From:	Hutchinson, Peter
To:	Connolly, Samuel
Cc:	Clydesdale, Alison
Subject:	Memo to CEPA re RHI policy options
Date:	22 February 2011 16:12:21
Attachments:	Memo - DETI to CEPA re RHI policy options and next steps.DOC Memo - DETI to CEPA re RHI policy options and next steps.tr5

Sam,

Please see attached a rough first draft of a memo to CEPA following today's meeting outlining a formal response on some of the policy options and a discussion on potential next steps. This requires further drafting but at this stage I'd be grateful if you could input / amend as required, specifically adding wording on the essential next steps re levelised costs, banding, design, gas implications etc.

Once you are content I will seek Alison's input and clearance in advance of circulation to Fred and Fiona.

Happy to discuss.

Thanks,

Peter

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RESTRICTED – POLICY DEVELOPMENT

Department of Enterprise, Trade and Investment
www.detini.gov.uk

From: **Peter Hutchinson**
Sustainable Energy Branch

Date: **xx February 2011**

To: **Iain Morrow**
CEPA

ECONOMIC APPRAISAL OF A RENEWABLE HEAT INCENTIVE FOR NORTHERN IRELAND

Background

1. At the progress meeting between DETI, CEPA and AEA, held on Tuesday, 22 February 2011 it was agreed that DETI would produce a note outlining formal consideration of the various policy options presented, an overview of the key DETI objectives for this project, how these may relate to an incentive scheme and a discussion on the appropriate next steps. This note will form the basis of further discussions, analysis and investigation in advance of a further progress meeting w/c 14th March 2011.

Financial scenarios

2. At the beginning of the meeting there was a discussion on the financial position in regards to funding of an incentive scheme. Currently Her Majesty's Treasury has allocated £25m for a "Northern Ireland Renewable Heat Incentive" for the budget period (£2m in 2011/12, £4m in 2012/13, £7m in 2013/14 and £12m in 2014/15). It should be assumed that no additional funding will be available over the budget period and the allocation of funding will remain as profiled.

3. Funding post 2015 was discussed and it was agreed that CEPA/AEA should consider two scenarios;
    i) No funding post 2015, the scheme designed will only have a 4 year life-span and should utilise the entire £25m in the most cost-effective way possible.
    ii) Funding post 2015 will be available and agreed with DECC in due course. The allocated funding to DECC is also currently only to 2015 however if they agree to 15yrs+ tariffs it is reasonable to assume that additional funding will be sourced, potentially through taxation or levies. Northern Ireland will avail of a share of this funding post 2015 and therefore a longer-term scheme, similar to the GB RHI, should be

designed. The final design of the GB RHI (expected w/c 28 February or 7 March) will provide further clarity.

CEPA options

4. CEPA outlined their initial policy options as follows;
   i) ***"Bang for buck"*** – A challenge fund type scheme where bids for finance are made and awarded by DETI through a competitive tender process. Successful bidders would be based on those who could deliver the most renewable heat at a cost effective price.
   ii) ***"Focus on industry"*** – The renewable heat target of 10% by 2020 could be achieved by specific support for some of the large industrial heat users in Northern Ireland (map attached at **Annex A**).
   iii) ***"Renewable refurbishment"*** – A whole-house approach based on grants/loans/incentives for those wishing to carry out energy efficiency refurbishments or replace fossil fuel heating systems. Could piggy-back onto "Green Deal"?
   iv) ***"Long term foundation"*** – With the key objective of building capability in the renewable heat market, DETI would support all technologies equally and attempt to establish a varied market. This would be an expensive option because of the range of technologies involved.
   v) ***"Green oil"*** – A targeted subsidy for oil users to switch to bio-diesel. Larger oil users (commercial, public and industrial) could be converted for free and receive ongoing incentive payments.
   vi) ***"Feed-in-Tariffs for Heat"*** – A simple tariff for all technologies and all sectors for heat use. Heat meters would be used to determine payments.
   vii) ***"NI RHI"*** – A scheme similar to the current GB proposals but with different subsidy levels.
   viii) ***"Mix and match"*** – A combination of the above schemes.

5. On reflection, one potential scenario that might be worth consideration, either as a stand-alone option or as part of another option, is a ***"Renewable Heat Obligation"*** specifically for biomethane and bio-liquids which would place obligations on existing natural gas and heating oil companies, respectively, to ensure a proportion of renewables in their supply chains by 2020.

6. From discussions at the meeting and further consideration it can be agreed that we rule out, at this stage (although recorded within the economic appraisal), the following options;
   - ***"Focus on industry"*** - Whilst attractive because of the simplicity and the potential to meet the target with only 3 or 4 large projects this scenario provides too high of a risk in terms of the potential for businesses to close down or move on following the installation of renewable heat using government funding. This approach also would not present wider opportunities for renewable heat such as market development or creating a supply chain. Finally this approach has the potential to have a significantly adverse impact on any potential extension of the gas network by competing for significant heat users. This is not to say that

industrial heat users should be completely excluded from any future heat incentive scheme.

- ***"Green oil"*** – Issues regarding supply and resource of bio-liquids means that a "green oil only" approach is not feasible, although DETI is keen for bio-liquids to remain in consideration as part of any other agreed scheme.
- ***"Feed-in-Tariffs for Heat"*** – The costly administrative arrangements and the potentially perverse advantage in wasting heat to claim payments means this should be discounted.

7. Linking back to paragraph 3, in relation to the two financial scenarios, at this stage it might be useful to set out two possible options;

   i) **Scenario 1, no funding post 2015** – A Renewable Heat Challenge Fund *("Bang for Buck"*) should be implemented with the most cost-effective renewable heat solutions being granted funding via a competitive tender / award process. Whilst being administratively costly this would ensure the allocated funding is used in the most efficient way in the available timescale.

   ii) **Scenario 2, funding available post 2015 as part of GB scheme** – A NI RHI is implemented, this is a long-term approach and incorporates elements of the range options outlined above i.e. a whole-house approach with high energy efficiency standards, a range of technologies incentivised including "green oil", objective of creating a lasting renewable heat industry etc. The tariff levels would be based on an oil counterfactual to ensure, as far as possible, that renewable heat and gas were not in direct competition. (This scenario needs further consideration, expansions and analysis re tariffs, banding options, eligibility etc).

Assessment criteria

8. CEPA outlined the assessment criteria, that each potential option should be considered against, as follows

   - Fit with other DETI policies and objectives, as well as those of other Departments including the Dept of the Environment, Department for Agriculture and Rural Development and the Office of the First Minister and Deputy First Minister (OFMDFM) where appropriate
   - Level of renewable heat likely to be delivered for a given cost.
   - Support for renewable supply chain in Northern Ireland.
   - Fit with profile of available funding.
   - Simplicity for those receiving the incentives.
   - Similarity to GB RHI.
   - Administrative complexity.
   - Ease of monitoring.
   - Importance of technological neutrality vs. risk of lock-in to obsolete technology.

9. As discussed, DETI is content that these criteria accurately reflect the objectives in developing this policy area. To this list I would suggest that the following is added however;
    - ***Capability building:*** i.e. the long term development of the market, growth of 'green job', increase in trained installers and skills, presence of a mature supply chain etc.
    - ***Carbon reductions.***
    - ***Availability and accessibility***: i.e. a scheme that is not just open to the few but can be accessed by all (special consideration to fuel poor).
    - ***Impact on natural gas market***: as discussed below, renewable heat is not intended to be a competitor for natural gas and should not hinder any potential development.

Linkages with Gas network

10. As the project continues it becomes more and more apparent that there are significant policy linkages between renewable heat and to the development of the natural gas industry, both the existing market and the potential extension of the gas network. As discussed at the meeting, the extension of the gas network remains a key policy goal for DETI and the introduction of a RHI should not negatively impact on this goal. Over the next ten years it is would be DETI's vision for an increased share in both renewable heat and natural gas and a correlated decline in home heating oil (this links to the importance of bio-fuels or "green oil" in a future RHI).

11. It is therefore vital that in each policy option an assessment on the impact of the natural gas market (existing market, potential development and future pricing) is considered.

12. It should be assumed that by 2020 there **[FRED TO INPUT RE GAS EXTENSION ASSUMPTIONS BY 2020]**

13. As a first step, it will be important to estimate the levelised cost for each technology (taking account of the likely counterfactual position) in order to determine how much renewable heat might be installed based on the funds available. This information can then be used in order to determine the impact on the current gas distribution charges which are calculated based on current, as well as estimated future volumes. ~~**[SAM TO INPUT RE LEVELISED COSTS, EXPECTED ROLL-OUT AND IMPACT ON GAS DISTRIBUTION COSTS].**~~

14. Through this assessment DETI will be able to determine whether or not the impact on the gas market is significant enough to require the limiting of the RHI, in some way, to off gas grid areas.

Agreed actions and next steps

15. From the meeting and this note the agreed actions and next steps are as follows;

- **CEPA** to revise list of options, as per this note, and expand on potential policy options along the basis of the two financial scenarios.
- **DETI** to speak with Invest NI re industrial sites and potential renewable heat uptake
- **CEPA and Sam Connolly, DETI,** to discuss gas distribution costs.
- **Peter Hutchinson** to speak with SEAI re biomass supply chains.
- **Peter Hutchinson** to provide a list of relevant appropriate stakeholders for CEPA to discuss Northern Ireland renewable heat issues with.
- **CEPA** to carry out analysis on levelised costs / effective heat tariffs and assess uptake rates under a RHI scheme.
- **DETI** to arrange a progress meeting for w/c 14th March via video-conference.

16. I hope this note is of use and provides some clarity on current DETI thinking on the potential way forward in designing further policy options / scenarios.

17. As always, I am happy to discuss.

Peter Hutchinson
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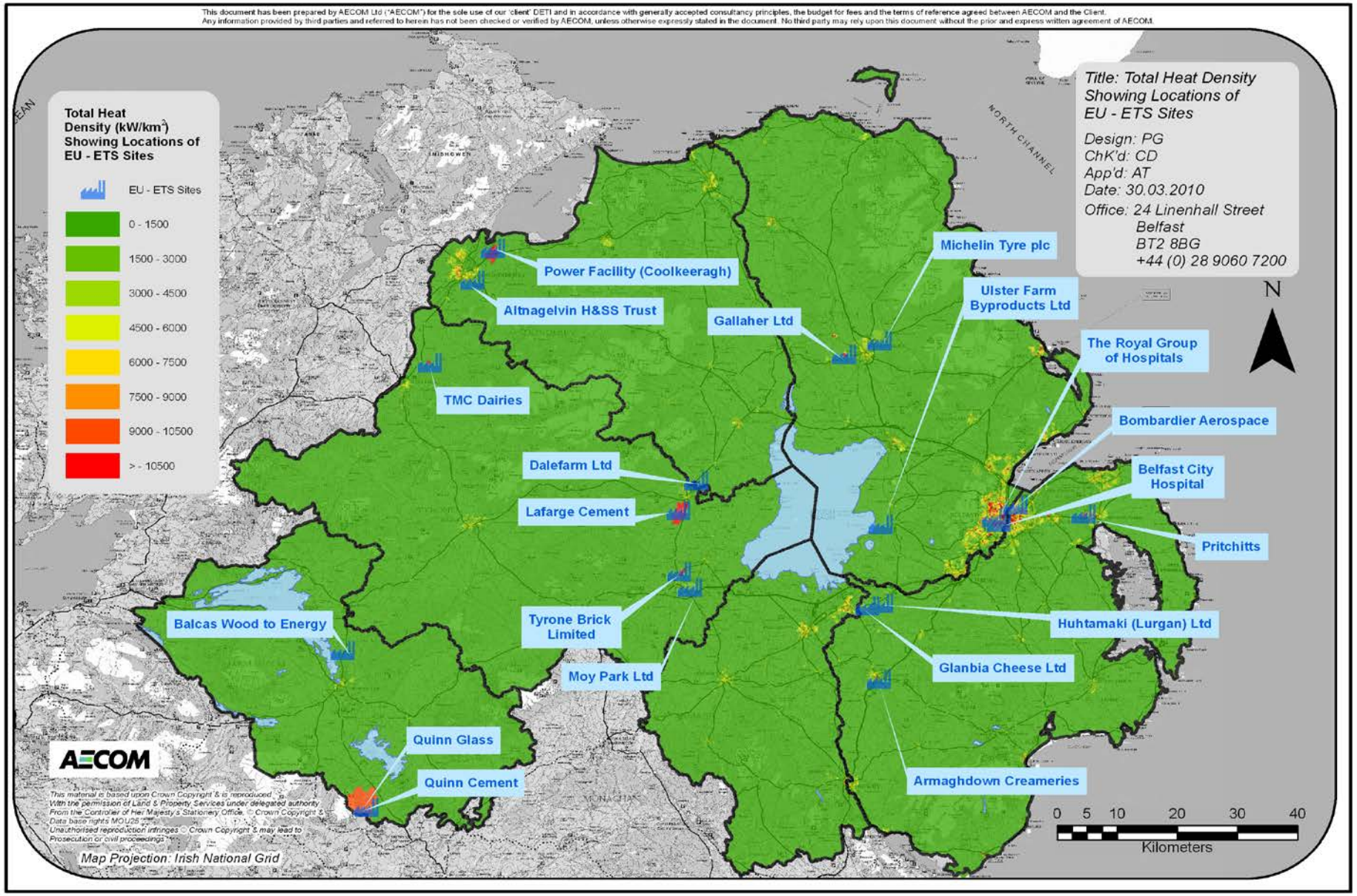
Email: peter.hutchinson@detini.gov.uk

Cc: **Fiona Hepper**
Alison Clydesdale
Fred Frazer
Sam Connolly
Mark Cockburn, CEPA
Paget Fulcher, CEPA
Mahmoud Abu-ebid, AEA
Oliver Edberg, AEA

Annex A



Department of Enterprise, Trade and Investment
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From: **Peter Hutchinson**
Sustainable Energy Branch

Date: **28 February 2011**

To: **Iain Morrow**
CEPA

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    i) No funding post 2015, the scheme designed will only have a 4 year life-span and should utilise the entire £25m in the most cost-effective way possible.
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funding post 2015 and therefore a longer-term scheme, similar to the GB RHI, should be designed. The final design of the GB RHI (expected w/c 28 February or 7 March) will provide further clarity.

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6. From discussions at the meeting and further consideration it can be agreed that we rule out, at this stage (although to be recorded within the economic appraisal), the following options;
   - ***"Green oil"*** – Issues regarding supply and resource of bio-liquids means that a "green oil only" approach is not feasible, although DETI is keen for bio-liquids to remain in consideration as part of any other agreed scheme.

- ***"Feed-in-Tariffs for Heat"*** – The costly administrative arrangements and the potentially perverse advantage in wasting heat to claim payments means this should be discounted.

7. At the meeting we discussed the ***"Focus on industry"*** option at length. Whilst this option is attractive because of the simplicity and the potential to meet the target with only 3 or 4 large projects this scenario also provides a very high risk in terms of the potential for businesses to close down or move on following the installation of renewable heat using government funding. This approach also potentially does not present wider opportunities for renewable heat such as market development or creating a supply chain. Finally, consideration must be given to whether only targeting heavy industry could have a significantly adverse impact on any potential extension of the gas network by competing for significant heat users. There are a number of reasons, therefore, why this option could also be ruled out at this stage. However, in advance of this option being discarded I believe it necessary for DETI to discuss the matter with Invest NI and get its view.

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12. It is therefore vital that in each policy option an assessment on the impact of the natural gas market (existing market, potential development and future pricing) is considered.

13. It should be assumed that by 2020 there will a greater penetration of natural gas connections within existing gas licensed areas. Phoenix Natural Gas currently has around 130,000 gas consumers, with some 270,000 having access to gas, and the number of connected customers are increasing on an annual basis, perhaps by around 4,000-5,000 per year. Phoenix also see potential for extending their current Greater Belfast licensed area to include towns such as Whitehead and Saintfield, with a further interest in taking gas to East Down, including Downpatrick.

14. Firmus Energy has around 8,000 customers connected to gas in the 10 towns/ cities in their licensed area outside Greater Belfast (these are urban areas served by the South- North and North-West gas pipelines constructed by BGE). Firmus would hope to connect around 2,000 customers per year over the next 25 years, these being industrial and commercial customers, along with social and new build housing. The Utility Regulator has agreed that Firmus may extend its gas network to Portstewart, and extensions to other towns such as Ballyclare and Warrenpoint are under consideration.

15. During 2010 the Department and Utility Regulator completed a study to assess the technical and economic feasibility of taking natural gas to 6 towns in the west and north-west of Northern Ireland, i.e. Cookstown, Dungannon, Omagh, Magherafelt, Strabane and Enniskillen. The study concluded that a further 40,000 consumers could be connected to gas over a 40 year period. No decision has yet been taken in relation to how further gas roll-out would be taken forward.

16. As a first step it will be important to estimate the levelised cost for each technology (taking account of the likely counterfactual position) in order to determine how much renewable heat might be installed based on the funds available. This information can then be used in order to determine the impact on the current gas distribution charges which are calculated based on current, as well as estimated future volumes.

17. Through this assessment DETI will be able to determine whether or not the impact on the gas market is significant enough to require the limiting of the RHI, in some way, to off gas grid areas.

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Annex A