



From: Jenny Pyper
Energy Division

Date: 9 April 2010

1. Andrew Crawford
2. Arlene Foster MLA

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UPDATE ON RENEWABLE HEAT STUDY

Issue: Update, ahead of next Oversight Group meeting on 26 April, on the study into the potential for renewable heat in Northern Ireland, including the impact renewable heat could make to the domestic heating market.

Timing: Immediate, if DSD are to be engaged in next few weeks

Need for referral to the Executive: Not at this stage

Presentational Issues: You will wish to consider the need for an announcement on DETI's renewable heat work, specifically regarding eligibility for any future incentivisation scheme.

Freedom of Information: Exempted under Section 35 of the Freedom of Information Act.

Financial Implications: None, at this stage.

Legislation Implications: There are a number of legislative issues to be addressed in relation to renewable heat.

PSA/PFG Implications: None at present, but it is likely that new PSA targets in relation to renewable heat could be developed.

Statutory Equality Obligations: Not Applicable.

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Recommendation: That you note this submission and agree to write to Margaret Ritchie, MLA, Minister for Social Development, regarding the work on developing a renewable heat market.

Background

You will be aware from previous submissions that Energy Division has been carrying out a study to determine the potential for renewable heat in NI and the most appropriate method of incentivising its uptake. I wanted to update you on the progress of this work, inform you of the initial findings of the study and suggest that there could be value in engaging with the Department of Social Development. This is therefore a substantial submission and you may wish to discuss in due course.

Renewable Heat Study

2. AECOM Ltd and Pöyry Energy Consulting were appointed in December 2009 to undertake the study into the potential development of the renewable heat market in NI. This work came on the back of the EU Renewable Directive which requires the UK to ensure that 15% of its energy consumption comes from renewable sources, this includes heating and cooling. Further to this, DECC indicated in July 2009, through the Renewable Energy Strategy, that it intended to incentivise renewable heat via the RHI from April 2011. As Northern Ireland was not to be included in this measure a separate assessment on how to encourage the NI renewable heat market was required.
3. The work, being carried out by AECOM and Pöyry, is essential to inform future policy decisions, to develop an evidence based target for renewable heat to 2020 and assess options for incentivisation. This work is to achieve the following outputs;
 - Modelling and data collection to produce a “heat map” of Northern Ireland and develop a detailed understanding of heat demand and customers.
 - Assessment of renewable energy resource availability in relation to heat.
 - Assessment of the technical potential for renewable heat technologies, and the likely uptake with consumers based on economic analysis.
 - Assessment of incentives and their impact on the potential uptake of technologies, including a review of other European practise.
 - The development of targets for 2020 based on resource and technical potential, and the potential impact of incentive schemes.
4. To assist and support this work an Oversight Group has been set up. This group is made up of public sector stakeholders, academia and representatives from local industry and renewable energy bodies. The

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group has met twice to date with a third and final meeting planned for Monday, 26 April 2010. At this meeting AECOM and Pöyry will present their final report for consideration and discussion.

Interim report

NI Heat Demand

5. AECOM / Pöyry have submitted an interim report to Sustainable Energy Branch. This report includes high level data on the existing NI heat market as follows;

- The total heat demand for Northern Ireland based has been calculated as 17,362 GWh per year.
- Of this 17GWh approximately 1.7% currently comes from renewable sources.
- The majority of heat use is in the domestic sector, at 61% of the total heat demand or 10,644 GWh. This is followed by the large industrial sector at 22%, the commercial sector at 12% and finally the public sector at 4%.

Reaching a 10% target

6. These high level results can be used to assess where and how renewable heat could potentially be targeted. For example, if we consider how a 10% target for renewable heat, as set out in the draft Strategic Energy Framework, could be achieved by using one sector only:

- Around 16% of the NI housing stock would need to be entirely heated by renewable technologies. This means modifying 1.6% of the stock per year equating to about 11,800 homes per year. This is less than the current boiler replacement rate (estimated at around 7% per year assuming a 15 year lifetime) and so seems an achievable target.
- The 10% target could be met entirely in the heavy industrial sector with 45% of the heavy industrial heat load being met by renewable heat. Due to the distribution of energy use in this sector, the 10% could be met in it's entirety by modifying two cement works sites (Lafarge Cement and Quinn Cement). These two sites alone account for 15% of overall heat demand in NI.
- The majority of the commercial sector would need to be heated by renewable fuels if the target was to be met by this sector alone. This would be challenging in the next 10 years and would require an uptake considerably higher than current refurbishment would suggest.
- The public sector could only ever meet half the target with only 4% of the overall heat load being accounted for. However, it has been suggested that the public sector will have an important role in the early

development of the market as it is one of the easier areas in which renewable heat could be delivered due to public ownership.

7. From this high level analysis, it would appear that there is potential for each sector to contribute towards a renewable heat target in 2020, with the housing sector having the largest overall potential (due to having the largest overall heat demand).

NI Resource Assessment

8. AECOM and Pöyry have also undertaken research into existing renewable heat resources in NI such as biomass, deep geothermal and solar irradiation and the viability of deploying heat pumps and using district heating.
9. Northern Ireland has only 6.2% forest cover, one of the lowest in the EU, which has an average of 37% and whilst biomass is currently available in many forms in NI increased demands in the future could impact on the level that renewable heat could be delivered by this method. Biomass, however, currently appears to be the most financially viable renewable heat option.
10. NI also possesses a natural geothermal resource, with potential sites in Larne, Ballymoney and Ballymena, however, the lack of developed projects to date means that this technology remains relatively untried and untested. Solar thermal could also have a role in delivering domestic hot water.

Engagement with DSD

11. OFMDFM, DARD and DOE are already represented on the project oversight group because they had obvious common areas of interest. It is now apparent however, that DSD may have a significant role in the support of DETI renewable heat policy because of its role in respect of energy use in the domestic sector.
12. Renewable heat may also present an opportunity to help tackle fuel poverty issues. There are a number of factors contributing to the higher levels of fuel poverty in NI compared to GB, one being the prevalent use of oil for heating (76% of homes in 2006 were heated using oil). Whilst there is a significant upfront capital cost in installing renewable heat technologies the ongoing operation and maintenance costs, such as biomass fuel, tend to be lower and more stable. Social housing may also provide the opportunity to roll-out small scale renewable district heating schemes where heat is generated at a central source and distributed to nearby houses as required.
13. In light of the potential role DSD may have in the future deployment of renewable heat in the domestic and social housing sector, we feel there would be value in you writing to Margaret Ritchie as Minister for Social

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Development, outlining DETI's work to date on renewable heat and seeking a DSD representative to attend the final meeting of the next Renewable Heat Oversight Group meeting on Monday 26 April 2010. A draft letter is attached at **Annex A** for your consideration.

GB Position

14. You will be aware that DECC is currently consulting on the design and implementation of the RHI. Since DECC launched the consultation document there has been a significant increase in the interest in DETI's renewable heat work with a number of queries received from the ETI Committee, MLAs, industry and members of the public. These queries have focussed on reasons as to why NI is not included in the RHI measure and what is being done to ensure NI is not unduly disadvantaged by DECC's proposals.
15. The DECC consultation closes on Monday 26 April 2010 and we understand that once the responses have been analysed and a final policy agreed that the regulations will be drafted and consulted on in Autumn 2010. These will then be debated in House of Commons and House of Lords in December 2010/January 2011, with the legislation enacted 1st April 2011. The first review of the RHI is scheduled for 2013.
16. If an RHI is deemed the most appropriate method of incentivising the NI market place then there may be merit in exploring the possibility of enacting appropriate legislation in NI through a legislative consent motion (LCM). Once our current study completes and its findings are known you may wish to consider writing to your counterpart in DECC to enquire about the possibility of a LCM.

Retrospective support for heat installations

17. One significant issue concerning local stakeholders and industry here is the decision by the Department of Energy and Climate Change (DECC) to allow new installations from the 15 July 2009 to be eligible for the Renewable Heat Incentive (RHI), despite legislation not to be in place until April 2011. Recent engagement with industry representatives here indicates that local renewable heat projects may be being delayed until DETI policy becomes clear in respect of retrospective approval. This decision by DECC to allow retrospective eligibility does appear to have the potential to detrimentally impact the NI market place.
18. Discussions with DECC have revealed that they do not yet have estimates of the cost implications of allowing installations from 15 July 2009 to qualify under the RHI. The reason for including transitional arrangements as eligible for the RHI was a desire to avoid creating a standstill in the market and enabling an orderly transition to the RHI in April 2011.
19. Considering the potential for a slow down in the local renewable market place as a result of the DECC RHI consultation and the lack of a NI

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incentive mechanism you may wish to consider making an announcement in the near future making a commitment that any future DETI renewable heat scheme will include retrospective approval. This would be, of course, subject to budget availability, though as DECC do not hold cost estimates for their scheme nor have they confirmed how it will be funded, our position is very similar. Further work would be required to determine costs and a date for retrospective eligibility should that decision be made. I will advise further on this issue and the scope for an LCM once the final AECOM/ Pöyry report has been received.

Recommendation

20. That you note this submission updating you on:

- (i) progress with the Renewable Heat study;
- (ii) the possibility of an LCM to allow a RHI in Northern Ireland;
- (iii) the potential for an announcement on eligibility to reassure the local market; and
- (iv) agree to write to Margaret Ritchie (draft at **Annex A**) inviting a DSD official to the next oversight group meeting. This letter should issue as soon as possible.



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ANNEX A**DRAFT LETTER**

Margaret Ritchie MLA
Department for Social Development
Lighthouse Building
1 Cromac Place, Gasworks Business Park
Ormeau Road
BELFAST
BT7 2JB

April 2010

Dear

You may be aware that my Department has been carrying out a study into the potential for deploying renewable heat in Northern Ireland. This study, which began in December 2009, came as a result of EU Renewable Energy Directive which requires the UK to ensure that 15% of its energy consumption comes from renewable sources – for the first time this requirement extended beyond electricity to heating and cooling and transport. Northern Ireland is expected to contribute to the United Kingdom's share of this target and, therefore, my Department's draft Strategic Energy Framework included an indicative target of 10% renewable heat by 2020.

This current study into renewable heat is being taken forward by AECOM Ltd and Pöyry Energy Consulting. The work will gather data on current heat and renewable heat usage in NI; assess the potential for deploying renewable heat in NI and consider appropriate methods of incentivisation. The Department of Energy and Climate Change (DECC) has recently announced that it will reward renewable heat installations via a Renewable Heat Incentive (RHI) from April 2011. This measure will not be available in Northern Ireland and therefore it has been necessary to undertake this current work to assess how best the market in NI could be developed and encouraged.

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Initial findings from this work have shown current heat demand in Northern Ireland as being 17,362 GWh per year, approximately 1.7% of this currently comes from renewable sources. The work has also shown that the majority of NI heat use is in the domestic sector, at 61% of the total heat demand or 10,644 GWh. This is followed by the large industrial sector at 22%, the commercial sector at 12% and finally the public sector at 4%.

The current Northern Ireland target of 10% renewable heat by 2020 is subject to revision dependent on the outcome of this work, however, if the 10% is formalised it will require the contribution of each sector, with the domestic sector, as the largest overall heat user, having a significant role to play. Indeed, for the 10% to be met solely through domestic housing it would require 16% of the existing stock to be entirely heated by renewable technologies. This equates to modifying 11,800 homes (1.6%) per year.

Renewable heat may also have a significant role in tackling fuel poverty, either through localised district heating schemes in new housing developments or through supporting the installation of renewable heat technologies in households suffering from fuel poverty.

This current work is the first phase in the wider development and implementation of a renewable heat strategy for Northern Ireland. A future renewable heat strategy will require the cross-departmental support, with roles for our respective departments as well as OFMDFM, DFP, DOE and DARD. Legislation may also be required depending on the agreed method of incentivisation.

In light of the role that domestic housing may have in the future deployment of renewable heat and the impact this work could have on alleviating fuel poverty, I would invite you to nominate one of your officials to attend the next meeting of the Renewable Heat Oversight Group at 10.30am on Monday, 26 April 2010 in Netherleigh. This group includes representatives from the public sector, from industry and from academia and has been tasked with

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overseeing the work of AECOM and Pöyry, offering advice and guidance where necessary.

At this meeting AECOM and Pöyry will present their final report for discussion and comment. There will also be an opportunity for those present to consider how this work is taken forward. I believe therefore that it would be useful if a relevant official from your Department could attend.

ARLENE FOSTER MLA

Minister of Enterprise, Trade and Investment