

Leadership in renewables

Power generation: the impact of EU R&D funding

Power | Heating & cooling | Transport

OBJECTIVES

A comprehensive study of renewable power generation 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 power generation sector

2 Understand how the renewable power generation sector has developed

METHODOLOGY

EFFECTIVE DATA COLLECTION ACTIVITIES USING A RANGE OF METHODS

DATA FROM EXISTING DATABASES

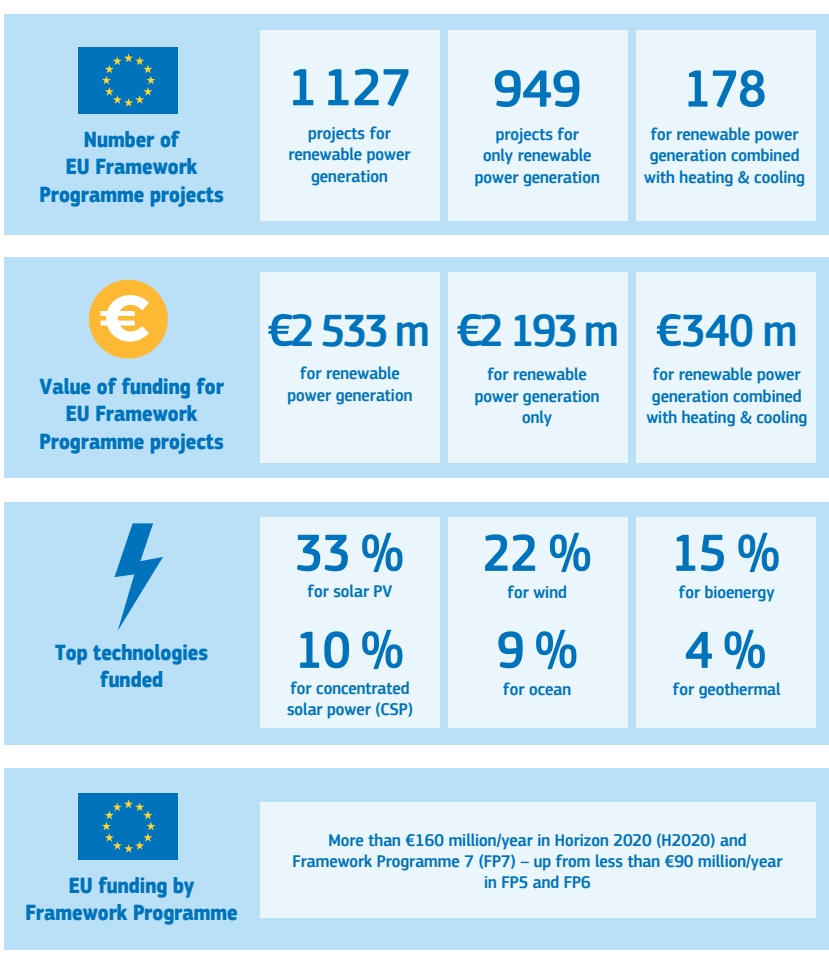
STAKEHOLDER QUESTIONNAIRE

CASE STUDIES

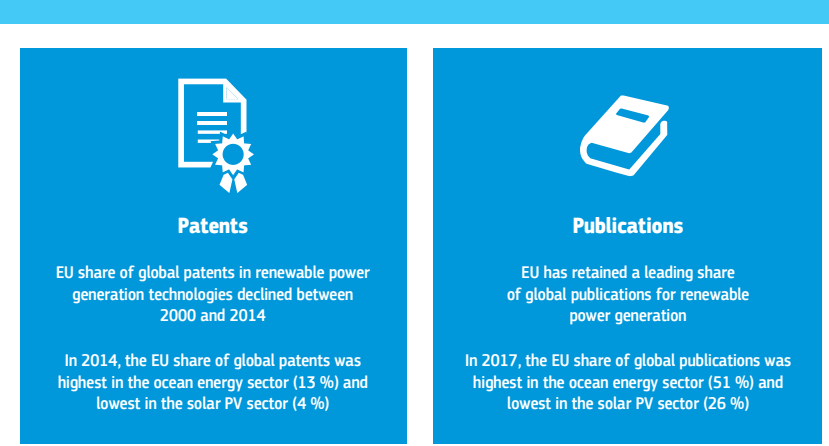
EXPERT INTERVIEWS

LITERATURE REVIEW

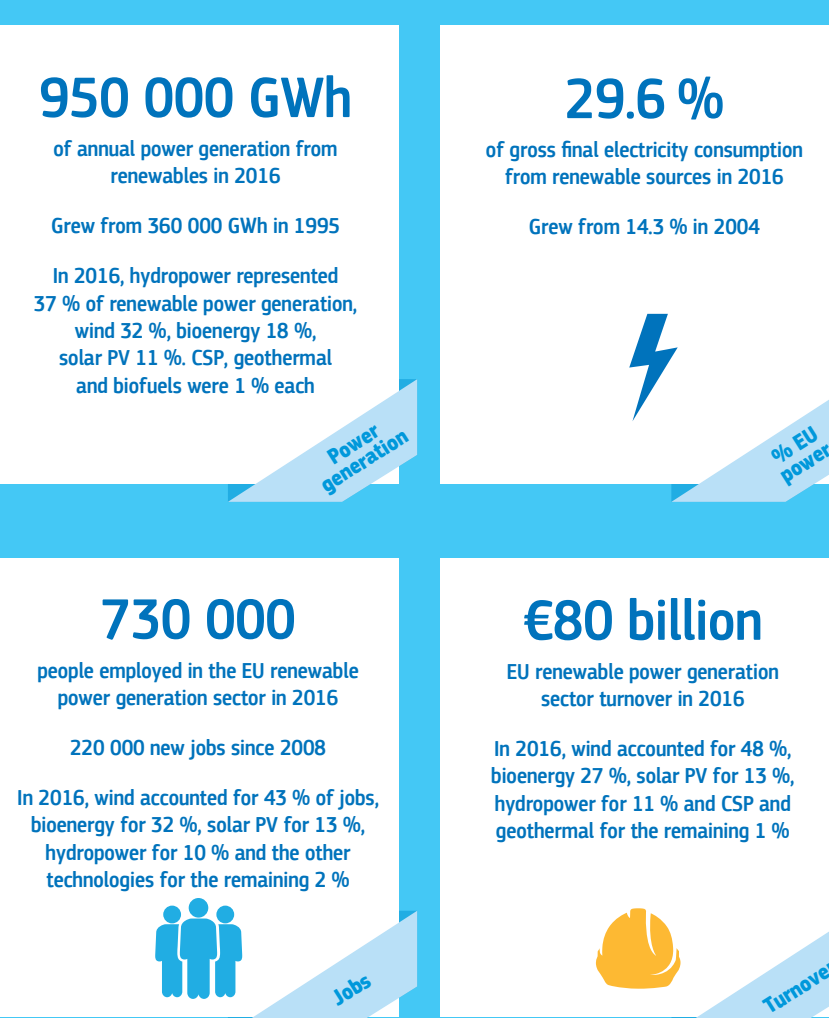
KEY FIGURES: EU R&D FUNDING



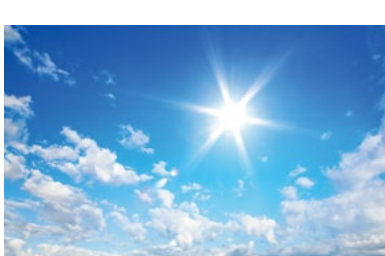
IMPACT ON KNOWLEDGE GENERATION



IMPACT ON SECTOR DEVELOPMENT



EXAMPLES OF IMPACT FROM R&D PROJECTS



Production technology to achieve low Cost and Highly efficient photovoltaic Perovskite Solar cells (CHEOPS)

- An ongoing H2020 project developing very high-performance/low-cost PV devices based on emerging perovskite technology
- The project has achieved an efficiency of 25.2 % with silicon and perovskite-based tandem cells and demonstrated how the efficiency could increase to over 30 %. It developed a cost-efficient and simple production process – compatible with existing manufacturing lines – integrating a perovskite cell directly on top of a standard silicon-based cell. It also introduced a unified standard for measuring and testing perovskite-based PV devices to strengthen reliability and comparability
- The project partner, Oxford PV, and its subsidiary, Oxford PV Germany, received €15 million financing from the European Investment Bank in 2017. This is to support the transfer of the perovskite technology from laboratory to industrial-scale manufacturing, fostering the EU technology leadership in the field



Demonstration of the WindFloat Technology (DEMOWFLOAT)

- FP7 project that demonstrated the performance and reliability of the WindFloat technology with a 2 MW pilot turbine in Portugal
- WindFloat uses innovative floating structures that enable the harvesting of abundant wind resources in deep waters where bottom-mounted foundations are not feasible
- EU also supports the commercialisation on its path to full commercialisation through the 25 MW WindFloat Atlantic project. It €60 million by InnovFin Energy Demonstration Projects