EU strategy on heating and cooling

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The Committee on Industry, Research and Energy adopted the own-initiative report by Adam GIEREK (S&D, PL) following the Commission communication entitled ‘An EU Strategy on Heating and Cooling’.

Recalling that almost 50 % of the EU's final energy demand is used for heating and cooling, the report pointed out the necessity to **take along specific measures** for heating and cooling when revising the Energy Efficiency Directive (2012/27/EU), the Renewable Energy Directive (2009/28/EC) and the Energy Performance of Buildings Directive (2010/31/EU).

Members considered that the strategy on heating and cooling must allow for both of these necessities in equal measure, taking into account that Europe has different climate zones and that needs, in terms of energy use, differ accordingly. It was important to ensure flexibility in choosing adequate strategy solutions.

Specific sustainable strategies: the report called for **specific sustainable heating and cooling strategies** to be developed at national level, giving special attention to combined heat and power, cogeneration, district heating and cooling, preferably based on **renewables**. It stressed the need to facilitate decentralised energy generation, thereby empowering consumers to be more involved in the energy market, and to control their own energy use.

Technology: Members stressed the fundamental role of renewable energy technologies, including the use of sustainable biomass, of aero thermal, geothermal and solar energy, and of photovoltaic cells in combination with electric batteries, to heat water and provide heating and cooling in buildings, in conjunction with thermal storage facilities that can be used for daily or seasonal balancing. They called on Member States to provide **incentives** for the promotion and take-up of such technologies.

Increase energy efficiency standards: energy demand in the building sector is responsible for about **40 %** of energy consumption in the EU, and a third of the natural gas use. This could be reduced by up to three quarters if the renovation of buildings is speeded up. Furthermore, **85 %** of this energy consumption is used for heating and domestic hot water.

In this context, Members considered that **modernisation of old and inefficient heating systems**, increased utilisation of electricity from renewables, better use of "waste heat" through highly efficient district heating systems, and **deep renovation of buildings** with improved thermal insulation, remain key to delivering a more secure and sustainable approach to heat supply.

They recommended: (i) the continuation of increasing energy efficiency standards for buildings, taking account of and encouraging technical innovation, particularly as regards ensuring homogeneity of insulation; (ii) continued support for the construction of nearly zero energy buildings. They called on the Commission to provide adequate **co-financing** for initiatives aimed at renovating public housing and apartment blocks with low levels of energy efficiency.

Furthermore, an **attractive financing system** should be set up to promote new technologies for heating households using renewable energy sources.

The report asked Member States to use legal and economic means to **accelerate the gradual phasing-out of outdated solid-fuel furnaces** with an energy efficiency level of less than 80 %, and to replace them, where possible, with efficient, sustainable heating systems at local level (such as district heating systems) or micro level (such as geothermal and solar systems).

Member States were called upon to: (i) phase out the use in urban areas of outdated furnaces for heating purposes that generate 'low height' emissions; (ii) take measures to phase out energy-inefficient furnaces and boilers using heating oil and coal that currently fuel over half of the building stock in the countryside; (iii) as a matter of urgency, take steps towards phasing out low-temperature furnaces used for the combustion of solid fossil fuels and organic waste, which, during the combustion process, release into the atmosphere a variety of harmful substances.

Europe's temperate climate zone: in this zone, reverse systems for heating and cooling using efficient **heat pumps** could become very important under certain conditions, given their flexibility. The report called on the Commission and the Member States to provide, with regard to heat pumps, **adequate aligned calculation methods**, and to promote the sharing of best practices for support mechanisms in order to support efficient, sustainable and low-carbon solutions to various thermal needs.

Research: Members took the view that progress should be made under the Horizon 2020 framework programme in R&D **relating to sustainable and efficient heating and cooling systems and materials,** such as small-scale renewable generation and storage solutions, district heating and cooling systems, cogeneration and insulation materials, as well as innovative materials such as structural window glass that lets in high levels of short-wave radiation (sunlight) from outside and lets out only a minimum of the long-wave thermal radiation that would otherwise escape to the outside.

The report stressed the importance of extensive scientific research into the development of innovative technological solutions designed to deliver **appliances and entire heating and cooling systems** that are energy efficient and based on renewables.