

Subject:	Hydrogen Update		
Date of Meeting:	27 April 2021		
Report of:	Chair, Greater Brighton Officer Programme Board		
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Ward(s) affected:	All		

FOR GENERAL RELEASE**1. PURPOSE OF REPORT AND POLICY CONTEXT**

- 1.1 This report sets out the great strides that have been taken on developing a hydrogen economy locally in the last 6 months, especially through the work of the Hydrogen Sussex group. The report also reaffirms the governance of Hydrogen Sussex, through the Greater Brighton Infrastructure Panel, and seeks sign up of the Greater Brighton Economic Board (“the Board”) to a proposed Hydrogen Strategy.

2. RECOMMENDATIONS:

- 2.1 That the Board notes the progress of and wide interest in Hydrogen Sussex, and its launch event in February 2021.
- 2.2 That the Board notes and supports the proposal to develop a hydrogen strategy for Greater Brighton and the wider Sussex region.
- 2.3 That the Board provides funding of £13,696 for core activities of Hydrogen Sussex, using existing Board core funding.
- 2.4 That the Board agrees the proposed Governance arrangements and agrees that Hydrogen Sussex report back progress every 6 months.

3. CONTEXT/ BACKGROUND INFORMATION

- 3.1 In July 2020 the Board approved the Greater Brighton Energy Plan. The Energy Plan articulated the ambition to position the Greater Brighton City Region as a hydrogen hub to transition to clean hydrogen economy for transport, heating and power.
- 3.2 Following on from agreeing the Energy Plan, in October 2020 the Board committed to 10 environmental pledges, the GB10. The GB10 highlights five energy and five water plan projects which are priorities for the Board to meet the objectives set out in the plans. Decarbonisation of energy is a prominent theme within the 10 pledges, as this is required in order to achieve Board members’ Net Zero targets; several pledges involve decarbonisation in various forms.
- 3.3 The Coast to Capital Local Enterprise Partnership (LEP) 2020 investment strategy, Build Back Stronger, Smarter, Greener, includes the development of a hydrogen hub to accelerate public and private investment in hydrogen production and uptake.

3.4 A report was presented to the January 2021 Board meeting, outlining the progress of Hydrogen Sussex to date.

4 HYDROGEN SUSSEX MEMBERSHIP, ACTIVITIES AND GOVERNANCE

4.1 Hydrogen Sussex is the new body supporting and facilitating the hydrogen economy across Sussex. The group emerged from the Greater Brighton Energy Plan work carried out in 2020 under the Greater Brighton Economic Board and the Greater Brighton Infrastructure Panel.

4.2 There is great potential and ambition for the development of a hydrogen economy and projects in the region due to:

- Natural resources (huge potential for wind and solar)
- Infrastructure (Gatwick & Brighton City Airports / Shoreham & Newhaven Ports and close to London)
- Engineering advantage (Ricardo, Ceres Power, Steamology, Supercritical Solutions)
- Intellectual capital with the research excellence of the universities of Sussex and Brighton.
- Partnership (exceptional public / private sector partnership, unlike any other hydrogen organisation across the UK)

Membership:

4.3 Hydrogen Sussex membership includes local authorities from across Sussex and other public sector organisations including East Sussex Fire & Rescue, the two universities of Brighton and Sussex, Brighton & Hove Metrobus, Shoreham Port and Newhaven Port, Gatwick Airport and Brighton City Airport, international engineering consultancy Ricardo and major utility companies.

4.4 The high level of momentum has led to interest from organisations across a wide geographical range – east as far as Hastings, north to Wealden, and taking in the county councils of East and West Sussex. Hence the ‘Hydrogen Sussex’ name which allows colleagues from a wider area to participate. The group also works with Coast to Capital LEP and the Greater South East Energy Hub. The strength of the membership adds value and strengthens the partnership by bringing in special expertise, and most importantly allows aggregation of potential demand for hydrogen across a wider area.

Governance:

4.5 The Greater Brighton Economic Board is the body to which Hydrogen Sussex ultimately reports and which steers the work plan, including development of a project pipeline and a strategy. The Greater Brighton Infrastructure Panel also inputs into the work of the group, bringing their unique expertise and advice and helping Hydrogen Sussex to position its work to overcome the wider infrastructure challenges of the city region.

4.6 Activities:

- Hydrogen Sussex held a successful launch in February 2021 with well over 200 attendees including government ministers and a diverse range of stakeholders from across the private and public sectors.
- The group has worked to raise the profile of hydrogen in the area with stakeholders including commercial partners.
- Speaking at major UK conference on hydrogen sponsored by Scottish Power (900 views)

- Carrying out research with the University of Brighton on potential hydrogen demand and corresponding locations for hydrogen facilities, focusing on large vehicles particularly in public sector fleets. This includes emergency vehicles, refuse trucks, buses and coaches, and large maintenance vans.
- Facilitating partnership working between Hydrogen Sussex members
- Building a hydrogen project pipeline for the region together with Greater South East Energy Hub and Coast to Capital LEP
- Developing a proposal for a Greater Brighton hydrogen strategy together with the University of Brighton, Brighton & Hove City Council, and Hydrogen Sussex.

4.7 Next steps for Hydrogen Sussex

- Strengthen links with BEIS to develop practical solutions for the Government's flagship Green Revolution policy, including green hydrogen
- Further develop regional evidence base, including economic data, that will help to support the business case and anticipated calls for funding bids
- Develop regional USP to show how Greater Brighton green hydrogen ambitions differ from former industrial areas such as Holyhead and Teesside
- Help commercial suppliers to understand potential hydrogen opportunities in Greater Brighton
- Following the launch, follow up with stakeholders including MPs to enhance support and understanding of hydrogen ambitions.

5 PROPOSAL FOR A HYDROGEN STRATEGY FOR GREATER BRIGHTON AND WIDER SUSSEX AREA

- 5.1 The Coast to Capital LEP invited Expressions of Interest for a regional pipeline of transformational and strategic projects to support discussions with government about regionally significant investment. The deadline for EOIs was the end of March 2021.
- 5.2 The University of Brighton, Brighton & Hove City Council, and Hydrogen Sussex, jointly submitted an Expression of Interest for development of a hydrogen strategy for the Greater Brighton and wider Sussex area – attached at **Appendix 1**. The aim of a strategy would be to give a clear focus and direction, establish a place-based perspective, and ensure that research and innovation is embedded in all hydrogen projects. The development of a regional hydrogen economy will also prepare the ground for significant funding applications and contribute to the goals of Building Back Better, by promoting sustainable recovery from the economic impacts of the pandemic.
- 5.3 Partners of Hydrogen Sussex submitted their own project specific Expressions of Interest to the LEP, including a proposal for a hydrogen hub in the Shoreham area with collaboration from Worthing Council, Shoreham Port, Brighton City Airport and Ricardo. The proposed strategy is complementary to and gives a framework for projects like those to proceed, mapping to a variety of funding sources and focusing on research excellence and delivery at commercial pace.
- 5.4 It is proposed that governance of the hydrogen strategy will be through Greater Brighton and the Greater Brighton Economic Board is requested to confirm this.

6 REQUEST FOR FUNDING FOR HYDROGEN SUSSEX

- 6.1 To date all Hydrogen Sussex's work has been done on a pro bono and in-kind basis. The group would like to request some core funding from Greater Brighton, to enable

key functions to take place and demonstrate Greater Brighton’s support. The request is to support the following budget:

Hydrogen Sussex Proposed Budget	2021-2022
Website & email hosting	£1,000
Membership Hydrogen Fuel Cell Association	£696
Support for Greater Brighton member councils on hydrogen projects	£2,000
External Consultancy (support funding applications and a city region strategy)	£10,000
Total	£13,696

7. ANALYSIS & CONSIDERATION OF ANY ALTERNATIVE OPTIONS

- 7.1 The Government has made clear that it sees economic recovery from Covid-19 as being driven by green growth, and the development of low-carbon energy solutions is a key strand in its thinking. The recently adopted Greater Brighton Energy and Water Plans and GB10 Pledges provide a firm foundation on which to build.
- 7.2 A Government hydrogen strategy is expected by early summer. The proactive and forward-thinking work of Hydrogen Sussex and Greater Brighton, including the ambition to become a leading hydrogen region, will ensure that the City Region is best placed to take advantage of these opportunities. A reactive or do-nothing approach would jeopardise the excellent work already done and potentially lead to future opportunities being missed.

8. COMMUNITY ENGAGEMENT & CONSULTATION

- 8.1 Hydrogen Sussex brings together a large number of Greater Brighton and other key stakeholders. It has also started to reach out to hydrogen groups across other areas of the UK.

9. CONCLUSION

- 9.1 Greater Brighton’s activities to develop a hydrogen economy will support green objectives of the Greater Brighton Energy and Water Plans, Greater Brighton 10 pledges, and ambition to establish a Hydrogen Hub.
- 9.2 Continuing development of a hydrogen strategy, research and ongoing work of Hydrogen Sussex will ensure that plans are in progress to maximise these opportunities. Further, at the current time it is crucial that the region is seizing the initiative to initiate, support and coordinate projects which will both help the environment and lead a sustainable economic recovery from the Covid-19 pandemic.

10. FINANCIAL & OTHER IMPLICATIONS:

Financial Implications

- 10.1 An allocation of £13,696 is required from the Greater Brighton Operation Budget for 2021-22 to support the Hydrogen Sussex strategy. The funding will support up to £10,000 for consultancy work for the funding applications and city region strategy with the balance providing website, member council and Hydrogen Fuel Cell Association member ship costs.

*Finance Officer Consulted: Rob Allen, Principal Accountant
Date: 19 April 2021*

Legal Implications

10.2. There are no legal implications directly arising from this report.

Lawyer Consulted: Joanne Dunyaglo Date: 14/4/21

Equalities Implications

10.3 None identified

Sustainability Implications

10.4 A gradual transition to hydrogen for power will help to cut carbon emissions and provide better air quality, thus having a positive impact on sustainability. The focus of Hydrogen Sussex is on 'green' hydrogen, produced by electrolysis with renewable electricity, which therefore has very limited carbon emissions from production and makes the most of the region's potential for renewable power.

SUPPORTING DOCUMENTATION

Appendices:

1. EOI Greater Brighton Hydrogen Strategy (April 2021)

Background Documents:

1. Greater Brighton Energy Plan (July 2020)
2. Greater Brighton 10 Pledges (October 2020)

