



## **Renewable cooling systems for massively glazed buildings**

**Coordinator:** IntelliGlass (Spain - Madrid)

**Other applicants:** Universidad Politécnica de Madrid (Spain – Madrid)

**Sector:** Sustainable construction

**Call of interest:** EraSME

### **Proposal summary:**

Most of the large buildings constructed nowadays present a large glass facade which poses a serious problem for their energy efficient climatization. In countries like Spain, Italy, Greece or Portugal, where the Sun radiation is very strong, the interior of the building gets easily overheated, requiring the use of large climatization systems, which consume a lot of energy.

Thus new approaches to the climatization of these buildings are required, based on more efficient climatization systems combined with renewable cooling sources like passive geothermal systems, passive evaporation units, day-night accumulation strategies, etc.

The main goal of the present R&D project is to study different climatization solutions based on renewable sources in order to determine their feasibility from a practical point of view. To achieve this, modeling, simulations, and prototype scale experiments are proposed to verify the different considered solutions and to determine their overall energy efficiency under real conditions.

### **Advantages for SMEs, trade or industry:**

Well founded knowledge on new approaches for the efficient cooling of buildings with golden rules and design tools to their direct application on real projects.

**Profile of partners sought:** engineering companies, HVAC manufacturers, geothermal systems companies, International RTOs, etc.

### **Contact:**

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