



Programme Review Days 2016

WELCOME

Bart Biebuyck, FCH JU Executive Director

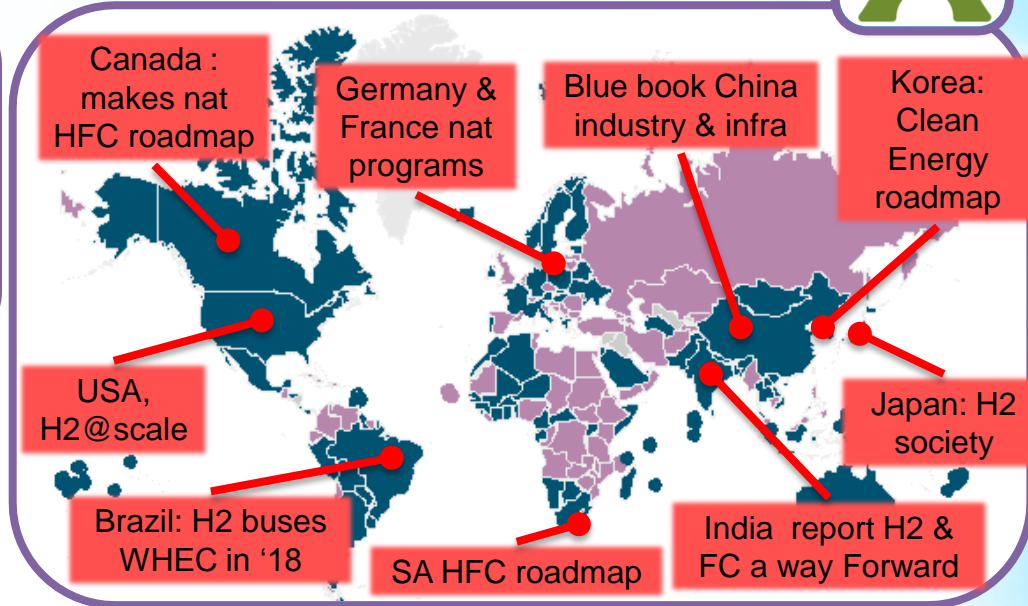


<http://www.fch.europa.eu/>

Paris agreement



- *Nov. 4, 2016 entry into force*
- *Limit temperature increase below 2° C vs pre-industrial levels *
- *target 1.5 ° C increase*







Build production capacity:
20k stacks/yr
5000 buses/yr
2020: 100 HRS, 10k cars
50 trams, ship demo's



Actual project data versus 2017 KPI's and SoA

Example

	FCH JU project results 2015	Objectives 2017	Non-European SoA
CAPEX, €/kW		< 14,000	6,100-7,200
Durability, y		> 12	10-20
Electrical efficiency, %		33-60	39-52
Thermal efficiency, %		25-55	35-56
LCOE, €/kWh	-	< 2.5*grid parity	0.62-0.90
NO _x emissions, ppm	-	< 2	

FCH JU objectives

COUNCIL REGULATION (EU) No 559/2014 of 6 May 2014 establishing the FCH 2 JU



Reduce the production cost of fuel cell systems to be used in transport applications, while increasing their lifetime to levels which can compete with conventional technologies



Increase the electrical efficiency and the durability of the different fuel cells used for power production to levels which can compete with conventional technologies while reducing costs



Increase the H₂ production energy efficiency mainly from water electrolysis & renewable sources while reducing costs, so that the combined system of the H₂ production and the conversion using the fuel cell system can compete with the alternatives for electricity production available on the market



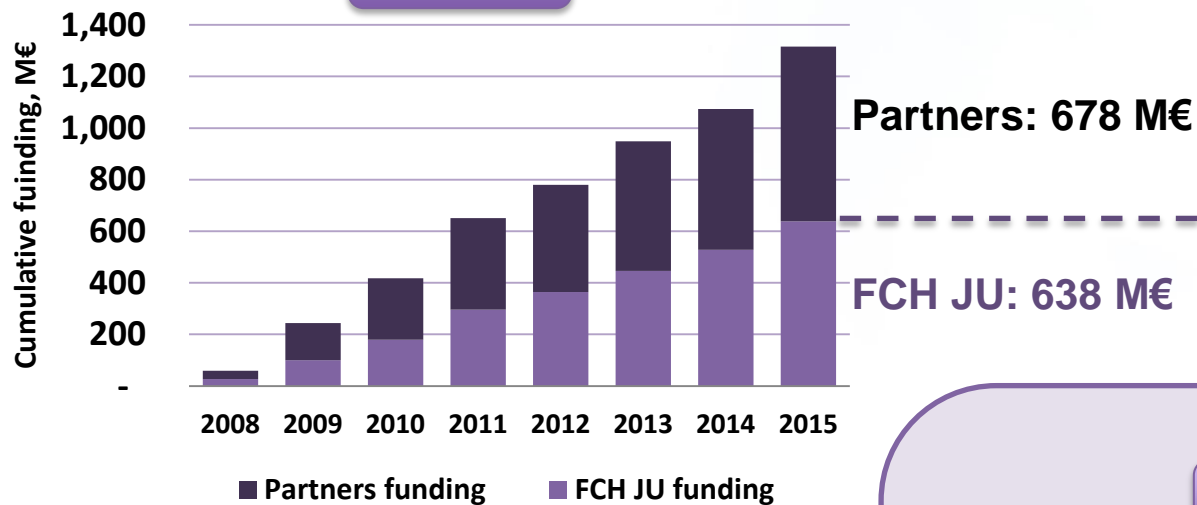
Demonstrate on a large scale the feasibility of using H₂ to support renewable energy sources integration into the energy systems, incl. through its use as a competitive energy storage medium for electricity produced from renewables



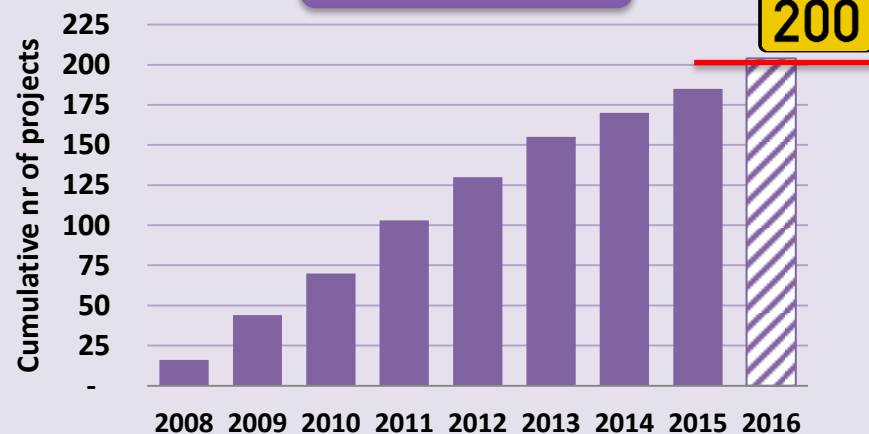
Reduce the use of the EU-defined “critical raw materials”, for instance through low-platinum or platinum-free resources and through recycling or reducing or avoiding the use of rare earth metals

FCH JU projects

Budgets



Nr of projects





Leverage effect



Hydrogen
Europe

ON.ERGHY
RESEARCH ON FUEL CELLS & HYDROGEN



The industry and research groups' members have committed 3.5 times the amount committed by the FCH JU for the period 2014-2016

Thank you for your attention !

Further info :

- FCH2 JU : <http://www.fch.europa.eu/>
- HYDROGEN EUROPE : www.hydrogeneurope.eu
- N.ERGHY : <http://www.nerghy.eu>