

Leadership in renewables

Heating & cooling: the impact of EU R&D funding

Power | Heating & cooling | Transport

OBJECTIVES

A comprehensive study of renewable heating & cooling research and development (R&D) support within the EU over the past 20 years

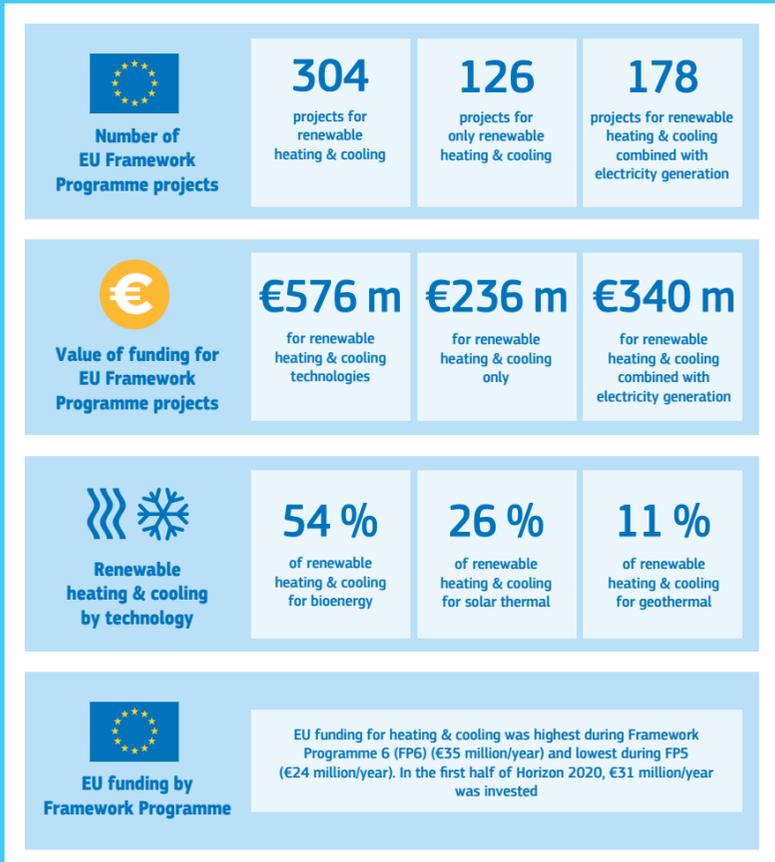
1 Identify the impact of EU R&D support for the renewable heating and cooling sector

2 Understand how the renewable heating and cooling sector has developed

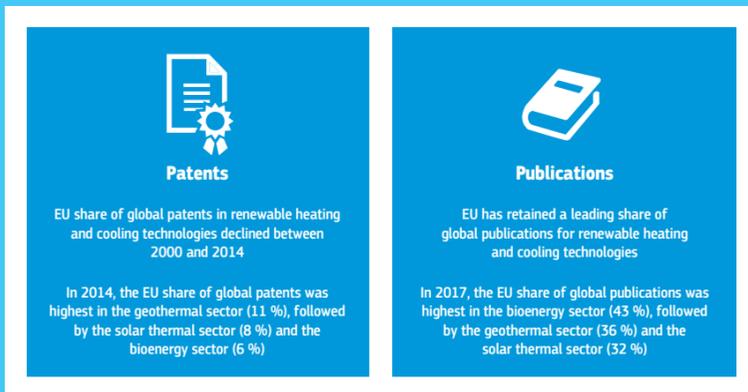
METHODOLOGY



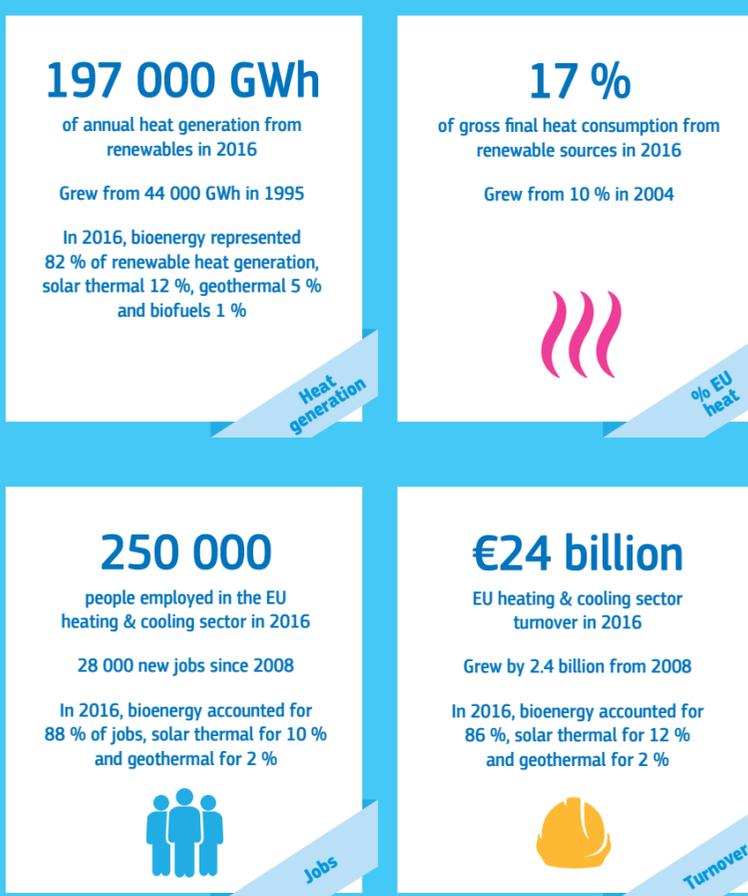
KEY FIGURES: EU R&D FUNDING



IMPACT ON KNOWLEDGE GENERATION



IMPACT ON SECTOR DEVELOPMENT



EXAMPLES OF IMPACT FROM R&D PROJECTS



UltraLowDust

Next generation small-scale biomass combustion technologies with ultra-low emissions

- FP7 project that demonstrated ultra-low emission biomass combustion for residential heating applications, based on three novel technologies
- Compared with the base case, the project was able to increase energy efficiency, and reduce carbon monoxide (CO) emissions by more than 200 mg/MJ, oxides of nitrogen by 27 %, organic gaseous compounds (OGC) by 85 % and total suspended particulate matter (dust) by 94 %. This was proved by certified bench tests based on EN 303-5 type testing conditions after the project had been completed
- A new ultra-low emission boiler technology (PuroWIN) was developed for wood pellet/chip combustion and is now commercially available. PuroWIN provides the lowest CO, OGC and dust emissions in the world – almost zero



SOLARBREW

Solar brewing the future

- FP7 developed the use of large-scale solar process heat for use in the brewing industry
- Project developed in conjunction with world-renowned brewer Heineken and implemented at three sites with a total planned capacity of 5.08 MWth
- The project led to significant improvements in the technologies and economics of solar process heat systems