Öko-Recherche
Büro für Umweltforschung und -beratung GmbH

Welcome to this webinar on

Recent Developments in

F-Gas Reporting & Market Trends

15 December 2025

10:30 – 12 am

Agenda

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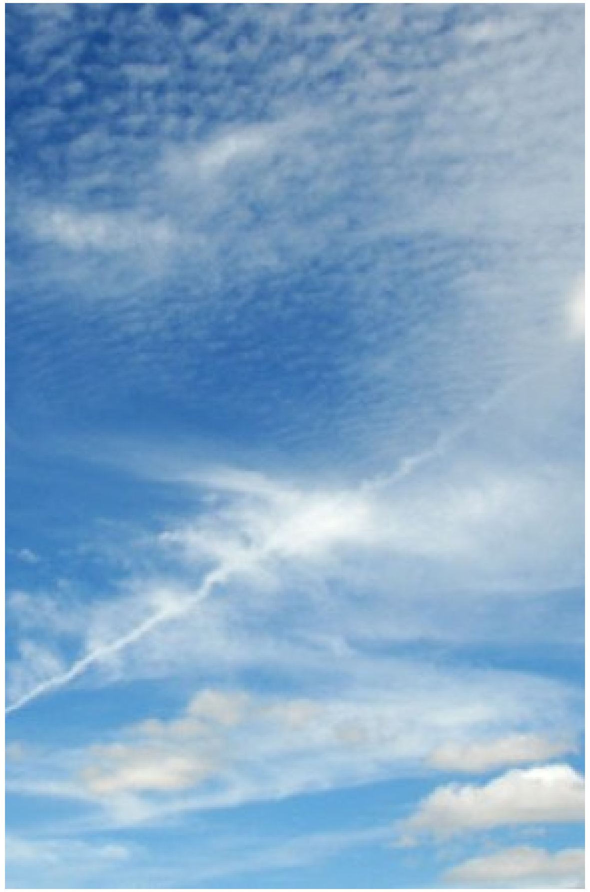
Büro für Umweltforschung und -beratung GmbH

Opening Remarks	Agnieszka Truszczynska, EU COM DG Clima
Introductory Remarks	Peder Gabrielsen, EEA
Main changes in Reporting Under the New EU F-Gas Regulation	Judith Epremian, Öko-Recherche
Market Trends from the ETC CM Report 2025/05	Sylvie Ludig, Öko Institut
Information about Price Monitoring Survey, Further Events & Closing Remarks	Felix Heydel, Öko-Recherche



Welcome

Agnieszka Truszczynska,
EU COM DG Clima

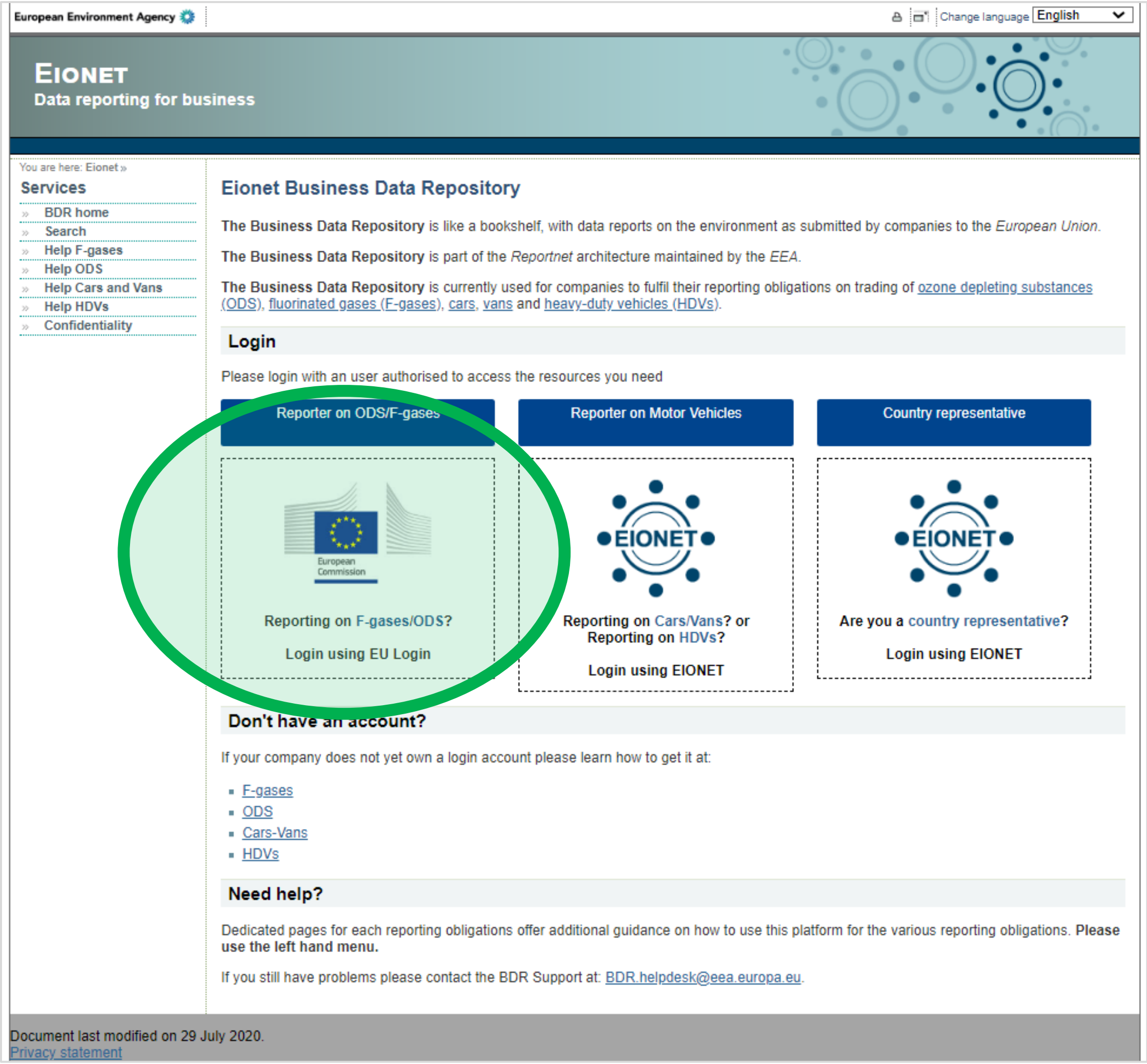
Introduction to F-Gas Reporting

Peder Gabrielsen,
European Environment Agency

F-gas Regulation Article 26 company reporting

Online reporting tool at the Business Data Repository -> https://bdr.eionet.europa.eu/

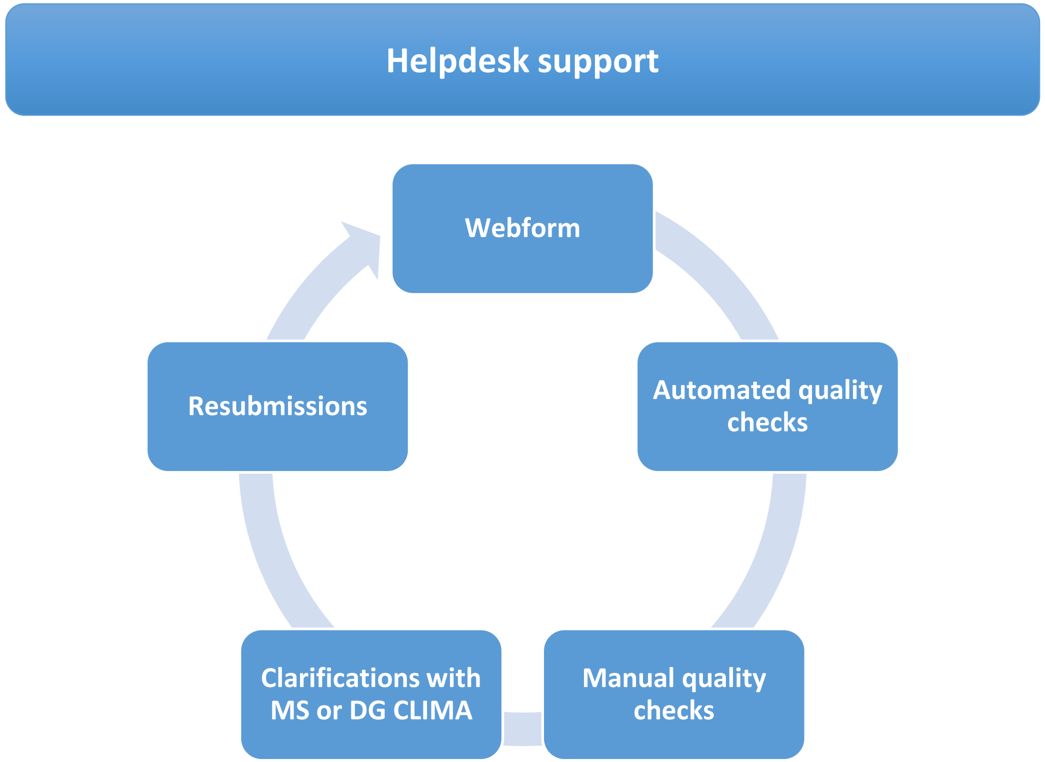
European Environment Agency support to companies –> BDR.helpdesk@eea.europa.eu



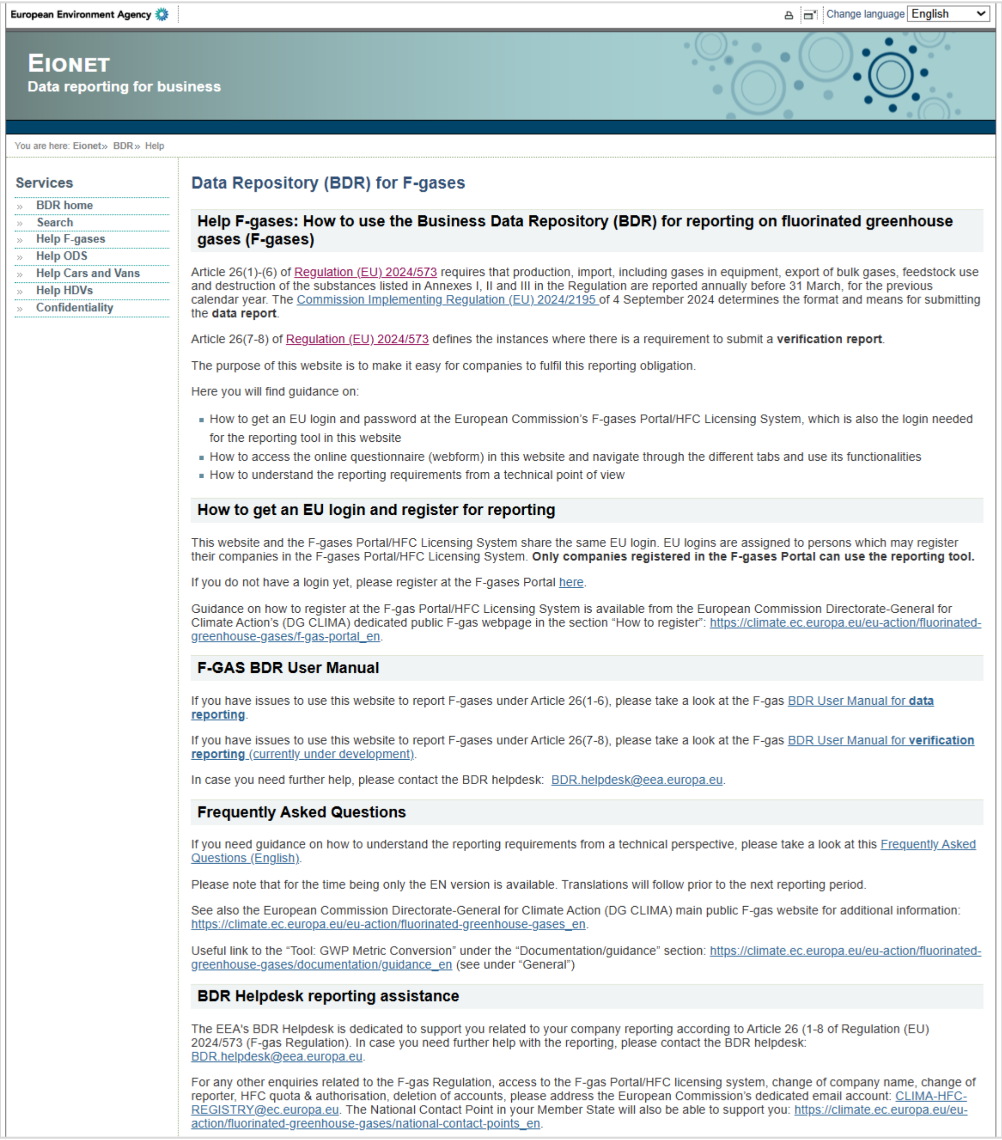
F-gas Regulation Article 26 company reporting

F-gases data flow management

- ***Reporting** by companies via electronic webform*
- ***Support** via Helpdesk on reporting issues*
- ***Follow-up by the F-gas Reporting Support team with companies for quality assurance of the data***



F-gases help webpage -> https://bdr.eionet.europa.eu/help/fgases



European Environment Agency | Change language English

EIONET
Data reporting for business

You are here: Eionet» BDR» Help

Services

- BDR home
- Search
- Help F-gases
- Help ODS
- Help Cars and Vans
- Help HDVs
- Confidentiality

Data Repository (BDR) for F-gases

Help F-gases: How to use the Business Data Repository (BDR) for reporting on fluorinated greenhouse gases (F-gases)

Article 26(1)-(6) of Regulation (EU) 2024/573 requires that production, import, including gases in equipment, export of bulk gases, feedstock use and destruction of the substances listed in Annexes I, II and III in the Regulation are reported annually before 31 March, for the previous calendar year. The Commission Implementing Regulation (EU) 2024/2195 of 4 September 2024 determines the format and means for submitting the **data report**.

Article 26(7-8) of Regulation (EU) 2024/573 defines the instances where there is a requirement to submit a **verification report**.

The purpose of this website is to make it easy for companies to fulfil this reporting obligation.

Here you will find guidance on:

- How to get an EU login and password at the European Commission's F-gases Portal/HFC Licensing System, which is also the login needed for the reporting tool in this website
- How to access the online questionnaire (webform) in this website and navigate through the different tabs and use its functionalities
- How to understand the reporting requirements from a technical point of view

How to get an EU login and register for reporting

This website and the F-gases Portal/HFC Licensing System share the same EU login. EU logins are assigned to persons which may register their companies in the F-gases Portal/HFC Licensing System. **Only companies registered in the F-gases Portal can use the reporting tool.**

If you do not have a login yet, please register at the F-gases Portal here.

Guidance on how to register at the F-gas Portal/HFC Licensing System is available from the European Commission Directorate-General for Climate Action's (DG CLIMA) dedicated public F-gas webpage in the section "How to register": https://climate.ec.europa.eu/eu-action/fluorinated-greenhouse-gases/f-gas-portal_en.

F-GAS BDR User Manual

If you have issues to use this website to report F-gases under Article 26(1-6), please take a look at the F-gas BDR User Manual for **data reporting**.

If you have issues to use this website to report F-gases under Article 26(7-8), please take a look at the F-gas BDR User Manual for **verification reporting** (currently under development).

In case you need further help, please contact the BDR helpdesk: BDR.helpdesk@eea.europa.eu.

Frequently Asked Questions

If you need guidance on how to understand the reporting requirements from a technical perspective, please take a look at this Frequently Asked Questions (English).

Please note that for the time being only the EN version is available. Translations will follow prior to the next reporting period.

See also the European Commission Directorate-General for Climate Action (DG CLIMA) main public F-gas website for additional information: https://climate.ec.europa.eu/eu-action/fluorinated-greenhouse-gases_en.

Useful link to the "Tool: GWP Metric Conversion" under the "Documentation/guidance" section: https://climate.ec.europa.eu/eu-action/fluorinated-greenhouse-gases/documentation/guidance_en (see under "General")

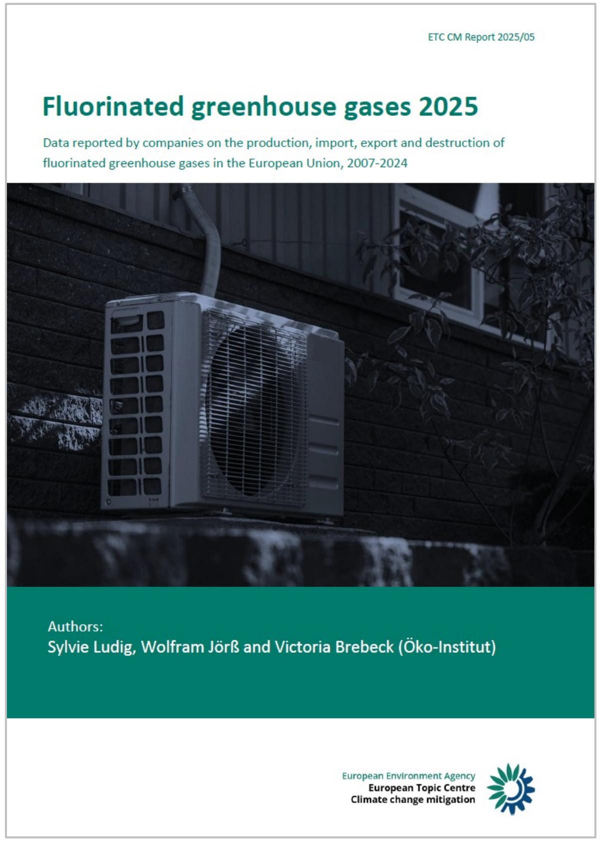
BDR Helpdesk reporting assistance

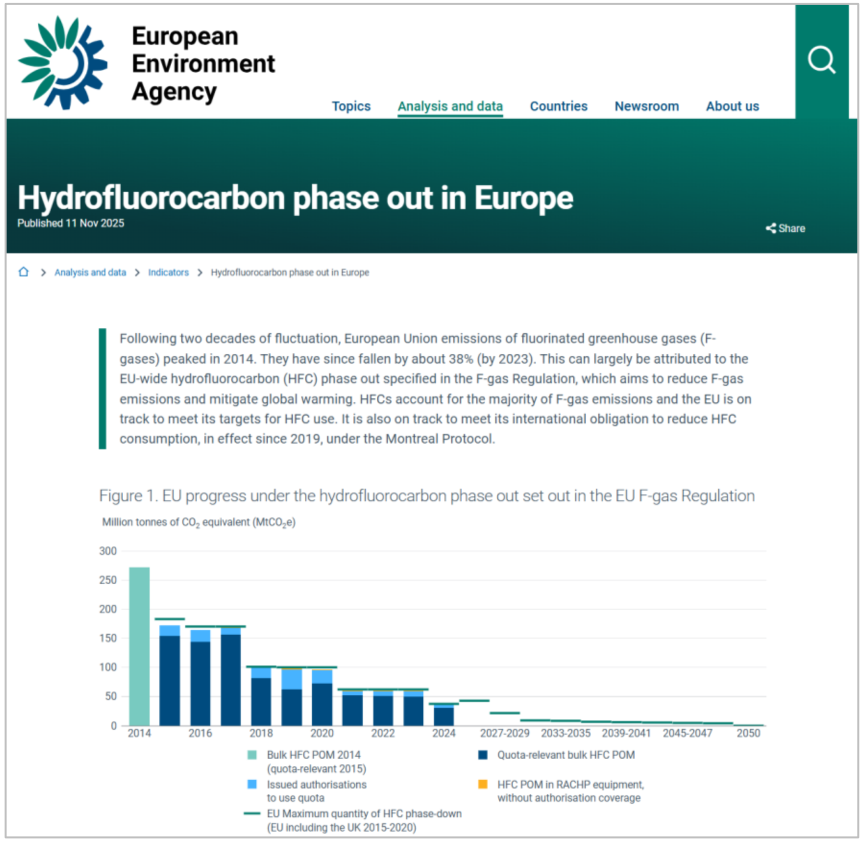
The EEA's BDR Helpdesk is dedicated to support you related to your company reporting according to Article 26 (1-8 of Regulation (EU) 2024/573 (F-gas Regulation). In case you need further help with the reporting, please contact the BDR helpdesk: BDR.helpdesk@eea.europa.eu.

For any other enquiries related to the F-gas Regulation, access to the F-gas Portal/HFC licensing system, change of company name, change of reporter, HFC quota & authorisation, deletion of accounts, please address the European Commission's dedicated email account: CLIMA-HFC-REGISTRY@ec.europa.eu. The National Contact Point in your Member State will also be able to support you: https://climate.ec.europa.eu/eu-action/fluorinated-greenhouse-gases/national-contact-points_en.

EEA products on fluorinated greenhouse gases

- **Public annual report**
  - ✓ Fluorinated greenhouse gases 2025 https://www.eionet.europa.eu/etcs/etc-cm/products/etc-cm-report-2025-05
- **Public annual indicator update**
  - ✓ Hydrofluorocarbon phase-down in Europe https://www.eea.europa.eu/en/analysis/indicators/hydrofluorocarbon-phase-down-in-europe





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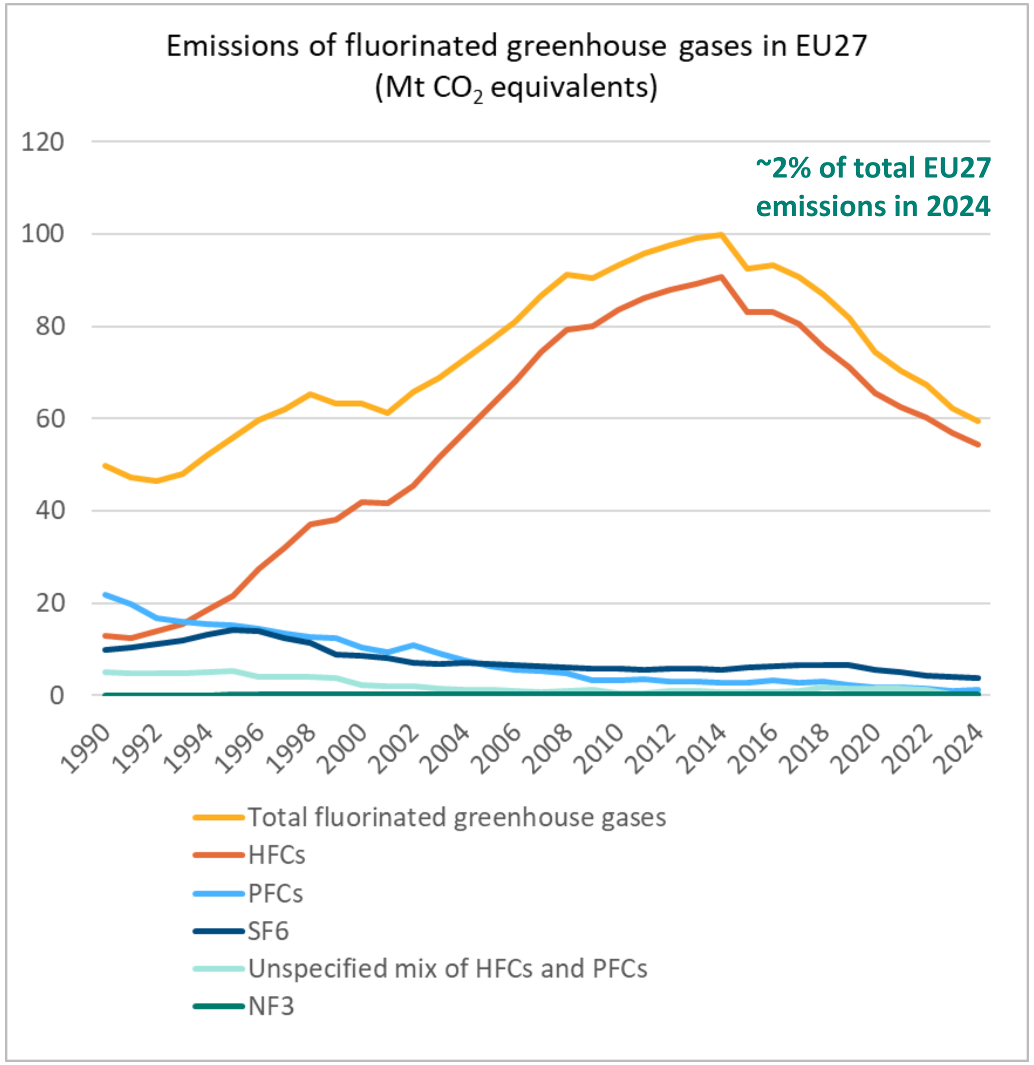
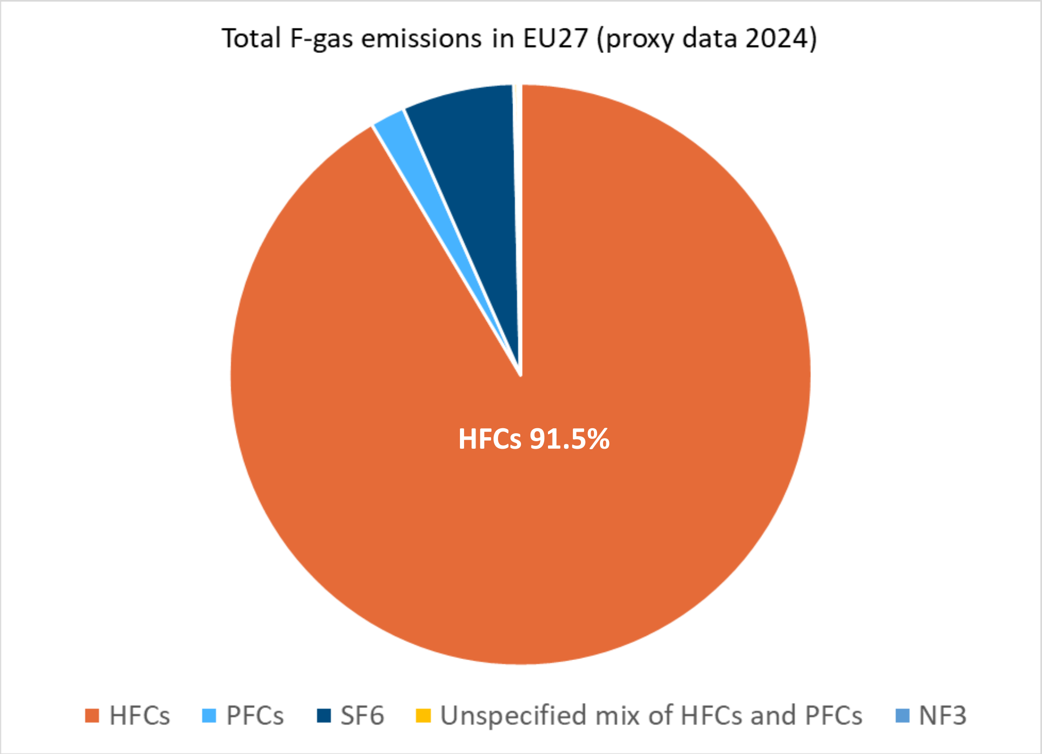
HFC phase out impact on EU F-gas emissions





Sources:

- EEA/PUBL/2025/024. Annual European Union greenhouse gas inventory 1990-2023 and inventory document 2025
- EEA greenhouse gases — data viewer: https://www.eea.europa.eu/en/analysis/maps-and-charts/greenhouse-gases-viewer-data-viewers

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Main Changes in Reporting introduced by Regulation (EU) 2024/573

Judith Epremian,
Öko-Recherche

Main Changes in Reporting Under Regulation (EU) 2024/573

Öko-Recherche
Büro für Umweltforschung und -beratung GmbH

More substances and new reporting thresholds

- **more substances covered:**
  - **New reportable substances added**

I: HFCs, PFCs and other F-gases

II: Unsaturated H(C)FCs, anaesthetic gases, other F-gases

III: Fluorinated ethers, ketones, alcohols and other fluorinated compounds

- **some reporting thresholds changed**

Companies that place **F-Gases contained in products or equipment** on EU market:

- **Now: ≥ 10 t CO_2e of HFCs, or ≥ 100 t CO_2e of other F-gases**
- Before: ≥ 500 t CO_2e of Annex I & Annex II substances

Companies that place **bulk gases** on the EU market:

- **Now: any amount of HFCs or >1 metric tonne or >100 t CO_2e of other F-gases**
- Before: 1 metric tonne or 100 t CO_2e of F-gases and Annex II substances

- quota holders that did not place any HFCs on the market must submit a **nil report**

Main Changes in Reporting Under Regulation (EU) 2024/573

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Destruction

- **List of destruction technologies** now matches list of destruction technologies acknowledged under the **Montreal Protocol** (revised structure)

Import of Pre-Charged Products & Equipment

- revised **structure of categories for stationary refrigeration, air-conditioning and heat pump equipment**
  - Especially revised sections on stationary applications

Main Changes in Reporting Under Regulation (EU) 2024/573

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HFCs for MDI manufacture

- Supply was quota-exempted in 2024, since 2025 part of the **quota system**
- reporting on HFCs for the manufacture of MDIs is obligatory for both, suppliers and **the recipients of these gases**
  - this double-tracked approach (supplier + recipient) applies also to exemptions from quota obligations (military, semiconductor)

Reclamation

- **Self-standing reporting obligation** for reclaimed quantities

Main Changes in Reporting Under Regulation (EU) 2024/573

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Verification

Pre-charged equipment and products

- **threshold for verification for submission to the European Commission via the reporting forms: ≥ 1,000 t CO_2e of HFCs**

Bulk gases

- **report must be verified when:**
  - **Amount placed on market > 1,000 t CO_2e of HFCs**

    and/ or
  - **any amount of HFCs supplied to another company for export outside the EU, which were not subsequently made available to any other person in the EU prior to the export**

Independent audit requirements

- Auditor must be **registered in F-Gas Portal**

Webinar planned for 29 January on verification under the F-Gas Regulation, including BDR reporting on verification results

Looking for more information or support?

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European Commission’s page on F-gases

- https://climate.ec.europa.eu/eu-action/fluorinated-greenhouse-gases_en

EEA F-gases Help Webpage

- https://bdr.eionet.europa.eu/help/fgases

Frequently Asked Questions regarding Company reporting under Regulation (EU) 2024/573

- https://bdr.eionet.europa.eu/help/faq/F-gases_FAQ_EN.pdf

EEA Support to companies on online reporting at the Business Data Repository

- BDR.helpdesk@eea.europa.eu

Common sources of confusion in reporting

Sylvie Ludig,
Öko Institut

Common sources of confusion in reporting

Öko-Institut Öko-Recherche Büro für Umweltforschung und -beratung GmbH

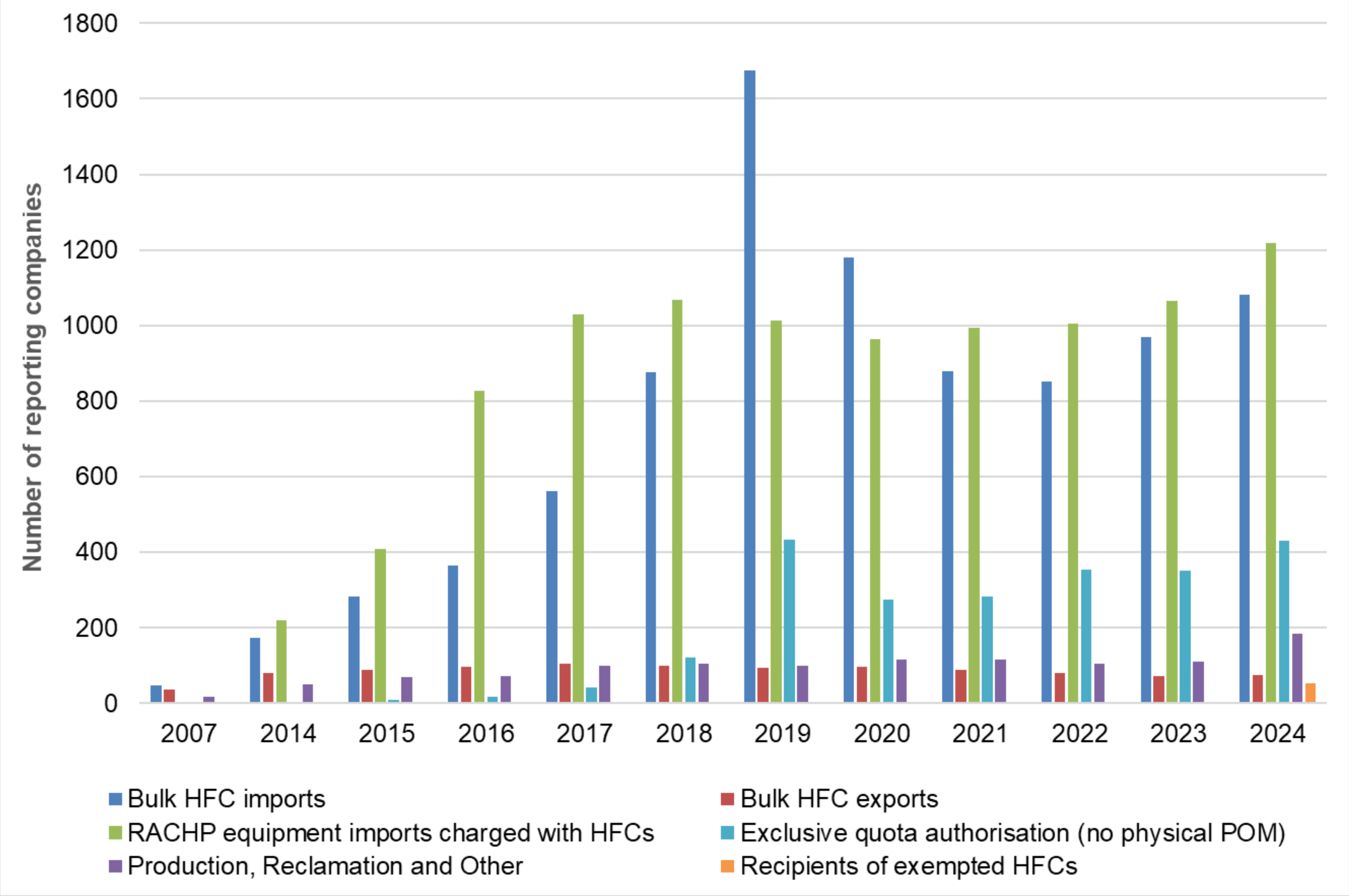
- **Metric used** when reporting quantities of gas
  - metric tonnes of gas vs. tonnes of CO_2e
- Correct **designation** of reported substances
  - HFC-134 ≠ HFC-134a
  - Unsaturated HFCs ≠ HFCs
  - Mixtures: adding fluorinated gases as 'other' or trying to add ASHRAE-defined mixtures (e.g. R-454c)
  - R-134a = HFC-134a, R32 = HFC-32
- **Bulk vs. equipment** imports
- **Own** bulk imports (2A) vs. 2G purchases under special customs procedures
- Reporting of refrigerant use or etching in semiconductor manufacture as '**feedstock use**'
- Reporting HFC-charged RAC equipment in section 11_P (category "other")

Market Trends from the ETC CM Report 2025/05

Sylvie Ludig,

Öko Institut

Reporting companies and activities



Number **of data & NIL reports** in 2025 reporting round higher than in 2024
(Cut-Off 06 July 2025):

- 3217 data reports (+32%)
- 2864 NIL reports (+25%) (no reportable activity)

Number of **bulk HFC importers** up by 14%, after similar increase in 2023

Number of equipment importers increased by 18%

~420 Quota holders don‘t import HFCs, instead issue authorisations, +22% after stable 2022-2023

54 companies reported on receipt of exempted HFCs

Origin of reporting companies (data reports)

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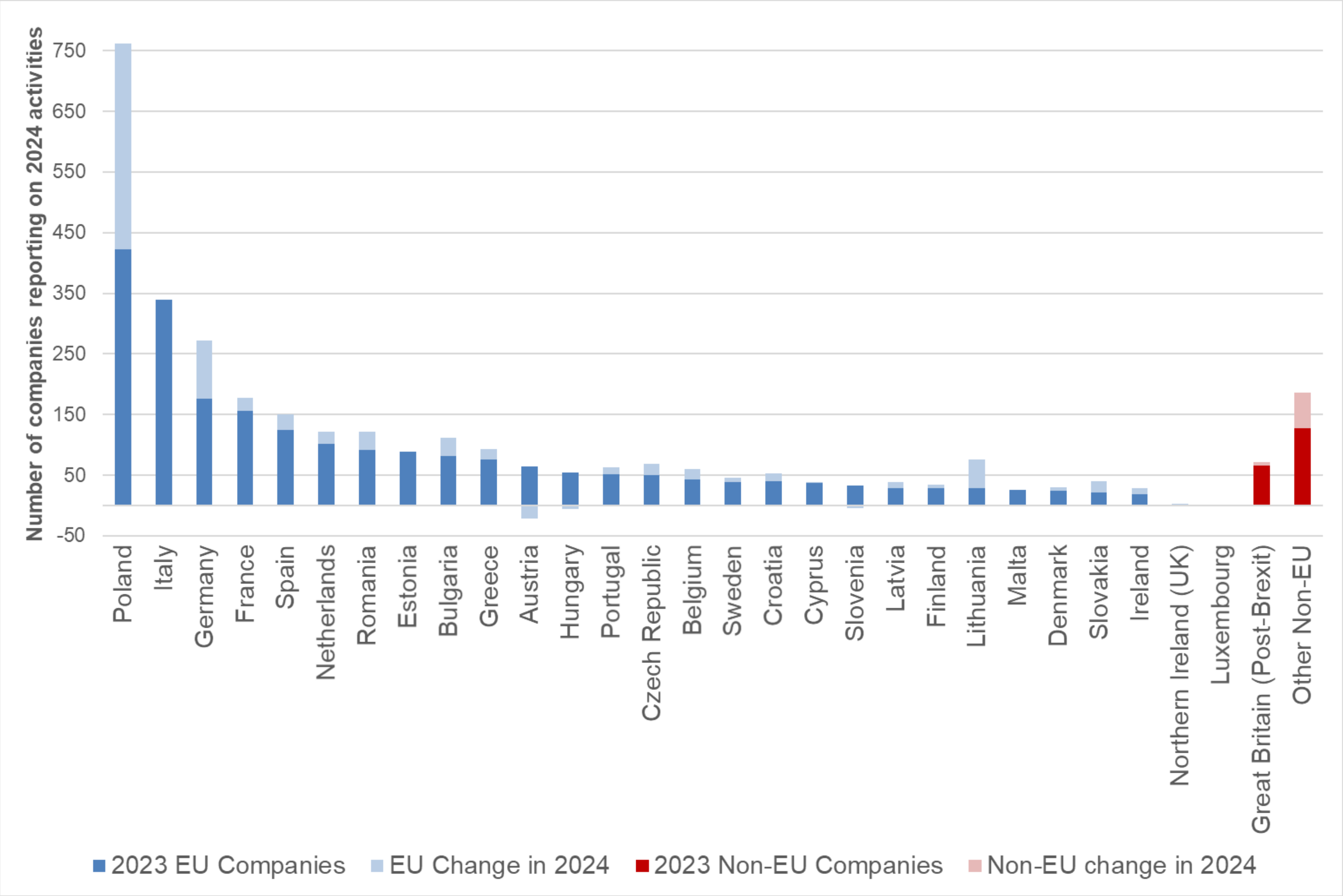

Companies distributed across all EU Member States

Most non-EU companies are from China, followed by GB, Belarus and Turkey

Number of reporting companies increased mainly for Poland, Germany and Lithuania, number of Italian companies stable after strong increases until 2023

European Environment Agency

Assessment of reported data

1) Data reported on physical F-gas flows:

- Production, Imports, Exports, Destruction, Feedstock Use, Stocks, Reclamation etc
- Report on 2024 first under FGR (EU) 2024/573

2) Calculated assessment / compliance metrics

- Supply – EEA metric for demand of EU industries, potentially emission-relevant
- HFC non-exempted Placing on the Market (POM) – FGR/HFC phase-down
- HFC consumption – Montreal Protocol/HFC phase-down

All: ≈ Production + Imports – Exports – Feedstock Use (- Destruction)

EU Progress of the EU HFC phase-out

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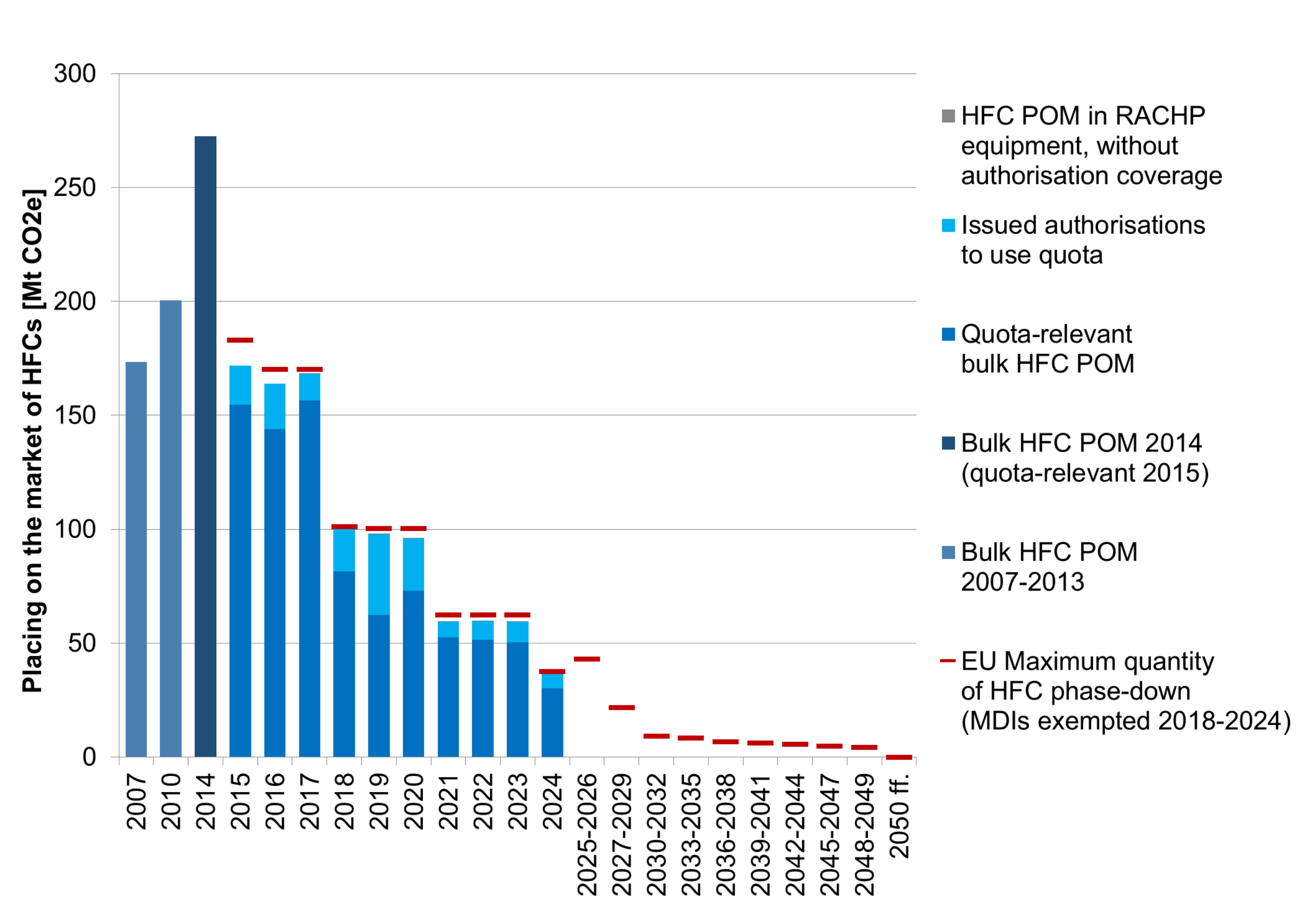

POM 2024 (preliminary data)

- ~0.5 Mt CO2e / ~0.6 % below maximum quantity
- Overachievement of 0.5 Mt results from
  - 1.4 Mt unused quota vs.
  - 0.8 Mt quota exceedances

(calculated at company level)

- Exceedances: ~56 % bulk, ~44 % equipment

Authorised quota 25% lower than in 2023 after increases in 2022 and 2023

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Intended applications of F-gas supply in 2024

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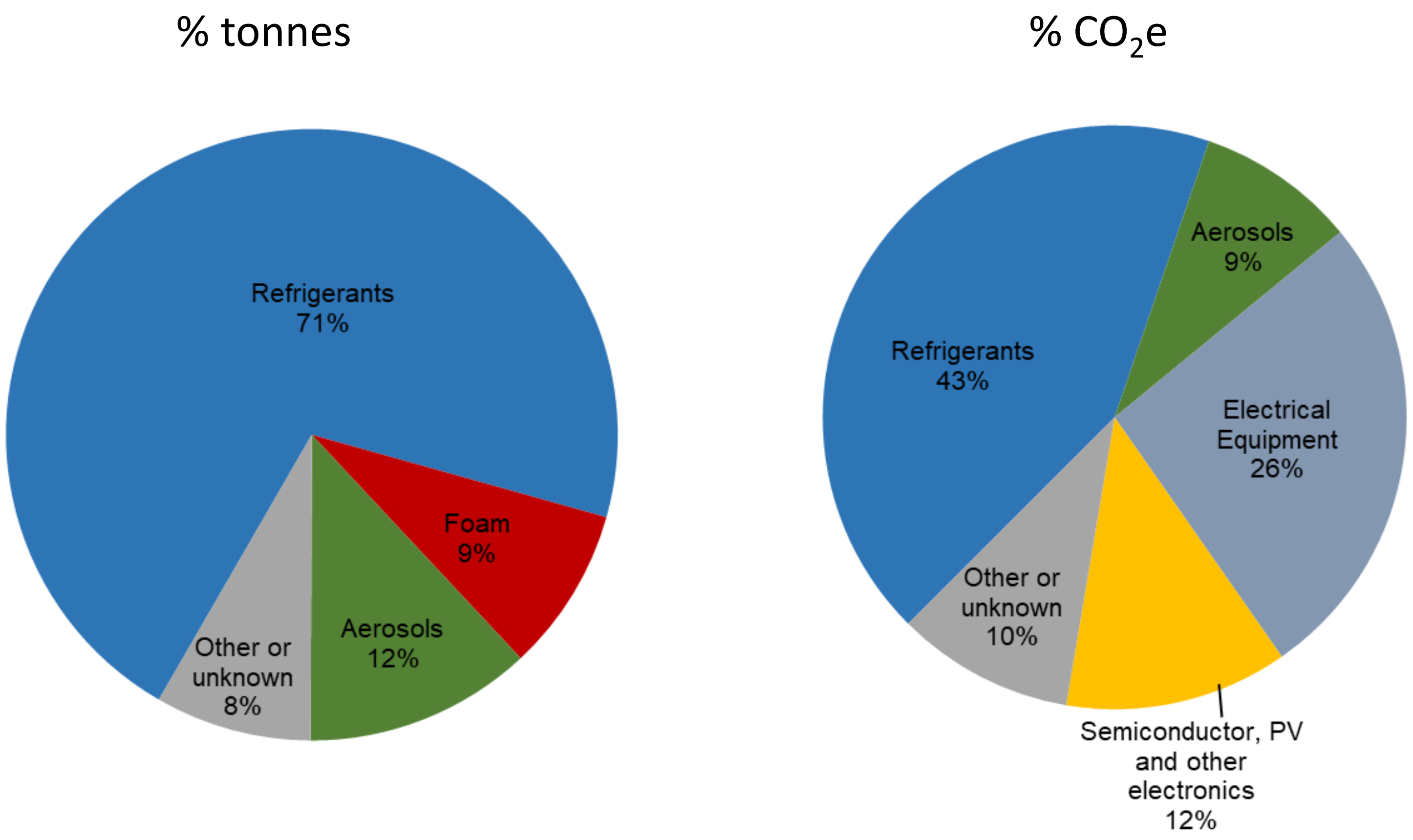

Overall key applications (% of GWP, 2024)

- 43% refrigerants (57% in 2023)
- 26% electrical equipment (14% in 2023)
- 12% Semiconductor/PV
- 9% aerosols (mostly MDIs)

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EU supply of fluorinated gases

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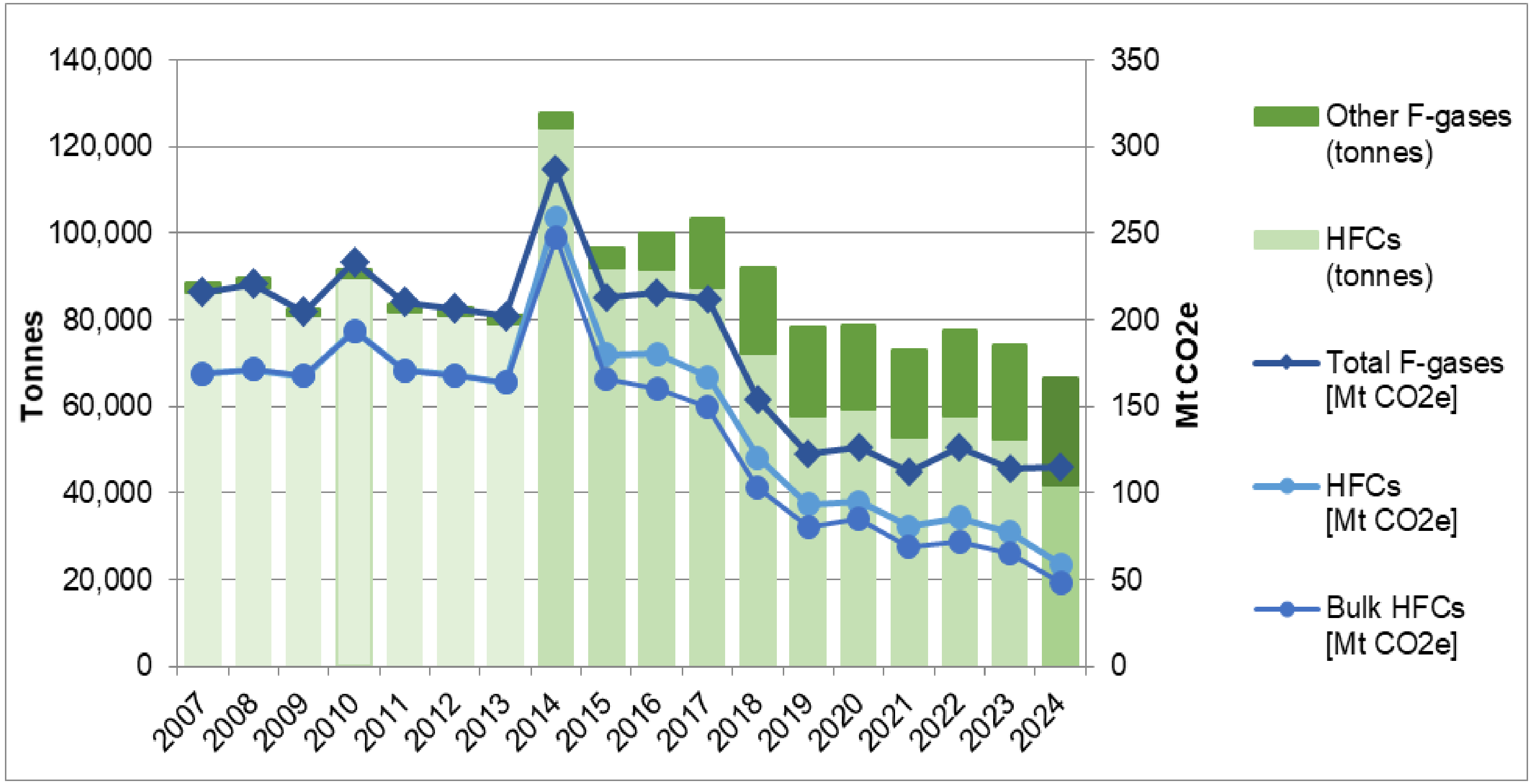


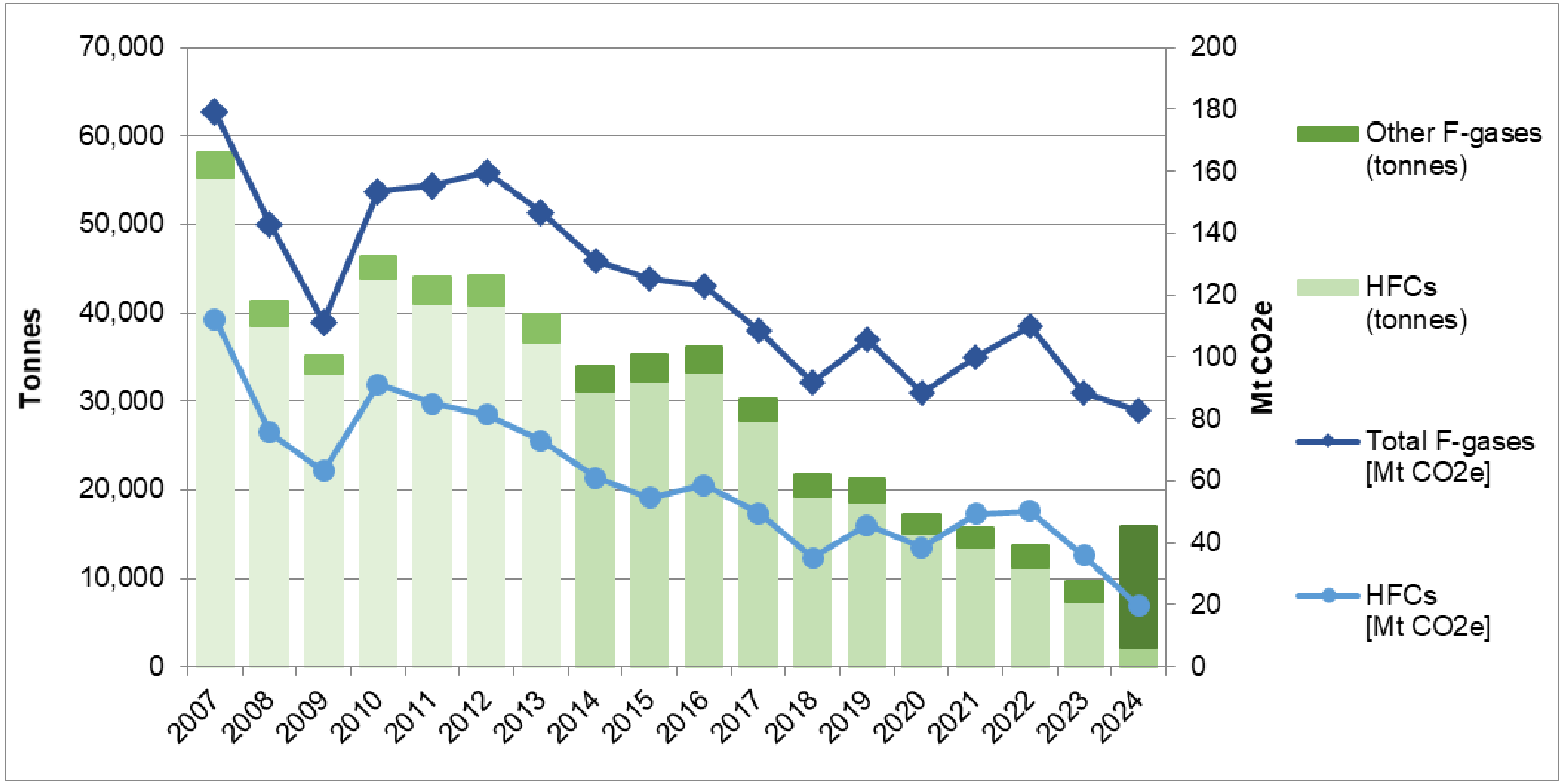
EU-27 F-Gas supply lower in 2024:

- 11 % decrease compared to 2023 (+1 % GWP 2024 vs. 2023)
- ~21% decrease of HFCs
- ~63% increase of SF_6

- Production and imports of HFCs lower,
- Production and imports of SF_6 higher!

European Environment Agency

EU Production of F-gases



Production in EU decreasing. Newly reportable HFO in 2024

Declining trend in HFC production continues (-72% in t)

SF6: ~75% of total GWP production, increasing

- still ~20% below 2012 historic high, levels similar since 2016

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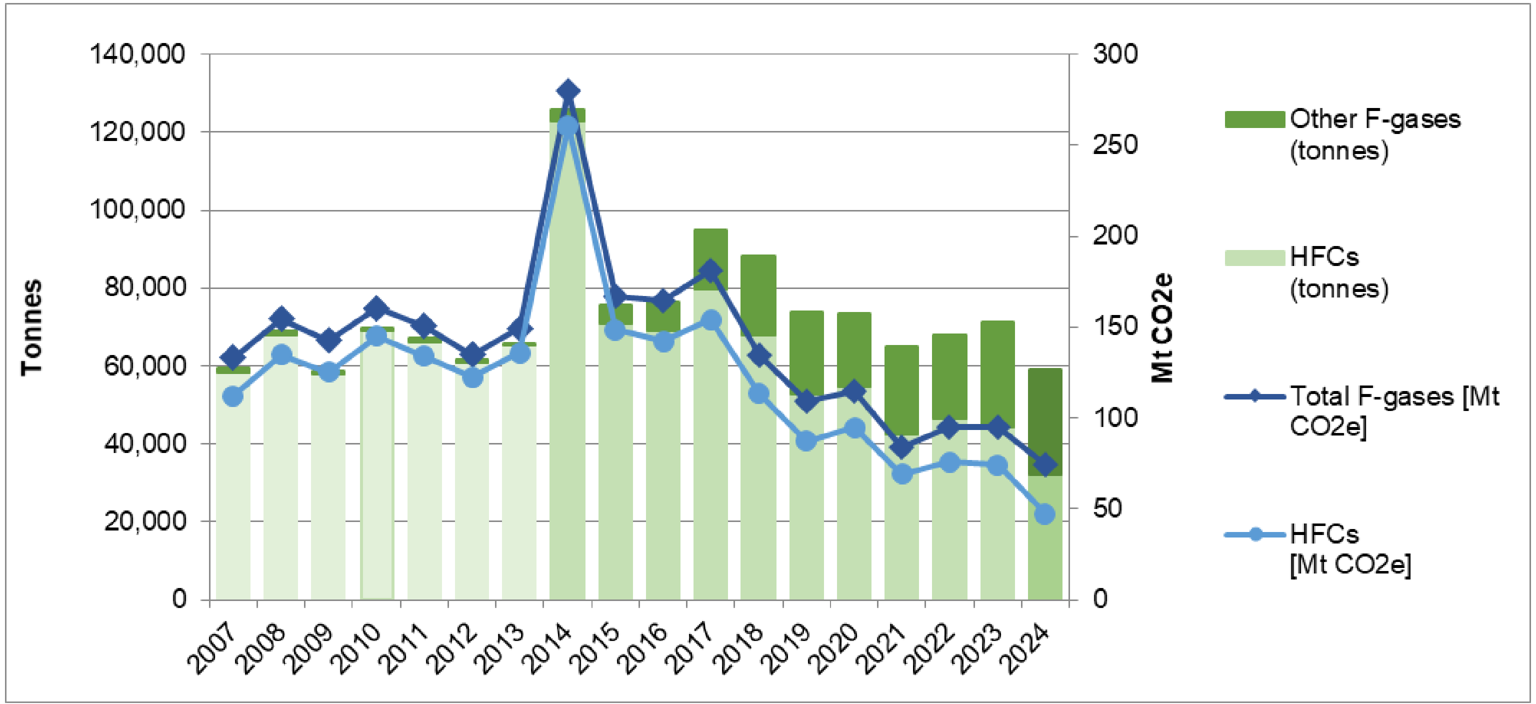
EU bulk imports of F-Gases



Bulk Imports decreasing since 2015

-20% between 2023 and 2024

EU supply of fluorinated gases (RACHP equipment)

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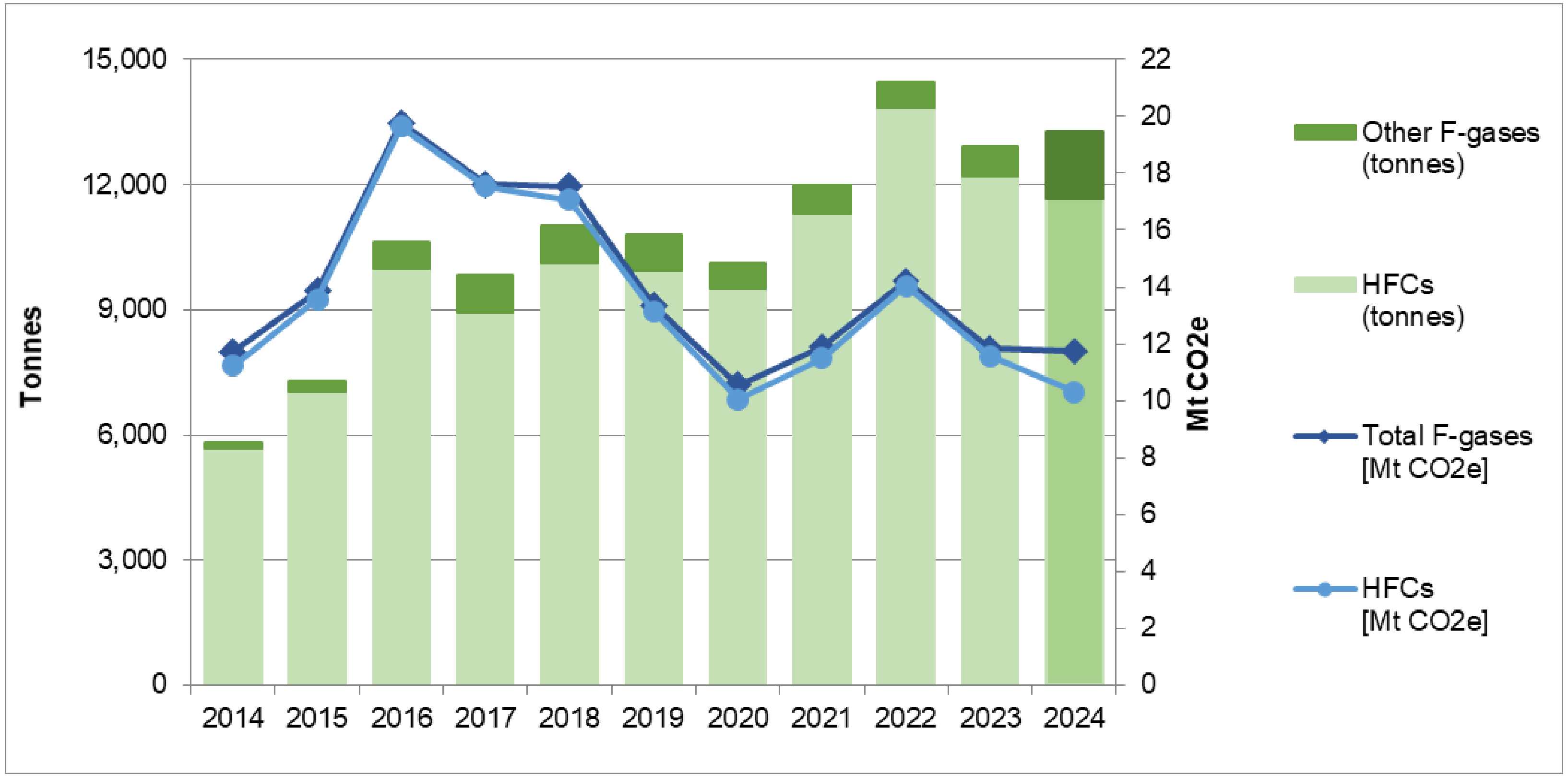
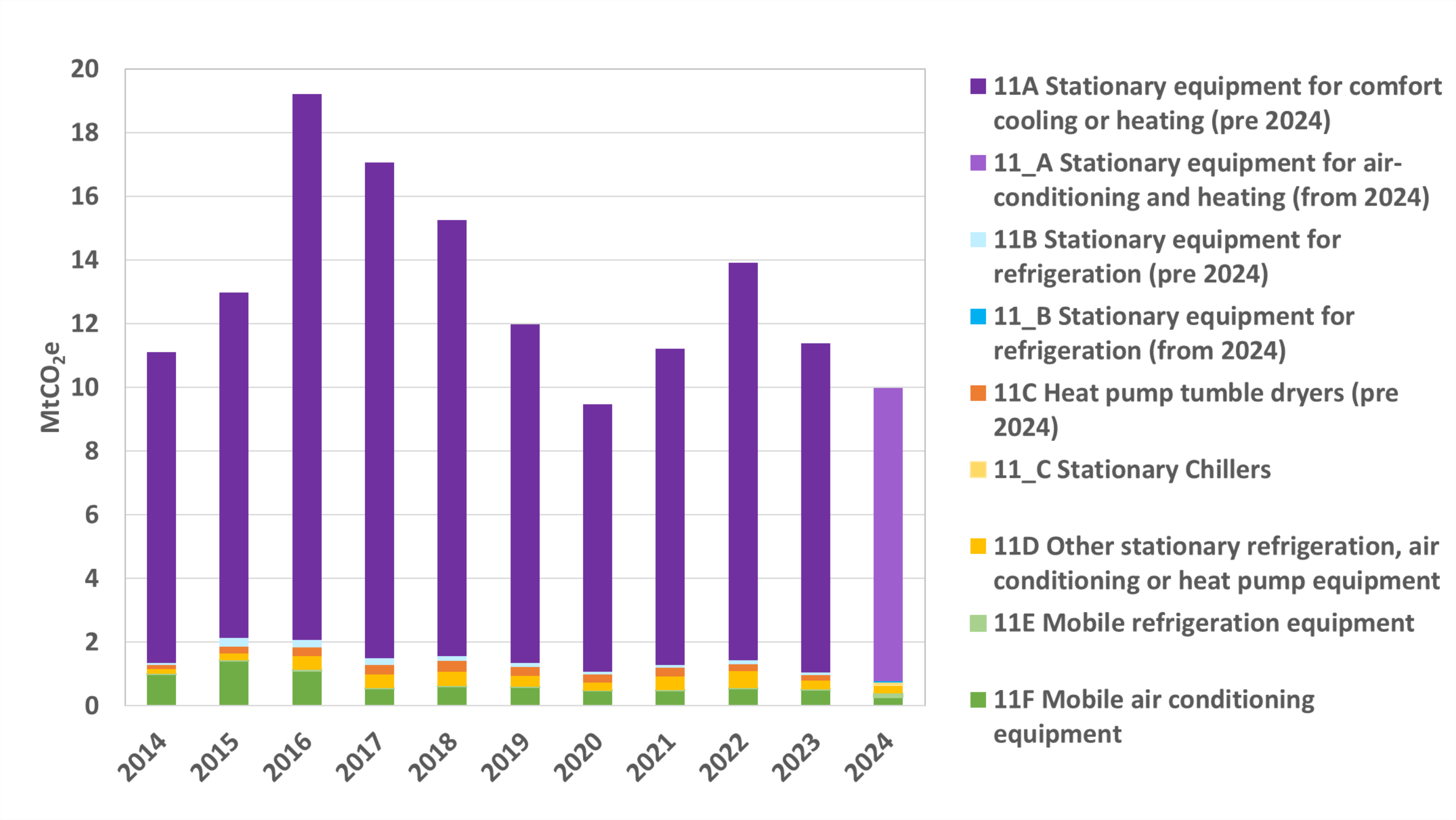


Stationary RACHP equipment

- Imports rising by ~30% since 2020, small rise in 2024 after decrease in 2023
- Main drivers overall reduced imports of stationary heating and cooling equipment as well as heat pumps

European Environment Agency

EU supply of fluorinated gases (RACHP equipment)

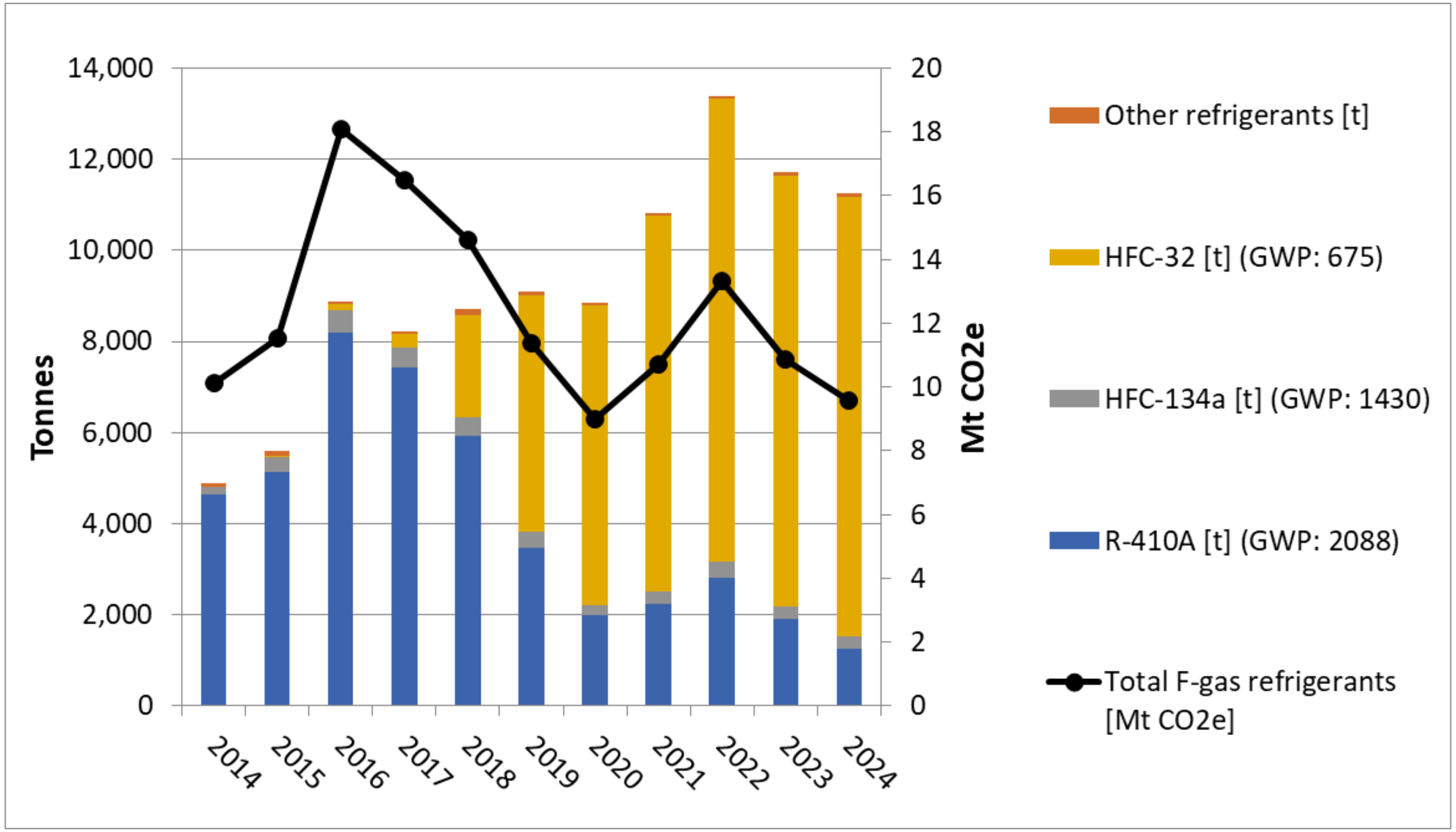


Change of reporting categories between 2023 and 2024 reporting!

Overall decrease

Stationary equipment for cooling and heating continues to dominate supply in pre-charged equipment

EU supply of fluorinated gases (Stationary equipment)



Focus on stationary Equipment (11_A-D)

- HFC-32 still on the rise to replace R-410A: 86% share of HFC-32 in imports of stationary equipment
- Overall decrease in 2024 compared to 2023

EU supply of fluorinated gases (mobile equipment)

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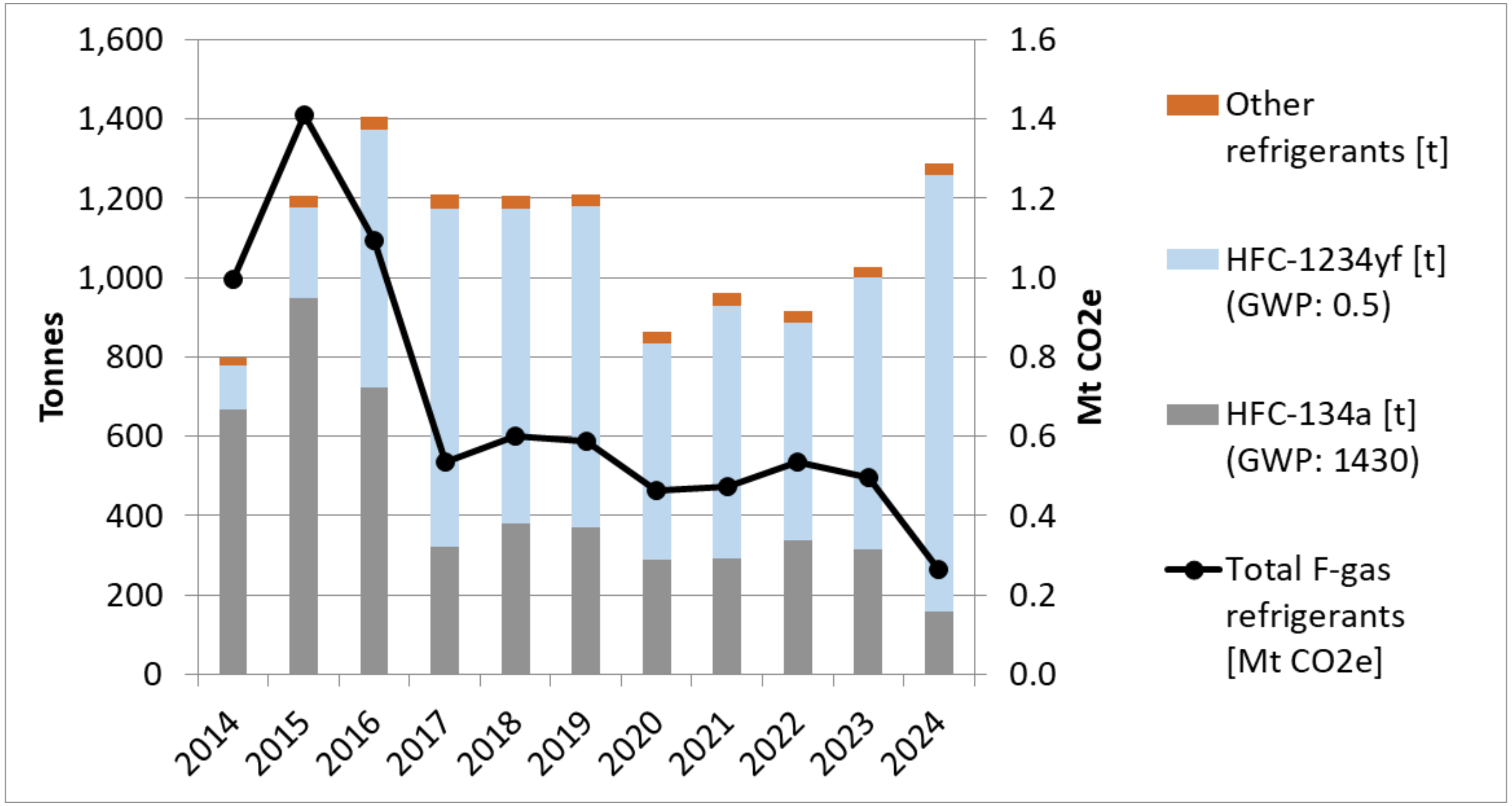

Mobile AC equipment:

AC: air conditioning

- Replacement of HFC-134a by unsaturated HFC-1234yf strongly increased in 2024 after being on similar levels 2020-2023
- 1234yf triggered by MAC Directive
- Increasing imports in 2024 but with lower GWP, thus decreasing in terms of Mt CO2e

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Bank of authorisations for HFCs in RACHP equipment imports

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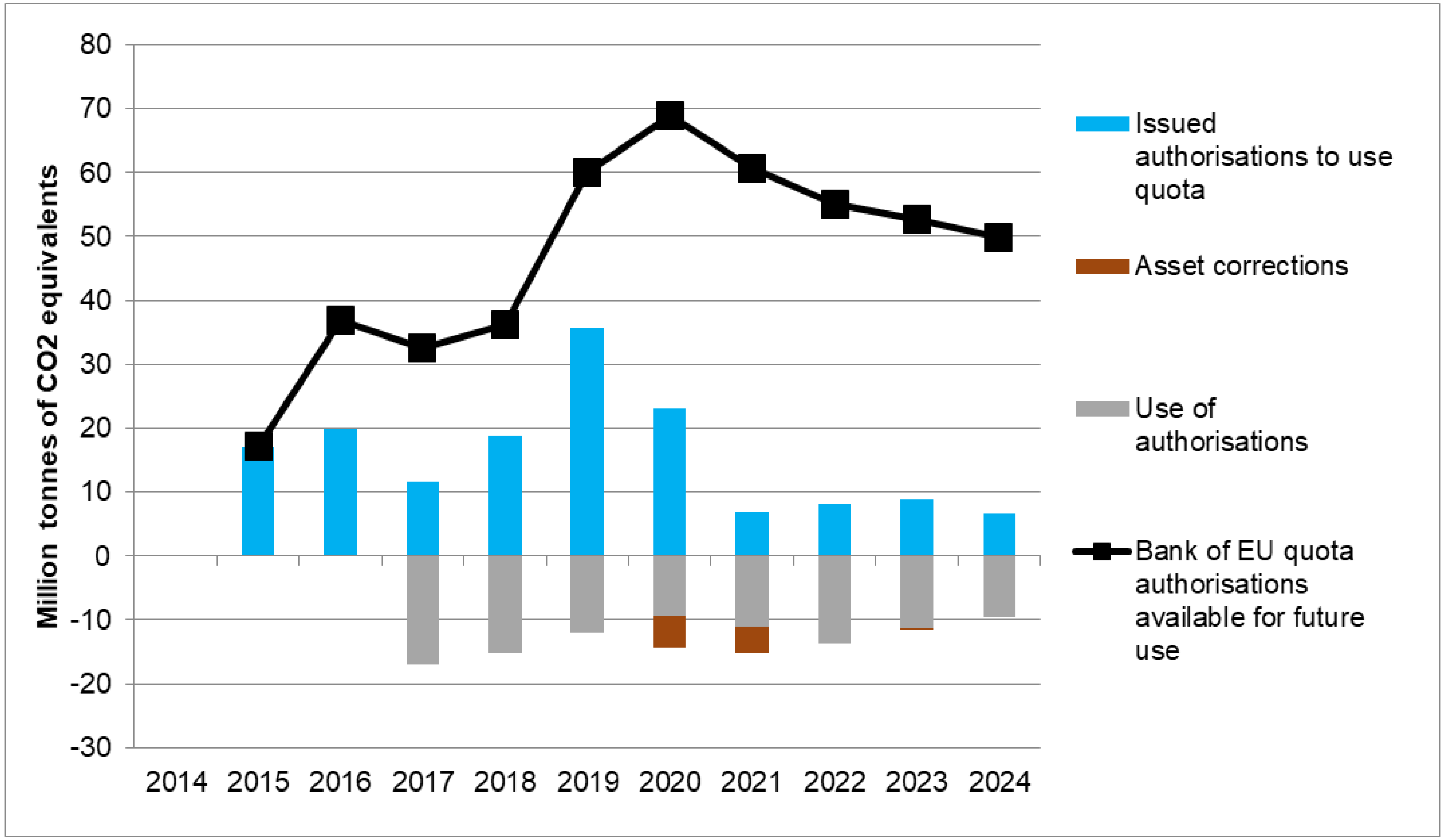

Less authorised quota 2023 vs 2024 (-25 %)

By the end of 2024, the authorisation reserve was at more than five times the amount of authorisations used in 2024

Reserve (bank) is equivalent to ~130 % of the 2024 quota allocation

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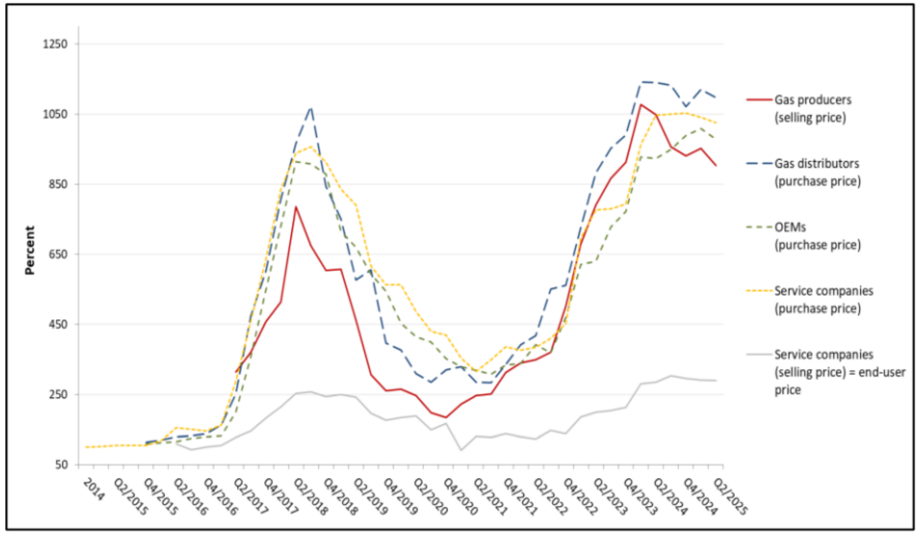
Information about Price Monitoring Survey, Further Events & Closing Remarks

Felix Heydel,
Öko-Recherche

Price monitoring survey
Importance of participation

- **Under the Regulation, quantities are well monitored**
- **Prices drive behaviour**
  - Price signals influence technology choices, compliance strategies, and the uptake of low-GWP alternatives.
- **Regulation changed price dynamics generally**
  - F-gas prices have remained several times higher than pre-2015 levels.
- **Price effects differ along the supply chain**
  - Producer, distributor and end-user prices may have different (short-term) trends — a single price point may be misleading.
- **Evidence is needed for policy and market transparency**
  - Robust, EU-wide price monitoring enables fact-based discussions and helps understanding regulation effects, market structure, and external drivers.

Figure 1 shows the **price developments for R410A** (GWP 2088) at all levels of the supply chain, with a significant decrease on producer-level (-5%). Data presented include prices reported by 3 gas producers, 13 gas distributors, 18 OEMs, and 8 service companies.



Price monitoring survey
Methodology

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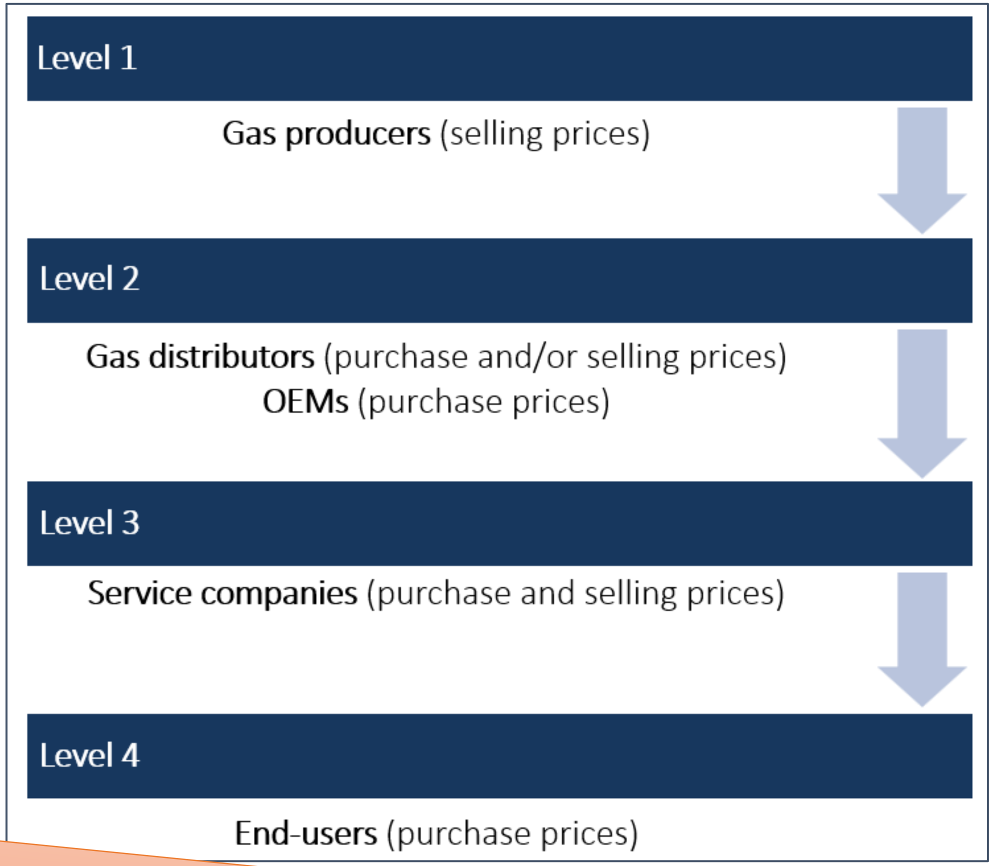
- **Quarterly evaluation** of price developments of HFCs and alternatives
  - Also captured: sectoral use and availability of refrigerants, prices of quota authorizations and reclaimed refrigerants, international prices, …
- **Supply-chain based monitoring**
  - Prices are collected at producer, distributor, OEM and service company level.
- **Standardised data collection**
  - Information is gathered via harmonised questionnaires and targeted interviews.
- **Trend-focused analysis**
  - Prices are analysed over time using absolute values and indices.
- **Aggregation and confidentiality**
  - Results are anonymised and published only in highly aggregated form.



Invitation to join the price monitoring as a survey participant!

Price monitoring survey
Results

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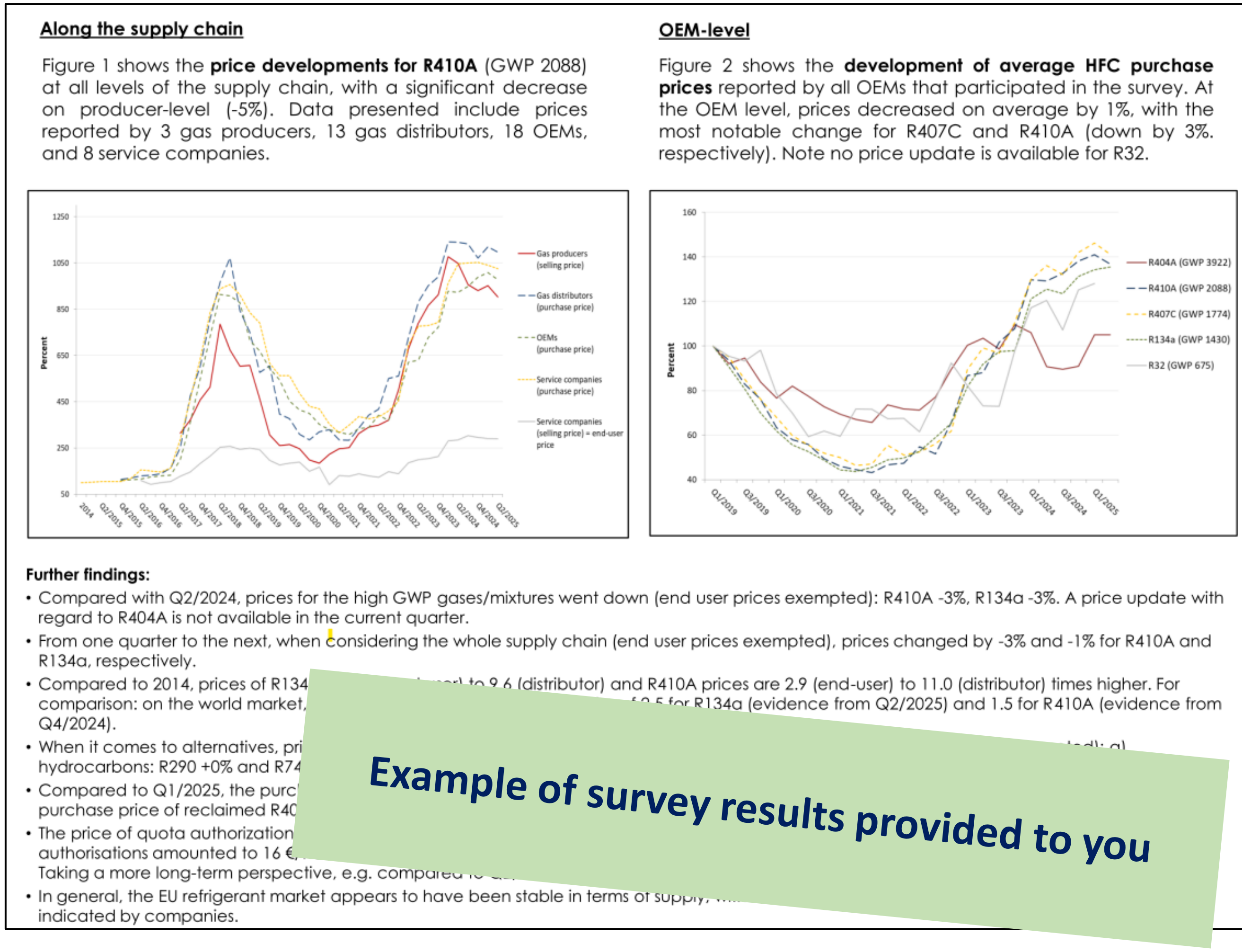
- **High-GWP prices remain generally elevated**
  - Prices are several times higher than pre-phase-down levels.
- **Relevant differences along the supply chain**
  - Price increases are most pronounced at distributor level compared to upstream and downstream actors.
- **Diverging trends between HFCs and alternatives**
  - Very high-GWP refrigerant prices were broadly stable in Q3/2025, while several alternatives with high to intermediate GWP increased.
- **Overall supply stable**
  - Availability was largely unaffected.



Along the supply chain

Figure 1 shows the **price developments for R410A** (GWP 2088) at all levels of the supply chain, with a significant decrease on producer-level (-5%). Data presented include prices reported by 3 gas producers, 13 gas distributors, 18 OEMs, and 8 service companies.

OEM-level

Figure 2 shows the **development of average HFC purchase prices** reported by all OEMs that participated in the survey. At the OEM level, prices decreased on average by 1%, with the most notable change for R407C and R410A (down by 3%, respectively). Note no price update is available for R32.

Further findings:

- Compared with Q2/2024, prices for the high GWP gases/mixtures went down (end user prices exempted): R410A -3%, R134a -3%. A price update with regard to R404A is not available in the current quarter.
- From one quarter to the next, when considering the whole supply chain (end user prices exempted), prices changed by -3% and -1% for R410A and R134a, respectively.
- Compared to 2014, prices of R134 … to 9.6 (distributor) and R410A prices are 2.9 (end-user) to 11.0 (distributor) times higher. For comparison: on the world market, … for R134a (evidence from Q2/2025) and 1.5 for R410A (evidence from Q4/2024).
- When it comes to alternatives, pri … hydrocarbons: R290 +0% and R74 …
- Compared to Q1/2025, the purc … purchase price of reclaimed R40 …
- The price of quota authorization … authorisations amounted to 16 € … Taking a more long-term perspective, e.g. compared …
- In general, the EU refrigerant market appears to have been stable in terms of supply, … indicated by companies.

Example of survey results provided to you

Price monitoring survey
How to join

Öko-Recherche
Büro für Umweltforschung und -beratung GmbH

- **Report price information for selected refrigerants**
  - Purchase and/or selling prices, as absolute values or indices.
- **Provide basic company information**
  - Company role and relevant market context.
- **Participate on a quarterly basis**
  - Submission of recent data once per quarter.
- **All inputs treated confidentially**
  - Data are anonymised and used only in aggregated form.
- **Join the survey & sign up via Email**
  - JE@oekorecherche.de

		Q3/2025		Q4/2025	
Refrigerant	**Baseline**	**Purchase price**	**Selling price**	**Purchase price**	**Selling price**
R134a	2014 = 100				
R404A	2014 = 100				
R407A	2014 = 100				
R407C	2014 = 100				
R407F	2014 = 100				
R410A	2014 = 100				
R422D	2014 = 100				
R449A	2014 = 100				
R448A	2014 = 100				
R507	2014 = 100				
R717 (ammonia)	2014 = 100				
R744 (CO_2)	2014 = 100				
R290 (propane)	2014 = 100				
Other refrigerants					
R32	year = 100				
R452A	year				
{please name}	year				
{please name}	year				
{please name}	year				
{please name}	year				
{please name}	year				
{please name}	year				
{please name}	year				
{please name}	year				

Example questionnaire

…what's next?

Öko-Recherche
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Upcoming exclusive event for price monitoring survey participants: "Ask the Expert" session, where your questions will be addressed by DG Clima

Join the survey & sign up via Email: JE@oekorecherche.de

29January (tbc): Webinar on verification & auditing

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Thank you for participating!

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