

APPG ON HYDROGEN MEETING MINUTES - ENERGY, SECURITY & NET-ZERO



All Party Parliamentary Group on
Hydrogen

Date	Tuesday 29 th October
Time	15:00pm – 16:00pm
Venue	Room R, Portcullis House
Chair	Dr Jeevun Sandher , MP for Loughborough and Chair of the APPG on Hydrogen
Parliamentary Panel	<ul style="list-style-type: none">• James Naish, MP for Rushcliffe• Kit Malthouse, MP for North West Hampshire• Henry Tufnell, MP for Mid and South Pembrokeshire• Lord Michael Naseby, House of Lords• Lord Cameron of Dillington, House of Lords• Baroness Gloria Hooper, House of Lords
Speakers	<ul style="list-style-type: none">• Dr Angela Needle, Director of Strategy, Cadent• Helen Sanders, Head of Corporate Affairs and Sustainability, SSE• Celia Greaves, CEO of Hydrogen Energy Association• Mike Gaskill, Head of External Affairs, OEUK.

Jeevun Sandher MP opened the session and asked the external witness panel to introduce themselves and initial insights on hydrogen's role on the path to net zero within the Department for Energy Security and Net Zero.

Dr Angela Needle, Director of Strategy at Cadent, touched on Cadent's gas distribution network, which has approximately 50% of the UK's gas going through its pipes and has 11 million customers. Cadent is focussed on helping customers use less gas. Cadent is looking at digital technology to reduce leaks. Dr Needle outlined that the industry is looking at ways that it can reduce emissions while also boosting so-called green gases, which include hydrogen.

Dr Needle noted that gas infrastructure in the UK is world class, and it works in tandem with electricity. Dr Needle then moved to argue that it was untrue that the whole gas network would need to be replaced to distribute hydrogen. The relevant infrastructure already exists; in sizeable quantities, adding that Cadent alone has 155,000 kilometres. Dr Needle also pointed to studies that suggested if hydrogen was to be used in the 2050 net-zero targets, the UK would get there by spending less.

The UK has a wealth of advantages—technical capacity, expertise and infrastructure—but that industry needed clarity in policy. The 2030 hydrogen capacity target is quite soon, and Dr Needle argued that there needed to be more explicit clarity to entice investors. The regulatory

clarity is needed, as Cadent has been looking to build its HyNet consortia project for quite some time.

Helen Sanders, Head of Corporate Affairs at Sustainability at SSE Thermal, outlined that her part of the company owns the SSE's existing gas-fired portfolio and operates specialist gas storage assets and salt cabins on the East Coast. SSE had an ambition to decarbonise its existing assets to provide flexible, low carbon power backup. The significant investment that it is making into renewables and in electricity transmission networks to make sure that customers can be using renewable electricity, while also providing a crucial level of flexibility.

Ms Sanders also pointed to SSE Thermal's actions in decarbonising its fleet across the UK and Ireland, such as through carbon capture and storage and low carbon hydrogen. Ms Sanders spoke of the work the company was doing in investing across the whole value chain, due to there being a need for hydrogen power stations to access the fuel in a secure way.

SSE is also looking to deliver the first hydrogen value chain by 2028, and that it is also looking at large-scale hydrogen projects, highlighting the electrolytic hydrogen production projects that are being mooted for development. Other projects, such as 900 megawatts hydrogen power stations, are also being considered.

These would naturally have a large amount of storage and production capacity- but Ms Sanders caveated this by suggesting more regulatory flexibility would be needed for these projects to fit in well with existing domestic energy infrastructure.

Celia Greaves introduced herself and the work of HEA, before outlining the need for long-term certainty on a national hydrogen strategy and argued that more incentives and obligations were needed across the entire value chain. Despite the UK having good foundations in the production and storage of hydrogen, the users of hydrogen are still struggling. Ms Greaves highlighted the need for the Government and investors to have a greater risk appetite, especially because delivering price parity is dependent upon large-scale adjustments and long-term contracts.

Sharing the risk, then, is important, with more flexible approaches allowing for more investment to flow—as opposed to the more common-place bilateral contracts.

Mike Gaskill introduced the work of Offshore Energies UK (OEUK) in representing much of the integrated offshore sector in the North Sea. The UK needs to be competitive, and that moving gas at scale could only be assured if the people and skills were readily available.

Additionally, he spoke of the need for there to be a multifaceted approach to move away from the North Sea and spoke of OEUK's expertise in working with investors and industry in order to deliver long-term credit and investment to help aid the transition. He added that hydrogen presented the energy industry with an exciting opportunity—as long as it was used as part of a wider integrated approach.

Jeevun Sahnder MP proceeded to open up the panel to questions.

Lord Cameron of Dillington proceeded to raise the point of hydrogen being used for home heating and the public perception of this. He mentioned a Financial Times article on investors no longer turning to hydrogen in Europe.

Dr Angela Needle discussed the work that Cadent was doing on implementing hydrogen for home heating and stressed the fact that by 2050, 20% of all energy needs to be produced using hydrogen. The negativity and opposition to hydrogen is unfounded. Dr Needle also spoke about hydrogen's use in providing energy for places that are hard to electrify; underlining that the so-called hydrogen heat fallacy was a “red herring”.

Gas networks have demonstrated that you can put hydrogen in the network and have made boilers that are safe and efficient to use inside the home. The need for hydrogen to be made more affordable for wider consumer uptake, and that this was vital in ensuring its integration into a wider energy network.

Helen Sanders explained that there are multiple ways to heat homes. Ms Sanders appreciated the progress of the Department for Energy Security and Net Zero (DESNZ) has made recently but stated that not enough work was being done to boost demand. Ms Sanders also spoke of the need to demonstrate hydrogen's use across the supply chain.

Celia Greaves noted that more positive messaging was required if hydrogen was to overcome perceptive issues surrounding boilers and uptake of hydrogen. This should be spread across the value chain, and integrate transport, fleet operators and industrial users to push a positive case.

Lord Cameron interjected and spoke of the requirement of investment.

Dr Angela Needle suggested that companies are looking for more clarity from government on the rules of investment around hydrogen production and adoption, and that there needs to be more clarity from Government and arms-length regulators. Cadent has 120 pipeline projects ready to be rolled out, but business models cannot adapt if the rules are not clear.

Helen Sanders added that SSE needed a "policy-trigger" model for investment, arguing that with targets being pushed out, shorter to medium term certainty was required for the requisite level of investment to be reached.

James Naish MP asked whether it was DESNZ that pushed these dates back, or whether something else had triggered it.

Dr Angela Needle suggested that the Treasury may have funds allocated for hydrogen which influences their overall strategy but ultimately suggested that it had come from DESNZ. Dr Needle suggested that certainty was paramount, if not investors would turn to Germany's growing hydrogen industry.

Helen Sanders also highlighted a lack clarity from DESNZ and suggested that previous allocation rounds had been good when rolled out within a manageable period. Ms Sanders also pointed to the general election as being a reason for a lack of clarity. The Government needs to strike a balance between setting up a programme that was either rolled out too early or late, as both would incur costs for industry.

Lord Naseby raised GB Energy and argued that the new government is hesitant to adopt hydrogen further. He was critical of the government ending hydrogen village trials and requested further information from the panellists as to how the government should approach hydrogen. He also suggested that communication between gas networks and hydrogen-related organisations and parliamentarians had to improve.

All panellists agreed that they would seek to work closely with Parliamentarians ahead of GB Energy's passing into the House of Lords.

Dr Angela Needle outlined the work Cadent was already doing vis-a-vis interaction with the House of Lords but was happy to supply Lord Naseby with a (a) short-hand and (b) detailed breakdown of key hydrogen asks.

Baroness Hooper asked who the competitors with regards to hydrogen on an international scale. Baroness Hooper also asked how much hydrogen the UK is producing; how much it has the future capacity to produce and how much is imported.

Helen Sanders stated that Germany is leading hydrogen production, particularly given its detailed positioning on hydrogen-ready power stations. Ms Sanders also pointed to the German Government's openness to this would speed up the transition and provide a more efficient uptake of clean energy. A lack of efficiency in Britain's energy system is particularly problematic; there is a lack of electricity capacity, particularly in meeting 2030 targets.

Celia Greaves added that Germany, the Netherlands and the US are the UK's competitors on hydrogen adoption. Ms Greaves suggested, however, that the US' uptake is not as simple as it apparently appears. Germany is particularly strong at use targets.

Dr Angela Needle stressed that if the UK does not stay ahead in its integration of hydrogen for widescale use, the UK would lose skills and workforce to its international counterparts. Other countries may have had more headline-worthy announcements, and that the UK had up until this point had been more substantive in its strategy. Dr Needle is, however, concerned that the UK's competitive edge would blunt if implementation was not sufficiently addressed.

Mike Gaskill added that the supply chain is exposed to competitive pressures overseas. If the UK does not offer sufficiently competitive leases to hydrogen vessels operators—which are crucial to the global transportation of hydrogen—then the country will lose out. He suggested that skilled workers would move abroad if the UK did not have the material capacity to onshore production at home, with talented workers more likely to leave if other countries asserted control on elements of the supply chain.

GB Energy is a positive sign that the UK will want to invest more strategically, but he highlighted that any quangos and new agencies should not do the same thing but work collaboratively to channel time and investment into different parts of the energy supply chain.

Kit Malthouse MP discussed INEOS' work on developing a hydrogen car and, in effect, looking for subsidy. He contrasted that to Tesla, and how it achieved mass adoption from an initial government subsidy, with the principle being that the government helped play a part in allowing a private enterprise to develop a product, permitting it to then market the technology to consumers, who then demanded more of it. He emphasised that hydrogen adoption needs to be in the hands of consumers to boost demand. He argued that behavioural change would (a) incentivise companies to take more risky investments and (b) allow the Government to hit its targets without being a regulatory burden.

James Naish MP added that the UK seemed to lack a risk appetite. He spoke of the contrast with the behaviour of US companies, which are heavily investing in new technologies, and the apparent lack of risky investment here.

Kit Malthouse MP suggested that, in following his automotive industry metaphor, that despite car manufacturers having a clear baselined regulatory framework for new propulsion cars, their products do not sell well. He spoke of the issues Toyota had with stimulating demand for its Mirai car; it is therefore a question of marketizing hydrogen better and for private companies to go and invest in new hydrogen-based facilities themselves.

Dr Angela Needle and Celia Greeves highlighted the investment both their companies were already committing, with Dr Needle referring to the work she was doing with industrial clusters

that simply cannot electrify (bricks, glass, ceramics and steel). By working on this basis, they could demystify hydrogen's use, but that they require a more joined-up regulatory approach.

James Naish MP agreed, suggesting that he was having conversations with industry on how better to align regulation with investors' appetite.

Jeevun Sandher MP concluded the meeting and thanked the panellists and Parliamentarians for their participation.