



**Making an impact
on the clean
energy transition**

**MARKET
UPTAKE**

ESSENTIAL EDUCATION FOR A SKILLED FCH SOCIETY



FCH innovation fuels demand for talent

Rising commercial adoption of innovative fuel cell and hydrogen technologies for applications as diverse as transport, home energy and industry is generating a growing demand for qualified workers. By 2030, tens of thousands more researchers, engineers and other workers will be needed to fill a rapidly increasing number of skilled jobs in the sector in Europe.

Education programmes focused on providing dedicated training in FCH technologies are thus essential today to meet this forecast future demand. The Fuel Cell and Hydrogen Joint Undertaking is addressing the challenge with initiatives targeting students of all ages, starting with primary and secondary education in the FCHGO project, which developed a 'ready to teach' toolkit aimed at inspiring interest and awareness of FCH technologies among 8 to 18-year-olds. For undergraduate and graduate education, TEACHY2020 is building a pan-European network of universities with FCH curricula, including a complete MSc course on FCH technologies, available in multiple languages. NET-TOOLS, used by TEACHY2020, is providing an internet-based e-learning platform, featuring networking, e-science and e-laboratory components to expand multilingual online education, training and research around FCH.

A knowledge-based green transition

Developed in collaboration with education institutions, research organisations and businesses along the fuel cells and hydrogen value chain, the FCH JU-supported education and training programmes are tailored to multiple target groups and accessible across different formats, from in-person learning to e-learning and blended learning. The approach will support European leadership in FCH technologies and promote a knowledge-based FCH society, benefitting all Europeans in the green transition.

The expanding fuel cell and hydrogen industry needs qualified workers, skilled in the development, deployment and maintenance of FCH technologies. The FCH JU is bolstering European talent with far-reaching initiatives to promote excellence in education and training, and to develop a well-educated workforce and FCH society prepared for a low-carbon, low-emission future.



FCH JU Success Stories



KEY ACHIEVEMENTS

FCHGO

8-18 YEARS OLD

students learning about the basic principles and applications of FCH technology

6

presentations and videos for teaching students aged 13-18

5

teaching tools for students aged 8-13

7

partner universities and organisations

TEACHY2020

75

educational and training institutions participating in the network

200

target number of partner educational and training institutions

7

languages in which course materials will be offered

20 % / 80 %

any university able to offer 20 % of course content locally can benefit from 80 % supplied by the project

NET-TOOLS

1

collaborative online platform offering e-Learning, e-Science, e-Laboratory and e-NETwork applications

3

languages in which learning materials are offered, with more to be added

4

live workshops and educational schools

INTENSE DEMAND FOR QUALIFIED EMPLOYEES

The expansion of the fuel cells and hydrogen industry will create intense demand for qualified employees, and education institutions need to be prepared to meet this demand.

COLLABORATIVE ONLINE AND OFFLINE TRAINING PROGRAMMES

Forecasts for future talent needs in the fuel cells and hydrogen industry led the FCH JU to launch education and training initiatives across Europe, bringing together universities, education and research institutions, businesses and social enterprises. **The goal?** To provide future generations of engineers, researchers and other skilled employees with the qualifications needed and bolster European competitiveness in FCH technologies.

Key results? Tools for primary and secondary education activities around FCH, a network of universities offering FCH-relevant training undergraduate and graduate programmes, and e-learning materials in multiple languages that are already preparing thousands of students across Europe for the dynamic FCH sector.

IMPACT

466 HOURS

average length of training

1 200 HOURS

maximum length of training

1 837

number of trainees in nine countries, 2016-2018



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FIND OUT MORE



www.fch.europa.eu/page/fch-ju-projects
<https://fchgo.eu/>
<http://www.teachy.eu/index.php>
<https://www.h2fc-net.eu/>



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FUEL CELLS AND HYDROGEN
JOINT UNDERTAKING

A partnership dedicated to clean energy and transport in Europe