THE BLACK MARKET FOR HFC REFRIGERANT GAS IS THRIVING ACROSS EUROPE.

#WorldRefrigerationDay
#WREFD20
#StopSmugglingHFC

WWW.STOPILLEGALCOOLING.EU
Agenda

- **René van Sloten** | Executive Director for Industrial Policy at Cefic, the European Chemical Industry Council
- **Tim Vink** | Director Regulatory Affairs at Honeywell and Vice-Chair of EFCTC
- **Dr Nicole Rosenboom** | Senior Consultant at Oxera Consulting LLP
- **Murli Sukhwani** | Region Director of Fluorochemicals EMEA at The Chemours Company and Chair of the EFCTC Data & Investigations working group
WHAT ARE HFCs?

HFC stands for Hydrofluorocarbons. They are refrigerant gases, used in:

- Air conditioning
- Fire extinguishers
- Heat pumps
- Refrigeration
HFCs have a high average Global Warming Potential (GWP)

To help combat climate change and stimulate the deployment of alternative solutions, the 2014 EU F-gas Regulation bound industry to gradually reduce HFCs through a quota system.

- 2016: 7% ↓
- 2018: 37% ↓
- 2021: 55% ↓
- 2024: 69% ↓
- 2027: 76% ↓
- 2030: 79% ↓
F-GAS REGULATION UNDERMINDED BY BLACK MARKET
THE IMPACT OF HFC SMUGGLING

Illegal HFCs:

• Undermine the regulation, thereby hampering climate goals
• Are imported from unknown sources and are a danger to our safety
• Cause national tax revenue losses
ILLEGAL IMPORTS OF HFCS
ONLY BENEFIT ORGANISED CRIME
Analysis of HFC trade statistics: key findings

Prepared for the European Fluorocarbons Technical Committee (EFCTC) webinar

Dr Nicole Rosenboom
Senior Consultant

26 June 2020
SKILLS

- Competition Economics
- Corporate Finance
- Modelling
- Performance Assessment
- Regulation

PRODUCTS

- Antitrust
- Due Diligence
- Impact Assessments
- Litigation
- Market Investigations
- Mergers
- Regulatory Reviews
- State Aid
- Strategy

Our offices
The context for Oxera’s assignment is EFCTC’s interest in illegal trade in HFCs into the EU

- an independent assessment of trade flows of HFCs
  - in absolute terms—metric tonnes and CO$_2$eq
- identify discrepancies between the data sources
  - by using a range of data sources (including China export data)
  - validate their reliability

<table>
<thead>
<tr>
<th>Source</th>
<th>Time period</th>
<th>Code detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eurostat</td>
<td>2013–18</td>
<td>HS, CN (after 2016)</td>
</tr>
<tr>
<td>Turkish Statistical Institute</td>
<td>2016–18</td>
<td>CN</td>
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<tr>
<td>Comtrade</td>
<td>2013–18</td>
<td>HS</td>
</tr>
<tr>
<td>China export data</td>
<td>2013-18</td>
<td>CN</td>
</tr>
<tr>
<td>European Environment Agency (EEA)</td>
<td>2013–18</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Note: $^1$ HS refers to Harmonised System, which is a globally used 6-digit classification system. CN refers to the EU’s Combined Nomenclature, which provides a finer classification by extending the HS codes to 8 digits.
Trends in Chinese export are similar in all datasets (including China export data)

<table>
<thead>
<tr>
<th>From China into EU27+1</th>
<th>From China into NCs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trade flow</strong></td>
<td><strong>Trade flow</strong></td>
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<tr>
<td>Export (China export data)</td>
<td>Export (China export data)</td>
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<td>Export (Comtrade)</td>
<td>Comtrade export</td>
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<tr>
<td><strong>Volume 2018 (’000 tonnes)</strong></td>
<td><strong>Volume 2018 (’000 tonnes)</strong></td>
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<tr>
<td>56.9</td>
<td>30.1</td>
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<tr>
<td>CN code</td>
<td>CN code</td>
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<tr>
<td>68.6</td>
<td>32.3</td>
</tr>
<tr>
<td>HS code</td>
<td>HS code</td>
</tr>
</tbody>
</table>

Source: Chinese data, Comtrade export
Exports to the EU vs. imports from China—growing mismatch

- export from China to the EU27+1 are higher than Eurostat imports for all years
- greater divergence in 2018 between the reported export from China to the EU, and the reported imports into the EU from China
- findings are similar at all data levels: HS code, CN code
- not visible in Turkish data (neighboring country)

The reason is unclear, but it would be consistent with the tightening of HFC quotas in the EU driving increased illegal trade.

Note: Excludes CN codes 38247880 and 38247890, which were not found in the Chinese data.
Is the growth rate in neighboring countries (NCs) indicating illegal trade?

- exports to NCs accelerate with the HFC phase down in 2018
- increase in HFC exports (in tonnes) to NCs in 2016-18 is substantially higher than export increase to the EU
- consistent with potential growth in illegal trade into the EU
  - HFCs may transit through NCs and could be shipped to the EU
  - other market dynamics may account for some or all of the growth

Source: China export data

- Volume NCs 2016: 21,248 tonnes
- Volume EU27+1 2016: 48,888 tonnes

Export from China to neighbouring countries (NCs) and EU27+1, in tonnes, CN codes

Source: China export data
Summary

1. the trend of Chinese export is similar for UN Comtrade data and China export data

2. there is a substantial discrepancy in the data of export (HFC tonnages) reported as leaving China (China export data) and the imports reported as entering the EU (Eurostat)

3. from 2017 to 2018 imports into neighbouring countries increased 41%. One explanation for this increase could be that these products are illegally imported into the EU market following the tightening of the F-gas regulation quota in 2018
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IN TOTAL, THE ILLICIT TRADE VOLUME IN HFCS COULD BE AS HIGH AS:

A THIRD OF THE LEGAL EU MARKET | 34 MILLION TONNES OF CO₂ EQUIVALENT
EU: 19 million tonnes CO$_2$ equivalent in excess imports from China
Neighbouring countries: 15 million tonnes of CO$_2$ equivalent in excess

- 2016 market baseline
- Market growth
- Excess imports
LET’S WORK TOGETHER AND TAKE ACTION NOW

- Harmonise and tighten enforcement by applying more stringent measures in all Member States
- Support customs in identifying illegal HFCs (Single Customs Window)
- Prohibit supply and use of non-refillables
- Report illegal activity (EFCTC Action Line)
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STOP SMUGGLING.
START TRACING.