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Community Energy Team  
 Department of Energy and Climate Change  
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 3 Whitehall Place  
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Dear Sirs,

### Northern Ireland Response to DECC Community Energy Call for Evidence

The Ulster Farmers' Union (UFU) is the largest farmer/land-owner representative organisation in Northern Ireland. With 12,500 members covering every aspect of NI agriculture and horticulture, including many farm enterprises which are intensive use of energy and heat, namely dairy, pig, poultry and mushroom sectors.

In addition to traditional farm production, the UFU are the largest single representative of small scale renewable energy/heat generators (<250kW) in NI, covering a wide range of other renewable projects including Wind, Anaerobic Digestion, Solar Thermal/PV and biomass (both feedstock production and generation).

#### 1. Potential/Benefits

Of Northern Ireland's 1.8 million inhabitants, some 36 per cent, or around two-thirds of a million, live in rural areas (see table below) and covering a much greater proportion of the land area.

Wider area type	Settlement area type	Mid-2008 population, thousands	Percentage of total population	Percentage of total land area	Percentage change in population since 2001
Urban	A – Belfast metropolitan urban area	579	32.6	2.2	-0.4
	B – Derry urban area	93	5.2	0.5	1.1
	C – Large town	237	13.4	1.5	5.2
	D – Medium town	109	6.2	0.9	6.0
	E – Small town	111	6.3	1.2	5.6
Rural	F – Intermediate settlement	71	4.0	1.1	8.1
	G – Village	77	4.4	1.9	8.3
	H – Small village, hamlet and open countryside	496	28.0	90.8	11.7
Urban	-	1,130	63.6	6.2	2.0
Rural	-	645	36.4	93.8	10.9
Total	-	1,775	100.0	100.0	2.4

1 Population for 2001 Census Output Areas

Source: 2008 Mid-Year Small Area Population Estimates, Northern Ireland Neighbourhood Information Service

With the majority of our members' farm businesses based in rural areas, we feel that this could enable our membership to be key generators and beneficiaries of Community Energy.

Despite the UFU not falling under any of the descriptions of relevant respondents, we feel that it is the clusters of communities in rural areas who could benefit from any community energy policy development in Northern Ireland. Since we fall out of the prescribed list of respondents and the fact that we are based in a devolved region and not every question in the consultation is relevant to our individual circumstance, we will concentrate on several key areas which we will need to address from a Northern Ireland perspective.

Overall, the potential for developing, adopting and implementing community energy in rural Northern Ireland is immense.

By their very location, rural communities in Northern Ireland are unable to access the natural gas pipeline and the associated disadvantages of this are already documented. However, the greater reliance upon oil and LPG means higher bills than those in urban areas. This not only impacts upon rural domestic dweller but local farmers as well.

The UFU role in any Community Energy is two-fold, they could benefit as both generators and recipients of community energy/heat.

## 2. **Barriers**

We will identify the barriers we have experienced in Northern Ireland in terms of Renewables, as these will have obvious impacts upon the rolling out and sustainability of any Community energy groups often face barriers to getting started and becoming sustainable over the longer term.

Our initial discussions with community energy groups have identified barriers across four main categories:

- i. **Grid Connection**
- ii. **Planning Policy**
- iii. **Access to funding**
- iv. **Structural differences between NI and GB**

### i. **Grid Connection**

This has been a major barrier to the adoption of renewable generation in Northern Ireland, specifically, speed, cost and perceived structural inefficiencies in the grid connection process.

However, in Northern Ireland, a major problem has only this year surfaced; lack of spare capacity at 11kV and 33kV networks and the subsequent need for grid investment and reinforcement.

#### - **Grid Connection from a Northern Ireland perspective**

Electricity generation on the island of Ireland is provided through a Single Electricity Market (SEM). The SEM is designed to produce the most efficient wholesale market price benefiting consumers in both Northern Ireland and the Republic of Ireland.

The already well documented barrier in terms of grid connection identified the stochastic and intermittent nature of wind makes generation difficult to predict for any Distribution Network Operator (DNO), which in our case is NIE (Northern Ireland Electricity). Traditionally the NI network was a 'passive' system, providing electricity from bulk supply transformers in distribution sub-stations to customers on the low voltage (LV) network. The grid is not built to accommodate "embedded generation" ie small-scale wind turbines connecting to the 11kV network on a one-at-a-time basis and you will be able to ascertain the stress that the local lower voltage network is currently under.

The Northern Ireland rural community relies upon this network which travails throughout our countryside. The reliance upon these lines is illustrated by the fact that in Northern Ireland there is approximately 3.5 times more overhead line per customer than the average Distribution Network Operator on the UK mainland.

The most evident problems lie with the lower voltage 11kV network.

**Grid Investment on low-voltage 11kV Network** - The 11kV distribution network in Northern Ireland is over 50 years old and in need of substantial investment and upgrading. Four instances of severe weather in the last 2 years illustrated the need for an immediate upgrade. It is only by complete chance that 11kV network did not go down during this time and since the fact that rural NI depends upon this network the consequences of this would have been disastrous.

The UFU has been calling for investment in the upgrade of the 11kV network and calling for further investment in the grid infrastructure formally through the RP5 2012-2017, which is currently with the Competition Commission due to an on-going dispute between NIE and the Northern Ireland Utility Regulator.

**Lack of Capacity** – whilst the decision on RP5 is being made, earlier this year, the picture changed with confirmation that those applying to connect renewable generation to the grid were facing what is known as “conditional offers” because the grid in their area of Northern Ireland was full to capacity. The problem now is that there not just a short fall in capacity at the 11kV but this now extends to the 33kV network. Red spots over NI...

On 12 June this year, the Northern Ireland Utility Regulator (NIAUR) and the Department of Enterprise, Trade and Investment (DETI) issued an information paper “Security of Electricity Supply in Northern Ireland”. In this paper, they identified a risk to security of supply from 2016 onwards. This would become a problem if key infrastructure projects were not resolved.

However, they also identified an option to procure additional short term generation capacity to address the security of supply.

DETI, under the Electricity (NI) Order 1992, has the power to either direct the UR to invite tenders or to invite tenders itself for ‘further generation capacity’ or the provision of such energy efficiency or demand side management measures to meet any projected shortfall.

The UFU is calling for consideration to be given to the need and viability of procuring additional generation through an assessment of options and on how energy efficiency or demand side management measures might contribute to improving security of electricity provision.

Options for additional generation could range from upgrading of current generation plant to meet EU Directive requirements to the provision of new generation plant.

**UFU view on Community Energy - Without any solutions to the grid problems, community energy will not happen in the scale needed in Northern Ireland.**

## ii. Planning Policy

Planning policy continues to be a major barrier to the uptake of renewables in Northern Ireland. There is a perception that when it comes to smaller wind turbines, planning authorities are trying to avoid the creation of a cluster of generators. However, when it comes to community energy projects there would be a necessity to have a cluster of turbines to provide electricity to the locality.

There are as many as 1,200 wind turbines currently stuck in the planning system and many have been there for as long as 3 years.

**UFU view – unless both planning policy and operational problems are not adapted, Community Energy will not develop in NI.**

## iii. Access to funding

The Rural Development Programme was a likely source of funding for community energy projects, yet when the political deal was reached in Brussels at the end of June, it became apparent that the RDP budget will be reduced by 20%.

Funding in the form of ROCs and the RHI does exist but these are aimed at individual applications. However, more consideration needs to be made to the support for capital expenditure for community energy to get these projects off the ground. These would not be “hand-outs” rather they could be interest-free loans.

**UFU View – the UFU through the Rural Enterprise Committee will be seeking funding for such projects through the RDP 2014-2020.**

## iv. Structural differences between NI and GB

- **Green Deal and ECOs** - In their Call for Evidence consultation, DECC identify the Energy Company Obligation (ECO) to work alongside the Green Deal to provide additional support for packages of energy efficiency measures. But since the Green Deal is not applicable in NI, it is not

clear how a similar body would work in NI. The UFU can see the merits of a brokerage system which would come from a set-up such as the ECO but without funding cannot see how it would work.

- **Selling Community Generated Electricity** - Community renewable electricity projects typically sell their electricity through Power Purchase Agreements (PPAs), where an energy supply company agrees to buy electricity from a generator over a fixed period of time at a fixed rate.

Problems exist for community electricity generators, for example, it is not easy to negotiate with the large energy supply companies. Aggregators in the past have assisted community groups overcome this hurdle.

**UFU View – Assistance in establishing aggregators to assist community groups.**

In Northern Ireland, like in GB, change is afoot, yet we are also moving from ROCs to FITs for small scale and this will impact upon the structures of PPAs and will need to change.

**UFU View – will DETI in NI initiate a process to support the market in preparing for the CfD in order to speed this transition and reduce costs (as well as the movement from ROCs to FITs?)**

Another route to market for community-generated electricity is Licence Lite, a new form of electricity supply licence, which was proposed by Ofgem in February 2009. The purpose of the licence is to enable smaller scale electricity generators to overcome the costs, risks and complexities of operating in the electricity supply market. If successfully implemented, it will enable them to supply electricity into the retail electricity market and earn a higher market rate than at present for the power they produce.

UFU View - Initial applications have recently been made for Licence Lite in London and the UFU would wish to similar considered in Northern Ireland.

### 3. Solutions

#### **Matrix Sustainable Energy Horizon Panel**

In April 2013, Northern Ireland Enterprise Minister Arlene Foster launched the Matrix Sustainable Energy Horizon Panel report “a Foresight Study into Future Market Opportunities in Sustainable Energy Technologies”. The report identified how to grow the Northern Ireland economy through the development of sustainable energy technologies.

Distributed Energy Solutions and their integration with Intelligent Energy Systems have been highlighted as essential areas of development in order to maximise the future global opportunities for Northern Ireland.

By 2050, there will be a complex mix of technologies generating, transmitting, distributing and storing energy. These will range from larger scale installations such as nuclear, offshore wind, geothermal, to smaller scale installations such as wind, biomass, solar, hydro, combined heat and power, and energy from waste including anaerobic digestion, of which many of our members are involved.

The panel believe that by adopting integrated and sustainable energy solutions that can be replicated on a global scale, Northern Ireland will become established as a leading International Reference Site. To date no individual region has established a leadership position in this sector and so Northern Ireland has a unique opportunity to become an early adopter in the field.

On 25 June 2013 in Belfast, a workshop entitled “Enabling Distributed Energy in the Energy Mix” was held and one of the key areas identified included the possibility of developing investment activities in community energy.

The workshop felt that a systems approach could be adopted to solve the many challenges in delivering local, robust, and commercially viable energy systems that are compatible with national scale infrastructure. Going some way to addressing the significant barrier we have identified in this call for evidence response.

#### **Further Solutions;**

- Adoption and implementation of the Matrix Sustainable Energy Horizon Panel Report in NI.
- Adequate investment in grid infrastructure and grid reinforcement
- Investment in extra capacity

- Investment in Active Network Management (ANM) – reference to the Orkney Islands smart grid where they exploit latent capacity and connect greater numbers of renewable generators to the existing grid and the subsequent addition of 51 MW of renewable generation to the grid. Could this be considered in Northern Ireland?
- Extend Green deal to NI?
- Make it easier for communities to sell electricity
- Rolling out of Licence Lite (or equivalent to Northern Ireland)

## Summary

To the best of our knowledge, there are no definite plans for any calls of evidence on Community Energy in Northern Ireland, and as highlight in this document we believe that there is scope and potential for our own farming sector, the rural countryside and the wider economy to benefit from. It would also go and long way to improving the current situation in relation to Renewables in that it could remove many of the significant barriers which persist in NI.

Yours faithfully,



**Chris Osborne**  
**UFU Senior Policy Officer**