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# Supporting the renewable hydrogen and fuel cell sectors in Scotland

James P Thomson

Renewables and Consents Policy



## Policy background

- Hydrogen and fuel cells part of renewable energy policy
- Hydrogen must be sourced from renewable energy
- Focus of policy to date on:
  - Achieving electricity generation targets
  - Carbon reduction
  - Security of supply
  - Reducing fuel poverty



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## Developing a strategy

- Forum for Renewable Energy Development in Scotland (FREDS) Hydrogen Energy Group
- Members included industry, academia and public agencies
- Published report “Hydrogen and Fuel Cell Opportunities for Scotland” in 2006



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**HYDROGEN AND FUEL CELL  
OPPORTUNITIES FOR SCOTLAND**  
THE HYDROGEN ENERGY GROUP REPORT





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## FREDS conclusions

- By 2020, the hydrogen and fuel cell sectors:
  - Create 10,000 jobs in Scotland
  - Contribute £500 million in GVA to Scottish economy
  - 50 leading demonstration projects in Scotland
  - 20% of renewable installations will have downstream hydrogen production and storage



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## FREDS recommendations

- Four main recommendations are:
  - 1. Support for further demonstration projects in remote or off-grid communities;**
  - 2. Projects are funded to support fuel cell design or production;**
  - 3. Projects are funded which are currently at the R&D stage, to be demonstrated commercially;**
  - 4. An inter-university research centre be established.**



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# Scottish Executive response

- **Renewable hydrogen and fuel cell support scheme**
  - £1.5 million for renewable hydrogen over next year
  - Maximum £250,000 per project
- **Key objectives**
  - To increase the use of renewable hydrogen & fuel cell technology to promote the development of a diverse renewables supply;
  - To enhance grid stability;
  - Maximise the economic benefits from renewables utilising renewable hydrogen or fuel cell technology;
  - To increase carbon savings.



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## Renewable hydrogen scheme

- Very successful scheme. Over subscribed by nearly 50%
- Seven projects selected
- Organisations receiving support include: Sigen, Berwickshire Housing Association, Western Isles Council, Lews Castle College, TUV NEL, St Andrews Fuel Cells and Pure Energy Centre
- Covering both stationary and vehicular uses
- Good geographical coverage of Scotland



## Some of the projects

- **Western Isles H2 SEED**
  - Develop a hydrogen infrastructure on Lewis using hydrogen produced from biogas
  - Both stationary and vehicular uses
- **Pure Energy Centre**
  - Project in partnership with Fuel Cells Scotland
  - Installation of CHP fuel cell units in non grid connected homes
- **Not just the support scheme**
  - Schools outreach work 'Hydrogen Challenge' with Careers Scotland and Sigen



## What next?

- Timing not great
- Scottish Executive remains committed to renewable energy
- Over to you
  - Views on future support
  - How much? Which areas or technologies?



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