

EXPRESSION OF INTEREST FOR DEVELOPING A REGIONAL PROJECT PIPELINE

INTRODUCTION

As stated in the Covering letter, this form is provided as an optional template for partners to detail their strategic project ideas.

Please return any completed forms to Jonathan Sharrock, Chief Executive, jonathan.sharrock@coast2capital.org.uk

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Date (DD/MM/YY):	1 st April 2021 (to replace EOI submitted on 30 th March 2021)
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PROJECT OVERVIEW

1.1) Brief description of the project.

Developing the Hydrogen Sussex Ecosystem Business Case

As the LEP is aware, there is a growing pipeline of potential Hydrogen Sussex projects. The overarching focus of Hydrogen Sussex is to create an ecosystem that is greater than the sum of its innovation assets and individual projects. The University of Brighton and Brighton & Hove City Council are a proponent of providing a structure to employ a coherent strategy to address medium and long-term challenges and, critically, to securing funding to do so.

Applying for significant strategic research and innovation funding will require a convincing business case to be in place ready to respond to quick turnaround calls in the way that the region has succeeded in responding to calls for shovel-ready infrastructure funding. Because funding is largely driven by “Place”, the strategy will need to articulate the region’s opportunity to achieve significant economic and societal impacts from investment in Hydrogen in line with the UK Research and Development Roadmap which seeks to re-balance regional inequality in terms of productivity and prosperity.

Hydrogen Sussex, and its associated hubs, offer the opportunity to build on existing research excellence (both private sector and university excellence), regional strategic assets (including Shoreham Port and Brighton and Hove City Airport) and private sector ambition to leverage strategic funding, maximise opportunity and be a major driver in becoming a zero-carbon economy. By working together, a business case which identifies all the inputs – including the expertise and assets in the region – and the outputs will provide a basis for accessing funding,

which often has a short deadline, and will also strengthen the region's ability to compete for funding

This Expression of Interest is being submitted jointly by the University of Brighton, Hydrogen Sussex and Brighton & Hove City Council, with the support and encouragement of several core public and private sector members of Hydrogen Sussex.

1.2) What is the current status of the project?

In February 2021. Hydrogen Sussex, successfully launched a public declaration to progress two clear aims: support the production of hydrogen and promote the development and uptake of hydrogen vehicles. Work on both is progressing at pace with plans including a new hydrogen plant at Shoreham Port and the world's first commercially-led deployment of fuel cell buses in Crawley. Brighton & Hove Buses and engineering and environmental consultancy Ricardo are now working together on a project to convert existing buses to hydrogen fuel cells.

Research within the different participating organisations and the universities continues apace with joint collaborations supporting differing components of Hydrogen research and usage including via the established and world-leading strategic relationship between Ricardo and the University of Brighton's Advanced Engineering Centre. The University of Sussex has also recently expressed new project ideas connected to Hydrogen Sussex agenda.

The Hydrogen Sussex launch stimulated deeper conversations and project links with key themes emerging including:

- Clusters of demand such as might be found at Shoreham Port, or at bus depots, help to make the production and use of hydrogen more economically viable.
- A new Hydrogen sector could feed into place-shaping and economic recovery
- It is much more likely that government challenge funding will be available if we can demonstrate an overarching strategy and regional support.

Therefore, the proposition to develop a business case will help place the region in a better place to maximise opportunity.

The Greater Brighton Economic Board will receive a report at its meeting on 27th April 2021, setting out the great strides that have been taken on developing a hydrogen economy locally, especially through the work of the Hydrogen Sussex. The report will also reaffirm the governance of Hydrogen Sussex, through the GBEB Infrastructure Panel, and obtain sign up of the Economic Board to the proposed Hydrogen Strategy.

1.3) Are there short term benefits and/or challenges for the project due to Coronavirus?

The project does not directly address Coronavirus challenges although there are indirect drivers: i) the need to create jobs to replace those lost particularly in aviation ii) motivation to invest in clean air technologies to reduce harmful respiratory effects of particulate emissions that have been shown to compound the symptoms of Covid-19. The development of a regional hydrogen economy will contribute to the goals of Building Back Better, by promoting sustainable recovery from the economic impacts of the pandemic.

There are no known challenges due to Coronavirus as the work can be developed and managed remotely.

1.4) What are the expected benefits of the project?

Acceleration of the development of Hydrogen Sussex initiatives by preparing the ground for significant funding applications will in turn accelerate the benefits to the region of developing a Hydrogen economy (Hydrogen Sussex KPIs which combine zero carbon and economic development outcomes). It is worth noting that the region has not succeeded in past attempts to secure significant place-based funding such as Strength in Places because of the absence of groundwork such as that proposed here to develop a robust business case.

Partners in Hydrogen Sussex are also submitting their own project specific EOIs to the LEP. This proposal is complementary to those EOIs, and strategy that is proposed here will give a framework for projects like those to proceed.

Benefits of the strategy will include:

- Clear direction and focus on development of a hydrogen economy in the Greater Brighton and wider Sussex and C2C LEP area, with ambitious goals and a clear plan on how to achieve them.
- Clear focus and understanding on the research excellence and innovation assets (wider private and public sector as well as HEIs) required to support the innovation ambition.
- A pipeline of robust hydrogen projects that can go forward for further development.
- Outline business cases for a small number of hydrogen projects
- To help shape commercial investment decisions by identifying the type of projects that are likely to gain political and sub-regional support.
- Embedding the skills agenda to deliver the next generation of technical specialists through the Ricardo Hydrogen Centre for Excellence
- Research and innovation in clean hydrogen technologies is promoted and encouraged, with the learning shared amongst partners and embedded in all projects
- Shared understanding of how hydrogen can help to meet Greater Brighton and C2C members' zero carbon and air quality targets
- Strategic oversight across the Hydrogen Sussex Programme; risks and opportunities are known and shared.

1.5) What geography would the project cover?

Greater Brighton and wider Sussex area for specific partnerships, taking into account the location of innovation assets, and aggregation of demand to drive business case.

Governance of the project will be through the Greater Brighton Economic Board.

1.6) Does the project have existing funding?

Total funding of around £90,000 will be required to prepare the strategy. Brighton & Hove City Council has match funding available of up to £30,000. Separately, the Greater Brighton Economic Board is expected to agree some core funding (c. £13,000) for the operation of Hydrogen Sussex.

1.7) Does the project require funding?

Yes, the project is seeking funding in the region of £60,000 – the balance of the cost of preparing the strategy.

1.8) Would the project benefit from Coast to Capital involvement?

Brighton & Hove City Council, the University of Brighton and Hydrogen Sussex will work together to scope and develop this work and facilitate stakeholder engagement across the Greater Brighton area. GBEB's and Hydrogen Sussex's work is already known to the LEP and has received positive support.

The involvement of Coast to Capital would be essential in embedding the strategy in the high-level regional energy vision and securing support for emerging projects from government relationships. C2C is well placed to contribute to business case development for example by mining economic intelligence and advising on policy. Furthermore, as place-based funding opportunities will expect to see LEP support and have LEP endorsement, involvement of C2C from the outset will greatly enhance regional responses to quick turnaround calls.