



Northern Ireland  
Assembly

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**COMMITTEE FOR  
ENTERPRISE, TRADE AND  
INVESTMENT**

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**OFFICIAL REPORT  
(Hansard)**

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**Renewable Energy Inquiry**

9 December 2010

**NORTHERN IRELAND ASSEMBLY**

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ENTERPRISE, TRADE AND  
INVESTMENT**

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**Members present for all or part of the proceedings:**

Mr Alban Maginness (Chairperson)

Mr Leslie Cree

Mr Paul Frew

Mr Paul Givan

Ms Jennifer McCann

Mrs Claire McGill

Mr Gerry McHugh

**Witnesses:**

Ms Alison Clydesdale )

Mrs Fiona Hepper )

Ms Olivia Martin )

Mr David Thomson )

Department of Enterprise, Trade and Investment

**The Chairperson (Mr A Maginness):**

The officials who are here to brief the Committee today are Ms Olivia Martin, Ms Alison Clydesdale and Mrs Fiona of the Department of Enterprise, Trade and Investment (DETI) energy division, and Mr David Thomson, the deputy secretary of the DETI policy group. He will deal with questions on energy and the economy.

I would like to concentrate on renewable heat, Mrs Hepper. I get the impression that

renewable heat will be the next big issue to come before the Assembly and this Committee. I wonder how you envisage that developing, particularly the renewable heat incentive. You have informed the Committee that the Westminster Government are making £25 million available. How do you envisage that being usefully spent to incentivise the use of renewable heat?

**Mrs Fiona Hepper (Department of Enterprise, Trade and Investment):**

We have work to do on the detail of an economic appraisal of renewable heat. The procurement of that advice is almost complete, and we will formally start work on that economic appraisal in the week commencing 13 December.

That work will look for the best model for Northern Ireland. It will consider the level at which the incentive needs to be pitched in Northern Ireland. It will also bring in evidence around how the work is shaping up in GB and how things will be done there. We want to determine whether what we do should simply replicate what will happen in GB or whether, because of the different shape of our energy market and the fact that we have a greater dependence on oil, we need to shape the model and the incentives in a different way.

Until we finish that complex piece of work, we will not know the detail. When that work is done, and after we have briefed the Minister on what we think is the best option, we are happy to come back to the Committee and talk members through the issue.

Some of the complexities will relate to whether we treat Northern Ireland as a block and simply have incentives for the region as a whole or whether we treat areas that have gas separately from areas that do not. Given that we are such a small region, the latter option might confuse the market and make it too complicated. We are planning quite a detailed appraisal and will progress that at quite a pace. The work will be finished by February, by which time we will have shaped our preferred model. As I said, we are happy to come back to talk to you, either formally in an evidence session or informally.

**The Chairperson:**

What is the potential of renewable heat?

**Ms Alison Clydesdale (Department of Enterprise, Trade and Investment):**

The heat demand in Northern Ireland is currently estimated to be about 17,000 gigawatt (GW)

hours a year. Our study shows that the 10% target in the strategic energy framework (SEF) can be achieved but will require some level of intervention.

The biggest heat demand is in the domestic sector, so there is a huge opportunity to target an incentive there. We will consider how to set the tariff levels in order to incentivise that sector. Also as part of the economic appraisal, we will look at the industrial sector. There is some merit in looking at some of its larger-scale installations. If a relatively small number of large-scale installations were to move to renewable heat, it could have a significant impact on the target. However, on a larger scale, the investment is slightly different, so the structure of incentives would be slightly different. The economic appraisal will determine which model will provide the best value for money and contribute most to meeting the target.

However, if the economic appraisal points us towards focusing on the domestic sector, there is an issue with getting householders up to speed. The incentive will pay them tariffs over 15 to 20 years, but householders will be required to make a capital investment to install whichever type of technology they choose. There is huge potential in the domestic sector for renewable heat.

**The Chairperson:**

Mrs Hepper, how many people work with you in your section?

**Mrs Hepper:**

There are 11.

**The Chairperson:**

Are there 11 in your section?

**Mrs Hepper:**

No, there are 27 staff in the whole division, 11 of whom work on the sustainable side.

**The Chairperson:**

Do those 11 work in the renewable energy section?

**Mrs Hepper:**

Yes, they do.

**The Chairperson:**

Therefore, a total of 27 people deal with energy issues.

**Mrs Hepper:**

Yes.

**The Chairperson:**

I am going to ask you a question to which your probable reply will be yes, because everybody wants more resources. Is that level of staff sufficient, or could you usefully do with additional staff? If so, what additional complement would you require?

**Mr David Thomson (Department of Enterprise, Trade and Investment):**

To save Fiona's blushes, I am sure that she would love to have many more resources.

**The Chairperson:**

As would everybody.

**Mr Thomson:**

I support her in that. Energy is a priority for the Department. At the previous evidence session, I mentioned the independent review of economic policy (IREP) report. One of that report's recommendations was for DETI to examine how it is structured. As a result, we placed more emphasis on policy areas, and an organisational review is ongoing. The Department has already taken some actions and is considering further plans. An economist, for example, is now involved. We are conscious that areas of the Department need extra support, and we hope that we can do something about that. However, we must do so in the context of a budget aim to reduce the administrative costs, which creates problems for the Department.

**The Chairperson:**

I understand that. However, in a crucial policy area such as renewable energy, the money that is spent on additional resources and additional expert staff to assist you with your task will be money well spent. There seems to be a heavy work commitment, and there is a wide range of issues across the board.

**Mrs Hepper:**

I agree. The work for the whole energy division is heavily loaded. I have been in DETI for a number of years, but I am new to the energy division. I have been extraordinarily impressed with the quality and efforts of the staff and with what they will deliver over the next few years.

Olivia's side works on the Northern Ireland renewables obligation (NIRO). The fact that that has been structured and negotiated with a lower obligation level has tripled the amount of renewables that have been delivered in Northern Ireland and has done so with the appropriate level of incentives. Moreover, on Alison's side, a significant amount of work has been done to reach the point at which we are able to talk realistically about a renewable heat incentive in Northern Ireland. In the context of David's comments, we must get the most bang for our buck with our existing staff. We have to decide what will have the greatest impact and prioritise that.

The team on the energy side is working on the restructuring of the division. We are doing some key pieces of work on the transposition of complex European directives, and that work will come to an end in spring 2011. Will that release any resources internally for us to prioritise? As civil servants, our normal work is to consider where we can best position our resources, and we will do that. However, there is, unquestionably, no shortage of work to be done, particularly on the renewables side.

**Mr Cree:**

As I listened to your comments, I wondered whether there is a clear definition of renewable heat. However, my questions are on a wider front. The renewable energy policy is based mainly on wind generation. Is anything happening to try to speed up the planning process for the North/South interconnector, bearing in mind the need to shape that before the 2020 target? If the interconnector is not ready within that time frame, is there a plan B? I have been interested in and concerned about other grid reinforcing for a long time. Is that happening, or are there plans for that to happen in the rest of Northern Ireland?

**The Chairperson:**

Some of Mr Cree's questions were addressed last week when he was, unfortunately, unavailable because of other political duties.

**Mr Cree:**

Sorry, I did not know that. That information was not included in last week's minutes.

**Mrs Hepper:**

That is fine; I am happy to cover those points again. The first part of the question was on wind. Although the target is not purely a wind target, realistically, the lion's share of renewables used to meet our target will be delivered by onshore wind. However, the NIRO is in place. That will not only incentivise the wind element but will bring other technologies on board. As I said last week, the Department is technology neutral, and we incentivise a range of technologies such as photovoltaic (PV) power, anaerobic digestion (AD) and other forms of biomass. We want all of those to play their part. However, we are realistic about the percentage that they will deliver, particularly in the short term. They will be dwarfed by what wind can deliver, largely because wind is a more established technology. The development of the equipment needed to deliver that is well embedded in the supply chain, but other technologies will start to make their play. This year, through our NIRO consultation, we propose to uplift the number of renewables obligation certificates (ROCs) available for anaerobic digestion based on our call for evidence earlier in the year.

I hope that the energy from waste will start to develop. When I was with the Committee previously, we talked about the plans of some conglomerations of councils, such as Arc21 and the Southern Waste Management Partnership (SWaMP) to bring forward ideas, and those will develop over time. Likewise, our Crown Estate call in the spring of next year will focus on offshore energy, and offshore wind and some of the marine and tidal technologies will start to come forward. Again, those are subject to slightly different timescales and will develop over time.

Last week, I mentioned that I had scheduled a meeting with the chief executive of the Planning Service in the early part of the new year to discuss whether there is anything that DETI can do in conjunction with NIE to smooth the path for the interconnector, albeit within the statutory requirements of the planning appeals process and its inquiry.

I have a blunt answer to your question: the bottom line is that, should the interconnector not materialise, there is no plan B. If the interconnector is turned down by the Planning Service, we will have to consider why that was the case. If it was the case that more information was required

and a mere tweak was required, the application could be resubmitted. If it is something more fundamental, NIE and EirGrid will already be looking at whether they are getting the maximum out of the existing interconnector and calculating how much more they can squeeze out of it. The bottom line, however, is that the interconnector is needed to enable us to bring forward —

**The Chairperson:**

I will just stop you there. I asked this question of the Utility Regulator, who was probably an inappropriate person to ask, but is there no way in which Government can prioritise the public inquiry? I know that the Planning Appeals Commission (PAC) is an independent body, and properly so. However, to deal with the issue quickly, so that we know whether there will be an interconnector on the route outlined, is there any way in which Government can prevail upon the PAC to deal with the matter as a top priority?

**Mrs Hepper:**

That is one issue that we want to cover when we talk to Ian Maye in January. We will give our view, which is that it is a strategic piece of economic infrastructure and a high priority in facilitating the delivery of the strategic energy framework. We need to find out, from the other side of the table, the issues that surround Planning Service and planning appeals. At present, nothing in that process is being held up. NIE has submitted its application, which is being considered by the Planning Service. PAC is asking various questions and has requested some additional information.

**The Chairperson:**

So, the gathering of information has not yet been concluded?

**Mrs Hepper:**

No. I understand that NIE hopes to submit the rest of the requested information in January. That is not holding up the process, but we will keep an eye on it. The Minister strongly supports the work coming forward as soon as possible and has already spoken to the Minister of the Environment. We will keep that level of conversation going, albeit that we do not want get in the way of the statutory and perfectly reasonable inquiry that has to be undertaken.

Mr Cree's final question was about the grid and the bringing forward of other grid investment and infrastructure. NIE is working on a number of scenarios for how the grid needs to develop



over the next 10 years or so. At this stage, it is working through a large number of scenarios to determine where it can squeeze more capacity from the existing infrastructure using new technology. That is the short-term plan. NIE's medium-term plans are looking at what 110kV lines need to be developed. The third process is to find out where the 275kV infrastructure should be.

NIE will whittle down those scenarios to their preferred one or two options, and that is on schedule for early spring of next year. They will then have formal discussions and negotiation with the regulator, because the regulator will play a major role in relation to how much it will cost. Likewise, NIE is already engaging with the Department on the various scenarios.

We are working on some of our strategic environmental assessments, which have to be done to ensure that there is no adverse environmental impact should the grid plans come forward. All of that work is ongoing and forms part of the current price review. There is, at present, no slippage on that.

**Mr Cree:**

You are aware that the departing regulator lambasted progress on the power line.

**Mrs Hepper:**

Yes, I saw the reports of that. I think that he was talking specifically about the interconnector and the fact that the tentative date for the Planning Appeals Commission to sit on that is not until late 2012. However, that is only a rumour at the moment. The Planning Appeals Commission has not decided, nor is it in a position to have decided, when that will happen. Iain Osborne's point was that, if it slips to the end of 2012 or into 2013 before the PAC takes evidence, that means that a further year or two will have passed without the interconnector being constructed.

**The Chairperson:**

How long will it take to build the interconnector?

**Mrs Hepper:**

I am not entirely sure.

**The Chairperson:**

It will take several months, anyway.

**Mrs Hepper:**

I think that it will take a year or two.

**The Chairperson:**

Could it take two years?

**Mrs Hepper:**

Yes.

**Mr Cree:**

I also asked about the definition of renewable heat.

**Ms Clydesdale:**

Put simply, renewable heat is heat from renewable sources, including solid biomass, bio-liquids, biogas, air, source heat pumps, ground-source heat pumps, solar, thermal —

**Mr Cree:**

Does renewable heat cover the whole range?

**Ms Clydesdale:**

Yes

**Ms J McCann:**

On the back of what Leslie's question on renewable heat, did you say £22 million or £25 million?

**Mrs Hepper:**

It is £25 million.

**Ms J McCann:**

That is not really a large amount of money. I just wonder how you could get best value from that money. You mentioned that the domestic sector is the largest user of heat. Is there any way in

which we can look at what was done in, for example, Kirklees in England? I know that it was not a renewables project, but perhaps we could focus on an area where fuel poverty is more concentrated, such as a social housing setting. Working alongside the Department for Social Development, could we consider providing renewable heat in those homes and investing that money in tackling fuel poverty? Although £25 million might sound like a large amount of money, it is not, particularly if it is scattered. Therefore, I wonder whether it would be better spent tackling fuel poverty in places where it is most acute.

**Ms Clydesdale:**

The Housing Executive is already trialling a number of biomass installations in social housing settings to determine whether they bring genuine benefits. Money could be targeted at an area of fuel poverty, but energy efficiency is the first step in tackling fuel poverty. Therefore, that should always be the first step prior to introducing renewable technologies.

**Ms J McCann:**

It could be done by working with the warm homes scheme through other Departments.

**Ms Clydesdale:**

Absolutely. The only issue of which we must be mindful is that a renewable heat incentive would have to be available to the entire population, regardless of whether they are in fuel poverty. If we targeted the scheme purely at fuel poverty, it might give rise to some equality issues, because other households would want to avail themselves of renewable heat. Their location might influence their decision, as might whether they are on the gas network. That would be a major influencing factor as to whether they take up renewable heat. Useful trials have been carried out in Housing Executive social housing settings, but it would also be useful for renewable heat to be available to a larger percentage and wider range of the population.

**Ms J McCann:**

I understand the equality implications. Many older people, for instance, die each year through fuel poverty and cold-related problems. Of course, they might have underlying health problems. You would get better value for money in the longer term if there were a targeted group.

**Ms Clydesdale:**

The Executive would need to give a commitment that there will be capital funding available,

because capital investment is required for renewable heat technologies. If a householder is in fuel poverty and is not able to make that investment, there would need to be a funding stream to get the technology installed. Perhaps that would be a matter for the DSD.

**The Chairperson:**

I do not think that anyone else has a question, but I have a few. The Committee heard from Mr Tom Clarke from the Department of the Environment, and he dealt with the planning aspects of renewable energy. He talked about approval for 41 projects for wind farms, with a potential output of 638 megawatts. You reflected that in your evidence. He said that 638 megawatts was 19% of the 40% target. He also said that another 43% of applications were being processed for projects and that that was capable of producing a further 700 megawatts. In his evidence, he said:

“adding the two together, we get 38·9%.”

He went on to say:

“The strategic target for renewables is 40%. We are saying that, if all the approved applications and all the applications that are being processed come to fruition, they will contribute 38·9% of our electricity.”

I asked if they were close to meeting the target. He said:

“Yes, if all of the applications go through.”

I asked if that took into account the fact that turbines on wind farms run at 30% efficiency.

The impression given by Mr Clarke was that the applications that were approved and about to be approved would achieve the 40% target. However, according to what you are telling us, and what Ms Clydesdale said last week, that is not the full story, is it?

**Mrs Hepper:**

No. Alison will come in on this.

**The Chairperson:**

Can she reconcile this for us?

**Ms Clydesdale:**

I can give the Committee some numbers around it. The derivation of the 40% target equalling 1,600 megawatts comes from an estimated demand in 2020 of 11,000 gigawatt hours, which is equivalent to an installed capacity of 4,000 megawatts. Therefore 40% of the 4,000 megawatts anticipated in 2020 equates to 1,600 megawatts.

**The Chairperson:**

So, it is 1,600 megawatts; right.

**Ms Clydesdale:**

In our strategic environmental assessment, we are estimating that the 1,600 megawatts are made up of a number of technologies, not only wind. We have various scenarios for minimum, low, medium and high levels of wind being supplemented by other technologies, such as biomass and small-scale generation. The 40% is based on an estimated demand profile in 2020.

The figures that the Planning Service is quoting relate to installed capacity, but we need to look at demand. We also need to be mindful of the fact that even though a project for a wind farm gets planning permission, it may not go through to design and build. So, although there might be 1,500 megawatts in the planning system, and 1,500 megawatts, or most of it, might get planning permission, only half might proceed to design and build stage. Even though planning permission is granted, it is up to the developer as to whether something is built. There is always ambiguity around the exact figures, because we will not know whether the wind farms will be built.

**The Chairperson:**

Assuming that they are built, is Mr Clarke right? Will we meet, or almost meet, the target?

**Ms Clydesdale:**

If everything that is in planning comes to fruition, is built, and is not curtailed by the current network, then the majority of the 40% target could be met by onshore wind, if the grid were in place. However, if the interconnector does not go ahead, then the curtailment levels of the current grid, even if all of the wind power resources are built, would probably restrict the amount of wind energy produced to about 800 megawatts until 2015.

**The Chairperson:**

Mr Clarke's evidence is, in essence, correct assuming that we get the grid connection — and that is big assumption — and assuming that we get the interconnector, which, again, is a big assumption. However, he is correct that, if the bulk of the applications are accepted, approved and become operational, we could reach the target.

**Ms Clydesdale:**

That is correct.

**The Chairperson:**

That is very helpful. I have one final point about geothermal energy. The Committee heard evidence that there are ample — I think that that word was used — resources of geothermal energy in Northern Ireland. Do you agree with that assessment?

**Ms Clydesdale:**

Yes. There are deep and shallow geothermal energy resources in Northern Ireland. A lot of the shallow geothermal resources have been realised in the past few years. Between 2006 and 2008, the Department promoted the Reconnect scheme, through which quite a few ground-source and air-source heat pumps were connected. That was positive, and a lot of householders have done that. There are certainly some deep geothermal resources available in Northern Ireland.

**The Chairperson:**

Are deep geothermal resources the ample source of renewable energy?

**Ms Clydesdale:**

Deep geothermal energy is slightly less developed than shallow geothermal energy at the moment. That resource is more expensive to harness because it is so much further down in the earth. Therefore, very high capital costs are associated with its development, and that can be a barrier to the speed of its development. That is why, at the moment, more types of shallow geothermal energy technologies are coming on to the market.

**The Chairperson:**

Therefore, it is not an exaggeration for someone to tell the Committee that there are ample resources of geothermal energy. Is that correct? That power source is highly capital-intensive, but will it provide us with renewable energy sources in the future?

**Ms Clydesdale:**

It could do. The current figures suggest that around 10 megawatts could be developed. The cost of development is the issue. As time passes and technology improves, the cost will fall and it will, hopefully, become a more attractive project. Again, it depends what we will do with that

geothermal energy. Will we generate electricity or heat from it? Those issues have to be addressed. The NIRO currently provides two ROCs for electricity generation, and the heat incentive will, in due course, look to provide for geothermal heat as well. Electricity from geothermal energy is still in its infancy and is an earlier technology than the generation of heat from geothermal energy.

**The Chairperson:**

Do I detect a preference for heat technology?

**Ms Clydesdale:**

Heat technology would be easier and, perhaps, cheaper to develop and easier to use.

**The Chairperson:**

Will the state be able to obtain royalties from the extraction of geothermal energy?

**Ms Clydesdale:**

There is no definitive judgement on ownership rights to geothermal energy at the moment. There are a number of scenarios. The rights could be owned by the landowner, by a holder of mineral rights or by the Crown. There is another scenario in which the rights are not owned by anyone. The situation is similar to water; heat will be extracted, potentially, from a number of areas involving a number of landowners. Therefore, there would be an issue concerning who owns the rights.

In GB, geothermal energy has proceeded with landowners' agreement, and developers have struck up individual agreements with landowners. If the Crown or the state had ownership of the land and the power to extract heat from that land, it would, quite rightly, be able to get royalties. However, given that this is such a highly capital-intensive industry, which, at the minute, offers a relatively low return, there is a chance the development of the industry could be slowed down if the Crown did take royalties. We might want to set the royalties at zero.

**The Chairperson:**

Mr Thomson, you did not really touch on the industrial aspect of renewable energy. How big is the potential for job creation, not just employing people to generate renewable energy, but through the manufacture of renewable energy products and equipment and research and

development in universities?

**Mr David Thomson (Department of Enterprise, Trade and Investment):**

There is a very big potential, with one caveat. If you read the European strategies or look at what is being said in Ireland, Scotland or England, everybody is saying that it is a very competitive market. That means that you have to look at what competitive advantage you have. As I said briefly earlier, I think that Northern Ireland has a competitive advantage. We have skills in manufacturing and skills in things like composites. We are close to the market, which is useful both for onshore and offshore generation. When we talk about offshore it is not just Northern Ireland offshore, but the Irish Sea and Wales, for example.

We certainly have potential. I know that Invest NI is doing quite a lot of work and is engaged with a number of potential inward investors at the moment. Of course, if we got big inward investors, that would have supply chain consequences. As you know, Harland and Wolff is keen to develop the market and has been relatively successful to date. It certainly sees a large potential in using the facilities of Belfast port. The economic strategy, on the basis of IREP, is focusing on research and development. We should encourage innovation and R&D, and renewable energy is one of the areas mentioned. I know that both universities are doing work on renewable energy.

**Mrs Hepper:**

Invest NI hosted a very successful supply chain event, alongside the Crown Estate, in March, which was well attended. Another is scheduled for March 2011 — I think around 3 March or 4 March — which will be just ahead of the Crown Estate call for the projects for Northern Ireland waters. That is being shaped at the moment. There is also some discussion about a renewables event in the United States to coincide with the St Patricks Day event. So, we have a number of very good opportunities to promote the product offerings of Northern Ireland and start to get our differential market offerings out into the wider world. Invest NI has done some work on that. As David said, it sees particular opportunities on the surveying, design, manufacture and assembly side of things, as well as the installation, operation and management.

If we get projects coming forward for the waters off Northern Ireland shores, and an installation is going into the water, at some point it will have to be decommissioned, and there will have to be work done on that. There are a number of different supply chain opportunities, and we will be pursuing those through Invest NI.



**The Chairperson:**

Nigel McClelland of Invest Northern Ireland, when giving evidence to the Committee, spoke about an estimated 31,000 jobs in Northern Ireland across the low-carbon sector, which includes building and environmental technologies. He also said that, in the renewable energy sector in particular, it was estimated that there were approximately 3,800 jobs: that is at the moment, I understand.

**Mrs Hepper:**

That is right.

**The Chairperson:**

He said that, given the projected growth figures, there could be as many as 15,000 jobs by 2015. Do you agree?

**Mrs Hepper:**

The figures that he quoted come from a piece of work done on a UK-basis a couple of years ago by the Department of Business, Innovation and Skills. It stated that around 3,000 to 4,000 was the baseline for jobs in Northern Ireland, building to around 15,000 or 16,000 by around 2015 or 2016. Invest NI thought that was a credible range.

**The Chairperson:**

So, none of that is far-fetched?

**Mr Thomson:**

No; it is not far-fetched. I would not like to say that it is a DETI projection; I am not sure that I would go as far as that. However, there is certainly potential.

**The Chairperson:**

Thank you very much. Once again, I am sorry for bringing you back.

**Mrs Hepper:**

It was a pleasure.