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New data: EU F-gas black market still impacts climate change

New data reinforce that the EU may fall short of its climate ambitions because of a thriving black market for hydrofluorocarbons (HFCs):

- *Smugglers have been trafficking shipments of HFCs up to a maximum of 31 million tonnes CO₂e across EU borders in 2019. Emissions of these illegally traded HFCs would have major effects on our climate and fund organized crime.*
- *The potential amount of illegally imported HFCs entering the EU in 2018 and 2019 is equivalent to the yearly emissions of more than 55 million cars – one fifth of all the cars on EU roads.*
- *The reduction of HFC quota from January 2021, combined with uneven enforcement, creates additional opportunities for illegal trade and risks escalating the smuggling problem.*

New data released in February 2021 show that an illegal market continues to bypass the EU quota system in place since 2015. This system intends to phase down hydrofluorocarbons (HFCs) with a high global warming potential (GWP), commonly used in cooling systems from commercial chillers through to car air conditioning systems. However, uneven enforcement by Member States has created an opportunity for criminals to bypass the quota system and import HFCs into the EU illegally. New data on this issue has been collected by Oxera Consulting LLP and analysed by EFCTC (European Fluorocarbons Technical Committee), a sector group of Cefic (European Chemical Industry Council).

Up to a maximum of 31 million tonnes CO₂ equivalent (MtCO₂e) could have entered through EU borders illegally in 2019. That means in 2018¹ and 2019, a total of a maximum of up to 73 MtCO₂e could have been smuggled into the EU. This is equivalent to the yearly emissions of more than 55 million cars – one fifth of all the cars on EU roads. This black market undermines the EU's climate goals, funds organised crime and threatens small and medium-sized businesses across the EU which have invested to comply with the law and supply legitimate refrigerants.

The latest step in the HFC phase-down was in January 2021 with a reduction of the quota from 63% to 45% compared to the level in 2015. A large amount of HFCs will be taken off the legitimate market in 2021, creating new opportunities for smugglers to fill the gap. In a worst-case scenario where demand for HFCs were to stay around the same level after the 2021 phase-down and enforcement were not to improve, this large black market could double in size.

Murli Sukhwani, General Manager of Fluorochemicals EMEA at the Chemours Company and Chair of EFCTC Data and Investigations, said: "We have identified a major discrepancy between the export volumes reported by China and the import volumes reported by the EU. This discrepancy has decreased slightly from 2018 to 2019. However, exports from China to EU neighbouring countries increased by 17% from 2018 to 2019. Even with market growth taken into account, a potential 23 million CO₂e of excess imports of HFCs could be destined for illegal trafficking to the EU market. This could indicate that improved controls at European ports are having some effect, but that they could be driving smugglers to find new import routes via neighbouring countries. For example, the

¹ The same research was carried out in June 2020 for the year 2018. Due to a data integrity issue in this 2018 calculation, the total potential amount of illegal HFCs on the EU market has been reevaluated from 34 MtCO₂e to 42 MtCO₂e.

EFCTC

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biggest seizure of illegally traded HFCs to date was stopped in August 2020 in Romania, coming from Turkey.”²

Ville Itälä, Director-General of OLAF, said:

“We are happy to see that the EU’s increased enforcement efforts since 2019 are clearly visible in the data. However, from our experience the black market is still a huge challenge. 2020 saw the largest seizures of illegal HFCs ever. At peak times, we alerted member states of illegal shipments on a daily basis. When a shipment is stopped somewhere, we often observe a decrease in illegal activity in that member state, with smugglers using different routes to get into the EU. As the EU strives to be the first climate neutral continent with its European Green Deal, OLAF will continue to play its part in combatting this illegal and environmentally damaging trade.”

In response to recent EU reports

In two recent reports, the EU acknowledged that a black market for HFCs exists but could not quantify its size. The European Environmental Agency (EEA) [claimed](#) that the HFC phase-down is progressing according to plan, disregarding illegal imports in the analysis because “it does not appear possible to quantify customs evasion”. In an [evaluation](#) of the phase-down in December 2020, the European Commission stated that comparing international trade statistics might not provide a fully accurate picture, due to trade (re-) routing.

Murli Sukhwani from EFCTC said: “Illegal trading happens under the radar and is never reported to authorities. While trade routes certainly pass through Europe, EFCTC’s collaboration with private investigator Kroll shows that the lack of control on T1 transit shipments makes this a preferred mode of transit for smugglers to place HFCs on the European market illegally. The Oxera database and EFCTC analysis provides the most accurate picture on illegal trade of HFCs to date. The large amount of potential illegal imports call for better enforcement of the legislation to safeguard EU climate targets.”

Next steps in 2021

EFCTC will continue to act on this issue in 2021, by collecting evidence of illegal activities through the multi-language confidential [EFCTC Action Line](#) and inviting the entire value chain to join the [EFCTC Pledge](#) to #SayNoToIllegalHFCs. More than 280 individuals and organisations have already pledged to do their part in the fight against illegal HFCs. With this initiative, EFCTC hopes to raise awareness and encourage action across the value chain to eradicate the black market.

Wimar Wysluch, a pledger, from the German Surveyor’s Council on Refrigeration, Air Conditioning and Heat Pumps said:

“We have joined the pledge because we are concerned about the black market and committed to raising awareness within the value chain. Infrequent and ineffective controls massively reduce the risk of being caught using illegally traded refrigerants. Unfortunately, this leaves it up to individual companies to counter the black market. As an expert, I can only recommend to all those who are involved to always act consistently and according to the law – even if it means losing a customer.”

² https://ec.europa.eu/anti-fraud/media-corner/news/05-08-2020/76-tonnes-illicit-refrigerant-gases-detained-romania-thanks-olaf_en

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About EFCTC

The European FluoroCarbons Technical Committee is a sector group of the European Chemical Industry Council (Cefic) – EU Transparency Register n° 64879142323-90 – and represents the companies Arkema, Chemours, Daikin Chemical, Honeywell and Koura. Its main objectives are to provide up to date information about applications, safety, health and environmental effects for HFCs (hydrofluorocarbons), HFOs (hydrofluoro-olefins), and the relevant European and international legislation.

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Public Q&A

1. What are HFCs?

HFCs, or hydrofluorocarbons, are gases manufactured for use in refrigeration, air conditioning, foam blowing, aerosols, fire protection and solvents. They were developed as alternatives to chlorofluorocarbons (CFCs), ozone-depleting substances that have been phased out since 1996 under the Montreal Protocol. HFCs are organic compounds that contain fluorine and hydrogen atoms. Unlike their predecessor CFCs, they do not have any ozone-depletion potential. The global-warming potential of HFCs varies depending upon the product but on average is up to thousands of times greater than carbon dioxide (GWP = 1). During regular use of refrigeration products, HFCs are contained within the refrigeration system and releases into the environment are minimised by proper installation, strong leak control and recovery/recycling.

2. What is the F-gas regulation?

The EU F-gas regulation (517/2014) entered into force on 1 January 2015 to combat the climate change impacts of HFCs by gradually reducing the quantity that can be placed on the EU market through a quota system. Named companies (European and overseas) receive specific HFC quota allocations for any given year. The aim is to achieve a 79% reduction of HFCs on 2012 figures by 2030.

3. Why are these illegal imports coming into Europe?

Illegal smuggling of HFCs is made possible by the uneven enforcement by Member States of the F-gas regulation. Where fines are low, criminal organisations simply factor in the possibility of a fine as a marginal business cost. In their eyes, this is an acceptable risk compared to the profits that can be made.

4. How do I know whether an HFC cylinder is illegal?

We encourage people to buy only from trusted suppliers, to always ask where a product is from, to avoid offers that are abnormally cheap or requesting cash payment, as well as single-use canisters as they are illegal on the EU market and therefore are smuggled goods. By joining our pledge on www.stopillegalcooling.eu/pledge the value chain receives more information about what they can do to identify illegal cylinders and stop the illegal market for HFCs.

5. What does this new data tell us?

The joint analysis by Oxera and EFCTC reveals two major trade flows that could be hiding illegal imports: Firstly, Oxera data, analysed by the EFCTC, revealed a gap of 9 million CO₂eqT in 2019 between the reported exports from China to the EU and the official EU reports on imports from China. This discrepancy could be feeding a thriving black market in HFCs. Secondly, Oxera identified a 17% increase in HFC exports from China to EU neighbouring countries between 2018 and 2019, the second largest increase since 2016. An analysis by EFCTC has shown that market growth does not account for this spectacular increase in imports. There is a 23 million CO₂eqT excess in exports above those justified by market dynamics.

In summary, as calculated by the EFCTC, the combined quantity of unexplained exports/imports of HFCs from China plus the excess quantities entering neighbouring countries means that the potential maximum quantities of illegal HFCs that could be available to enter the EU is 31M CO₂eqT.

6. How did you come to these findings?

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In their analysis, Oxera Consulting LLP looked at data from the following trade databases: the official EU statistics database (Eurostat), the UN trade database (Comtrade), data from the Turkish Statistical Institute and Chinese export data. Comparing the data flows from these databases and establishing a baseline for consumption in the neighbouring countries by using the data in the UNIDO report for Turkey, the EFCTC expert group has concluded that there is an excess export volume of 31 million tons of CO₂e_qT that is unaccounted for and could have been available on the black market in 2019.

7. What needs to happen to stop the illegal trade of HFCs?

Many authorities are not aware of the problem's scope. Increased enforcement, higher fines and building more knowledge on the issue of illegal HFCs would help to solve this issue.

We therefore call on the EU and Member States to:

- Promote best practices in terms of border controls and VAT checks: *customs authorities* need to have access to the necessary information and tools. Although customs officials can check the HFC registry to know whether an importer is registered under the quota system, no information tells customs how much a company has already imported. A real-time connection between the HFC registry and the information gathered by customs is required (e.g. through Single Customs Window).
- Set higher, more dissuasive fines at the level of member states, and following up on cases of illegal smuggling: right now, the possibility of incurring a fine is simply factored in as a business cost by criminal organisations and is marginal compared to the profits that can be made.
- Gather more intelligence on the issue of illegal HFCs. For instance, the EFCTC has several partnerships to gather evidence on the size of the illegal market and on concrete cases of illegal canisters being sold.

At the same time, broader awareness along the value chain would help close the gap. The website www.stopillegalcooling.eu provides further useful tools to authorities and the value chain to stop the illegal market.

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