

Position Paper

**for a Regulation of the European Parliament and of the Council
on fluorinated greenhouse gases, amending Directive (EU) 2019/1937 and
repealing Regulation (EU) No 517/2014**

Frankfurt am Main, 12.05.2023

On 5th April 2022, the EU Commission presented a proposal to amend the Regulation on fluorinated greenhouse gases (F-Gases Regulation) [document: 2022/0099 (COD)]. Subsequently, almost a year later, on 30th March 2023, the EU Parliament adopted its own proposed amendments to the EU Commission's proposal [document: P9_TA(2023)0092]. The EU Council finally proposed a position on 5th April 2023 [document ST 8162 2023 INIT].

All proposals essentially aim at a faster phase-out of the use of the F-gases, which are used among others as refrigerants. This faster phase-out will inevitably reduce greenhouse gas emissions in the relevant sectors. Even though we fundamentally share the goal of reducing greenhouse gas emissions, we see possible undesirable developments in the design of the regulation that counteract the overriding goal of EU climate neutrality in 2050 and therefore point out the need for adjustment in the following sections:

- In the context of the reduction of greenhouse gas emissions, the proposals made for the use of synthetic refrigerants in heat pumps counteract the goals of the heating sector and thereby put the transformation process that is necessary in Germany and all of Europe at risk. This applies to the proposed bans, the short deadlines, and the lack of exemptions. Particularly large heat pumps are negatively affected, which slows down the necessary expansion and decarbonisation of the district heating sector.
- For district cooling utilities, there is a lack of investment security due to the short deadlines.
- From a technical point of view, there is no need to restrict the use of sulphur hexafluoride in electrical switchgear.

Proposals counteract transformation

Necessary regulation

A general, short-term ban on F-gases in heat pumps in Annex IV must be rejected.

For a ban, the actual greenhouse gas potential of F-gases, the directly associated effects on the greenhouse gas balance in other sectors, as well as adequate investment and planning security must be equally taken into account.

Exemptions must be created for refrigerants that are less harmful to the environment and areas of application without alternative refrigerants, such as heat pumps in the high capacity range for district heating.

Furthermore, the period between the adopted regulation and the entry into force of the ban must ensure investment security.

Annex IV (No. 16 according to the EU Council, No. 17 according to the EU Commission and Parliament) introduces a ban on the placing on the market of products and equipment, including heat pumps, with certain synthetic refrigerants containing F-gas. These proposed

measures are in contrast with the desired market ramp-up and expansion of heat pumps being pushed by Germany, but also by the EU. This can be seen, for example, in the EU Commission's current consultation on the "Heat Pump Action Plan" [document Ares(2023)3023552].

Heat pumps are a key technology to achieve the climate targets for the German and European heating sector. This applies to both the object-based individual heat supply and the grid-based heat supply via district heating. Especially in district heating, we currently see a large demand for heat pumps in the capacity range of more than 100 kW to 20 MW – in the medium term also up to 100 MW to decarbonise the sector. Due to higher temperature requirements and applicable safety requirements, the demand for these large heat pumps can so far mainly be met by the use of synthetic refrigerants containing F-gases. Natural refrigerants are already used today wherever possible, but they cannot be used for every application.

From a technical perspective, it must be taken into account that heat pump refrigerants are in a closed circuit and should not escape into the environment. As a rule, refrigerants only escape in the event of an accident or leakage of the system. Larger systems are subject to particularly high technical requirements, so that the risk of leakage is further reduced. Moreover, the high requirements ensure that refrigerants do not escape during operation, maintenance, and servicing. In addition, it is possible to recycle refrigerants, which reduces the quantities that have to be disposed of. Overall, the effect of a ban on synthetic refrigerants in heat pumps in the high capacity range on the actual reduction of greenhouse gas emissions is correspondingly low.

Not only the expansion of heat pumps, but also the expansion of climate-neutral district heating plays a central role to decarbonise the German and European heating sector. Therefore, the effects of an improper ban on F-gases would be even more crucial for the climate goals of the heating sector.

In our view, a differentiation is necessary for a provision in Annex IV, which considers the actual greenhouse gas potential of the refrigerants used and the scope of their application. The regulation must be designed in such a way that particularly climate-damaging refrigerants in a field of application that already offers technical alternatives are affected by the ban as quickly as possible. On the other hand, less climate-damaging refrigerants and areas of application without current alternatives, such as in the area of heat pumps in the high capacity range for district heating, should benefit from transitional measures and exemptions that encourage technological development but do not put at risk the market ramp-up and investment security.

With regard to differentiation based on the greenhouse gas potential, we support the proposal of the EU Commission and the EU Council. In the proposals, the ban refers to refrigerants with a Global Warming Potential (GWP) greater than 150. This addresses refrigerants that are particularly harmful to the climate, which is in line with the objective of the regulation. Furthermore, we welcome and support the initiative of the EU Council to create exemptions for higher capacity ranges above 50 kW thermal capacity, which applies to heat pumps in the district heating sector, and safety-relevant application areas.

The starting date from which the ban should be applied must offer investment security for plant operators, which is essential for a successful transformation in the heating sector. The transition period must be chosen adequately so that current projects in the planning and implementation stages can be completed. Especially in the case of projects in the district heating sector, planning and implementation periods amount to several years. Moreover, manufacturers must be able to gradually convert their capacities during this time. From the manufacturers' perspective, a short-term ban also devalues the development work of recent

years. For the scope of district heating, we consider a transitional period of four years after the regulation comes into force to be appropriate.

Necessary regulation

Irrespective of the ban on use in new plants (placing on the market), the operation of existing plants must also be guaranteed beyond the effective date of the ban in the sense of investment security.

Beyond the proposed ban, operation over the entire life cycle of the installations must be guaranteed by a future regulation in the interest of investment security. Exceptions must therefore be created for maintenance and repair, which are not affected by the ban under Annex IV. Therefore, we expressly support Amendment 160 of the EU Parliament to Article 11, Paragraph 1, Subparagraph 1a.

Necessary regulation

A tightening of the existing phase-down with additional short-term effects must be rejected. Such an approach increases investment uncertainty and weakens confidence in long-term agreements considerably.

A phase-down for the reduction of F-gases on the market was already defined in the current F-gas regulation from 2014. The regulated time frame was 2015 to 2030. All the current proposals now include a continuation beyond 2030, but also significantly reduce the maximum quantities between 2024 and 2030 – from currently allowed 21% to 5%.

This step means a direct intervention in the already regulated market, which inhibits the market ramp-up of heat pumps.

Investment security for district cooling utilities

Necessary regulation

In the case of district cooling plants, the technical possibilities must be sufficiently taken into account as well, within the framework of a restriction in Annex IV.

In addition, the period between the adopted regulation and the entry into force of a ban must ensure investment security. Furthermore, in terms of investment security, the continued operation of plants must remain guaranteed over the operating life of the plants.

In addition to grid-based heat supply (district heating), there is also the area of grid-based cooling supply (district cooling). In this case, cooling networks are fed via central cooling machines and thus supply the connected buildings – office complexes, hospitals, etc. – with cooling. Annex IV of the F-Gas Regulation also addresses a ban on market placement of these cooling machines when using certain F-gas-based refrigerants.

As in the case of heat pumps, a similar measure must be introduced for cooling devices that considers the actual greenhouse gas potential and the area of application, as well as ensuring suitable transition periods allowing investment security. Therefore, we support the proposal of the EU Council to introduce a GWP limit of 150 for cooling systems as well, with the additional exception of safety-related necessity. However, we plead for a significantly longer transition period. Since investments in district cooling are also multi-year projects, we consider a period of four years from the entry into force of the regulation to be appropriate.

For comprehensive investment security, the continued operation of existing cooling devices for the production of district cooling must remain possible through maintenance and servicing. Therefore, measures restricting this possibility, as proposed by the EU Parliament in Amendment 152, article 13, paragraph 3, subparagraph 1, should be rejected.

Continued use of SF₆ in electrical switchgear

Necessary regulation

Sulphur hexafluoride (SF₆) must remain approved for use in switchgear under appropriate safety monitoring until adequate alternatives are available.

Both, the proposal of the EU Commission and the proposal of the EU Parliament in Annex IV No. 23 introduce a ban on the use of F-gases with a high GWP value depending on the voltage level. This would essentially affect the use of sulphur hexafluoride (SF₆) as a gas for insulating electrical components. According to our assessment, however, SF₆ is currently necessary from a technical point of view, as appropriate alternatives have been lacking. We support the initiative of the EU Council to remove this ban.

The high GWP value is already accounted for today by extensive safety measures in electrical switchgears that prevent the gas from escaping. This circumstance should be considered, and a corresponding exemption should be created for such installations – at least until there are foreseeable technical alternatives.

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AGFW is the German energy efficiency association for district heating, cooling, and cogeneration. We represent more than 600 utility companies (national and regional), energy service providers as well as industrial companies of the sector across Germany and Europe. As rule-setting body we represent over 95 % of Germany's DHC market.

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