SUBMISSION FROM FINTRY DEVELOPMENT TRUST

INTRODUCTION

Fintry Development Trust (FDT) is a development trust based in the village of Fintry, Stirlingshire. It broadly has the aim of reducing energy use in the village – ultimately, making the village a resilient, sustainable, zero-carbon, zero-waste community.

It has over 220 members (out of an adult population of approximately 500) and an elected board of nine directors. It is constituted as a company limited by guarantee and has charitable status. Membership and the area of benefit are limited to the Fintry Community Council boundary. FDT was formed in 2007.

Although our membership base is strong, all households and residents in the Fintry area benefit from all FDT projects and a strong emphasis is placed on ensuring that projects and money spent can help the most people and are delivered as equitably as possible.

The eight Directors include members of the original team who negotiated for the community wind turbine on the Earlsburn Wind Farm as well as a member of Fintry Community Council.

The development trust has a trading subsidiary, Fintry Renewable Energy Enterprise which secured ownership of a wind turbine on the nearby Earlsburn Wind Farm.

Since this was the first engagement of its type by a developer with a community group, it has become known as the “Fintry Model” for community inclusion of this nature, within any renewables development. Most importantly, the Fintry Model has been shown to be successful and fully replicable in other communities facing the same issues of energy poverty and requirements to provide a sustainable community.

It has also gained support across political and social boundaries as an example of how communities and developers can work together in a virtuous and mutually beneficial way, delivering additional renewable energy capacity to the grid, in line with the Scottish Governments aspirations for 100% renewable capacity within Scotland by 2020.

Over the past 18 months no revenue has been generated for the trust from the turbine due to low wind resource. The reserves that the trust had built up are being used to support the Fintry Grant Scheme. The grant is currently for up-to £500 per household and is for a wide range of energy efficiency measures, including heating systems, insulation and other energy efficiency improvements. The first round of the Fintry Grant Scheme launched in May 2011 has been very successful and well received by the community with over 32 applications submitted in the first round.
In 2010-11 Fintry Development Trust completed the CCF funded FRESCo Pilot Project. The FRESCo Pilot Project saw the employment of an Energy Advisor.

The direct impact of the Energy Advisor is indicated in the over 65 householders who took advantage of the household visit service to get advice and assistance in reducing their carbon emissions and improving their energy efficiency.

There were also around a further 60 householders who came to the Q & A drop in sessions to receive advice.

Of these householders approximately 85% of them received a follow up on their initial enquiry and around 40% of them received on-going assistance along with countless other small behavioural changes due to advice sessions and home visits. From the householders who received the on-going assistance we have seen over 35 installations of domestic micr-renewables, primarily heating systems, and one commercial biomass boiler in the Fintry Sports Club. The physical measures installed through the FRESCo Pilot Project come to annual CO₂ savings of 223 tonnes per year. The total heating and lighting emissions for the village were estimated at 3276 tonnes CO₂ per year (from the energy survey carried out in 2008, see www.fintrydt.org.uk) so this is a reduction of 6.8%.

In the last year, Fintry Development Trust has also delivered the Fintry community orchard, a woodland classroom for the Fintry Primary School, as well as a successful rural car club (FEET-Fintry Energy Efficient Transport).

Furthermore, FDT recently launched the short documentary film, Wind of Change. The film chronicles the history and on-going inspirational work of FDT. (see: http://windofchangefilm.wordpress.com/) The film has been met with great interest from community groups, politicians (Scottish, UK, and EU), stakeholder bodies, international organisations, and the media. It has been distributed to every MSP, every Scottish and issue-related MP, over 250 community organisations and stakeholders, and enjoys over 2,800 views on YouTube.

In 2011, Fintry Development Trust secured Exemplar Status from the Scottish Government for the sustainability and carbon-reduction work of the Trust in Fintry. Exemplar Status has allowed Fintry Development Trust the opportunity to engage in widespread outreach endeavours, ensuring that the low-carbon lessons learned in Fintry can be accessed and utilised by other communities throughout Scotland, and vice versa. This outreach activity has ranged from visits, conferences, speaking engagements, press/media attention, etc. The general awareness and interest in the work and aims of FDT has grown exponentially and has gained international attention.
Previous funding from Climate Challenge Fund enabled Fintry Development Trust to complete the first project towards meeting its long-term aims – the Fintry Community Energy Project – surveying and insulating as many properties in the village as possible. 332 rural properties within the Fintry Community Council area were targeted. The target properties included private, rented and council housing in addition to a number of community buildings. 75% of households actively took part in the project, providing energy efficiency and carbon footprint information. Between September 2008 and January 2009, 61% of surveyed households benefited from the free insulation measures on offer. Those receiving cavity wall and/or loft insulation will save, on average, £606 on their annual fuel bill. This represents a total increase in annual disposable income for the community of £91,552. If energy savings from behavioural changes are included, the increase in annual disposable income for the community is £180,000. Carbon Dioxide Emissions will reduce by 475 tons each year as a result of the insulation measures and the community will use 1.6GWh less energy from insulation measures and 1.3GWh from behavioural changes. This project was delivered by the Energy Agency and was funded by the Climate Challenge Fund, CERTS and FDT.

FDT’s experience is focused on the direct delivery of community renewables towards similar goals of the 2020 targets. We believe that they are achievable on a local community level and that communities have a major role to play in the delivery of the 2020 targets. Our submission is informed by this outlook.

Targets
- Are the 2020 renewables targets (for electricity and heat) achievable? If not, why not?

Our experience is in local and community energy. In Fintry we have increased the spread of domestic and community micro-renewable heating and generation from approximately 3% to 15% over the last 18 months. There are approximately 330 households in the Fintry catchment and we have achieved domestic 35 installations and 1 commercial biomass heating installation in the Fintry Sports Club which serves as village hub. This was achieved through our intensive energy advice service which assists residents in all areas of energy efficiency and conversion to micro renewables. The FDT (Fintry Development Trust) Energy Advisor is embedded in the community and understands the needs and dynamics of the community as a whole, as well as individual situations. The Energy Advisor is able to assess options and opportunities and assist the household or organisation in the necessary and unique process to ensure a positive micro-renewable installation and/or energy efficiency outcome. We believe that the 2020 renewables targets can be met on a community level in Fintry and FDT is currently working to achieve said 2020 targets.
100% Renewable energy generation for Fintry is difficult to address, as we are linked to the National Grid and cannot control our own generation and usage ratio. That said, our 1/15th ownership of the Earlsburn windfarm equates roughly to the output of one 2.5MW turbine. This output already goes a distance in off-setting energy used by the village from the grid with a renewable source. Furthermore, there are further opportunities for renewable energy sources in the catchment that are being investigated by FDT and other Fintry residents.

As such, the 2020 targets are realistically achievable in Fintry and we believe such efforts can be replicated in other Scottish communities.

- What contribution will achievement of the 2020 renewables targets make to meeting Scotland’s CO2 emissions targets (a reduction of at least 42% by 2020 and an 80% reduction target for 2050) under the Climate Change (Scotland) Act 2009?

In locations, such as Fintry, off mains gas, domestic and commercial properties rely heavily on LPG and oil fired boilers, and coal to a lesser degree, for heating and hot water. These traditional heating mechanisms have high CO2 emissions and account for approximately 80% of Fintry’s total CO2 emissions. Replacement by micro-renewable systems will inevitably see a drastic reduction in CO2.

- Will increase in demand from electric heat and transport be offset by efficiencies elsewhere?

In the case of Fintry, the increased demand for electricity for heat and transport can be off-set by energy efficiency measures as delivered by FDT. These measures range from seeking to aggressively insulate cavity and loft properties, as well as the approximately 50% of homes in Fintry deemed hard to treat. Education and practical application of energy reduction measures and draught proofing in homes and businesses further offset increased electricity demand.

Challenges
(a) Technology

- Is the technology to meet these targets available and affordable? If not, what needs to be done?

The technology to meet the 2020 targets is available in the community arena such as Fintry. This technology is always improving. That said, availability does not equate to affordability. As micro-renewables remains a niche market, installed by the few properly qualified technicians. As such, cost and labour availability are still a challenge for many householders and businesses. This barrier to accessibility has been heightened by the removal of up-front grants offered by the Government. Even if the general populous felt that FiTs were stable and once domestic RHI is finally announced with a reasonable incentive level, it still only addresses the pay-back
period of the micro-renewable technologies, leaving the up-front costs a large barrier to micro-renewable installations. The Green Deal should address this issue to some degree, but as with many UK Government programmes, it is still heavy with unknowns and variables. Scottish Government could look to a new upfront grant or 0%-low interest loan programme to enable installations to take place. The more installations of micro-renewable technologies that occur, the sooner the costs will come down, making the technology more affordable.

- Are electricity generating or heat producing technologies compatible with the need for security of energy supplies?

The technologies for electricity and heat production can certainly lead to energy security, but there are many other areas to address other than the generation technologies themselves. The grid needs improvement both in stability and access. Communities need to have more realistic access to the grid for community-led and domestic generation projects. Mass energy storage needs to be addressed with regards to renewables and this easily can be seen to stretch to household or community level storage availability. Communities, through improved storage capacity and grid function, should be able to have more control over the generation and use and storage of electricity and heat generation. With grid improvements, the ability for communities to functionally access as a micro-grid would allow for community-level vested interest in the security of supply.

- Are our universities and research institutes fully geared up to the need for technological development, innovation and commercialisation?

FDT has many fruitful relationships with educational and research institutes. The work of the many institutions in Scotland is often ground-breaking, with important and exciting projects and programmes launching all the time. Unfortunately, these educational and research institutes are still costly investments for the average individual to access, thus creating a vacuum of institutionally held knowledge and an under-supply of people available to deliver it in practice. There should also be further industry and Scottish Government support focused at re-tooling mid—career professionals to deliver the innovations being set out. Those local and national experts, practitioners, consultants, etc. offer an invaluable service to the viability of the industry and capacity to meet the 2020 targets and Scottish Government should do all it can to provide opportunities to those individuals and communities able and interested to train and deliver the expertise and knowledge that is coming from our great institutions. The avenues for involvement and training are as open and varied as the people of Scotland, ranging from plumbing and other trades, woodland management, community relations/development, etc.

(b) Supply chain and infrastructure

- Is the supply chain in Scotland in place to meet the targets?

From our experience with our investment in the Earlsburn Windfarm, as well as our large scale domestic and community level, it would seem that Scotland is importing
far more than it is creating. Renewables needs to be a home-grown industry from the bottom-up. Unfortunately the concern is that due to ambitious 2020 targets and lack of time, the concern is that investment in growing the Scotland-based industry will not occur and expertise and supply will continue to come from Scandinavia, China, etc.

- What further improvements are needed to the grid infrastructure or heat supply networks both at a national and a local level? Additionally, are we confident that the necessary infrastructure can be developed and financed so that Scotland can export any excess electricity generated to the rest of the UK and/or the EU? What is the role for the Scottish Government here?

We can only speak to our local and community experience. As mentioned above, the grid requires up-grade to ensure that communities, businesses, and households can reasonably and reliably access the grid. The grid needs stabilisation and an emphasis needs to be placed on the capacity for communities to micro-grid in their area to secure a sustainable generation and usage ratio. Further investment into retro-fit district heating options would maximise the capacity to utilise and store the heat generated by communities and businesses. What’s more, heat storage and battery options need to be invested in on local and national scale to ensure there is no loss of generation, thus allowing full use of resources and the ability to create an excess to sell out with Scotland. The Government and industry are the only bodies that can enable these changes and Scottish Government will need to set the lead.

(c) Planning and consents

- Is the planning system adequately resourced and fit for purpose?

The planning system is improving but there are still many barriers that are cumbersome and unnecessary, especially on an individual and community level. Restrictions and process needs to be stream-lined and further relaxed for what are becoming standard micro-renewable installations so that the onus is not completely on the party seeking to install. Further training of planning officials in the technologies and their role in planning would be of great benefit and something the Scottish Government could assist with. National best practice guidelines should be created for all new builds and large conversions incentivising the use of renewables and creating ease in doing so.

- How can national priorities be reconciled with local interests?

For FDT the national priorities closely mirror our own local interests and priorities, as such much of the above applies to this question. Additionally, it should be made a requirement that local communities are involved, from the outset, with renewables projects and given more input and incentive options by developers. If more focus was placed on community ownership and investment positive local priorities would be addressed, and ideally, more easily reconciled.

Regulations that restrict community level capability and capacity for renewable generation and supply need to be reconciled as well. OFGEM rules need to be
evaluated and changed to ensure that there are a set of achievable community level generation and micro-generation options and opportunities that allow full participation. Currently OFGEM’s rules and focus are based on a model of big generators and big suppliers servicing small consumers. This mode makes it difficult for communities to be as involved as they could be in supply and generation. Creating a more accessible set of rules for community-level generation and supply would directly lend to local stability and assist in addressing the national priorities. FDT has first-hand experience of the overly cumbersome and inaccessible OFGEM regulations whilst attempting to set up its own local ESCo (Energy Supply Company) during the early stages piloting the FRESCo (Fintry Renewable Energy Supply Company) project. The FRESCo project had to be completely reworked, abandoning the ESCo element completely, when it became clear that OFGEM’s regulatory barriers were too much for a community project to take on.

Another opportunity to reconcile national priorities and local interests might come from an innovative legislation scheme that would require communities to produce a certain amount of their own energy locally. Although generally easier for rural communities, it would certainly possible for communities of all socio-geographic strands with some support. This would afford local communities ownership of an energy supply that would provide for lower energy rates and ideally an income source over the long term. National priorities would go a long way to being met as communities would take on some of the responsibility for seeking out and exploiting sustainable renewable resources. Local renewable energy production would make great strides toward meeting national targets on a Scotland-wide scale. Furthermore, such exciting legislation opportunities and efforts could potentially make a big impact nationally with little additional output by the government. This is an idea in the making and would very interesting to explore further.

(d) Access to finance

- Will sufficient funds be available to allow investment in both the installation and the development of relevant technologies? What can the Scottish Government do to influence this?

This is an unknown and we have not heard what level of investment the Scottish and UK Governments are willing/able to invest. What is important is for the Governments to assert their financial investment intentions and build a feeling of security in the incentives for installation, especially in the community and domestic sectors. Furthermore, the Scottish and UK Governments need to ensure that there are mechanisms in place for communities and domestic installations to acquire the necessary funds for feasibility and install on the front end of projects, whether that be in the form of grant or loans.

- What will the impacts be on consumers and their bills?

This is also unknown. There are other means of funding installation and development other than through consumer levies. Industry could play a part in investment and if a home-grown renewables industry were in place, the earning capacity for the nation and those employed at every level of the industry would allow
for further investment financially, through research, or in-kind. That said, if it is to come from consumers it is clear that the investment to reach the 2020 targets is high and will have an impact somewhere, thus it is important to focus away from consumer bills and towards more innovative approaches to finance.

(e) Skills and workforce development

- Will Scotland have sufficient home-grown skills to attract inward investment? Are current policies producing the desired move towards Science Technology Engineering and Maths subjects at schools and universities? Is the skills transfer from the oil and gas sectors being realised?

While the move towards more science, technology, engineering and maths courses is commendable, it highly specialises those students and does not ensure that they have the soft skills required to work on the community renewables and energy level. There needs a wide-spread opening up of skill enhancement across the spectrum, as mentioned above in relation to Universities and research innovation. We need to match the growth of skills to real opportunities here in Scotland, and that can only be done if we curtail the current outsourcing of materials and expertise for ease and affordability. While the courses exist, they are not easily realised by those seeking to change direction—due to cost, inflexibility of courses, and lack of on the job training. Due to this we are losing out on a wealth of home-grown skills worthy of inward investment, as those individuals with a career in other sectors to round their newly acquired knowledge in the renewables industry are not as high in number as they should be. It will be the influx of fresh trainee/graduates and up-skilled professionals that will create the right blend for investment into the renewables industry.

To close, FDT believes that on a local and community level much can be done to achieve the 2020 targets successfully. As such, support for community and local level projects should be supported and encouraged if Scottish Government would like to see widespread adoption and achievement of its 2020 goals. We believe that Fintry will be able to rise to the challenge and look forward to working with Government and other communities to make community level achievement a reality.

Fintry Development Trust
12 April 2012