




# 2023 World Fuel Cell Conference

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Name	Sara Walker	
Affiliation	School of Engineering, Newcastle University, UK	
<h2 style="color: red;">Invited Keynote Lecture</h2>		
Presentation Title	Hydrogen integration into energy systems: the glue for net zero	
Abstract (150 words)	<p>The UK Government has set out high expectations for the role of hydrogen, with demand 250-460 TWh by 2050. In comparison, the UK currently produces around 27 TWh hydrogen annually, the majority of which is grey hydrogen and used as industrial feedstock. Hydrogen is a highly versatile energy vector suitable for use in many hard-to-decarbonise sectors where other energy vectors, such as electricity, are not suitable. Furthermore, increasing use of renewables with seasonally variable output will require medium- to long-term storage in energy systems, which hydrogen can provide. Therefore, hydrogen and alternative liquid fuels have an essential role in the net zero transition, by providing connectivity and flexibility across the energy system.</p>	
Biographical Sketch (150 words)	<p>Professor Sara Walker is Director of <a href="#">The Centre for Energy</a> at Newcastle University. She has been working in the energy sector since 1996, with a career spanning industry and academia. Her research focus is on renewable energy and energy efficiency in buildings, energy policy, energy resilience, and more recently on whole energy systems and system transition to net zero. She is Director of the EPSRC Hub on Hydrogen Integration for Accelerated Energy Transitions, EPSRC Energy Demand Research Champion, and Deputy Director for the EPSRC Supergen Energy Networks Hub. She is an Advisory Committee Member for the UK Energy Research Centre and the UK CCS Research Centre, and also contributes to the EPSRC Scientific Advisory Committee for Energy.</p>	