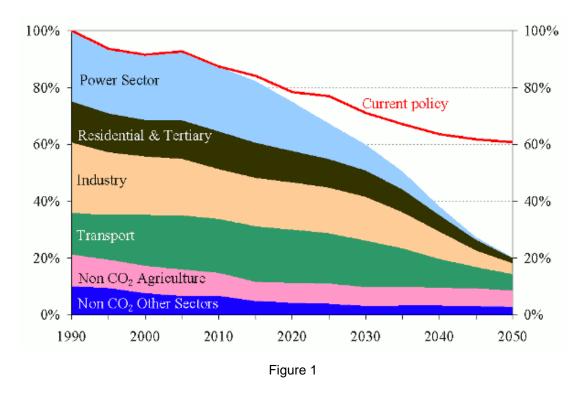
## THE EUROPEAN F-GAS REGULATION IN THE CONTEXT OF TECHNOLOGICAL DEVELOPMENTS

## Wolfgang Zaremski - ASERCOM

The European Commission calls for a climate-neutral Europe by 2050. On 28 November 2018, the Commission presented its long-term strategic vision for a prosperous, modern, competitive and climate-neutral economy for 2050. At the request of the European Parliament and the European Council, the Commission presents its vision for a climate-neutral future covering almost all EU policies and in line with the objectives of the Paris Convention to keep the temperature increase well below 2°K and to make efforts to limit it to 1.5°K. The Commission will also present a Communication on the climate change and its implications for the future of the European Union. The strategy shows how Europe can lead the way towards climate neutrality by investing in realistic technological solutions, empowering citizens and coordinating policies in key areas such as industrial policy, finance or research, while ensuring a socially equitable transition. The minimum aim is to reduce greenhouse gas emissions till 2050 80-95% of 1990. Figure 1 shows the different sectors of the economy and the savings targets.



One building block on the way to the goal is the F-Gas regulation. The F-Gas 517/2014 regulation set a "Road Map" and provides industry certainties on refrigerant trend. Our industry is ready for this coming transition, but there is much work still to be done. The additional challenges for our industry are manifold, see figure 2. The F-gas revision is coming, the Ecodesign requirements for energy-related products, regarding Ecodesign

requirements for air heating products, cooling products, high temperature process chillers and fan coil units are in progress.

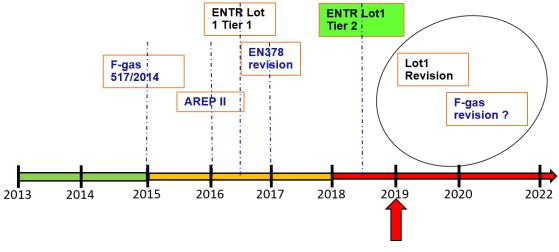


Figure 2

Those Regulations and standards linked to refrigerant's concerns remain key focus for ASERCOMs working groups.

The ASERCOM members have had great success in the implementation of ENTR Lot 1, Tier 2 for condensing units. The MEPs set in 2016 for condensing units were further tightened in 2018. Energy savings of up to 15 % were achieved. These goals can only be achieved with open technology. Political guidelines are counterproductive!

A new generation of lower global warming-potential refrigerants and very well-known old refrigerants, like Ammonia and Hydrocarbons on the field. Manufactures and equipment OEMs are moving forward with new technologies, see figure 3. State of the art will be in future CO2 units small cooling-capacity.

The development and testing of these systems requires time and money. Time to guarantee reliability. Money for the development. Money for test series at the manufacturer. But even more important are the people in development and in the field. Unfortunately, there is often a lack of suitable employees. The lack of experts slows down the development of new products. If the rules and regulations are then changed too quickly, there will be run in problems.

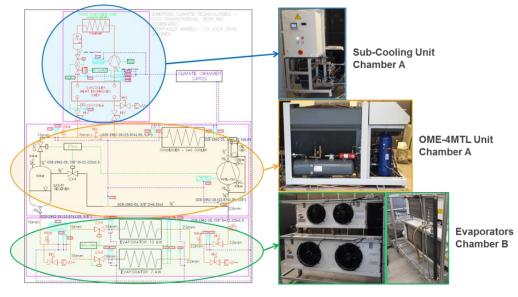


figure 3

The forthcoming revision of the F-Gas Regulation must therefore not hinder the development of new technologies. A further reduction of F-Gas quotas or prohibition in certain applications is counterproductive. The F-Gas Regulation is ambitious but is working very well. The Regulation has marked a milestone in the HFC phase down. The Regulation has been promoted innovation for climate-friendly technologies in the EU marketplace and for the rest of the world.