



International Partnership
for Hydrogen and Fuel Cells
in the Economy

UK Update

31st IPHE Steering Committee Meeting

10 – 11 April 2019

Vienna, Austria

Announcements and/or New Initiatives

UK



- Dec 2018 - Clean growth Mission to establish the world's first net-zero carbon industrial cluster by 2040 and at least one low-carbon cluster by 2030. Backed by £170m from the Industrial Strategy Challenge Fund.
- Dec 2018 – Publication of 'Clean Growth: Transforming Heating' providing an overview of the evidence base on low carbon heating technologies including hydrogen.
- Jan 2019 – Storage at Scale Competition (£20m) launched to demonstrate innovative large-scale energy storage solutions including Power-to-X (>5Mw input).
- Jan 2019 – Publication of 'Maritime 2050: Navigating the Future' strategy. Including potential role for hydrogen.
- Feb 2019 – Winners of the Ultra-Low Emissions Bus Scheme announced. Including £4.4m for 20 hydrogen buses and refuelling infrastructure.
- Mar 2019 – Offshore Wind Sector Deal deepening partnership with government and industry to maximise UK leadership in offshore wind and advantages for industry. References development of a roadmap, including potential role for hydrogen.
- Mar 2019 – New guidance on Renewable Transport Fuel Obligation with support for hydrogen from renewables.
- Mar 2019 – Launch of public consultation on the scope of £315m Industrial Energy Transformation Fund.
- Apr 2019 – Launch of demo projects under the UK's Prospering from the Energy Revolution Challenge. Including ReFLEX Orkney project (£28.5) to create a 'smart energy island', which could include roll out of hydrogen technologies and Smart Hub SLES project to integrate energy management across buildings and infrastructure using innovative technologies including hydrogen.

Examples of Lessons Learned and Impact

UK



Please include up to 3 examples of policies, regulations or mandates that have been used in your country to deploy sustainable energy technologies. Please include a lesson learned for each example (i.e. if you had to do it all over again, what would you do different? Or what worked well?)

Program initiative, policy, regulation or mandate	Lessons Learned/Outcomes
- Power sector decarbonisation	<ul style="list-style-type: none"> • Have a comprehensive and clear technology neutral low carbon electricity (LCE) deployment strategy, covering generation at all stages of technological readiness and be willing to remove support from technologies not going down the cost reduction curve. For example using competitive auctions (CfD) to deploy offshore wind at scale. • Use competitive mechanisms to allocate support for technologies ready for mass deployment, rather than seeking to set rewards administratively based on incomplete information. • Your strategy should provide long term visibility of the pipeline of investment out to 2030 to help further drive cost reduction and investment into the supply chain to develop UK industry • At the same time, consider the impact of LCE on the power network and its operation, and ensure that governance and operation structures are appropriately flexible to meet the challenges it presents
- CCUS Action Plan (ongoing)	<ul style="list-style-type: none"> • Develop a genuine partnership between government and industry to secure the benefits of CCUS • Deliver a business environment that works for all stakeholders • Deliver commercial frameworks to enable investment, innovation and cost reduction.

Applications - Current Status and Goals

UK



Application	Status (As of Feb 2019)	Goal (For Year)
Fuel cell vehicles	~100 <i>(73 additional vehicles announced in Feb 2019)</i>	n/a
Hydrogen stations	13 <i>(5 additional stations announced in Feb 2019)</i>	n/a
Fuel cell buses	20 <i>(53 additional buses announced in Feb 2019)</i>	n/a
Electrolyzers	<i>Exact details not available</i>	n/a
Primary fuel cell power units	<i>Exact details not available</i>	n/a
Backup power fuel cell power units	<i>Exact details not available</i>	n/a
<i>Others applicable to your country (examples: Power to gas, rail, marine, trucks, etc.)</i>	<i>Exact details not available</i>	n/a

Thank you



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