



## All Party Parliamentary Group on Hydrogen, Non-Verbatim Minutes – Global Export Opportunities for the UK Hydrogen Industry

**DATE:** Tuesday 26 January 2021

**TIME:** 11:00-12:00

**METHOD:** Zoom Meeting

**CHAIR:** Jacob Young MP for Redcar and Chair of the APPG on Hydrogen

**SPEAKERS:** Graham Stuart MP, Minister for Exports, Department for International Trade  
Rodney Berkeley, Director of Energy and Infrastructure, Department for International Trade  
Angus Brendan MacNeil MP, Chair of the International Trade Committee  
Melanie Taylor, Head of Stakeholder Relations, Northern Gas Networks  
Dan Sadler, UK Low Carbon Strategy Director, Equinor

### MINUTES

#### Jacob Young, MP for Redcar and Chair of the APPG on Hydrogen

Jacob Young welcomed parliamentarians and wider stakeholders and outlined that this meeting will focus on how the Department for International Trade can work with the UK hydrogen industry to promote UK hydrogen technology across the world. He also noted the work of the APPG on Hydrogen over the last year under his leadership, specifically the Group's inquiry and [report](#) into how the UK's hydrogen sector can help support the UK's economic recovery. He stated that in this specific moment the Hydrogen APPG has never been more important as we think about COP26 in November as well as the prominence of hydrogen in the Prime Minister's Ten Point Plan. He then introduced the first speaker Graham Stuart MP, Minister for Exports at the Department for International Trade.

#### Graham Stuart MP, Minister for Exports, Department for International Trade

Graham Stuart said that Britain has helped lead the charge in harnessing power in the past and present, with the world's first hydrogen fuel cells, to generating green hydrogen using offshore wind, and creating plans for hydrogen ammonia powered aircraft. He noted that with the global economy moving through a recovery stage of building back better and greener, that low carbon energy solutions are key to sustainable growth and that innovation will be critical to keeping UK renewables ahead of the curve.

The Minister noted British businesses who have exporting success with hydrogen such as companies like ITM Power, who provide electrolysers, with the world's largest hydrogen process plant in Germany and Ceres, who export fuel cell designs to engineering and manufacturing firms. He said that there is potential for far more export growth which the Department are determined to unlock, referencing that the International Hydrogen Council [predicted](#) that the global hydrogen market could be worth as much as \$2.5 trillion dollars by 2050.

He stated that the UK is perfectly placed to brace the increasing demand for exporting UK hydrogen products as it was the world's first major economy to legislate for Net Zero by 2050. He said the Government is working to foster the development of hydrogen and other clean growth industries as we move towards Net Zero by 2050. He added that the Government are working with the industry to invest up to £500 million pounds in low carbon hydrogen generation over the next



decade, with the aim of building five gigawatts of production capacity through both green and blue hydrogen projects. He said this will create thousands of jobs, spurring growth and spreading prosperity across the UK.

He said this year the Government will bring forward details of its UK Hydrogen Strategy as they seek to stimulate private investment in new hydrogen production facilities across the UK, driving growth and fuelling greater innovation. He noted that the Department for International Trade work closely with the Department of Business, Energy and Industrial Strategy (BEIS) to consider how hydrogen can be used to boost UK export potential. In this process, both departments map the UK hydrogen supply chain to identify areas of competitive advantage so that British firms can build upon this as they expand their global trading operations.

He stated that the Department for International Trade look for gaps so that foreign direct investment teams can help target and attract foreign buyers and add to the supply chain. He said the Department has created a dedicated team to promote trade and investment in the hydrogen industry and train overseas network of trade adviser based in key markets worldwide to identify hydrogen export opportunities for British businesses. He said that the Department has also led virtual trade missions, conveyed its leadership on renewable energy in the foreign press, and supported British businesses through the UK Export Finance.

He said that after COVID-19 and in a post-Brexit world, the UK has to build on its recent global exporting successes and build global trade, particularly with the fastest growing parts of the world. As part of this new dynamic, he said that the Department are agreeing trade deals with countries worldwide which are opening up fresh opportunities for exports and investments across the UK's renewable energy sector.

He drew to a close by saying that growing Britain's clean energy sector will be critical to its economic vitality in the years ahead and in creating jobs and that the UK's hydrogen technology and innovators are central to this endeavour. He said the Government must ensure these businesses have the tools and support they need to thrive so that they can drive change and build export led growth which will keep the UK at the forefront of the clean energy revolution benefitting the entire world for generations to come.

### **Rodney Berkeley, Director of Energy and Infrastructure, Department for International Trade**

Rodney Berkeley outlined his role as Director of Energy and Infrastructure at the Department for International Trade by leading a team which drives the Government's trade and investment strategy in low carbon projects. This includes working closely with colleagues overseas in embassies and consulates to promote what UK companies do and to promote commercial opportunities in international markets.

He stated that commercial insights play an important role in policy development and that it was crucial for his team to understand the needs of hydrogen businesses. He referenced a [report](#) published by Bloomberg in May 2020, which estimated that the world's current hydrogen project pipeline is worth around £90 billion dollars. He said that gives the Department a target to be ambitious about and a market to want to engage with. He added that it gives his team a pipeline of opportunities to work with businesses to remove barriers and make international connections.

Rodney underlined the huge potential of the hydrogen industry in the UK to export products to meet increasing global demand. He stated that the Government will need the right policy and regulatory framework to achieve this. This is why the Department has expanded its hydrogen team to support growth in blue and green hydrogen production, fuel cell deployment, heating and hydrogen power. He noted that countries across the world are setting ambitious hydrogen production targets and



hydrogen investment programmes. In this global market, he said that the UK is in an excellent position to build a globally competitive hydrogen sector, noting the UK's offshore wind capacity to provide power for the production of green hydrogen. He noted that companies in the UK are prioritising exports to hydrogen markets in countries that have published hydrogen strategies on the basis that government support is essential due to the cost of hydrogen against intensive fuels such as natural gas.

He outlined that the Department want to engage with BEIS to ensure that whatever industry is created in the UK has exporting capability across the globe. He added that the Department offers a range of investor support for businesses in the UK, including the recently launched Office for Investment. He concluded that the Department in the near term are working to identify and articulate investment opportunities that already exist internationally and look to expand on this once the UK's Hydrogen Strategy is published.

### **Angus Brendan MacNeil MP, Chair of the International Trade Committee**

Angus Brendan MacNeil outlined the fresh potential for hydrogen to be exported worldwide and that despite not being an expert in the area, his role was to engage, listen and learn. He said that the International Trade Committee has not looked at hydrogen exports specifically but that this session and the theme will inform staff and members of the Committee.

He stated that the UK has good potential to increase hydrogen production in the UK but that rules which stop, for example the development of wind turbines, restrict this growth. He noted that there is a growing consensus across the political spectrum to invest more both in the UK and abroad which is welcome. He said that the role of the Committee can be to look into what the UK can do in the long term to help hydrogen grow.

### **Question and Answer Session**

As Graham Stuart had to leave halfway through the session, the Chair then welcomed questions for the Minister.

The Minister firstly referenced the APPG on Hydrogen's [report](#) and its "excellent recommendations", highlighting one which called on the Government and industry to deliver funding models to create investment and jobs directly to the UK. He said he invites businesses as part of the UK's Hydrogen Strategy to look at this recommendation in more detail. He noted that getting the framework for exporting hydrogen products right and unlocking private investment is crucial.

The Minister also responded to questions in the chat function on whether there will be an open consultation for the UK Hydrogen Strategy. He said that there may be a consultation after the strategy is published but stated that engagements such as this session and others also feed into the policy process between industry and the Government. He said that the "door is very much open" to businesses and that the Government want to hear solutions.

**Lord Oates, Vice Chair of the Hydrogen APPG and Liberal Democrat Peer**, asked the Minister if the Department has considered using mechanisms like Contracts for Difference to help drive production efficiency costs in green hydrogen production.

**Andrew Selous (Con, South West Bedfordshire)** said it would be helpful if the Department for International Trade could flag to parliamentarians British companies within the hydrogen space who have the potential to export globally.



The Minister said that on Contracts for Difference's to help drive green hydrogen production, the Department are looking at this but that no decision has been made about the right model. The Minister welcomed Andrew's question and said that this was a question he himself posed to his team in the Department. He referenced companies such as ITM Power and Ceres but said that he could ask his official to create a list of hydrogen companies in the UK. This question he said created a challenge for hydrogen businesses in the UK to grow and become more recognised in the UK and worldwide.

The Minister then left the meeting and apologised that he could not stay for the whole session but noted that officials were still in the meeting.

### **Melanie Taylor, Head of Stakeholder Relations, Northern Gas Networks**

Melanie Taylor outlined that for the past five years, Northern Gas Networks has been pioneering research into the potential for converting the gas network to hydrogen. She said that the H21 programme is world leading and put hydrogen and the UK on the global Net Zero map. She stated the reason for this was that NGN was offering a solution that countries worldwide were dealing with in decarbonising heat, industry and heavy transport.

She said that since the publication of the first H21 report, NGN has hosted delegations from every continent. She noted that NGN have worked collaboratively with the Department of Business, Energy and Industrial Strategy and partner guest networks, Cadent, Wales and West Utilities and SGN. She said that network infrastructure in the UK as a whole has caught the eye of global investors and businesses.

Melanie stated that NGN are on the eve of a key milestone in the H21 programme and will soon publish the results of the first phase of the safety research. She also said that engineers are preparing live trials of hydrogen in the gas network. These trials she noted will pave the way for trialling 100% hydrogen conversion in customer homes in the early 2020s. She referenced that this was ultimately the ambition behind the Government's Ten Point Plan for hydrogen villages and towns.

She highlighted that SGN in partnership with Cadent are also leading trials of blending up to 20% hydrogen in almost 700 homes in Gateshead, following a successful trial at Keele University. Melanie stated that it is through a combination of these programmes as well as the strides that have been made in government policy recently, that NGN are now starting to see a surge in global businesses contacting them with an interest in hydrogen production and seeking to understand more about what those investment opportunities might be.

Melanie warned that whilst the UK is currently viewed as a front runner for hydrogen investment, other countries are catching up, and companies are looking more broadly at what other countries across Europe and across the world are doing. She said the UK has an opportunity to create the conditions to become a cluster for hydrogen in the world, but that they are in a global race to succeed among other countries in this area.

She stated that there are three things that a partnership between the Government and businesses should focus on to make the most out of the international hydrogen economy. Firstly, the UK must become the first country to have hydrogen bonds at scale. This requires a combination of efforts from the gas networks and the Government and broader industry. For gas networks, it requires them to complete research and engage with regulatory changes that will allow for hydrogen piping at scale, and for the Government and wider industry, it is about establishing the right mechanisms for investment in hydrogen production.



Secondly, Melanie said that the UK should continue work in becoming the first country to convert the gas networks to 100% hydrogen. She said that this does not require a long wait and that there are things currently that the Government can do as part of this process. For instance, in delivering hydrogen villages and towns, she said the Government can choose to locate these in areas that have existing innovation clusters, so that the pilots themselves can become testing areas for businesses that are developing new hydrogen products.

Thirdly, on action to maximise the potential for trade and investment, she said the UK needs to utilise regional hydrogen assets and nurture innovation and production. She referenced, for example, Teesside University securing funding for the Tees Valley Hydrogen Innovation Project. She said that the emphasis on existing regional hydrogen assets should be on growth and a focus on trade opportunities.

### **Dan Sadler, UK Low Carbon Strategy Director, Equinor**

Dan Sadler introduced his role at Equinor and highlighted that he also chairs the Hydrogen Advisory Council's new sector development workgroup, which will feed directly into the UK's Hydrogen Strategy. He outlined that this group specifically focuses on stimulating the UK supply chain and maximising the jobs potential in new low carbon markets. He stated that Equinor are a significant investor in the UK and that they are the only commercial Carbon Capture, Usage and Storage (CCUS) operators in Europe. He added that Equinor have a corporate ambition to reach net zero emissions by 2050, aligning themselves with the Government's target on this.

He stated that Equinor have extensive experience from a blue and green hydrogen perspective and highlighted that both types of hydrogen are needed to scale up the hydrogen market in terms of practicality regarding delivery and time. He noted that Equinor are focused on the Zero Carbon Humber industrial cluster and submitted a proposal to develop a hydrogen transmission system and a CCUS system in the cluster. He said the projects undertaken by Equinor there links to the Northern Endurance Partnership, which is a partnership to develop offshore carbon emissions in transport and storage infrastructure in the North Sea, supplying the Net Zero Teesside and Zero Carbon Humber clusters.

Dan said it was sensible for Equinor to launch their hydrogen projects in the industrial clusters to decarbonise industries which are difficult to decarbonise as well as grow public confidence and grow the supply chain. Dan highlighted that the hydrogen supply chain is vast, from production of electrolyzers, the transmission and storage systems and the end use, whether this is for heat, transport, ammonia, or industry. He said that the UK must make use of the first mover advantage in hydrogen technology and discover what the unique selling points are for the UK in established markets. He referenced low carbon ammonia for use as a vector to transfer hydrogen and export this to countries across the world. He added that the UK needs to look at emerging market opportunities for domestic heat with the growing development of hydrogen appliances, burners, and fuel cells.

### **Question and Answer Session**

**Michael Brown, Lead Analyst at Hydrogen East** wanted to understand more about the hydrogen projects in Gateshead and what in particular was existing to make trials viable. He also asked where we might expect the export potential of hydrogen to come from in the UK.

**Melanie Taylor** said that on HyDeploy the reason for the Gateshead location was that it is an area that has a mix of different material types on the pipes so is a good example of what the network



looks like nationally. She added that the project also received strong support from local government residents.

**Dan Sadler** said there is a question on whether the UK should be exporting hydrogen products or exporting hydrogen technologies and said that the UK should be doing both. In terms of hydrogen products, he said this is a unique selling point for countries that have the infrastructure to develop green products. In terms of locating export potential, he said that this is an area where businesses need to look at what markets need to be developed, for instance hydrogen appliances cannot be exported currently as other countries are not converting to hydrogen in their domestic gas network but may do so in the future.

**Lord Young, Labour Peer** said we need to look at the demographics of people in training and skills in the hydrogen industry so that the next generation of hydrogen engineers and scientists in the UK will not be held back.

**Rodney Berkeley** said this was a good point and that skills is an area that the Department for Business, Energy and Industrial Strategy are considering. He said that the Government are looking to be more proactive than reactive on this issue and look at how skills can be driven into the industry.

The Chair, Jacob Young then closed the session and noted that the questions and ongoing discussion in the chat function will be widely shared as more questions could not be answered due to the time restraints of the meeting. He thanked the Minister and other speakers for contributing to the session and stated that it was great to have so many attendees at the meeting in what was a very informative session.