

Hydrogen technologies: Addressing European challenges



Hydrogen Fuel Cells as part of the solution






Bringing the technology to market scale requires a pan-European coordination

Challenges for market scale

- Market failure for first movers
- Deficient leveraging of available funding
- Fragmentation of legislation across the EU
- Lack of critical mass
- Insufficient infrastructure for transport applications

Needs

Regulatory Incentives

-  Favourable tax regime for decarbonized hydrogen
-  Support fuel cells for combined heat and power
-  Grid flexibility – introduce hydrogen into natural gas network
-  Increase support for hydrogen as clean alternative fuel for transport
-  Tighten local emissions regulations

Innovative financing tools

-  Dedicated insurance products for banks to overcome market delay
-  Direct equity investment schemes by EIB
-  Reimbursable grant systems
-  'Green' or 'Technology' Bond for alternative infrastructure investments

Benefits

expected from deployment of all alternative fuels by 2030*

1.  **Energy Security**
Potential fuel import savings **€58-€83 billion** a year by 2030 for EU economy
2.  **Green Growth**
Potentially **+500,000 to 1.1 million** additional jobs in 2030
3.  **Sustainability**
CO₂ could be cut by **64-97%** in 2050

* Data based on the report "Fuelling Europe's Future" by Cambridge Econometrics (CE) + Ricardo-AEA (2013)