Transition Edinburgh
Community Energy Meeting

Meeting Minutes
26th April 2011

Time: 7-9pm
Venue: St Leonard's Land, Room 3.24, Holyrood Road
Chaired by: Johanna Carrie
Minutes taken by: Jamie Auld Smith
In attendance: Jamie Auld Smith (TES), Tom Black (PEDAL), Olga Bloemen (TEU), Patricia Campbell, Susan Campbell, Johanna Carrie (TEP/TE), Georgy Davis (CES), Zuri Godall, Alistair Hamilton (TES), Peter Hamilton (RHS), Dory McIntosh (Re-Empower), Fergus McKinnis (UoE), Phil Meyer, Andrew Morton (ESSac), Philippa Parmiter (SIStech), David Seagrave, David Somervell (UoE/TEU), Marina Vons-Gupta (TES), Mike Wight (TE)[1]
Apologies: Pat Abel (TES/TE), Jane Campbell (TES), Alexandra Henderson

Aim of Meeting

Fired up by the success of the recent *United We Stand*[2] event, several TE members perceived great potential for active community groups in Edinburgh to locally progress the aim of 'sustainable communities working together towards financial independence'.

There was great interest in finding a simple model for equalising the benefits of community-led energy generation. This is partially in response to concerns that certain communities or households (e.g. those who can afford the high initial capital investment) will benefit from the current Feed-In Tariff (FIT) and forthcoming Renewable Heat Incentive (RHI) at the expense of capital-poor communities, who will effectively be subsidising these incentives through increased fuel costs.

This first TE Community Energy open meeting was called therefore to bring interested individuals, groups and organisations together to further explore ideas, enthusiasm and scope for collaborative work on these issues.

Introductions

Each person in attendance introduced themselves and their interest in the meeting.

Ideas & Knowledge Share

Each person in attendance was invited to share their ideas and interests around community-led energy projects. For simplicity, these ideas have been collated under the following broad themes: 1) Energy efficiency; 2) Large-scale community renewable projects; 3) Community-led micro-renewable bulk buy schemes, and 4) Appropriate renewable technologies.

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[1] See table at end of document for full names of organisations represented
[2] http://www.transitionscotland.org/content/united-we-stand-sustainable-communities-working-together-towards-financial-independence

1) Energy Efficiency

It was acknowledged that the uptake of adequate energy efficiency measures is a vital first step before any micro-renewable installation. Furthermore, how energy is used in a given home needs to be considered, with householders changing their patterns of energy use where possible to maximise return on investment

The various barriers to installing adequate insulation and other efficiency measures encountered by many people was also acknowledged.

Several community projects are already focussing on supporting individuals and communities to overcome these barriers, including TES *Transition for All* and TEU *Big Green Makeover.* Contact: **Jamie Auld Smith** and **Olga Bloemen**.

Finally, although loft insulation is a widely promoted efficiency measure, there are access issues around installing roof-based air-source heat pumps when loft insulation is already in place. For convenience to the heat pump installer, both measures would be put in place simultaneously.

2) Large-scale Community Renewable Projects

Wind Turbines: PEDAL are currently in negotiations to erect a turbine on Scottish Water-owned land in Portobello. Results of the initial feasibility studies are encouraging, however PEDAL are awaiting results of noise & wildlife impact surveys, which could stall project delivery. Contact: **Tom Black**

Hydro-electric: Funding has been secured to conduct a full feasibility study at Bonaly Reservoir, awaiting the results of a preliminary survey. Other sites may be considered if Bonaly is not suitable. This study will co-ordinated by TEP/TES. Contact: **Johanna Carrie**.

Anaerobic biogas production from sewage: This technology is in place already at Seafield. It was suggested that the smelly nature of biogas production from sewage meant that it is more appropriate in rural areas where the biogas could be piped in to dilute the mains supply. Contact: **David Somervell** for more information

University of Edinburgh Combined Heat and Power (CHP) scheme- Through securing significant (£5 million) grant funding, UoE were able to install large scale CHP over a number of estate properties, delivering savings of £1.5 million per year. This saving effectively subsidises extension of the CHP to new estate properties. It was emphasised that through multi-stakeholder collaborative working practice, large scale, community-owned CHP can deliver widespread and significant cost and carbon savings and income for communities and organisations, as witnessed in Scandinavian countries such as Denmark. See also **Appropriate Technologies** section below. Contact: **David Somervell**

Grant Funding: British Gas have launched an Energy Share Fund offering grant funding of up to £500,000 to support the research and capital costs of community-led renewables projects. The deadline for applications (including demonstration of community support) is May 31st 2011. See http://www.energyshare.com/fund/about-applying/ for more details.

Community Energy Scotland support- CES is comprised of member community groups who are engaged in renewable generation projects. Support available includes a loan scheme for feasibility studies where loans granted are only repaid if the project is successfully delivered. Interactive learning/training sessions which match similar communities together are also offered. Finally, the 'Investing in Community Benefit' resource on the CES website provides lots of case studies of successful community projects. Georgy Davis (CES) has more information on this. Contact: **Georgy Davies**

Sharing the benefits: How do you equitably disperse the income and benefits gained from a community renewables project in an urban community? One model is to have a panel which decides how the income generated is awarded to candidate groups or projects in the community. Another, potentially more progressive/democratic model, is participatory budgeting. This has been piloted by Greener Leith and involves a 'soft touch' gateway check of potential groups or projects to help ascertain initial viability of their idea. Then an Open Day is organised where local people are invited to vote on which groups/project(s) they would like to receive the community grant. Contact: **Alistair Tibbitt (Greener Leith)**

Sustainable Hockerton was also signposted as a community who have developed an innovative model for community ownership. Contact: **Mike Wight** for more information.

3) Community-led micro-renewable bulk buy for households

FIT video resource: A (commercial) video resource explaining the benefits of the Feed-In Tariff: http://www.youtube.com/watch?v=hGbLA0HZfqg

Re-Empower: Re-Empower is a fledgling social enterprise aimed at developing and piloting a model for enabling low-income communities to access finance to maximise ownership of and benefits from solar PV & thermal technologies. Founder Dory McIntosh will partner with TES/TEP to deploy this model to support 100 low income households to access and benefit from these technologies. Contact: **Dory McIntosh**

Solar bulk buy models: A plethora of options and models for solar bulk buy have been piloted or are in development. Groups that have successfully launched schemes include: PEDAL, Transition Linlithgow, Fife Council, Dundee Solar City, and East Lothian Hotspot. Some of these were developed in partnership with the Energy Saving Scotland advice centre- more information below.

One interesting option proposed involved participating householders making a donation of the income generated from the FIT/RHI into a community fund as part of their installation/purchase agreement. Contact: **Mike Wight**

Experience of the Fife Solar and East Lothian (Haddington, Longniddry, North Berwick) PV schemes suggest the following:

- In Scotland, solar technologies perform better in general when closer to the east coast- 23% above expected output in the case of North Berwick
- The uptake of solar schemes may be limited in urban areas by the sheer volume of junk mail received by householders, whereas the opposite may be true in rural areas

Contact: **Andrew Morton**

Street-based bulk buy scheme: Interest was expressed in the potential benefits of setting up a solar bulk buy scheme for one street, comprised of a row of similar properties. The potential exists to have all panels connected into one system, which then feeds into the grid through a single transformer. However, the significant legal complexities of such an arrangement were highlighted, as well as the likelihood of a reduction in income through the RHI/FIT due to the larger generation capacity. However, the potential seems high for street-based bulk buy schemes. Contact: **Phil Meyer**

Training available: TES/TEP have partnered to offer training in setting up a community solar bulk buy scheme to up to 15 community members. The training will be delivered by James Hiddinga (Transition Linlithgow). Contact: **Johanna Carrie**

4) Appropriate technologies

The Scottish Government target to meet 100% of current electrical demand through renewable resources by 2020 was highlighted. This figure is currently at 31%. Scotland has an estimated renewable resource of 206 GW. It is speculated that harnessing 1/3 of this would be enough to power 36 million homes. Electrification of transport infrastructure however would require significant additional capacity.

Concern was expressed that the current focus on developing solar PV and solar thermal panels does not take into account the requirement for renewable space heating capacity, and may do so at the expense of promoting technologies such as heat pumps which provide this capacity. Given Scotland's dependence on gas for space heating, this leaves Scottish communities vulnerable to the supply side effects of peak gas.

In light of this, it was suggested that Transition groups should carefully consider these factors when choosing which technologies to promote, in order to ensure longer term resilience to the effects of peak gas for space heating.

Heat pumps: One new model of heat pump, the Sanyo Eco-Cute Airsource, costs around £13,000 to have installed, which is comparable to solar PV, and produces hot water at 65^{o}C. It is typically compatible with existing conventional radiator systems. By utilizing a new refrigerant fluid technology it delivers an average co-efficient of performance of 3. 10 systems have already been installed in social housing, which were retrofitted to be

well insulated. Concerns were raised over the performance of this technology in older, poorly insulated properties. Contact: **Peter Hamilton**

Solar PV: The AISSAC website- http://www.aissac.co.uk/- gives actual data on the performance of installed PV panels, with monthly estimates of savings etc. The carbon life cycle assessment of solar PV- from mine to installation, was found to have a CO_2 payback interval of roughly half the expected lifetime of the panel. Contact: **Philippa Parmiter** for more information.

Solar Thermal: This is a relatively low-cost, tried-and-tested technology, one of the few that has proven to pay for itself without subsidies. It will become more attractive when the RHI takes effect. **Johanna Carrie** has first-hand experience of benefits.

Feedstock for University CHP System: The UoE is planning to extend its CHP system, currently powered on North Sea gas, to St Leonard's Land/Holyrood building, and link this up to existing facilities at George Square and King's Buildings. There is concern over the appropriate feedstock for the new system. Locally sourced biofuels/biomass have been considered but gas may be the preferential option as it is proven.

Water-source heat pumps: The potential for water-source heat pumps situated in rivers, lochs or ponds was emphasised. One existing installation in Castle Hamlets was signposted. Contact: **David Seagrave**

People Power!: There was discussion of the potential for energy created through people power e.g. bicycle-powered dynamos. While the quantities generated were generally considered to be trivial (with the possible exception of certain environments such as gyms), the educational and inspirational aspects of this technology were felt to be very positive. Contact: **David Seagrave**

Next Meeting

It was agreed that a further meeting to develop these ideas would be valuable, with **Johanna Carrie** kindly agreeing to schedule this.

Abbreviation	**Organisation**
CES	Community Energy Scotland
ESSac	Energy Saving Scotland advice centre
PEDAL	Portobello Transition Town
RHS	Renewable Heat Strategies
Re-Empower	Re-Empower
SIStech	Scottish Institute of Sustainable Technology
TE	Transition Edinburgh
TEP	Transition Edinburgh Pentlands
TES	Transition Edinburgh South
TEU	Transition Edinburgh University
UoE	University of Edinburgh