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**Subject:** Impact Assessment - 2011 Energy Bill - NI RHI Powers  
**Date:** 18 May 2011 17:23:49  
**Attachments:** [NI - RHI IA for Energy Bill.DOC](#)

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Sam,

As discussed previously, DECC has requested that DETI carry out a high level impact assessment in advance of the tabling of an amendment to the current 2011 Energy Bill to extend general renewable heating powers to Northern Ireland.

I have drafted the attached, as the powers we are taking are very general and no decision has been taken on the method of financial support we can not include specific figures but instead a full narrative. This is similar to DECC's position in 2008 when they took general powers (I have attached their impact assessment for their legislation for your information).

This impact assessment will be attached to the draft clause that will be inserted into the Bill to give the DECC Committee and Parliament an outline of what is being proposed. The clause is to be introduced on 1 June 2011. A full RIA and EQIA will be required in due course when we are going out to consultation on a possible incentive scheme.

Grateful if you would consider and amend where appropriate, I would be keen to get this to DECC by end of this week at latest. If it would be useful to meet to discuss tomorrow let me know.

Many thanks,

Peter

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## Summary: Intervention & Options

<b>Department /Agency:</b> DETI	<b>Title:</b> Impact Assessment for Renewable Heat Incentive	
<b>Stage:</b> Consultation	<b>Version:</b> 1	<b>Date:</b> 19 May 2010
<b>Related Publications:</b>		

Available to view or download at:

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### What is the problem under consideration? Why is government intervention necessary?

This IA analyses options to increase the uptake of renewable heat technologies to help meet the Northern Ireland Executive agree target of 10% renewable heat by 2020. This target also contributes to the UK share of the EU 2020 renewable energy target, and the 80% reduction in GHG by 2050. It is widely agreed that Government intervention is necessary because many renewable energy technologies are less developed or deployed at a lower scale and higher cost than traditional energy technologies. Without Government support, it is likely that the private sector will not invest sufficiently in innovation and deployment to meet our longer term goals

### What are the policy objectives and the intended effects?

To achieve a substantial increase in renewable heat in the Northern Ireland, reaching a level of the order of 10% of total heat demand or more by 2020, compared with 1.7% today. Current heat demand in Northern Ireland is estimated at 17.4 TWh however this will drop to 16.7 TWh by 2020, therefore the 10% target equates to 1.7 TWh by 2020 (this is an additional 1.3-1.4 TWh). Analysis of this target and the associated costs has been carried out by AECOM and Pöyry in a 2010 DETI commissioned study.

### What policy options have been considered? Please justify any preferred option.

The 10% target has been agreed by DETI and the Executive following substantial analysis. The most appropriate method of reaching this target has been assessed with consideration given to several options including specific industrial support, capital grant schemes and a Northern Ireland RHI. The Northern Ireland RHI option is consistent to the GB position and provides long-term, stable support for those wishing to invest.

**When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects?** The potential costs and expected benefits have been assessed through a economic appraisal (following the NIGEAE ten steps) carried out by CEPA and AEA. A full impact assessment will be carried out in advance of consultation on the final design of the Northern Ireland RHI.

### Ministerial Sign-off For consultation stage Impact Assessments:

***I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.***

Signed by the responsible Minister:

..... Date:

## Summary: Analysis & Evidence

Policy Option:

Description: Increased Uptake of Renewable Heat Technologies

<b>COSTS</b>	<b>ANNUAL COSTS</b>		Description and scale of <b>key monetised costs</b> by 'main affected groups' Costs include the resource cost of the renewable technologies, which include costs to overcome supply side and demand side barriers.
	<b>One-off</b> (Transition)	<b>Yrs</b>	
	£		
	<b>Average Annual Cost</b> (excluding one-off)		
	£		<b>Total Cost (PV)</b> £
Other <b>key non-monetised costs</b> by 'main affected groups' Other costs include the cost to consumers of any subsidies, and the indirect cost to the economy resulting from increased energy prices.			

<b>BENEFITS</b>	<b>ANNUAL BENEFITS</b>		Description and scale of <b>key monetised benefits</b> by 'main affected groups' Benefits are monetised carbon benefits from the replacement of fossil fuels in heat generation. Carbon savings outside the EUETS are valued at the shadow price of carbon in line with Green Book guidance.
	<b>One-off</b>	<b>Yrs</b>	
	£		
	<b>Average Annual Benefit</b> (excluding one-off)		
	£		<b>Total Benefit (PV)</b> £
Other <b>key non-monetised benefits</b> by 'main affected groups' There may be some benefit resulting from a greater diversification of the fuel mix. A large number of installations will be made in domestic and local premises, which may have benefits in terms of users becoming more conscious of their energy consumption.			

**Key Assumptions/Sensitivities/Risks** Results are sensitive to assumptions on fuel prices: reductions in fossil fuel prices will increase the resource cost of renewables and vice versa.

Price Base Year 0	Time Period Years	<b>Net Benefit Range (NPV)</b> £	<b>NET BENEFIT (NPV Best estimate)</b> £
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What is the geographic coverage of the policy/option?			Northern Ireland	
On what date will the policy be implemented?			2011/2012	
Which organisation(s) will enforce the policy?			DETI/Ofgem	
What is the total annual cost of enforcement for these organisations?			£ unknown	
Does enforcement comply with Hampton principles?			Yes	
Will implementation go beyond minimum EU requirements?			No	
What is the value of the proposed offsetting measure per year?			£ unknown	
What is the value of changes in greenhouse gas emissions?			£ n/a	
Will the proposal have a significant impact on competition?			Yes	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	Yes/No	Yes/No	N/A	N/A

<b>Impact on Admin Burdens Baseline</b> (2005 Prices)			(Increase - Decrease)	
Increase of £	Decrease of £	<b>Net Impact</b>	£	

## Evidence Base (for summary sheets)

### A. Overview

1. This Impact Assessment focuses on potential measures to increase renewable heat uptake in the Northern Ireland. DETI has carried out <sup>1</sup>substantial research into the potential development of the Northern Ireland renewable heat market, this research has demonstrated that Northern Ireland could achieve 10% renewable heat by 2020 however government support, both in terms of financial incentives and policy levers, would be required. Preliminary analysis would suggest that £2.5m per % per annum might be required.
2. Her Majesty's Treasury (HMT) has provided DETI with £25m to support the development of renewable heat. DETI is currently carrying out a full economic appraisal of potential options, including consideration of a Northern Ireland Renewable Heat Incentive (RHI), similar to the GB RHI scheme but specifically tailored for the Northern Ireland market. The Northern Ireland heat market is quite different to the GB market (dependency on oil, developing gas market, rural geography, high levels of fuel poverty etc) and therefore it is necessary that any incentive scheme is designed to consider these issues.
3. <sup>2</sup>DETI has already indicated that a Northern Ireland RHI is the preferred method of incentivisation however before this can be designed and delivered a full economic appraisal is required. Cambridge Economic Policy Associates (CEPA) and AEA technologies are carrying out this appraisal. This research will advise a future consultation on a preferred method of supporting the renewable heat market, the appraisal will be published alongside this consultation.
4. For a RHI to be introduced in Northern Ireland primary legislative powers are required, DECC and DETI have agreed that a clause can be inserted into the 2011 Energy Bill to provide this powers, these powers will be similar in nature to the powers granted to <sup>3</sup>DECC for renewable heat in the 2008 Energy Act.
5. This impact assessment considers the potential development of the renewable heat market. A full regulatory impact assessment and equality assessment will be carried out in advance of a future consultation on the proposed method of incentivisation for Northern Ireland.

### B. Objectives

6. The objective of the potential measures in the renewable heat sector is to achieve a substantial increase in renewable heat in the Northern Ireland in the most cost-effective way utilising the funding provided by HMT. In September 2010 the Northern Ireland Executive agreed to a target of 10% renewable heat by 2020, this is a challenging target considering current renewable heat levels of 1.7%. An ongoing economic appraisal of a Northern Ireland RHI, being carried out by CEPA and AEA Technologies, is assessing all possible options for developing the renewable heat market in Northern Ireland. The 'do nothing' scenario is also being considered however this is unlikely to be deemed a viable option considering developments in the GB renewable heat market which has the potential to leave Northern Ireland at a distinct disadvantage.
7. Looking towards 2020, analysis undertaken indicates that Northern Ireland's overall heat demand is predicted to fall from 17.4 TWh per year to 16.7 TWh with rises in demand from new development being outweighed by reductions in demand and energy efficiency

<sup>1</sup> AECOM Ltd and Pöyry Energy Consulting (2010): Assessment of the potential development of the Northern Ireland Renewable Heat Market

<sup>2</sup> <http://www.northernireland.gov.uk/index/media-centre/news-departments/news-deti/news-deti-september-2010/news-deti-200910-foster-recognises-importance.htm>

<sup>3</sup> <http://www.legislation.gov.uk/ukpga/2008/32/section/100>

improvements. Taking into account the existing 300 GWh of renewable heat already present a target of 10% for 2020 equates to an additional 1.3 TWh or 1300 GWh of renewable heat. Consideration will also need to be given, in due course, to reasonable targets to 2050 and beyond.

8. Secondary objectives in developing the renewable heat market include increasing Northern Ireland's fuel security by reducing dependence on imported fossil fuels and the associated reduction in carbon emissions that this would bring. DETI also wish to promote the 'green economy' and see renewable heat as having a role to play in developing new green skills and jobs.

### **C. Potential measures to address constraints and barriers**

9. A full economic appraisal of the various options for incentivising the Northern Ireland renewable heat market is currently being carried out. This appraisal will be published along with a future consultation on the design and implementation of the Northern Ireland incentive scheme. This appraisal has been carried out following NIGEAE guidelines<sup>4</sup>.

#### **(i) Non-financial**

10. As previously mentioned, DETI commissioned research in 2009/2010 (carried out by AECOM and Pöyry) aimed at determining the optimum potential of the renewable heat market to 2020 and to assess methods of incentivisation and possible barriers. This work determined that a 10% renewable heat target by 2020 was reasonable and achievable however would require substantial government intervention, both in terms of financial incentives and policy levers.
11. In terms of non-financial constraints the major barrier identified related to resource and maximising indigenous fuel sources. Other potential constraints were the number of registered installers and need for additional skills, and the lack of understanding amongst consumers about renewable heat technologies.
12. Whilst these non-financial barriers are potential constraints to the uptake of renewable heat technologies they should be able to be overcome as increase demand and deployment makes investment worthwhile and increases consumer confidence in the technologies in question.

#### **(ii) Financial barriers: Renewable Heat Incentive**

13. The current economic appraisal is considering a number of options that would increase the level of renewable heat from the current level of 1.7% to a potential 10% by 2020. The appraisal is also considering the most effective method of utilising the funding provided to DETI for a Northern Ireland renewable heat scheme (£25m over the CSR period, £2m in year one; £4m in year two; £7m in year three and; £12m in year four.) Some of these potential options are:
  - a. A "Northern Ireland Renewable Heat Incentive" – similar to the DECC proposals, a set level of financial support paid to generators of renewable heat at a given £/MWh. This scheme would however be designed and tailored specifically for the Northern Ireland heat market.
  - b. Joining in with the GB Renewable Heat Incentive – seeking to be a part of the wider GB scheme due to come into effect in July 2011 for the non-domestic sector and October 2012 for domestic consumers.

<sup>4</sup> <http://www.dfpni.gov.uk/index/finance/eag/eag-step-by-step.htm>

- c. A capital grant scheme – those wishing to install renewable heat technologies could apply for capital grant support, the level of support would be determined by the size and type of technology installed..
  - d. A “Renewable Heat Challenge Fund” – a competitively awarded grant scheme where applicants would be ranked on the amount of cost-effective heat delivered and awarded funding dependent on their ranking.
14. Other options were also considered but ruled out. Options were selected and assessed on the basis of set criteria, some of which were:
- Fit with existing Northern Ireland Executive energy policy
  - Level of cost-effective renewable heat delivered
  - Fit with profile of existing funding
  - Simplicity and accessibility for those wishing to avail of the scheme
  - Administrative complexity/costs
  - Carbon savings associated with the policy
  - 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.
  - Impact on the emerging natural gas market
15. DETI analysis of the various options is still ongoing. These options will soon be considered by the DETI Minister and a public consultation will then issue over Summer 2011 which will advise on the design and implementation of an appropriate scheme.
16. DETI has already expressed a preference for a Northern Ireland RHI, this is based on earlier research and a expectation that a consistent approach with Great Britain and DECC would be beneficial, however the unique circumstances in the Northern Ireland heat market need to be considered in a specifically tailored scheme. These issues include the prevalence of heating oil (77% of total demand), an emerging and developing natural gas market (17% of demand), higher levels of fuel poverty, varying fuel prices and a much more rural geography.
17. DETI will shortly consult on a preferred option; early indications are that local stakeholders wish a similar scheme to the GB RHI to be implemented locally.
18. The proposed amendment to the 2011 Energy Bill establishing powers to introduce a Renewable Heat Incentive in Northern Ireland, will allow work to begin immediately on the design of a NI RHI, minimising delays that could translate into lost opportunities for renewable heat delivery by 2020. Any delay would also leave Northern Ireland at a disadvantage in comparison to Great Britain and could lead to local skills being lost.

#### **D. Costs and benefits of package to promote uptake of renewable heat**

19. Initial analysis on developing the Northern Ireland heat market estimated that 10% renewable heat could be achievable at a cost of £2.5m per % per annum. The ongoing economic appraisal will provide more detailed costings as they will relate to actual proposed expenditure and set RHI tariffs. Similarly to GB, the costs and benefits are heavily dependent upon a range of factors including fossil fuel and biomass prices, the price of carbon within the EU ETS as well as assumptions underlying the renewable heat cost curve in the UK. The economic appraisal will provide a detailed evidence base for DETI to base decisions; this research will be published alongside future proposals.

#### **E. Impacts**

20. The most obvious impact will be the increased level of renewable heat deployed in Northern Ireland. It is also expected that there will be related impacts such as reduced carbon

emissions, displacement of existing fossil fuel supplies (predominantly displacement of imported heating oil), and potential for 'green jobs' within the supply chain of renewable heating.

21. As the scheme will be funded directly through AME money provided by HMT there will be minimal impact on fossil fuel prices. The ongoing economic appraisal, previously referenced, will consider all the intended and unintended impacts of incentivising the renewable heat market and will be published alongside a future public consultation.

#### **F. Impact on the rest of the heat sector, including small firms**

22. Policies to promote renewable heat are expected to increase deployment of renewable technologies across a range of sectors (industrial, commercial, domestic and public). As the natural gas market is still developing in Northern Ireland and DETI is considering the potential extension of the existing grid, the Northern Ireland RHI tariffs will be based on a heating oil counterfactual to ensure, as far as possible, that gas and renewable heat are not competing but in the majority of circumstances that heating oil is being displaced. In rural areas of Northern Ireland renewable heat may be the only alternative to heating oil and therefore incentives present opportunities for SMEs in these areas not previously possible.
23. Further to this, the need to install, maintain and fuel (in the case of biomass) the renewable heating technologies will also generate jobs, and in many cases the firms best-placed to enter these new market segments will be those previously providing fossil fuel alternatives.

#### **G. Risks**

24. The biggest risk with the implementation of a NI RHI, or an alternative incentive scheme, is that it does not deliver the required increase in renewable heat uptake. The reasons for an incentive scheme not adequately increasing renewable heat uptake may include a poorly designed scheme, insufficient tariff/support levels, lack of confidence in the market, poor communications, limited fuel resource etc. Switching from established fossil fuels to relatively unknown renewable heating technologies presents a fundamental change in Northern Ireland's heat markets and will require consumers, both domestic and commercial, to pay upfront capital costs in return for incentive based payments over up to 20 years. The level of uptake remains a major risk for any incentive scheme.
25. There are also risks associated with fuel supply and maximising the indigenous supply of biomass, biogas and bio-liquids. For the 10% renewable heat target to be met there will need to be confidence that sufficient fuel supply will exist and that the cost of renewable heat fuels will not become prohibitive. The uptake of biomass fuels and the increase in farming of energy crops may also present have an environmental impact such as air quality issues in urban areas utilising biomass boilers. Increasing use of biomass for heat may also divert biomass feedstocks used by other industries (e.g. the chemical, woodchip and paper), to the production of renewable heat. This could adversely affect these industries in a way that gives a net environmental and social disbenefit.
26. The ongoing economic appraisal will identify potential risks and assist in identifying options to mitigate the possible impact. DETI will also work with other departments to ensure that barriers to deployment are identified (planning issues, biomass sustainability, skills, public confidence) and addressed. DETI will also consider developing and publishing a Renewable Heat Strategy for Northern Ireland that will explain the key incentive measures but also propose secondary actions, other than financial incentives, that should be taken forward to ensure that the chosen incentive scheme is successful and meets its key objectives.

#### **H. Inequality impacts**

27. The RHI could have an impact on groups vulnerable such as fuel poor if targeted appropriately and third party organisations such as Housing Associations, the Northern Ireland Housing Executive or Energy Service Companies (ESCos) were utilised. The capital cost of installations will still remain an issue for many domestic customers however the use of ESCos could ensure renewable heat was available to all.
28. The delivery of renewable heat will provide an alternative fuel choice for people, many people in Northern Ireland currently rely on heating oil and for those who live off the gas grid this remains their only choice. As the gas grid is still only developing, renewable heat could provide alternative heating for many domestic consumers and businesses.
29. Similarly to the GB RHI, the distributional impact on different income groups will depend on a number of factors such as: which groups take-up renewable heat measures; energy consumption; how much energy companies pass on the cost of the RHI to different groups through different tariff structures; the potential for households to undertake energy efficiency measures in order to reduce their energy consumption.

### **I. Implementation and Monitoring and Evaluation**

30. Detailed measures on how to increase renewable heat in Northern Ireland will be set out in a public consultation from DETI, scheduled for Summer 2011. The economic appraisal, used to inform decisions, will be published alongside this consultation along with full impact assessments.
31. Following consultation, DETI will seek to introduce an appropriate scheme through subordinate legislation. DETI will also consider developing a wider cross-departmental renewable heat strategy which will build on financial incentives and seek to remove barriers and create opportunities through policy support.