

Mitigation of Fluorinated greenhouse gases across EU (Part I)

Recently, the European Environmental Agency (EEA) released a report on the production, import, export and destruction of greenhouse gases in the EU during the period 2007 – 2019. In this and a following article, we intend to give a review of the content of this report.

The trend of continued reduction in the use of hydrofluorocarbons (HFCs) by the EU is confirmed by the EEA report, named “Fluorinated greenhouse gases 2020” [1]. The report states that the attempt to phase-down/out HFCs under the EU-wide regulation (F-gas) and the global HFC phase-down regulation (Kigali amendment to Montreal protocol) has progressed successfully and met the defined goals so far. The latest version of the EU F-gas regulation (No 517/2014) started in 2015 and aimed to reduce emissions by two thirds by 2030 compared with the 2014 levels. To follow the Paris Agreement, the EU is committed to reduce GHG emissions by 40% in domestic emissions by 2030 compared to 1990 levels, although the European Commission has proposed to change the reduction target to at least 55%.

The stepwise reduction in the quantity for HFCs under the EU F-gas Regulation is presented in Figure 1. It can be seen that fluorinated greenhouse gas emissions have been decreasing in the EU since 2015, after the peak in 2014. After 2015, the EU-wide quantity of HFCs placed on the market stayed below the overall market limit for the fifth year (2015-2019) in a row. For example, in 2019 the reduction was reported to be 2% below the regulated limit, while it was 1% below the limit set in 2017 and 2018.

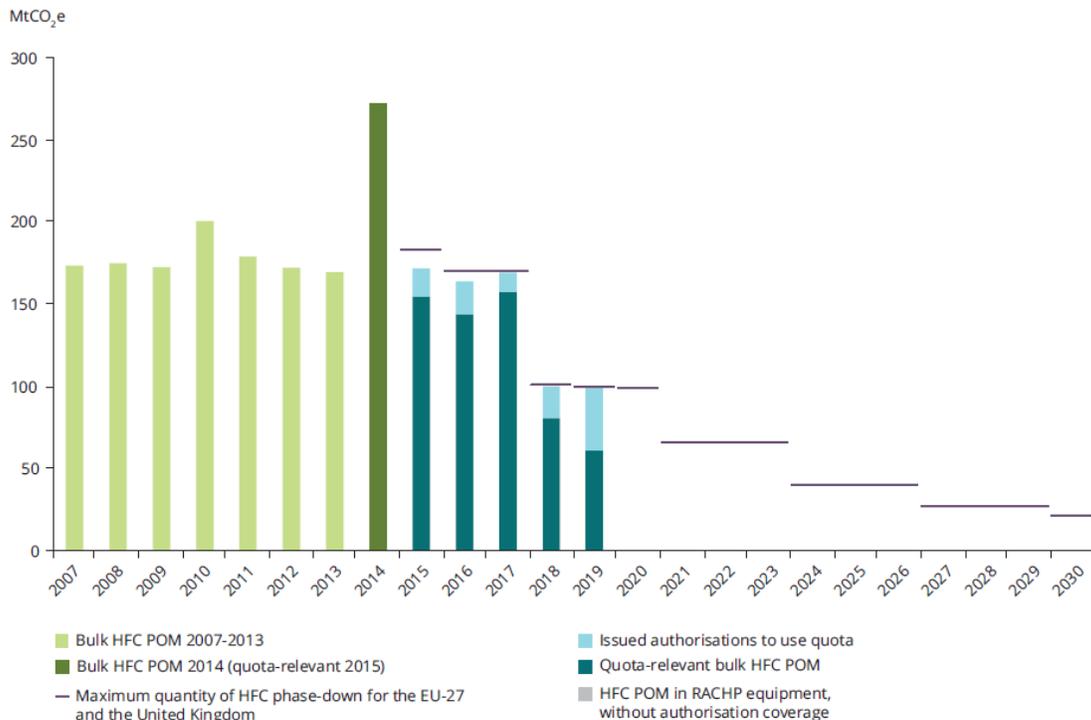


Figure 1. Progress of the HFC phase-down under EU regulation [1]

According to the F-gas regulation, the companies in the EU have to report the details of their activities involving F-gases such as annual production, imports and exports. Figure 2 represents the supply, production, import, export and destruction of F-gases in the EU from 2007 to 2019. These data revealed that the volume of total supply of F-gases in the EU measured in tonnes in 2019 was 15 % below 2018, while the reduction is even more significant at 20% below 2018 if considering the carbon dioxide equivalent (CO₂e). In 2019, the total imports of F-gases to the EU decreased by 14%, the bulk exports decreased by 10%, the reclaimed F-gases decreased by 20%, and the destroyed amounts increased by 145% compared with 2018.

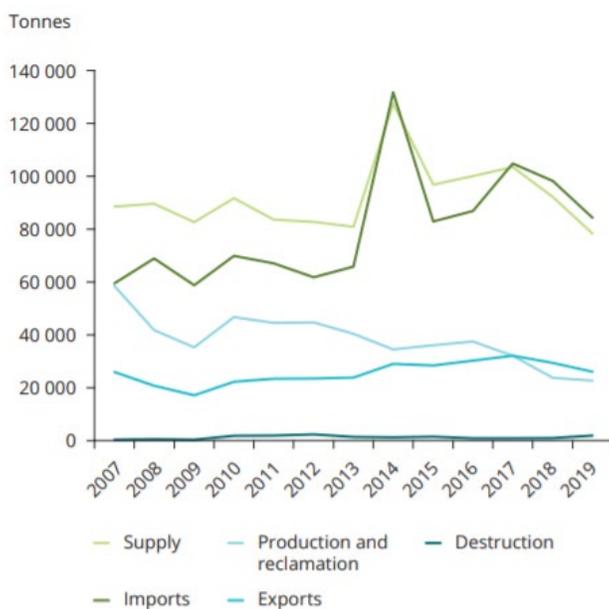


Figure 2. Supply, production, import, export and destruction of F-gases (CO₂e) [1]

It seems that the continued reduction in the use of HFCs and other F-gases can lead to achieving the net-zero greenhouse gas (GHG) emissions goal by 2050. In the next issues, details of the supply, production, import, and export of GHGs across the EU for the period between 2007 and 2019 will be presented in some detail.

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Reference

[1] European Environment Agency report “Fluorinated greenhouse gases 2020”, 2020, ISBN 978-92-9480-294-1, ISSN 1977-8449, doi: 10.2800/08599