



north wales economic ambition board
bwrdd uchelgais economaidd gogledd cymru

REPORT TO TRANSPORT DELIVERY SUB-GROUP

DATE: 14th May 2021

Title: *Transport Decarbonisation and Hydrogen Hub Update*

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1. Purpose of the Report

To update Members on progress with developing project proposals for low and zero carbon transport projects in North Wales

2. Decision Sought

Members are invited to note the progress made and the next steps to develop business cases for investment.

3. Reasons supporting the need for a decision.

The report is largely for information, to advise members of developments with developing infrastructure and project to support low and zero carbon transport.

No formal decision is required as a result of the report.

4 Background and Relevant Considerations

At the December 2020 meeting of the Delivery Sub-Board, Members received a report on proposals to develop ambitious projects to support the decarbonisation of transport networks in North Wales. Two projects were highlighted as being potentially suitable as hub locations: Holyhead and Deeside.

Since the last report good progress has been achieved with detailed work to develop business cases on both projects underway and further work commissioned to better understand how the whole region could benefit from the opportunities and secure access to green hydrogen fuel sources to support fleet decarbonisation.

Deeside

The Deeside project proposes to develop a hydrogen hub at Deeside Industrial park, that would utilise renewable energy to develop green hydrogen to support transport decarbonisation. Hydrogen Fuel Cell vehicles require a high quality of hydrogen to avoid contamination of the fuel cell and green hydrogen is ideal for this purpose. The outline of the project is that the hub would contain hydrogen generation facilities along with storage and fuelling equipment.

A critical component of the project is to assess the potential future demand for the fuel and in particular to assess the potential market for hydrogen for fuel cell vehicles. A detailed analysis of the potential future demand has been carried out with potential users, along with discussions with vehicle manufacturers and fleet users to assess possible take up.

At the end of the 2021-21 financial year, funding was made available by Welsh Government to develop a Strategic Outline Case for the project and to further develop the SOC into an Outline Business Case. The work has progressed well, with Jacobs being appointed by Flintshire to undertake both commissions. A draft SOC has been received and the OBC is now progressing well.

Once completed, the OBC will be the subject of a Gateway review, prior to progressing towards the development of a Full Business Case

Regional Hydrogen Opportunities

For both of the above projects growing the demand for the hydrogen generated will be essential as part of a new ecosystem for hydrogen across the region. Further generation opportunities, storage, distribution and fuelling infrastructure will be required.

It will be necessary to grow demand for the fuel, especially if one of the main uses will be to support transport decarbonisation. Both Holyhead and Deeside are well placed to provide fuel to parts of the strategic transport network and to provide low carbon fuel to other commercial and business users.

The public sector in Wales has a key role to play in showing leadership in decarbonisation efforts, for example by transitioning public sector fleets from petrol / diesel fuel to low / zero carbon and zero tailpipe emission solutions. There has been a strong focus on battery electric vehicles in recent years and this technology offers an excellent solution for many vehicle types and duty cycles. However, based on currently available technology pure battery electric solutions are unlikely to be able to meet the needs of all vehicles. Hydrogen fuel cell technology offers a promising solution for heavier vehicles and those with challenging duty cycles (e.g. high daily mileage / high daily energy demands) such as refuse collection vehicles. The availability of suitable solutions in this space is currently limited and joint procurement across multiple public bodies offers the potential to pool demands, attract vehicle suppliers, and potentially improve the commercial case for the hydrogen refuelling infrastructure required.

In order to assess options for future opportunities funding was available to fund a further small commission from Element Energy to consider how such opportunities could be identified.

The work is currently progressing well and is considering the following areas of activity

- An assessment of future demand
- Engagement with potential fuel cell electric vehicle suppliers
- Hydrogen production and distribution cost analysis
- Hydrogen fuelling station siting

A draft report will shortly be available and discussions of the next steps will be held.

5. Considerations

Transport decarbonisation is a key requirement of Welsh Government and Westminster policy, the sale of carbon fuelled vehicles will be restricted in the next few years, and whilst battery technologies have developed apace, heavier vehicles will not be suitable for battery solutions alone. The case for strategic intervention in alternative fuelling infrastructure is clear but coordinated actions by the public sector is needed to ensure that an adequate infrastructure to support hydrogen and other technologies is in place.

The funding made available by Welsh Government has enabled projects to be progressed at both Holyhead and at Deeside; and also, to consider future further roll out across the region. Once the initial business case development is complete, detailed work on a full business case and implementation and delivery strategies will be needed.

Further update reports will be provided to members as the projects develop.

5. Financial Implications

There are no specific financial implications from this report, it is mainly information on work that has been completed to consider proposals to decarbonise transport in North Wales.

6. Legal Implications

There are no specific legal implications from this report.

7. Staffing Implications

There are no specific staffing implications at this stage – the report provides updates on work currently underway.

8. Impact on Equalities

There are no specific equalities implications at this stage – the report provides updates in work currently underway. Detailed consultation on any reports where impacts are possible will be carried out at the appropriate consultation process.

9. Consultations undertaken

There are no specific consultations required at this stage – the report provides updates in work currently underway. Detailed consultation on any reports where impacts are possible will be carried out at the appropriate consultation process.

STATUTORY OFFICERS RESPONSE:

i. Monitoring Officer – responsible body:

No observations to add in relation to propriety

ii. Head of Finance – responsible body:

I understand that this progress report is submitted for information, hence I have nothing to add from a financial propriety perspective.