Borders Energy Summit

28th and 29th January 2006

Heriot Watt University, Netherdale, Galashiels

Report

Contents

Introduction

Energy has been a common theme running through much of my constituency casework. Damp homes, controversial wind farm applications, lack of central heating and proper insulation in many older people's homes. I rarely go through a week when I do not receive correspondence from a constituent raising with me an issue relating to energy: it is a massively important factor to all of our day to day lives. Whether it is cost of energy bills or the bigger issue of climate change; it is vital that we get it right.

I believe now is the time for the Borders to take its first steps towards creating its own energy strategy: a strategy that harnesses the Borders massive potential for renewable energy and brings together local key players in securing the energy future of the region. Last year I came to the decision that it was important to convene all the leaders of local public sector agencies, as well as experts in the field, business leaders and decision makers to consider approaches to energy policy in the Borders. The first ever Borders Energy Summit came together as a result. Taking place over two days, the summit comprised a 'strategic day' with participation from 50 key decision makers and included presentations from Cornwall and Orkney where similar projects are well established. The second day was a "renewable energy fair" which allowed the public to hear from renewable energy experts and to meet renewable energy businesses. This report outlines the discussions and the decisions made during the strategic day and provides feedback on the public response to the renewable fair.

That just leaves me to say a few words of thanks to those people who helped make the first Borders Energy Summit such a success. I am grateful for the hard word that Ian Lindley, Director of Planning and Economic Development at Scottish Borders Council has provided, along with the willing assistance of Mark Walton at Borders Construction Industry Forum, Pip Tabor of the Southern Upland Partnership, Stefan Kay and Patrick Corbett of Heriot Watt University and Roger Hemming of the Rural Partnership. I would also like to say thank you to the experts and local agency representatives who contributed to such an interesting and valued debate on the strategic day. Another thank you must go to the staff of Heriot Watt University whose valued contribution to the smooth running of the summit overall made the event such a success.

Jeremy Purvis MSP

Galashiels
April 2006

Chapter 1: Energy Summit Outline of events

Saturday 28th January

A Catalyst For Change "Strategic Day"

0930 Register and Coffee

Keynote address and presentations:

1000 Welcome address by Jeremy Purvis MSP

1015 Keynote address by Tim German, Director of the Cornwall Sustainable Energy Partnership

1045 Local successes
Laura Cregan, Berwickshire Housing Association and;
Ian Lindley, Director of Planning and Economic Development, SBC

1140 Learning from elsewhere
Dr Sandy Kerr, Orkney Renewables Forum

1200 Lunch

1300 'Solution Groups': Break out groups to discuss specific areas where action is required to bring about change

Housing	Chaired by Peter Lee, Chief Executive, Eildon Housing Association
Borders Potential	Chaired by Professor Patrick Corbett, Heriot Watt University
Good for Business	Chaired by Alastair McKinnon, Director of Enterprise Development, Scottish Enterprise Borders
Public Sector	Chaired by Ian Lindley, Scottish Borders Council

1430 Coffee

1445 Reports from Solution Groups and discussion

1600 Close and the way forward by Jeremy Purvis MSP

Sunday 29th January

Renewable Energy Fair
Organised by the Southern Upland Partnership and Scottish Borders Rural Partnership this event was an opportunity for exhibitors in renewable energy to show their produce to the public and give the public the opportunity to ask questions and discuss options in renewables. Topics of discussion included

household energy efficiency; community energy; education for change; and possibilities for the Borders.

Chapter 2: Strategic Day: Presentations

The morning session of the strategic day consisted of presentations from keynote speaker Tim German, Director of Cornwall Sustainable Energy Partnership. Speeches were also made by Laura Cregan, Berwickshire Housing Association, Ian Lindley, Director of Planning and Economic Development, Scottish Borders Council, Dr Sandy Kerr, Orkney Renewables Forum, and Jeremy Purvis, Tweeddale, Ettrick & Lauderdale Member of the Scottish Parliament. This is an outline of those presentations and a biography of each speaker:

Welcome Address
Jeremy Purvis MSP

Biography
Jeremy was born in Berwick in 1974 and is the youngest constituency MSP, elected aged 29 as Liberal Democrat MSP for Tweeddale, Ettrick and Lauderdale in May 2003. He is Justice and Home Affairs Spokesman for the Scottish Liberal Democrats. Jeremy went to school in Berwick and he then studied Politics and Modern History in London, graduating in 1996.

While at university Jeremy also worked for the ELDR (Liberal) Group in the European Parliament and Liberal International. On graduating, Jeremy worked full time for Sir David Steel in the House of Commons and then ran his office in the House of Lords. In 1998 he moved to Edinburgh to work for a parliamentary affairs company and, in 2001, he established, with a fellow director, his own strategic communications consultancy, advising clients on communications.

Jeremy has wide experience of working on Borders issues. When working for David Steel in the House of Commons he conducted research on the local economy and assisted in constituency casework. He continues his strong interest in the local economy as well as being the leading campaigner for the Borders Railway.

The Welcome Address
"A warm welcome to you all and thank you for coming to the first ever Borders Energy Summit. Today marks the first step in what I hope to be a new energy future for the Scottish Borders with sustainable and renewable energy at its heart. I would like to thank Heriot Watt University for being our hosts today. I am delighted not only that this is the University of Patrick Corbett and his colleagues, doing fascinating research in Petroleum and other technologies, and Stefan Kay, a member of Scottish Enterprise's forestry cluster doing excellent work promotion of biomass as a fuel, but it is also the home of the School of Textiles.

With the industrial revolution, the Borders textile industry mills were powered by the Tweed and the Teviot from Peebles to Hawick. When coal for the boilers was needed, Lady Victoria Pit brought coal from Newtongrange to the Borders on the Waverley Railway Line. In 2006 as look to reopen the Borders Railway, we should also be thinking about where our energy comes from, who generates it, where it is generated and how it is generated.

Much of my constituency casework is energy related; damp homes, controversial wind farm applications, lack of central heating and proper insulation in many older people's homes and, without too much of a stretch of the imagination – wheelie bins! Together with the policy issues that I work on from nuclear to recycling, I felt that the time was right to ask if the local New Ways Partners, the community planning body in the Borders, would work with me in arranging a meeting of policy makers and opinion formers and experts in their field, to take a closer look at this issue of energy. I am delighted that this meeting is taking place and I want to register my deep gratitude to Mark Walton of Borders Construction Industry Forum in particular for doing so much preparatory work. Pip Tabor and the Southern Upland Partnership are adding to today with an excellent series of seminars, workshops and exhibitions tomorrow; free for anyone to come and engage in the debate.

Ian Lindley at Scottish Borders Council has provided full support, as has Hugh Muschamp at the Local Energy Support Programme, and I am very grateful to them both. I am also particularly grateful to Patrick Corbett and Stefan Kay at Heriot Watt University. Overall I think that with the support of all the New Ways Partners, this summit can be a real catalyst to move forward.

If I were Ross Finnie the Environment Minister I would be saying that it is vital for local agencies to work together and I think the organisation of this summit today is testimony of that. Ross would also be saying to you that the Scottish Executive is making real achievement and commitments in sustainable energy. We have set an ambitious target of achieving 40% of electricity from renewable energy by 2020 and are already making significant progress towards achieving that goal. We have set the target of 55% recycling by 2020 and since 2002 recycling levels have doubled. The Scottish Executive has further developed a £20million fund for public sector energy efficiency improvements with the expectation of saving £70million as a result making significant cuts in greenhouse emissions.

We are delivering sustainable economic development with the Green Jobs Strategy, introduced by my previous Scottish Liberal Democrat leader, Jim Wallace. We have awarded £143million through the Strategic Waste Fund to support local authority recycling efforts. We have embarked upon the biggest ever investment in public transport infrastructure in Scotland including, not least, the Borders Railway! The Scottish Executive has set the highest insulation standards for new homes in the UK and among the highest in Europe. The Warm Deal programme has provided insulation in over a hundred thousand homes, reducing fuel poverty and energy use. We are delivering, through the Environmental Assessment (Scotland) Act 2005, radical SEA requirements for public sector plans, policies and programmes, ensuring that their environmental impact is assessed at an early stage.

The fact is that in Scotland we are beginning to see a change in attitude towards energy: not least because Scotland has massive resources for

renewable energy. We have marine energy expertise and the manufacturing capability to develop a world beating marine energy industry. There are 2000 jobs directly employed in renewable energy in Scotland, including around 1,200 in wind energy. Vestas in Campbeltown have invested £12million in Scotland because of the positive attitude to wind power and the activity of the industry, employing 210 people in Campbeltown, 50 throughout the rest of the UK and Ireland and supporting 20 jobs in haulage. There are 60-70 jobs in Stornoway, 60-70 jobs in Nigg and around 50 jobs in Aberdeen in the supply industries. The Danish wind industry employs at least 16,000 people – we are a long way off from that but these are statistics we cannot ignore.

Nor can we ignore the fact that homeowners can save up to 30% on their electricity bills through solar cells, and up to 70% on their water heating bills through the use of solar panels. Domestic wind turbines can reduce on an electricity bill by 15%. There are already 50,000 solar water heating systems installed across the UK and this can only improve. Furthermore and as previously mentioned, new homes in Scotland have among the strictest insulation regulations in Europe. Scottish new build homes are therefore 25% more energy efficient than older homes as a result.

There is enormous potential for renewable energy in Scotland and the Scottish Borders is no exception. Biomass, wind, ground source heat, solar – the Scottish Borders has all of these resources and can take a role in developing theses energy technologies. There are opportunities to be had and markets to expand and Scotland, and the Scottish Borders, can lead the field. Locally there are successes in energy, and you will hear more about this later this morning from Laura Cregan and Ian Lindley. In my view there is a win-win situation for businesses and the environment in Scotland and the Scottish Borders. In 2004 Scottish Enterprise Borders hosted an energy efficiency seminar in the Borders for local businesses, on which it should be commended. A textiles company in the Borders now saves £15,000 a year after reducing energy consumption, at no cost to production. A food processor in the Borders has doubled production, without increasing energy costs, by investing in new freezer technology. A business has reduced waste disposal costs to zero by recycling and minimising waste.

A representative of Peter Scott Knitwear said: *"These are really significant savings we have made by changing boiler systems and I would recommend all manufacturing companies in the Borders to take advantage of Scottish Enterprise Borders' Energy Survey."* The link between the public sector and businesses will make a real difference.

But of course we can do more, to break down barriers that we identify today and move towards an energy strategy for the Borders. I want an energy strategy to be radical and ambitious and, above all, to make a difference. What is stopping the Borders from effectively coming off-grid? Can we generate our own energy with an appropriately sited wind farm or through waste and biomass sold and brought back and is this enough? Can we have

Borders energy for Borders people? Can we reduce fuel poverty in the Borders? (Currently at 17% of households) Today we will have the opportunity to ask these questions, look at energy alternatives, discuss the renewable energy potential of the Borders and, what is more, create a solution, a step forward for the Borders energy future.

Thank you."

Keynote Speech
Tim German, Director, Cornwall Sustainable Energy Partnership

Biography
Tim has a background in initiating and developing partnership working in the arts, heritage, education and energy sectors. In Cornwall his work has resulted in the Cornwall Sustainable Energy Partnership (CSEP), which involves over 70 organisations including all local authorities, the health sector including all primary care trusts, housing associations, businesses, voluntary and community organisations, educational establishments, and the environment and renewable energy sectors. He has taken the CSEP from its inception to being the model for energy partnerships in the UK and Europe. The European Commission has chosen CSEP as the best practice example of sub-regional energy partnership working in Europe.

One of the major programmes of the CSEP is Home Health, a domestic energy and health programme, which has successfully helped Cornwall to achieve an LPSA target and was the reason for winning the International Ashden Award.

Tim sits on various national panels including the Parliamentary Warm Homes Group and the Sustainable Energy Partnership that meets in Parliament. He is also a member of the Energy Steering Group for CPMR (a group of 150 European regions) and has been instrumental in developing their energy policy. Tim's eclectic background included thirteen years spent as a professional opera singer, singing over 40 roles across the world.

The Keynote Speech
Tim German's presentation was entitled "Climate Change & Energy Sustainability: Today's Challenge or Opportunity?" Rapidly changing weather patterns, high gas prices and increasingly threatened imported energy, high transmission costs, high levels of fuel poverty and draining energy profit makes climate change and energy sustainability a real challenge. However in Cornwall they have managed to create a partnership that works together to find the opportunity from climate change and energy sustainability; including diversification of the energy market, increased funding opportunities and more demand driven opportunities.

In July 2004 the Energy Strategy for Cornwall was launched and signed by 72 local agencies and organisations. The Cornwall Sustainable Energy Partners include all local authorities, all health trusts, all Local Strategic Partnerships, housing associations, business enterprise organisations, regional development agency, business representative organisations, economic &

agricultural forums, regeneration companies, charity and voluntary organisations, the LEA, 'local' universities; environmental organisations, renewable energy and energy efficiency organisations.

The Cornwall Energy Strategy places energy at the heart of sustainable development and commits all partners to work together to achieve energy sustainability for Cornwall, its communities and businesses. Emphasis of this strategy is placed on sustainable development, defined as *"Development which meets the needs of the present without compromising the ability of future generations to meet their own needs."*[1] Furthermore the Cornwall Energy Strategy and Action Plan was intended to coincide with the UK Sustainable Development Strategy 2004 which states: *"For the future, we need ways to achieve economic, social and environmental objectives at the same time, and consider the longer term implications of decisions."* During the presentation Tim German highlighted the importance of the Energy Partnership working for all three aspects of economy, society and environment in achieving energy sustainability: only through the partnership and agreement of all three aspects would the energy strategy be successful and this was important for any region wanting to go down this route.

According to the Cornwall Energy Strategy 2004, sustainable energy in Cornwall would encompass the reduction of energy demand (particularly for energy deprived from fossil fuels); improve the efficiency with which energy would be used, particularly in buildings, industrial processes and transport; and generate more of Cornwall's energy supply from renewable energy sources. Tim German stressed that the problem of climate change could not be ignored and action now was vital.

He provided an example of a multi-agency approach to increasing household energy efficiency in deprived and isolated communities in Cornwall. So far more than 4000 homes have received insulation and/or heating measures under the Home Health initiative and, in some areas, 91% of homes surveyed required measures. As a result of working in partnership to improve the energy efficiency of homes there have been significant improvements in the well-being of residents in the most deprived and isolated areas; income has been redistributed back into the local economy and has provided local employment; furthermore it has produced a 35% increase in annual carbon savings in the domestic sector.

Tim German's presentation then went on to outline the areas of opportunity in sustainable energy in Cornwall including: small scale, locally resourced biomass energy generating plants; oil seed crops being used for bio-diesel (this includes a project to create transport fuels for diesel vehicles from 5% mix Kerrier DC, increasing to 35% mix by summer 2006) and a new design of Ford Focus which runs on 'Flexi-fuel'; anaerobic digestion plants (process of treating biodegradable material in the absence of air to produce methane

[1] Our Common Future: The Brundtland Report (World Commission on Environment & Development 1987)

gas); small scale renewables and energy efficiency projects such as domestic wind turbines and solar panels; regeneration projects and energy saving homes; and in summer 2007 the Partnership intends to launch The Wave Hub, a marine renewable project for energy sector development and job creation.

Tim German went on to compare the similarities between Cornwall and the Scottish Borders. In particular he highlighted the similar rurality of the regions, the particular individuality and strong communities in both areas, and furthermore the similar need in both Cornwall and the Borders for self-sustainability. Furthermore he highlighted the benefit of the Scottish Borders having just one unitary authority in Scottish Borders Council; in comparison to Cornwall which must coordinate one county and six districts.
Tim German concluded his presentation with the following recommendations to ensure that energy is placed at the heart of Sustainable Development and Regeneration were the Borders to follow in the example of Cornwall:

1. Promote sustainable energy – not just energy efficiency or renewable energy separately;
2. Priorities sustainable energy in regeneration;
3. Carbon savings included as target in regeneration;
4. Factor in 'energy' at an early stage;
5. Public sector needs to take the lead;
6. Develop and operate an Energy Saving Company approach;
7. Provide training, education and awareness raising;
8. Utilise local expertise and develop 'demand-led' business.

Local Successes
Laura Cregan, Berwickshire Housing Association

Biography
Since graduating from Strathclyde University with a degree in Manufacturing Systems Engineering in 1992, Laura spent 10 years working in the private sector, initially as an Industrial Engineer with Babcock Ltd, and latterly as a General Manager of a small telecommunications company She then joined the Scottish Executive Environment & Rural Affairs Department as a Senior Policy Administrator, with responsibility for Aquaculture policy development in the areas of fish health, welfare and the environment.

In 2004 Laura joined Berwickshire Housing Association Development department as Senior Project Officer, taking over responsibility for renewable energy system's project management, business development and marketing for the Association's new property development subsidiary, Berwickshire Ltd.

The Presentation
Laura Cregan's presentation outlined the many successes Berwickshire Housing Association had achieved in sustainable development locally. The presentation began with a breakdown of who Berwickshire Housing Association are: formed by stock transfer in 1995 (the first in Scotland), a Registered Social Landlord (RSL) with Communities Scotland, registered as

an Industrial and Provident Society (not-for-profit) and winners of various National Awards for sustainable renewable energy technology. Berwickshire Housing Association's aims are the provision of excellent and affordable housing but also the provision of housing services appropriate to people who would benefit from the Association's help. The Association is made up of an elected voluntary committee of 16 people including tenant members, Scottish Borders Council members and ordinary members. Their resources comprise a staff of 120 people, a turnover in excess of £4million, assets in excess of £35million, and 1700plus properties throughout Berwickshire, Northumberland and the Scottish Borders.

With regards sustainable development Berwickshire Housing Association has been a leader in its field. Currently their sustainable development portfolio includes Level II Sun Spaces and whole house ventilation, Retro-fitted Solar Water Panels and Solar Slates, a Level III Experimental House with "Intelligent" Sun Space', domestic scale Photovoltaics (PV's), roof-mounted domestic Wind Turbines, and Domestic Fuel Cell technology.

Laura Cregan highlighted particular aspects of these developments. Firstly the Solar Slates and Solar Water Heating that provides for 100% solar (PV) powered, sustainable, automatic and free for pre-heated air and hot water in homes. The Association currently has ten retro-fit installations in operation and tenant feedback has been positive. Moreover, as part of the "Warmth for the Millennium" initiative, the Association is installing 50 Solar Slates in fuel poor households.

The Association has also installed six freeze tolerant solar panels in homes in Coldingham and Duns that provide whole house ventilation with excess energy going into a hot water cylinder. The solar panels allow user control of ventilation output and provide a heat recovery system. Laura Cregan then went on to talk about the Level III Experimental House with "Intelligent" Sun Space, 4kWp Photovoltaics and a domestic Wind Turbine. The Level III House develops "passive" Sun Space into an "Intelligent" version with automatic blinds to raise the temperature in the apex of Sun Space. The House has increased efficiency of internal solar water collectors, incorporates a winter/summer ventilation system with heat recovery, and provides a Hygrothermal Heat Storage with Sun Space.

In her presentation Laura Cregan also discussed the Government's Renewable Energy Programme or "DFT2". The purpose of this programme is to provide information on the building, operating performance reliability and maintenance of building integrated PV systems. The DFT2 programme is one of 23 in the UK and one of four in Scotland – delivering 36kWp over 17 properties. Tenants are involved in the process through Customer Displays; in the case of Berwickshire Housing Association this is through the promotion of the Green Energy User Club.

Following on from this Laura Cregan continued to talk about the sustainable development projects currently underway by Berwickshire Housing Association. One project is the Swift™ Rooftop Wind Energy System which has a rated power output of 1.5kW, a rotor diameter of 2.1meters and an estimated annual energy of c.4000kWh. The price of the wind energy unit including the required costs needed in roof strengthening (especially in timber framed houses) is costed at £10,000. The System is connected either to the grid or directly to a hot water cylinder and each turbine has a 'hot box' which monitors output. In March 2005 three domestic wind turbines were installed by Berwickshire Housing Association (one in Whitsome) however it was pointed out that, so far, no significant generation had been monitored as they were awaiting the replacement of new blades. The Association is also ensuring that, where funds allow, all new build properties are undergoing the strengthening of their roof structures to enable turbine installation at a later date.

A further project mentioned was the development of hydrogen fuel cells which are 'on-grid' connected and produce 1.5kWe, 2.9kWth. A fuel cell has thermal storage of 5000litres and Berwickshire Housing Association was the first to install a domestic unit in the UK and Europe. The current installations are undergoing a 12-month monitoring exercise to inform future deployment within new and existing stock and development of level IV hydrogen fuel cell is currently underway in Eyemouth. Also discussed were the Sunspaces operational in the Association's housing stock. Laura Cregan outlined four different Sunspaces beginning with Sunspace 1 which is the simplest, to Sunspace 4 which is most advanced. Sunspace 1 includes a glazed roof, no windows and no heat extraction with a temperature range (in July 2005) of 25.7 – 53.4°C. Sunspace 2 has a tiled roof with low and high level windows, glazed screens and a temperature range (in July 2005) of 23 – 34.5°C. Sunspace 3 has a glazed roof and screens with a thermostat-controlled high level window, with a temperature range (in July 2005) of 23 – 43.4°C. Sunspace 4 has no roof sunspace but instead has an elevation with a fan transferring warm air into the living space. This sunspace is still being developed and as yet the Association has no confirmed temperature range.

Other initiatives undertaken by the Association include a 20kWp integrated PV system installation to a community-owned healthy living centre and Complete Solar Roof water heating that will produce c.12,000 kWh per annum for domestic hot water and underfloor heating.

Laura Cregan concluded her presentation by highlighting the future work by the Association in sustainable development. Further development of renewable energy technology applications is to take place on hydrogen fuel cell technology, ground source heat pumps and biomass/solar hybrid power systems. She also stressed the importance of community and tenant support and participation in these projects and emphasised that the Association is also looking into shared equity and ownership options as well as further community involvement in their schemes.

Ian Lindley, Director of Planning and Economic Development, Scottish Borders Council

Biography

Ian has been the Director of Planning and Economic Development for Scottish Borders Council since 2004. Since graduation Ian has gained experience in the public sector in a wide range of areas including planning, regeneration and development.

A member of the Royal Town Planning Institute and, more recently, the Chartered Management Institute, Ian is involved with a number of influential groups. Currently Ian is involved with the Planning Officers Society (and Chairs the Sustainability Group) and the Faraday Partnership (an Industrial Steering Committee integrating renewable energy and buildings). He was previously on the Steering Group EPSRC Institute for Energy and Sustainable Development at De Montfort University.

The Presentation

Ian Lindley's presentation centred on Scottish Borders Council's approach to local energy sustainability and planning and was broken down into four categories: Energy Conversation, Scottish planning, Scottish Borders planning, and Scottish Borders Council's Corporate Plan.

Under the first category of Energy Conversation Ian Lindley outlined the need for further improvement in building regulations, construction standards and white goods. In particular he highlighted the tightening of building standards and regulations since 2003 under the Building (Scotland) Act and the further tightening of standards to come under the 2007 Building Regulations.

Under the second category of Scottish Planning Ian Lindley highlighted the areas of consideration required in planning. These include locations, layout, elevations, landscape, land use mix, and Government regulations and planning policies– namely PPS 22 versus NPPG6/SPP6.

In the local context, and under the third category of the presentation, he outlined the main planning considerations for the Scottish Borders, including National Electricity Targets, local onshore wind approvals, other renewables, and supplementary policy. In his view there was a real need to know and understand what energy demand there was in the Borders, particularly for business. This was important to take forward any energy strategy.

Ian Lindley went on to discuss Scottish Borders Council's corporate actions in energy. This included Energy Conversation and Procurement and planning decisions on various energy conversation applications. He stated that, at the time of the summit, Scottish Borders Council had approved five wind farms, supplying 115MW energy. Of 14 other wind farm site applications the Council had refused three, one was withdrawn by the applicant, one was being scoped by the authority, and the remainder are all approved awaiting construction. Of those wind farms approved the power output equates to

110MW energy. Those applications refused planning permission by Scottish Borders Council were due to reasons impacting on the environment.

Further corporate actions performed by Scottish Borders Council included the handling of Scottish Executive Grants, lifetime costings, property reviews, tackling fuel poverty and vehicle fuels. Future energy sustainable projects underway include the 3HS (Three High Schools) programme in Berwick, Eyemouth and Earlston which will incorporate biomass and micro wind energy generation and the 4PS (Four Primary Schools) programme again incorporating renewable energy sources for heating and other uses. A final project is a Climate Change Strategy to set new targets and reappraise funding streams.

In conclusion Ian Lindley stressed the following necessary actions:

1. Changes in awareness, finance and policy;
2. Expansion of the renewables market;
3. Create new job opportunities;
4. Use local materials;
5. Create local energy solutions that must be sensitive to the locality.

Learning from Elsewhere
Dr Sandy Kerr, International Centre for Island Technology (ICIT) and Orkney Renewable Energy Forum

Biography
Dr Sandy Kerr is a Lecturer in Environmental Management with the Institute of Petroleum Engineering at Heriot Watt University. Sandy was brought up in the Borders where he still has strong family ties.

Based at Heriot Watt's Orkney campus since 1993 he has a particular interest in the sustainable development of small island communities and how energy and renewable energy in particular can facilitate this. Sandy is also a Lecturer on the MSc Programme in Renewable Energy from Heriot Watt University.

The Presentation
Dr Kerr's presentation was entitled "Orkney – a community engaging with renewable energy" and outlined the ways in which the Orkney community has adopted a number of renewable energy projects including a Renewables Forum. He began by providing a breakdown of Orkney's economy, environment and its energy resources.

Orkney's economy has 2% unemployment with a GDP that is 77% of the Scottish average. Employment is mainly in agriculture with around 2,300 jobs. The next highest employment area is tourism with around 2,100 jobs. Following these there are around 2,000 jobs in the public sector, 1,000 jobs in transport, 600 jobs in fishing aquaculture and 300 jobs in the food sector. Orkney's environment has a rich marine biodiversity, fertile land and

freshwater. There is much ornithological interest in the area as well as international designations due to the habitats, birds and seals.

The energy resources available in Orkney include wind, wave, tide, bio fuels, others (ground source, waste and photovoltaics) and, most importantly stressed by Dr Kerr, people. Orkney is seldom without wind and has up to 60% wind-efficiency. The landscape has adapted as a result of this and is therefore an excellent resource to take advantage of. A major wind farm development is Burger Hill which began in 1951 with a 100kW device. In 1983 250 and 300kW devices were set up. In 1987 a 3MW device was installed and this is largest in the world. From 2002 to today offshore devices are being installed which produce up to 2.75MW of energy. Orkney also has a number of small cluster commercial wind farms, with 20MW currently installed (including those at pre-installation) and another 20MW are at the planning stage. These small cluster commercial wind projects have the potential capacity of 100-200MW.

A number of the Orkney Islands have invested in community wind projects. One such project is the Westray Development Trust, which has invested in a micro wind project, producing 6kW of energy for the island. Other examples include Holm Hall, producing 15kW, and the Burray Project, producing 850kW of energy.

Dr Kerr also outlined the enormous tidal energy surrounding the Orkney Islands. With a number of tidal flows between the islands, some up to 12 knots on the Pentland Firth, tidal energy is a predictable resource with which they can take advantage. Orkney is also well placed with regards the North Atlantic tidal gyre and the North Sea tidal gyre. Orkney also has the man-made tidal feature of the Churchill Barriers which were created during World War II to protect the British fleet, and which have had a significant impact on the tidal flow around the islands.

Orkney can also take advantage of the significant wave energy around the islands. In July the average wave can reach 1meter. In February the average wave can reach above 2meteres, and in extreme weather waves have been recorded above 12meters. With approximately 7MW of energy from 100meters of wave power this is a significant resource.

Alongside wave, wind and tidal power, Orkney is developing renewable energy through bio fuels. An example of this is work undertaken in bio-digestion and bio-diesel by Westray Development Trust. The UHI Millennium agronomy institute is also doing research in willow trials. Overall Orkney has an extremely diverse renewable energy resource: wind, biomass, heat pumps, micro wind, photovoltaics, wave and tide. Most importantly however Dr Kerr emphasised that Orkney's strongest resource was people. Without the people in the island communities learning how to engage in renewables and those who are taking part in the research and development of these technologies, renewable energy would mean nothing. It is people that are

ensuring that there is a 'joined up' Orkney with regards the renewable energy forum and taking forward these technologies in the community. Furthermore Orcadians are now spread all over the world taking forward the Orkney experience in renewables in project management, oil and gas, electrical contracting, research and development, environmental impact assessment, marine service and power systems procurement. Orkney is leading the field in a global context.

The Orkney Renewable Energy Forum (OREF) is comprised of 40 organisations and businesses including Scottish Renewables, the RSPB, AMEC and Scottish Natural Heritage to name a few. The Forum encourages renewable energy throughout the islands. It identifies sustainable options to energy, facilitates debate, lobbies on strategic issues, and acts as a consultative body in renewable energy. As well as this, Orkney is involved in renewable energy research and development, servicing the renewables sector and education in energy. One such example is The European Marine Energy Centre Ltd (EMEC Orkney), which is a facility for prototype wind and tidal energy devices as well as developing a standards and certification scheme. EMEC is currently developing a tidal site with five berths, each between 10 and 50meters long. The berths will be grid-connected with a 3.5m/s flow of tide. The site chosen is a sheltered area and it will be operational this year.

In renewable energy education Orkney is also leading the way with the MSc in Renewable Energy from Heriot Watt University through the International Centre for Island Technology. The MSc offers flexible learning applied to the implementation of renewables and offers insight into the environment, various technologies and policy economics. Added to this the MSc programme provides Orkney with an additional 60 jobs.

The development of renewable energy on Orkney is restricted however as there are conflicts in the form of the natural environment, the landscape, the visual impact of renewable energy projects and the scale of development. The International Centre for Island Technology and the Orkney Renewable Energy Forum must therefore plan for the future. This will include a renewable energy resource assessment to inform the debate; physical planning of the islands for draft planning policy; a renewables strategy; and ensuring the continuation of debate on the issue. Big decisions will also need to be made, in particular a grid connection of all energy sites in the Orkney Islands with a 40MW capacity. Another issue Orkney will need to consider is the renewable energy production capacity of the islands (47MW in the summer and 72MW in the winter) and how this would relate to the demand of energy in the summer and winter months.

In conclusion the lessons that can be learned from Orkney include:

1. We need renewable energy;
2. There is no one solution;

3. Commercial developers will find you;
4. You need to organise;
5. Need to find appropriate solutions;
6. Maximise benefits through research and development, servicing and community benefits.

Chapter 3: Strategic Day: Solution Groups

Solution Group 1: Housing

Peter Lee, Chief Executive of Eildon Housing Association chaired this solution group looking specifically at the issues of renewable energy in relation to homes.

During the discussions Mr Lee explained the housing situation in the Borders, the roll of the Registered Social Landlord's (RSL's), their small new build situation and how the private sector housing market has really taken off due to the 'Edinburgh factor'.

The Group decided very early on in their discussions that the main issue was how energy could be conserved in houses, rather than an immediate need to look at different ways of energy regeneration. It was felt that with new build houses it was the private sector that had to be targeted to improve design, but that the cost factor was the main problem.

However, despite a large amount of new build homes the main challenge would be how technology can be used to make the very high percentage of older buildings more energy efficient; and in particular the private sector as there is legislation in force to ensure that RSLs take action. The Group felt that there should be legislation to encourage the private sector, or at least a VAT reduction/removal on relevant materials. The issue of enforcement was considered and whether the carrot or the stick would be best i.e. incentives such as a grant.

However, RSLs are very tightly controlled financially by Community Scotland, and there is no incentive to take risks or be experimental. Risk capital would be needed as being forward thinking and adventurous costs money up front.

Various alternative issues were discussed:

Insulation was a key factor: technicalities were mentioned such as insulation from the outside being much more efficient than inside, and causes less condensation problems. There could be aesthetic problems with that however.

Another factor was cost: thought to be a problem with mental acceptance of paying money for something which will take some time to pay for itself. Particularly discussed was the influence of a 'credit society' and the notion that people do not wish to pay for something now that would only benefit later, and the difficulty in changing people's attitudes in this respect. It was believed that for this to change education would need to be involved at some level.

Energy consumption packages were talked about, as some service companies are operating these. However such packages were not thought to

be a practical way forward for most housing developments, as people like to be flexible and independent.

Also discussed was wind power and the thought that, in rural areas, people liked to be seen as self sufficient; having schemes on a scale that fitted with and benefited the communities would be advantageous. It was stressed that local solutions would be vital.

The Waverley Railway and resulting building programme was also discussed. The group agreed that the new town at St Boswells might be a great opportunity to do something different in energy terms and would be an excellent demonstration project to kick-start the move towards better building for renewables etc.

The group also felt that the Border settlements were strongly individual and competitive amongst themselves, and if one town had a successful project that it might stimulate others to emulate it. This they termed the 'Competitive factor'. It was suggested that a Forum might be able to take this forward, but fears that it might just be another talking shop. Also contractors are already having to pay for Waverley Line contribution so cost factors might be a problem.

The Borders was felt to have a strong identity but was not a self sufficient area like Orkney and Cornwall, as it was too close to Edinburgh. Community solutions therefore might be more suitable and effective rather than a regional one.

The Group felt that with the very positive interactions with Ian Lindley and the Planning Department at Scottish Borders Council that the time was right for change and that support would be forthcoming. Furthermore, the official bodies in the area are already working together through the New Ways Partnership which would be a useful organisation to take any renewable initiatives for the area forward.

Key Issues

- Saving Energy – Efficient insulation of old and new buildings;
- Use local identity to give momentum to change, and learn from other areas;
- Cost of change – needed financial and legal changes/incentives.

Recommendations

- Use the new town at Newtown St Boswells as a trial building area;
- Set up an Energy Forum – New Town as a sustainable development project;

- RSLs should be encouraged to take the lead in demonstrating what can be achieved with old and new housing.

Solution Group 2: Borders Potential

Professor Patrick Corbett from Heriot Watt University was chairing this solution group. The purpose of this group was to consider the ways and means in which the Borders could become energy efficient and use its potential for renewable energy. Items of discussion during the meeting included:

1. Generation of energy in the Borders (solar, wind, hydro/wind, ground heat, biofuel, fossil and waste renewables.)

2. Conservation of energy (building, carbon emissions, textiles, transport, insulation)

3. Education (skills, public awareness and encouraging energy efficiency and sustainability)

4. Partnership and Policy (cooperation, collaboration and the use of audit)

5. Investment and business development

The meeting began with the question being raised as to whether people would move to the Borders because it has a 'green image' and if this was enough of an incentive to move towards a greener energy strategy. The Group discussed whether the Borders could utilise the tourism market by selling itself as an area of "Green Premium".

The issue of social justice and social responsibility was thought to be of key importance: getting the average person on the street to take responsibility for climate change.

Also discussed was the necessity of a stage by stage approach to a change to renewable and sustainable energy in the Borders. The term 'virtuous circle' was coined: this would involve household waste being recycled, then reused as energy – local waste for local energy.

Production and generation of green energy should benefit the consumer. Mike Leonard from Ofgem highlighted the fact that in energy flow there was no traceability of energy source. In the case of it being green energy this could be certified with a renewable obligation certificate. The virtuous circle could still be achieved as Borderers would be aware that their energy was green and produced locally, however the exact source would not be able to be specifically located.

Community Involvement:

A majority of the group believed that community involvement was vital in both generation of and investment in renewable energy. Community ownership was particularly thought to be a key issue to encourage local participation, with a Community Fund from developers used to purchase a wind turbine for example: any further turbines required to power a local community could be invested by the developer. Such development could be encouraged with the incentive of donations to community projects i.e. local footpaths, bridleways or community gardens.

The mainstreaming of such a strategy was also considered and Denmark was offered as example of how small community ownership was being encouraged nationally. Renewable energy is taught in schools and mini windmills are common place.

The community fund was further raised in relation to Local Authorities. Laurence Cox from Eildon Housing Association queried whose responsibility it would be to contribute to a community fund for the 1 in 5 Borders homes that are owned by a RSL. Would this come out of the public purse or the private one – would it inevitably lead to higher taxes for tenants?

Another possible funding option was utilising the 2nd Home Council Tax to contribute towards the fund.

Another point raised was the need for accurate statistics of energy consumption. In particular Ofgem are launching an initiative to raise awareness of the potential for smart metering. It was suggested that if the consumer could see exactly what energy they are using it would encourage energy efficiency. This would be even more beneficial when switching to green energy as they would be able to see the benefits.

Auditing of energy and setting targets was a further issue as there is no data available for biofuel and other forms of renewable energy. With electricity the consumer can see exactly what they are using by the bill at the end of every quarter. There is currently nothing like this to prove that switching to renewable will be cost efficient. Showing figures is the only way of convincing the consumer. What is required is some form of renewable energy toolkit.

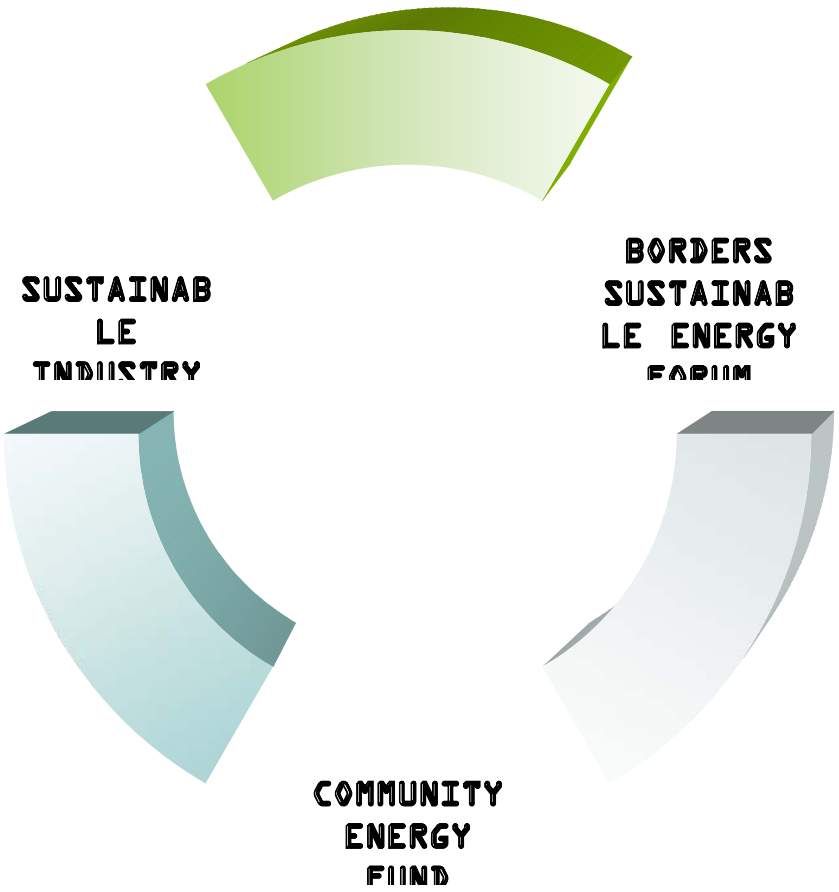
Renewable Energy Forum:

The 'Virtuous Circle' was also discussed as a means of adopting a sustainable and renewable energy strategy for the Borders, with the use of a Borders Energy Forum, Community Energy Fund and with direct involvement by local industry.

A Borders Renewable Sustainable Energy Forum would link efforts across the Borders and address the local geographic, social and technical challenges.

The forum would be required to seek active participation and involvement by local communities. This would be done through the use of education, communication and engagement. It was suggested that skills could be developed through Borders College with a schools programme in the local schools. The Group also wanted to see the Borders become well known for the utilisation of renewable energy within the local schools.

The recommendations made by the group for the 'virtuous circle', and consequently their overall recommendations are broken down as follows:



Solution Group 3: Public Sector

Ian Lindley, Director of Economic Development and Planning at Scottish Borders Council, chaired the public sector solution group supported by Hugh Muschamp from South East Scotland Local Energy Support Programme. The purpose of this solution group was to consider the role of the public sector in

supporting the development of renewable and sustainable energy in the Borders.

The group discussed the main challenges in doing this. These included:

1. The grants available for energy development in the public sector and how this is linked to private finance;
2. Life Cycle Costs and ensuring that all budgets i.e. cost/running and maintenance are linked;
3. The Scottish Communities and Household Renewables Initiative (SCHRI) run by the Energy Saving Trust on behalf of the Scottish Executive
4. Photovoltaics are open to businesses but the SCHRI only supports communities and households with installation of a range of accredited renewable measures (Photo voltaic is not included as this is currently covered by a Department of Trade and Industry grant called 'clear skies');
5. How to encourage the educational potential in children and utilising school systems in providing an energy feature;
6. Scottish Executive Fund – 5 year payback and wood fuel not permitted;
7. Scottish Borders Council – No Link Revenue – Capital "invest to secure" Payback . . .
8. Procurement difficulties and the fact that bulk is not always best for price.

The group discussed the benefits of a Community Tariff in reaching an energy efficiency goal and the local benefits this would entail. Scottish Executive targets could encourage such a tariff (i.e. the 40% energy by renewable sources by 2020 target) or by a locally set target by Scottish Borders Council. The message in encouraging this could be the local benefits brought by sustainable energy i.e. for the economy, society and the environment.

Also discussed were Energy Services Companies (businesses that use their services and profits to support energy services and measures), and whether such companies could be attracted to build local assets in the Borders. This could generate energy and the profits could help fund insulation measures or provide advice to other companies for example. The solution group also raised the issue of Renewable Obligation Certificates, whereby the Government pays a unit amount for any renewable electricity generated and the electricity can then be used as well. There is debate on how to use a similar method to encourage heat generation such as solar water and biomass etc.

The role of the energy regulators Ofgem was also discussed and the support needed for Biomass generation particularly in the Borders. European Economic Community incentives might also play a role in supporting renewable sustainable energy locally produced in the Borders and that more understanding was required as to what incentives were available.

A further issue raised and discussed by the solution group was housing development and any barriers to a developer including:

- Public uncertainty of district heating;
- Awareness, confidence and perceived cost – will people buy this? Do they know?
- The Architect and the image of a planned build;
- The planning process – opportunities – training/guidance sheets, fast track of development new build and the Supplementary Planning Policy (example of Sweden whereby cases of six or more houses have to have district heating);
- Section 75 (a Planning Agreement under the Town & Country Planning (Scotland) Act. Agreements are used where the applicant does not have control over land affected by the development but where the impact of the application approved would be sufficient to justify refusal of the application. Section 75 allows the Local Planning Authority to legally bind the applicant or successors in title to undertake works sufficient to overcome the reason for potential refusal. The principle is that any development can impact on the wider area.)

The group also discussed examples of other local authority areas that had instigated energy initiatives: in particular the example of the City of Edinburgh Council which has produced The Edinburgh Standards for Sustainable Buildings consultation. This provides a suggested approach to encouraging sustainable design, and thereby sustainable energy in design. A number of Planning Authorities have set standards for energy use of new build to be generated by renewables. This was started in the London Borough of Merton. The City of London and others have taken this on and involved statements in the Local Plans that are to encourage either higher levels of energy efficiency in the building structure and/or some of the ongoing energy demand when the building is in use must be from onsite renewables. The English authorities are supported by the Office of the Deputy Prime Minister's Planning Guidance that supports Local Planning Authority's putting this policy in their Local Development Plans. There is currently no such Scottish Executive level policy backing for this in Scotland but it is likely that discussions will start in Scotland with similar standards in mind, in particular under a review of the Scottish NPPG6.

In particular the group stressed the need for partnership at all levels i.e. the ability to work with the planner and developer and other bodies involved.

The topic of energy efficiency was then discussed and the following areas were considered:

- The role of employment;
- Environmental audits and whose responsibility that would be (the Local Authority, the company itself or an outside regulator?);

- Does the Scottish Borders want to be self sufficient in energy and, if so, how is the energy retained in the Borders?
- The supply infrastructure of biomass and its production in the Borders for the Borders.

In conclusion the public sector solution group finalised their discussions with the following main issues and recommendations:

Main Issues:
- Finance
- Policy
- Awareness

Recommendations:

- The need for a longer-term view in renewable, sustainable energy e.g. mainstreaming, pump pricing renewables etc;
- The need for flexibility with a Central Energy Efficiency Fund (CEEF);
- An improved strategy, policy, process and communication;
- Support MSP Bills on renewables i.e. Climate change and energy efficiency policy;
- Bring a new plan and policy principles to the Borders;
- Investigate how to take forward and set targets for the Borders with new partners.

Solution Group 4: Local Business

Alastair MacKinnon from Scottish Enterprise Borders chaired the Local Business Solution Group which discussed the local business responsibility and involvement in a local Borders energy strategy as well as the possible opportunities that would arise.

The group looked primarily at the revenue flows and efficiency of both existing businesses and new businesses from two different angles. The first angle was considering the barriers that a change to, and involvement in, a renewable sustainable local energy strategy would have on local business. The second angle considered the benefits that such involvement would have on local business.

Barriers:

For existing businesses the group considered the following revenue flows:

- Developer contacting with existing local business;
- Developer encouraged to promote opportunities to local businesses;
- Educating contractors on readiness, knowledge etc and meeting the buyer.

Whilst new businesses would need to contend with:

- Community Perception;
- Acceptance of planning of viable/potential projects;
- Knowledge of demand opportunities;
- Research and Development;
- Knowledge and apathy;
- Quality value of 'green is good' element to products.

For exiting businesses the following was considered to be required for efficiency:

- Information for Business;
- Diagnostic;
- Investment/Payback;
- Customer sales benefit of 'green business'.

Whilst for the efficiency of new businesses the following would be required:

- Connectivity of those with knowledge of demand and resources;
- Research and Development on market opportunities and solutions;
- Demonstration Lead – creating opportunity i.e. lead from Scottish Borders Council on Bio Diesel for example.

Opportunities:

The group considered the opportunities available to new and existing businesses through the use of new energy saving products, a 'green' image and the possible creation of new business opportunities in renewable energy production. Again this was broken down by revenue flow and efficiency.

For existing businesses the revenue flows considered in this respect were:

- New products;
- Contract Work;
- Services;
- Natural Assets.

For new businesses the revenue flows were broken down as follows:

- Products of energy;
- Production of materials;
- Energy from Bio Diesel and other viable green energy sources;
- New energy products sold to a wider market;
- New markets and new opportunities.

In terms of efficiency the group considered the following benefits for existing businesses:

- Energy Usage and energy sources allowing savings and investment;
- Alternative materials, alternative material sources and more efficient materials;
- Minimisation of waste through recycling and re-usage.

Whilst for new businesses efficiency benefits could be found through:

- Supporting other businesses to become more efficient;
- "Communal" business opportunities i.e. transport.

In conclusion the public sector solution group's conclusions can be broken down thus:

Article I. Barriers	Revenue Flows	Efficiency
Existing Businesses	Developer involvement Education of contractors	Information for Businesses Diagnostic/Investment/Payback Customer sales benefit of 'green energy'
New Businesses	Community Perception Acceptance of Planning Knowledge of demand Research & Development Apathy Quality value of 'green is good' element to products	Connectivity to those with knowledge, demand and resources Research & Development in market opportunities Need for demonstration lead from Scottish Borders Council

Article II. Opportunities	Revenue Flows	Efficiency
Existing Businesses	New products More contract work and services Natural Assets	Savings and Investment in energy usage and sources More alternative in materials and sourcing Minimisation of waste
New Businesses	New products of energy and production of materials New products sold to new markets and more market opportunity	Ability to support other businesses through "communal" business opportunities i.e. in transport.

Chapter 4: Strategic Day: Conclusions

Following the presentations, discussions and deliberations during the course of the strategic day of the First Borders Energy Summit the following conclusions were made:

- To create a Borders Energy Forum with a Borders energy strategy;
- To work with the New Ways Partners in creating this;
- To encourage community involvement in renewable energy;
- To encourage local business involvement in renewable energy;
- To seek out funding and investment;
- To use the Energy Forum to tackle fuel poverty in the Borders;
- To foster the massive renewable energy potential of the Borders with the possibility of coming off-grid;
- To look at the local angle to the current national energy debate and;
- To contribute towards meeting the Scottish Executive target of 40% electricity from renewable energy by 2020.

Chapter 5: Renewable Energy Fair: Public Feedback

435 people were logged on arrival but for the first (very busy) half hour, groups were logged as single entries so numbers were significantly higher than this – estimated 500+.

People came from as far as Aberdeen, Edinburgh, East Lothian and Dumfries & Galloway but the large majority were from the Borders. The large majority came as interested individuals. 24 people stated that they were there as businesses and 41 were representing community groups.

Asked about the reasons they had come:
65 said they were particularly interested in wind energy
34 for solar energy
16 came to find out about Ground source heat pumps
17 came due to interests in woodfuel
6 for hydro
The rest stated general interest.

159 evaluation sheets were returned

Speakers were scored as	Excellent (36)
	Good (78)
	Average (7)
	Poor (4)
Range of information available	Excellent (57)
	Good (82)
	Average (9)
	Poor (2)
Event Organisation	Excellent (39)
	Good (81)
	Average (24)
	Poor (8)
Catering	Excellent (8)
	Good (33)
	Average (30)
	Poor (19)
Venue and Parking	Excellent (66)
	Good (79)
	Average (9)
	Poor (0)

What they gained
106 said “Information or contacts that help with a proposed project “

112 said “Information that may lead to a project”
115 said “A better understanding of small scale renewable energy systems”
3 said “Information that may lead to training for installer accreditation”
62 said “Useful advice on energy saving”
1 said “Nothing, this event has not been useful”

Other Comments included

Seminar rooms were over crowded and overlapping of seminars meant that you could attend all.

Large numbers of people made it hard to ask questions

Organisers too busy!

More exhibitors wanted

Local Authority presence would have been useful

Micro-hydro not represented

Better directions from town needed

Independent advice would be good

Microphones needed for some speakers

Some speakers not as good as others

Information could have been more appropriate to an informed audience?

More publicity needed?

Catering could be improved – use fair trade products

Pre-booking for seminars needed

Push-chair access required next time

Need an unbiased advisory body to highlight best options?

Important to develop a renewable energy system that will work when the mains are on AND when it goes off during power-cuts.

General feedback was very positive and there were many requests for another event soon.

Chapter 6: A Step Forward

Following the first Borders Energy Summit in January the partners involved have in a few short months taken forward a number of the recommendations and conclusions made by the delegates involved on the Strategic Day, as well as the comments made by those who attended the Renewables Energy Fair on the Sunday. In particular Scottish Borders Council has now created its Energy Summit Commitments for 2006. These include:

- Sign the Declaration on Climate Change as soon as available;
- Prepare a Climate Change Strategy during 2006;
- Prepare a Supplementary Policy on household micro renewables during 2006;
- Prepare a SPG on relationship between layout, design, landscape, topography, energy etc. during 2006;
- Deliver bio-energy and wind energy in 3 High Schools by PPP contract;
- Apply process and lesions from 3HS to 4PS (4 Primary Schools);
- Increase the percentage of renewable energy procured by Scottish Borders Council;
- Continue to share our findings with out partners on barriers and successes/solutions;
- To hold follow up Summits;
- Present to Members whole-life costing of Scottish Borders Council capital and revenue budgets in respect of energy during 2006 and seek to enable this;
- Work with the New Ways Partners to enable future delivery of local actions;
- Pursue Best Practice for energy performance in any expansion of Newtown St Boswells;
- Bring various Private Members' Bills on renewables and micro energy before Scottish Borders Council members and seek endorsement.

Furthermore a number of meetings have taken place since the Summit. A few weeks after the summit the New Ways Partners and those involved in organising the Summit met at Scottish Borders Council Headquarters, Jeremy Purvis MSP chaired the meeting, and the agenda was to discuss taking forward the conclusions of the summit and the next steps in creating a Borders Sustainable Energy Forum. At the meeting the practical format of creating the Forum was top of the agenda. Such a process would involve three stages: first an audit, second identification of a broad target, and third an action plan.

It was understood from the Cornwall experience and the broad range of interests in sustainable energy in the Scottish Borders, that it was essential to forge a strong partnership, and then to continue to work hard to maintain it. This will allow each partner to bring their needs and resources to the table and would increase the operability of the Forum. In the Cornish example such a strategy has been highly successful and a number of their projects have

attracted significant funding and acclaim. Furthermore as with the Cornish example, emphasis must be on sustainable energy supply and demand.

Further discussions between the partners concluded that a Sustainable Energy Development Worker (SEDW) will be required to help the New Ways Partners establish a Scottish Borders Sustainable Energy Forum (SBSEF) which in turn will develop and implement a Sustainable Energy Strategy and Action Plan. The Plan will include actions designed to avoid duplication of effort in all aspects of "energy work" in the Scottish Borders.

Therefore as a result of the Energy Summit the New Ways Partners have agreed to find a way to progress a sustainable energy project which would promote sustainable use and generation through a variety of means with all stakeholders in the region. The establishment of a Scottish Borders Sustainable Energy Forum is seen as the first step towards an integrated approach. An audit of energy use and existing expertise is another key requirement and this would be following by the development of a Sustainable Energy Strategy. It is hoped that funding can now be sought from the Scottish Executive in providing a facilitator to achieve these goals.

For further information on the work being undertaken following the Energy Summit and future developments please contact Pete Middleton at the New Ways Partnership (contact details provided in the appendix).

Appendix

Scottish Borders Energy Summit: Delegate List

Jeremy Purvis	Member of the Scottish Parliament
Laura Cregan	Berwickshire Housing Association
Ian McGregor	Berwick-upon-Tweed Community Development Trust
Mark Walton	Borders Construction Industry Forum
Alastair Cranston	Borders Machinery Ring
Tim German	Cornwall Sustainable Energy Partnership
John Elliot	Councillor
A.I. Farquhar	Councillor
Douglas Younger	Councillor
Graham Garvie	Councillor
Brian Kennely	EarthEnergy Systems
Tim Rutherford	EarthEnergy Systems
Robin Wallace	Edinburgh University
Peter Lee	Eildon Housing Association
John Bathgate	Emtelle UK Ltd
Fenella McEwan	Fife Council
Mike Thornton	Head of the Energy Saving Trust in Scotland
Roger Wardman	Heriot Watt University
Doug Harries	Heriot Watt University
Patrick Corbett	Heriot Watt University Energy Academy
Russell Payne	LEEP
Laura McGadie	LEEP
Hugh Muschamp	Local Energy Support Programme
Marc Haslem	MEB: People & Places
Thomas Pyemont	Miller Dreams Limited
Jim Hume	NFU Borders
Christopher Wilkins	North British Windpower
Mike Leonard	Ofgem
Charles Gallagher	Ofgem
Sandy Kerr	Orkney Renewables Forum
P J Lewis	P J Lewis
Neil Highmore	Patience & Highmore
Brian Mahler	Peebles High School
Jeremy Lee	Peebles High School
Ian Lindley	Scottish Borders Council
Callum Hay	Scottish Borders Council
David Hume	Scottish Borders Council
Susan Dean	Scottish Borders Council
David Romanis	Scottish Borders Council
L Douglas	Scottish Borders Council
Alistair McKinnon	Scottish Enterprise Borders
Peter Maley	Scottish Enterprise Borders
Rob Macneal	Solar and Wind Applications
Pip Tabor	The Southern Uplands Partnership
Tshering Sherpa	The Southern Uplands Partnership
Paul Smith	Tweed Horizons Centre

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Energy Saving Trust Scotland:
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