

Written Evidence Submitted by Hydrogen Strategy Now Campaign (HNZ0024)

The cross-industry Hydrogen Strategy Now campaign is delighted to provide this submission to the Science and Technology Committee's inquiry into the role of hydrogen in achieving Net Zero.

The Hydrogen Strategy Now campaign was launched in June 2020 and is made up of fifty-four major businesses and trade bodies. A full list of campaign partners is set out at the end of this submission.

Collectively, Hydrogen Strategy Now campaign partners:

- Employ around 100,000 people and have a value of over £100bn in the UK.
- Stand ready to invest up to £3bn in hydrogen projects in the UK, creating thousands of jobs across the country.

In summary, this submission sets out the Hydrogen Strategy Now campaign's views that:

- Unlocking the UK hydrogen economy will create and sustain hundreds of thousands of high-skilled, green jobs - in all parts of the country.
- Hydrogen is essential if the UK is to meet its Net Zero targets, improve air quality and build a Green Recovery.
- Hydrogen will increase our energy security by making fuller use of the UK's natural resources.
- The UK is home to world leading hydrogen R&D, skills, and academia - let's seize the moment to create new export opportunities in an industry set to be worth \$2.5tr and create 30m jobs by 2050.
- Many countries have already begun investing billions into their domestic hydrogen markets via an economy-wide hydrogen strategy. The UK risks missing the boat on hydrogen if the UK Government does not soon produce its own hydrogen strategy.

The global hydrogen race is now on. For example, Germany is investing €9bn and France is investing €7bn to stimulate their domestic hydrogen markets. Overall, about 20 countries – who collectively represent approximately 70% of global GDP – have announced a hydrogen strategy or roadmap as a key pillar of their decarbonisation ambitions. We cannot afford to delay and risk our position as a world-leader in this future economy that is set to be worth \$2.5tr and create 30m jobs by 2050.

We were delighted to see the Government recently confirm its intention to bring forward a UK hydrogen strategy in 2021. We welcome the inclusion of hydrogen as point two of the Ten Point Plan for a Green Industrial Revolution, as a key element of the Energy White Paper, and its inclusion in the most recent Spending Review. This builds on the Prime Minister's statement in July that his Government will "invest massively in hydrogen".

The UK has the ability to out-manoeuvre and outwit the international competition. By taking the following four steps, we can utilise our natural resource and technological know-how, spend taxpayer money more efficiently than our other competitors, and stimulate much greater private investment, economic growth, and carbon reductions.

1. **Set ambitious targets for mass commercialisation of hydrogen technology:** Hydrogen technologies, across all categories, have now been used extensively in real-world situations across the world for many years. The opportunity now exists to set targets for mass deployment and commercialisation of these technologies across the UK over the coming

decade, as other countries have already started doing. Examples could include targets for a nationwide hydrogen refuelling network, targets for introduction of hydrogen vehicles (buses, trains, lorries, ships, cars, vans, emergency vehicles, and refuse trucks - many of which can be manufactured in the UK), and a commitment to a 2025 mandate that all new boilers must be hydrogen-ready.

2. **Stimulate supply and demand in parallel:** We can also steal a march over other countries by setting inspirational, investment-stimulating goals for the production of hydrogen and do so in a manner that maximise the UK's natural resources, academic skills, world leading equipment manufacturers and experienced workforce for the production of both green and blue hydrogen. To unlock private sector investment, these targets should also be backed by long-term policy mechanisms, for example a 'contract for difference' for hydrogen production, as is currently open to nuclear and offshore wind.
3. **Focus initially on regional clusters:** The UK's hydrogen economy must be built up step-by-step - we cannot switch instantly. The Government should focus initially on regional clusters that are most suitable to hydrogen production and usage, and in technologies that can be implemented quickly, scaled up efficiently, and that suit the local skills, geography, and decarbonisation priorities. The creation of the first UK Hydrogen Transport Hub in the Tees Valley is a welcome step forward in this regard, but further such hydrogen hubs should be established across the UK.
4. **Ensure relevant Government departments work collaboratively:** Hydrogen policy staddles many different Government departments and will also require strong leadership from Metro Mayors and council leaders to be delivered. The UK should be the first country in the world to establish a working group that will involve HMT, BEIS, DfT, DEFRA and MHCLG, as well as the devolved administrations, and local government leaders, to ensure that hydrogen policy across the UK is coordinated and implemented at pace.

In addition to the above policy recommendations, we encourage the Committee to consider the following two issues.

1. **A potential delay to the UK Government's hydrogen strategy:** When the Government first committed to producing an economy-wide hydrogen strategy, it set a target for publication of Q1 2021. However, during a Westminster Hall debate on 17 December 2020, the Energy Minister suggested the strategy will be "published in the first half of next year". Whilst the campaign appreciates the pressures the COVID crisis will be placing on Government resources, we believe it is essential that a hydrogen strategy is brought forward as soon as possible. The lack of a formal hydrogen strategy has already severely restricted the amount of private investment and job creation within the UK hydrogen economy.
2. **A potential increase to the 5GW hydrogen production by 2030 target set in the PM's Ten Point Plan:** Whilst we welcome the 5GW target set by the UK Government, we note that the Scottish Government has set its own target of 5GW of hydrogen production by 2030. We therefore urge the committee to suggest that the UK Government seeks to increase its hydrogen production target in the forthcoming hydrogen strategy.

Parliamentary support

Over sixty parliamentarians from both Houses and from all parties are supporting the Hydrogen Strategy Now campaign.

When expressing her support for the campaign, Baroness Brown, vice-chair of the influential Climate Change Committee said:

"The UK missed the boat on wind technology and missed the boat on batteries. We can't afford to miss the boat on hydrogen.

"I strongly agree that the UK urgently needs a hydrogen strategy, as there are too many small, piecemeal funds and projects. We need some serious private and public funding, and a coordinated effort between government and industry, to kickstart and grow a green-job-creating hydrogen economy across the country".

Support from Trade Unions

On Wednesday 24 June 2020, the Hydrogen Strategy Now campaign secured the support of four of the UK's largest trade unions – Unison, GMB, Prospect, and Unite. The General Secretaries of all four of these trade unions signed an open letter to the Chancellor, which is copied in full below:

Dear Chancellor of the Exchequer,

As the UK's biggest energy unions, we have joined together to encourage you to take positive and bold steps in enabling the UK to set an ambitious strategy for hydrogen across the country.

We represent some 200,000 workers in the energy sector and we fully support the need to become decarbonised in a manner that takes significant steps towards our Net Zero targets, whilst at the same time sustaining and creating high quality jobs, and supporting economic growth in all parts of the country.

We believe hydrogen is key to meeting these objectives. It will support the decarbonisation of heat and the generation of clean power. It is also critical not only because it will enable energy to decarbonise, but also because it will enable transport and heavy industry to do so too, with the multiple benefits this will bring.

We note that a cross-industry campaign has been established by a group of businesses and trade bodies urging you to announce at next month's fiscal event a commitment to establishing a UK-wide hydrogen strategy. We agree with this recommendation, and urge the Government to move fast on developing a UK-wide hydrogen strategy.

We can look across the world and see other nations bringing forward multi-billion pound, job-creating hydrogen strategies. The UK cannot afford to risk being left behind and failure would result in the UK not meeting its Net Zero obligation and a loss of high skilled and quality jobs.

We would welcome the opportunity to meet with you to discuss how the UK's hydrogen industry can create and sustain jobs among the sectors we represent.

*Dave Prentis
General Secretary of UNISON*

*John Phillips
Acting General Secretary of GMB*

*Mike Clancy
General Secretary of Prospect*

Len McCluskey
General Secretary of Unite

Support from academics

On Thursday 2 July 2020, the Hydrogen Strategy Now campaign published a letter to the Chancellor signed by forty world-leading academics supporting a UK-wide hydrogen strategy. The letter is copied in full below:

Dear Chancellor of the Exchequer,

We are writing as world-leading academics in the fields of low-carbon energy, renewables, the environment, transport, and climate change, to express our support for a UK-wide hydrogen strategy. Such a strategy could further reinforce the UK's standing, reputation and the export potential of our knowledge in this field.

The economic recovery from the Covid crisis must be green, clean, and create jobs. Hydrogen can play a key role in this recovery. In the longer term, if the government is going to achieve its legally required target of reaching Net Zero carbon emissions by 2050, hydrogen will be needed to get there.

The UK has a huge number of natural advantages when it comes to hydrogen energy – we have a surplus supply of renewable wind energy, we have a robust energy infrastructure, and we have a highly-skilled manufacturing base well-suited to a cutting-edge new technology like hydrogen.

The benefits of having a strong hydrogen economy are clear – it will drastically reduce carbon emissions, improve air quality, and create new, green jobs across the country. It can help usher in a new era of zero-carbon transport, through hydrogen buses, trains, lorries and even ships and aeroplanes, as well as zero-carbon heating. It will also provide a huge boost to manufacturing in this country and give the UK the opportunity to lead the world in an exciting renewable and low-carbon technology.

Of course, the Net Zero target cannot be met through hydrogen alone. It will need a complementary approach across all forms of renewable energy and zero-carbon areas. But introducing a UK-wide hydrogen strategy would be a good place to start.

Many other countries have already begun this work. Germany, Japan, Australia, South Korea, Canada, and China have all introduced their own hydrogen strategies. The European Commission is also creating an EU hydrogen strategy, including plans for multi-billion-euro investment in hydrogen projects. Unless the government acts now, the UK risks being left behind.

We fully support the objectives of the Hydrogen Strategy Now campaign, which has brought together leading organisations to jointly call for the introduction of a UK-wide hydrogen strategy. We hope the government takes note, and acts now, before it is too late.

Hydrogen Strategy Now campaign partners

The Hydrogen Strategy Now campaign is made up of fifty major businesses and trade bodies:

1. Adelan
2. Air Products
3. Alexander Dennis
4. Alstom
5. Anglo American
6. Arcola
7. Arup
8. Ballard
9. BayoTech
10. BCGA
11. BOC
12. Bosch
13. Bramble Energy
14. Cadent
15. Ceres
16. DWF Law
17. EDF
18. ENA
19. Energy UK
20. Enterprise
21. Equinor
22. EUA
23. Green Tomato Cars
24. H2GO Power
25. ITM Power
26. JCB
27. Johnson Matthey
28. Kew Technology
29. Kiwa
30. Nel
31. Neptune Energy
32. Northern Gas Networks
33. Orsted
34. Powerhouse Energy Group
35. Progressive Energy
36. Protium
37. Riversimple
38. RWE
39. Ryse Hydrogen
40. SGN
41. Siemens
42. SMMT
43. Storengy
44. TÜV SÜD National Engineering Laboratory
45. UK H2Mobility
46. UKHFCA
47. ULEMCo
48. Uniper
49. Vattenfall
50. Wales & West Utilities
51. Waste2Tricity
52. Wrightbus
53. WSP
54. ZeroAvia

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