



The German Federal Environment Agency's Perspective on F-Gases (SRAC sector)

Umwelt
Bundes
Amt 
Für Mensch und Umwelt

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German Federal Environment Agency (UBA)

1. UBA - Who we are, what we do
2. German UBA's View on Revision (SRAC sector)
 - a) Phase-down
 - b) Other measures
3. Next steps
4. Further activities

Who we are, what we do

UBA is Germany's central federal authority on environmental matters

Our key statutory mandates are:

- To provide scientific support to the Federal Government
- Implementation of environmental laws
- Information of the public about environmental protection

Identifying tomorrow's problems today. The UBA sees itself as an early warning system which detects potential future adverse impacts on mankind and his environment...

UBA advises the German Government, e. g. the German Ministry for the Environment

on ODS / F-gases for some 30 years

German UBA's View on Revision

There is a need to tackle F-gases

The COM's study on F-gases is an appropriate basis

Alternatives
technically feasible
& cost effective

Energy
efficiency

Different
situation in
each
European
country

Different
options to
reduce F-
gas
emissions

UBA
supports a
combination
of a phase-
down
approach
with further
measures

German UBA's View on Revision

There is a need to tackle F-gases

The COM's study on F-gases is an appropriate basis

UBA position send to the European Commission
in December 2011:

**phase-down approach combined with further
measures**

http://www.umweltbundesamt.de/produkte/dokumente/options_for_reducing_emissions_of_fluorinated_greenhouse_gases_f_gases.pdf

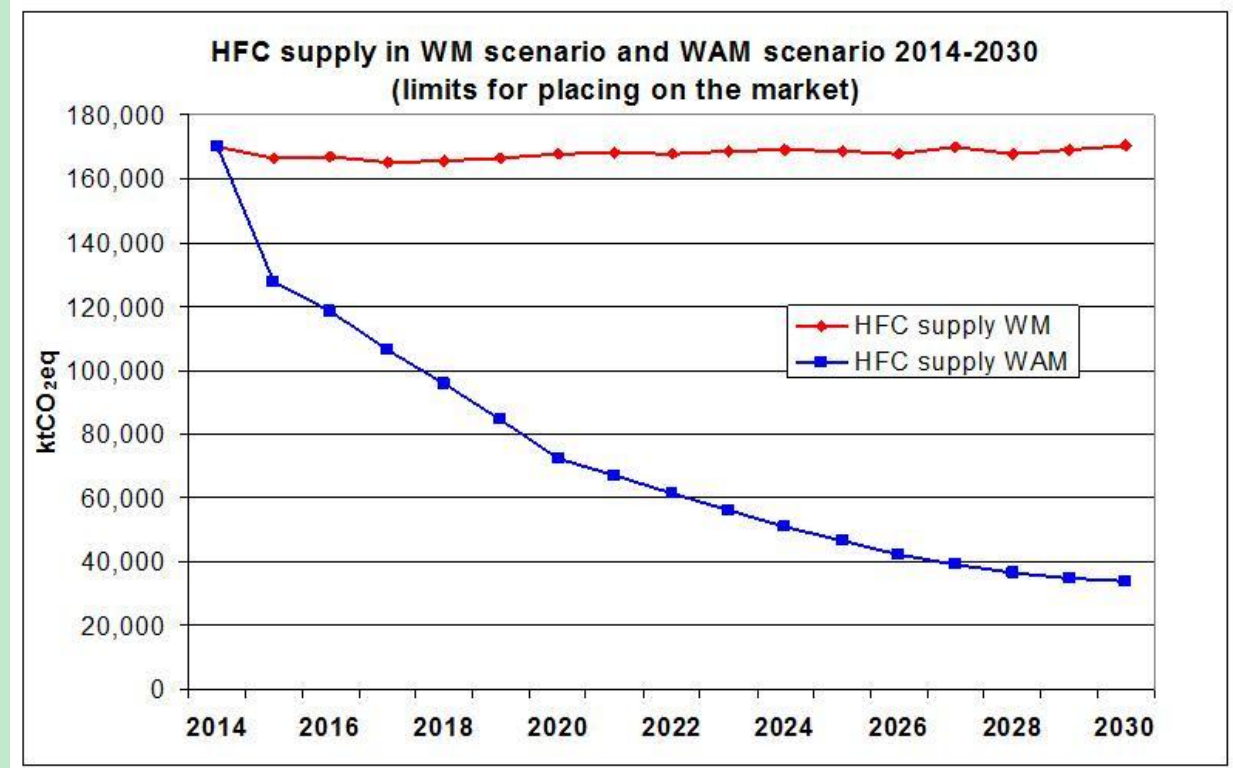
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Phase-down

German UBA's View on Revision

WM: with
measures scenario

WAM: with
additional
measures scenario
(phase-down)



Source: Schwarz et al. 2011: Preparatory study for a review of Regulation (EC) No 842/2006 on certain fluorinated greenhouse gases

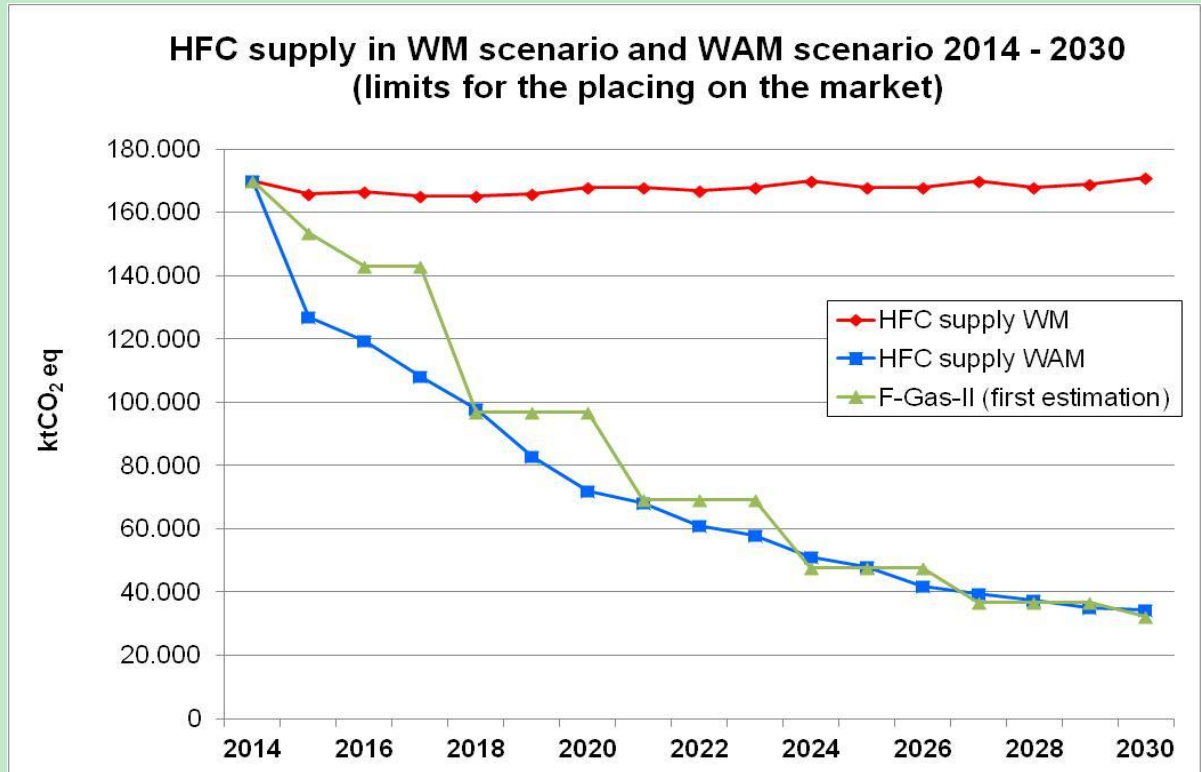
Phase-down

German UBA's View on Revision

WM: with
measures scenario

WAM: with
additional
measures scenario
(phase-down)

Note:
Green curve calculated
on publicly available
data (data gaps!) not
covering all supplies
to the EU market.



Source: Schwarz et al. 2011: Preparatory study for a review of Regulation (EC) No 842/2006 on certain fluorinated greenhouse gases; EEA Technical report No 12/2012 Fluorinated greenhouse gases 2011 ISSN 1725-2237

Phase-down

German UBA's View on Revision

Running study: *“Measures to improve the market penetration of climate-friendly halogen-free substances in the context of the review of Regulation (EC) No. 842/2006”*

Modeling HFC demand for Germany for different applications (2 scenarios: REF & MIN)

Phase-down

German UBA's View on Revision

Reference scenario (REF): Calculation of HFC demand and emissions in 2030 based on current reference technology and established political measures (F-Gas Regulation, MAC-Directive, ChemKlimaschutzSchV)

HFC minimization scenario (MIN):

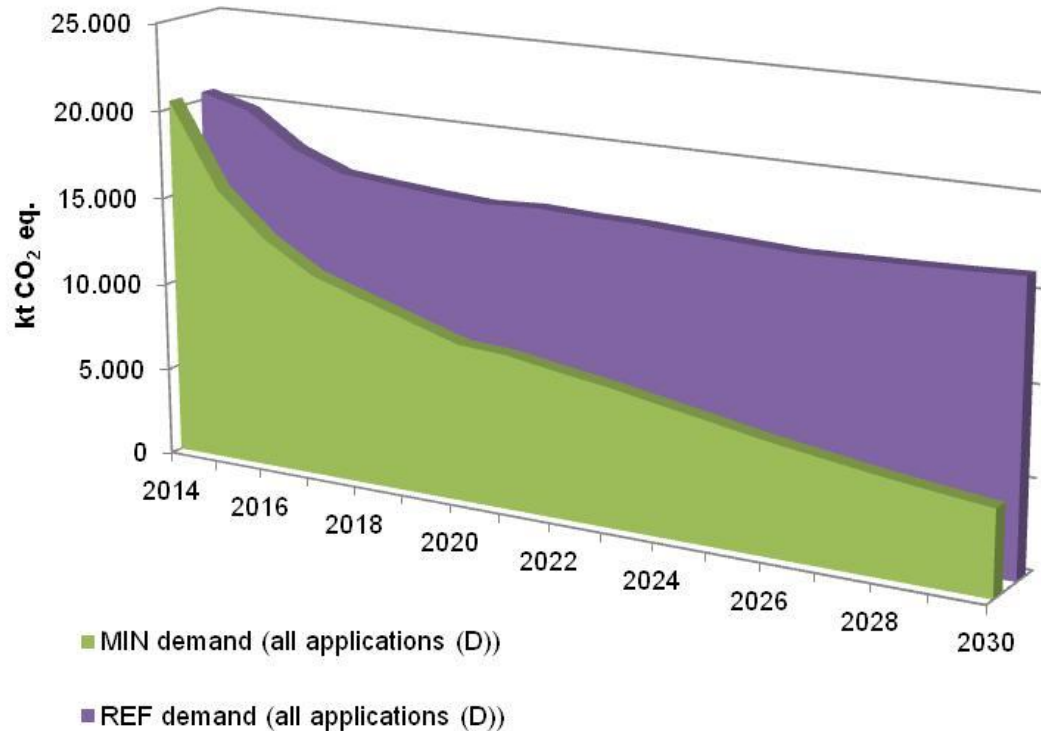
- Identification of alternative technologies in SRAC & other HFC using applications
- Estimates of the market penetration potential of alternative technologies **in Germany** in 2030

Calculation of demand and emissions in 2030 based on the market penetration potential of alternative technologies (same approach as for EU)

Phase-down - Preliminary Results

German UBA's View on Revision

Scenarios for HFC demand for all applications in Germany



HFC demand

2030: **REF scenario**
All applications:
ca. 16,000 kt CO₂ eq

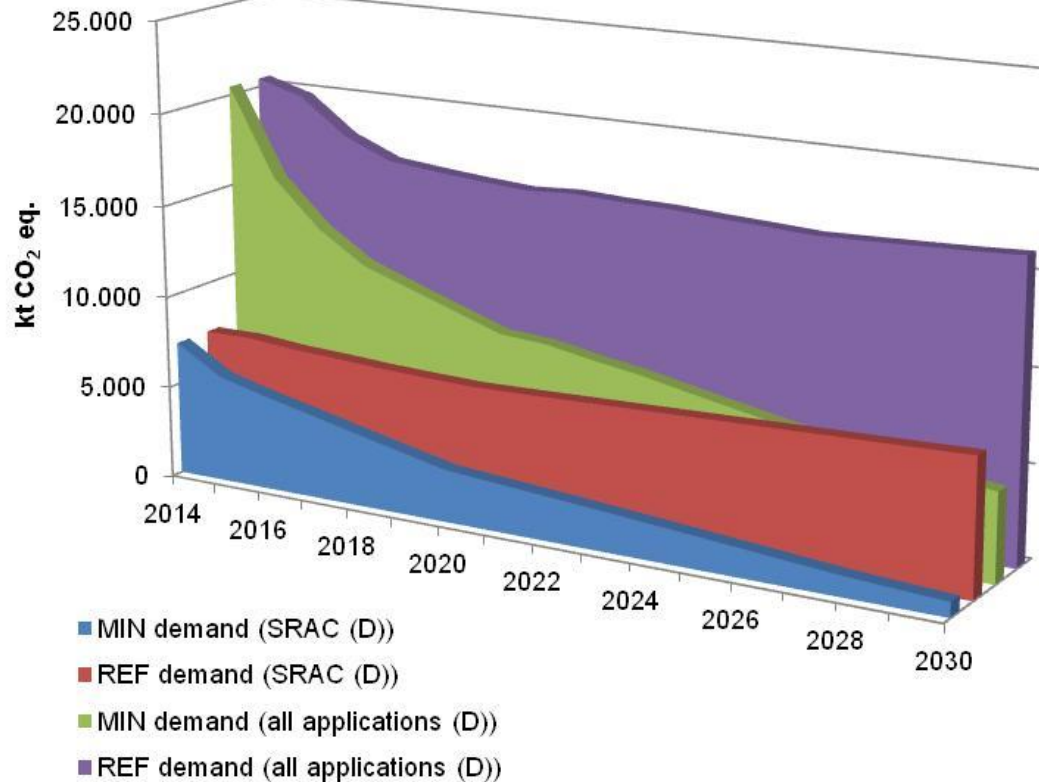
2030: **MIN scenario**
All applications:
ca. 4,800 kt CO₂ eq

Source: Gschrey et al. 2012: unpublished

Phase-down - Preliminary Results

German UBA's View on Revision

Scenarios for HFC demand for all/ for SRAC applications in Germany



HFC demand

2030: **REF scenario**

Stationary AC:
ca. 2,000 kt CO₂ eq.
Stationary Refr:
ca. 5,200 kt CO₂ eq.

2030: **MIN scenario**

Stationary AC:
ca. 130 kt CO₂ eq.
Stationary Refr:
ca. 800 kt CO₂ eq.

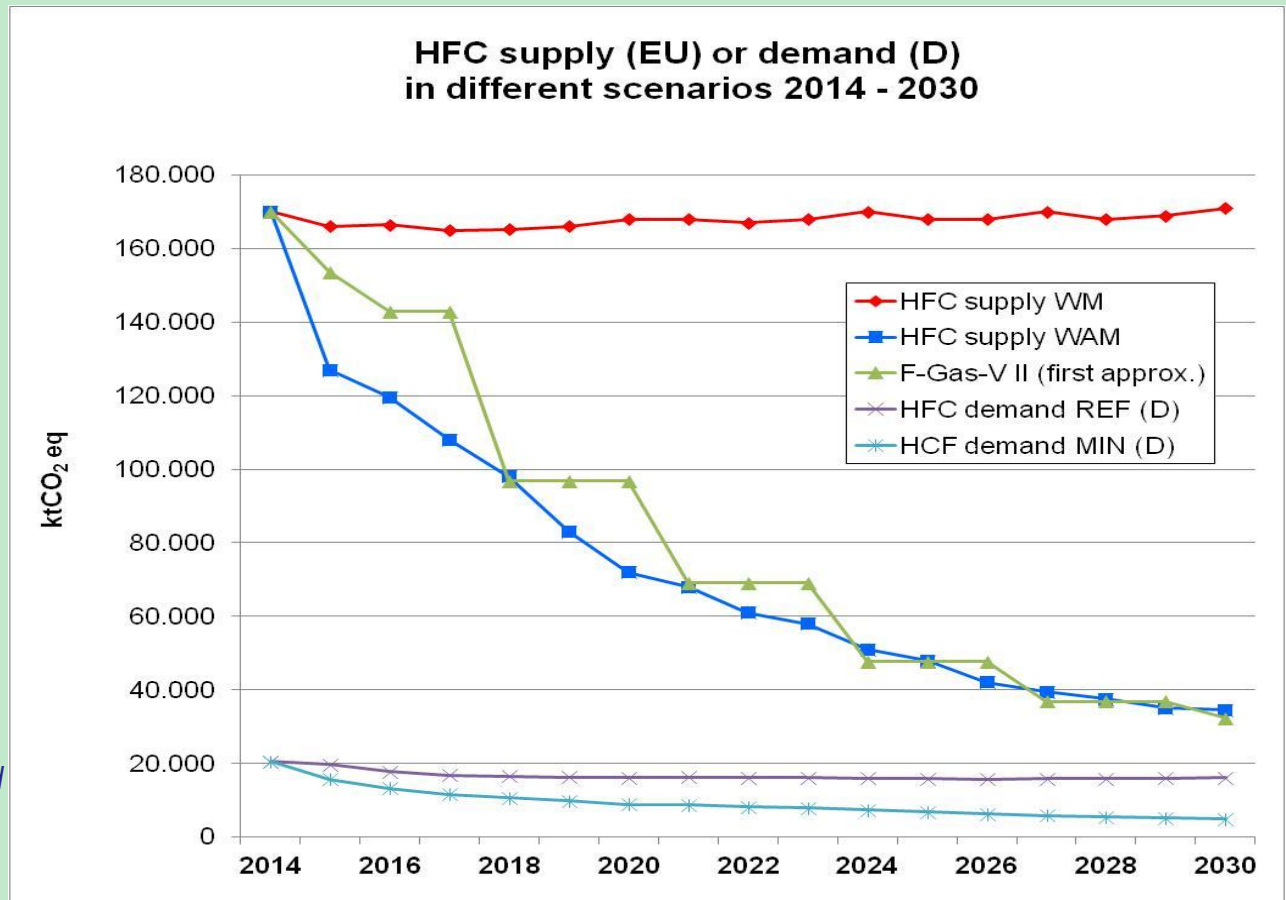
Source: Gschrey et al. 2012: unpublished

Phase-down - Preliminary Results

German UBA's View on Revision

Note:
supply \neq demand

Sources:
Schwarz et al. 2011:
Preparatory study for a review
of Regulation (EC) No
842/2006 on certain
fluorinated greenhouse gases;
EEA Technical report No
12/2012 Fluorinated
greenhouse gases 2011 ISSN
1725-2237;
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Other measures (SRAC)

German UBA's View on Revision

combine a phase-down approach with further measures

UBA position 2011:

“The German UBA considers it appropriate to include [...] into Annex II of Regulation (EC) No. 842/2006 since these prohibitions would not lead to higher overall GHG emissions.”

domestic
fridges/freezers
2015

small commercial
/stand-alone equipment
2015

direct-evaporation heat
pumps

commercial
refrigeration systems
[containing more than
[20] kg of refrigerant]
2020

industrial refrigeration
systems exceeding a
capacity of [100] kW
2020

refrigeration equipment
containing less than
[150] g of refrigerant
2020

refrigeration equipment
for cold storage depots
exceeding a capacity of
[450] kW
2020

Other measures (SRAC)

German UBA's View on Revision

combine a phase-down approach with further measures

First comparison with COM's proposal:

domestic
fridges/freezers
2015

small commercial
/stand-alone equipment
2015

direct-evaporation heat
pumps

commercial
refrigeration systems
[containing more than
[20] kg of refrigerant]
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refrigeration equipment
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[150] g of refrigerant
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refrigeration equipment
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exceeding a capacity of
[450] kW
2020

Other measures (SRAC)

German UBA's View on Revision

combine a phase-down approach with further measures

First comparison with COM's proposal:

- extending the scope of Article 3 (1) to include mobile refrigeration ...
- including fluorinated greenhouse gases that have been placed on the market but are not covered by Regulation (EC) No. 842/2006 in the reporting or in Annex I ...
- employing the GWP values of the 4th IPCC Assessment Report,
- including a general obligation to minimize F-gas emissions regardless of the emission source (including R22 production),
- introducing at the same time an efficient reporting system ...

Our preliminary position regarding the proposal is positive.

We

- ... welcome it*
- ... are happy to see the phase-down approach in the proposal*
- ... are happy that the COM proposes further placing on the market bans*
- ... already identified areas for further discussion (e. g. [missing] definitions, range of bans, GWP thresholds, reference to 2009/125/EC)*

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Next steps - UBA

- **Analyze COM's proposal in more detail**
- **Compare with German calculations on phase-down approach**
- **Compare with UBA position**
- **Identify areas to be discussed further**
- **Prepare (official) position**

Next steps - Germany

- **Prepare statement on COM's proposal for the German Federal Parliament (Bundestag)**
- **Expert hearing**
- **Prepare position**

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Further activities – The Climate Initiative



The screenshot shows the website for Germany's Climate Initiative. At the top left is the logo of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. Next to it is the logo for 'Climate protection goes off!' and 'GERMANY'S CLIMATE INITIATIVE'. On the top right, there is a navigation bar with links for 'HOME', 'MEDIA', and 'PRESS', and a search box with the text 'enter search' and a 'Search' button. The main content area features a large image of a young girl blowing a dandelion seed. The title 'THE CLIMATE INITIATIVE' is prominently displayed in blue. Below the title, the text reads: 'The German government has set itself ambitious targets for climate protection. Firstly, to reduce its greenhouse gas emissions by 40 percent by 2020 compared with 1990. Secondly, to facilitate an international post-2012 climate agreement with the help of the International Climate Initiative. However, these targets can only be achieved if all stakeholders play their part. The revenues from emissions trading, and numerous projects and other initiatives, are paying the way. Let us work towards a climate-friendly future!'

- **National Climate Initiative (NCI)**
- **International Climate Initiative (ICI)**

Further activities – The Climate Initiative

- **Promotional programme** for climate protection measures in the field of commercial refrigeration
- **Refrigeration Award**
- **Strategy to enhance the use of HCs as refrigerants**
 - Project runs from October 2012 until June 2014
 - To be followed by implementation of strategy
- **Assessment of technical innovations necessary to fulfill the requirements on leak tightness (ChemKlimaschutzV) for the SRAC sector**

Thank you !



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