

# COOLING SECTORS PROFILES

## European Construction Sector



Buildings are major consumers of cooling. Today, 2% of building energy needs are dedicated to space cooling and cooling needs in the building sector will significantly increase in the coming years. Thus, developing sustainable and energy efficient cooling solutions in buildings is a crucial challenge. New buildings constructed today are very energy efficient thanks to new technologies and systems which can lead to nearly zero energy buildings or even to buildings which can produce more than they consume. However, tackling the refurbishment of existing buildings, including historic ones is highly critical. Indeed, it is expected that by 2050, about 50% of the existing building stock built in 2010 will still be operational.

The strategic objectives of the construction sector are to develop technologies and solutions enabling the speeding up of the reduction in energy use and GHG emissions, especially through a higher renovation rate. The sector needs also to develop energy efficient solutions and innovative and smart systemic approaches for low-carbon buildings and districts.

As people spend 90% of their time indoors, health-related issues in buildings are also key to ensure a qualitative and healthy built environment.

**9%**

Is the EU construction sector contribution to the European GDP. It is the largest European economic activity.

**€18MIL**

Direct jobs created by the European construction sector.

**72%**

is the percentage that the cooling needs in buildings will reach by 2030.

## TECHNOLOGIES USED TO COVER THE COOLING DEMAND IN THE SECTOR

- HVAC systems with fossil fuels
- Renewable technologies: heat pumps, thermal energy storage and biomass
- District heating and cooling



The stock of existing buildings represents 40% of EU energy consumption.

## INITIATIVES



**JOINT INITIATIVE:** The commitment of the construction sector to improved efficiency is translated into the Energy-efficient Buildings public-private partnership (EeB PPP) with the European Commission. This joint initiative between the European construction industry and the EC aims to promote research and innovation on new methods, systems and integration of technologies to reduce the energy footprint and CO<sub>2</sub> emissions related to new and retrofitted buildings across Europe.



**RESEARCH PROJECTS:** More than 150 research projects were co-funded in the FP7 and Horizon 2020 programmes under the EeB PPP umbrella. The projects demonstrate scientific and technological excellence from early stage conception to demonstration of almost ready-to-market innovations. The research projects are featured in the EeB PPP Project Review 2017 and the most promising technologies developed by the projects are featured in the dedicated EeB PPP promising technology brochures and can be found on the ECTP website ([www.ectp.org](http://www.ectp.org))

Information kindly provided by ECTP (European Construction Technology Platform) ([www.ectp.org](http://www.ectp.org))

The European Construction Technology Platform (ECTP) is a leading membership organisation promoting and influencing the future of the Built Environment.

Since 2004, the main mission of ECTP and its experts Committees is to develop new R&D&I strategies to improve competitiveness, meet societal needs & take up environmental challenges through an Innovative Built Environment. ECTP also works closely with the European Commission in the framework of the Energy-efficient buildings public-private partnership (EeB PPP).