

# ONE YEAR SINCE THE HYDROGEN STRATEGY



All Party Parliamentary Group on  
**Hydrogen**

Minutes

<b>Date</b>	Thursday 30 June 2022
<b>Time</b>	12:50-13:50
<b>Venue</b>	Hydrogen for Life Summit at the Science Museum, London
<b>Chair</b>	Jacob Young MP, Chair of the APPG on Hydrogen
<b>Speakers</b>	<ul style="list-style-type: none"><li>• Jake Tudge, Associate Director, Energy &amp; Mobility Deal Strategy, KPMG</li><li>• Dr William Mezzullo, Head of Hydrogen, Centrica</li><li>• Jinmi Macaulay, Public Affairs and Policy Manager, Gas Transmission, National Grid</li><li>• Dr Angela Needle, Director of Strategy, Cadent</li><li>• Devrim Celal, CEO of KrakenFlex and Lead for Hydrogen, Thames Estuary Growth Board</li></ul>
<b>Theme</b> <b>Background information</b>	<p>This session looked at last years' Hydrogen Strategy, the progress the Government and industry have made since its release, the upgrading of its ambitions made in the Energy Security Strategy, and where we need to go next to realise our ambitions and aims for the hydrogen economy.</p> <p>The session also looked at whether industry is feeling backed and supported in delivering hydrogen production.</p>

**Jacob Young MP** opened the meeting as a retrospective look at the Hydrogen Strategy One year on. He outlined the projects currently taking place in his Redcar constituency to do with Hydrogen and noted the critical role hydrogen will play in decarbonising the economy. He then handed over to **Dr Angela Needle, Director of Strategy, Cadent**.

Dr Needle opened the discussion, outlining the challenges for the sector and the critical question of how we can adapt the existing gas network we currently have for a hydrogen economy, with the aim of reusing as much of the existing infrastructure as possible. She said that the Hydrogen Strategy had a profound impact on industry, but she called for fewer Government-run competitions and instead more collaboration between Government and the sector. Hydrogen companies are driving a new economy, upskilling people and creating jobs, and it is important that they have a more collaborative relationship with Government than currently exists. On Cadent's needs, she said that Cadent need a transmission storage model that transfers hydrogen to users in the same way as methane. To scale up hydrogen, we need new markets linked together by infrastructure, and we need early investment and building to start now in order to be ready for ten years' time.

Mr Young thanked Dr Needle and handed over to **Jake Tudge, Associate Director, Energy & Mobility Deal Strategy, KPMG**.

Mr Tudge thanked Jacob and ran through KPMG's work on hydrogen, noting that they advise clients across the entire value chain. He said it was important to reflect on how far we have come in a year, including the creation of the hydrogen villages and the East Coast partnership. We are going into a new world, a new era for hydrogen as we leave covid behind and enter a cost of living crisis. He said that gas is the 'hidden hero' of the energy sector, that we must look to decarbonise this and hydrogen is the best option. He said there are three key points to this.

- Finance and international investment – there is a lot of enthusiasm for hydrogen internationally. This means we must have the market and infrastructure in place to make the most of this. An example of a quick win is the blending of hydrogen with the existing gas network, as a number of heating appliance manufacturers are already trialling.
- Upscaling targets – He said it was good to see the Government upgrading its hydrogen production targets in the Energy Security Strategy to 10GW by 2030, but added that we need to further scale this up dramatically to 160GW. He further added that we are in a privatised world and must coordinate across both the private and public sector to meet these challenges.
- Delivery - What are the end-use applications, but how do we choose the best one? Where can we convert and put that demand early on?

Mr Young thanked Mr Tudge and handed over to **Dr William Mezzullo, Head of Hydrogen at Centrica.**

Dr Mezzullo thanked Mr Young and discussed the importance of hydrogen storage and the future for gas. He said it has been a good year for hydrogen, and it will play a key role in decarbonising the economy. If we are targeting 160GW we need to get the cost as low as possible. He said he was pleased to see BEIS's support for greening gas and anaerobic digestion, and added that Centrica currently has short and long-duration storage facilities, with the intention to convert these to hydrogen. He said we need a solution around long term energy storage. Batteries are fine, but long term, we need solutions that will get energy to end users. He called for the Hydrogen business model for transport to be brought forward, and said industry needs certainty from next year to start planning these projects.

He added that there is no one solution to decarbonising heat. We need a mix, and the forthcoming village trials are a good example of this. He said the consumer is still concerned about the cost though, so we must drive innovation to ensure we have the cheapest marketable product. He concluded by noting that one of the biggest risks is around demand for hydrogen, adding that blending is not just about putting hydrogen into the grid, but de-risking the sector and driving down investment costs.

Mr Young thanked Dr Mezzullo and handed over to **Jinmi Macaulay, Public Affairs and Policy Manager for Gas Transmission at National Grid.**

Mr Macaulay said that National Grid are looking for market creation and de-risking of hydrogen. Their Project Union is looking to create a hydrogen backbone for the UK by repurposing existing infrastructure. He said there is huge export potential to export hydrogen to Europe, just as we are currently export record levels of gas through the integrated transmission network. He added that projects are currently on the go and construction continues with the intention to start testing blending next year.

On the Hydrogen Strategy, he called for a regulatory framework for hydrogen to build feasibility and give projects more structure. On the transport and storage business model, he said that from next year National Grid will start planning its business model from 2026, so announcements from BEIS on this must be brought forward to allow suppliers to plan for the future.

Mr Young thanked Mr Macaulay and handed over to **Devrim Celal, CEO of KrakenFlex and Lead for Hydrogen, Thames Estuary Growth Board.**

Mr Celal outlined the importance of the TEGB area for hydrogen development, noting that they are however the cluster with the highest carbon footprint. Work therefore needs to be done to decarbonise and improve the lives of those who live there. He said that hydrogen investment started in the area about a year ago. TEGB initially devised a strategy engaging multiple stakeholders, including global investors and most sovereign wealth funds. They have identified several clusters which will allow the creation of 15,000 new jobs and £2.2bn of investment to the regions, as well as reducing carbon outputs by the equivalent of 100,000 internal combustion engines.

He noted hydrogen's potential for the transport sector, noting that to decarbonise maritime travel there will be key regulatory changes, which will involve extensive engagement with port authorities and industry stakeholders. He mentioned TEGB's work on the Hydrogen Living Lab, which is bringing together businesses to help them create changes and innovation in living labs at a local scale, which is currently on a roadshow.

Mr Young thanked Mr Celal and opened the session up to questions from the audience.

### **Questions**

*Regarding the pricing of hydrogen, how we produce it sustainably and affordably? Is blue hydrogen actually economically viable or should we go straight to green like Germany?*

Dr Mezzullo replied that the principle of economies of scale should kick in for hydrogen. He said the Government should allow the market to promote efficiency, but praised the Low Carbon Hydrogen Standard to allow consumers to understand the emissions involved. He said there may be some areas where hydrogen is more affordable than others, and we need to embrace and understand this. BEIS have said hydrogen must be home grown, but this will pose efficiency challenges and may not be the most cost effective options. Mr Tudge said the scale and access to market are the main challenges, as well as how we measure and monitor the low carbon standard going forward.

*How has the situation in Ukraine changed the dynamic regarding hydrogen?*

Dr Needle said the costs of energy and key components has increased, which has brought energy resilience to the top of the agenda, and has shifted the dial from climate change to resilience, reliability and energy independence, as well as the cost of living. This has benefited hydrogen enormously as production targets have been doubled. More work needs to be done to understand the role of hydrogen in this.

**Graham Stuart MP** asked if BEIS is giving sufficient support and attention to investment in hydrogen, and how we reduce the cost of hydrogen.

Mr Macaulay stated that BEIS has been engaging with them, saying they are open to conversations and demonstrations of how hydrogen can work for the future, but that we still need more speed behind the process.

Mr Tudge said it was encouraging to see international interest in hydrogen investment in the UK. We need a business model or certainty that provides a 10-15 year outlook to retain those investors. We must also attract the necessary skills or retain them in the UK. Mr Celal added that funding early-stage ideas in the living labs in the regions is a promising initiative to try and reduce costs and scale up. Dr Needle said that competition is always about the cheapest, but actually we need to look beyond cheapest wins and have a bit of bravery to make big investments and win in the long run.

### *Where should mass hydrogen rollout start in the UK?*

The panellists agreed that a promising area for mass hydrogen rollout to begin would be transport. BEIS don't have the sole mandate around hydrogen, and we need to see collaboration with the DfT, as we have seen in Germany. Transport is a low hanging fruit. Next easiest wins are the industrial players, corporates are looking to decarbonise and hydrogen should be playing a role there. Mr Tudge said that hydrogen should also be looked at in the context of power production to fill the upcoming power gap. We have the turbines already. Heating is also an option, but solutions to this will likely be local.

The Government can't do everything, and at some point the private sector has to step in when the Government can't underwrite. Mr Celal said that all his projects are privately funded, but that they need support from the Government for fuelling stations and linking up to the rest of the grid. Some of the subsidies from hydrogen are aimed at larger projects, but Government needs to look at making it more attractive for smaller producers and investors as well.

Energy Minister Greg Hands then appeared via a pre-prepared message via video link, running through the Government's key initiatives on hydrogen and complementing the APPG's work.

Mr Young then asked the panellists for closing messages and key asks for Government.

Dr Mezzullo said that industry needs to understand whether the subsidies from Government will be increased as we need stimulation for investment.

Mr Celal said that we need to look at hydrogen as a holistic part of the modern economy.

Mr Macaulay said we need a hydrogen regulatory framework.

Dr Needle called for a business model that supports storage,

Mr Tudge called for the Government to pursue quick wins, with a business model that doesn't let perfection get in the way.

Mr Young thanked panellists and attendees and ended the session.