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Italian companies join forces to support gas heat pumps as a solution to reduce emissions and improve energy efficiency

Milan, 28 July 2017 - Combating air pollution, improving energy efficiency and promoting the use of renewable sources in air conditioning. These are the main objectives shared among Italian companies and associations, with the contribution of the Politecnico di Milano University, aiming to promote gas heat pumps as a modern, environmentally friendly and cost-effective solution in line with strategies targeted to reduce emissions in the heating sector.

This partnership has been detailed in a position paper jointly developed by the gas heat pump industry (Maya, Panasonic Heating & Cooling, Robur, Tecnocasa Climatizzazione), the Climgas association and the main gas infrastructure operators in Italy (Snam, Italgas, 2i Rete Gas). The paper identifies the advantages of a technology that leverages transportation, storage and distribution infrastructure to enhance the role of natural gas – and eventually biomethane – in enabling the use of renewables in buildings, in line with the COP 21 targets.

Gas heat pumps, in particular, allow primary energy savings of more than 40% compared to conventional gas boilers. This is also achieved through the recovery of renewable energy from the external environment. They are also one of the most cost-effective energy options, cutting over 30% of heating operating costs for final customers and easily integrated into existing plants, which are among the most energy-intensive sectors in Italy.

In addition, gas heat pumps allow for a substantial reduction in greenhouse gas emissions (carbon dioxide) which can also be completely eliminated when they are fuelled with renewables such as biomethane and bio-syngas obtained from Power-To-Gas plants. The same reduction occurs for health-damaging emissions such as nitrogen oxides, particulate matter and organic gaseous compounds.

Further benefits include high performance both in intense cold conditions and during the summer thanks to the total recovery of residual heat and the optimization of energy network utilization. A greater spread of gas heat pumps would in fact prevent expensive electricity grid reinforcements by exploiting existing gas infrastructure.

In light of the recent public consultation on Italy's National Energy Strategy, the position paper intends to boost this technology by leveraging a leading infrastructure system at the European level and combining primary energy efficiency, viability and convenience for consumers.

Today, promoting the use of gas heat pumps is the simplest and most immediate way to improve efficiency and reduce heating power consumption without invasive plant modifications or increasing energy efforts, and to significantly reduce emissions.