Department of Enterprise, Trade and Investment
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From: Alison Clydesdale
Sustainable Energy Branch

Date: 20 November 2009

1. Andrew Crawford
2. Arlene Foster MLA

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ETI COMMITTEE QUERIES

Issue:	**The ETI Committee has requested information on:-** **(i)the statutory arrangements relating to Renewable Heat; and** **(ii) who pays for smart metering.**
Timing:	**Routine – due with ETI Clerk on 27 November**
Need for referral to the Executive:	**Not at this stage**
Presentational Issues:	**None, at this stage.**
Freedom of Information:	**This note is fully disclosable.**
Financial Implications:	**Not applicable.**
Legislation Implications:	**There are a number of legislative issues to be addressed in relation to renewable heat and smart metering.**
PSA/PFG Implications:	**None at present, but it is likely that new PSA targets in relation to renewable heat / smart metering may be needed for the future.**
Statutory Equality Obligations:	**Not Applicable.**

Recommendation: **That you note the submission and agree to the briefing notes at Annex A and B being forwarded to the Committee Clerk.**

Background

At its meeting on Thursday, 12 November the ETI Committee noted and discussed correspondence from GT Energy in relation to geothermal energy and written briefing in relation to the Better Billing and Metering consultation. The Committee commented that the draft Strategic Energy Framework (SEF) made reference to DETI not having the appropriate statutory powers to allow it to work in the area of renewable heat. In addition the ETI Committee expressed their support for the use of smart meters for all consumers but expressed concerns about who would pay for the cost of the meters. The Committee has now asked the Department for further clarification on both these matters.

ETI Committee Query on Renewable Heat

2. You will be aware that the EU Renewable Energy Directive requires the UK to ensure that 15% of its energy consumption comes from renewable sources – and that this extends beyond electricity to heating and cooling and transport.

3. The reference the ETI Committee made to the draft SEF relates to Section 4.31 as follows;

> *"Currently DETI has no statutory powers to allow it to work in the area of renewable heat – the Department's powers limit it to electricity and gas. DETI will therefore ask the Executive and the Northern Ireland Assembly for the statutory powers necessary to take this important area of work forward"*

4. This applies to renewable heat in general and refers to the absence of legislation giving powers to DETI to regulate in this area, and the need to introduce such legislation to provide a legislative basis for Renewable Heat Incentives (RHI) or equivalent support measures for renewable heat, amongst other matters.

GB position

5. A key element of the DECC plan to provide financial support for renewable heat is through the Renewable Heat Incentive (RHI) for which primary powers were taken via last minute amendments to what is now the Energy Act 2008 (in advance of the Renewable Energy Directive coming into force). At that time (September 2008) the timing was too tight to get a Legislative Consent Motion through the Assembly for extension of powers for an RHI to NI and (b) Energy Division was unable to advise categorically that an RHI was the best course of action for NI, because of the lack of

any evidence base or detail on the DECC proposals and the significant difference in the NI and GB heat markets.

6. DECC are yet to publish exact details of the RHI, however, it's expected that the incentive will apply to generation of renewable heat at all scales, domestic, commercial and industrial. The incentive will likely cover a wide range of micro-generation technologies including biomass, solar hot water and air and ground sourced heat pumps. It is expected to be banded by size or by technology and will be funded by a levy on suppliers of fossil fuel for heat.

7. The incentive will apply across England, Scotland and Wales and is hoped to be in place by April 2011.

NI position

8. Sustainable Energy Branch has just commissioned a significant piece of work exploring the issue of renewable heat. An external consultant is due to be officially appointed next week to undertake a study which will;

    i. Assess and quantify the current scale, future sustainable growth potential and optimum size of the renewable heat sector in NI;
    ii. Make recommendations as to the options for encouraging the deployment of renewable heat technologies in NI in the short, medium and long term; and
    iii. Make recommendations for an appropriate evidence based renewable heat target, and how this may impact on the existing heat markets in NI.

9. This work will consider the potential of all forms of renewable heat, including the potential of deep geothermal energy in Northern Ireland. It is expected that the report will be completed by April 2010, we will then be seeking your views on the next steps and on the various policy options, before beginning further work to develop a wider strategy.

10. It is envisioned that the work scheduled to start next week will be the first phase in the development of a strategy for Renewable Heat in NI (to be considered by the NI Executive), accompanying legislation and an appropriate NI equivalent to the GB Renewable Heat Incentive. It is not clear at this stage if primary or secondary legislation will be required, but if our work indicates that a RHI is appropriate for NI then a legislative timetable would have to be developed in due course.

GT Energy

11. GT Energy, whose letter to the Committee sparked their discussion, are currently working with Ballymena District Council on a potential geothermal project to provide heat to Ballymena town and neighbouring industrial sites.

12. There is no legislation that deals specifically with the exploration for, and development, of deep geothermal energy resources in Northern Ireland. GSNI has advised that evidence across Europe suggests that the lack of regulatory system for geothermal energy may be a contributing factor to inhibiting investment and is considered to be an obstacle to the development of this potentially significant resource of low carbon sustainable base load energy in Northern Ireland.

13. GSNI has already submitted a marker for new primary legislation on geothermal energy to be started FY 2009-10. However, the formal legislative process has not yet commenced due to the higher priority assigned to legislation transposing the EU Hydrocarbons Directive.

14. GSNI and Minerals Branch have, however, carried out extensive background research into geothermal legislation both in the EU and in other Common Law jurisdictions, and intend to submit a policy memorandum early in 2010 with a view to introducing a bill in 2011.

ETI Committee Query on smart metering

15. The ETI committee, while supportive of smart meters for all consumers, has expressed concerns as to who would pay for the cost of the meters. The analysis of the Better Billing and Metering consultation responses stated that a cost benefit analysis would need to be carried out in this regard. In the meantime, the IME 3 Directive, which is due to be transposed by March 2011, places an obligation on member states to install 80% smart electricity meters by 2020 and asks for a cost benefit analysis to be undertaken by 2012.

16. NIAUR is therefore currently undertaking a smart metering technical assessment which will identify potential delivery models for any smart meter rollout. This work does not include any costings at this stage. This work is only the first stage in determining a solution for smart metering, an in depth cost benefit analysis will be required once a solution is identified but it is likely that it will be 2012 before precise costings are known.

17. DETI will evaluate NIAUR's findings when the work completes in December, and may need to undertake a preliminary policy impact assessment to determine indicative costs and benefits to assess if any policy interventions are required in this area. Going forward it is envisaged that a joint DETI and NIAUR approach will be needed especially on the cost implications, a key part of this will more than likely be a public consultation on the identified delivery options. It will be particularly important to link into developing thinking on smart grid going forward as the adoption by consumers of technologies like smart metering will be a major factor in the success of a smart grid infrastructure.

18. We can however draw on recent GB impact assessments, that have indicated that the costs of a smart meter rollout would range from £5 bn - £9 bn depending on the solution chosen. This would include not only the

costs of the meters themselves but the associated IT and communications infrastructure that would be required. The impact assessment identified total benefits ranging from £7bn - £11 bn, resulting in net benefit figures for a roll out to end of 2020 ranging from £2.5bn to £3.6bn. This indicates that the annual average impact per meter ranges between £1.50 and £2.50 per meter per year. These costs will fall to suppliers who in turn are likely to recover them from consumers.

19. Northern Ireland has the most rural electricity network in the UK and so some of the economies of scale that GB can achieve through their favoured choice of a dual fuel central communications model for a smart meter rollout may not be so easily achievable here. Similarly, the choice of communications protocol may also be significant here, especially if improvements to the communications infrastructure are required, and Northern Ireland's large population of key pad meters is also a feature unique to Northern Ireland that needs to be further examined in relation to what role it plays in any smart meter rollout.

20. While the GB figures cannot be directly correlated to NI, they do however give a sense of the major costs that are involved in a smart meter rollout.

21. NIAUR has advised that the NIE T&D price control mechanism may perhaps offers a method to cover the investment required. NIE can recover monies from customers through their price control agreements. However before this could be considered a clear and appropriate level of benefit to customers would need to be demonstrated. While we can take an indication from the ongoing GB studies, to arrive at specific and realistic costs for NI further work including trialing of technology would be needed.

22. In addition interoperability standards for metering would need to be agreed, and operation within the SEM would also need investigation.

Recommendation

23. It is recommended that you note this submission and agree that the briefing notes at **Annex A** (renewable heat) and **Annex B** (smart metering) are forwarded to the ETI Committee Clerk for the attention of Committee members.

ALISON CLYDESDALE
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DETI LMU

ANNEX A

From: David McCune
Departmental Assembly Liaison Officer

Date: November 2009

To: Jim McManus
ETI Committee Clerk

Issue: **Statutory Powers for Renewable Heat**

1. The ETI Committee requested information regarding the statutory arrangements relating to the area of renewable heat.

2. Grateful if you would circulate the attached information to the Committee members as required.

DAVID MCCUNE

Statutory Powers for Renewable Heat

Currently DETI has no statutory powers to allow it to work in the area of renewable heat – the Department's powers limit it to electricity and gas. 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. DECC took primary powers relating to heat through amendments to the Energy Act 2008. These powers allow DECC to provide financial support for renewable heat generation through a Renewable Heat Incentive (RHI), however exact details of this incentive are yet to be published. DECC hope that the incentive will be in place by April 2011.

The amendments to the Energy Act that gave DECC these powers were made at the end of the process leaving DETI with no time to get a Legislative Consent Motion through the Assembly that would extend these powers to Northern Ireland. Also, because of the significant difference between the heat markets in NI and GB it was not clear whether or not the GB model would be appropriate for NI.

There is much less understanding of heat demand (compared to electricity demand) across the UK as a whole and in Northern Ireland there are very few statistics available in relation to heat. Therefore, as outlined in the Strategic Energy Framework (SEF), DETI has just commissioned a substantial piece of work to examine the potential for deployment of renewable heat in Northern Ireland. This will also include potential heat outputs from geothermal sources. This work will seek to establish an evidence base by undertaking 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 and will be completed by April 2010. A definitive heat map for Northern Ireland will be produced.

It is envisioned that the work will be the first phase in the development of a strategy for Renewable Heat in NI (which will in due course be considered by

the NI Executive), accompanying legislation and an appropriate NI equivalent to the GB Renewable Heat Incentive. If our work indicates that a RHI is appropriate for NI then a legislative timetable would have to be developed, with legislation likely to be forthcoming 2011/12. In the meantime DETI is examining, as part of the study outlined above, options for short term incentivisation until such times as legislation is passed.

Deep Geothermal Energy

Geothermal energy is a sustainable low carbon energy resource that can provide a constant year-round input to heating and/or power generation systems. It is relatively underdeveloped in the UK but is used widely in several European countries and in the USA.

A study in 2008 by CSA Ltd outlined the areas in Northern Ireland with the highest deep geothermal resource potential suitable for use in CHP plants or district heating schemes, and examined these in context of the end-user markets. In addition the Tellus radiometric data has also established that the granites of the Mourne Mountains belong to the 'High Heat production' category that may be sufficiently hot at depths of about 5 kilometers to be used to generate electricity in an Enhanced Geothermal System.

It should be noted that at present there is no legislation that deals specifically with the exploration for, and development, of deep geothermal energy resources in Northern Ireland. GSNI have carried out some background research into geothermal legislation in both the EU and in other Common Law jurisdictions, and hope to submit a policy memorandum early in 2010 with a view to introducing a bill in 2011.

ANNEX B

From: David McCune
Departmental Assembly Liaison Officer

Date: November 2009

To: Jim McManus
ETI Committee Clerk

Issue: **Cost of Smart Meters**

3. The ETI Committee requested information regarding who would pay for the cost of smart meters.

4. Grateful if you would circulate the attached information to the Committee members as required.

DAVID MCCUNE

Smart Metering Costs

NIAUR is currently undertaking a smart metering technical assessment which will identify potential delivery models for any smart meter rollout. This work does not include any costings at this stage.

The IME 3 Directive which is due to be transposed by March 2011, places an obligation on member states to install 80% smart electricity meters by 2020 and asks for a cost benefit analysis to be undertaken by 2012.

DETI will evaluate NIAUR's findings and may need to undertake a preliminary policy impact assessment to determine indicative costs and benefits to assess if any policy interventions are required in this area,

We will draw on recent GB impact assessments, which indicate that the costs of a smart meter rollout would range from £5 bn - £9 bn depending on the solution chosen. This would include not only the costs of the meters themselves but the associated IT and communications infrastructure that would be required. The GB impact assessment identified total benefits ranging from £7bn - £11bn, resulting in net benefit figures for a roll out to end of 2020 ranging from £2.5bn to £3.6bn. This indicates that the annual average impact per meter ranges between £1.50 and £2.50 per meter per year. These costs will fall to suppliers who in turn are likely to recover them from consumers.

NIAUR has advised that the NIE price control mechanism may perhaps offer a method to cover the investment required. However to arrive at specific and realistic costs for NI further work, including trialing of technology, would be needed. DETI is working with NIAUR on this further work.

Minister: for your consideration and if content approval please.

Alistair Clydesdale
20/11/09

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From: Alison Clydesdale
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Statutory Equality	**Not Applicable.**

Obligations:

Recommendation: **That you note the submission and agree to the briefing notes at Annex A and B being forwarded to the Committee Clerk.**

Background

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Recommendation

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