

# HyTrEc

## Hydrogen Transport Economy for the North Sea Region

April 2015

The Hydrogen Transport Economy (HyTrEc) project aims to improve access to and advance the adoption of hydrogen as an alternative energy vector across the North Sea Region. The project will identify and address structural impediments constraining development of, access to and adoption of this alternative fuel in urban and rural settings.

The aims of the HyTrEc project are to support

- regional accessibility strategies
- environmentally responsible energy production practices
- developing different modes of transport
- transnational transport corridors
- efficient and effective logistics solutions
- sustainable growth solutions.

### Aberdeen Hydrogen Refuelling Station Launch

The official opening of Aberdeen's hydrogen production and bus refuelling station happened on the 11<sup>th</sup> March in Aberdeen, as part of the Aberdeen Hydrogen Bus Project. The launch attracted attention from UK-wide media, resulting in media coverage in local and national newspapers, radio stations, trade press and TV as well as coverage from the market-leading coach and bus industry weekly magazine – Route One.

The event was well attended by the project partners and funders, with representatives from industry, other local authorities, academic representatives, fleet managers and local supply chain organisations.

The hydrogen buses are now being introduced into public service and after a few months of testing the buses, they will go into full service and run as part of the everyday fleet.



### HyTrEc's hypothetical journey throughout the NSR may soon become reality.

During the transnational discussions among HyTrEc partners, it became clear that there were a number of practical challenges in attempting to travel in a hydrogen-fuelled vehicle within the North Sea Region due to disparities in infrastructure, policy, regulation and knowledge across the different member states.

The partnership therefore undertook a transnational pilot study to improve the accessibility and connectivity of existing regional hydrogen corridors by identifying these factors, in order for key issues to be tackled where possible within the project, or recommendations promoted beyond the partnership. The study was carried out on a theoretical basis initially, and then followed by a real life journey.



In January 2015 Stefan Neis, of project partner WaterstoNet, drove their hydrogen fuel cell powered Hyundai ix35 from Brussels, Belgium to the HyTrEc project partners meeting in Vejle Denmark. The car performed extremely well, in all weather conditions, comparable to a normal gasoline fuelled car but, without any exhaust emissions or noise.

Stefan found it to be a challenging trip, mainly due to the availability of the hydrogen refuelling stations in the different countries, on the route. After spending time on initial detailed preparation work such as finding contact details for the station operators, arranging access and obtaining entry passes, overall the trip went very well.

Stefan and the rest of the partnership are grateful for the support of the people who helped make the journey a success!



In cooperation with the NOW GmbH (National Organisation for Hydrogen and Fuel Cell Technology, Germany) and the DWV (German Hydrogen and

Fuel Cell Association), project partner EIFI, European Institute for Innovation, is currently working on a phase 2 for the journey, which is to drive a hydrogen vehicle to the the HyTrEc final conference in May in Aberdeen. The findings of this theory into practice example will obviously provide some useful indicators that may be used in any follow up project. Further details and reports on the theoretical and real-life journeys can be found on the project website at [www.hytrec.eu](http://www.hytrec.eu).

### Aberdeen Hydrogen Strategy

On 18th March 2015, Aberdeen City Council approved the [Aberdeen City Region Hydrogen Strategy 2015-2025](#). This strategy outlines the actions required over the next 10 years in order to cement the city as a leader in the emerging hydrogen and fuel cells sector. A copy of the report can be downloaded from the [Aberdeen Invest Live Visit](#) webpage.

The Hydrogen Strategy aims to open up greater potential for hydrogen technologies in the long term and presents strong opportunities for businesses to diversify their activities in the energy sector. The Strategy aims to encourage the development of skills, know-how, and expertise in the hydrogen and fuel cell markets, initially through the deployment of H<sub>2</sub> transport.

The key near-term priorities are to:

- build a second refuelling station capable of refuelling all hydrogen vehicle types in order to attract early releases of passenger cars. This station will be accessible to the public;
- work with local partners and car manufacturers to deploy first generation vehicles;

- support the Council fleet as an early adopter for new vehicle types;
- work with bus operators to ensure a second major fuel cell bus deployment from 2018;
- work with other regions to seed a Scottish refuelling network linking to the work of the UK H2 Mobility programme.

Aberdeen is promoting hydrogen technologies as a low carbon alternative to fossil fuels and as an energy vector to facilitate the deployment of renewable energy sources in the area.

### HyTrEc Final Conference

Aberdeen will host the final conference of the HyTrEc project on 20th and 21st May 2015. The event marks the culmination of the project, where key findings and outputs will be showcased, with a chance for delegates from industry, government, public sector and academia to network and discuss the next steps for the sector with project partners.

Along with the results and recommendations of the HyTrEc project, the latest developments will be heard from key organisations including Hyundai UK, the Fuel Cells and Hydrogen Joint Undertaking, UK H2 Mobility and the German National Hydrogen Organisation (NOW GmbH). The conference will also offer delegates the chance to visit the UK's first fully integrated hydrogen production and bus refuelling station and experience Europe's largest fleet of hydrogen fuel cell buses. Several other hydrogen vehicle technologies will also be on show, including diesel/hydrogen hybrids and fuel cell range extended electric vehicles.

If you are interested in attending the conference contact: [hytrec@aberdeencity.gov.uk](mailto:hytrec@aberdeencity.gov.uk) for further information.

### HyResponse workshop for first responders

The "First International Workshop on Hydrogen Safety Training for First Responders" was organized by the French Academy for Fire, Rescue and Civil Protection Officers (ENSOSP) in Aix-en-Provence, France, in September of last year.

The HyResponse project aims to create a European Hydrogen Safety Training Platform (EHSTP). This training platform will develop a tool box for European First Responders to help them in assessing status and decision making not only for the implementation of a new hydrogen project but also on the emergency response level in case of incident/accident on site. During the two day workshop at the ENSOSP headquarters, the Fuel Cell and Hydrogen Joint Undertaking, together with project partners and other invited organisations gave a presentation about hydrogen and its role in safety, transport, codes and standards and the experience of the first responders.

The newly built – centre provides a state of the art training facility for local fire fighters and also the fire fighters in training from ENSOSP to simulate all kinds of fires and accidents. The training included setting various vehicles on fire, including hydrogen vehicles, LPG and CNG to show the difference in the types of fire and how to deal with them.

### 5 Refuelling Stations for Denmark

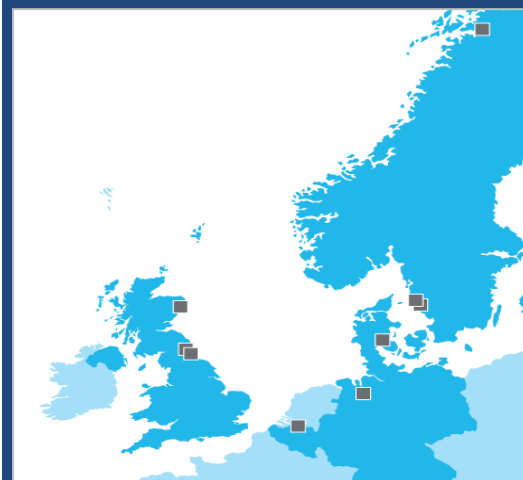
Denmark now has 5 functional hydrogen refuelling stations and is planning for another 5 this year. This will make Denmark the best covered country with hydrogen stations so far.

The progress in Denmark makes it an attractive country for hydrogen cars. The local municipality of Vejle received 3 Hyundai IX35 fuel cell electric vehicles in 2014, as did the Municipality of Ålborg. Copenhagen currently has around 20 hydrogen cars.

The introduction of the vehicles means that the public are seeing them around on the roads and people are learning about the technology.

The cars in the municipality of Vejle are used for the environmental department and they have used them for about 3 months so far with no issues or complaints.

The hydrogen network in Denmark has expanded a lot since the start of HyTrEc in 2012. For an update please go to: <http://www.hydrogenlink.net/eng/network.asp>



#### HyTrEc partners include:

- Aberdeen City Council
- European Institute for Innovation
- Narvik University College
- WaterstofNet
- Gateshead College
- Green Network
- Hydrogen Sweden
- SP Technical Research Institute of Sweden.

#### For further information contact:

Rachel Sharp  
Project Manager - HyTrEc  
Aberdeen City Council  
Business Hub 4  
Marischal College  
Broad Street  
Aberdeen  
AB10 1AB

[hytrec@aberdeencity.gov.uk](mailto:hytrec@aberdeencity.gov.uk)

Tel: +44 (0)1224 522525



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