



**From:** Jenny Pyper  
Energy Division

**Date:** 23 September 2009

1. Andrew Crawford  
2. Arlene Foster MLA

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**STUDY INTO THE POTENTIAL FOR RENEWABLE HEAT IN NORTHERN IRELAND**

**Issue:** To provide you with the Terms of Reference for the study into renewable heat potential and take your view on membership of the Project Steering Group

**Timing:** Routine

**Need for referral to the Executive:** Not at this stage, but heat is a cross-cutting issue and will require referral to the Executive at a later date.

**Presentational Issues:** None, at this stage.

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

**Financial Implications:** It is expect that this consultation will cost in the region of £150K. You indicated approval for a consultancy spend of up to £250K following my submission of 27 May 2009.

**Legislation Implications:** There will be number of primary 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 will be needed for the future.

**Statutory Equality Obligations:** It is unlikely that this policy will have equality implications but it will be screened in due course.

**Recommendation:** That you note the draft Terms of Reference and offer views on the membership of the Project Steering Group.

## Background

In April 2009, I updated you on developments in on renewable heat policy in Great Britain and the Irish Republic and proposed a work programme for DETI Energy Division for renewable heat (SUB 254/09, attached at **Annex A** for ease of reference). In addition, you approved the business case for consultancy spend in this area in May 2009, SUB 315/09, attached at **Annex B**).

2. You agreed to a work programme that will involve preliminary scoping of the NI heat market by consultants, the setting of a renewable heat target and the development of a draft strategy. Please now find attached at **Annex C** the proposed Terms of Reference for the first stage of this work to be undertaken by consultants on the potential for renewable heat in Northern Ireland, for your information. It is envisaged that this work will be a two stage process, with an economic appraisal being carried out separately.
3. As you will see, the output of this consultancy work will be;
  - provision of up to date and accurate statistics on current heat and renewable heat usage in Northern Ireland, including a base heat map;
  - recommendations on the options for encouraging the development of renewable heat technologies in the short, medium and longer term, specifically considering options for Northern Ireland in the absence of a legislative provision for a Renewable Heat Incentive; and
  - a proposed evidence-based renewable heat target and an assessment of the impact this target may have on the existing energy industries.
4. This work will also be informed by the responses to the draft Strategic Energy Framework, currently out for public consultation. The SEF included a provisional target of 10% renewable heat by 2020; however, this may need to be revised in light of responses from respondents and through information gathered by the successful consultants. DECC have recently confirmed a target of 12% renewable heat by 2020 for England and Wales. Scotland and the Irish Republic have set targets of 12% and 11% for 2020 respectively. The market in Northern Ireland is considered to be significantly smaller.
5. It had initially been proposed that this piece of work would include the development of a draft strategy to meet the proposed target. However, after initial meetings with key industry players we have decided that it would be more appropriate for the evidence to be gathered and considered by key stakeholders in the first instance. We will also be seeking to take your view on the proposed options, and get your approval on the final policy before developing a strategy. There may be opportunities emerging which the new Matrix energy panel might consider so I will keep Fiona Hepper's team in the loop as work progresses.
6. This is therefore seen as the first phase in a much wider work programme which should culminate in a NI strategy for Renewable Heat deployment (to be considered by the NI Executive), accompanying primary legislation and an appropriate NI equivalent to the GB Renewable Heat Incentive.

**Project Steering Group**

7. It is proposed that this project will be managed by a DETI-led Project Steering Group with the successful consultant expected to submit regular progress reports. I will chair the group which will comprise key civil servants and external stakeholders.
8. The exact membership of this group has not yet been decided though some possible public / private stakeholders that could be represented are;
  - Department of Agriculture and Rural Development
  - Invest NI
  - Action Renewables
  - Ulster Farmers Union
  - Queen's University Belfast and University of Ulster
9. A tentative list of participants is attached at **Annex D** and any further suggestions you may have would be welcome prior to us approaching the potential participants to sit on this Steering Group. It is envisaged that the first meeting will be held mid December 2009.

**Next Steps**

10. The tender documentation for this project has been placed in the Official Journal of the European Union on 15 September for 40 calendar days. The tender will close on 26 October when all applications will be considered by an evaluation panel. It is expected that the contract will be awarded by 18 November.
11. The successful consultants will be expected to produce a draft report in January 2010, with a final report presented to the Project Steering Group by the first week in March 2010. At this point the Project Steering Group will consider the findings and the options for encouraging Renewable Heat technologies in Northern Ireland in the short, medium and longer term. An economic analysis will be needed to assess the options emerging from the study and this will be commissioned once the way forward becomes clearer, and we have discussed emerging findings with you.

**Recommendation**

12. I recommend that you:
  - a) note the draft Terms of Reference for the study on the potential for renewable heat in Northern Ireland; and
  - b) offer any additional nominee(s) for inclusion in the Project Steering Group.



**JENNY PYPER**  
**Head of Energy Division**  
**X 29577**

Distribution List

cc: Stephen Quinn  
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**TERMS OF REFERENCE****ASSESSMENT OF THE POTENTIAL FOR DEVELOPMENT OF RENEWABLE HEAT IN  
NORTHERN IRELAND****Background:**

1. The Department of Enterprise Trade and Investment (DETI) is responsible for the development and maintenance of an appropriate legislative and policy framework for energy in Northern Ireland and is currently consulting on a Strategic Framework for Northern Ireland to cover the next 5-10 year period. The vision is for a competitive, sustainable, reliable energy market at the minimum cost necessary. Four key policy goals have been identified to support this vision as follows
  - Competitiveness
  - Security of Supply
  - Infrastructure
  - Sustainability
  
2. The agenda for developing renewable energy solutions and securing real reductions in energy consumption to enhance sustainability is driven by environmental policy, aimed at reducing harmful emissions. However, pursuing sustainability in energy also offers opportunities to enhance security of energy supply by introducing alternative generation sources, which are not subject to the price volatility of imported fossil fuels. Furthermore, development of indigenous sources offers opportunities for diversification and alternative sources of income.

**Renewable Heat**

3. Renewable heat is simply heat produced from renewable sources, for example wood pellet boilers, solar thermal water heating units, heat pumps and, on a larger scale, industrial biomass boilers or biogas plants.
  
4. The EU Renewable Energy Directive (2009/28/EC), published in the Official Journal of the European Union on 5 June 2009, requires that member states ensure that

15% of their energy consumption comes from renewable sources by 2020. This requirement extends beyond electricity to heating and cooling and to transport.

5. As heat energy accounts for almost half of all the energy consumed in the UK and produces around half of the UK's CO<sub>2</sub> it would appear there is considerable scope to explore and increase the use of renewable heat technologies in order to help meet the new Renewable Energy Directive target. The domestic sector is believed to be the largest heat-consuming sector, with the industrial sector the next largest user. However the magnitude of the contribution of renewable heat activities to wider policy drivers is still to be determined.
6. In the UK Renewable Energy Strategy, published in July 2009, the Department of Energy and Climate Change (DECC) has set a target of 12% for England and Wales renewable heat (or 72 TWh) by 2020. Scotland has set a renewable heat target of 11% by 2020 and the Republic of Ireland 12%. Currently, DETI is consulting on, through the draft Strategic Energy Framework for Northern Ireland, a suggested renewable heat target of 10% by 2020 (2,500 GWh/yr of renewable heat) for Northern Ireland. This is seen as the minimum requirement for NI and is a provisional target, subject to the outcome of the consultation and completion of this study.

## **Purpose of the assignment**

7. DETI now wishes to appoint a consultant to:
  - a. undertake an independent assessment to identify and quantify the current scale, future sustainable growth potential and optimum size and scale of the renewable heat sector in Northern Ireland. The successful consultant will be required to provide a statistical evidence base to verify their findings;
  - b. make recommendations as to the options for encouraging the deployment of renewable heat technologies in Northern Ireland. It is anticipated that GB legislation for a Renewable Heat Incentive (RHI) will be forthcoming, the Energy Act 2008 allows DECC the ability to provide financial support for renewable heat through the RHI. NI is not included in this measure and

therefore an assessment will need to be made on the most appropriate options of incentivising and stimulating the renewable heat market in NI. The successful consultants must therefore examine the appropriateness of a RHI for NI and will be expected to provide an analysis of the needs or otherwise for any short term incentive that may be required in the absence of anticipated legislation for a RHI in NI in the short term; and

- c. make recommendations for an appropriate evidence-based renewable heat target and to consider how this target might impact on existing energy markets in NI.

### **Contract Requirements**

8. Currently there is no firm statistical basis for heat in Northern Ireland. Before a target can be set and a strategy developed there needs to be up to date NI specific data concerning the current heat demand and production. The assignment will address the following key objectives and the successful consultant will therefore be required to:
  - i. **To provide up to date and accurate statistics on the current heat and renewable heat usage in Northern Ireland. Specifically this should include as a minimum:**
    - base-line statistics for heat and renewable heat consumption and production in NI based on primary, contemporary evidence;
    - baseline statistics by sector (domestic, public , industrial, commercial and agricultural or as most appropriate), on current NI heat demand and usage by GWh/year ;
    - baseline statistics by sector or as most appropriate on current % renewable heat demand / usage by GWh/y; and
    - recommendations for maintaining statistics.
  - ii. **To produce a base heat map for Northern Ireland in a Geographic Information Systems format that identifies, as a minimum, high-level heat users and their location; highlights heat demand and resource in NI; and**

- identifies locations which offer the best potential for developing renewable heat technologies.**
- iii. To benchmark Northern Ireland's renewable heat potential against Renewable Heat markets in GB, RoI and at least 2 other European regions.**
- iv. To consider and present options on how the Renewable Heat market in Northern Ireland could be encouraged / incentivised. Specifically this will include as a minimum:**
- an evidence based assessment of potential options for encouraging / incentivising the renewable heat market in NI, taking account of developments in the EU, GB and RoI;
  - evidence-based assessments of the most likely renewable heat scenarios; and,
  - an evidence based cost-benefit analysis for each option presented, detailing the potential cost (to government and industry) and the potential economic impact of each proposal.
- v. To make an evidence based assessment of the need for an interim measure in Northern Ireland to stimulate the Renewable Heat market in light of the introduction of the Renewable Heat Incentive in Great Britain, and present options for any short term incentivisation and accompanying cost-benefit analysis.**
- vi. To make projections as to evidence-based target for renewable heat to 2020 for Northern Ireland, setting out clearly the potential impact of any target on other existing energy markets (i.e electricity, gas, coal and oil).**

### **Project Management and Timetable**

9. The Project will be managed by a DETI-led Project Steering Group and the consultant will be asked to liaise closely with the Steering Group and submit regular reports (frequency of written reports and meetings to be agreed) to enable the

review of progress. The Group will be chaired by DETI. It will comprise of key civil servants and private sector stakeholders. The membership of this group will be agreed in due course. Payment will be made in full upon satisfactory completion of the assignment. No interim stage payments will be provided.

- 10 It is anticipated that the appointed consultant will be available to commence work **w/c 16 November 2009** and provide a draft report, including recommendations, by **29 January 2010**, with a final report available by **5 March 2010**.

## **Project Output**

11. Draft and final reports to be available electronically and in hard copy (6 hard copies of final report required). The final report will inform future policy on renewable heat in Northern Ireland and it is anticipated that the report will be published in due course subject to the approval of the Minister, the Enterprise, Trade and Investment Committee and NI Executive. .

## **Intellectual property**

12. Any tender received by the Department shall remain the intellectual property of the tenderer. Once commissioned, however, all documents/results will become the property of the Department to be used as the Department see fit.

## **Additional Information**

13. A short bibliography has been provided at **Annex A** to enable consultants to familiarise themselves with the issues and existing research/studies, but it is expected that the consultants will draw on a wider bibliography in relation to heat and renewable heat.

## **Equality considerations**

14. DETI is committed to achieving a successful economy in Northern Ireland which will provide equal opportunities for all. To this end, Section 75 of the Northern Ireland

Act 1998 sets out a number of obligations relating to the nine 'Section 75' categories as follows:-

- Religious belief;
- Political opinion;
- Racial group;
- Gender;
- Marital status;
- Age;
- Persons with disability
- Persons with dependents; and
- Sexual orientation.

15. DETI as a recognised public authority has an obligation under Section 75 as detailed in its Equality Scheme which can be accessed on the Department's website at [www.detini.gov.uk/Equality scheme](http://www.detini.gov.uk/Equality%20scheme) .
16. The study must therefore consider equality aspects relating to the nine 'Section 75' categories by considering available data, identifying any adverse impacts that may be present and proposing alternative measures/policies which might better achieve the promotion of equality of opportunity.
17. The evaluation must also consider the accessibility of the Strategy for all in line with the Disability Discrimination Act 1995.

## Bibliography

- The draft Strategic Energy Framework for Northern Ireland 2009  
<http://www.detini.gov.uk/cgi-bin/downutildoc?id=2470>
- The UK Renewable Energy Strategy (July 2009)  
[http://www.decc.gov.uk/en/content/cms/what\\_we\\_do/uk\\_supply/energy\\_mix/renewable/res/res.aspx](http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/res/res.aspx)
- The UK Supply Curve for Renewable Heat, a study for the Department of Energy and Climate Change (July 2009)  
[http://www.nera.com/image/PUB\\_Renewable\\_Heat\\_July2009.pdf](http://www.nera.com/image/PUB_Renewable_Heat_July2009.pdf)
- Directive 2009/28/EC of the European Parliament and of the Council (23 April 2009) on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC  
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:EN:PDF>
- The Heat and Energy Saving Strategy 2009  
<http://hes.decc.gov.uk/>
- Scotland's Renewable Heat Strategy: Recommendations to Scottish Ministers. The Renewable Heat Group (RHG) Report 2008  
<http://www.scotland.gov.uk/Publications/2008/03/11102501/0>
- The Consultation on a Bioenergy Action Plan for Northern Ireland 2009-2014  
<http://www.detini.gov.uk/cgi-bin/downdoc?id=4672>
- The Potential for Renewable Energy Sourced Heat in Northern Ireland Scoping Assessment (April 2007) – Report to Action Renewables from the AEA group

### **Suggested list of members for Renewable Heat Steering Group**

**Chair :**                    **Jenny Pyper,  
Head of Energy Division**

**Participants :**        John Speers, Gd 5 DARD  
Olive Hill, Director, Invest NI  
Michael Doran, Executive Director Action Renewables  
Graham Furey, Ulster Farmers Union  
John Gilliland, Rural Generation  
Professor Neil Hewitt , University of Ulster ( heat pump expert)  
Dr Elaine Groom, Queen’s University, Belfast (anaerobic digestion expert)  
Nigel Moore, CAFRE (biomass supply expert)  
Geoff Smyth, Carbon Trust