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TIME TO COMMIT ON HFCs

An EIA briefing to the Consumer Goods Forum Global Summit 2014

In 2010, the Consumer Goods Forum made international headlines with its ambitious pledge to begin phasing out HFCs from 2015. Four years on from this historic pledge, we review the CGF's progress to date and identify further opportunities to protect the global climate by eliminating climate-destroying refrigerants. Our research shows that some CGF members have made significant efforts to realise this commitment while others are not yet out of the starting blocks.

Hydrofluorocarbons (HFCs) are refrigerants with global warming potentials (GWP) many hundreds to thousands of times higher than carbon dioxide (CO_2). For example, HFC-404A, the most commonly used HFC in commercial refrigeration, is almost 4,000 times more potent than CO_2. This means that just 1kg of HFC-404A which leaks into the atmosphere is equivalent to four tonnes of CO_2 emissions. Despite their catastrophic impact on the climate, many retailers across the globe continue to use these refrigerants in vast amounts. The resulting impact on a retailer's carbon footprint is huge; leaking refrigerants can account for as much as 40% of a supermarket group's entire carbon footprint.[1]

The Environmental Investigation Agency has been tracking retailers' progress in moving towards HFC-free alternatives since 2008. During this time we have seen an impressive and rapid shift away from HFC-based technologies, spreading across Europe and beyond. This transition has not only led to a significant drop in direct emissions of super greenhouse gases, but it has also curbed indirect emissions related to energy use. Indeed, the energy efficiency of alternative technologies - even when used in warmer climates - now outpaces that of equipment containing HFCs. This development has gone hand-in-hand with a drop in upfront investment costs, making climate-friendly refrigeration a win-win solution both for the climate and for companies' balance sheets.

2014 is a pivotal year in the shift away from HFCs. The European Union's Member States have just agreed a landmark Regulation which both reduces the market supply of HFCs and bans the use of HFCs above a certain GWP in commercial refrigeration.

From 2020, the use of HFCs with GWPs above 2,500 will be banned in both new refrigeration equipment and for servicing. From 2022, HFCs with a GWP above 150[2] will be banned in centralised commercial refrigeration systems.

environmental investigation agency

ABOUT EIA

EIA is an independent campaigning organisation committed to bringing about change that protects the natural world from environmental crime and abuse. As part of our work, we have undertaken groundbreaking investigations into the illegal trade in ozone depleting substances (ODS) and have been closely involved in the international ozone and climate negotiations for well over a decade.

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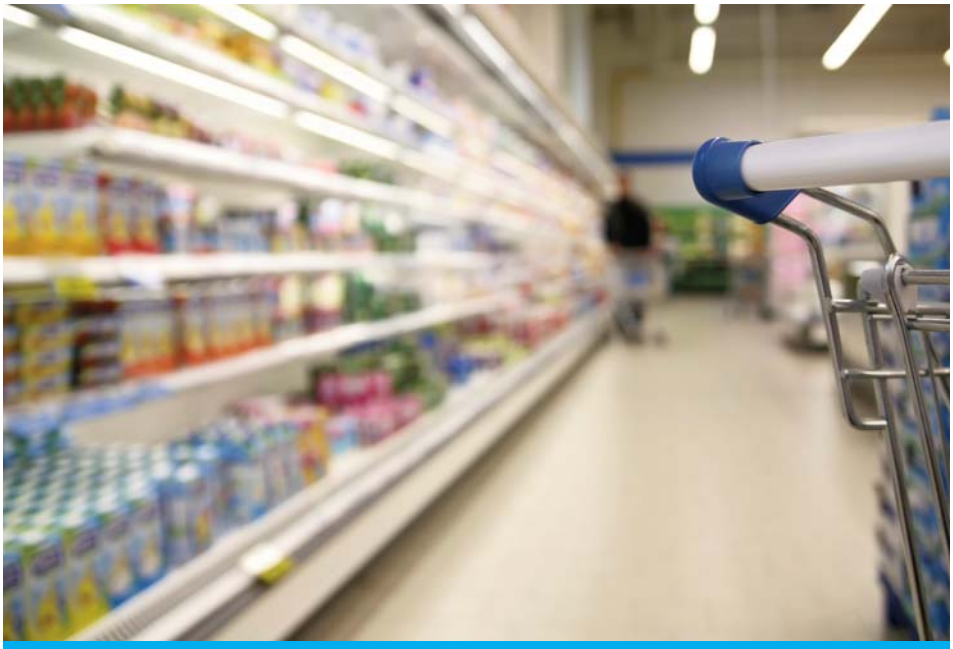
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In tandem with this, moves to eliminate HFCs are afoot in many other countries around the globe. Japan has recently announced its intention to phase down HFCs by encouraging a shift to lower GWP alternatives. Regulatory developments in the United States also suggest that the market for HFCs will shrink, with a regulation that would ban certain high-GWP HFCs in the refrigeration, foam, aerosol, and car air-conditioning sectors coming down the pipeline. Specifically, HFC-404A, HFC-507A and high-GWP blends above ~1,800 GWP will be banned for centralised commercial refrigeration systems.

These regulatory developments are sending clear signals to the market that the days of HFC-based refrigeration systems are numbered. **Companies who have not taken steps to phase out HFCs will be at a significant disadvantage.**

There is also growing international support for global action to eliminate the use of HFCs. In May 2013, the Arctic Council called for a phase-down of HFCs under the Montreal Protocol.[3] This was closely followed in the same year by a landmark agreement to tackle HFCs between the United States and China[4] and the G20 leaders' statement



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ACTIVATING THE CGF PLEDGE ON HFCS

As the Board of The Consumer Goods Forum, we recognise the major and increasing contribution to total greenhouse gas emissions of HFCs and derivative chemical refrigerants. We are therefore taking action to mobilize resources within our respective businesses to begin phasing out HFC refrigerants as of 2015 and replace them with non-HFC refrigerants (natural refrigerant alternatives) where these are legally allowed and available for new purchases of point-of-sale units and large refrigeration installations. **Cancún, 2010**

Activation Recommendations issued by the CGF Secretariat:[9]

1. Make a public commitment to phase out HFC refrigerants in new installations from 2015.
2. Start piloting solutions for new installations with natural refrigerants now (2013).
3. Measure existing footprint and share best practices on natural refrigerant pilots.
4. Publicly communicate about progress (for example total charge of refrigeration, % leakage per year, % of natural refrigerants, and number of new installations using natural refrigerants).
5. Contribute voluntarily to a set of case studies to raise awareness.

TABLE 1:

CGF COMMITMENTS	**1.** Publicly commit	**2.** Start pilots	**3.** Measure footprint and share best practice	**4.** Publicly communicate progress	**5.** Contribute to case studies
AEON	√	√	√	√	√
Alliance Boots	X	?	√	√	?
Almacenes Exito	X	?	√	X	?
Beijing Hualian	X	?	?	X	?
Carrefour	√	√	√	√	√
Cencosud	X	?	?	X	?
Delhaize	X	√	√	√	√
Dairy Farm	X	?	?	X	?
Dohle	X	√	?	X	?
IGA	X	√	?	X	?
Izumiya	X	√	?	X	?
Jeronimo Martins	X	√	√	√	√
Kroger	X	?	√	√	?
Marks and Spencer	√	√	√	√	√
Metro Group	√	√	√	√	√
Migros Ticaret	X	?	?	X	?
NTUC Fairprice	X	√	√	X	?
Pick 'n Pay	√	√	√	√	√
Royal Ahold	√	√	√	√	√
Sainsbury's	√	√	√	√	√
Sobeys	√	√	√	√	√
Walgreens	X	√	?	X	?
Walmart	X	√	√	√	?
Wegman's	X	√	?	X	?
Woolworths Limited	√	√	√	√	√

at the St. Petersburg Summit.[5] Most recently, the joint declaration by former Indian Prime Minister Manmohan Singh and U.S. President Obama in Washington, DC established a task force to resolve issues surrounding a phase-down of HFCs[6] and the G7 pledged to address their use under the Montreal Protocol.[7] At the end of May this year, China announced a new target to eliminate emissions of 280 million tonnes CO_2-equivalent of HFCs under the Twelfth Five-Year Plan.[8]

2014 is crunch time for the CGF and its members to finalise preparations to begin phasing out use of HFCs in 2015. Table 1 provides an overview of efforts by CGF Board members in the retailers segment to implement the Secretariat's Recommendations. Data was obtained both from direct communication with retailers and information available in the public domain. A question mark (?) indicates a situation where no information was available from the retailer. As the Secretariat's Recommendations specifically request public communication, we assume that a question mark may mean a failure to implement that step. Where information available suggests that a retailer has failed to meet a specific implementation step a cross (x) is given. Where a step has been achieved a tick (√) is awarded.

Of the 25 retailer Board members, EIA estimates that up to 16 have yet to

make a public commitment to phase out HFCs in new installations from 2015. Just 18 retailers appear to be piloting systems with natural refrigerants. This indicates that numerous retailers are unprepared to begin phasing out HFC refrigeration in 2015. It is also important to note that, in some cases, a company's commitment to move away from HFCs only appears to apply to the country in which they are based. EIA considers that any such commitment should extend across a retailer's entire operations.



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"With consumer concern about climate change growing by the day, retailers must provide leadership on HFCs."

CASE STUDIES

Walmart

Walmart is the largest food retailer in the world. In 2011, Walmart stated that it "is currently executing a global strategy to address harmful refrigerants, and develop and incorporate the latest innovations and technologies in effective, energy efficient, environmentally responsible refrigeration solutions," and had identified changes in "case display equipment, plant equipment, design and installation practices, and research and development projects."[10] Since this announcement, Walmart has not made a public statement on its global strategy to phase out HFCs, which is the first of the Consumer Goods Forum Activation Recommendations.

Walmart is currently operating secondary loop systems running on glycol and CO_2 in 168 Walmart stores and 2 Sam's Club outlets. These systems require a reduce charge of HFCs. Its Washington DC "H Street" store recently deployed a low-temperature system running on natural refrigerants. In South Africa, Walmart has 9 stores using transcritical CO_2 systems, and in Japan, cascade CO_2 with ammonia is the primary system used in Walmart's SEIYU stores.[11]

Despite these measures Walmart's lack of more forceful leadership in phasing out HFC refrigeration could thwart progress on implementing the CGF Resolution. **Walmart, as the CGF's biggest and richest retailer, should lead the CGF effort to phase out HFCs, and set the standard for other members to follow.**

Carrefour

Carrefour, the second-largest food retailer in the world, has made considerable gains in implementing its Consumer Goods Forum commitments. In 2010 the company pledged to stop using HFC-based equipment in new installations from 2015,[12] and appears to be on track to meet this target. As of March 2014 it had 115 systems across Europe operating on CO_2 technology.[13] Carrefour has also been trialling innovative parallel compressor systems in Southern Italy and Spain which have led to significant energy savings[14] If ongoing pilots prove successful, Carrefour plans to roll these out across its estate.

Tesco

Tesco has also already begun phasing out HFCs. Included in Tesco's plans is a pledge to roll out natural refrigeration systems across all new large stores, and a third of smaller 'Express' systems in the UK with a view to extending this across the rest of Europe and Asia.[15] As of Spring/Summer 2014, Tesco had 194 systems using natural refrigerants. Approximately half of these systems are in operation in Tesco's non-UK stores, including in locations throughout Hungary, China, South Korea and Thailand.[16]


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CONCLUSIONS AND RECOMMENDATIONS

There is growing momentum towards the introduction of climate-friendly refrigerants in commercial applications, where technologically viable and feasible alternatives to HFCs are available now. There is strong evidence of this in Europe, where the number of HFC-free supermarkets has more than doubled in the last two years alone. With consumer concern about climate change growing by the day, retailers must provide leadership by doing more to reduce their use of HFCs, which are among the most powerful greenhouse gases known to man.

The CGF's 2010 announcement in Cancún generated global praise but much more needs to be done to realise its strong promise. Despite laudable efforts from a group of pioneering retailers, EIA is concerned that many CGF members have yet to announce a plan or even a policy on beginning to phase out HFCs. Some, like Walmart, continue to build hundreds of new stores each year using climate-damaging HFCs.

The historic commitment of the Consumer Goods Forum to lead efforts to combat climate change is still achievable if prompt action is taken. EIA is therefore urging:

- The CGF Board to publicly reaffirm its commitment to begin phasing out HFCs from 2015.
- All CGF members to release a policy on HFCs demonstrating in a series of steps how they intend to begin phasing out HFCs as of January 1st 2015;
- Retailers to commit to use HFC-free refrigeration in all new store builds and refurbished stores from January 1st 2015.
- The CGF Secretariat to present an update of CGF members' actions to begin phasing out HFCs at its 2015 Summit.

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