Paul McCormack

Skills - key to unlocking the clean hydrogen economy

Hydrogen and Energy Storage Show Floor Theatre
ALL Energy 2023
11th May

INTRODUCTION

We are at one of the most pivotal times in the Energy industry, facing climate and security challenges. The urgency is driving industry, communities and society through an accelerated energy transition.

The drive to reduce our carbon footprint energy security has powered companies to unprecedented levels of innovation, transformation, productivity, and efficiency.

As we embrace a rich future of sustainable energy, catalysed by Green Hydrogen we are examining every step in a four stage Green H2 Commodification value chain to enable this transformation for all.

THE EFFECTIVENESS OF GREEN HYDROGEN

Green Hydrogen is ***360°*** effective

- Environmental – zero carbon footprint
- Social – community inclusive energy solution
- Commercial – a key energy catalyst assisting industry pivot to green solutions
- Financial – Innovations in electrolysers will ensure that Green Hydrogen will become more cost effective than natural gas

Interreg
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Key Message

Hydrogen is the key to creating a successful, sustainable and secure energy future for Europe.

But it is people who need to open the door.

Responding to our climate and energy crisis requires us all to act. It will be a collaborative 'all hands-on deck' effort with governments, scientists, innovators, industry and communities all working in cohesion as partners in the clean energy transition that will deliver the solutions we require and contribute to our understanding of climate change and its impacts.

CONTEXT

In 2021 our EU goal was driving to build a clean energy future through the Fit for 55 package. On the 24th February 2022 our goals were expanded and accelerated to a clean secure energy future for Europe through the REPowerEU action plan.

The climate challenge allied with the current geopolitical situation makes an unparalleled case for a rapid clean energy transition.

The transition requires smarter use of current technologies, the development of next-generation technologies and the deployment of smart infrastructure to use and integrate these technologies in our energy system.

These steps together with increased energy efficiencies across the entire energy value chain will deliver our energy goals.

The Green Dawn

The global energy crisis is a clean energy opportunity.
The oil shocks of the 1970s spurred vital progress in renewable energy opportunities but we allowed these to be side tracked.

Today's crisis highlights the fragility and the unsustainability of our reliance on fossil fuels.
This can be the springboard towards a cleaner, more affordable and more secure energy system.

The green energy transition is fragile

Energy price rises are exposing challenges in market design and regulation, creating the need to rethink it.

Across the globe and especially in Europe nations are turning to fill gaps in their fossil fuel supplies by looking to reopen coal mines, expanding domestic gas production, and securing new import contracts.

This new landscape offers difficult terrain for the clean energy transition including Green Hydrogen.
Renewed energy security concerns among many nations risk pushing clean energy ambitions back down the agenda while short-term crises are tackled.

'Near term challenges shouldn't obscure real opportunities.'

IT WILL TAKE MORE THAN TECHNOLOGY

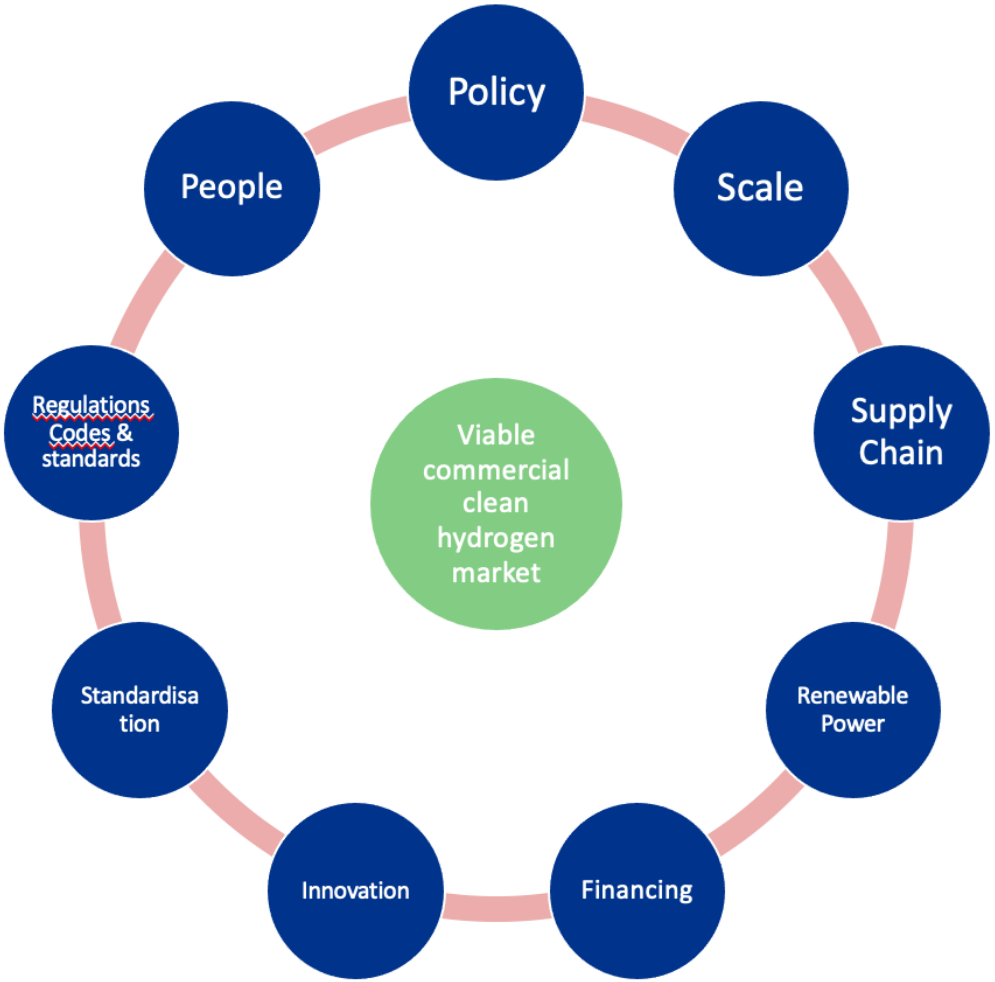
Technology alone will not achieve our net zero goals.
As detailed in Marianna's Evaluation section of the Green H2 EVALUATION link in the SMART H2 value chain, substantial work is still needed on, understanding behaviours and attitudes around energy use, and on mechanisms for supporting households and communities through the energy transition.

In our drive for technological development, we cannot overlook the central role played by people, and ensure that we are also fostering innovation and collaboration at the social level.

INNOVATE THE TECHNOLOGIES OF THE FUTURE

- Half of the clean energy technologies required to achieve net-zero emissions by 2050 are not commercially viable yet.
- Selected technologies to showcase solutions that are accelerating and demonstrating progress toward our shared clean energy goals
- There is no ‘one-size fits all’ approach to reaching net-zero — technologies across all sectors of the economy will need to work together. And these technologies are all at varying stages of research, development and demonstration (RD&D).

Creating a thriving hydrogen economy



Key Message

We need to speak to the End Users, those whose jobs it is to decarbonise and strengthen energy security.

We cannot promote "*hydrogen for the sake of hydrogen*". We must find the right roles.

Industry-Research collaborations are essential for enabling clear-headed, objective decision-making

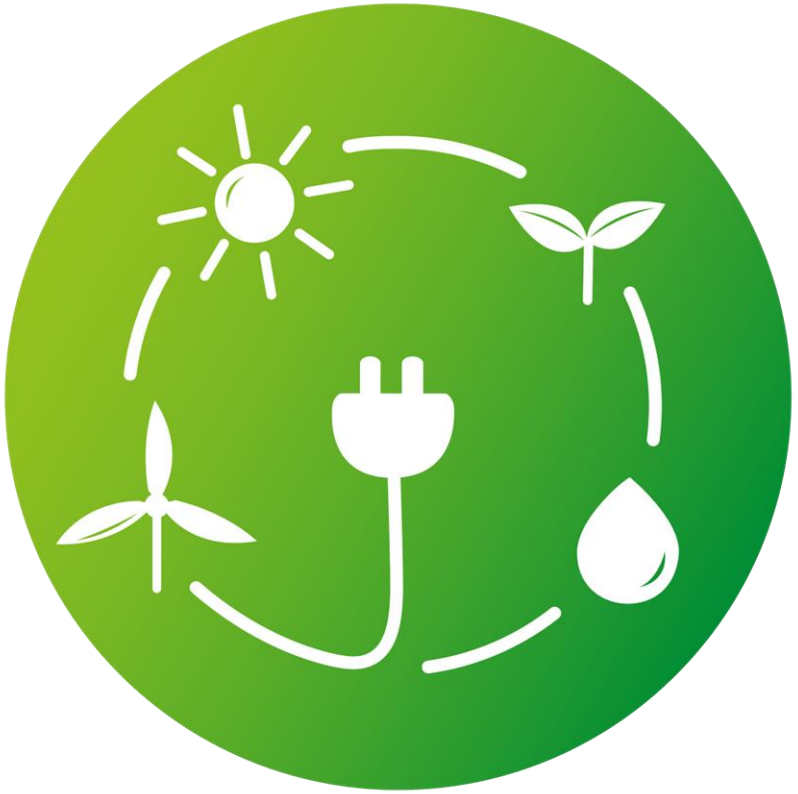
Summary

Green H2 is a disruptive technology – it is nonlinear change in a linear world.

Disruption, by definition, changes the “traditional way of doing things” and accelerates change and transformation.

We must optimise all steps of Green H2 in a logical, needs driven, exponential accelerated manner in order to fully exploit current and future clean energy applications

Energy innovation is not linear it is a conversion and Green H2 innovation can and will convert our energy systems to the green alternatives we need



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HYDROGEN: SECURING IRELAND'S GREEN ENERGY FUTURE

ESB Energy for generations

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Hydrogen: Securing Ireland's Green Energy Future
22 - 23 November 2022

https://col.eventsair.com/h2irl-2022/registration/Site/Register

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Contact details and media links

- GenComm Website nweurope.eu/gencomm
- GenComm LinkedIn GenComm
- GenComm twitter @GenComm_CH2F
- Community Hydrogen Forum www.communityh2.eu

GenComm Animation

https://vimeo.com/366993950/91cafb0bb6

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