



# HFC Phase-down Makes District Cooling “Hotter”

By DEVCCO

“ ***As agreed and formalized in October 2016 in the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, the production and consumption of hydrofluorocarbons (HFCs) used as refrigerants in air conditioners and chillers will be phased down. This is not only important for fighting climate change, but it also provides a great opportunity to promote district cooling.*** ”

As greenhouse gases (GHGs), HFCs can be thousands of times more powerful than carbon dioxide (CO<sub>2</sub>). The Kigali Amendment, which will enter into force on January 1, 2019, requires the HFC phase-down for two groups of Article 5 Parties and two groups of non-Article 5 Parties according to the graphs beside.

The UN Framework Convention on Climate Change (UNFCCC) Paris agreement sets the target of limiting global warming this century to well below 2°C. Actions undertaken to comply with the Kigali amendment can get us a remarkable 25 percent of the way toward this target or 0,5°C. It should also be noted that more countries have committed to the Montreal protocol than the Paris agreement.

District cooling offers numerous benefits - financial, economic and environmental. Due to its economies of scale, a district cooling system has lower per-user investment cost than individual solutions. In addition, since local peak demands occur at different times, the installed capacity can be reduced through the use of district cooling, which lowers investment costs still further. The efficiency of a district cooling system can be up to 20 percent higher than the efficiency of local solutions; 10 percent of this efficiency increase results from avoiding the urban heat island effect induced by split-type air-conditioners. Utilization of local

resources such as sea-water and integration with district heating systems also can create flexible and more environmentally friendly cooling solutions.

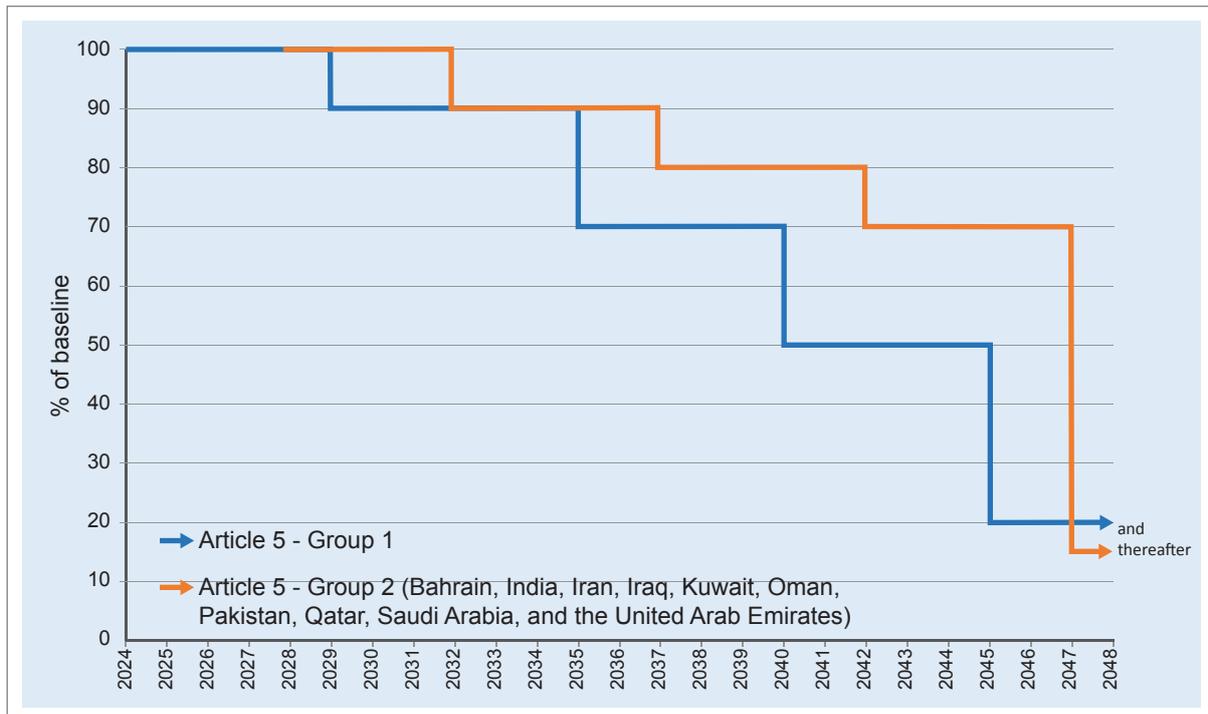
There are, of course, challenges with district cooling. These include front-loaded investments, institutional challenges related to urban planning, and the need to develop feasible business models. However, international experience is increasingly providing examples of how these issues can be overcome, as projects are being implemented successfully in a wide range of business environments.

In recent years, the development of district cooling schemes in Europe has been relatively slow - with the exception of projects in Sweden, Denmark, Finland and in larger cities like Paris and Amsterdam. The commitment to the Kigali Amendment can help unlock the potential of district cooling in Europe in the coming years. It also can help accelerate district cooling development globally by promoting dialogue among stakeholders developing district cooling schemes.



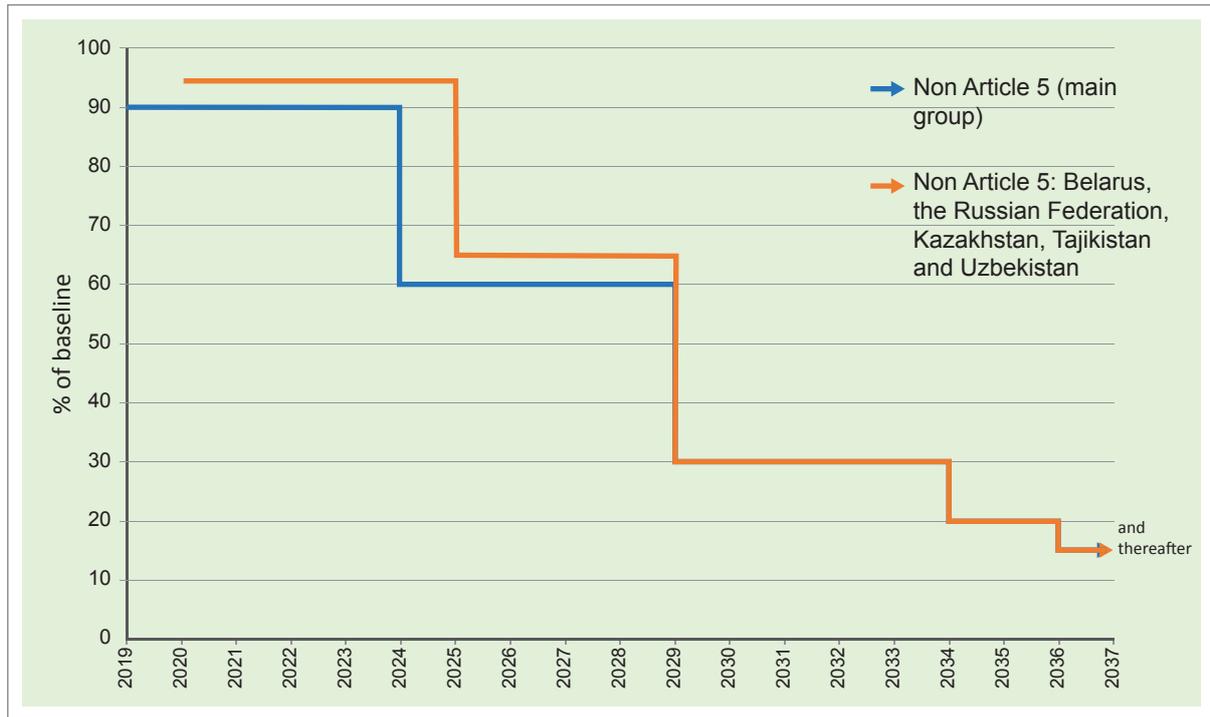
Devcco is a private, independent company owned by its founding Partners who have been the driving forces in several of the world's largest and most pioneering District Cooling and multi utility developments for the last two decades. Devcco has a unique position within the growing segment of District Cooling and has been involved in several ground-breaking business developments within District Energy in Sweden.

### Phase-down Schedule



Source: UN Environment

## Phase-down Schedule



Source: UN Environment

This article was published in the APUEA Magazine No.1/2018. See the full magazine on [www.apuea.org](http://www.apuea.org)