Northern Ireland
Assembly

COMMITTEE FOR ENTERPRISE, TRADE AND INVESTMENT

OFFICIAL REPORT (Hansard)

Renewable Energy Inquiry: Northern Periphery Programme MicrE and SMALLEST Projects

4 November 2010

NORTHERN IRELAND ASSEMBLY

COMMITTEE FOR ENTERPRISE, TRADE AND INVESTMENT

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Members present for all or part of the proceedings:
Mr Alban Maginness (Chairperson)
Mr Paul Butler (Deputy Chairperson)
Mr Paul Frew
Mr Paul Givan
Mr William Irwin
Ms Jennifer McCann
Dr Alasdair McDonnell
Mrs Claire McGill
Mr Gerry McHugh
Mr Sean Neeson

Witnesses:

Mr Nick Lyth	)	International Resources and Recycling Institute
Ms Leanne Rice	)	Action Renewables
Mr Derek Bond	)	University of Ulster
Mr David Hanna	)	

The Chairperson (Mr A Maginness):

You are very welcome to the Committee, and we look forward to hearing what you have to say. I know that there are two separate projects. Who will kick off?

Mr Derek Bond (University of Ulster):

I will.

The Chairperson:

You are very welcome, Mr Bond. If any of your colleagues want to intervene at any stage, they are welcome to do so.

Mr Bond:

I thank the Committee for inviting us here. We are a group of people from three separate organisations. I am accompanied by Nick Lyth from the International Resources and Recycling Institute in Scotland, Leanne Rice from Action Renewables — the Committee has already met that body's director, Michael Doran — and David Hanna, who, like me, is from the Ulster business school at the University of Ulster.

All of us are involved in various European regional development fund projects that are funded under INTERREG IVb in the area of renewable energies. In particular, David represents a project called MicrE, which looks at the use of renewable energies in small and medium-sized enterprises (SMEs). It looks at how they can use renewable energy to reduce their energy costs and at the economic opportunities for SMEs in peripheral regions to sell their technology and have expertise in that area.

Leanne is involved in the SMALLEST project and works for Action Renewables. SMALLEST — Solutions for Microgeneration to Allow Energy Saving Technology — is concerned with communities and renewable energies. Nick is the lead partner in the SMALLEST project, which, as it stands, is the northern periphery programme's (NPP) biggest strategic project and involves all regions within the northern periphery programme area. I will hand over to Mr Lyth to talk about the projects.

Mr Nick Lyth (International Resources and Recycling Institute):

I thank the Committee for inviting me today. I am the director of the International Resources and

Recycling Institute, which is a charity in Scotland that is committed to advancing the theory and practice of resource use by linking the public and private sectors to the academic sector on an international basis. I am here in my role as lead partner for the northern periphery programme project called SMALLEST, which is concerned with accelerating the uptake of renewable energies and the conversion from traditional energies to renewable energies in remote rural communities in the northern periphery. The International Resources and Recycling Institute is the lead partner in that project, which includes two partners from Northern Ireland. When I heard that the Committee was looking at the barriers to renewable energy, I felt that it was a good opportunity to talk to members about that.

I want to make a couple of suggestions. The excellent written submission that you received from the University of Ulster gives all the background, so I do not want to go over it. However, I want to speak about a couple of issues that are not in the submission, including the outcomes in which I am most interested and which I wish to facilitate in Northern Ireland.

The first is the observation that you, as a Government, are responsible for investing in the SMALLEST programme. Northern Irish taxpayers' money is part of the northern periphery programme. Someone decided — possibly unbeknownst to you, although there is undoubtedly someone in the Northern Ireland Government who knows well — on the northern periphery programme's behalf, that the SMALLEST project should be what they call "strategic". It was their decision, not ours. It was not even our suggestion when we asked the northern periphery programme to fund the SMALLEST project. Someone in the Northern Irish Government decided to make the project strategic.

What they mean by strategic is that the SMALLEST project, into which they are putting €3 million, should cover the entire region of the northern periphery programme and that it should lead to policy change. The Committee could usefully ensure that the Northern Irish partners — Action Renewables and the University of Ulster — are not just called to this Committee as witnesses to talk about renewable energy in rural communities but are included as part of the process of policy change.

That has happened in Scotland. I am a member of the Scottish Government's community renewables implementation group, which is part of their policy advisory process for policy change on renewable energy. The group is making policy recommendations to Jim Mather and

John Swinney, even though there will be Scottish elections next March. Those recommendations will be adopted, although whether they become approved policy is another matter. The SMALLEST project, which is funded by the European Union northern periphery programme, will have an instrumental voice in developing policy recommendations in Scotland.

That should happen in every region in the northern periphery. This is an opportune moment to suggest to the Northern Irish Government that a similar process should take place here. I know that the University of Ulster and Action Renewables are ready and willing to get involved.

The SMALLEST project enables the sharing of policy developments in community renewables in the various regions. That is the great virtue of the northern periphery programme: it allows us to bring together the policies of a bunch of disparate regions to encourage the uptake of renewable energies in rural communities. By doing that, you draw yourselves into a much wider stream of policy-making across the northern periphery; that would be a very virtuous process.

That leads me to my second point, which is about training and accreditation. I am not sure to what extent it relates to policy, but it undoubtedly relates to the subject of your investigation: the barriers to renewable energy in Northern Ireland. We are dealing with a very new subject, and the training and accreditation of those who work on the trades skills — plumbing, engineering, and electrics — and the professional skills — law, planning and accounting — have no specific training in renewable energy.

In Scotland, we are peddling hard to put that right. Work is being done on that by the Scottish Qualifications Authority (SQA), which is the main body for trades accreditation; the UK-wide Microgeneration Certification Scheme (MCS), which applies in Northern Ireland; and the National Occupational Standards (NOS), to which I have been introduced just this week as we try to tackle that issue right now. I believe that the NOS are UK-wide standards. However, I am not sure. If so, they apply in Northern Ireland. You can tell that it is not my field. As lead partner in SMALLEST, I champion the point that a fantastic opportunity exists.

In Scotland, we recognise that we need to standardise those different qualification routes. We need to bring them together into one route and accreditation process for anybody who wants to work in a renewable-energy field, particularly in communities. The same applies to every region

in the northern periphery programme. I know that because I have talked to Action Renewables and the University of Ulster about what happens here. I understand that, in many ways, you have exactly the same problem: the quality of work is not adequate. At present, there is a relationship between work that is done and insurance. Therefore, there is a relationship between the Microgeneration Certification Scheme, which is required to be evidenced for someone's equipment to be insured and insurers. That is in place. However, it needs to be developed and standardised. Then, of course, training programmes need to be written in and embedded in training colleges in all regions.

I speak with a bigger mission that connects up with the strategic vision of the northern periphery programme. We can achieve an ideal because it is so new in all regions. We could achieve a common standard throughout the northern periphery. If we can do that, as part of the SMALLEST programme, by all working together, we will achieve something that will be adopted by all of Europe. It will be a terrific thing to have done.

I would be extremely pleased if you could consider that as part of your recommendations. I do not know whether it would then convert into policy. However, I am quite certain that you could facilitate it in the education processes. I think that I have probably said enough. I will shut up now. Thank you for listening.

The Chairperson:

Do any of your colleagues want to say anything?

Mr Bond:

We are happy enough.

The Chairperson:

Thank you for your detailed paper. It is very helpful indeed. As politicians, we are trying to remove existing barriers to the development of renewable energy in Northern Ireland. We want to try to create a situation whereby it will be relatively easy for people, such as those who live in rural communities, which have been mentioned, to enter the marketplace. Mr Bond, what do you regard as the most significant barriers that prevent that transition?

Mr Bond:

From our research, I think that the issue is one of knowledge transfer. People know about renewable energy, but they do not know who to go to for advice and information. That includes not only the people who are thinking of installing it but those who have traditionally given advice. At the University of Ulster, we are putting together a postgraduate course on managing renewable energies that is aimed very much at professionals, such as architects, surveyors and planners.

The Chairperson:

That is similar to the point that Nick raised about qualifying or —

Mr Bond:

It is different. There is a question about whether the people who install the equipment should be qualified to do so, because there is currently no agreed standard. A lot the first adopters were badly burned by the experience, as David and Leanne will tell you. There is a need for accreditation, such as the CORGI scheme for gas installations, so that people know that the individual concerned actually knows what he or she is doing.

The other problem is that, on the whole, the advisers do not really have a satisfactory knowledge of managing renewable energies. We floated the idea of the masters course with the local advisory panel for SMALLEST, which includes architects and other people, and some of them have said that they would like to do it. We have not, in fact, launched the degree yet; however, we have a waiting list of more than 20 professionals who would like to do it. Generally, people recognise that there is a need for more knowledge.

The Chairperson:

Will that be done on a part-time basis?

Mr Bond:

Yes, and some of it will be done through distance learning.

The Chairperson:

Will that be done over one or two years?

Mr Bond:

Our part-time masters courses normally run for two years. People will study two modules each semester. Professor Hewitt, who will give evidence here today, is from our sustainable technology group, and he will provide technology modules and to explain the technology. We, in the business school, will then provide the taught modules, because we find that those modules are better at showing people how to manage change.

One issue that has come across clearly in Mr Hanna's work is the lack of adequate business models for people, and I am sure that David will talk about that later. Obviously, most people nowadays do not know how to work out effectively how much they will save by using renewable energy and how long the payback period will be. That will also be part of our course, because it is important for professional people to understand those things.

The problem is really one of knowledge transfer. Nobody really knows who to go to. A lot of people got burned by early adoption. A couple of years ago, B&Q and other companies were selling small windmills from China, and people bought them without having any understanding of what they did. It nearly became a status symbol for people to have a windmill in their garden. However, most of those have now been taken down or failed to work properly.

In some instances, I liken the technology for renewables to the technology for TVs. When we were children, very few people bought TVs, because the technology was so unstable and the TVs kept breaking down, so people rented them instead. Renewable energy technology is at that stage, and that is one of the problems. However, we do not have a rental market for renewable energy technologies; everybody has to make the decision to buy. However, I know that some schemes are starting now. For example, in Scotland, people can rent the equipment rather than buy it.

The Chairperson:

I will stop you there, Mr Bond, because I want to address a question to either Mr Hanna or Mr Lyth about the failures locally. Will you comment on the failures? Why did things fail? Is there any common denominator among those failures? As a postscript, what happened to the individuals who failed? Did they continue or did they simply drop out of the sector?

Mr Hanna (University of Ulster):

There is a variety of reasons why the cases studies that we visited failed. One of the main reasons was that the experts gave poor advice. Another reason was that the installations did not generate enough electricity to actually produce payback. That issue can also be clouded by grants. A grant came up, people cobbled together a business plan, applied for and received the grant, installed the equipment, and then found that it was completely inadequate and did not produce what they wanted. The grant inspired them to go for it, but they were badly advised. They just installed the equipment, and it is now an expensive decoration.

The Chairperson:

It seems that business failures were caused in part by the investment being grant led. People saw the opportunity to get a grant, and got into the sector with poor advice. Is that the case?

Mr Hanna:

Yes. We find that installers are, essentially, sales people. They say that people will get a certain return from the investment. People go ahead, believing that expert, and find that they do not get that return. The grant issuer should check the business plan to make certain that it is thorough and that the equipment will generate the heat or electricity that it claims to do. There are no thorough checks, and people are getting grants without their business plans being thoroughly audited. They are getting the money, putting up the equipment and not getting what they have been told they would. That falls to the grant issuer, and, in some instances, the installers. As I said, however, they are sales people, and in most cases they put forward a best-case scenario.

The Chairperson:

Naturally, they will do that.

Ms Leanne Rice (Action Renewables):

David's points are very valid. I want to pick up on one or two of them. Having talked to community organisations, I have come across one or two that received grant funding. The problem is that the grants bodies told them specifically what technologies they should install. They gave them the make of equipment and the size. I know that people got advice from advisory services that said that that may not necessarily be the exact technology that they should go for. As David said, however, as grants were available, they felt they had to push forward.

Those technologies were not properly assessed and not suitable for Northern Ireland conditions. They subsequently broke down, and because they were originally grant-funded, the people do not have the money to fix them. Unfortunately, when they went back to funding organisations, the issue was not resolved, because nothing was written into the original grant fund to specify what would happen if something broke down and whether the installer or the person or community organisation was liable for fixing it.

If grant funds are being considered, they should be thoroughly researched to make sure that the technologies that people are being encouraged to install are appropriate and that a guarantee is built in if anything goes wrong, so that the matter is dealt with correctly.

Mr Butler:

You spoke about difficulties with the technologies in both projects. Has there been any success to show that progress is being made, especially with micro-generators?

Mr Bond:

Yes. There are many small, successful projects that succeed despite everything. Perhaps Mr Hanna would like to expand.

Mr Hanna:

Some of the simplest technology seems to be the best. Biomass boilers are like a coal fire where the coal is replaced by wood or other biomass. They have few mechanical parts and operate very effectively. They can be used to distribute heat or to generate electricity, but they tend to be used for heat.

Those tend to be reliable, provided that there is an available supply of biomass. They are cost effective, provided that the right contractor can install it at a reasonable rather than extortionate price. That brings me back to the grant issue. Grants tend to have an application deadline, and, if they want to obtain the grant, people have to act quickly to gather the required information, make the application or prepare a business plan.

Mr Butler:

Investing in renewable technology is often perceived to be costly, and there are questions about the return on it. It has often been said that the return on solar panels or wind turbines is not worth

it. Is there much evidence that renewable technology is costly? It seems that it is talked about only when there is a crisis and electricity prices go up.

Ms Rice:

As David mentioned, it is very important to make sure that the customer installs the right technology, thoroughly researches all the options and does all the groundwork before proceeding with the project. Last week, for example, I was talking to a member of staff at the Share Centre in Fermanagh, which has installed biomass boilers. The staff there could not be happier, because they are saving money. They are delighted that their project can be used as a demonstration model for anyone who is interested in going down the renewable energy route and that they can show that it works. However, they have also said that commitment to the cause is required; it is not necessarily always about cost savings for every installation. A lot of businesses, for example, are very interested in greening their corporate images and are finding that, when going for tenders, they are being asked more and more to prove themselves as green organisations, and they are looking at renewables from that standpoint.

Renewable technologies can work, but it is very important for the customer to work out which is the most suitable option and the level of payback and not just to regard it as a decoration.

Mr Lyth:

Mr Butler has teased out an important question about where the barriers lie. Renewable energy technology is much misunderstood. Almost none of it is new; wind was first used to generate electricity in the United Kingdom in 1894. We have known how to do it for a very long time; we just have not bothered. The reason for that was that coal was cheap, so we developed coal-based energy systems. The technology has been there for a long time, and the same goes for tidal and wave power and solar energy.

There is an issue with technology, which is that of applied technology. The advances that we need are really in applied technology. Yesterday, I met representatives of QinetiQ, the privatised Government research body for the defence industry, which has developed some radical new technology for energy from waste. It is radical because QinetiQ has developed it to work down to a micro scale, and it now wants to commercialise it and bring it to the civilian population. It was developed for the Royal Navy's ships. Their energy from waste plant was put onto aircraft carriers — which is a vexed subject now — and it has been proved to work in the past couple of

years. That is a genuinely an important technological breakthrough, and it is potentially useful.

The second part of Mr Butler's question, which is absolutely to the point, was about cost efficiency and about what works.

It is extraordinarily vexed, and, of course, the whole answer to that question is masked by the subsidy-led approach that has characterised our development of community renewable energy in the past 10 years. There have been an awful lot of uneconomic developments that have not been visible because of the subsidies. That is more difficult to engage with and more controversial because we are discovering things at a macro level that we had not known before.

A study that is now available in Scotland shows that the macro wind-farm developments in Scotland, of which there are many, but nothing like as many as are planned over the next few years, have been drastically ineffective. The success of the wind farms in Scotland is predicated on a 30% capacity rate. The later study shows that they operate at an average of 15% capacity. If that study is robust, it calls into question the whole of the UK wind-farm development. The interface of technology and cost-efficiency is, at all levels, the crux of the Committee's consideration of the barriers to renewable energy. If that research is robust, it means that wind is not yet working. Does that mean that we move away from wind on a UK-wide basis or does it mean that we have to work out what we are doing wrong and make sure that we do it better? There is no doubt that wind is a resource. How can we use it cost-efficiently? I wanted to make those two observations on the nature of the barrier, where the barrier exists and where we need to work collectively to try to sort out what to do.

The Chairperson:

It would be helpful if we could have sight of that research report.

Mr Neeson:

I am very fortunate in the sense that the University of Ulster at Jordanstown is in my constituency, and I have worked very closely with it over the years. In 2001-02, this Committee carried out a study into the development of energy in Northern Ireland, and that has been adopted as the strategic energy policy. I was interested in what Nick said about neighbouring EU states. What policies on renewable energy that have been adopted in other areas could be adopted here and could be included in the report that we hope to develop in the near future?

Mr Lyth:

The exemplar that is leading the way in the northern periphery, and probably in the whole of Europe, is Sweden. I should stress that it is work in progress, and therefore my answer is based on partial understanding. The evidence that we are accumulating through SMALLEST shows that Sweden is leading the charge. The policies that characterise Sweden's effective engagement with renewable energy are dominated by two different factors, the first of which is the economic instruments. That was my answer to the Chairperson's question about the major barriers. The first barrier is the economic instruments. We are trying to kick-start something that has not been done before and make a shift in industrial infrastructure to deliver to our communities. The industry cannot make that shift naturally; it depends on the economic instruments to kick-start it. It must then become self-sustaining, but that is where it starts. Sweden developed economic instruments that would be across the board for residential and industrial activities; they would stimulate the conversion from traditional to renewable energy generation. That is the first area, and that is cruel to say at a time like this, when public sector cuts are either here or looming at such a level as we know they are in the United Kingdom.

The second area in which they were very clever is, I think, within your grasp as a regional Government: it relates to service supply. That is where SMALLEST is connecting. We are trying to extend the service supply and to make it do more and do it to greater effect across the region. In many ways, although there is a Swedish partner in the project, I am not certain what they can learn. I am not sure that they can improve what they are doing. They developed a service agency that would cover all of the issues related to all the different kinds of renewable energy in all the differing circumstances that may apply in Sweden.

Called the Swedish Energy Agency, it is a big organisation with a representative in every community in Sweden. That is how far it goes. I do not know how that representative is funded, but somebody from the Swedish Energy Agency in each community is responsible for making sure that renewable energy happens in that community. By putting the two together — the funding and the service — we have a very powerful mechanism for making that happen. I think that that is the answer, Mr Neeson, but, as I say, it is a work in progress. If the whole policy development, as I suggested at the beginning, is converged so that the smallest partners in Northern Ireland are sitting with the policymakers in Northern Ireland, the answer to your question will develop organically. Then Northern Ireland will benefit from the most sophisticated

answer to that question.

Mr Neeson:

I have a follow up question for Derek Bond. To what extent does the business school have any help from Invest NI in developing renewables? I ask because a constituent of mine, who is now based in Scotland, is developing a major renewable project. However, because he is not exporting it, he gets no help from Invest NI.

Mr Bond:

We have close contacts with Invest NI. Because this is a European project, we are very closely linked with the European unit in Invest NI. We recognise that Invest NI is very much aimed at exporting, and, obviously, renewable energy is local. The problem is that the old LEDU constituency in Invest NI is where interest lies in this side of renewable energies.

To come back to your earlier question, one of the problems that we find in Northern Ireland is this idea of community ownership. In Sweden and in Germany, which have successful renewable energy sectors, communities have bought into it. Most communities in Northern Ireland are very suspicious of it. Leanne Rice will talk about the few that have bought into renewable energy, and which, through strong leadership, have been successful. However, on the technology side, which Mr Neeson asked about, Mr Bond, who is here to talk about technologies at work, would agree with Mr Neeson. Professor Neil Hewitt, who the Committee will hear from in its next session, will give more advice on the technologies.

As people who are involved more in the business side, our job is to get people to buy into renewable energy. Many communities would like to buy in but do not know how, or are very scared of it and think, as Mr Butler said, that it is a waste of money and that payback takes a very long time. To get any of the technologies to work in Northern Ireland, we have to get community buy-in. That buy-in is much more evident in Scotland, where Community Energy Scotland and others work with communities. In Northern Ireland, no body yet does that, although Action Renewables has a business plan that includes involving communities.

Unfortunately, Invest NI is more export orientated. The problem, which comes to the matrix group, is that we often think that technologies here have to be frontier technologies that are only worth investing in because the rest of the world will want to buy them. In fact, the problem with

renewable energy is finding technologies that work in the local environment and are easy to run. Those might not be the latest technologies, but they are ones that actually work in this environment. That is the gap that we have in Invest NI. There is a feeling that one has to come up with a new windmill that will beat the world.

As in the MicrE project, we are saying that we should look at technologies that are tested, that work and that local SMEs can adopt and sell. One of the big problems with windmills is getting them serviced and getting people who have the technological knowledge to work with them. The more advanced the technology gets, the less likely it is that a local organisation can work on it. There is a problem of a technology window in that Invest NI often thinks that it should be at the very frontier of technology. A region such as Northern Ireland should be somewhere back from the frontier with technology that we can work with happily.

Mrs McGill:

On page 8 of your response, you refer to difficulties presented by the planning process, inconsistencies and conflicting advice. Do you have any views on how that should be addressed? I also want to ask Nick about Scotland. There is an increasing trend here of individual wind turbines on farms. Loads of applications are made for those, particularly in rural areas. That presents difficulties. The area of natural beauty is really a line on a map. An application could be approved in one place but another refused only a field away. How is all that dealt with? What is the situation in Scotland regarding single wind turbines in rural areas, given that analysis and research has now placed a major question mark over wind as a renewable energy at this level?

Mr Bond:

I will talk a bit about Northern Ireland, and then Mr Lyth can talk about Scotland. In Northern Ireland, one of the problems with the Planning Service is knowledge transfer. Planners have admitted to us that they do not understand the technologies. They are very keen to get more involved and find out about the technology so that they can make more informed decisions. There have been cases of planners allowing something and then cancelling the planning permission. That is quite a problem in Northern Ireland, and it is one that the Planning Service is looking at. We have had discussions with the Planning Service about its training needs in the area of renewable energies. That comes back to the postgraduate course that we hope to offer.

Mrs McGill:

In my very limited recent experience, it is not about the lack of knowledge of the technology; it is about whether to allow another 30-metre wind turbine go in one field but refuse another application for one down the road. I was looking at a map in the local office within the last week. There are a number of turbines dotted all over the place. I am not saying that that is right or wrong, but I am wondering how it will be addressed. The planners are having difficulty. How do you decide that it is appropriate for one farmer to have a turbine but not another? There is a commercial aspect. David made a point about grants, and so on. It may not be grants, but there is certainly a commercial return in some cases. How is the planning side dealt with?

Mr Hanna:

It is not completely confined to wind turbines. One of the major problems is the length of time that it takes to process applications. If you put money into something and produce a business plan but are left waiting in limbo for more than 12 months, it costs money. Time is money. Therefore, the process needs to be speeded up.

We have had conflicts around windmills and the necessary area of land, which is governed by planning law, and whether that is about just the land for the turbine, the land for the generator, which would be located further away, or the land for the path. There is no easy answer. However, it has to be about speeding up the process, because that would the give people applying for applications a chance to go for something.

The Chairperson:

Has any study been done on the time that people have had to wait for applications to be processed, or is the evidence anecdotal?

Mr Hanna:

No specific study has been done. However, having talked to people whose applications are at different stages of the planning process, particularly those involved in anaerobic digestion, our experience is that people have had to go through various processes depending on the type of supply coming to the factory and whether the supply can be shipped to the factory.

The Chairperson:

The way that things are done is definitely not timely.

Mr Hanna:

No.

The Chairperson:

At times, the process is inconsistent between one office and another.

Mr Hanna:

Yes.

Mr McHugh:

Planning is a serious issue. I sense that councillors want to take the same approach to planning as they did to one-off housing in the countryside. However, most councillors would approach the issue from a position of knowing very little about either. *[Laughter.]*

We have a tourism product in most areas. I have seen a wind farm on the other side of Stranraer that seems to have been done quite well. However, a one-off should not work in this situation.

You talked about models. There have been wind farms in the United States for I do not know how many years now. Surely, that is a model of the technology. If they have not found the flaws in that, why are we reinventing the wheel here? There are old pictures of windmills in Holland 200 years ago. I do not know about all that, but I live close to Shell, which has done a number of things in this area, including the use of small windmills.

My question is on grants. In relation to solar or wind energy, it is the taxpayer who has to pay for the grant that someone else benefits from, quite often someone who has money already. Is that money being wisely spent or is it, yet again, making someone richer on the back of the taxpayer? We would not want that money to be ill-spent. On top of that, the technology paid for by grants must not be a failure. For example, some single entity wind structures cost at least £250,000 to £500,000 and involve considerable labour. Usually, the grant applicant is someone who has a lot of money in the first place, and that is not the direction that I want to go in.

Are the other industries, such as the oil industry, trying to hold back the process? You

mentioned that Shell was doing a good job on the timber side, but I have heard any amount of bad press claiming that the timber is wet, it is this and it is that. Is there any evidence of a scuttling of projects going on behind the scenes?

Mr Bond:

We are not really in a position to answer that. Fiscal policies favour carbon. Therefore, there has to be a shift in policy before we can start to really talk about renewable energies. It is easy to see the oil companies as big, evil giants. However, we do not know what is going on behind the scenes. Until proved otherwise, we have to assume that they are gentlemen.

Mr McHugh:

My other question is about how we can get local communities to look at renewable energy differently. In comparison with Sweden, the local communities are quite anti renewable energy. That started because oil was so cheap that you hardly had to buy it at all. That has changed a lot. Is that going to happen?

Mr Bond:

That is part of what the SMALLEST project is about — trying to find out how we can bring communities along and get them to engage and start thinking effectively about renewable energy. It falls to the individual consumer. Most of us use energy but do not look upon it as a commodity. It is only when we get the bills in that we realise how much we spend. It is interesting that, in Northern Ireland, the pre-payment meters here are actually cheaper than paying afterwards, which is unusual within the UK. We find that people who have the pre-payment meters become much more energy efficient and intelligent about their use of energy than most of us, because they realise how much they are using on standby. If you go to bed thinking that you have switched everything off and with £5 on your meter, and the next morning there is £4·50 on it, the next night you are going to go around and check. Part and parcel of renewable energy is getting people to realise that they are energy consumers.

Mr McHugh:

Can you say if wind is a runner for us here or not? It is a big issue? Is wind actually the runner that we first thought? I know that in the west of Ireland it will impact greatly on the product that we have, which is turf.

Mr Bond:

That is outside our expertise; I suggest asking that question of the professor who is the next witness, as he has the expertise.

Mr Hanna:

In relation to community engagement, there is an element of keeping up with the Joneses. If one community has installed a renewable energy installation that has been working and another community can see that, they will try to implement that in their own community. However, what we have found is that a lot of early adopters have been stung; they have been given bad advice and people have put up equipment that has not worked, so people are fearful, because they see another community that has an expensive piece of equipment that is not working and they say that they are not falling for that trap. There has to be some element of regulation. Mr Bond mentioned some sort of CORGI-style approval and certification system that stops the suppliers installing poor equipment and people installing the equipment badly.

Mr Irwin:

I fully understand that some people have a bad taste in their mouth, because just a couple of miles from where I live a farmer erected a wind turbine from China that cost £50,000, grant-aided from the Department of Agriculture by 50% or thereabouts. That wind turbine never went for one day. He got a phone call when he had got it complete telling him that he could not put it on because they were dangerous, and that blades had flown off other ones. That guy will be very difficult to convince the next time around, understandably, even though compensation was given and an ex gratia payment was made by the Department to alleviate some of the cost.

You talk about community buy-in, which is very important, and I think that you will get that, but only where there is clear direction and it is clear what works and what does not work. It needs to start at the top. Government needs to have clear guidelines. There needs to be a joined-up approach from different Departments if we are ever going to be successful. I read that Norway leads the way in Europe, with 100% of its energy from renewable sources. How did they achieve that? What form of renewable energy are they using to do that?

Mr Hanna:

I will partially answer that. I believe a lot of it is politically driven. Quite a few years ago, the oil supply to Norway came from Russia, but then Russia cut off that supply and Norway was left

without.

The Norwegians decided that they would not be caught in such a situation again, and the entire country got behind the scheme, which is why they have been so successful in implementing it.

Mr Irwin:

That proves that it is achievable.

The Chairperson:

Yes, but it depends on the mood that exists in the country.

You refer to the cost of joining the grid in your report. You seem to be making a major point about the cost. Do you have any comment to make on that, further to what you say in your report?

Mr Bond:

That was discussed when the Ulster Farmers' Union gave evidence. In our scoping study across the northern periphery, we have found that it costs more to get onto the grid in Northern Ireland than it does anywhere else.

The Chairperson:

Why is that? Costs should be within certain margins.

Mr Bond:

The state of our infrastructure is part of the problem. Mr Doran said that our grid structure is problematic and is not designed to accommodate lots of small link-ups to it, whereas countries like Finland and Germany have a different infrastructure and encourage people to link to their grids. It seems easy to blame the big bad electricity suppliers for trying to make it awkward for other people to come in, but, for historic reasons, our grid is not as well developed as it could be. We also have the problem of trying to set up quite a complex infrastructure in a small area

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The Chairperson:

We have a very useful briefing from the Assembly Research and Library Service on the NIE distribution code, which reiterates the points that you have been making and gives us some detail

on the distribution code. It seems to be a difficult problem for people to resolve. If you are starting off in business, it is another impediment to easy transition into that market.

Mr Bond:

That is one of the problems with renewable energy. People often think of feeding energy into the grid, but the alternative is storing it yourself. One of our partners is Pure Energy from the Shetland Islands, which Mr Lyth knows well. That company is looking at hydrogen storage; it could be possible to have a small hydrogen tank on your premises to store your energy when you are not using it so that it can be used again as needed. Obviously, for island communities that is a very important issue.

So, we have to think about whether we always have to feed surplus energy into the grid. Should the technology be such that people can store the energy and use it as they need it? Professor Hewitt does not think that hydrogen is the way forward, and we have had long debates on the issue. However, that suggests that we should be looking at how we store the energy when we are not using it.

The Chairperson:

I am very grateful to all of you for coming. We have had a very interesting discussion. Thank you very much.