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Q&A: Andrea Voigt

Andrea Voigt. Source: EPEE.

At the Refrigeration 2018 Conference, experts from around the globe will descend on Sydney to discuss the HFC phase-down and other key industry issues. Ecolibrium's Mark Vender speaks with one of the conference's international keynotes.

On March 26–27 at the Novotel Sydney Brighton Beach, experts from around Australia and the world will gather for AIRAH's Refrigeration 2018 conference. Perhaps the biggest issue on the table is the global HFC phase-down, which aims for an 85 per cent reduction in HFCs over the next 30 years.

It's still early days for Australia, which kicked off its program on January 1. But Europe is already well into the phase-down, with its F-Gas Regulation coming into force in 2015. The European approach differs from ours in a couple of key areas.

First, they have planned big step changes in 2018 and 2021, rather than making gradual reductions over a longer period. Second, Europe is counting HFCs in pre-charged imported equipment as part of its quota, whereas Australia excludes this. In both these areas, Europe's program is more aggressive than ours; nevertheless, we can still learn some important lessons.

Andrea Voigt, European Partnership for Energy and the Environment (EPEE), is one of the keynote speakers at Refrigeration 2018, and she was happy to share her experiences so far on the road to HFC reduction.

Ecolibrium: What is the state of play in Europe?

Andrea Voigt: The greatest challenge of the HFC phase-down is in 2018 and 2021, with HFC consumption cut first to 63 and then to 45 per cent – and even more if we take into account the import of pre-charged equipment, which also falls under the European phase-down.

As a result, since last year the market has experienced tremendous price increases of more than 500 per cent for high-GWP refrigerants such as R-404A, refrigerant shortages, and a lack of refrigerant bottles.

As the phase-down is expressed in CO_2-equivalent and is not refrigerant-specific, everything is linked. In other words, if people continue to use high-GWP gases such as R-404A and R-507A, it not only triggers shortages and price increases for these gases, but may also do so for other refrigerants with a lower GWP such as R-134a or R-410A. That's what is happening right now in Europe and causing panic in the market.

I don't think it's too late. But change is only possible if we accelerate the move away from R-404A and R-507A. As the EPEE, we highlight the importance of stopping the use of these gases as soon as possible. As always, installers play a crucial role. They need to inform and advise end users and therefore need to be aware about the urgency to act.

Eco: What are the biggest challenges of the phase-down?

AV: Human nature is to stick to the status quo and wait until the very last minute before acting, in particular if acting implies changing habits.

While the beauty of the phase-down is to leave flexibility to industry and not to prescribe or to prohibit specific refrigerants, the risk is that nobody will act until significant problems appear – such as huge price increases and refrigerant shortages. Striking the right balance between flexibility and introducing change seems to me a major challenge.

Ensuring the required level of competence for installers is another big challenge, and yet indispensable for the safe and efficient operation of HVAC&R equipment.

In Europe, we are still seeing a lack of installers competent to handle flammable and high-pressure refrigerants. To properly educate and train installers we also need training facilities and schools. Again, there is still a lack of the latter when it comes to flammable and high-pressure gases, at least in certain countries.

Finally, we need to ensure proper implementation and enforcement of the phase-down. We see in Europe that as soon as restrictions apply the black market starts to grow. Market surveillance is therefore of key importance. Quota allocation and use, imports, the use of refrigerants, etc.,need to be properly controlled.

In a nutshell, governments need to make available sufficient resources to ensure enforcement of the legislation, supported by penalties in case legislation is not respected.

Eco: What could Australia learn from the European phase-down so far?

AV: Seeing the current situation in Europe, I wonder if these big "cliffs" in 2018 and 2021 are a good idea. Maybe it would have been wiser to have more even phase-down steps, for example by reducing consumption by the same quantity every year rather than introducing suddenly such big steps.

I guess this was supposed to wake up the market and accelerate activity; however, it does not consider human nature. Had there been smaller steps, it would have reduced consumption gradually. Combined with the sectoral bans that act as signposts, this would have probably achieved the same results but with less dramatic consequences. In this sense, I would say Australia is on the right track.

Another key lesson is related to building codes. Numerous European countries have codes in place that restrict or even prohibit the use of flammable gases in buildings. As the move towards lower GWP refrigerants leads to the use of more flammable refrigerants, such building codes are a major obstacle.

The same applies to standardisation, though to a lesser extent. Therefore, my recommendation would be to ensure that standards and building codes enable the use of mildly flammable and flammable refrigerants, rather than acting as obstacles. Of course, safe use and operation must always remain the priority.

Eco: What about developing nations – how can we support them?

AV: By making available case studies, sharing best practice, field experience and other insights from our countries.

The EPEE has developed a model together with Gluckman Consulting to simulate HFC phase-down scenarios for Europe and now, in the form of the "Gapometer", to establish a roadmap towards achieving the targets. This model has been adapted to the markets of Kuwait and Bahrain, in a pilot project conducted with UNEP. As a next step, we intend to further adapt it and make it available to other developing countries.

Such models are of key importance for developing countries to fully understand their markets and develop the required activities to achieve the phase-down steps. ■

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