

## **SCOTLAND'S HYDROGEN FUTURE CONFERENCE**

### **MINISTER FOR ENTERPRISE, ENERGY AND TOURISM - SPEECH**

#### **Introduction**

Ladies and gentlemen, I'm delighted to join you all this morning. I'd like to begin by thanking May East and her colleagues at CIFAL Findhorn for organising this conference.

And can I take the opportunity to recognise the wider activities of CIFAL Findhorn, which has established itself as a key partner in the global campaign to promote sustainable practices.

I'd like to extend those thanks to everyone taking part in and sponsoring this inaugural hydrogen and fuel cells event. I'm a great believer in the value of bringing people together to make contacts, share ideas and create opportunities.

This event also reflects one of the key themes of this year's Homecoming celebrations – the need to look forward – to the opportunities of the future, and to Scotland's place in an emerging global industry.

And it's clear that Scotland's hydrogen and fuel cells sector is doing just that. Members of SHFCA [Scottish Hydrogen and Fuel Cells Association – pronounced '*shifca*'] gave an excellent presentation to the Forum for Renewable Energy - FREDS - in January this year.

I co-chair the FREDS group, which brings together key voices from Scotland's renewables sector to work in partnership with government and other agencies. I saw the presentation as an important step in the development of a confident and coherent message from the sector. About the benefits of hydrogen and fuel cells, and their potential role in a low carbon economy.

That process continues with events like this one, and it's clear that the sector has gathered momentum throughout the year. Through the continued growth of SHFCA. Through its engagement with the Scottish Government, the Enterprise Agencies and the wider renewables sector. Through the innovative projects you'll hear about over the next two days. And through the prominence given to hydrogen and fuel cells in our Renewables Action Plan.

I'll say a bit more about the Action Plan in a moment. First I'd like to set our renewables strategy in the context of Scottish priorities on the two big areas of climate change and energy.

## ***Strategic Objectives***

Climate Change and energy security present two of this century's great global challenges. We have to reduce carbon emissions in a world where fossil fuel reserves are finite, and often held in regions affected by political instability.

As an energy-rich nation with a long history of innovation and energy expertise these are issues which Scotland is helping to shape on the world stage.

Scotland is determined to act as a model of best practice in tackling climate change. To influence the international community to agree an ambitious new treaty in Copenhagen in December.

As I am sure you know, Scotland's Climate Change Act sets a target to reduce emissions of greenhouse gases by at least 80 per cent by 2050.

We are committed to early action, and to delivering the biggest achievable cuts in emissions over the next decade. The Act sets an interim target to reduce emissions by at least 42 per cent by 2020.

Meeting these ambitious targets will be a huge challenge for us all - individuals, business and the public sector. At the same time, the global market for low carbon technologies will be massive if the world acts on the scale required.

Scotland's Climate Change Delivery Plan sets out our high level options to meet our emissions targets. It envisages largely carbon-free electricity generation by 2030, using renewables complemented by fossil fuels with carbon capture and storage.

And largely de-carbonised heating through a combination of energy-efficiency and a massive increase in renewable or low carbon heating.

### Energy Strategy

Few sectors present the scale of opportunity for Scotland as energy, which is central to the Scottish Government's focus on economic recovery and our core purpose in government of increasing sustainable economic growth.

In February this year, we announced 10 Energy Pledges in support of our Economic Recovery Programme. The actions form a coherent approach to energy issues in Scotland and range across the key areas of energy generation and transmission, energy efficiency and transport.

The actions support the main themes of our Economic Recovery Programme;

- Jobs and communities;
- Education and skills;
- Innovation and industries of the future.

Following on from the Energy Pledges the Scottish Government is spearheading an enormous range of activity to drive the transition to a low carbon economy.

This includes;

- Developing our Energy Efficiency Action Plan;
- The Renewable Heat Action Plan, which will be published in October;
- Developing a routemap for Carbon Capture and Storage by the end of 2009; and

- The Low Carbon Vehicles consultation, which is running until 2 October;

This includes hydrogen powered vehicles, and explores some of the opportunities to stimulate their uptake and the need for efficiency improvements to these and other alternatively powered vehicles.

## **Renewables Action Plan**

However, the first of our Energy Pledges centred on producing Scotland's Renewables Action Plan.

That Action Plan was published in July and sets out the collective actions to be taken by the Scottish Government, the private sector and public bodies to achieve our renewables ambitions for Scotland.

That includes meeting a 20% share of Scotland's overall energy demand from renewables by 2020.

It means ensuring we secure the necessary investment in infrastructure, supply chain and skills across the full range of technologies to bring jobs and export opportunities to Scotland.

The progress made by our renewable energy sector over the last 2 years has been substantial;

- We have taken action to speed up the planning process, and have approved 25 new renewables projects since May 2007 – bringing massive levels of private investment to the Scottish economy.
- The Crown Estate has awarded 10 Exclusivity Agreements for offshore wind sites in Scottish Territorial Waters – with the potential to generate up to 6 gigawatts of electricity.
- Last December the European Commission earmarked the North Sea supergrid as a strategic energy priority for Europe.
- And the new Scottish European Green Energy Centre in Aberdeen will play a pivotal role in putting Scotland at the forefront of European innovation, research and development in low carbon energy.

That pace of change demands a constantly evolving framework. So we will build on the strong relationships we have established across the renewables sector to ensure that

the Action Plan is updated on a regular basis to reflect industry needs.

At the heart of the Action Plan are routemaps for the development of all key sectors, from delivering a major increase in renewable heat, to creating a world leading marine energy industry.

## **Hydrogen and Fuel Cells in Scotland**

The Green Hydrogen and Fuel Cell route map recognises the cross-cutting benefits these technologies can offer. From enabling greater renewables penetration, to greater energy security in remote areas, to low carbon transport, these technologies have enormous promise.

The task ahead is to turn that vision into reality. Scotland must act now to capitalise on its niche advantage of developing solutions in rural and remote communities seeking better energy security and mitigation of fuel poverty.

Some of that vision has already been demonstrated in the projects supported under our Scottish Hydrogen and Fuel Cells Support Scheme.

A total of 7 projects were supported under the scheme, receiving total funding of £1 million to demonstrate renewable hydrogen and fuel cell technology in Scotland.

The projects covered a diverse range of technologies and applications. There were 5 demonstration projects and 2 research and development projects. The demonstration projects ranged from a hydrogen powered house in Berwickshire, through to the production of green hydrogen for use in a hydrogen refuelling station on Stornoway.

The research and development projects involved the development of a solid oxide fuel cell and a fuel cell power management system. They used a wide range of renewable energy sources, including wind, solar and hydro.

## **Demonstration Projects**

I want to briefly mention a couple of other examples of projects currently being brought forward:

- The soon to be completed Hydrogen Office project, based in Methil, Fife. The work to be undertaken at these facilities will help to educate consumers and the industry

alike, and will play a major role in helping to change the way we think about, use and store energy in the future.

- Plans are also progressing for an ambitious transport initiative in North East Scotland using hydrogen and fuel cell technologies in public transport and postal services. This could include 3 hydrogen refuelling stations along the route from Aberdeen to Inverness via Peterhead. The Scottish Government recognises the efforts to create a hydrogen transport corridor in its route map for the sector. Tom Read will tell us more about this in his presentation later today.

## Going forward

These are real projects happening on the ground in Scotland. I would like to congratulate everyone involved for their enthusiasm and dedication in making them happen. The task now is to build on this progress. The routemap provides that focus.

I am pleased to report that work has started in earnest. We are setting-up Hydrogen and Fuel Cells Implementation Group - a sub-group of FREDS, whose key task will be to drive forward delivery of the Routemap.

This industry-led group will be chaired by Scottish Enterprise and have representation from across the sector in Scotland, as well as environmental agencies and government.

A key task in the short term will be for the group to identify and overcome barriers currently facing the sector. It will also identify the next steps towards commercialisation and feed relevant actions back into the Action Plan.

## **Energy Storage**

We recognise that renewable technologies as well as the energy sector as a whole could be greatly enhanced by advances in energy storage.

Therefore, another key piece of work underway is an assessment of energy storage requirements for Scotland. The use of Hydrogen and Fuel Cells will of course be covered in the study.

The study will contribute to the evidence base on energy storage and management technologies and am sure will be warmly welcomed by the sector.

## **Conclusion**

I'd like to draw my comments to a close by again thanking the organisers for this opportunity and I hope that the contacts and information sharing made possible by this event lead to great things for Scotland's Hydrogen and Fuel Cell sector.

I hope I have given you the confidence that the Scottish Government is fully committed to helping the sector realise its full potential. But we cannot act alone. A co-ordinated effort between the private and public sectors, universities and enterprise agencies will be key.

The implementation group will be the focus for driving that work forward and the Scottish Government looks forward to working with you in ensuring that Scotland achieves its potential in this emerging global sector.

Thank you.

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