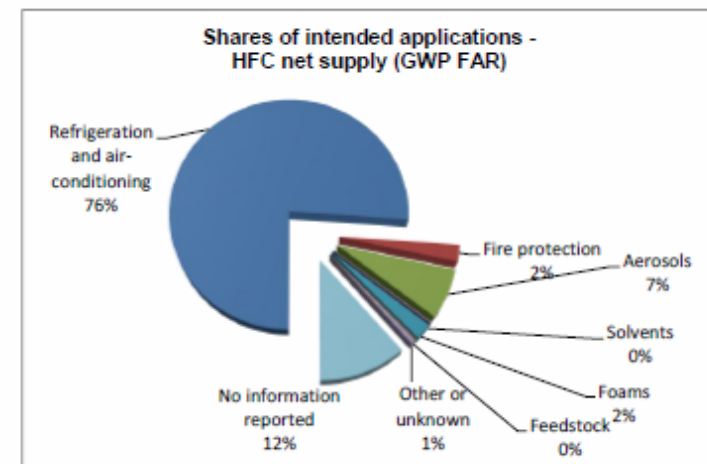


## Cascade not allowed, e.g.:



## A (personal) remark @ the end

- *R404a is probably not **cool** anymore!*
  - *Service ban applies from 2020*
  - *There are more energy-efficient options with lower GWP*
  - *PD step 2018 is 63%!*





# Looking forward



## Reviews

<i>Report on codes &amp; standards</i>	<i>2016</i>
<i>Report on training for alternatives</i>	<i>2017</i>
<i>Report on quota allocation</i>	<i>2017</i>
<i>Report on refrigeration systems</i>	<i>2017</i>
<i>Report on availability of HFCs</i>	<i>2020</i>
<i>Report on mV switchgear, split AC</i>	<i>2020</i>
<i>Comprehensive Report on effects, incl. Forecast of HFCs demand, need for further action, overview of standards, analysis of alternatives in equipment not banned</i>	<i>2022</i>



## The international context

- The new EU F-gas Regulation demonstrates that ambitious measures on F-gases are feasible
- Increasing interest and demand for alternatives to HFCs are likely to trigger innovation and economies of scale also in other markets
- The agreement will result in a more active role of the EU in the negotiations on an HFC amendment under the Montreal Protocol



# Developments elsewhere, e.g. US

Commission

## Current Thinking on Possible Status Changes

- Consumer Aerosols (non-medical & non-technical aerosols)
  - Change status for HFC-134a, HFC-227ea and HFC-125
  - Retain HFC-152a
- Various foam blowing end uses
  - Change status by foam type, generally HFC-134a and higher GWPs
- Commercial Refrigeration
  - Vending Machines and Stand-Alone Reach-In Coolers
    - Change the status for HFC-134a and HFC blends with higher GWPs
  - Multiplex Supermarket Systems
    - Change the status for R-507A, R-404A and other HFC blends with high GWPs
    - Retain R-407A , R407F, others
- Motor Vehicle Air Conditioning
  - Change the status for HFC-134a



## To know more...



[http://ec.europa.eu/clima/news/articles/news\\_2014031201\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2014031201_en.htm)

[http://ec.europa.eu/clima/policies/f-gas/legislation/docs/fluorinated\\_greenhouse\\_gases\\_en.pdf](http://ec.europa.eu/clima/policies/f-gas/legislation/docs/fluorinated_greenhouse_gases_en.pdf)

[http://ec.europa.eu/clima/policies/f-gas/legislation/documentation\\_en.htm](http://ec.europa.eu/clima/policies/f-gas/legislation/documentation_en.htm)