EHPA, as the representative of the European heat pump industry, welcomes the efforts and commitments of the European Commission to improve energy efficiency and increase the share of renewable energy in the heating and cooling sector in Europe.

As a consequence, a future-proof, efficient and sustainable energy system, will require much faster deployment of heat pump technologies. This can be seen as a fact that is supported by numerous national and European studies and reports (Fraunhofer Institute, Germany; University of Aalborg, Denmark; Ecofys, Germany; IEA, France; UNEP, Switzerland; etc.). The importance of heat pumps was also mentioned several times during the Conference on Heating and Cooling and RES conference, both organised by the Commission earlier this year.

Heat pumps are a set of heating and cooling solutions with variable capacity, using different technologies to cover the requirements of the residential, commercial and industrial sectors. At the current technology readiness level, they offer mature solutions for many of today’s needs. To improve the technologies even further, in particular to make them ready for full integration into tomorrow’s energy systems, additional and continued funding support for heat pump R&D is needed.

The Horizon 2020 call for the 2016 - 2017 period should recognize heat pumps as technologies using renewable energy and integrate heat pump related research and augment dedicated calls with heat pump technologies.

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The following modifications would increase the future readiness of the coming Horizon 2020 calls in terms of the use of Renewables and energy efficiency. They would enable the heat pump industry to contribute to a sustainable energy system.

1) Heat pumps are not listed among the Renewable technologies. According to the European renewable energy directive (2009/28/EC), efficient heat pumps contribute to the overall final consumption of renewable energy. A European research policy, which intends to boost RES for future energy systems, needs also to support the development of innovative heat-pump solutions. The following research areas should benefit from further research:

**Energy Efficiency:**
- a. Heat pump solutions in industrial processes
- b. Thermal storage, demand responses and integration into smart grids
- c. Increasing the potential of district heating, cogeneration and other renewable technologies.

**Renewable Energy:**
- d. Heat pumps using waste heat (and other clean and innovative processes).

2) EHPA considers heat pumps to be a valuable improvement to several calls of the Horizon 2016-2017 Programme. In particular:

- **LCE 7 - 2016/2017:** Developing the next generation technologies of renewable electricity and heating/cooling.
  The Specific Challenge section among the technologies supported in 2016 - 2017, should contain a dedicated paragraph on Heat Pumps.

- **EE 20 – 2017:** Innovative solutions of industrial symbiosis between intensive industries for the valorisation of waste heat.
  The Scope section of the call, among the actions that the project should be augmented by: “To determine potentials and strategies to upgrade industrial waste heat to useful temperature levels via utilization of heat pump technology.”

- **EE 22 – 2016:** New technologies for the efficient recovery of waste heat in large industrial systems
  The Scope section of the call, among the actions that the project should cover, EHPA suggests to add: “The recovery of waste heat flows within processes by means of heat pump technology.”

3) EHPA recommends that the Commission makes good use of one of the Strategic research and innovation priorities for Cross-cutting Technology from the Strategic Research and Innovation Agenda for Renewable Heating and Cooling (RHC Platform):

- Development of a heat pump for near-zero energy buildings (single family house) (Innovation action).
- New concepts for industrial heat pumps (Research & Innovation action).

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