

**From:** [Hill, Janice](#) on behalf of [Sterling, David](#)  
**To:** [Crawford, Andrew](#); [Private Office DETI](#)  
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**Subject:** Urgent: Ministerial Submission - Business Case for Phase 2 of Renewable Heat Incentive  
**Date:** 30 October 2012 17:57:00  
**Attachments:** [image001.png](#)  
[Annex A - Phase 2 Business Case.DOCX.DOCX](#)  
[Appendix I - Terms Of Reference - RHI Phase 2.DOCX.DOCX](#)  
[Appendix II - HoD approval on PPE - UOC - nomic Appraisal of a Northern I....pdf](#)  
[Ministerial Submission - Business Case for Phase 2 of RHI.DOCX](#)  
**Importance:** High

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Please see attached submission for the Minister's urgent consideration.

D Sterling has approved.

Kind regards

Janice

**Janice Hill**

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*The new website for the European Sustainable Competitiveness Programme for NI is now available - visit [www.eucompni.gov.uk](http://www.eucompni.gov.uk)*

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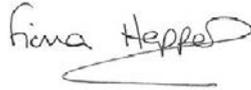
**BUSINESS CASE TEMPLATE FOR PROPOSAL TO ENGAGE AN EXTERNAL RESOURCE**

**Project Title:** PHASE 2 OF THE NORTHERN IRELAND RENEWABLE HEAT INCENTIVE

**Prepared By:** PETER HUTCHINSON **Date:**

**Approved By:** FIONA HEPPER

(Director of DETI Energy Division)



**Signed:** **Date:** 30 October 2012

## **Section 1: NEED FOR THE ASSIGNMENT**

### ***Background –Purpose of the assignment***

- 1.1 This paper is prepared in line with the DFP Guidance for the use of external consultants (April 2012).
- 1.2 The purpose of this assignment is to appoint external consultants to carry out an assessment of a range of issues relating to a second phase of the Northern Ireland Renewable Heat Incentive <sup>1</sup>(RHI). This is a specialist / technical task that requires the advice of specialist heat economists – these skills are not available within DETI. Consideration also be given to the appropriate levels of support for emerging and innovative renewable heating technologies and issues involved in extending the current RHI scheme to the domestic sector. This work will ensure that the heat market is encouraged in the most cost-effective way possible.
- 1.3 Analysis produced will include research into the technical standards of a range of renewable heat technologies; assessment of the capital/operating/fuel costs of each of the technologies; methodology for extending the scheme to the domestic market; and a detailed list of recommendations, all of which will be costed and have a clear objective (i.e. expected heat delivery). The recommendations included in this report are expected to remain within the overall funding envelope of £25m to 2015. DFP have already approved the introduction of the RHI and spend up to the £25m budget therefore no further approvals will be required. An addendum to the existing business case approved by DFP can be developed in order to keep DFP fully apprised on amendments to the scheme.

### ***Strategic / policy context***

- 1.4 In December 2010, DETI appointed Cambridge Economic Policy Associates (CEPA) and AEA Technologies to carry out an economic appraisal on a RHI for Northern Ireland. This work focused on how DETI could appropriately incentivize renewable heat technologies in Northern Ireland within a set funding envelope of £25m to 2015 (provided by Treasury). The RHI would be a key policy lever in reaching targets set by the EU, the Executive and DETI.
- 1.5 This work followed the Department of Energy and Climate Change (DECC) announcement in July 2009 that it intended to introduce a RHI to support the deployment of renewable heat technologies. Details on the design, implementation, tariff levels and eligibility were later

<sup>1</sup> The RHI is an incentive scheme that will reward those who install eligible renewable heat technology with a set tariff to be paid over a number of years, the level of tariff and length of payment is determined by the size and type of technology involved. The tariffs are set in order to cover the capital, operating and other non-financial costs of installing such technologies.

consulted on in February 2010 and confirmed in March 2011. The GB RHI scheme (applying to England, Scotland and Wales) was launched in November 2011.

- 1.6 The RHI is the main UK policy driver to satisfy obligations under the EU Renewable Energy Directive and to support the achievement of their renewable heat target of 12% by 2020, and as such Northern Ireland is expected to contribute to this target.
- 1.7 As the RHI, only applied to England, Scotland and Wales and not Northern Ireland, the previous assignment considered the introduction of a similar scheme in NI. This was appropriate given the significant differences between the heat markets here and Great Britain.
- 1.8 The economic appraisal carried out by CEPA / AEA provided DETI with evidence to consult on a NI RHI scheme, this consultation was carried out in July 2011. Following the consultation the policy was finalized and approvals sought from the EU Commission, DFP and the DETI Minister. All approvals for the scheme are now in place and the first phase of the NI RHI is scheduled to launch in November 2012..

***What is the need for the assignment?***

- 1.9 The NI RHI follows, in many ways, the approach taken by DECC in regards to the GB RHI. The NI RHI, in the first instance, seeks to incentivize the most well established technologies (biomass, heat pumps, solar thermal etc) in the most cost effective scenarios (i.e. non-domestic). This has been described as phase 1 of the scheme and will be used as a primer for the wider market.
- 1.10 DETI now needs to engage with consultants to assess options for phase 2 of the RHI scheme. It is expected that this work will assess the need and benefit of extending the scheme to the domestic sector, the development of tariffs for additional technologies and consideration of a number of other technical issues. A full terms of reference for the proposed project is attached at Appendix I. The appointed consultants will be expected to advise on the methodology, costs and benefits of extending the scheme to domestic customers; the need for additional tariff levels and appropriate levels; and the overall cost and benefits of the measures proposed under phase 2.
- 1.11 The work carried out under phase 2 will ensure that NI will remain in line with measures proposed by DECC for the GB scheme and will support the achievement of targets. The second phase of the scheme will further assist in the development of the renewable heat market in Northern Ireland and will provide opportunities for the exploitation of innovative renewable heating methods.
- 1.12 Phase 1 of the RHI focuses on the most well established renewable heating technologies in the most cost-effective scenarios (i.e. non-domestic). The introduction of the scheme followed detailed research into the economics of renewable heating and options for incentivisation. Given the range of renewable heat technologies this initial research did not consider more innovative and emerging renewable heat solutions. In addition, research previously carried out was in line with emerging policy in GB however DECC have subsequently carried out further research and have considered additional policy areas. This research proposed will ensure NI remains in line with GB.

***What is the scope of the assignment, i.e. tasks anticipated to provide desired outcomes?***

- 1.13 This assignment will determine the measures required under the second phase of the NI RHI, will outline how these measures should be introduced, advise and assess the cost/benefit.

***Timing of assignment – when is the information required and is there any possibility of deferring the assignment?***

- 1.14 There is no possibility in deferring this assignment. DECC intend to roll-out phase 2 of the GB RHI from June 2013 and will be shortly consulting of their proposals. By deferring this project there would be a significant delay in rolling out similar policy in Northern Ireland and therefore disadvantaging the renewable heat market here. Further to this, delay of the project would have an impact on expected levels of spend against budget and could lead to the overall renewable heat target being missed.
- 1.15 Following the completion of this assignment there will be a need for public consultation, development of legislation, EU commission clearance and financial approvals through DETI and DFP. Therefore, this analysis work must be completed as soon as possible. This will allow the Minister to make a final decision on the second phase of the NI RHI and allow a roll out as soon as possible.

***Description of previous similar consultancy assignments, including an analysis of past expenditures (corresponding evaluations must be appended)***

- 1.16 As previously mentioned, an economic appraisal of the NI RHI have previously been undertaken. A post project evaluation (PPE) of the appraisal carried out by CEPA and AEA is attached at **Appendix II**.

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**Section 2: BENEFITS AND THEIR TIMING**

***What are the projected outputs from the assignment?***

- 2.1 The immediate output of the external consultancy exercise is that the analysis is completed with the necessary level of independence and within the required short timescale.

***What are the expected benefits to be delivered from the assignment and give an indication of when they are likely to accrue?***

- 2.2 The immediate benefits of the consultancy appointment are the independent assessment of appropriate measures to be introduced under the second phase of the NI RHI. The work will also provide important technical advice on innovative technologies and extending the current scheme to the domestic sector. In addition, the work will assess the cost/benefit of each of the considered issues and advise on the most appropriate policy for phase 2. This approach will ensure that policy decisions in respect of supporting the renewable heat market will be based on firm evidence with the expected costs and benefits known in advance. The immediate benefits will accrue initially from 2013 onwards as the number of installations begin to increase and new technologies are supported.
- 2.3 The long term benefit of undertaking this piece of work will be the development of a complete incentive scheme for renewable heat applications in Northern Ireland. By increasing the uptake of renewable heat in Northern Ireland there are opportunities to reduce Northern Ireland's dependence on fossil fuels and therefore increasing fuel security and cutting carbon emissions. The development of the renewable heat industry also presents significant opportunities for 'green jobs'.

***What are the implications of the assignment not going ahead?***

- 2.4 If this work did not go ahead then decisions on the development and extension on the NI RHI would either be taken without a firm evidence base or not taken at all.
- 2.5 The RHI, as it stands, is only available in the non-domestic sector and for well established technologies, without the extension of the scheme the domestic market will not be supported and innovative technologies not given the opportunity to compete with others. The extension of the scheme through phase 2 provides the opportunity for renewable heat applications to become more commonplace and will further support the achievement of set targets.

- 2.6 If the scheme is not extended or developed as proposed there would be significant criticism on the Department for reneging on previous statements. Further to this, the Northern Ireland industry is likely to be disadvantaged in comparison to GB counterparts.

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### Section 3: ASSESSMENT OF ALTERNATIVE OPTIONS

- 3.1 A number of alternative options to external consultancy have been considered;

***Option 1 – Do nothing***

Doing nothing would result in the Department making a non-evidence based decision in regards to phase 2 of the NI RHI. . This could result in ineffective and costly options being employed or no decision being taken at all and therefore would have a detrimental impact on the Northern Ireland renewable heat market.

***Option 2 - Complete assignment using in-house resources***

The necessary resources and technical expertise do not currently exist in-house in Energy Division as specialist heat economist input is required.

***Option 3 – Partial completion of assignment using in-house resources. While it may be accepted that resource constraints/skills shortages will not allow the full assignment to be completed in-house, the option of using in-house resources to produce an interim output supplemented by consultancy input should be assessed. In addition, the option to relax the time constraint to allow more of the outputs to be achieved by in-house resources albeit over a longer timescale should be assessed.***

The necessary resources and technical expertise do not currently exist in-house in Energy Division as specialist heat economist input is required.

***Option 4 – Use of internal Consultancy, for example, BCS, departmental economists, statisticians, etc.***

The necessary resources and technical expertise to develop appropriate support mechanisms for renewable heat and to advise on the potential cost / benefit do not currently exist in-house. In-house economists will be utilised in the quality assuring of the work by consultants, however they do not have the necessary technical experience in renewable heat to undertake this task.

***Option 5 – Staff substitution, for example, short-term/medium term secondment of industry expert(s).***

Whilst the secondment of industry experts would provide the necessary technical expertise the resources do not exist within energy division to either manage this secondment on a day-to-day basis or to house the seconded experts.

***Option 6 – Use of External consultants – What is the rationale behind using external consultants as opposed to the alternatives considered?***

This is our preferred approach. This will ensure the appropriate level of expertise is available for this project and that it can be completed in a timely and cost-effective manner. This approach would also ensure that the assessment is independent and the conclusions based on economic analysis and evidence.

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**Section 4: EXPECTED DELIVERABLES**

- 4.1 Please provide details on the deliverables expected from consultancy. If available, a copy of the draft terms of reference for the proposed consultancy should be attached.
- 4.2 The successful consultant will be expected to undertake an independent assessment of issues that require consideration for phase 2 of the NI RHI. These include
- Advise on the introduction of tariffs for additional technologies, to include air source heat pumps, deep geothermal energy, bioliquids and landfill gas.
  - Advise on the extension of the RHI scheme to the domestic sector.
  - Assess the need for financial support for large biomass installations (over 1MW).
  - Consider the need for an additional 'uplift' for renewable heating applications that service more than one building or dwelling i.e. community or district heating.
  - Provide a detailed analysis of the expected costs of each of the additional measures under phase 2 and the expected benefits in terms of renewable heat delivered and wider impacts.
  - Make recommendations on the implementation of phase 2 of the Northern Ireland RHI based on analysis carried out, the expected costs of additional measures and the monetary and non-monetary benefits.
- 4.3 A copy of the terms of reference for the proposed consultancy is attached at **Appendix I**.
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**Section 5: SKILLS TRANSFER*****Outline the potential for skills transfer***

- 5.1 This piece of work requires a combination of both economic and energy, specifically renewable heat, expertise to understand the current heat market in terms of supply and demand, to consider issues relating to innovative technologies and to assess the effectiveness and costs of the recommended approach. This expertise will be required to analyse the market, consider previous research carried out in this area, understand potential linkages with GB policy and provide the evidence base for a way forward.

***What arrangements have been put into place to facilitate the transfer of skills from the consultants to departmental staff to the extent that this is a benefit of the consultancy?***

- 5.2 Throughout the project there will be some opportunity for skills transfer to Departmental staff, specifically in relation to energy economics and the cost/benefit of the various options considered. This knowledge and understanding will increase through close contact with the appointed consultants and can be maintained following the successful completion of the project.

***When is it anticipated that knowledge and skills delivered by the consultancy will be transferred to internal staff?***

- 5.3 Knowledge and skills delivered by the consultancy will be transferred to internal staff throughout the project through meetings and discussions about the elements of the project. This will be increased further on delivery of the draft report through the process of quality assurance. The final report will assist in in-house knowledge and support the development of a cross-departmental renewable heat strategy.

***What are the implications of skills transfer for future consultancy support?***

- 5.4 Due to the highly technical nature of renewable heat, specifically the economics surrounding innovative technologies, the skills transfer involved in the project will not mean that future consultancy won't be required. However, the transfer of skills, knowledge and understanding

during this assignment will ensure that this work can be developed further in-house and that any future consultancy will be monitored and quality assured by more knowledgeable and experienced staff.

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**Section 6: PROPOSED DIVISION OF WORK**

***What in-house support will be given to the consultants e.g. technical/specialist inputs, accommodation, photocopying and typing services etc?***

- 6.1 The external consultants will be required to provide the delivery of specific objectives as described in the terms of reference within the tender documentation.
- 6.2 In-house staff will be used to manage the delivery of the project, assisting consultants with minor queries if appropriate and providing the consultants with full and supporting background documentation to give contextual awareness of renewable heat in Northern Ireland. It is estimated that 2-3 meetings will be held with G7/DP throughout the project.

***Provide indicative estimates of the number of consultancy days by consultancy grade.***

- 6.3 The assignment is estimated to take up to 85 consultancy days as follows:-
- Project Manager – 15 to 20
  - Senior Consultant – 10 to 15
  - Principal Economist – 15 to 20
  - Technical Consultant – 15 to 20
  - Economist / Researcher – up to 10

***Provide indicative estimates of the expected number of in-house staff days by staff grade.***

- 6.4 The assignment is estimated to take up to 20 in-house staff days, estimated at 10 days at DP, 5 days at G7 and 5 days at Deputy Economist.
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**Section 7: EXPECTED COSTS OF THE ASSIGNMENT*****External Consultancy Costs***

- 7.1 It is expected that the external consultancy costs for this project will be in the region of £80,000 - £120,000. This assessment is based on previous experience of similar analytical projects.
- 7.2 Budget is available from the Energy Division Budget and the ERDF Competitiveness Programme.

***In-House Costs***

- 7.3 The in-house cost of 3 meetings, reading time and project management (detailed at para 6.4) for a G7, DP and Deputy Economist is in the region of £4000.
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**Section 8: PROJECT MANAGEMENT / PERFORMANCE REVIEW ARRANGEMENTS**

***What are the proposed project management arrangements, including details of monitoring officers, draft reports, Steering Groups etc?***

- 8.1 The project will be managed by Sustainable Energy Branch with the successful consultants expected to liaise closely with the Head of Branch and Deputy Principal on a regular basis. A Deputy Economist will also provide support throughout the project, specifically quality assuring the work of the consultants.

***Proposed arrangements for on-going monitoring of consultancy performance and expected deliverables. The project managers should ensure that appropriate mechanisms are in place for influencing performance at interim stages.***

- 8.2 Regular meetings will take place throughout the project with the consultants obliged to submit regular update reports (at agreed intervals) to enable the review of progress. A draft report will be required by 31 January 2013 with a final report due by 14 February 2013.

***Identify person/persons responsible for managing/delivering skills transfer.***

- 8.3 The progress of the assignment will be monitored closely by the Deputy Principal to ensure that the project is completed on time and within budget.

***What are the performance review arrangements for the assignment, e.g. the quality assurance employed from Departmental specialists?***

- 8.4 Payment will only be on completion of the report, which has been approved by G5 Energy Division.

***Skills transfer should be pro-actively managed and monitored like any other consultancy benefit.***

- 8.5 The appointed consultants will be expected to attend project management meetings, provide regular update reports and be contactable throughout the contract. Consultants will be expected to explain the analysis carried out and the evidence gathered so skills and knowledge will be transferred.

## **Section 9: IMPLEMENTATION AND EVALUATION PLAN**

***How will the results of the consultancy be implemented?***

- 9.1 The results of this consultancy will be to provide an evidence base for measures to be introduced as part of phase 2 of the NI RHI. This information will be used to advise the Minister in advance of final policy decisions, public consultation and policy implementation.

***Proposed arrangements for evaluating the outputs delivered by the consultancy assignment. This should include information on who is the responsible officer for ensuring the evaluation takes place and also information on when it is proposed to carry out the evaluation. Whilst ideally the evaluation should be independent of the project promoters, in most instances, evaluations should be carried out by internal resources, i.e. in-house staff or internal consultancy.***

- 9.2 Following the completion of this assignment a Post Project Evaluation on the work of the consultants will be carried out by Energy Division, to be completed within 6 months of the satisfactory conclusion of the project.

## CONSULTANCY BUSINESS CASE CHECKLIST

Consultancy Business Case Checklist				
Title Phase 2 of the Northern Ireland Renewable Heat Incentive		Name of SRO Fiona Hepper		
<b>Requirement</b> <i>[a brief summary including purpose; terms of reference; context of work; expected benefits and deliverables.]</i>		DETI wish to appoint a consultant to consider and advise on issues relating to the launch of phase 2 of the Northern Ireland RHI. This assignment will relate to the assessment of appropriate levels of support for additional technologies; the treatment of large biomass installations; the extension of the scheme to the domestic market and the consideration of an incentive uplift for district or community heating schemes.		
<b>Is this a contract extension?</b>		no		
<b>Duration</b>		6-8 weeks		
<b>Value (£) per year, and total value</b> <i>(years are illustrative only – additional years may be required for some projects)</i>		Year 1 £80- 120k	Year 2 n/a	Year 3 n/a Total £80- 120k
		<b>Confirmed?</b> <i>[insert tick/ cross]</i>		<b>Para. no/ page?</b> <i>[insert from Business Case]</i>
<b>Is the strategic case clear and strong?</b>		yes		
<b>Is VFM being optimised including consideration of existing framework agreements?</b>		yes		
<b>Is there a robust cost/ benefit analysis?</b>		yes		
<b>Has the procurement strategy and sourcing option been signed off by the Head of Procurement of the relevant CoPE as being compliant with NI procurement policy, as well as providing the most appropriate VFM solution?</b>		<i>[yes or no]yes – this assignment will be procured through CPD.</i>		
<b>Have other possible sources of expertise been checked and ruled out ie in-house, secondment, etc?</b>		<i>yes- given the complexities of renewable heat external consultants are required.</i>		
<b>For assignments which could be carried out by BCS does the business case reflect discussions with BCS and the rational for choosing to use external resources instead?</b>		<i>[yes or no]</i>		
<b>Is the budget identified and secured / approved by Finance Director?</b>		<i>yes- budget is available within DETI Energy Division</i>		
<b>Is the deliverability confirmed?</b>		yes		
<b>Is the level of risk acceptable?</b>		yes		
<b>Skills transfer considered / included in contract?</b>		yes		
<b>IPR assignment considered / included in contract?</b>		<i>[yes or no]</i>		
<b>Is exit strategy clear?</b>		<i>yes- contract will finish on finalisation of report</i>		

<b>Departmental AO Approval (if applicable)</b>	Date
<b>Ministerial Approval (if applicable)</b>	Date
<b>DFP Approval (if applicable)</b>	Date

**TERMS OF REFERENCE****DEVELOPMENT OF PHASE 2 OF THE NORTHERN IRELAND  
RENEWABLE HEAT INCENTIVE****General**

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 in September 2010 published the 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. Heating energy accounts for around half of all total energy consumed within Northern Ireland with over 98% of our heating fuels coming from imported fossil fuels. Renewable heat is simply heat produced from renewable sources such as solar radiation, biomass materials, heat pumps, geothermal energy and waste materials.
3. The EU Renewable Energy Directive (RED) (2009/28/EC) set a binding target that 20% of the EU's energy consumption should come from renewable sources by 2020. The UK share of this target commits the UK to increasing the share of renewable energy to 15% by 2020 and Northern Ireland is expected to contribute to this share. The Department of Energy and Climate Change (DECC) has indicated that renewable heat levels of around 12%, coupled with 30% renewable electricity consumption are required for the UK to meet its requirements. £860million has been made available from central Government funding to support the introduction of a Renewable Heat Incentive (RHI) in GB over the period 2011-2015; HMT has notified the Northern Ireland Executive that £25million of funding is available for a NI RHI over the same period.

**Background**

4. In 2010, DETI commissioned a study conducted by AECOM Ltd and Pöyry Energy Consulting – an Assessment of the Potential Development of Renewable Heat in Northern Ireland. The report concluded that a 10% target

was achievable but would require significant Government intervention. The report also indicated that an incentive scheme specific to Northern Ireland would be required.

5. The Strategic Energy Framework (SEF) was agreed by the Northern Ireland Executive in September 2010. The SEF includes four key energy goals: building competitive markets; ensuring security of supply; enhancing sustainability; and developing our energy infrastructure. The development of the renewable heat market locally will support the delivery of these energy goals, specifically in regards to Northern Ireland's sustainability and energy security. A target of 10% renewable heat by 2020 was included within the SEF; this is a challenging target given that the level in 2010 was 1.7%.
6. In order to achieve the renewable heat target, DECC introduced a GB Renewable Heat Incentive for the non-domestic market in November 2011. Northern Ireland was not included within that scheme because of the differences in the two heat markets. In GB the natural gas market is prevalent and accounts for 68.8% of heating demand with oil only accounting for 10%. This is very different from the situation in Northern Ireland where refined oil products account for around 77% of the overall heat demand, with natural gas accounting for 17% and the remaining heat demand met by electricity (1.2%), coal (3.2%) and renewables (1.7%).
7. It was therefore considered appropriate to separately assess how the NI renewable heat market could best be developed and the <sup>1</sup>Minister announced this publicly in September 2010 indicating that a NI RHI, that would support renewable heat installations commissioned from 1 September 2010, would be introduced if, after a full economic appraisal, it was considered to be viable and economic to do so.
8. Further to this, in October 2010, DETI was advised through a letter from the Chief Secretary to Treasury to the First and deputy First Minister that £25m of funding would be available to Northern Ireland should a NI RHI be introduced. This funding was incremental over the budget period (£2m/£4m/£7m/£12m).
9. DETI commissioned an economic appraisal to consider the available options and the final report – <sup>2</sup>A Renewable Heat Incentive for Northern Ireland – was completed by the consultants, Cambridge Economic Policy Associates (CEPA) and AEA Technologies, in June 2011.

<sup>1</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>2</sup> [http://www.deti.gov.uk/economic\\_appraisal\\_into\\_the\\_northern\\_ireland\\_rhi\\_-\\_june\\_2011.pdf](http://www.deti.gov.uk/economic_appraisal_into_the_northern_ireland_rhi_-_june_2011.pdf)

10. The report provided the basis for a <sup>3</sup>public consultation on the proposals for a Renewable Heat Incentive for Northern Ireland (RHI). The majority of respondents were supportive of the introduction of a RHI and acknowledged the importance of a specific NI approach. However, there were a number of areas where consultees were not in agreement with the proposals, in particular the proposed tariff structure and levels. DETI therefore asked CEPA/AEA to undertake some additional analysis in light of the information provided by respondents, in order to assess the additional evidence provided and to update the economic model where appropriate. This work was completed in February 2012 and informed the final policy position.

### **Developing the Northern Ireland Renewable Heat Market**

11. The primary objective of the NI RHI is to increase the uptake of renewable heat to 10% by 2020 (baseline position 1.7% in 2010). The AECOM study showed the current heat demand in Northern Ireland to be 17.4 TWh per year. Looking forward to 2020, Northern Ireland's overall heat demand is predicted to drop to 16.7 TWh per year, with rises in demand from new development being outweighed by reductions in demand with efficiency improvements in the existing sector. The 10% for renewable heat therefore equates to 1.6TWh (or an additional 1.3 TWh when considering existing levels).
12. Renewable heat technologies are currently unable to compete with existing fossil fuel alternatives given the often higher capital costs and also the lack of understanding and awareness amongst consumers of what are often seen as innovative technologies. In order to help develop this market, DETI needs to consider the implementation of both policy instruments and financial incentives. Without these measures being put in place there is a risk of market failure and Northern Ireland will not achieve the targets set.
13. Financial incentives have already been successful within the Northern Ireland Renewable Electricity market. Since the introduction of the Northern Ireland Renewables Obligation (NIRO) in 2005, the level of electricity generated from renewable sources has increased from 3% to over 12%.
14. A Renewable Heat Strategy Group (a sub group of the Sustainable Energy Inter Departmental working Group (SEIDWG) has been set up with representatives from all the Departments with a role to play in the development of the renewable heat market. This group will develop a Renewable Heat Strategy road map and will consider issues such as maximising local biomass resource, identifying linkages with Green New

<sup>3</sup> [http://www.detini.gov.uk/the\\_development\\_of\\_the\\_northern\\_ireland\\_renewable\\_heat\\_incentive.pdf](http://www.detini.gov.uk/the_development_of_the_northern_ireland_renewable_heat_incentive.pdf)

Deal, skills development, renewable heat deployment in new housing schemes and within the public sector. This work will be undertaken alongside the introduction of the RHI.

### **The Northern Ireland Renewable Heat Incentive**

15. Following the economic appraisal into the incentivisation of renewable heat, the following design of the Northern Ireland RHI has been developed. The scheme represents a long term approach to developing the renewable heat market by providing consistent, secure, long term payments for renewable heat generation. The incentivisation involves payments to installers of renewable heat technologies, with tariffs dependent on the type and size of technology installed, and in the form of pence per kilo watt hour (p/kWh) for heat generated. Payments will be made quarterly over a 20 year period for all installations following accreditation and the scheme will be open to new installations until 31 March 2020; this is in line with the GB RHI.
16. The RHI tariffs have been calculated to cover the cost difference between traditional fossil fuel heating systems and a renewable heat alternative. The tariffs account for the variances in capital costs, in operating costs, as well as seeking to address non-financial 'hassle' costs. The tariff is generated against a counterfactual position of heating oil; this is due to the fact that Northern Ireland is primarily dependent on oil and most of those switching to renewable heat will be oil consumers.
17. Tariffs vary depending on the type and size of technology to ensure that financial support is targeted for the specific installation and so over-compensation is avoided. Tariffs are paid for 20 years (the lifetime of the technology) and are '*grandfathered*<sup>4</sup>', however they will be amended on a yearly basis, for existing installers and new schemes, to reflect the rate of inflation.
18. The tariff setting methodology has three general principles:
  - Renewable installations are divided depending on the type of technology and size of installation;
  - Within each banding a reference technology<sup>5</sup> is chosen to develop a consistent tariff across technologies and scales; and

<sup>4</sup> Provides certainty for an investor by setting a guaranteed support level for projects for their lifetime in a scheme, regardless of future reviews.

<sup>5</sup> In order to set a fixed incentive rate for each band a '*reference installation*' is chosen and the tariff set relates to this installation and provides appropriate subsidy to make it viable. In line with DECC's methodology, the reference installation is chosen as the installation requiring a subsidy that would incentivise half of the total potential output from the technology that could be taken up across the period 2011-20 if that rate was offered to that band in every year. Total potential output is calculated as heat output that could be achieved if all technically viable segments within the band installed the technology.

- The net costs (difference between capital and operating costs of fossil fuel counterfactual and renewable alternative) are calculated and a tariff determined.

19. The proposed tariffs are outlined below.

Technology	Size	tariff
<b>Biomass</b>	Less than 20kWth	6.2
	Between 20kWth and 100kWth	5.9
	<sup>6</sup> Between 100kWth and 1000kWth	1.5
<b>Biomethane</b>	Biomethane all scales, biogas combustion less than 200kWth	3.0
<b>Ground source heat pumps</b>	Less than 20kWth	<sup>7</sup> 8.4
	Between 20kWth and 100kWth	4.3
	Between 100kWth and above	1.3
<b>Solar thermal</b>	Below 200kWth	8.5

20. RHI payments will be made on a quarterly basis and are determined by multiplying the applicant's actual (metered) heat output with the relevant tariff level. Under the RHI only 'useful heat' is deemed eligible; this is defined as heat that would otherwise be met by fossil fuels, this excludes deliberately wasting or dumping heat with the sole purpose of claiming incentive payments.

### **Purpose of this assignment**

21. Given the complexities and the need to introduce incentive measures in a timely manner DETI has taken a phased approach in introducing the RHI.

This approach is as follows;

- Phase 1 – Introduction of long term incentives for non-domestic market (eligible technologies to include the most established technologies) and a short term grant scheme for domestic customers.
- Phase 2 – Opening the scheme to domestic consumers and assessing appropriate support levels for additional technologies (Air Source Heat Pumps, Deep Geothermal and Bioliquids etc).

<sup>6</sup> The GB RHI has an open band above 1000kWth of 1p/kWh. Given the oil counterfactual it is deemed that Northern Ireland installations over 1000kWth are already cost-effective to 2020 and therefore do not require an incentive. If evidence to the contrary is provided by stakeholders this upper limit will be reviewed under Phase 2 of the RHI.

<sup>7</sup> This tariff reflects a deeming approaching for the domestic sector. If a metered approach was introduced a tiered tariff would be more appropriate. This would be 9.3p/kWh for the first 1314 hours and then 4.9p/kWh after that.

22. This approach is similar to GB where *Premium Payments* were launched in July 2011 with the mainstream RHI beginning in November 2011. DECC is currently considering expanding the non domestic RHI and introducing a domestic incentive (details available on the DECC website).
23. DETI now wishes to appoint a consultant to consider and advise on issues relating to the launch of phase 2 of the Northern Ireland RHI. This assignment will relate to the assessment of appropriate levels of support for additional technologies; the treatment of large biomass installations; the extension of the scheme to the domestic market and the consideration of an incentive uplift for district or community heating schemes.

### **Contract Requirements**

24. The appointed service provider will be expected to build upon;
- a. Research already carried out by the Department;
  - b. The details of the first phase of the NI RHI; this includes using consistent methodology and considering budgetary constraints, and;
  - c. Consider potential linkages with the GB RHI.
25. The key objectives of this assignment will include but should not be limited to the following;
- **Advise on the introduction of tariffs for additional technologies, to include direct air biomass heating, biogas above 200kw, biomass CHP, air source heat pumps (air to air and air to water), solar thermal above 200kw, deep geothermal energy, bioliquids (including microgeneration and bioliquid CHP) and landfill gas.**
    - Gather data/evidence on each of the considered technologies.
    - Determine appropriate tariff levels for each of the considered technologies.
    - Consider appropriate tariff banding and lifetimes for these technologies.
    - In addition to considering RHI tariffs for deep geothermal, consideration should be given to the appropriateness of alternative support such as a Challenge Fund scheme.
    - Provide technical information on each of the assessed technologies.
    - Advise on eligibility standards or requirements for each of these technologies.
  - **Advise on the extension of the RHI scheme to the domestic sector.**
    - Advise on appropriate bands, tariff levels and tariff lifetime for technologies suitable for microgeneration.

- Assess the costs of enforcing the installation of heat meters in this sector (to include the capex and opex regarding administration.)
  - Advise on an appropriate methodology that could be used to 'deem' payments to the domestic sector i.e. an annual payment made on expected, rather than actual, heat demand.
  - Consider the cost / benefits of metering heat and deeming heat in this sector. Consider also the risks associated with either option.
  - Recommend the appropriate method for extending the RHI scheme to the domestic sector.
- **Assess the need for financial support for large biomass installations (over 1MW) (including Combined Heat and Power systems).**
    - Gather evidence on the current costs of biomass in Northern Ireland.
    - Assess the appropriateness of a RHI tariff for biomass over 1MW in size.
    - Assess the need for a specific tariff for biomass CHP.
    - Consider the need for capital support for large biomass installations (if a RHI tariff is deemed inappropriate).
- **Consider the need for an additional 'uplift' for renewable heating applications that service more than one building or dwelling i.e. community or district heating.**
    - Assess costs involved in community / district heating schemes additional to similar sized applications that service one building or dwelling only.
    - Determine an appropriate level of incentive to be available to district heating schemes in addition to existing tariffs.
    - Advise on eligibility and standards for community / district heating scheme.
- **Provide a detailed analysis of the expected costs of each of the additional measures under phase 2 and the expected benefits in terms of renewable heat delivered and wider impacts.**
    - Costs should be provided for the extension of the scheme to domestics, the inclusion of additional technologies and the development of an uplift for district heating.
    - Costs should be for the whole-life of the RHI.
    - Assess the additional renewable heat delivered through each measure.
    - Assess wider benefits of each of the proposed actions under Phase 2, both monetary and non-monetary.
    - Consider displacement that the growth of the renewable heat market may have on existing energy sectors.

- **Make recommendations on the implementation of phase 2 of the Northern Ireland RHI based on analysis carried out, the expected costs of additional measures and the monetary and non-monetary benefits.**

### **Project Management and Timetable**

26. The Project will be managed by DETI Sustainable Energy Branch in conjunction with DETI Economics Branch and the consultant will be asked to liaise closely and submit regular reports (frequency of written reports and meetings to be agreed) to enable the review of progress.
27. It is anticipated that the appointed consultant will be available to commence work w/c 10 December 2012 and provide a draft report by 31 January 2013, with a final report available by 14 February 2013.

### **Project Output**

28. Draft and final reports to be available electronically and in hard copy (4 hard copies of the final report required).

### **Monitoring and Evaluation**

29. The project will be monitored by Renewable Heat Branch in conjunction with DETI economics branch.

### **Project Funding and Payment**

30. The economic appraisal will be funded from the EU Competitiveness Programme and as such the final report will have to meet the publicity requirements of the programme.
31. Payment will be made in full, on satisfactory completion, production and acceptance by DETI, of the work undertaken.

### **Key Personnel Experience:**

32. Tenderers must clearly demonstrate that the key personnel who will be involved in delivering this contract i.e. Project Manager/leader of the team, principal/senior engineering staff and principal/senior economists have relevant experience within the last 3 years in providing technical, environmental and economic consultancy advice in relation to renewable energy.

33. Tenderers must be able to demonstrate that key personnel have experience of cost benefit analysis / economic appraisal of major energy infrastructure projects on 2 relevant projects within the renewable energy field, within the last 3 years. This should include evidence of the collation and assessment of complex data in relation to renewable energy. CV's must also be provided for each nominated individual.
34. Each example must include the project title, year and value, the individual's role and responsibility within that project and details to explain how that example is relevant to the current work required.

### **Terms of Reference**

35. In submitting an application tenderers must address the following:
- (i) Detail the proposed consultant / team to carry out this project and detail their previous relevant experience.
  - (ii) Provide details of the proposed methodology to be employed in undertaking this project.
  - (iii) Provide an estimate of cost and time required to complete the outlined project.

### **Format of Response**

36. Details must be provided of the individuals who will be assigned to carry out the assignment to include:
- Consultant's name;
  - Consultant's grade. This should be limited to director / partner, lead consultant, senior consultant, consultant, junior consultant, trainee, researcher, research assistant, and analyst;
  - Number of days each consultant will spend on this assessment;
  - Daily rate;
  - Experience – relevant experience should be attached on no more than one A4 sheet per consultant.

## **Methodology:**

37. Tenderers must provide full details of the proposed approach to deliver each of the contract requirements as detailed in paragraphs 24 and 25 of the terms of reference.

## **Resource Allocation:**

38. Tenderers must provide details of how resources will be utilised to deliver service and how these will be allocated to the project requirements. This includes providing a timeline and schedule detailing the names and responsibilities of the staff involved in each key activity in the assignment.

## **Contract Management Arrangements:**

39. Tenderers must provide details of:

- How they proposed to manage and supervise this contract
- contingency plans should any proposed member of the team for reasons of illness or otherwise be unable to complete the assignment

## **Evaluation Criteria**

40. The evaluation criteria that will be used in the award of this contact will have a weighting as follows:

- Methodology (50%)
- Cost (30%)
- Resource Allocation (10%)
- Contract Management (10%)

## **Award of Contract**

41. The contract will be awarded to the consultancy that meets the terms of reference offering the best value for money along with appropriate relevant experience in respect of the evaluation criteria.

## **Intellectual property**

42. 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.

**Equality considerations**

43. 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.

44. 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) .

45. 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.

46. The evaluation must also consider the accessibility of the Strategy for all in line with the Disability Discrimination Act 1995.

## POST PROJECT EVALUATION

Title of Consultancy Assignment:

Economic Appraisal of a Northern Ireland Renewable Heat Incentive

Name of Consultant Appointed:

CEPA in conjunction with AEA

Cost of Consultancy:

Sensitive commercial information  
redacted by the RHI Inquiry

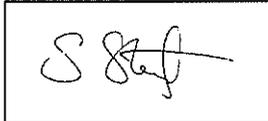
Prepared By:

Susan Stewart

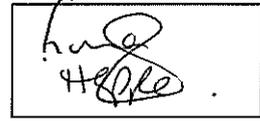
Approved By:

Fiona Hepper

Signed:



Signed:



Date:

23 August 2011

Date:

25/8/11

**Section 1: Background***Provide a brief description of the assignment including:*

- What was the purpose of the assignment?
- What was the need for the assignment?
- Who was the appointed consultant and when were they appointed?

Purpose of the assignment

The purpose of the assignment was to appoint external consultants to carry out an economic appraisal for a Northern Ireland Renewable Heat Incentive (RHI). An RHI is an incentive scheme that will reward those who install eligible renewable heat technology with a set tariff to be paid over a number of years, the level of tariff and length of payment is determined by the size and type of technology involved. The tariffs are set in order to cover the capital, operating and other non-financial costs of installing such technologies. This required the advice of specialist heat economists as the skills needed to deliver this project were not available within DETI. The assignment also had to give consideration to the alternative methods of support to ensure that the heat market is encouraged in the most cost-effective way possible.

Need for the assignment

The Department of Energy and Climate Change (DECC) in GB announced in July 2009 that it intended to introduce a RHI to support the deployment of renewable heat technologies. The RHI is the main UK policy driver to satisfy obligations under the EU Renewable Energy Directive and to support the achievement of their renewable heat target of 12% by 2020, and as such Northern Ireland is expected to contribute to this target. The RHI, as it stands, only applies to England, Scotland and Wales and not Northern Ireland. The significant differences between the heat markets here and Great Britain meant that a separate assessment on the nature and growth potential of the Northern Ireland market was needed.

In December 2009, DETI appointed AECOM Ltd and Pöry Energy Consulting to carry out a significant piece of research into the nature of the heat market heat, the current levels of renewable energy, the potential development of the market and potential support measures to assist the reaching of a 10% renewable heat target.

The report produced by AECOM and Pöry showed that whilst the current level of renewable heat in Northern Ireland is relatively low (1.7%) that 10% renewable heat by 2020 was achievable; however substantial Government support, in terms of policy and financial incentives, would be required. The research also highlighted that the GB RHI, as it stood, could be ineffective in Northern Ireland as it did not take account of the specific elements of the heat market here and therefore to effectively incentivise the local market a Northern Ireland RHI should be developed.

In order for the RHI to be designed and implemented it was necessary to carry out an Economic Appraisal to determine the most cost-effective structure for the scheme. This work would assess the RHI in comparison to other support measures, would develop possible scenarios for tariff levels, advise on the potential uptake and overall cost of a scheme and allow for a decision to be taken on the future design.

#### Appointed Consultants

DETI conducted a competitive tender process and contracted external consultants, Cambridge Economic Policy Associates Limited (CEPA), in conjunction with AEA to carry out this work in February 2011 with the aim for completion by May 2011.

#### **Section 2: Assessment of Costs**

*This section should provide a comparison of the actual costs of the external consultancy with the agreed contract value.*

*Where the variation between contract value and actual costs is greater than 10%, an explanation for the variation must be provided. [Note where actual costs exceed the cost approved by DFP by more than 10%, then DFP must be informed].*

Expected Cost	Sensitive commercial information redacted by the RHI Inquiry	Actual Cost	Sensitive commercial information redacted by the RHI Inquiry
<b>Percentage variation between expected cost and actual cost</b>			- 0.07%

#### **Explanation of variation in costs**

The Department initially estimated that the cost of this project was to be between £40-50k. Grade 5 approval for external consultants to undertake an economic appraisal was obtained on 11 November 2010.

However, in the tendering process, 4 bids from external consultants were submitted ranging between [redacted] Sensitive commercial information redacted by the RHI Inquiry [redacted]. Only one of the proposed service providers was within the expected price range. The higher than expected prices were due to the specialist technical nature of the project. In December 2010, representatives from Sustainable Energy Branch and Economics Branch met to evaluate the tenders and award the contract. Following an assessment of each of the tender applications based on methodology, resource allocation and contract management, the contract was awarded to CEPA, partnering with AEA. CEPA's estimated costs of carrying out the work were around [redacted] plus expenses. This was higher than the Department's initial estimated cost of between £40-50k.

As the expected cost of this piece of work was higher than anticipated, Ministerial and DFP approvals were obtained and received on 10 January and 18 January 2011 respectively. The price quoted by CEPA/AEA for this work was valid until 28 February 2011. The project was part-financed (50%) by the European Regional Development Fund under the European Sustainable Competitiveness Programme for Northern Ireland and the necessary approval to obtain the extra financing was obtained on 22 December 2010.

CEPA's costs of carrying out the economic appraisal were estimated at [redacted] (excl. VAT). CEPA also estimated proposed expenses for the project at [redacted] (excl. VAT). CEPA undertook and completed the economic appraisal for [redacted] (excl. VAT). Expenses included travel (flights and other transportation for 2 day trips to Belfast for 4 people); video and phone conferencing; and some subsistence. This came to a total of [redacted] (excl. VAT).

The economic appraisal was estimated and costed correctly. Expenses were slightly less expensive than estimated. Final overall costs were therefore slightly less than the original estimates.

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### Section 3: Assessment of Deliverables

*This section should provide detail on what was delivered by the consultants. The extent to which projected deliverables, as outlined in the Terms of Reference, were met by the consultants, and the quality should be assessed.*

The project deliverables, as specified in the Terms of Reference, were as follows;

- i. Identify the strategic context within which this policy sits, specifically identifying the particular EU, UK and NI policy that is relevant.
- ii. Determine the need for Government intervention in the renewable heat industry in Northern Ireland.
- iii. Outline the objectives of Government's support of the renewable heat industry and the associated benefits.
- iv. Identify a full list of potential options for future delivery of a Northern Ireland Renewable Heat Incentive.
- v. Provide a detailed analysis of the economic cost/benefit of implementing a renewable heat incentive in domestic, non-domestic and the large industrial sector in NI.
- vi. Identify and quantify the monetary costs and benefits for each option.
- vii. Assess and identify the potential risks in delivery in a future support scheme.
- viii. Outline the non-monetary costs and benefits of delivering a RHI support scheme and increasing renewable heat levels to 10% by 2020.
- ix. Calculate net present values and assess uncertainty.

- x. Make recommendations, based on the evidence gathered and the economic analysis carried out, on the most cost effective structure of a Northern Ireland RHI to increase the level of renewable heat to 10%.

The terms of reference stipulated that the successful consultant would provide a draft report for consideration by Sustainable Energy Branch followed by submission of a final report. These reports were delivered to agreed timescales and to a good standard. Some changes were required but these were incorporated into the final report. CEPA/AEA worked closely with Sustainable Energy Branch staff, providing regular updates on their research throughout the contract and were also available to answer questions or discuss certain issues further.

The economic appraisal considered various options for incentivising the local renewable heat market, and has advised on appropriate tariff levels. It has also considered the costs/benefits and the impact of each of the options. CEPA and AEA also considered high-level options which included specific targeted support for the heavy industrial sector, the roll-out of capital grants, adopting the GB RHI scheme, the introduction of a Renewable Heat Obligation, the introduction of a NI RHI scheme, as well as others. Under each of these scenarios various funding options were also considered.

The external consultant's work was deemed to be consistent, sufficiently detailed, and in keeping with what was asked for in the tender document.

#### **Section 4: Assessment of Benefits**

*This section should provide detail on the benefits provided by the consultancy assignment. For example:*

- *Were the deliverables achieved within the timescale specified in the contract?*
- *Reasons for any delays and the impact on expected benefits should be explained.*
- *Was the consultancy assignment used for the purpose originally intended?*
- *How were the outputs delivered by the assignment used?*

The contract was originally meant to begin in December 2010 and was expected to be completed within a 12 week timescale. However, as there was a requirement to seek approval for extra money to fund the economic appraisal, the contract was not awarded until 18 January 2011. The project did not officially begin until early February 2011 due to the delay by the consultants in submitting necessary contractual documentation. Timescales were revised following discussions between Sustainable Energy Branch and the consultants. This had limited impact and the final report is of a good standard with excellent detail.

The project provided a detailed economic analysis of the options for developing renewable heat in Northern Ireland which included specific targeted support for the heavy industrial sector, the roll-out of capital grants, adopting the GB RHI scheme, the introduction of a Renewable Heat Obligation and the introduction of a Northern Ireland RHI scheme. Under each of these scenarios various funding options were also considered. The appraisal assessed the cost/benefit of each policy option to ensure that the most appropriate scheme for Northern Ireland and so that funding secured will be sufficient for the expected demand.

The appraisal has informed decisions on future renewable heat strategy and has formed the basis of the Department's consultation exercise that was launched on 22

July 2011. The economic appraisal was placed on the Departmental website along with the consultation for more detailed information.

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### **Section 5: Division of Work**

*This section should provide details of the division of work between in-house staff and the consultants. Evidence should be provided of whether the in-house assistance provided matched what was in the business case.*

The business case for the economic appraisal stated that in-house staff would be used to manage the delivery of the project, assisting consultants with minor queries if appropriate and providing the consultants with full and supporting background documentation to give contextual awareness of renewable heat in Northern Ireland. In addition, the business case estimated that 2-3 meetings would be held with G7/Deputy Principal throughout the project and that the Departmental economists would provide a quality assurance check before the EA was signed off.

Several meetings were held throughout the project, as well as continual communication via telephone and email. Regular update reports were submitted throughout the project, with a draft outline report and final draft submitted and considered in advance of a final draft being agreed. Progress meetings were held on 22 February 2011, 21 March 2011 and 14 April 2011 with the external consultants. These meetings were useful to discuss progress, assess options and quality assure of findings. In addition, the 14 April meeting was used to present findings to appropriate Government stakeholders in order to gather initial views on the appraisal.

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### **Section 6: Skills Transfer**

- *What mechanisms were put in place to allow the transfer of skills and knowledge to happen?*
- *Assess the extent to which transfer of skill and knowledge to in-house staff has taken place and what impact has this had on in-house capability?*
- *Has the need for future consultancy support diminished as a result of skills transfer?*

The economic appraisal required specialist and technical skills within the field of energy economics. There has been some opportunity for the transfer of knowledge within the Department, as the final assessment has been made available to other staff. However, it must be recognised that research at this level was completed by technical consultants, and opportunity for transfer of much of the technical knowledge must therefore be somewhat limited within the general Civil Service. However it is envisaged that the study conclusions will benefit many key sustainable energy industry players and policy makers in relation to the recommendations.

It is envisaged that future detailed technical work for large energy projects or studies would be carried out by external consultants due to a lack of Departmental staff, qualified to a sufficient level in specialist energy economics related fields.

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### **Section 7: Assessment of Project Management Arrangements**

*This section should provide an assessment of the project management arrangements. For example:*

- *Were the monitoring arrangements put in place to manage the consultant's satisfactory?*
- *Was there an opportunity to influence performance interim stages?*

- *Was the project managed effectively?*

The Department managed the progress, objectives, and financial monitoring of the RHI economic appraisal. The consultants, CEP/AEA, reported to the Department on progress and provision of the appraisal reports. Representatives from DETI were engaged in monitoring progress of the economic appraisal report through e-mail and telephone correspondence with the consultants and contract progress meetings to ensure that the work was completed in accordance with the study terms of reference and to try to ensure that the economic appraisal would be completed on schedule. This system worked well and the Department was kept informed of progress, advised of difficulties and were able to offer appropriate support and advice as appropriate. Departmental staff also kept senior officials informed about the study progress.

There were no issues with project management – appropriate levels of staff from CEPA and AEA were made available to work on the project and good contingency arrangements were in place where required.

The final Study report was deemed to be comprehensive, consistent and sufficiently detailed and was accepted by Sustainable Energy Branch and the Departmental Economics Branch.

## **Section 8: Conclusions and Recommendations**

### **Conclusions**

*Provide a summary of what value was added by this assignment and assess whether, on balance, value for money was achieved.*

The economic appraisal has been used by the Department to consider how best to take forward future Northern Ireland renewable heat strategy and has formed the basis of the Department's consultation exercise that was launched on 22 July 2011. The appraisal recommendations were provided to the Minister and the Departmental Committee and have been relayed to key representatives from the sustainable energy industry and the wider public through the consultation. The report has also been placed on the Departmental website along with the consultation to provide more detailed information to stakeholders.

The procurement was completed through a competitive tendering exercise and assessed by representatives from the Department, with a representative from Central Procurement Directorate overseeing the procurement exercise. CEPA and AEA had the most competitive and value for money bid which met the requirements of the tender document and, specifically, the study Terms of Reference.

Utilising external consultants was deemed to be the only feasible option as there was no sufficient expertise within either the Department or the Utility Regulator to successfully undertake and complete the economic appraisal. Therefore, the necessary skills could not be engaged within the Department, the Utility Regulator or the wider Civil Service in Northern Ireland.

In July 2011, the Department confirmed that the RHI economic appraisal was completed to their satisfaction with sufficiently detailed costs and benefits for each of the policy options and recommendations. As noted above, the Department has since disseminated the findings of the report to the Minister, the Departmental Committee, and through consultation with sustainable energy industry stakeholders, and the wider public.

The RHI economic appraisal report is helping to advise on policy for the Department. The report will be used to identify how best to develop renewable heat in Northern Ireland. Therefore it is considered that the project has been successfully concluded and will form a solid basis for further consultation by the Department into developing renewable heat technologies in Northern Ireland.

## **Recommendations**

*Provide a summary of the lessons learnt and provide details on how these will be disseminated within the Department/Agency.*

CEPA's and AEA's work in completing the economic appraisal was deemed to be consistent, sufficiently detailed, and in keeping with what was asked for in the Study Terms of Reference.

The RHI economic appraisal report is helping to advise on policy for the Department and has been used to identify how best to develop renewable heat in Northern Ireland.

The lesson learnt from the assignment is when initially costing a project, to discuss what the costs would be with colleagues who have been involved in similar projects or contacting Central Procurement Directorate to obtain advice on the estimated costs of this type of project. However, on this occasion, previous experience had formulated Sustainable Energy Branch's initial costing for this project.

The lessons learnt will be disseminated through Divisional Heads of Branch meetings and through interaction with Departmental colleagues.

From: Fiona Hepper  
Head of Energy Division

Date: 30 October 2012

To: 1. David Sterling *[Approved 30/10/12]*  
2. Andrew Crawford  
3. Arlene Foster, MLA

copy distribution list below.

**BUSINESS CASE FOR PROPOSAL TO ENGAGE CONSULTANTS TO ASSIST IN DEVELOPMENT OF PHASE 2 OF THE NORTHERN IRELAND RENEWABLE HEAT INCENTIVE**

- Issue:** This submission seeks the mandatory internal approvals, ahead of an approach to DFP Supply, to appoint external consultants to undertake work in relation to the development of Phase 2 of the Northern Ireland Renewable Heat Incentive (RHI).
- Timing:** **URGENT** – work on phase 2 of the NI RHI must begin as soon as possible in order to align as closely as possible with the GB scheme.
- Need for Referral To the Executive:** The second phase of the RHI scheme will be a DETI initiative and therefore will not require referral to the Executive. However the Executive will need to be consulted on the second phase of the Renewable Heat Strategy, which will be cross-cutting in nature. Issues regarding legislation may also require Executive approval.
- Presentational Issues:** Not at this stage, however there is likely to be increased interest from MLAs, industry and media as this work progresses.
- FOI Implications:** Exempted under Section 35 of the Freedom of Information Act.
- Programme for Govt/ PSA Implications:** None at present, but it is likely that new PSA targets in relation to renewable heat will have to be developed.
- Financial Implications:** The assignment is estimated at between £80,000 and £120,000.
- Legislation Implications:** Not at this stage, but it is likely that subordinate legislation will have to be implemented to introduce the measures proposed by the second phase of the Renewable Heat Strategy.

**Statutory Equality Obligations:**

An equality screening exercise will be undertaken when implementing legislation for the second phase of the Renewable Heat Strategy.

**Recommendation:**

That the Departmental Accounting Officer and Minister consider and approve the business case for the appointment of consultants, at an estimated cost of between £80,000 and £120,000 to assist in the development of Phase 2 of the renewable heat strategy for Northern Ireland. Once approval has been obtained, DFP Supply approval to incur the expenditure will be sought.

**Background**

You will be aware through previous submissions that the Northern Ireland Renewable Heat Incentive will shortly be implemented following the passage of subordinate legislation in the NI Assembly. The RHI will initially only be open to non-domestic consumers and will incentivise the most well established renewable heating technologies.

2. This first phase of the scheme will act as a primer for the market in advance of the scheme being extended to the domestic sector and additional technologies being supported. For phase 2 to be implemented economic analysis and technical research is required to assess issues pertaining to the domestic sector and additional innovative technologies. I am therefore seeking your approval to commence this work.

**Renewable Heat - Drivers**

3. The key driver for developing the renewable heat market in Northern Ireland is the EU Renewable Energy Directive (RED), which sets challenging renewable energy targets for all EU Members States. The UK renewable energy target is 15% consumption from renewable sources by 2020, in order to support this target the Department of Energy and Climate Change (DECC) has adopted a target of 12% renewable heat by 2020. In addition to the set targets, the development of the renewable heat market will support increased energy security, assist in reducing emissions and provide opportunities for 'green jobs'.
4. You will be aware that in order to achieve this target, DECC introduced a RHI in GB from November 2011 that will reward new renewable heat installations by a tariff depending on the size and type of technology installed. DECC is currently consulting on proposals for introducing the GB RHI to the domestic sector and extending the non-domestic scheme to include additional technologies.

**Need for Consultants**

5. Energy Division now wishes to appoint external consultants to carry out an assessment of a range of issues relating to a second phase of the Northern Ireland RHI scheme. This is a specialist task that requires the advice of specialist heat economists as well as technical advice from energy consultants.

6. Consideration must also be given to the appropriate levels of support for emerging and innovative renewable heating technologies and issues involved in extending the current RHI scheme to the domestic sector. This work will ensure that the heat market is encouraged in the most cost-effective way possible.

### Objectives of the Assignment

7. The work carried out under phase 2 will ensure that Northern Ireland will remain in line with measures proposed by DECC for the GB scheme and will support the achievement of targets. The second phase of the scheme will further assist in the development of the renewable heat market in Northern Ireland and will provide opportunities for the exploitation of innovative renewable heating methods.
8. The key objectives for phase 2 of the NI RHI are:
- consideration on the introduction of tariffs for additional technologies, to include air source heat pumps, deep geothermal energy, bioliquids and landfill gas;
  - consideration on the extension of the RHI scheme to the domestic sector;
  - assessment of evidence of need for financial support for large biomass installations (over 1MW);
  - consideration of the need for an additional 'uplift' for renewable heating applications that service more than one building or dwelling i.e. community or district heating;
  - provision of a detailed analysis of the expected costs of each of the additional measures under phase 2 and the expected benefits in terms of renewable heat delivered and wider impacts;
  - recommendations on the implementation of phase 2 of the Northern Ireland RHI based on analysis carried out, the expected costs of additional measures and the monetary and non-monetary benefits.
9. The terms of reference, drafted with input from DETI Economics Branch, is at **Appendix I** and is included within the Business Case attached at **Annex A**.

### Cost and Timing

10. The cost of engaging external consultants to undertake this work is estimated to be in the region of £80,000 - £120,000. It is proposed to utilise Divisional funding from EU ERDF, on the basis that renewable heat supports sustainable development in Northern Ireland and has the potential to contribute to Priority 3 of the EU Competitiveness Programme – "Improving accessibility and Protecting and Enhancing the Environment".
11. The tendering process with Central Procurement Directorate, DFP, will commence once final approvals are secured from DFP Supply. Energy Division will work closely with CPD to ensure that all established protocols are followed.
12. The introduction of Phase 2 is planned for summer / autumn 2013. However, this is a very tight schedule as we essentially need to repeat the Phase 1 process – develop proposals, conduct a public consultation, review proposals and develop a final policy position prior to obtaining approvals including State Aid clearance so it is possible that there may be some slippage. Therefore it is essential that this project goes ahead as soon as possible. This work will advise on the appropriate next steps and inform a

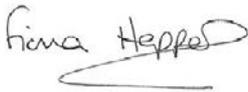
consultation process on the design and implementation of Phase 2 of the NI RHI scheme. HMT allocated £25million of funding for a Northern Ireland RHI from 2011 to 2015. To ensure this money is fully utilised, the development work for Phase 2 must go ahead.

**Recommendation**

13. The Department does not have the relevant technical expertise to carry out an assessment of a range of issues relating to a second phase of the Northern Ireland RHI scheme. Whilst this project will be managed by Sustainable Energy Branch, with input from Economics Branch, it is necessary to appoint an external consultant to take this work forward and advise on the most appropriate way to develop Phase 2 of the RHI for Northern Ireland.

14. I therefore recommend that the Departmental Accounting Officer and Minister:

- i. approve the attached business case for the appointment of consultants estimated at between £80k - £120k; and
- ii. note that approval will subsequently be sought from DFP Supply to incur the expenditure.



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