

ANNUAL GENERAL MEETING AND MEETING TO DISCUSS HYDROGEN AND TRANSPORT – MEETING MINUTES



All Party Parliamentary Group on
Hydrogen

Date	Monday 27 th March
Time	16:00-17:00
Venue	Macmillan Room, Portcullis House
Chair	Alexander Stafford MP, Chairman of the APPG on Hydrogen
AGM Attendees	<ul style="list-style-type: none">• Jacob Young MP• Lord Cameron• Paul Beresford MP• Mike Amesbury MP• Lord Wigley• Nia Griffith MP• Richard Graham MP• Peter Gibson MP
Event Speakers	<ul style="list-style-type: none">• Clare Jackson, CEO, Hydrogen UK• Srikanth Padmanabhan, President of the Engine Business, Cummins Inc• Simon Godwin, Delegate for European Government Affairs, BorgWarner Inc
Theme/ Background information	<p>The AGM served as an opportunity to elect a Chair, Vice Chairs and Officers for the APPG, and to ask approval for the APPG's Income and Expenditure Statement for the reporting year 2022-23.</p> <p>The session then looked at the actions that need to be taken to roll out hydrogen across the transport sector for both public and private consumers, its advantages over other forms of 'clean' transport and the next steps for its rollout.</p>

The session began with the APPG's Annual General Meeting.

Alexander Stafford MP nominated himself to continue as Chairman of the APPG on Hydrogen. **Jacob Young MP** seconded the nomination. This was approved by attendees unanimously.

Led by **Alexander Stafford MP**, following a unanimous vote, the following officers were re-appointed:

- Bill Esterson MP (Vice Chair)
- Richard Thomson MP (Vice Chair)
- Christine Jardine MP (Vice Chair)

- Lord Wigley (Vice Chair)
- Liz Savile-Roberts MP (Officer)
- John Spellar MP (Officer)
- David Duguid MP (Officer)
- Ed Davey MP (Officer)
- Andy Carter MP (Officer)
- Clive Betts MP (Officer)
- Sir Roger Gale MP (Officer)
- Jessica Morden MP (Officer)
- Baroness Hooper (Officer)
- Lord Moynihan (Officer)
- Lord McNicol (Officer)

Following a unanimous vote, **Claudia Webbe MP** was appointed as a new Officer of the APPG on Hydrogen in absentia.

Following a unanimous vote, the income and expenditure statement, alongside the renewal of the secretariat, provided by Connect Public Affairs, was approved.

External attendees were then invited to enter the room to begin the session on Hydrogen and Transport.

Alexander Stafford MP formally opened the meeting and announced that he had been re-elected as Chairman of the APPG on Hydrogen for 2023/24. He spoke of important innovation taking place in the transport industry and said that he was excited to hear from the panel to elaborate on this in more detail. He then passed on to **Clare Jackson, CEO of Hydrogen UK**.

Claire Jackson apologised for not being able to come via her hydrogen car, but noted that the range of her vehicle could go from Birmingham to London and back. She introduced the work of Hydrogen UK and welcomed the fact that whilst hydrogen is not the silver bullet, it has a critical role to play, especially in the UK; FirstHydrogen are developing hydrogen vans, ZeroAvia are developing hydrogen airplane solutions. What is critical is that we capitalise on UK strengths so that we can grow this important area.

Hydrogen UK have benchmarked how the UK is doing in certain areas in comparison to other countries and found that we have a lot of catching up to do. Japan has 170 refuelling stations, France has 50 and the UK has 6. Nobody will want to bring vehicles to the UK without an appropriate fuelling network. We've made a good start but we have an awfully long way to go. Hydrogen requires a cross departmental hydrogen strategy – but we are yet to commit to national and regional targets. HydrogenUK's recommendation would be to establish a regional network of 200 refuelling station by 2050, to help with infrastructure deployment. We need infrastructure and HGV help deployed at the same time, but we are not seeing any of this action in the UK. We also need to see a rise in demand aggregate areas. We see that in Tees Valley with the hydrogen valley, so we need to replicate that across the UK and not just experimental regions. South Korea and China are establishing great scaling up policies – but the government ought to ask itself how we can be learning from them.

One of the positive things that came out of this study was the UK's investment in hydrogen buses – we should take heart from that. There are some countries that have really developed policy on road vehicles, but a lack of policy in other forms of transport. That is an area where the UK can be a leader – we have a great off-highway sector in the UK. We need to invest in R&D there. From HS2 to jet zero, we have an opportunity to show hydrogen on a mass scale. There is a huge opportunity here to get this right.

Alexander Stafford MP thanked Clare Jackson and introduced **Srikanth Padmanabhan, President of the Engine Business, Cummins Inc.**

Srikanth Padmanabhan introduced himself and the work of Cummins, the largest independent manufacturing company in the production space. They have a big presence in the UK, with big operations in Darlington, Cardiff and Huddersfield, as well as other locations.

Climate change is the big challenge of today. Decarbonisation is a growth opportunity for the transportation industry. The commercialisation of the vehicle industry is a moon-shot opportunity—there are so many opportunities that present themselves across the sector, so why are we not making the most of them? In passenger cars, the total cost, initial cost, sale cost and re-sale cost all matter. In the commercial space, you need to draw efficiencies somewhere if these vehicles are going to be profitable. Without profit incentive, we cannot rely on the market to decarbonise the sector. The Government needs to use low-carbon fuels if it is to reach net-zero, but the Government also needs to invest in the industry to make these innovations profitable and desirable.

Zero carbon fuels are also a necessity – the problem with battery powered cars is that the sale cost is not viable for all, nor is the re-sale value. Access for customers is very low, with very few being able to afford EVs. Hydrogen as a zero carbon fuel has so much more potential in the next 20-30 years, especially as the UK attempts to implement the ZEV mandate by 2030. All our counterparts show that hydrogen can work in a combustion engine, so the UK is being left behind if we are not acting at the same rate and investing in this technology (which can be done in the UK, as shown by the work of Cummins). Hydrogen is critical – so it is time that the government start to recognise that.

Alexander Stafford MP thanked Srikanth Padmanabhan and introduced **Simon Godwin, Delegate for European Government Affairs, BorgWarner Inc.**

Simon Godwin introduced himself and the work of BorgWarner. BorgWarner is evenly distributed across the world around different continents. They make decisions about where to invest, based on internal and external facts that alter their competition and where investment would make the most impact. BorgWarner make batteries for both personal and commercial vehicles, however they are also exploring and developing their hydrogen options. Hydrogen fuel cells are a key technology, but the technology with the highest potential is the hydrogen internal combustion engine.

The internal combustion engine carries the greatest potential for consumer demand. The maturity of the underlying technology, the familiarity of its use, the maintenance of UK R&D jobs, faster decarbonisation of road transport and therefore enhancing the path to net zero. Industrialisation is critical for this to happen. We're talking about substantial expertise and investment for this to happen in the UK. The UK needs to demonstrate its competitiveness – but BorgWarner's projects planned in the UK are not eligible for the UK Automotive Fund, due to it not being seen as zero-emission. We can secure many advantages of the net zero ambitions of the government, but only if appropriate policies are implemented can the investment follow.

Alexander Stafford MP thanked Simon Godwin. He asked **Clare Jackson** about the goal of 200 refuelling stations and whether this was big or small as a goal.

Claire Jackson said that you don't need as many refuelling stations as you do chargers, due to the rate at which your engine is 're-filled'. It's all about strategic deployment of the refuelling stations and how we plan this well geographically.

Simon Godwin added that Hydrogen Europe have mapped out how much hydrogen infrastructure would be needed compared to EV charging points. If you focus only on EV, the total cost of infrastructure is far larger, in fact more than half, due to lack of competition for vehicles and lack of choice for the consumer.

Srikanth Padmanabhan pointed to the utility of hydrogen hubs or corridors for providing heavy-duty, long-haul applications and refuelling for hydrogen – they show that strategic planning is possible, preventing the need for building thousands of points.

Peter Gibson MP thanked the panel for their work in this area, particularly to Cummins for providing jobs in his constituency.

An audience member asked where the industry would make the hydrogen necessary for 1 tonne refuelling stations, as often suggested by these refuelling stations.

Claire Jackson noted that you have to be careful about where you put refuelling stations – we're looking at them knowing that they won't be in the middle of cities but likely in the artillery back routes. There are a number of options on energy generation, from on-site production to only on-site purification, which make them more viable.

Siobhain Baillie MP said that we have to persuade the government of the sheer scale of internal impact if we invest properly in this industry. When you look around the world, what are the things, issues and evidence base that put other governments over the line compared to the UK?

Srikanth Padmanabhan said that if hydrogen vehicles are not considered a ZEV vehicle, that automatically puts you behind. The national plan of China and India and the IRA of the US both create clarity and incentives, boosting the hydrogen industries. The investment of the UK makes them world-leading, but the latest regulatory framework is still lagging behind significantly. Divergence between the EU and the UK also needs to be closed.

Clare Jackson agreed, adding that the cost of hydrogen will come down – the US has very ambitious targets, but they are throwing so much money at it that they might just pull it off. If we could hit their numbers, the world is our oyster. But we are in the middle patch where we need enough investment and support for this to be pulled off. Everyone is responding to the US and putting money on the table to compare for their hydrogen strategies. We need to ask where the supply chains are going to be developed, not whether this is worth our time. We need those chains built in the UK to then be exported. That's the goal. If we don't accelerate with our plans on this, we have no hope of being as 'world-leading' as we were once deemed to be.

Srikanth Padmanabhan added that Cummins Inc build engines here in Darlington to then export to India but it remains unviable for those engines to be used en masse in the UK – that makes no sense. We need to be more linear in our thinking rather than being blinded by short-termism.

An audience member asked if hydrogen compares to BEVs?

Clare Jackson replied, saying that it's all about giving consumers choice. High utilisation and charging time remains important, so maybe hydrogen is the answer. But for those looking for convenience and lower cost right now, BEVs make sense. But it is good to have two viable options for the consumer, rather than just one.

Simon Godwin noted that even if all passenger cars go electric, commercial vehicles still need to become zero-emission. There is more competition and viability there due to more space for fuel cells to operate than passenger vehicles – so hydrogen is not out of question yet.

Nia Griffith MP said that she was impressed with the pace at which hydrogen is going for flights. The image of airports being places where you generate the electricity needed suggests that there is real opportunity here. But the opportunity is only worthwhile if the hydrogen is green. She asked the panel for their thoughts on this.

Srikanth Padmanabhan said that there are other industrial spaces where hydrogen can be used, but in the short term he thinks synthetic fuels are the answer for net-zero flight. Planes would have

to be re-designed to allow for hydrogen aerospace technology, so perhaps it's only the answer for short-haul flights. Nonetheless, this is possible.

Clare Jackson slightly disagreed with **Srikanth Padmanabhan**, saying that hydrogen engines in planes is something being seriously considered by people like Rolls-Royce. But in terms of how far we've got to go, we need to keep going at a faster pace if we're to see any progress. Clustering end use and looking for synergies within the transport sector is hugely important. Industrial clusters will be major for that.

Alexander Stafford MP thanked all attendees for coming and all Parliamentarians for their contributions. He thanked the panellists and formally closed the meeting.