

To: Humber Leadership Board

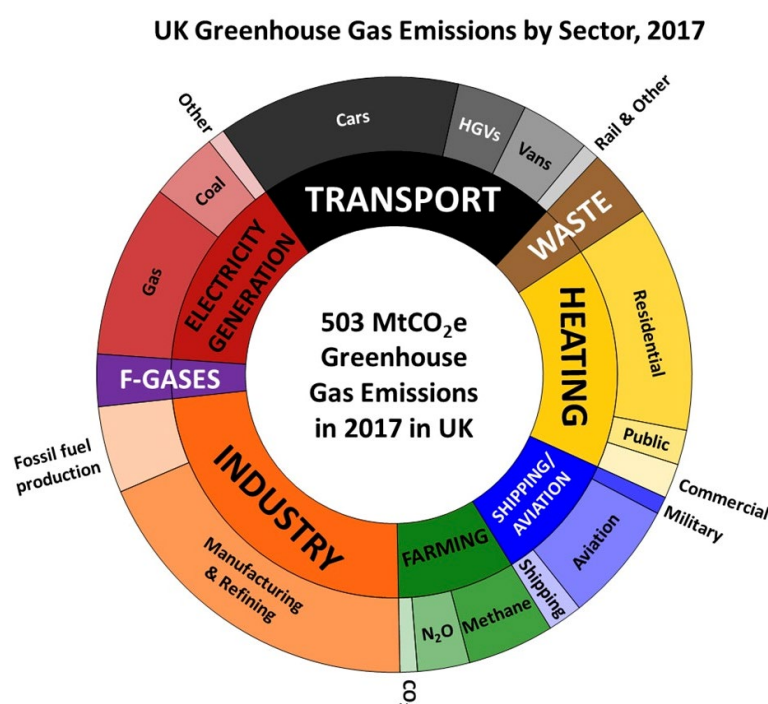
From: Simon Green, Deputy Chief Executive – North Lincolnshire Council

Date: 25 March 2021

Subject: Humber Decarbonisation Strategy Paper – Humber Joint Strategic Unit

1. Background

- 1.1 In understanding the challenge for the whole UK and then what is considered unique for the Humber region. The below diagram shows the issues facing the UK as it seeks to decarbonise the country by the government's deadline:

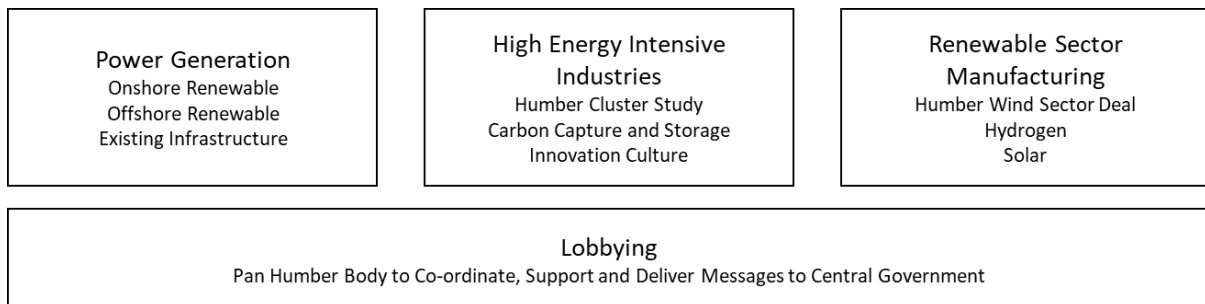


- 1.2 The Humber is a significant region for the government to achieve its decarbonisation goal of being a net zero economy. Our economic base sees a significant cluster of energy intensive industries which produces critical products for the economy ranging from products such as oil, chemicals, steel and other manufacturing processes but in doing so emits significantly more CO₂ compared to any other UK region. Industry across the Humber Estuary emits 12.4MtCO₂ per annum, or 13.9 tonnes per Humber resident – over twice the national average.
- 1.3 The Humber also produces 25% of the UK's power with the import and transportation of crude to refineries, natural gas to industrial users and consumers, wood and coal to the traditional power stations.

- 1.4 The Humber region is home to the UK's most coherent offshore wind cluster. The industry's close proximity to market coupled with manufacturing and installation in Hull; innovation at Aura in the East Riding; operations and maintenance in Grimsby; and helicopter transport from Humberside Airport in North Lincolnshire, have demonstrated that by working together they have created a national success story. As new areas of the North Sea-bed are unlocked for offshore wind development the potential for further growth of the Humber Offshore Wind Cluster is enormous.

2. Humber and Decarbonisation

- 2.1 When considering the overall challenge for the UK to deliver a net carbon zero economy the Humber can be at the forefront in addressing the regions specific factors. When considering against the above diagram the below are the key areas which need focussing on within the Humber region as a significant number are not bespoke to the Humber region:



3. Power Generation

3.1 Existing Work:

The Humber currently has a significant number of power generation operations within its boundary and just outside (including Drax) that has seen to adapt and move away from a reliance on fossil fuels to generate power. Examples of these changes can be seen at Drax, VPI Immingham and SSE.

3.2 Future Opportunities

Due to the unique location associated with the Humber the opportunity to consider the generation of Green or Blue Hydrogen is significant. The opportunity to not only access significant water bodies associated with the creation of hydrogen but also with the location to the North Sea gas fields as a location to potential store CO2 created in the process. Consideration needs to be considered how we make the space the right place for these businesses to locate and how we achieve this.

4. High Energy Intensive Industries

Existing Work:

- 4.1 A total of £1.7m government funding has been secured for the Humber Cluster Plan – a comprehensive plan for decarbonisation in our region, which will show how the Humber cluster can achieve net zero carbon emissions by 2040, potentially making it the first in the world to do so.
- 4.2 This joint bid by the Humber Local Enterprise Partnership and CATCH also involves eight private sector partner organisations and was submitted to Innovate UK as part of the Government's Industrial Decarbonisation Challenge Fund scheme, part of the £350m green recovery package announced by the Prime Minister in July.
- 4.3 The project, totalling £2.6m, will move the Humber closer to achieving large-scale decarbonisation, with businesses across the Humber working to find effective and lasting solutions for the region.
- 4.4 The eight partner organisations supporting the Humber Cluster Plan are: British Steel, Centrica, Drax, Equinor, National Grid Ventures, Phillips 66, SSE Thermal and VPI Immingham. They include the strategically important refining and steel sectors, as well as major energy producers and low carbon infrastructure providers. A wider group of businesses will be involved in developing the plan, with all energy-intensive industries in the Humber invited to take part.

Future Opportunities:

- 4.5 In assessing how the Humber can be at the forefront of delivering decarbonisation across our cluster we need to consider whether we can create a culture of innovation and allow new technologies space to move from the lab into phased testing on our industrial sites. The work of universities and decarbonisation is not limited to just looking within the region (University of Hull or Lincoln) but expanding the net and looking at funding solutions to bring practical use for these technologies. The Humber needs to consider how as a collective it can work with indigenous businesses to make a series of spaces, on their sites, for the technology to be implemented. Then, via a series of these developments, consider how a virtual knowledge sharing forum can be established within the Humber. The below is just a small number of further education:
 - University of Edinburgh – significant R&D department looking at CCS opportunities
 - Imperial College – the country's largest CCS research programme
 - University of Aberdeen
 - University of Nottingham - Low Carbon Energy and Resources Technologies Research Group

- Heriot-Watt University – in partnership have sought to develop a cluster of research into CCS
- Oxford University – CCS research department exploring in conjunction with Industry Symbiosis

The Humber needs to consider how these innovation centres could be brought forward and move the existing work from the lab to practical use. There is the potential for the Freeport Development Corporation being involved, given the allocation of Custom Sites locally.

5 Renewable Sector

Existing Work:

- 5.1 The Humber became renowned for being the heart of the offshore wind sector following the success in attracting Siemens, Orsted and other supply chain businesses to the region. The region also successfully created Green Port Hull which became the Humber Energy Estuaries first collaboration to bring new investment and support the diversification of the SME community locally. These have seen significant developments in the skills, ambition and future growth of the region and as a result we continue to see interest in the region. Since Orsted came to the region they have supported in driving forward the sector of offshore wind locally and working with Government has started to look at a regional of cluster plan called the Humber Offshore Wind Cluster Prospectus.
- 5.2 The creation of a Humber Offshore Wind Cluster has already taken place and looks to support in moving to cleaner economic growth through low carbon technologies and the efficient use of resources is one of the greatest industrial opportunities of our time and the Humber is the place where the UK's capability to meet its net zero ambition is being forged; bringing forward high value job opportunities, rejuvenated urban settings, investment, world class technology development, economic growth and clean electricity powering over one million homes locally.
- 5.3 This work has already pulled together a prospectus which can be found via the below:

<https://static1.squarespace.com/static/5faa9db24824a917c7e06a4c/t/5faac0f953e983236a938b9e/1605026053460/The+Humber+Offshore+Wind+Cluster+Prospectus.pdf>
- 5.4 Locally the Local Authorities are working with a number of renewable sector organisations seeking to be based within the region. This includes tier 1 suppliers through to ancillary support businesses and delivery of these schemes will further embed the regions brand for being the central hub for the UK to bring a net zero carbon economy.

Future Opportunities:

- 5.5 The successful bid for a Humber Freeport status allows the Humber region to further embed it as the heart of the offshore sector in the UK. The opportunities based within the South Humber Bank following the successful OWMIS bid by Able means the realistic opportunity to see the site finally develop.

6. Lobbying

- 6.1 As the Humber seeks to build on the existing work that has already begun, consideration needs to be given to how we can continue a cohesive and collaborative message, which in turn, can be delivered to central government. With the loss of the Humber wide LEP there is a recognition that both LEPs need to collaborate but a consideration of how the region brings this together is crucial. Currently there is a number of existing pan-Humber organisations who can support, such as the Chamber, Marketing the Humber [Bondholders], CATCH but none of these have the presence with central government arguably required to deliver a message unlike for example a combined authority/mayor.
- 6.2 With the formation of the potential Freeport Development Corporation that will span the Humber looking specifically at economic regeneration based around the concept, it would be advisable that we consider the merits of incorporating a lobbying role on behalf of the decarbonisation agenda of the Humber within their remit. Not only will they have scope for development associated with the tax sites but a number of the custom sites identified are within the High Energy Intensive Industries sector. Without the Humber region having a designated body (i.e. the Humber LEP) to support in lobbying this organisation will be accountable to the four local authorities and therefore strategically placed to be the voice of the Humber.

7. Recommendations

- 7.1 That the Humber Leadership Board notes the contents of this report.
- 7.2 To recognise the key role of the Humber Leadership Board in leading and advocating this theme.