Department of Enterprise, Trade and Investment – Energy Division

Risk Register – Northern Ireland Renewable Heat Incentive and Premium Payment Scheme
## Document Review History

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<tr>
<td>1/3/2012</td>
<td>Risk Register opened – initial entries</td>
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Project Risks

This section outlines the key risks facing the introduction of the Renewable Heat Incentive (RHI) scheme and the Renewable Heat Premium Payments for domestic customers. These risks have been identified by the Renewable Heat Branch, Energy Division, during the planning and development of the scheme.

This register details the assessment of the key risk areas; the associated controls; and actions required to mitigate these risks. Each risk has been assessed for its severity to the business and for the effectiveness of the controls currently operating.

This risk assessment has been undertaken by considering:

- the impact that each risk would have on the project should it occur; and
- the likelihood of the risk materialising

Each risk has then been assessed against a risk assessment chart to show its relative significance to the project. Further analysis of each risk is detailed including:

- the controls currently in place to manage/mitigate the risk; and
- any additional actions considered necessary to fully manage the risk.

Finally, each risk is assigned a risk owner

The Register is a dynamic document. As the scheme progresses, any newly identified risks will be added to the Register and any initially placed on the Register, but no longer considered appropriate, will be removed. The Register will be held by the Project Manager who will be responsible for its upkeep.

The approach to assessment of the risks attaching to the project mirrors the DETI corporate approach to risk management.
# Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme

## Risk

A. Incorrect tariff levels set (either too high or too low)

## Risk owner

Fiona Hepper

## Specific Objective

- To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

## Risk indicators

- Lack of interest/uptake amongst consumers (indicating tariffs are too low).
- Higher than expected uptake or overspending on profiled budget (indicating tariffs are over generous).

## Potential root causes

- Incorrect assumptions made in tariff-setting methodology i.e. underestimating or overestimating the capital/operating/fuel costs of renewable technology or fossil fuel counterfactual.

## Potential business implications

- Low uptake of renewable heat incentive – renewable heat industry stalls and opportunities for ‘green jobs’ lost.
- Technologies are over-incentivised, forces a cut in tariffs at a later date and a loss of confidence in the incentive scheme.

## How is this risk currently managed: partially managed to an acceptable level of risk

- Economic Appraisal consistent with NIGEAEA guidelines has supported the development of appropriate tariff levels.
- External consultants have advised on technology assumptions and appropriate methodology for determining tariff levels.
- Economic model developed to assess future potential uptake and expected costs.
- Tariff levels consulted on (July 2011) with stakeholders offering advice and evidence where changes were necessary.
- Additional economic analysis carried out and tariffs amended to ensure they are appropriate for the Northern Ireland market place.

## Additional actions required to fully manage the risk

- Ongoing engagement with key industry stakeholders to assess uptake and monitor energy costs.
- Liaison with administrator to assess uptake levels and expected spend against profiled budget.
- Planned reviews of the scheme so tariffs can be revised depending on market conditions.

## Risk rating

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Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme

**Risk**

B. Low uptake

**Risk owner**

Fiona Hepper

**Specific Objective**

- To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

**Risk indicators**

- Lack of uptake amongst consumers.
- Low number of applications to Ofgem or enquiries to DETI.
- Lack of awareness or awareness of scheme.
- Concern from stakeholders about success of incentive.

**Potential root causes**

- Incorrect assumptions made in tariff-setting methodology i.e. setting tariff levels too low.
- Not enough advertising or marketing to promote the scheme.
- Application process or the scheme itself being overly complicated.
- Renewable heat suppliers not providing opportunities for uptake.

**Additional actions required to fully manage the risk**

- Ongoing engagement with key industry stakeholders to assess uptake and monitor energy costs.
- Liaison with administrator to assess uptake levels and expected spend against profiled budget.
- Planned reviews of the scheme so tariffs can be revised depending on market conditions.
- Promotion and marketing initiatives carried out to raise awareness.
- Work with stakeholders to identify opportunities for ESCo’s.

**Risk rating**

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**Potential business implications**

- Low uptake of renewable heat incentive – renewable heat industry stalls and opportunities for ‘green jobs’ lost.

**How is this risk currently managed: partially managed to an acceptable level of risk**

- Economic Appraisal consistent with NIGEAEA guidelines has supported the development of appropriate tariff levels.
- External consultants have advised on technology assumptions and appropriate methodology for determining tariff levels.
- Tariff levels consulted on (July 2011) with stakeholders offering advice and evidence where changes were necessary.
- Planned promotion and marketing, potentially through the Executive endorsed ‘Energywise’ campaign

**Criticality (H,M,L) - Name - Target Date**

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<th>Criticality</th>
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Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme

Risk

- C. Harm to other sectors

Risk owner

Fiona Hepper

Specific Objective

- To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

Risk Indicators

- Widespread changing from existing gas installations to renewable heat technologies.
- Increased gas prices.

Potential root causes

- Renewable heat will, of course, displace existing fossil fuels, however if this displacement disproportionately impacted on the gas network the impact could be more significant. Tariffs incorrectly set against a lower cost base could cause this.

Additional actions required to fully manage the risk

- Ongoing engagement with key industry stakeholders to assess uptake and monitor energy costs.
- Liaison with administrator to assess uptake levels.
- Planned reviews of the scheme so tariffs can be revised depending on market conditions.

Risk rating

Impact

Low

Medium

High

Likelihood

Low

Medium

High

Potential business implications

- Increased gas/oil/coal prices.

How is this risk currently managed: partially managed to an acceptable level of risk

- Economic Appraisal consistent with NIGEA EA guidelines has supported the development of appropriate tariff levels.
- External consultants have advised on technology assumptions and appropriate methodology for determining tariff levels.
- Economic model developed to assess future potential uptake and expected costs.
- Tariff levels consulted on (July 2011) with stakeholders offering advice and evidence where changes were necessary.
- Additional economic analysis carried out and tariffs amended to ensure they are appropriate for the Northern Ireland market place.
- Establishment of a cross-departmental group to consider renewable heat.

Criticality (H,M,L)

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Name

JMcC / PH
Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme

Risk

D. Failure of renewable heat supply

Risk owner

Fiona Hepper

Specific Objective

- To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

Risk Indicators

- Lack of supply of renewable heating fuels or technologies.
- Lack of skills in terms of renewable heat installations.
- Demand for renewable heat technologies outstripping supply.

Potential root causes

- Presence of an immature renewable heat market.
- Lack of developed supply chains for key fuels.
- Businesses unable to meet increased demand associated with introduction of RHI.
- Lack of available training / awareness for potential installers.

Additional actions required to fully manage the risk

- Ongoing engagement with key industry stakeholders.
- Promotion of RHI opportunities.
- Liaison with relevant Departments and Agencies to develop skills in this sector.

Potential business implications

- Low uptake of renewable heat incentive – renewable heat industry stalls and opportunities for ‘green jobs’ lost.
- Confidence in renewable heat market drops due to lack of supply.

How is this risk currently managed: partially managed to an acceptable level of risk

- Work of the Cross-Departmental group on renewable heat, including representatives from DARDm DEL and Invest NI.
- Phased approach of RHI.
- Using MCS for <45kw installations to ensure standards.

Criticality (H,M,L) | Name | Target Date
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H | JMcC / PH | Ongoing and biannual meeting of cross departmental group.
Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme

Risk
E. Insufficient budget secured for the RHI payments or for the administration of the scheme.

Risk owner
Fiona Hepper

Specific Objective
• To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

Risk Indicators
• Higher than expected uptake.
• Overspends in annual budget.
• Higher administration costs.

Potential root causes
• Tariffs set at too high/generous a level leading to a higher than expected uptake.
• External circumstances making the tariffs more generous i.e. increase in oil costs, reduction in renewable heating costs.

Additional actions required to fully manage the risk
• Ongoing engagement with key industry stakeholders to assess uptake and monitor energy costs.
• Liaison with administrator to assess uptake levels and expected spend against profiled budget.
• Planned reviews of the scheme so tariffs can be revised depending on market conditions.

Risk rating

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Potential business implications
• A forced cut in tariffs or delays to payments creating a loss of confidence in the incentive scheme.

How is this risk currently managed: partially managed to an acceptable level of risk
• Economic Appraisal consistent with NIGEAEA guidelines has supported the development of appropriate tariff levels.
• External consultants have advised on technology assumptions and appropriate methodology for determining tariff levels.
• Economic model developed to assess future potential uptake and expected costs.
• Tariff levels consulted on (July 2011) with stakeholders offering advice and evidence where changes were necessary.
• Additional economic analysis carried out and tariffs amended to ensure they are appropriate for the Northern Ireland market place.
• Liaison with DECC finance team regarding future financing and correspondence from HMT relating the budget for existing commitments.

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# Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme

## Risk

F. Failure to meet EU and Executive set targets.

## Risk owner

Fiona Hepper

## Specific Objective

- To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

## Risk Indicators

- Lack of uptake amongst consumers.
- Low levels of renewable heat delivered.
- Interim targets missed.

## Potential root causes

- Tariffs set at too low a level to generate required uptake.
- Lack of qualified installers in renewable heat market.
- Lack of awareness or understanding in regards to renewable heating opportunities.

## Potential business implications

- Opportunities for renewable heat market missed.

## How is this risk currently managed: partially managed to an acceptable level of risk

- Economic Appraisal consistent with NIGEAEA guidelines has supported the development of appropriate tariff levels.
- External consultants have advised on technology assumptions and appropriate methodology for determining tariff levels.
- Economic model developed to assess future potential uptake and expected costs.
- Additional economic analysis carried out and tariffs amended to ensure they are appropriate for the Northern Ireland market place.
- Work of the Cross-Departmental group on renewable heat, including representatives from DEL and Invest NI.

## Additional actions required to fully manage the risk

- Ongoing engagement with key industry stakeholders to assess uptake and monitor energy costs.
- Planned reviews of the scheme so tariffs can be revised depending on market conditions.
- Promotion of RHI opportunities.
- Liaison with relevant Departments and Agencies to develop skills in this sector.

## Criticality (H,M,L)

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Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme

**Risk**

- H: Failure to receive State Aid approval

**Risk owner**

Fiona Hepepr

**Specific Objective**

- To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

**Risk Indicators**

- EU Commission refuse to approve the NI RHI scheme.

**Potential root causes**

- Lack of information provided to Commission.
- Inability to justify the need for, or the design of, the NI RHI scheme.
- Tariffs set at too high a level and amounting to over-incentivisation.

**Additional actions required to fully manage the risk**

- Commission kept informed of proposed changes to the Scheme.
- Lessons learned from the GB application.

**Risk rating**

**Impact**

- High
- Medium
- Low

**Likelihood**

- High
- Medium
- Low

**Potential business implications**

- Scheme delayed or postponed.
- Creates uncertainty amongst renewable heat sector.

**How is this risk currently managed: partially managed to an acceptable level of risk**

- Detailed submission made in December 2011 outlining RHI proposals.
- Submission based on GB application that was approved in November 2011.
- Addendum to December application submitted in February 2012 advising on proposed changes.

**Critically (H,M,L)** | **Name** | **Target Date**
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H | JMcC/PH | Ongoing
**Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme**

### Risk

1. Inadequate resource to deliver project/separate key functions including staff

### Risk owner

XXXXXXXXXXXX

### Specific Objective

- To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

### Risk indicators

- Small team.
- Complex and technical issues.
- Varied requirements i.e. policy development, legislation, resource management, programme management, liaison with Ofgem, liaison with stakeholders etc.

### Potential root causes

- Lack of resources.

### Risk rating

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### Potential business implications

- Inadequate monitoring and auditing of RHI and RHPP.
- Failure to fully implement scheme.
- Delays in launch date.
- Criticism from stakeholders.

**How is this risk currently managed: partially managed to an acceptable level of risk**

- Some additional resource secured (1/2 DP)
- Adequate separation of functions achieved within existing resource
- Phased approach of RHI.
- Development of realistic timescales.

### Criticality

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### Additional actions required to fully manage the risk

- Clear programme management structures.
- Monitoring of progress and reporting on slippage.
- Additional resource needed.
**Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme**

**Risk**

J. Instances of fraud

**Risk owner**

Fiona Hepper

**Specific Objective**

- To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

**Risk Indicators**

- Duplicate applications
- Unusual meter readings (too high for expected output)
- Lack of information provided to administrator.
- Use of unregistered installers

**Potential root causes**

- Desire to defraud for financial gain.

**Additional actions required to fully manage the risk**

- Assessment of applications and verification of installations and meter readings.
- Liaison with Ofgem on instances of suspected fraud
- Suspension of RHI payments

**Risk rating**

**Impact**

- High
- Medium
- Low

**Likelihood**

- High
- Medium
- Low

**Potential business implications**

- Scheme is defrauded.
- Target missed because of overpayments where no heat generated.
- Confidence in market affected.

**How is this risk currently managed: partially managed to an acceptable level of risk**

- Checks to applications.
- Physical verification of sites under RHPP scheme
- Random checks to sites and meters under RHI scheme
- Requirements of detailed information for each installation
- Use of MCS under 45kw installations
- Meter readings assessed against expected output
- Instances of suspected fraud investigated and payments stopped.

**Criticality (H,M,L)**

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Department of Enterprise, Trade and Investment – Renewable Heat Branch – Renewable Heat Incentive Scheme

Risk

K. Failure in administration of RHI.

Risk owner

Fiona Hepper

Specific Objective

• To develop an appropriate incentive mechanism to increase the levels of renewable heat in Northern Ireland, to a level of 10% by 2020.

Risk Indicators

• Delays in dealing with applications, accreditations and payments.
• Stakeholders complaining about application process.
• System overly complicated.
• Lack of data being collected.

Potential root causes

• Lack of resources in Ofgem.
• Difficulties in IT systems.
• Lack of communication between Ofgem and DETI.

Additional actions required to fully manage the risk

• Joint project team with Ofgem / DETI as scheme is implemented.
• Identification and monitoring of risks specifically for the administration system.

Potential business implications

• Lack of confidence in scheme.
• Potential applications lost.
• Target not achieved.

How is this risk currently managed: partially managed to an acceptable level of risk

• Lessons from GB implementation learned.
• Robust and detailed feasibility developed.
• Sufficient resources earmarked.
• IT systems well developed and tested (through GB scheme).
• Proposed management systems between DETI and Ofgem.
CONFIDENTIAL

Northern Ireland Renewable Heat Incentive (RHI)
scheme
State Aid notification

Department of Enterprise, Trade and Investment

20 December 2011
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EXECUTIVE SUMMARY

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. In September 2010, the Department published the Strategic Energy Framework (SEF)\(^1\) for Northern Ireland, outlining energy policy for the next 5-10 year period. The vision is for a competitive, sustainable, reliable energy market at the minimum cost necessary.

2. The agenda for developing renewable energy solutions and securing real reductions in energy consumption to enhance sustainability is driven by environmental policy, aimed at reducing harmful emissions. However, pursuing sustainability in energy also offers opportunities to enhance security of energy supply by introducing alternative generation sources, which are not subject to the price volatility of imported fossil fuels. Furthermore, development of indigenous sources offers opportunities for diversification and alternative sources of income. The need to increase security of supply within the heating market is a major issue for Northern Ireland given the current dependence on oil for heating requirements.

3. The EU Renewable Energy Directive\(^2\), published in the Official Journal of the European Union on 5 June 2009, requires that the United Kingdom achieves a level of 15% renewable energy by 2020. In order to meet this legally binding target the Department of Energy and Climate Change (DECC) has set targets of 12% renewable heat and 30% renewable electricity by 2020 for the UK as a whole. To support the development of the renewable heat market from a level of 1.5% (2009) to the target of 12% by 2020, DECC has developed a Renewable Heat Incentive (RHI) which supports the deployment of specific renewable heat technologies through incentive payments dependent on actual heat delivery. This scheme (SA 3212S) was considered by the EU Commission and it was deemed compatible\(^3\) with the internal market in accordance with Article 107(3)(c) Treaty on the Functioning of the European Union (TFEU)\(^4\) and therefore no objection was raised.

4. This RHI, however, only applies to Great Britain i.e. England, Scotland and Wales. However, Northern Ireland is expected to contribute to the UK target and has set a target in the SEF of

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10% renewable heat by 2020, against a baseline position of 1.7% in 2010. In order to meet this target, and also contribute to the wider UK target, a similar incentive scheme to that in GB is required to stimulate growth in the Northern Ireland renewable heat market. Similar to the position in GB, renewable heat technologies in Northern Ireland are currently not able to compete financially with fossil fuel alternatives. There are several significant barriers to deployment, including capital costs; ‘hassle’ factors; and lack of understanding of renewable heat technologies. If these issues are not addressed then the targets will be missed.

5. DETI has chosen to develop a separate RHI for Northern Ireland rather than adopting the GB scheme given the differences in the two heat markets. The most significant difference is the composition of the heating market. Northern Ireland is very reliant on oil with only an emerging natural gas market, in comparison to the GB market which is dominated by natural gas with a much smaller oil market. This fundamental difference in the heat markets means that different levels of incentive are required to encourage people to switch to renewable heat, i.e. there is a different counterfactual position. DETI has also considered a number of other issues in the development of its RHI policy – including, the impact on fuel poverty (there are much higher levels in NI), the differences in energy prices (both fossil fuel and renewable) and the role of additional technologies (deep geothermal, bioliquids and air-source heat pumps (ASHPs)).

6. The final design of the Northern Ireland RHI is very similar to that already approved by the EU Commission and in place in GB; however there are differences in terms of tariffs and banding of technologies. As for GB, the financial support provided by the Northern Ireland RHI scheme is in the form of a range of pence/kWh tariffs for useful heat generated from renewable technologies. The tariffs cover the cost difference between heat generated from renewable technologies and heat generated from fossil fuel sources (and vary by technology and size of the installation).

7. DETI intends to introduce the RHI scheme as soon as possible (by 1 April 2012) because of the need to meet the targets set by 2020 and to utilise funding allocated by the UK Government for the scheme. In addition, the longer the scheme is delayed, the greater the disadvantage faced by both Northern Ireland consumers and those within the renewable heat sector, given that the scheme has already been implemented across the rest of the UK.
8. A consultation on the proposed NI scheme was undertaken between July – October 2011, and this was preceded by an independent economic appraisal carried out by expert consultants (attached at Annex E).

9. In conclusion, DETI is content that this scheme complies with the Environmental guidelines and is therefore compatible with the internal market in accordance with Article 107(3)(c) TFEU.
Chapter 1 - INTRODUCTION

10. The Renewable Energy Directive (2009/28/EC) sets a binding target that 20% of the EU’s energy consumption coming from renewable sources by 2020. The UK share of this target is 15% and DECC has set targets of 12% renewable heat and 30% renewable electricity by 2020 to support the achievement of this legally binding target. Northern Ireland, as part of the member state, is expected to contribute to the UK targets and therefore must consider measures to increase the levels of renewable energy.

11. The Strategic Energy Framework (SEF), endorsed by the Northern Ireland Executive and published by DETI in September 2010, sets ambitious targets for renewable energy generation. For renewable electricity a target of 40% was set and, the main incentive measure of the Northern Ireland Renewables Obligation (NIRO) is already in place and well-established. However, currently in Northern Ireland no scheme is in place for renewable heat.

12. For renewable heat a target of 10% has been set by the Northern Ireland Executive. The current heat demand in Northern Ireland has been assessed as being 17,362 GWh per year, of which around 1.7% (300 GWh) is from renewable sources. Looking forward to forward to 2020, Northern Ireland’s overall heat demand is predicted to drop from 17.4 TWh per year 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 1.6 TWh (or an additional 1.3 TWh when considering existing levels).

13. In order to achieve this target DETI must seek to introduce financial incentives and appropriate policies that will remove barriers to the deployment of renewable heat and allow renewable heat technologies to compete with the existing fossil fuel alternatives. This proposal, similar to GB, is to provide financial support in the form of a range of tariffs (pence per kWh) to incentivise the utilisation of a range of renewable heat technologies.
14. The powers to introduce the RHI scheme in Northern Ireland are provided by the Energy Act 2011\(^5\) (primary legislation). The details of the scheme will be prescribed and enforced through secondary legislation (draft attached at Annex D).

15. DETI launched a consultation on the design and implementation of the Northern Ireland RHI in July 2011, this consultation was open for comment until October 2011. Following this engagement DETI is reassessing some elements of the scheme, specifically - banding and tariffs and some of the technology assumptions. Following this analysis a final scheme will be agreed. DETI, however, wishes to submit a pre-notification to the Commission on the general aspects of this scheme given the desire to have the NI RHI in place as soon as possible. Once a final scheme is agreed, DETI will submit an updated notification highlighting any changes that may have taken place.

16. It should be noted that the Northern Ireland scheme is very similar to the GB RHI which has already received State Aid approval. The major difference in the two schemes is that the Northern Ireland tariffs tend to be lower than those offered in the GB scheme. This is due to the fact that the Northern Ireland tariffs are designed against an oil counterfactual rather than a natural gas counterfactual. As oil is a more expensive fossil fuel, less of an incentive is required to switch to renewable heat. There are also some differences in banding and eligibility standards, these are detailed in this submission.

17. DETI has previously stated that the Northern Ireland RHI would be in place by for 1 April 2012; however it should be clear that DETI will respectfully await the consideration of the Commission and will not launch the scheme until approval is given.

18. This submission is structured as follows;

   a. Executive Summary
   b. Introduction (current Chapter)
   c. Overview of the Scheme
   d. DETI's view of the key State Aid aspects
   e. Annexes, including tariff setting methodology, the proposed levels of support and the current legislation.

Chapter 2 - OVERVIEW OF THE NI RHI SCHEME

Objectives

19. The primary objective for the Northern Ireland RHI is to increase the uptake of renewable heat to 10% by 2020 (baseline position of 1.7% in 2010). The 10% for renewable heat equates to 1.6TWh (or an additional 1.3 TWh when considering existing levels).

20. This will be achieved through the introduction of financial incentives with payments made to installers of renewable heat technologies – the tariffs are dependent on the type and size of technology installed and are set in the form of pence per kilo watt hour (p/kWh).

21. 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 will 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 either the targets set for renewable heat by the Northern Ireland Executive in the SEF or be able to contribute to the UK target set under the Renewable Energy Directive. As a result of implementing the NI RHI we expect that, as the market share of renewable heat increases, that barriers to deployment will diminish and ultimately costs of these technologies will reduce.

22. The Northern Ireland RHI will also have associated benefits. Northern Ireland is currently overly dependent on oil for heating demand (77% of total demand\(^6\)), therefore the RHI has been designed to primarily (but not exclusively) focus on displacing oil. The increase of renewable heating, at oil’s expense, will support the DETI energy policy goal of increased energy security. This will also have a significant impact on carbon emissions levels and will assist in Northern Ireland reducing emissions in line with EU objectives. DETI also expect there to be increased opportunities for ‘green jobs’ and ‘green skills’ as this sector develops.

\(^6\) Study into the potential development of the renewable heat market in Northern Ireland, AECOM Ltd and Pöyry Energy Consulting. 2010
Beneficiaries

23. For the targets set to be achieved, renewable heat levels will need to increase across all areas in society (domestic, public sector, commercial, industrial etc). Initially, however, and in line with the approach taken by GB, the scheme will only be open to non-domestic consumers. Further work is required before the domestic sector can be introduced to the RHI and DETI wish to implement the scheme as soon as possible without additional delay. DETI intend to extend the scheme to the domestic sector in the future and in accordance with its obligations under Article 108(3) DETI will notify the Commission in advance if the extension of the scheme to the domestic sector involves the provision of State aid.

24. The non-domestic sector is the area where the most cost-effective renewable heat applications can be installed and barriers such as available financing and understanding of different technologies are much less of an issue. Beneficiaries will therefore be those in the non-domestic sector who can avail of the scheme, as well as the local renewable heat industry that will enjoy the associated benefits of increased business opportunities.

25. There will also be benefits for intermediaries, such as energy service companies (ESCos) that would be entitled to act for households or commercial businesses. The rationale for allowing intermediaries such as energy service companies to benefit is that they may be required to promote wider take-up of the scheme.

26. The RHI payments will be made to the owners of the eligible renewable heat installations (this may include ESCos) and to producers of biogas and biomethane. The scheme will open to all Northern Ireland consumers (all sites must have a valid Northern Ireland postcode).

ELIGIBLE TECHNOLOGIES AND INSTALLATIONS

Eligible technologies

27. The Northern Ireland RHI scheme intends to incentivise a range of renewable heat technologies and fuel sources, in line with the Renewable Energy Directive. These include;
   - Ground source heat pumps
   - Water source heat pumps
- Deep geothermal
- Solar thermal (up to 200kw)
- Solid biomass (including municipal solid waste)
- Biogas combustion (excluding landfill gas and up to 200kw only)
- Biomethane (excluding landfill gas)

28. There are also a number of renewable heat technologies and fuel sources that will not be supported from the outset of the scheme but may be introduced later through scheduled reviews. If new technologies are proposed, DETI will provide a separate notification to the Commission.

29. The technologies not included from the outset include large solar thermal or biogas installations (above 200kW), biogas or biomethane from landfill gas, bioliquids and air source heat pumps (ASHPs). For these technologies further analysis needs to be carried out on the correct tariff levels as well as determining methodology for measuring and metering the useful heat output.

30. The Commission should be aware that DETI had initially proposed to incentivise bioliquids and ASHPs from the outset of the scheme however technical issues have meant that is more appropriate to delay these technologies. DETI will consider the introduction of these technologies from 2013, the Commission will, of course, be notified in advance. DETI is aware that DECC are also considering the introduction of additional technologies in the future, DETI will work with DECC to ensure a consistency of approach, especially when engaging with the Commission.

31. DETI plans to carry out regular reviews of the RHI scheme and the introduction of these technologies, as well as other issues, will be considered as part of those scheduled reviews. As the priority for this scheme is to increase renewable heat levels to 10% by 2020 it is essential that the scheme is implemented as soon as possible, additional technologies can be considered at a later date.

**Eligible installations**

32. The Northern Ireland RHI scheme will be open to two categories of eligible renewable heat installations;
- New installations commissioned after the introduction of the RHI scheme (aimed for 1 April 2012), and;
- Installations commissioned from 1 September 2010 but prior to the introduction of the RHI scheme (the transitional period).

33. Installations commissioned during the transitional period have been deemed eligible to receive RHI payments from the outset of the scheme and should be considered as continuing existing aid under new arrangements – this is the same approach taken by DECC for the GB scheme, which supports installations commissioned since 15 July 2009.

34. The aim of the transitional arrangements, similarly to GB, is to have a smooth transition from grant based incentives to the RHI. In order to avoid over-incentivisation, new installations commissioned after the start of the scheme will not be able to receive both grants and RHI payments. Installations commissioned during the transitional period that received Government grant from another Department will have to either repay the grant or agree to a reduced incentive payment (length of tariff). Installations commissioned prior to 1 September 2010 will not be eligible for RHI payments.

35. By committing to support technologies commissioned during the transitional period, DETI is aiming to avoid a ‘wait-and-see’ culture where those planning to install would delay plans until the final policy position is in place. This would be very harmful to the industry and could lead to the market stalling and then not being prepared for new business when the scheme is in place. By supporting technologies from 1 September 2010, DETI has sought to give confidence to consumers wishing to install and allow the market to continue to develop. These installations have also been important in supporting the targets set and preparing the market for the RHI when in place.

Additional requirements

7 The date at which installations have been deemed eligible follows an announcement by the DETI Minister in September 2010, this was the first indication that DETI would seek to introduce a Northern Ireland RHI. This announcement followed significant research into the heat market that suggested a tailored RHI for Northern Ireland was the most suitable approach for increasing the uptake of renewable heating technologies.  
36. To ensure standards are achieved and maintained, DETI will require that all small scale installations (less than 45 kWth) are subject to technical specification under the Microgeneration Certification Scheme\(^9\) (MCS) and are installed by an MCS accredited installer. This will provide consumer protection and assist in developing confidence in the technologies, by using accredited equipment and installers.

37. The MCS is an independent certification scheme and has been accredited under the European standard EN 45011 by the United Kingdom Accreditation Service (UKAS), which certifies low carbon and renewable energy technology products (up to 45 kWth). \(^{10}\)Products and installers certified under an equivalent scheme accredited under EN 45011 are also eligible.

38. The MCS, or equivalent, standards do not apply to systems larger than 45 kWth. In the most part these systems will be bespoke and will be manufactured and installed by technical experts, therefore the same standards are not required.

39. Heat meters will be required for all installations so accurate recordings of actual heat output can be recorded and payments made. Only heat meters specified under the Annex MI-004 of the \(^{11}\)Directive of the European Parliament on measuring Instruments (2004/22/EC) will be eligible under the scheme.

**RHI Tariffs**

40. 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.

41. 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

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\(^{10}\) The MCS product scheme was notified to the European Commission in August 2007 under the European Technical Standards Directive (Notification 2007/0458/UK).

years (the lifetime of the technology) and are ‘grandfathered’; however they will be amended on a yearly basis, for existing installers and new schemes, to reflect the rate of inflation.

42. The RHI tariffs consist of dedicated and non-dedicated tariffs (detailed in table below).

"Dedicated tariffs" are tariffs set at specific levels based on the specific installation technology and size for which they are intended. However, for certain technologies there is currently not sufficient data or time to develop a dedicated tariff before the start of the RHI scheme. Additional dedicated tariffs will be considered as part of future reviews and will be subject to separate State Aid notification.

43. There are a number of technologies that, whilst not having a dedicated tariff, will be eligible to receive another tariff where there is sufficient information that the relevant tariff will not result in overcompensation:

<table>
<thead>
<tr>
<th>Renewable Heat Technology</th>
<th>Tariff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Source Heat Pump</td>
<td>Dedicated</td>
</tr>
<tr>
<td>Water Source Heat Pump</td>
<td>Ground Source Heat Pump</td>
</tr>
<tr>
<td>Deep Geothermal</td>
<td>Ground Source Heat Pump</td>
</tr>
<tr>
<td>Solar</td>
<td>Dedicated</td>
</tr>
<tr>
<td>Solid Biomass</td>
<td>Dedicated</td>
</tr>
<tr>
<td>Municipal Solid Waste</td>
<td>Solid Biomass</td>
</tr>
<tr>
<td>Biogas</td>
<td>Biomethane</td>
</tr>
<tr>
<td>Biomethane</td>
<td>Dedicated</td>
</tr>
</tbody>
</table>

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12 Provides certainty for an investor by setting a guaranteed support level for projects for their lifetime in a scheme, regardless of future reviews.

13 The ground source heat pump (GSHP) has been selected as a proxy because water source heat pumps (WSHPs) are expected to be more expensive than air source heat pumps (ASHPs), based on evidence provided by consultants and stakeholders. In addition, the technical characteristics of WSHPs are more akin to those of GSHPs.

14 Geothermal heat costs are expected to be significantly higher than GSHP costs based on evidence from consultants and stakeholders. A call for evidence on deep geothermal energy has been carried out and will inform a potential future tariff level for this technology.

15 Biogas is eligible for installations <200KW. Up to that scale evidence from consultants and stakeholders shows that biogas costs will be higher than biomethane costs.
44. The tariffs have been designed through liaison with external consultants and subject to an economic appraisal and analysis. The tariff setting methodology, as proposed, is detailed in Annex A, and an overview of the proposed tariffs is included at Annex B.

45. It should be noted that these tariff proposals were first published in July 2011 as part of the DETI consultation on the design and implementation of the Northern Ireland RHI. Following this consultation further analysis is being undertaken to assess whether the scheme has been designed appropriately. It is possible that the tariffs may be revised and, if so, DETI will inform the Commission of any proposed changes to the tariffs as soon as these are available.

**RHI Payments**

46. 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.

47. In circumstances where beneficiaries are suspected of wasting heat just to claim incentives DETI, or another enforcement body, will have the power to investigate. It is, however, expected that the risk of wasting/dumping heat in the commercial sector will be much less than in the domestic sector as RHI payments will be only one of many factors in deciding to run a renewable heat technology.

48. At this stage, as the RHI only applies to the non-domestic sector, all renewable heat installations will be required to be accompanied with a heat meter that will determine actual heat output. Heat meters are already common in many commercial applications and therefore should not be a barrier to uptake. Meters will allow for accurate readings to be taken of actual heat usage and appropriate payments made. They will also ensure accurate statistics are maintained throughout the lifetime of the scheme.

49. Further to enforcement powers mentioned above, all beneficiaries will be required to submit an annual declaration to the scheme administrator to confirm that the installation is in working order, being maintained and is being used for eligible purposes. There is an obvious incentive to keep the equipment maintained given that payments are made on metered output.
Tariff and scheme duration

50. Payments will be made by the scheme administrator on a quarterly basis for the lifetime of the technology (maximum of 20 years). Tariffs are grandfathered so beneficiaries will receive a consistent level of support over the lifetime of the installation with the only revision being adjustments for inflationary pressures. The profiles of the tariffs and the length of scheme are consistent with the GB RHI and other renewable energy schemes (Renewables Obligation and Feed-in-Tariffs).

51. It is expected that the NI RHI will be open to new installations until 2020, meaning the final payment from the scheme will be in 2040. This long term commitment will make a significant impact on the renewable heat market, providing the necessary incentives and confidence to invest in renewable heat technologies.

Reviews

52. The NI RHI will have scheduled reviews built-in to the scheme to allow DETI to ensure that the scheme remains fit for purpose and value for money for the duration. The scope of these reviews will include analysis of tariffs (either to be reduced or increased), the appropriateness of technologies (remove existing technologies or add new innovative ones) and the assessment of effectiveness and success. The RHI scheme will therefore be subject to re-notification to the Commission as required.

Costs and Benefits

<table>
<thead>
<tr>
<th>RHI Benefits by 2020</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional renewable energy</td>
<td>1,860 GWh</td>
</tr>
<tr>
<td>Total CO2 emissions displaced</td>
<td>5MtCO2</td>
</tr>
<tr>
<td>Number of renewable heat installations</td>
<td>25,000</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>RHI Costs by 2020</td>
<td></td>
</tr>
<tr>
<td>Subsidies paid (2010) prices</td>
<td>£84m</td>
</tr>
</tbody>
</table>
Funding

53. Similar to the GB RHI scheme, the NI RHI will be funded directly through normal Government expenditure. Funding for the NI RHI has been provided by Her Majesty's Treasury as a pro-rata share of funding allocated to the GB scheme. The NI RHI will continue to be funded in this manner for the lifetime of the two schemes.

Administration

54. DETI has proposed that the GB energy regulator, Ofgem, will act as the administrator of the NI RHI scheme. Ofgem’s responsibilities would include registering and accrediting installations, calculating and making payments, monitoring compliance and ensuring the conditions of the scheme are met. Ofgem has a track record in administering large scale renewable energy schemes (RO, FiTs and the NIRO) as well as developing and implementing the GB RHI.

Interaction with other incentive schemes

55. To avoid overcompensation, the general approach under the NI RHI is that, where potential beneficiaries have already received Government support (capital grant) for an installation, there will be the option to repay the grant or receive a reduced tariff (in terms of length of years). Under no circumstances will beneficiaries be able to retain grant support and receive full incentive payments.

56. DETI has also sought to address issues where installations might be in receipt of both incentives for renewable heat generation and renewable electricity generation. Specifically, in relation to incentive payments for renewable electricity through anaerobic digestion (AD), DETI has excluded AD systems that are in receipt of ROCs from claiming RHI payments.
CHAPTER 3 - NORTHERN IRELAND RHI SCHEME AND STATE AID

The State Aid element of the NI RHI Scheme

Support for the non-domestic sector

57. The Northern Ireland RHI will be open to individuals and organisations within the non-domestic sector, this includes commercial and industrial sector; the public sector; not-for-profit organisations; churches; and communities etc. The domestic sector is not eligible at this stage, which is defined as one heat source heating one property which is primarily used for domestic purposes (however DETI does propose to provide interim support for this sector, as described at paragraphs 71-79).

58. Article 107 of the TFEU\(^\text{16}\) provides that:

"Save as otherwise provided in the Treaties, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the internal market."

59. In order to fall within Article 107 of the TFEU, a measure must therefore satisfy the following criteria:

1. be funded by state resources,
2. distort or threaten to distort competition,
3. favour certain undertakings or the production of certain goods, and
4. affect trade between Member States.

60. The term “undertaking” is not defined in the TFEU but has been consistently interpreted by the European Court of Justice (ECJ) as comprising “any entity engaged in an economic activity,”

\(^{16}\) The Treaty on the Functioning of the European Union.
irrespective of its legal status and the way in which it is financed\textsuperscript{17}. Economic activity is defined as “offering goods and service in the market”\textsuperscript{18}.

61. DETI accepts that making RHI payments to individuals and organisations within the non-domestic sector could be considered State Aid and therefore we wish to seek the Commission’s approval for the scheme under the Community Guidelines on State Aid for Environmental Protection\textsuperscript{19} (‘the EP Guidelines’). It is DETI’s belief that the Northern Ireland RHI scheme should be considered as “operating aid” for “renewable energy sources” that meets the compatibility conditions laid down in point 109 (Option 1 for operating aid to renewable energy sources) of the Environmental aid guidelines.

62. ‘Renewable Energy Sources’ are defined within the EP Guidelines but DETI are aware that DECC have raised the issue that not all renewable energy sources within that definition are themselves defined. In addition, the definition of “renewable energy sources” in the EP Guidelines is not fully consistent with the definition in the Renewable Energy Directive. DETI understand that DECC has already raised these issues with the Commission.

63. Specifically, DETI is aware of two issues in relation to biogas and heat pumps, however, we also note that biogas (bio-methane injection and biogas combustion, except from landfill gas) as well as ground and water source heat pumps (but not air source heat pumps) and fall within the scope of the GB RHI scheme approved by the Commission.

\textsuperscript{17} Case C41/90, Höfner and Elser, [1991] ECR I-1979, para 21.
\textsuperscript{19} OJ C 81, 1.4.2008, p.1.
The non-state aid element of the NI RHI scheme

Interim capital support for the domestic market

64. As the sector with the largest heat demand, the deployment of renewable heat within the domestic sector will be vital in supporting the achievement of the target of 10% renewable heat by 2020. DETI is therefore committed to supporting the uptake of renewable heat in the domestic sector.

65. However, at this stage, DETI proposes that a phased approach should be taken. As previously explained, the non-domestic sector will be able to avail of the NI RHI from the outset. By taking this approach, large scale, more cost-effective, applications will come on-line first. This will provide a base for market growth and development.

66. This phased approach will also allow DETI to carry out further analysis to understand the appropriate design and required levels of incentive that are needed in the domestic sector. DETI is aware that the barriers to deployment of renewable heat in the domestic sector are different to those in the non-domestic sector and that the upfront capital expenditure may not be as readily available. DETI will consider these issues with a view to introducing an appropriate long term solution to incentives in the domestic market in the future. This is in line with the approach taken in GB.
ANNEX A – RHI TARIFF SETTING METHODOLOGY

Introduction

1. This Annex provides further information on how the tariffs for the NI RHI have been set and includes an overview of the methodology and technology assumptions used. The tariffs detailed below are set for the non-domestic sector and are categorised by type and size of technology.

2. The tariffs are those detailed in the public consultation launched by DETI in July 2011. DETI is now carrying out further analysis work on the tariffs and the assumptions contained within the methodology. It is possible the tariffs may change in advance of the scheme, however should this happen DETI will inform the Commission immediately and provide the necessary supporting evidence. DETI have chosen to provide this notification ahead of revised tariffs given the timescales for implementation.

Objectives

3. The main objectives in designing the NI RHI tariffs are;

   - To support a range of technologies, installation sizes, and investors to order to achieve 10% renewable heat by 2020;
   - To provide adequate compensation as to create a level a level playing field between renewable heat technologies and fossil fuel alternatives whilst avoiding overcompensation;
   - To consider potential linkages with other renewable energy support mechanisms (primarily the Northern Ireland Renewables Obligation) and to guard against areas of overcompensation in these areas.

Tariff Calculation

4. As previously mentioned, the RHI tariffs (set at pence per kilo watt hour of renewable heat output) are designed to cover the cost difference between the heat generated from renewable heat technologies and heat generated from the fossil fuel alternative (for Northern Ireland oil is set as the “fossil fuel counterfactual”). This cost difference accounts for capital costs and
ongoing operating costs. The tariff also includes consideration of non-financial costs or ‘hassle factors’ that installers might face when considering renewable heat.

5. A rate of return is also offered on the net capital expenditure to ensure the renewable energy technology is attractive to investors. This rate of return is also essential to reflect the potential financing costs of the investment as well as accounting for the perceived risk associated in investing in a relatively new technology.

6. The tariff setting methodology has three general principles:

   a. Renewable installations are divided depending on the type of technology and size of installation;
   b. Within each banding a reference technology is chosen to develop a consistent tariff across technologies and scales; and
   c. The net costs (difference between capital and operating costs of fossil fuel counterfactual and renewable alternative) are calculated and a tariff determined.

7. A more detailed schematic of all the various inputs required to determine the tariff level is shown below.
Tariff Banding

8. Tariff banding is a common feature of the Renewables Obligation, the Feed-in-Tariff and the Northern Ireland Renewables Obligation. It is used within the NI RHI to guard against potential overcompensation by grouping technologies by size and designing an appropriate tariff for that specific size of technology. By banding technologies with similar costs the tariffs are therefore more reflective of costs associated with that installation.

9. In order to minimise the complexity of the scheme and to make sure that it is as accessible to consumers as possible, the number of bands are quite low. The proposed banding is detailed, along with the tariffs, at Annex B.

Reference Installation
10. Whilst banding is used to group installations with similar costs together it is inevitable that within bands there will still be variation in terms of costs, performance and required tariff level. It is clear that differences will arise depending on the location and use of the installation, for example a domestic installation in a rural setting will have different costs and performance than a small commercial installation in an urban area.

11. 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.

**Elements of RHI Tariff Calculation**

**Costs**

12. The costs are determined by assessing the differences in the costs of installing a renewable technology, over and above the fossil fuel counterfactual. In order to assess these costs data was gathered for a number of components for both the renewable heat technology and the fossil fuel alternative:

- **Ongoing Costs**
  - Fuel/electricity costs (variable)
  - Maintenance costs (fixed)
  - Ongoing demand-side barrier/administrative costs (non-financial hassle factors)

- **Upfront Costs**
  - Capitals costs of equipment and installation
  - Up front demand-side barrier/administrative costs (non-financial hassle factors)

13. The ‘hassle’ factor costs are included to account for non-financial choices that consumers have to make when considering the uptake of renewable heat technologies. These account for time/understanding required in considering installing renewable heat technologies, the potential disruption (digging up ground for GSHPs) or the additional space required (biomass
boilers). Changing to renewable heat is a considerable behaviour change and therefore it is important that non-financial barriers are accounted for.

14. The RHI is designed to provide support on an ongoing basis, over the lifetime of the equipment (a maximum of 20 years). The 20 year payments therefore seek to address all the ongoing and upfront costs which would be additional to the counterfactual installation. The main difference between the method used to calculate the Northern Ireland RHI rates and that used by DECC is that in the Northern Ireland scheme the positive and uniform discount rates are used to value costs in future years and recover upfront costs across heat output in all years.

15. The economic analysis used to design the Northern Ireland support levels is based on a financial model developed by independent consultants. The model examines how much renewable heat could be achieved under different incentive levels and outlines the various results or impacts of different scenarios. In order to do this, the model relies on a number of assumptions, these include consumer behaviours; technology costs and performance; barriers and risks; and ongoing fuel costs. This information is based on existing data which is consistent with the DECC methodology.

16. A copy of the Economic Appraisal of the Northern Ireland RHI is attached at Annex E.

**Fossil fuel counterfactual**

17. Given the fact that the heating oil accounts for over 75%\(^\text{20}\) of Northern Ireland’s heating demand the Northern Ireland RHI tariffs have been set using an oil fossil fuel counterfactual. This approach recognises that prevalence of oil within the Northern Ireland heating market and the fact that the majority of those switching to renewable heat will be doing so from oil.

18. In addition, by setting an oil counterfactual position the most cost-effective applications will be incentivised, given the lower cost differential between renewable heat technologies and oil than that between renewable heat and natural gas.

**Payment method**

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\(^{20}\) Study into the potential development of the renewable heat market in Northern Ireland, AECOM Ltd and Pöyry Energy Consulting, 2010
19. The Northern Ireland RHI follows the GB RHI model in terms of making payments. Rather than providing up front support for the installation it is proposed that payments are made on a quarterly basis over the lifetime of the technology (a maximum of 20 years). This payment profile, rather than an upfront capital grant, was chosen as it provides a long term incentive to invest and to generate renewable heat and it reduces the upfront pressure on Government expenditure.

Rate of return

20. As previously explained, the RHI tariff setting methodology also includes the provision of a rate of return in order to stimulate interest in a developing unknown marketplace and to provide compensation for financing costs of making the necessary investment in capital projects.

21. The rate of return has been set at 12% for all technologies incentivised under the NI RHI, barring solar thermal which has a rate of return of 6%. With regards to solar thermal, a lower rate of return is built-in to the available tariff given that solar thermal will not provide an entire buildings heating demands, only the hot water requirements. In addition, solar thermal is currently the most expensive, per unit of energy, renewable heat technology. If a 12% rate of return was afforded to solar thermal there would be a risk that a substantial amount of available funding would be diverted to support this technology, at the expense of other more cost-effective options. DETI considers it is important, however, that solar thermal is incentivised because it is a well established and easily accessible technology.

22. The proposed rates are in line with the scheme already in place in GB and have been designed in a similar way through analysis by consultants and engagement with stakeholders.

23. The rate of return is generally higher than that afforded to established renewable electricity schemes such as the FiT (5-8% rate of return). The higher return reflects the lack of understanding of the renewable heat market (only 1.7% of market share in comparison to 10%+ share of renewable electricity) and therefore the uncertainty amongst investors. The rate of return also represents the required level of return needed to create the appropriate conditions for the necessary investment to be made to secure the 10% renewable heat target by 2020.
Reviews

24. There will be scheduled reviews in-built into the Northern Ireland RHI, this will allow the progress of the scheme to be monitored, assessed and, if necessary, changes implemented. The reviews will consider all aspects of the scheme including eligible technologies, tariff levels, fuel prices, banding, rates of return etc. This will allow the scheme to remain fit for purpose and new innovative technologies added and other established technologies, that may no longer need an incentive, be removed from the table of tariffs.

25. The first review is scheduled to start in 2014 with any changes or revisions implemented by 2015. Reviews will be carried out by the DETI.

Degression

26. Degression is a policy instrument used in some existing renewable electricity incentive schemes, including the FiT in GB. It is a mechanism whereby tariffs would be automatically reduced on an annual basis to reflect, and to potentially encourage, the reduction of technology costs for renewable heating.

27. At this stage DETI does not propose to include build degression into the NI RHI legislation, however may consider the need to do so in the future. If degression is introduced consideration will need to be given to an appropriate methodology.

Grandfathering

28. The outcome of future reviews will not impact on existing installations already commissioned and receiving payments under the scheme i.e. tariffs will be ‘grandfathered’. In practice this means that investors will receive the same level of tariff (barring amendments relating to inflation detailed below) for the lifetime of their installation, this applies even if tariffs are altered (increased or decreased) as part of a review.

29. This approach was been proposed for the following reasons;

   a. It is the same approach taken by DECC in the design of the GB RHI and is consistent with the policy design of renewable electricity schemes (RO, NIRO and FIT). Grandfathering is
a key element to increase investor confidence and to remove risk/uncertainty from investing. It also provides a clear and transparent policy framework with investors understanding that whilst the scheme may change in the future that they will not be impacted by those revisions. If investors thought there was a risk that incentive payments would drop in the future, it would be difficult to make long term financial investments; therefore certainty in support levels is vital.

b. It is essential to reduce risk wherever possible; the renewable heat market in Northern Ireland is much more immature than many other parts of the EU and is considerably less well understood than renewable electricity. In order to deliver significant increases in the levels of renewable heat it is important that risks are reduced and investor confidence developed, grandfathering is a key aspect of this.

c. The largest element of the RHI tariff relates to the upfront capital cost of the equipment and the difference between the fossil fuel counterfactual, therefore the investment is made considering the payback on the capex. With increased deployment there is the chance the technology prices will reduce, however, those who have installed earlier will not enjoy these cost reductions and will still need to pay off the capex paid. Therefore grandfathering is a method of provide a guaranteed level of support against the considerable capex of a project.

d. Finally, it must be acknowledged that just as capex costs may differ over time so will input fuel prices (particularly bioenergy). Similarly to capex, it is likely than as these technologies become more common that prices may reduce because of economies of scale and more developed supply chains. The fluctuation of operating costs are more difficult to manage as there could be an argument that support should also fluctuate, however DETI consider this to be neither practical nor good policy-making. Having changeable tariffs would not be practical given the lack of price indicators in both bioenergy and oil, both unregulated tradable assets. This would result in reactive changes, rather than proactive, and would be unmanageable, complex and administratively costly. In addition, it would remove any certainty that investors would have in terms of making investments in technologies. There would be absolute no guarantee on incentive levels and therefore the renewable heat market would not grow, as the renewable electricity has done. As mentioned previously, the immaturity of this market means that risks must be minimised and grandfathering is a key element of creating a level of confidence.
Indexation

30. The Northern Ireland RHI tariffs will automatically adjust each year to account for inflation\textsuperscript{21}. This is in line with the approach taken in the GB RHI and the Feed-in-Tariffs scheme. This increase (or decrease where deflation occurs) will apply to all existing participants in the scheme as well as new entrants. This indexation will provide investors with confidence that tariffs will remain appropriate if input costs (fuel, electricity, maintenance etc) increase through inflation.

Tariff Calculation examples (non-domestic)

31. In order to demonstrate how the tariffs have been calculated for the Northern Ireland the methodology is illustrated in a number of tables below. The tables highlight how the various technology assumptions produce the following tariffs for;

i) A small biomass boiler; and
ii) A large ground source heat pump;

32. All technology assumptions used in setting the tariffs have been developed by independent consultants. Electricity and fossil fuel prices for the conventional form of generation are taken from the UK Government projections of fuel prices. All tariffs will be paid on a quarterly basis over a period of 20 years, providing renewable heat is still being generated.

Tariff calculation 1: Small biomass boiler (pellet)

33. As with all the calculations, the tariff for the small biomass boiler (up to 45kWh) is determined by using a reference installation that is closest to the 50% of technical potential under an oil fossil fuel counterfactual. The characteristics of the small scale biomass boiler and the oil counterfactual are detailed below.

\textsuperscript{21} The tariffs for each subsequent year commencing with 1st April and ending with 31st March, are the tariffs applicable on the immediately preceding 31st March adjusted by the percentage increase or decrease in the retail prices index for the previous calendar year (the resulting figure being rounded to the nearest tenth of a penny, with any twentieth of a penny being rounded upwards).
34. Using these technology characteristics we calculate the following elements of the relevant tariff:

a. **Compensation for the capital costs**; this is the difference between the capital costs of the renewable technology and the fossil fuel counterfactual whilst applying a 12% rate of return on the difference over the lifetime of the technology.

b. **Compensation for the operating costs** (including annual fuel costs); this is the difference between the annual running costs of the renewable technology and fossil fuel counterfactual.

c. **Compensation for the non-financial up front barrier**; this accounts for the hassle factors associated with installing a renewable heat technology not present when installing fossil fuels.

35. The components of the small biomass tariffs are presented below:

<table>
<thead>
<tr>
<th>Costs in 2011 prices</th>
<th>Annuitted Capital cost at 12% rate</th>
<th>Annual operating costs</th>
<th>Annual fuel costs</th>
<th>Annuitted Upfront barrier costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable</td>
<td>£1020</td>
<td>£230</td>
<td>£1200</td>
<td>£120</td>
</tr>
<tr>
<td>Fossil fuel</td>
<td>£540</td>
<td>£190</td>
<td>£1010</td>
<td>n/a</td>
</tr>
<tr>
<td>Difference</td>
<td>£480</td>
<td>£40</td>
<td>£190</td>
<td>£120</td>
</tr>
<tr>
<td>Renewable technology Resource costs</td>
<td></td>
<td></td>
<td></td>
<td>£830</td>
</tr>
</tbody>
</table>
36. As both installations produce the same heat output of 18,400 kWh (calculated by size of technology x 8760 hours in year x load factor) this results in a subsidy of 4.5 p/kWh (i.e. £830 / 18,400 kWh).

**Tariff Calculation 2 – Large GSHP**

37. The calculation of the large scale GSHP (installations over 45KW) follows the same principles as those set out in the small biomass calculation. The characteristics of the large GSHP installation and the fossil fuel counterfactual technology used in to set the tariff are outlined below.

<table>
<thead>
<tr>
<th></th>
<th>CAPEX £/KW</th>
<th>OPEX £/kW/year</th>
<th>Efficiency %</th>
<th>Load Factor %</th>
<th>Size kW</th>
<th>Life time</th>
<th>Fuel cost p/kWh</th>
<th>Upfront barrier costs (including admin costs) £</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSHP</td>
<td>900</td>
<td>1</td>
<td>360</td>
<td>36</td>
<td>200</td>
<td>20</td>
<td>11</td>
<td>3951</td>
</tr>
<tr>
<td>Oil</td>
<td>68</td>
<td>1</td>
<td>89</td>
<td>20</td>
<td>360</td>
<td>15</td>
<td>4.88</td>
<td>n/a</td>
</tr>
</tbody>
</table>

38. The components of this tariff are presented below.

<table>
<thead>
<tr>
<th>Annual costs in 2011 prices</th>
<th>Annuitised Capital cost at 12% rate £</th>
<th>Annual operating costs £</th>
<th>Annual fuel costs £</th>
<th>Annuitised Upfront barrier costs £</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable</td>
<td>24100</td>
<td>200</td>
<td>19500</td>
<td>530</td>
</tr>
<tr>
<td>Fossil fuel</td>
<td>3600</td>
<td>360</td>
<td>34500</td>
<td>n/a</td>
</tr>
<tr>
<td>Difference</td>
<td>20500</td>
<td>-160</td>
<td>-15000</td>
<td>530</td>
</tr>
<tr>
<td>Renewable technology</td>
<td></td>
<td></td>
<td></td>
<td>£5870</td>
</tr>
<tr>
<td>Resource costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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39. As both installations produce the same heat output of 631,000KWh (calculated by size of technology x 8760 hours in year x load factor) this results in a subsidy of 0.9p/kWh (i.e. £5870 / 631,000KWh).
# ANNEX B – Proposed Northern Ireland RHI Tariffs

<table>
<thead>
<tr>
<th>Tariff name</th>
<th>Eligible Technologies</th>
<th>Size</th>
<th>Tariff duration (years)</th>
<th>Northern Ireland recommended levels (pence per kWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Source Heat Pumps</td>
<td>Including water source heat pumps and deep geothermal</td>
<td>Less than 45kWh</td>
<td>20</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Above 45kWh but excluding large industrial sites</td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td>Biomass</td>
<td>Solid biomass; Municipal solid waste&lt;sup&gt;22&lt;/sup&gt; (inc. CHP)</td>
<td>Less than 45kWh</td>
<td>20</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Above 45kWh but excluding large industrial sites</td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td>Biomethane</td>
<td>Biomethane Injection and biogas combustion, except from landfill gas</td>
<td>Biomethane all scales, biogas combustion less than 200kWh</td>
<td>20</td>
<td>2.5</td>
</tr>
<tr>
<td>Solar Thermal</td>
<td></td>
<td>Less than 200kWh</td>
<td>20</td>
<td>8.5</td>
</tr>
</tbody>
</table>

<sup>22</sup> Defined under the Waste and Emissions Trading Act 2003, Section 21
ANNEX C – Sections 113 and 114 Energy Act 2011

(Attached separately)
ANNEX D – Draft Subordinate Legislation

(Attached separately)
ANNEX E – The Economic Appraisal of the Northern Ireland Renewable Heat Incentive

(Attached separately)
Energy Act 2011

2011 CHAPTER 16

PART 3

MEASURES FOR REDUCING CARBON EMISSIONS

Northern Ireland: renewable heat incentives

113 Renewable heat incentives in Northern Ireland

1. The Department of Enterprise, Trade and Investment may make regulations—
   (a) establishing a scheme to facilitate and encourage renewable generation of heat in Northern Ireland, and
   (b) about the administration and financing of the scheme.

2. Regulations under this section may, in particular—
   (a) make provision for the Department or NIAUR to make payments, or to require designated fossil fuel suppliers to make payments, in specified circumstances, to—
      (i) the owner of plant used or intended to be used for the renewable generation of heat, whether or not the owner is also operating or intending to operate the plant;
      (ii) a producer of biogas or biomethane;
      (iii) a producer of biofuel for generating heat;
   (b) make provision about the calculation of such payments;
   (c) make provision about the circumstances in which such payments may be recovered;
   (d) require designated fossil fuel suppliers to provide specified information to the Department or NIAUR;
   (e) make provision for payments to fossil fuel suppliers in specified circumstances;
(f) make provision about the enforcement of obligations imposed by or by virtue of the regulations (which may include a power for the Department or NIAUR to impose financial penalties);

(g) confer functions on the Department or NIAUR, or both.

(3) In this section—

“biofuel” means liquid or gaseous fuel which is produced wholly from biomass;

“biogas” means gas produced by the anaerobic or thermal conversion of biomass;

“biomass” means material, other than fossil fuel or peat, which is, or is derived directly or indirectly from, plant matter, animal matter, fungi or algae;

“biomethane” means biogas which is suitable for conveyance through pipes to premises in accordance with a licence under Article 8(1)(a) of the Gas (Northern Ireland) Order 1996 (S.I. 1996/275 (N.I. 2)) (licences to convey gas);

“the Department” means the Department of Enterprise, Trade and Investment;

“designated fossil fuel suppliers” means—

(a) if the regulations so provide, a specified class of fossil fuel suppliers, and

(b) in any other case, all fossil fuel suppliers;

“fossil fuel” means—

(a) coal;

(b) lignite;

(c) natural gas (within the meaning of the Energy Act 1976);

(d) crude liquid petroleum;

(e) petroleum products (within the meaning of that Act);

(f) any substance produced directly or indirectly from a substance mentioned in paragraphs (a) to (e);

“fossil fuel supplier” means a person who supplies fossil fuel to consumers for the purpose of generating heat;

“functions” includes powers and duties;

“modify” includes amend, add to or repeal;

“NIAUR” means the Northern Ireland Authority for Utility Regulation;

“owner”, in relation to any plant which is the subject of a hire purchase agreement, a conditional sale agreement or any agreement of a similar nature, means the person in possession of the plant under that agreement;

“plant” includes any equipment, apparatus or appliance;

“renewable generation of heat” means the generation of heat by means of a source of energy or technology mentioned in subsection (4).

(4) The sources of energy and technologies are—

(a) biomass;

(b) biofuels;

(c) fuel cells;

(d) water (including waves and tides);

(e) solar power;

(f) geothermal sources;
(g) heat from air, water or the ground;
(h) combined heat and power systems (but only if the system’s source of energy is a renewable source within the meaning given by Article 55F of the Energy (Northern Ireland) Order 2003 (S.I. 2003/419 (N.I. 6));
(i) biogas.

(5) The Department may by regulations—
(a) modify the list of sources of energy and technologies in subsection (4);
(b) modify the definition of “biofuel”, “biogas” or “biomass” in subsection (3).

(6) The Department may by regulations make provision, for the purposes of subsection (2) (a)(iii) and the definition of “fossil fuel supplier”, specifying that particular activities do or do not constitute generating heat.

(7) Any power to make regulations under this section is to be exercisable by statutory rule for the purposes of the Statutory Rules (Northern Ireland) Order 1979 (S.I. 1979/1573 (N.I. 12)).

(8) Regulations under this section may not be made unless a draft of the regulations has been laid before, and approved by a resolution of, the Northern Ireland Assembly.

(9) Regulations under this section may—
(a) provide for a person to exercise a discretion in dealing with any matter;
(b) include incidental, supplementary and consequential provision;
(c) make transitory or transitional provisions or savings;
(d) make provision generally, only in relation to specified cases or subject to exceptions (including provision for a case to be excepted only so long as conditions specified in the regulations are satisfied);
(e) make different provision for different cases or circumstances or for different purposes.

114 Power for Gas and Electricity Markets Authority to act on behalf of Northern Ireland authority in connection with scheme under section 113

(1) GEMA and a Northern Ireland authority may enter into arrangements for GEMA to act on behalf of the Northern Ireland authority for, or in connection with, the carrying out of any functions that may be conferred on the Northern Ireland authority under, or for the purposes of, any scheme that may be established, under section 113.

(2) In this section—
“GEMA” means the Gas and Electricity Markets Authority;
“Northern Ireland authority” means—
(a) the Department of Enterprise, Trade and Investment, or
(b) the Northern Ireland Authority for Utility Regulation.
CONFIDENTIAL

Northern Ireland Renewable Heat Incentive (RHI) scheme

State Aid notification

ADDENDUM

Department of Enterprise, Trade and Investment
20 February 2012
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</tr>
</tbody>
</table>
The Northern Ireland Renewable Heat Incentive

Background

1. On 21 December 2011, the Department of Enterprise, Trade and Investment (DETI) submitted a State Aid notification to the EU Commission relating to the potential introduction of a Northern Ireland Renewable Heat Incentive (RHI). In this submission it was noted that DETI was carrying out further analysis on the potential design of the scheme following issues raised by local stakeholders during a public consultation process. This analysis has now completed and informed final proposals, in terms of tariff levels and banding, for the Northern Ireland scheme. The additional analysis was carried out by independent economic consultants and is available at Annex A.

2. It is therefore appropriate for an addendum to be submitted to the Commission to provide detail on proposed changes to the scheme, as detailed in the December 2011 submission, and seek the Commission’s views on the proposed levels of incentive.

3. The changes to the scheme, as described in this paper, are focussed on the banding and tariff levels of the Northern Ireland RHI. Explanations are provided why changes have been made. All other elements of the scheme remain unchanged and therefore this paper should be read in conjunction with the previous submission.

The Northern Ireland RHI

4. DETI has chosen to develop a separate RHI for Northern Ireland rather than adopting the GB scheme given the differences in the two heat markets. The most significant difference is the composition of the heating market. Northern Ireland is very reliant on oil with only an emerging natural gas market, in comparison to the GB market which is dominated by natural gas with a much smaller oil market. This fundamental difference in the heat markets means that different levels of incentive are required to encourage people to switch to renewable heat, i.e. there is a different counterfactual position.

5. DETI has also considered a number of other issues in the development of its RHI policy – including, the impact on fuel poverty (there are much higher levels in NI), the differences in energy prices (both fossil fuel and renewable) and the role of additional technologies (deep geothermal, bioliquids and air-source heat pumps (ASHPs)). However the introduction of additional technologies will not be until phase 2 of the scheme (likely to be in early 2013).

6. The final design of the Northern Ireland RHI is very similar to that already approved by the EU Commission and in place in GB; however there are differences in terms of tariffs and banding of technologies. As for GB, the financial support provided by the Northern Ireland RHI scheme is in the form of a range of pence/kWh tariffs for useful heat generated from renewable technologies. The tariffs cover the cost difference between heat generated from renewable
technologies and heat generated from fossil fuel sources (and vary by technology and size of the installation).

7. DETI intends to introduce the RHI scheme as soon as possible because of the need to meet the targets set by 2020 and to utilise funding allocated by the UK Government for the scheme. In addition, the longer the scheme is delayed, the greater the disadvantage faced by both Northern Ireland consumers and those within the renewable heat sector, given that the scheme has already been implemented across the rest of the UK.

8. It should be noted that DETI will not seek to introduce the scheme until the Commission has commented on the proposals and agreed that the RHI can be introduced in Northern Ireland.

Proposed tariff and banding levels

9. Following the public consultation on the Northern Ireland RHI, comments and evidence presented by stakeholders and additional economic analysis, carried out by independent economic consultants, the proposed tariffs for the NI RHI are detailed in the table below.

<table>
<thead>
<tr>
<th>Tariff name</th>
<th>Eligible Technologies</th>
<th>Size range (kW)(^1)</th>
<th>Tariff in original report</th>
<th>Updated tariff(^2)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biogas injection</td>
<td>Biomethane injection and biogas combustion, except from landfill gas</td>
<td>Biomethane all scales, biogas combustion less than 200kWth</td>
<td>2.5</td>
<td>3.0</td>
<td>Change to assumption on gate fee</td>
</tr>
<tr>
<td>Biomass boilers</td>
<td>Solid biomass; Municipal solid waste(^3) (inc. CHP)</td>
<td>0-20(^4)</td>
<td>4.5</td>
<td>6.2</td>
<td>Increase due to inflation, switch to 2011/12 reference installation and inclusion of ongoing barrier costs</td>
</tr>
</tbody>
</table>

\(^1\) The range should be read as including the lower end, but not the upper end. For example, the range 20-100 includes 20kW boilers but not 100kW boilers – the latter are covered by the 100-500 range.

\(^2\) Includes inflation, and effect of changes to technology costs and tariff bands

\(^3\) Defined under the Waste and Emissions Trading Act 2003, Section 21

\(^4\) The 0-20kW band for biomass and GSHP is primarily a domestic banding. Whilst the RHI will not be open to domestic customers until phase 2 of the scheme we have included for your information and consideration. In reality, in phase 1 of the scheme, there will be little or no applications within these bandings.
<table>
<thead>
<tr>
<th>Tariff name</th>
<th>Eligible Technologies</th>
<th>Size range (kW)(^1)</th>
<th>Tariff in original report</th>
<th>Updated tariff(^2)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>20-100</td>
<td>4.5 (&lt;45kW) 1.3 (45kW+)</td>
<td>5.9</td>
<td>Intermediate tariff based on 50kW boiler. Increase due to inflation and inclusion of ongoing barrier costs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100-1,000</td>
<td>1.3</td>
<td>1.5</td>
<td>Increase due to inflation and switch to 2011/12 reference installation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,000+</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSHP</td>
<td>Including water source heat pumps and deep geothermal</td>
<td>0-20</td>
<td>4.0</td>
<td>3.4(^5)</td>
<td>Change to the reference installation means a higher tariff</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20-100</td>
<td>4.0 (&lt;45kW) 0.9 (45kW+)</td>
<td>4.3</td>
<td>Intermediate tariff based on 30kW pump</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100+</td>
<td>0.9</td>
<td>1.3</td>
<td>Increase due to inflation and switch to 2011/12 reference installation</td>
</tr>
<tr>
<td>Solar Thermal</td>
<td></td>
<td>0 - 200</td>
<td>8.5</td>
<td>8.5</td>
<td>No change has been made to the proposed tariff for solar thermal, it remains at 8.5p for installations up to 200kWh</td>
</tr>
</tbody>
</table>

\(^5\) This tariff reflects a 'deeming approaching' for the domestic sector rather than a metered approach.
10. As can be seen, the tariffs have changed for all technologies, although in many cases the changes are very small and explained by inflation and a slight shift in reference installation.

11. Comparing the tariffs directly to those in Great Britain is difficult, since the tariff bands are different. However, in general our proposed tariffs are lower. The main reason for this is the higher cost of oil heating in NI compared to gas heating which predominates in GB. This is less the case for heat pumps, since they use electricity which is relatively expensive in Northern Ireland.

*Proposed NI RHI Tariffs (in comparison to GB tariffs)*

<table>
<thead>
<tr>
<th>Technology size band</th>
<th>Size range (kW)</th>
<th>Proposed NI tariff</th>
<th>Nearest GB equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biogas injection</td>
<td>All</td>
<td>3.0</td>
<td>6.8</td>
</tr>
<tr>
<td></td>
<td>20-100</td>
<td>5.9</td>
<td>7.9 for the first 1314 peak load hours and then 2.0</td>
</tr>
<tr>
<td><strong>Biomass boilers</strong></td>
<td>100-1,000</td>
<td>1.5</td>
<td>4.9 for the first 1314 peak load hours and then 2.0</td>
</tr>
<tr>
<td></td>
<td>1,000+</td>
<td>-</td>
<td>1.0</td>
</tr>
<tr>
<td>GSHP</td>
<td>20-100</td>
<td>4.3</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>100+</td>
<td>1.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Solar Thermal</td>
<td>0 - 200</td>
<td>8.5</td>
<td>8.5</td>
</tr>
</tbody>
</table>

Changes from previous submission

12. As detailed in table 1, the proposed NI RHI tariffs have changed since the previous submission. The reasons vary from taking into account inflationary pressures, changes in banding (and therefore reference installation) or changes in previously held assumptions.

Changes in banding

13. The most significant changes in the tariffs have been a result of changes in proposed banding, primarily this relates to biomass boilers and GSHPs. The bands have been revised following concerns that the 0-45 and 45+ bands were too generic and, in particular, the 45+ band was too wide given the varying applications for renewable heat. These bands have therefore been revised to attempt to group more similar installation types.
14. It should be noted that one addition is a banding between 0-20kw for both biomass and GSHP. This band is designed primarily with domestic consumers in mind and as the scheme won’t be available for domestic customers until phase 2 (provisionally scheduled for early 2013) there is unlikely to be significant uptake, in the first instance, amongst these bands. Small and medium sized commercial applications will primarily fall into the 20-100kw banding.

*Using a current reference installation*

15. Previously tariffs had been set using a ‘future’ reference installation i.e. one from 2014/2015. Given our assumptions that renewable heat technologies will reduce in cost as uptake increases, using a future reference installation meant a lower assumed capital cost for renewable technologies. On reflection, it has been considered more appropriate to set tariffs against current prices and in comparison to 2011/2012 reference installations; this ensures tariffs are appropriate from the outset of the scheme. The danger of setting tariffs against future installation prices is that they are not sufficient to generate uptake that will, in turn, drive prices down.

16. Tariffs have therefore been amended to be set against a 2011/2012 reference installation; this will, of course, be revised during future reviews of the Northern Ireland RHI.

*Application of ongoing barrier costs*

17. An additional change is the inclusion of on-going barrier costs, this follows the GB RHI approach and costs. In most cases, these ongoing barriers make little difference to the tariffs, because they are small in comparison to the other costs.

*Biomethane*

18. Following our review, we have updated our estimate of the annual operating cost to £350 per kW. It was previously £600 per kW. We have also changed our estimate of the efficiency to 85%. These changes were made following a review of additional evidence made available from SKM/Enviros6 in their report to DECC published May 2011.

19. Further to this, we have revisited our assumption on fuel input, and have assumed a 50:50 split between waste and fuel crops.

20. The changes in these assumptions have resulted in the tariff being revised to 3p (previously 2.5p).

*Biomass*

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21. The previous biomass bandings (less than 45kW and above 45kW) have been considered as too broad, especially in regards to the above 45kW category where there would be a wide range of biomass applications. DETI has therefore sought to revise the bands as follows;

<table>
<thead>
<tr>
<th>Band size</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-20kW</td>
<td>Based upon 11kW biomass boiler</td>
</tr>
<tr>
<td>20-100kW</td>
<td>Based upon 50kW size biomass boiler (originally based on 20kW)(^7)</td>
</tr>
<tr>
<td>100-1,000kW</td>
<td>Based upon 200kW boiler. This would encompass the majority of the ‘large commercial/public’.</td>
</tr>
<tr>
<td>1,000kW+</td>
<td>It is proposed that there is no tariff for large (&gt;1MW) biomass boilers. In arriving at this recommendation, we have used the same methodology as for other technologies. This indicates that large industrial biomass should be viable without subsidy, taking into account current technology costs and current and expected oil and biomass costs. In particular, the low price of woodchips relative to oil, when coupled with the high load factor of an industrial boiler, more than outweighs the higher capital cost of a biomass boiler.</td>
</tr>
</tbody>
</table>

22. The bands, as above, do not follow those in place in GB because the average boiler size in Northern Ireland is expected to be smaller than in GB. Therefore a tailored tariff to reflect the Northern Ireland market is expected to generate a greater uptake from consumers.

23. The 0-20kw band will primarily be for domestic customers, when the RHI is widened to include domestic consumers in future years. The bands above 20kw will primarily be for commercial users.

**Ground Source Heat Pumps**

24. As for biomass, we have revisited the banding for GSHPs. The previous banding had the same issues as the biomass (described above) as well as concerns that the differences in tariff between the lower and upper bands were too much of a dramatic step change (which does not exist in actual project cost).

\(^7\) In reality 20kW is very small for a non-domestic boiler and many of the installations are likely to be larger i.e. 50kW+. In a very small office it would probably not be practical from a load factor perspective that biomass would be viable. It is also likely that small office premises may be connected to larger biomass boiler heating a either one larger building with several different businesses or via a small district heat network such as holiday lets/farm business.

\(^8\) There are two caveats to this conclusion. The first is that it depends on our assumption about woodchips – both their price, and that they are the fuel of choice for industrial biomass. If the price were to increase in future, or industrial customers were to shift to using mostly pellets, this could argue for revisiting our conclusion. This will be considered as part of ongoing reviews.
25. As with biomass, we propose to introduce what is in effect a domestic tariff; this is based upon the existing 11kW boiler size. Further, it is proposed to use a 30kW GSHP size for small commercial installations, instead of 11kW. We consider that it is more likely that small commercial installations will be by landlords installing heating systems to serve multiple small businesses, rather than each business in a building installing its own heating systems. We have therefore proposed a reference size which would cover the demand from two or three small businesses, rather than just one. The 30kW reference size will also act as an interim point between domestic and large commercial installations (reference size 200kW).

<table>
<thead>
<tr>
<th>Band size</th>
<th>Reference size</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-20kW</td>
<td>11kW</td>
</tr>
<tr>
<td>20-100kW</td>
<td>30kW (original 11kW)</td>
</tr>
<tr>
<td>100kW +</td>
<td>200kW</td>
</tr>
</tbody>
</table>

Tariff setting methodology

26. Whilst changes to costs and tariff bands required us to recalculate tariffs for some technologies the basic methodology for doing so has remained the same. It is briefly summarised below; further details can be found in Annex B.

27. Our approach to setting the NI RHI tariffs can be summarised as: first, identify the required subsidy level, in pence per kWh that just covers the additional cost of a reference renewable heat installation compared to a conventional oil boiler. For example, suppose that over its lifetime, an oil boiler costs 5p per kWh of heat produced, and a reference biomass boiler of similar size costs 7p per kWh. The subsidy is therefore 7p-5p=2p per kWh.

28. This leads to two questions: (i) what is a reference installation; and (ii) how is the average lifetime cost of a boiler or renewable heat installation calculated?

29. Following the GB RHI approach, we say that the reference installation for a particular technology size is the one with the average\(^5\) cost for that technology size over all the sites where it could be installed. Also included in the tariff calculations is the going barrier costs, this follows the GB RHI approach and costs.

30. To calculate the average lifetime cost, we calculate the annual operating and fuel cost, and add this to the annuitized cost of the upfront capital, installation and barrier costs\(^6\). We then divide this cost per year by the average annual heat produced to obtain a figure for cost per unit of heat. Further details of the proposed tariffs are available at Annex C.

---

\(^5\) More precisely, the median.

\(^6\) Barrier costs divide into two types – upfront and ongoing costs. Upfront costs are determined as a number of days required to install the new equipment, times an assumed hassle cost per day (following the approach used for the GB RHI). Ongoing costs are taken from those used in the GB RHI.
Expected impact

31. The expected impact of the tariffs proposed by this scheme, in terms of CO₂ emissions displaced, additional renewable heat and number installations, is detailed below.

**Overall impact of the Northern Ireland RHI**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total CO₂ emissions displaced (millions of tonnes)</th>
<th>Additional renewable heat resource (GWh)</th>
<th>Number of installations</th>
<th>Subsidies paid (£m, 2010 prices)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>0.01</td>
<td>46</td>
<td>754</td>
<td>1.61</td>
</tr>
<tr>
<td>2013</td>
<td>0.03</td>
<td>111</td>
<td>2,290</td>
<td>3.77</td>
</tr>
<tr>
<td>2014</td>
<td>0.05</td>
<td>185</td>
<td>4,256</td>
<td>6.41</td>
</tr>
<tr>
<td>2015</td>
<td>0.08</td>
<td>272</td>
<td>6,880</td>
<td>10.00</td>
</tr>
<tr>
<td>2016</td>
<td>0.11</td>
<td>364</td>
<td>9,623</td>
<td>13.59</td>
</tr>
<tr>
<td>2017</td>
<td>0.15</td>
<td>466</td>
<td>12,971</td>
<td>17.89</td>
</tr>
<tr>
<td>2018</td>
<td>0.19</td>
<td>581</td>
<td>17,123</td>
<td>23.07</td>
</tr>
<tr>
<td>2019</td>
<td>0.23</td>
<td>712</td>
<td>22,329</td>
<td>29.38</td>
</tr>
<tr>
<td>2020</td>
<td>0.27</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2021</td>
<td>0.27</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2022</td>
<td>0.27</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2023</td>
<td>0.27</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2024</td>
<td>0.27</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2025</td>
<td>0.27</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2026</td>
<td>0.27</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2027</td>
<td>0.28</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2028</td>
<td>0.28</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2029</td>
<td>0.28</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2030</td>
<td>0.28</td>
<td>872</td>
<td>29,081</td>
<td>37.54</td>
</tr>
<tr>
<td>2031</td>
<td>0.29</td>
<td>872</td>
<td>29,081</td>
<td>36.98</td>
</tr>
<tr>
<td>2032</td>
<td>0.29</td>
<td>826</td>
<td>28,327</td>
<td>35.23</td>
</tr>
<tr>
<td>2033</td>
<td>0.29</td>
<td>761</td>
<td>26,791</td>
<td>33.08</td>
</tr>
<tr>
<td>2034</td>
<td>0.30</td>
<td>687</td>
<td>24,824</td>
<td>30.43</td>
</tr>
<tr>
<td>2035</td>
<td>0.30</td>
<td>600</td>
<td>22,201</td>
<td>26.84</td>
</tr>
<tr>
<td>2036</td>
<td>0.30</td>
<td>508</td>
<td>19,457</td>
<td>23.39</td>
</tr>
<tr>
<td>2037</td>
<td>0.30</td>
<td>406</td>
<td>16,110</td>
<td>19.23</td>
</tr>
<tr>
<td>2038</td>
<td>0.31</td>
<td>291</td>
<td>11,957</td>
<td>14.20</td>
</tr>
<tr>
<td>2039</td>
<td>0.31</td>
<td>160</td>
<td>6,752</td>
<td>8.02</td>
</tr>
<tr>
<td>2040</td>
<td>0.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

ATTACHED SEPARATELY
Annex B – Tariff setting methodology

These rates are calculated to provide a large proportion of “investor segments”\textsuperscript{11} with sufficient incentive to install a range of renewable technologies.

Characteristics

The proposed rates are set on the following basis:

- *Periodic payments per unit of heat* – Subsidies are paid as a fixed £ / kWh heat generated from qualifying renewable technologies over the expected life of the installation.

- *Calculated for reference installations* – Rates are calculated for a reference installation to meet the forecast difference between the discounted value per unit of heat from a renewable technology and its conventional fuel counterfactual (oil).

- *Differentiated by band* – Rates are set independently for a set of “technology / installed capacity” bands, with independently selected reference installations to reflect variation in the cost of each technology relative to its counterfactual.

- *Incentive up to half potential output subject to having an oil counterfactual* – The reference installation is selected such that the subsidy level would make half of the potential heat output within its band economically viable.

The rates proposed are designed to provide a reasonable incentive for each technology in isolation and do not take account of investors’ post-subsidy preferences across technologies, or presuppose rankings of rival claims on limited installation capacity or subsidy budget. This approach aims to ensure that there is an incentive for take-up across technologies, providing a set of rates that are more robust than if designed to optimise against any given take-up algorithm.

Assessing subsidy levels required

A renewable technology is considered to be economically viable for an investor if its all-in, discounted cost of heat over time is less than the non-renewable counterfactual. Valuations are based on both the investor and boiler characteristics that define the technical demands of each installation. Values considered in these calculations are the levelised cost per unit of heat over the life of the boiler of\textsuperscript{12}:

- upfront capital costs;
- expected upfront “hassle costs;”
- ongoing operational expenses (including ongoing “hassle costs”); and
- forecast yearly fuel expense.

\textsuperscript{11} Heat installation investors are characterised as domestic, commercial or public entities differentiated by their size, type, location and access to fuels.

\textsuperscript{12} This process implies a required return on upfront costs equal to the discount rate used.
The difference in the value of each technology can be expressed as a net £ / kWh. If the renewable technology is more costly than the counterfactual, this difference shows the per unit subsidy required to make that investor indifferent between the technologies.

Expected technology costs and performance specifications were provided by AEA. Conventional fuel forecasts are based on “Central” projections by DECC, with uplifts applied to reflect higher costs in Northern Ireland. Valuations were levelised across expected heat output using discount rates differentiated for domestic and non-domestic investors\(^\text{13}\).

Selecting the bands

Subsidy bands are defined by observable technology and capacity ranges, pooling together investors with similar costs per unit of heat. This allows technologies to be economically viable across a range of scales and investor types while reducing the need to over-subsidise investors requiring comparatively little subsidy.

The bands ultimately selected group domestic, small commercial and small public sector installation capacities together, while providing separate rates for medium sized commercial and public sector installations. Incentive rates for large capacity industrial installations were considered to be inappropriate as any sites with potential to use a renewable option would able to do so without RHI support.

Selecting the reference installation

A fixed incentive rate is calculated for each band based on the £ / kWh subsidy required to make a reference installation 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.

Differences from DECC methodology

The main difference between the method used to calculate the rates is that positive and uniform discount rates are used to value costs in future years and recover upfront costs across heat output in all years.

Annex C: Tariff tables

In this section we set out the technology assumptions, and proposed tariffs, for each technology. This includes those technologies where we do not consider that subsidy is required. In those cases, we have shown why the average cost of energy from the renewable heat technology is less than that from oil.

Please note that in the tariff calculation tables, the figures are all on an annual basis except the final figure which for consistency with the GB RHI and our previous report is on the basis of quarterly payments. As in our previous report, we have converted to quarterly payments by multiplying the annual figure by 0.96. We have also increased all tariffs in line with 2011 inflation of 4.8%14.

Note that cost figures have been rounded to the nearest pound (except where otherwise noted or for small sums) and tariff figures to the nearest 0.1p. Totals may therefore not add exactly.

Ground Source Heat Pumps – domestic

Ground Source Heat Pumps (domestic) – technology parameters

<table>
<thead>
<tr>
<th>Technology</th>
<th>Capex (£/kW)</th>
<th>Opex (£/kW/year)</th>
<th>Efficiency (%)</th>
<th>Load Factor (%)</th>
<th>Size (kW)</th>
<th>Lifetime (years)</th>
<th>Fuel cost (p/kWh)15</th>
<th>Upfront barrier costs (£)16</th>
<th>Ongoing barrier costs (£/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Source Heat Pump</td>
<td>1,48017</td>
<td>4.94</td>
<td>325%</td>
<td>19%</td>
<td>11</td>
<td>20</td>
<td>14.4</td>
<td>605</td>
<td>3.40</td>
</tr>
</tbody>
</table>

14 Source: December 2011 RPI figure, Office of National Statistics


15 Note that this is the fuel cost in 2012. The model takes account of expected future fuel costs in determining tariffs.

16 Calculated following the GB RHI approach (i.e. a number of days times an assumed hassle cost per day).

17 This is the figure for an urban installation, since our reference installation is in an urban area. The corresponding figure for an urban installation is £940.
Ground Source Heat Pumps (domestic) – technology resource costs in £ per year

<table>
<thead>
<tr>
<th></th>
<th>Annuitised Capital cost at 16%(^{18})</th>
<th>Annual operating costs</th>
<th>Annual fuel costs</th>
<th>Annuitised Upfront barrier costs</th>
<th>Ongoing barrier costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Source Heat Pump</td>
<td>2,746</td>
<td>54</td>
<td>815</td>
<td>81</td>
<td>3.40</td>
</tr>
<tr>
<td>Oil</td>
<td>657</td>
<td>188</td>
<td>1,004</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Difference</td>
<td>2,089</td>
<td>-134</td>
<td>-189</td>
<td>81</td>
<td>3.40</td>
</tr>
<tr>
<td>Sum of difference</td>
<td></td>
<td></td>
<td>1,872</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ground Source Heat Pumps (domestic) – tariff breakdown, in pence per kWh

<table>
<thead>
<tr>
<th>Subsidy for</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualised capital and barrier costs</td>
<td>9.9</td>
</tr>
<tr>
<td>Operating costs</td>
<td>-0.7</td>
</tr>
<tr>
<td>Fuel costs</td>
<td>-0.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8.4</td>
</tr>
<tr>
<td>Convert to quarterly basis(^{19})</td>
<td>8.0</td>
</tr>
<tr>
<td>Adjust for inflation</td>
<td>8.4</td>
</tr>
</tbody>
</table>

\(^{18}\) Since the reference installation is domestic, we assume a discount rate of 16% to reflect a typical consumer discount rate.

\(^{19}\) Following the GB RHI approach, we multiply annual tariffs by 0.96 to calculate quarterly tariffs. This is to reflect the benefit to consumers of not having to wait a full year for payments under the RHI.
Ground Source Heat Pumps – small commercial

Ground Source Heat Pumps (small commercial) – technology parameters

<table>
<thead>
<tr>
<th></th>
<th>Capex (£/kW)</th>
<th>Opex (£/kW/year)</th>
<th>Efficiency (%)</th>
<th>Load Factor (%)</th>
<th>Size (kW)</th>
<th>Lifetime (years)</th>
<th>Fuel cost (p/kWh)</th>
<th>Upfront barrier costs (£)</th>
<th>Ongoing barrier costs (£/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Source Heat Pump</td>
<td>1,228</td>
<td>7.00</td>
<td>360%</td>
<td>29%</td>
<td>30</td>
<td>20</td>
<td>12.14</td>
<td>3,951</td>
<td>16</td>
</tr>
<tr>
<td>Oil</td>
<td>97</td>
<td>3.45</td>
<td>93%</td>
<td>17%</td>
<td>50</td>
<td>15</td>
<td>4.86</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Ground Source Heat Pumps (small commercial) – technology resource costs in £ per year

<table>
<thead>
<tr>
<th></th>
<th>Annuitised Capital cost at 12%</th>
<th>Annual operating costs</th>
<th>Annual fuel costs</th>
<th>Annuited Upfront barrier costs</th>
<th>Ongoing barrier costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Source Heat Pump</td>
<td>4,932</td>
<td>210</td>
<td>2,526</td>
<td>529</td>
<td>16</td>
</tr>
<tr>
<td>Oil</td>
<td>710</td>
<td>173</td>
<td>3,902</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Difference</td>
<td>4,222</td>
<td>37</td>
<td>-1,376</td>
<td>529</td>
<td>16</td>
</tr>
<tr>
<td>Sum of difference</td>
<td>3,428</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ground Source Heat Pumps (small commercial) – tariff breakdown, in pence per kWh

<table>
<thead>
<tr>
<th>Subsidy for</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualised capital and barrier costs</td>
<td>5.5</td>
</tr>
<tr>
<td>Operating costs</td>
<td>-0.0</td>
</tr>
<tr>
<td>Fuel costs</td>
<td>-1.3</td>
</tr>
</tbody>
</table>
Ground Source Heat Pumps — larger commercial

*Ground Source Heat Pumps (larger commercial) — technology parameters*

<table>
<thead>
<tr>
<th></th>
<th>Capex (£/kW)</th>
<th>Opex (£/kW/year)</th>
<th>Efficiency (%)</th>
<th>Load Factor (%)</th>
<th>Size (kW)</th>
<th>Lifetime (years)</th>
<th>Fuel cost (p/kWh)</th>
<th>Upfront barrier costs (£)</th>
<th>Ongoing barrier costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Source Heat Pump</td>
<td>900</td>
<td>1.05</td>
<td>360%</td>
<td>36%</td>
<td>200</td>
<td>20</td>
<td>12.14</td>
<td>3,951</td>
<td>66</td>
</tr>
<tr>
<td>Oil</td>
<td>68</td>
<td>1.47</td>
<td>89%</td>
<td>20%</td>
<td>360</td>
<td>15</td>
<td>4.86</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Ground Source Heat Pumps (larger commercial) — technology resource costs in £ per year*

<table>
<thead>
<tr>
<th></th>
<th>Annuitted Capital cost at 12%</th>
<th>Annual operating costs</th>
<th>Annual fuel costs</th>
<th>Annuitted Upfront barrier costs</th>
<th>Ongoing barrier costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground Source Heat Pump</td>
<td>24,098</td>
<td>209</td>
<td>21,276</td>
<td>529</td>
<td>66</td>
</tr>
<tr>
<td>Oil</td>
<td>3,594</td>
<td>529</td>
<td>34,479</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Difference</td>
<td>20,504</td>
<td>-320</td>
<td>-13,203</td>
<td>529</td>
<td>66</td>
</tr>
<tr>
<td>Sum of difference</td>
<td>7,576</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Ground Source Heat Pumps (larger commercial) – tariff breakdown, in pence per kWh

<table>
<thead>
<tr>
<th>Subsidy for</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualised capital and barrier costs</td>
<td>2.9</td>
</tr>
<tr>
<td>Operating costs</td>
<td>-0.1</td>
</tr>
<tr>
<td>Fuel costs</td>
<td>-1.6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1.3</td>
</tr>
<tr>
<td>Convert to quarterly basis</td>
<td>1.2</td>
</tr>
<tr>
<td>Adjust for inflation</td>
<td>1.3</td>
</tr>
</tbody>
</table>

Biomass – domestic

Biomass (domestic) – technology parameters

<table>
<thead>
<tr>
<th></th>
<th>Capex (€/kW)</th>
<th>Opex (€/kW/year)</th>
<th>Efficiency (%)</th>
<th>Load Factor (%)</th>
<th>Size (kW)</th>
<th>Lifetime (years)</th>
<th>Fuel cost (p/kWh)</th>
<th>Upfront barrier costs (€)</th>
<th>Ongoing barrier costs (€/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>662</td>
<td>19</td>
<td>85%</td>
<td>17.5%</td>
<td>12</td>
<td>20</td>
<td>5.54</td>
<td>908</td>
<td>177</td>
</tr>
<tr>
<td>Oil</td>
<td>183</td>
<td>9.41</td>
<td>93%</td>
<td>10.5%</td>
<td>20</td>
<td>15</td>
<td>5.11</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

20 Takes from the figure used in the GB RHI for 107kW commercial biomass boilers, scaled to reflect the assumed difference in the cost of time between domestic (€15/hour) and non-domestic (€70/hour) consumers.
Biomass (domestic) – technology resource costs in £ per year

<table>
<thead>
<tr>
<th></th>
<th>Annuitised Capital cost at 16%</th>
<th>Annual operating costs</th>
<th>Annual fuel costs</th>
<th>Annuitised Upfront barrier costs</th>
<th>Ongoing barrier costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>1,339</td>
<td>230</td>
<td>1,196</td>
<td>122</td>
<td>177</td>
</tr>
<tr>
<td>Oil</td>
<td>657</td>
<td>188</td>
<td>1,004</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Difference</td>
<td>682</td>
<td>42</td>
<td>192</td>
<td>122</td>
<td>177</td>
</tr>
<tr>
<td>Sum of difference</td>
<td></td>
<td></td>
<td>1,246</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biomass (domestic) – tariff breakdown, in pence per kWh

<table>
<thead>
<tr>
<th>Subsidy for</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualised capital and barrier costs</td>
<td>4.8</td>
</tr>
<tr>
<td>Operating costs</td>
<td>0.2</td>
</tr>
<tr>
<td>Fuel costs</td>
<td>1.2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6.2</td>
</tr>
<tr>
<td>Convert to quarterly basis</td>
<td>6.0</td>
</tr>
<tr>
<td>Adjust for inflation</td>
<td>6.2</td>
</tr>
</tbody>
</table>
Biomass – small commercial

**Biomass (small commercial) – technology parameters**

<table>
<thead>
<tr>
<th></th>
<th>Capex (£/kW)</th>
<th>Opex (£/kW/year)</th>
<th>Efficiency (%)</th>
<th>Load Factor (%)</th>
<th>Size (kW)</th>
<th>Lifetime (years)</th>
<th>Fuel cost (£/kWh)</th>
<th>Upfront barrier costs (£)</th>
<th>Ongoing barrier costs (£/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>608</td>
<td>4.60</td>
<td>85%</td>
<td>17%</td>
<td>50</td>
<td>20</td>
<td>4.39</td>
<td>3,951</td>
<td>828^21</td>
</tr>
<tr>
<td>Oil</td>
<td>97</td>
<td>3.45</td>
<td>93%</td>
<td>17%</td>
<td>50</td>
<td>15</td>
<td>4.86</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Biomass (small commercial) – technology resource costs in £ per year**

<table>
<thead>
<tr>
<th></th>
<th>Annuitised Capital cost at 12%</th>
<th>Annual operating costs</th>
<th>Annual fuel costs</th>
<th>Annuitised Upfront barrier costs</th>
<th>Ongoing barrier costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>4,073</td>
<td>230</td>
<td>3,868</td>
<td>718</td>
<td>828</td>
</tr>
<tr>
<td>Oil</td>
<td>710</td>
<td>173</td>
<td>3,902</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Difference</td>
<td>3,362</td>
<td>58</td>
<td>-34</td>
<td>718</td>
<td>828</td>
</tr>
<tr>
<td>Sum of difference</td>
<td>4,932</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Biomass (small commercial) – tariff breakdown, in pence per kWh**

<table>
<thead>
<tr>
<th>Subsidy for</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualised capital and barrier costs</td>
<td>5.9</td>
</tr>
<tr>
<td>Operating costs</td>
<td>0.2</td>
</tr>
</tbody>
</table>

^21 Source: GB RHI impact assessment
<table>
<thead>
<tr>
<th>Fuel costs</th>
<th>-0.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>5.9</td>
</tr>
<tr>
<td>Convert to quarterly basis</td>
<td>5.6</td>
</tr>
<tr>
<td>Adjust for inflation</td>
<td>5.9</td>
</tr>
</tbody>
</table>

Biomass – larger commercial

**Biomass (larger commercial) – technology parameters**

<table>
<thead>
<tr>
<th></th>
<th>Capex (£/kW)</th>
<th>Opex (£/kW/year)</th>
<th>Efficiency (%)</th>
<th>Load Factor (%)</th>
<th>Size (kW)</th>
<th>Lifetime (years)</th>
<th>Fuel cost (p/kWh)</th>
<th>Upfront barrier costs (£)</th>
<th>Ongoing barrier costs (£/ year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>486</td>
<td>4.60</td>
<td>81%</td>
<td>36%</td>
<td>200</td>
<td>20</td>
<td>4.4</td>
<td>5,364</td>
<td>878</td>
</tr>
<tr>
<td>Oil</td>
<td>68</td>
<td>1.47</td>
<td>89%</td>
<td>20%</td>
<td>360</td>
<td>15</td>
<td>4.86</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Biomass (larger commercial) – technology resource costs in £ per year**

<table>
<thead>
<tr>
<th></th>
<th>Annuitised Capital cost at 12%</th>
<th>Annual operating costs</th>
<th>Annual fuel costs</th>
<th>Annuitised Upfront barrier costs</th>
<th>Ongoing barrier costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>13,031</td>
<td>920</td>
<td>34,185</td>
<td>718</td>
<td>878</td>
</tr>
<tr>
<td>Oil</td>
<td>3,594</td>
<td>529</td>
<td>34,479</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Difference</td>
<td>9,437</td>
<td>391</td>
<td>-486</td>
<td>718</td>
<td>878</td>
</tr>
<tr>
<td>Sum of difference</td>
<td>11,130</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

22 This is the figure for our reference installation, which is in a rural building. The corresponding figure for an urban installation is £508.80.

23 Source: GB RHI Impact Assessment
Biomass (larger commercial) — tariff breakdown, in pence per kWh

<table>
<thead>
<tr>
<th>Subsidy for</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualised capital and barrier costs</td>
<td>1.5</td>
</tr>
<tr>
<td>Operating costs</td>
<td>0.1</td>
</tr>
<tr>
<td>Fuel costs</td>
<td>-0.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1.5</td>
</tr>
<tr>
<td>Convert to quarterly basis</td>
<td>1.4</td>
</tr>
<tr>
<td>Adjust for inflation</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Biomass — industrial

Biomass (Industrial) — technology parameters

<table>
<thead>
<tr>
<th></th>
<th>Capex (£/kW)</th>
<th>Opex (£/kW/year)</th>
<th>Efficiency (%)</th>
<th>Load Factor (%)</th>
<th>Size (kW)</th>
<th>Lifetime (years)</th>
<th>Fuel cost (p/kWh)</th>
<th>Upfront barrier costs (£)</th>
<th>Ongoing barrier costs (£/ year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>316</td>
<td>14.38</td>
<td>81%</td>
<td>82%</td>
<td>16,086</td>
<td>20</td>
<td>2.52</td>
<td>5,364</td>
<td>878</td>
</tr>
<tr>
<td>Oil</td>
<td>31</td>
<td>0.23</td>
<td>89%</td>
<td>82%</td>
<td>16,086</td>
<td>20</td>
<td>4.77</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Biomass (industrial) — technology resource costs in £ per year

<table>
<thead>
<tr>
<th></th>
<th>Annuitised Capital cost at 12%</th>
<th>Annual operating costs</th>
<th>Annual fuel costs</th>
<th>Annuitised Upfront barrier costs</th>
<th>Ongoing barrier costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>681,375</td>
<td>231,341</td>
<td>3,613,079</td>
<td>718</td>
<td>878</td>
</tr>
<tr>
<td>Oil</td>
<td>67,574</td>
<td>3,701</td>
<td>6,226,764</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Difference</td>
<td>613,801</td>
<td>227,639</td>
<td>-2,613,686</td>
<td>718</td>
<td>878</td>
</tr>
<tr>
<td>Sum of difference</td>
<td>-1,770,650</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biomass (industrial) — tariff breakdown, in pence per kWh

<table>
<thead>
<tr>
<th>Subsidy for</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualised capital and barrier costs</td>
<td>No subsidy required</td>
</tr>
<tr>
<td>Operating costs</td>
<td></td>
</tr>
<tr>
<td>Fuel costs</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
</tr>
<tr>
<td>Convert to quarterly basis</td>
<td></td>
</tr>
<tr>
<td>Adjust for inflation</td>
<td></td>
</tr>
</tbody>
</table>

Biogas (biomethane)

The table below shows the technology costs for the production of biomethane for injection into the gas grid. One point to note is that fuel costs are shown as negative. This is because some of the fuel for biomethane production is waste, which has a negative cost (a “gate fee”).

Also, the counterfactual for biogas is conventional wholesale gas. The viability of biomethane is therefore assessed based on its cost per kWh against the 2.9p per kWh we assume for wholesale gas prices.
Biomethane – technology parameters

<table>
<thead>
<tr>
<th></th>
<th>Capex (£/kW)</th>
<th>Opex (£/kW/year)</th>
<th>Efficiency (%)</th>
<th>Load Factor (%)</th>
<th>Size (kW)</th>
<th>Lifetime (years)</th>
<th>Fuel cost (p/kWh)</th>
<th>Upfront barrier costs (£)</th>
<th>Ongoing barrier costs (£/ year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomethane</td>
<td>4,600</td>
<td>350(^{24})</td>
<td>85%</td>
<td>93%</td>
<td>1,000</td>
<td>20</td>
<td>-4.1</td>
<td>0(^{25})</td>
<td>0</td>
</tr>
<tr>
<td>Wholesale gas</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Biomethane – tariff breakdown, in pence per kWh

<table>
<thead>
<tr>
<th>Subsidy for</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annualised capital and barrier costs</td>
<td>6.7</td>
</tr>
<tr>
<td>Operating costs</td>
<td>4.3</td>
</tr>
<tr>
<td>Fuel costs</td>
<td>-8.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3.0</td>
</tr>
<tr>
<td>Convert to quarterly basis</td>
<td>2.9</td>
</tr>
<tr>
<td>Adjust for inflation</td>
<td>3.0</td>
</tr>
</tbody>
</table>

\(^{24}\) Note that this figure is lower than that used in the GB RHI. AEA have received additional information on biomethane opex since the last review, notably SKM’s report to DECC. This has been taken into account and reflects the lower opex compared to that previously reported.

\(^{25}\) Source: GB RHI Impact Assessment. Biomethane is assumed under the GB RHI to have no upfront or ongoing barrier costs.
NORTHERN IRELAND RENEWABLE HEAT STRATEGIC OUTLINE CASE

Project Title: Business Case to determine most suitable approach to spend Her Majesty's Treasury Funding for a Renewable Heat Strategy in Northern Ireland

Sponsoring Department/Agency: Department of Enterprise, Trade and Investment

Senior Responsible Officer: Fiona Hepper (Assistant Secretary)

Signed: Date:

Section 1: Project Overview

_Briefly describe the basic project concept._

The Department of Enterprise, Trade and Investment (the Department) is responsible for the development and maintenance of an appropriate legislative and policy framework for energy in Northern Ireland.

The agenda for developing renewable energy solutions and securing real reductions in energy consumption to enhance sustainability is driven by environmental policy, aimed at reducing harmful emissions. However, pursuing sustainability in energy also offers opportunities to enhance security of energy supply by introducing alternative generation sources, which are not subject to the price volatility of imported fossil fuels. Furthermore, development of indigenous sources offers opportunities for diversification and alternative sources of income.

Renewable Heat Targets

Renewable heat is simply heat produced from renewable sources, for example wood pellet boilers, solar thermal water heating units, heat pumps and, on a larger scale, industrial biomass boilers or biogas plants. The Department published its Strategic Energy Framework (SEF) in 2010 which includes a target for Northern Ireland to achieve 10% renewable heat by 2020. In order to reach the target it is important that support mechanisms are developed to encourage the uptake of renewable heat technologies within the domestic, commercial, industrial and public sectors.

The EU Renewable Energy Directive (2009/28/EC), published in the Official Journal of the European Union on 5 June 2009, requires that member states ensure that 15% of their energy consumption comes from renewable sources by 2020. This requirement extends beyond electricity to heating and cooling and to transport.

As heat energy accounts for almost half of all the energy consumed in the UK and produces around half of the UK’s CO₂ it would appear there is considerable scope to explore and increase the use of renewable heat technologies in order to help meet the new Renewable Energy Directive target.

GB Renewable Heat Incentive

The Department of Energy and Climate Change (DECC) has set a target of 12% renewable heat for England and Wales by 2020, this target, coupled with the 30% target for renewable
electricity consumption, will assist in Great Britain meeting its requirements under the Renewable Energy Directive.

In order to achieve this target, DECC has made clear plans to introduce a Renewable Heat Incentive (RHI) in Great Britain (by December 2011) and has published draft Regulations regarding the design and structure of such a scheme. The RHI in Great Britain will initially only be open to the non-domestic sector with the domestic sector to be eligible for RHI payments from October 2012. In the interim, domestic consumers wishing to install renewable heating technologies can apply for 'renewable heat premium payments' to support the capital cost of the installation.

Over the next 4 years, DECC anticipate that £860m will be invested in new renewable heat installations, this investment will go beyond 2015/2016 as new installations are supported for 20 years under fixed tariffs. The tariffs set by DECC are designed to provide a rate of return of 12% (considering the capital costs, operating costs and non-financial 'hassle' costs) across each technology, barring solar thermal which will have a rate of return closer to 6%.

Northern Ireland Heat Study

Northern Ireland is not included as part of the wider Great Britain RHI. There are many differences between the heat and renewable heat markets in Great Britain and Northern Ireland that mean that it has been more appropriate for a separate assessment to be taken on how the local market can be developed. In December 2009, the Department commissioned research into the existing heat and renewable market so an assessment could be made on the optimum growth potential of the market, methods for developing the market and an appropriate target for 2020. The study was carried out by AECOM Ltd and Pöyry Energy Consulting and was part financed by the European Regional Development Fund under the European Sustainable Competitiveness Programme for Northern Ireland.

Economic Appraisal of a Northern Ireland RHI

In February 2011, Cambridge Economic Policy Associates (CEPA), in conjunction with AEA Technologies, were commissioned to undertake an economic appraisal on the feasibility and potential design of a Northern Ireland RHI.

The economic appraisal has 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.

Section 2: Aims, Needs, Objectives & Constraints

State the rationale for government intervention e.g. by reference to market failures or equity objectives. Identify the relevant NI Government/Departmental strategic aims and policy objectives. Outline the need for the project e.g. demand for services, deficiencies in existing provision etc. List the project objectives as specifically as possible at this stage. Identify likely constraints e.g. timing issues, legal requirements, professional standards, planning constraints.

The overall aim is to deliver the maximum possible renewable heat in Northern Ireland, but this has to be delivered in a way that is consistent with other Departmental policies and objectives. In September 2010, the Northern Ireland Executive endorsed a target of 10% renewable heat by 2020 (against a baseline of 1.7% in 2010). This target is included in the Strategic Energy Framework.
Taking into account the 300 GWh of renewable heat already present in Northern Ireland, a target of 10% for 2020 equates to an additional 1.3 TWh or 1300 GWh of renewable heat.

HMT has advised that £25million of funding will be made available for a Northern Ireland RHI. This funding is spread over the spending period between 2011-2015, with £2 million in the first year, followed by £4 million and £7 million, with £12 million available in the final year.

Therefore, the Department needs to assess how best to utilise this funding in the most beneficial way that will help Northern Ireland achieve the 10% target of renewable heat whilst also ensuring that there will be significant benefits for fuel security in Northern Ireland and the opportunity to reduce carbon emissions. The Department must also consider the potential to develop 'green jobs' and 'green skills' within the renewable heat industry.

There are several issues to consider in this matter. The heat market in Northern Ireland is very different to the market in GB. Northern Ireland is largely dependent on oil with a developing natural gas market, whereas in GB the gas market is well established and is the predominant fuel source. There are also differences in fuel prices between GB and NI and the amount of our income that goes towards heating our homes and businesses. As a consequence, our levels of fuel poverty tend to be higher. Finally the geography of Northern Ireland is very different to GB, with Northern Ireland being more rural with fewer larger cities and therefore having a very different heat density. All these factors have meant that it has been appropriate to assess the need to develop the heat market in Northern Ireland and how that market might be encouraged and incentivised.

There could be potentially a number of constraints in the development of a Northern Ireland Renewable Heat market:

- A lack of knowledge/awareness regarding renewable heat may act as a barrier to its development. Domestic/community/public and commercial sectors need more education and support to help plan, fund and implement projects;

- Planning constraints could also have a negative impact with the planning applications process being time-consuming therefore causing delays in building new technologies; and

- Lack of skills in the Northern Ireland business sector in developing and building these new technologies.

Section 3: Stakeholder Issues

Identify the key stakeholders and explain their involvement. Indicate their level of commitment to the project as specifically as possible. Describe any consultations held or still required. Are there any outstanding stakeholder issues?

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Involvement</th>
</tr>
</thead>
</table>
| Government       | • Lead on introduction and set framework for renewable heat in Northern Ireland  
                    • Establish Renewable Heat Strategy Group which will have responsibility for the development of the renewable heat market |
<p>| Domestic         | • Opportunity to avail of support to convert new renewable heat technologies                                                              |</p>
<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Involvement</th>
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<tbody>
<tr>
<td>Green Economy</td>
<td>• Possible creation of new jobs/ growth of the industry</td>
</tr>
<tr>
<td>Public</td>
<td>• Opportunity to convert public buildings to new renewable heat technologies</td>
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<tr>
<td>Commercial</td>
<td>• Opportunity to avail of grant to convert new renewable heat technologies</td>
</tr>
<tr>
<td>Existing heating</td>
<td>• Increasing demand for renewable heat may lead to a reduction in the</td>
</tr>
<tr>
<td>industries</td>
<td>demand for conventional heating</td>
</tr>
</tbody>
</table>

The Department has taken the views of the energy industry and the wider community on the development of a RHI in Northern Ireland. The consultation paper on the design and implementation of the Northern Ireland RHI was launched in July 2011 and sought views on the Department’s proposal for:

(a) An NI RHI;

(b) Interim support for domestic consumers;

(c) Support for heavy industrial market;

(d) Establishment of a Cross-Departmental Group on Renewable Heat;

(e) Timescales and next steps; and

(f) Draft Regulations that outline the potential structure and design of a NI RHI.

The consultation ended on 3rd October 2011. This has allowed work on designing and implementing the final scheme to begin. This, in turn, will allow the Department more time to utilise the allotted £2 million funding from HMT for this financial year.

Section 4: Management & Implementation

Give a preliminary indication of the proposed project management structure and key personnel.
Is any consultancy support likely to be required?
Identify accommodation, staff and TUS issues.
Describe any legal, contractual or procurement issues.
Are there any important outstanding management/implementation considerations?

The Department, in liaison with the Utility Regulator and the Office of the Gas and Electricity Markets (Ofgem) in GB, will monitor the operation of the Northern Ireland renewable heat market to assess if the elements of the incentive scheme are delivering the anticipated benefits.

It is expected that Ofgem will be responsible for administering the scheme on behalf of DETI. Ofgem has significant experience in the delivery of large scale energy incentive schemes such as the Renewables Obligation (RO) and the Feed-in-Tariff (FiT). In addition, Ofgem has administered the Northern Ireland Renewables Obligation (NIRO) since its inception and therefore has an understanding of the local energy market and a working relationship with the Department. While there are benefits of having Ofgem administer the scheme – including utilising their expertise and economies of scale as we can use the IT systems developed in GB,
we are seeking further information from Ofgem on the costs and timescale for implementation of a Northern Ireland RHI. It should be noted that administration costs paid to Ofgem will not come from the £25 million fund therefore DETI will have to pay for these costs from its budget.

Many aspects of the scheme will be implemented by Ofgem by which participants in the incentive scheme must abide. Compliance with the incentive scheme will be enforced by the Ofgem who has the power to impose sanctions on those participants in the event of a failure to comply with the eligibility criterion or ongoing obligation set out in the Regulations.

Financial incentives are only one part in the wider development of the renewable heat market. There is no guarantee that the Northern Ireland Executive set target will be met through incentives alone. Therefore in order to consider the need for complimentary and additional policy support for renewable heat, a Renewable Heat Strategy Group has been established and met for the first time on 18 October 2011. This group will have responsibility for the development of the renewable heat market, monitoring the roll-out and uptake of the Northern Ireland RHI and ensuring that supporting policies are considered, developed and implemented, where appropriate. The group will be chaired by DETI and will report to the Sustainable Energy Inter-Departmental Working Group (SEIDWG), which the DETI Minister chairs.

Section 5: Consideration of Options

Provide an initial list of options identified that could meet the objectives and briefly describe their main features.

(Consider variations in scale, quality, technique, location, timing etc).

NB A preferred option should not be identified before options have been developed and appraised more fully at OBC stage.

The Department has considered a number of options for its support of a renewable heat market:

Option 1 - Do Nothing
It is determined that under this option that there would be limited deployment of renewable heat, the amount of which would largely be dependent on fossil fuel prices and the understanding of renewable alternatives. This option is not deemed as viable for a number of reasons. Firstly, the target set in the SEF for renewable heat would not be met and the funding of £25 million provided by Her Majesty's Treasury (HMT) would not be used. Secondly, the Northern Ireland renewable heat market would be distinctly disadvantaged in comparison to Great Britain and there would be a potential loss of skills and expertise to the Great Britain market.

Option 2 - A renewable heat challenge fund
The Department could establish a capital grant scheme with the grants being awarded on a competitive basis. In this scenario interested parties would be invited to apply for funding and would provide information on the intended installation, expected heat output and required funding (there would be a maximum allowed grant based on % of total cost). Applications would then be ranked based on the cost-effective renewable heat output and grants awarded according to rank.

There are several issues to consider under this option. The scheme would need to be administered either by the Department or a contracted third party organisation and therefore could result in additional resource pressures or governances issues. It could also be potentially complicated and would require applicants to have an understanding of their heat
demands and most appropriate technology requirements. There would also be a danger that only certain technologies would be incentivised, namely air source heat pumps or biomass boilers. However, this would not support the development of a more diverse market and could have a negative impact on technologies that require more support, e.g. solar thermal. The final issue is that a capital grant system does not provide long term stable support. Previous experience shows that grant schemes tend to lead to the market ramping up but then failing once the funding ends. It was also be rewarding the installation of the renewable heat technology but not the actual renewable heat generated.

**Option 3 - 50% capital grant**
The option would be a 50% grant to cover the capital costs of various renewable heat installations. Lessons learned from the Reconnect scheme would support the view that a competitively awarded grant can be more cost-effective and targeted than an administratively awarded grant.

**Option 4 - Joining in with the GB RHI scheme**
There are many positives for joining in with the existing GB RHI including the consistency of approach with GB, savings in the cost of administering an NI scheme, and the potential speed with which a scheme could be implemented. However, it has been concluded that, given the differences between the GB and Northern Ireland heat markets implementing the GB RHI as it is currently devised and using the proposed GB tariffs in Northern Ireland would not be appropriate. The GB tariff levels are largely based on the assumption of a household or business switching from gas to renewables. Whereas, given the prevalence of oil in Northern Ireland, tariff levels for a Northern Ireland scheme would need to be set on the assumption of moving from oil to renewables. If GB tariff levels were implemented there would potentially be an incentive for existing gas customers to switch to renewables and not just those using oil. Under statute, DETI has an obligation to develop and maintain an efficient gas industry and therefore it is important to develop tariff levels that make it attractive for oil customers to switch but not necessarily existing gas users.

**Option 5 - A specifically tailored NI RHI scheme**
The Northern Ireland RHI could offer the highest potential renewable heat output at the best value. It also would incentivise a wide range of technologies and provide investors with long-term support.

The purpose of the RHI (in GB and NI) is to incentivise people to move from carbon-based heating to renewable energy sources. The 'cost' of the carbon fuel is therefore important and differs in the GB and NI markets. The tariffs for the Northern Ireland scheme may therefore be lower as they would be based on moving people from a more expensive fuel source.

Similar to the GB scheme, the NI RHI would be made available in the first instance to the non-domestic market, followed by the domestic market in order to provide us ample time to better assess and monitor heat demand in domestic dwellings.

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**Section 6: Costs, Benefits & Risks**

*Provide broad estimates of the capital and revenue costs of the project.*
*If financial savings are anticipated, explain their nature and quantify them broadly.*
*Describe the non-monetary costs and benefits that are expected to arise.*
*Explain the key risks that the project is likely to face and any potential mitigation measures.*
Costs

**Funding** - HMT has advised that £25 million of funding will be made available for a Northern Ireland RHI. This funding is spread over the spending period between 2011-2015, with £2 million in the first year, followed by £4 million and £7 million, with £12 million available in the final year. The funding will come from direct Government expenditure and therefore will have no impact on Northern Ireland consumers' energy bills.

HMT has agreed that funding beyond 2014/15 will be available for those installations that are installed within the Spending Review period (i.e. up to 2014/15). This is subject to funding being basically flat beyond 2014/15, and initial payments being affordable within the Spending Review funding profile.

Additional funding post 2015 will need to be negotiated with DECC and HMT in due course. The GB RHI is open to new applicants until 2020 and therefore additional funding will be required if DECC are to maintain this commitment. DETI would be eligible for a pro-rata share of any additional funding post 2015, similar to the method of allocating the existing funding to 2015.

**Administration costs** - The administration costs for each option will need to be found from outside the HM Treasury funding. The consultants who undertook the economic analysis examined the administration requirements and costs for other renewable support schemes, and considered that the likely cost would be around 10% of total funding per annum.

The administration costs of any NI RHI, along the lines of the GB RHI model, will depend on the extent to which Department can use the systems already in place for the GB RHI to administer an NI RHI. As noted in section 4, the Department is already in discussions with Ofgem, the administrator for the GB RHI, about this.

Benefits

There are potentially several benefits if a RHI is developed in Northern Ireland:

**Employment and capacity building, particularly in green sectors** - DECC has estimated\(^1\) that there are 150,000 jobs in the heating industry in Great Britain. In relative terms, this could equate to around 3,750 jobs in this sector in Northern Ireland. The Renewable Energy Installers Academy lists 92 firms or individuals in Northern Ireland that are qualified to install renewable heat; this could be expected to grow significantly with a robust, long term renewable heat subsidy in place. In March 2011 there were 26 firms that were MCS (microgeneration scheme) accredited and qualified to install at least one of the renewable heat technologies and based in Northern Ireland. Investment in renewable energy is likely to create direct jobs as well as indirect jobs across the entire supply chain of the renewable industry including:

- Environmental monitoring;
- Development design;
- Commissioning and procurement;
- Manufacturing;
- Installation;
- Project management;
- Transport and delivery and operations; and

• Maintenance.

A 2007 European Commission study\(^2\) found that, overall, a 10% substitution towards renewable energy sources compared to non-renewable sources has a positive impact on jobs.

**Reduction in oil imports** - Analysis suggests that the majority of the fuel displaced will be oil, which is as expected since nearly 80% of heating in NI is from oil. This reduction in oil imports would reduce Northern Ireland’s exposure to the price of oil and to the risk of disruptions in oil supplies.

**Air quality** - There could be air quality impacts from widespread take-up of biomass heating, particularly if this is in urban areas. However, the relative impact will depend significantly on the fuel displaced. The impact assessment for the GB RHI\(^3\) notes that where renewable heat displaces oil, the “[air quality] impacts can be positive”.

**Risks**

The Department recognises that there is some degree of risk and uncertainties in implementing a renewable heat incentive to Northern Ireland:

**Risk of incorrect subsidy level** - Probably the most obvious risk is that the subsidy levels proposed for the RHI are either too high or too low. In the former case, those installing renewable heat will be over-subsidised and less heat will be delivered than under more optimal subsidy levels. In the latter, renewable heat will not be deployed to the extent expected.

**Risk of harm to other sectors** - An increase in renewable heat will, inevitably, lead to a reduction in the demand for conventional heating (oil, gas, coal and electric heating).

**Risk of low take-up** - Other possible barriers include planning restrictions, a lack of awareness, and negative perceptions of the reliability and/or cost of renewable heat. The delivery of the Green New Deal, an energy efficiency measure being led by the Department of Social Development (DSD), presents a significant opportunity to deliver messages about renewable heat to homes and businesses. The Department will work with DSD to look at how this could be done, and considers whether additional marketing or awareness raising would be appropriate.

**Risk of failure to implement targets set by EU Renewable Energy Directive** - The EU Renewable Energy Directive (2009/28/EC)\(^4\) (RED), published in the Official Journal of the European Union on 5 June 2009, 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. This requirement extends beyond electricity to heating and cooling and to transport. This is an important shift in emphasis: almost half of the final energy consumed in the UK is in the form of heat, producing around half of the UK’s CO\(_2\).

The RED is the key driver for the work undertaken by the Department on renewable heat. The requirement to meet the very challenging 15% renewable energy target falls at Member State level, not at Devolved Administration (DA) level. However, while energy is a devolved matter for Northern Ireland, each DA is expected to contribute as much as possible to the overall UK target. In light of the obligations within the RED, the Department has undertaken to introduce a renewable heat scheme in Northern Ireland.

\(^2\) European Commission (2007), DG Environment: Links between the environment, economy and jobs.

\(^3\) DECC, 2011, Renewable Heat Incentive Impact Assessment

Risk of not receiving State Aid Approval

In order for the Northern Ireland renewable heat scheme to proceed, DETI must obtain the necessary State Aid approvals from the EU Commission. DECC has recently received State Aid approval for their scheme in GB after some amendments were made to measures relating to large biomass boilers.

Section 7: Funding & Affordability

Outline the estimated phasing of cash/DEL requirements.

Identify the expected sources of funding and the degree to which the funders are committed.

Indicate the current cash/DEL provision for the project (if any) and the additional resources that are likely to be required.

State any particular concerns over affordability.

Funding

HMT has advised that £25 million of funding will be made available for a Northern Ireland RHI. This funding is spread over the spending period between 2011-2015, with £2 million in the first year, followed by £4 million and £7 million, with £12 million available in the final year. The funding will come from direct Government expenditure and therefore will have no impact on Northern Ireland consumers' energy bills.

HMT has agreed that funding beyond 2014/15 will be available for those installations that are installed within the Spending Review period (i.e. up to 2014/15). This is subject to funding being basically flat beyond 2014/15, and initial payments being affordable within the Spending Review funding profile.

Additional funding post 2015 will need to be negotiated with DECC and HMT in due course. The GB RHI is open to new applicants until 2020 and therefore additional funding will be required if DECC are to maintain this commitment. DETI would be eligible for a pro-rata share of any additional funding post 2015, similar to the method of allocating the existing funding to 2015.

Affordability

The Department would have to consider and find the costs administering a renewable heat scheme from outside the HM Treasury funding. Taking into account costs for other renewable support schemes, it is deemed the likely cost would be around 10% of total funding.

The administration costs of any NI RHI, along the lines of the GB RHI model, will depend on the extent to which Department can use the systems already in place for the GB RHI to administer an NI RHI. The Department is already in discussions with Ofgem, the administrator for the GB RHI, about this. The costs are likely to be higher the more that any NI RHI deviates from the GB RHI, both in terms of rates and in terms of structure. This would have a potential impact on the affordability of any scheme which is implemented in Northern Ireland.
Ms Jill Hawthorne-(by e-mail)  
Accountability & Casework Branch  
Department of Enterprise Trade and Investment  
Netherleigh  
Massey Avenue  
Belfast, BT4 2JP  
3 January 2012

Dear Jill,

NI RENEWABLE HEAT: STRATEGIC OUTLINE CASE

1. You wrote on 22 November 2011 seeking approval of a Strategic Outline Case (SOC) for a NI Renewable Heat Incentive.

2. HMT would provide £25m funding for a NI Renewable Heat Incentive (RHI) over the period 2011-15. This funding would allow the NI Executive to meet its target of producing 10% of NI's heating requirements from renewable sources by 2020 and would assist the UK to meet the EU's target of producing 15% of all energy from renewable sources. It is envisaged that a NI RHI subsidy would stimulate job creation in the renewable energy sector, improve air quality and reduce imports of oil. The scheme would be implemented and administered on DETI's behalf by Ofgem which has the power to impose sanctions upon participants that do not comply with set regulations and criteria.

3. Having considered the SOC in conjunction with our economists, I am content to provide approval for DETI to proceed to Outline Business Case (OBC) stage. As part of this process the following items should be addressed:

   ➢ Further cost detail in relation to administration costs should be provided at OBC stage, including benchmarking information as
to how the level of administration fee for the NI RHI scheme compares to that of the GB regions;

➢ It is not entirely clear that in the event of the UK not meeting the EU RED target of 15% by 2020, if NI would be subject to any infraction fines. This point should be addressed at OBC stage;

➢ It is not entirely clear how Ofgem would administer a NI RHI scheme, what the eligibility criterion is, what the ongoing obligations are and what DETI’s responsibilities would be. Also it is not clear what the likely cost of Ofgem’s management/administration services would be. Further detail should be provided at OBC stage;

➢ Section 2 identifies a number of constraints including a lack of knowledge/awareness regarding the development of renewable heat in NI, planning constraints and a lack of skills in NI’s business sector to build and develop these new technologies. Further information detailing how these constraints could be overcome should be provided in the OBC document;

➢ Further detail regarding project/option benefits, their delivery and monitoring should be provided at OBC stage.

Happy to discuss.

Yours Sincerely

Sylvia Sands

cc Trevor Cooper
lain McFarlane
Stuart Stevenson
Hi Peter,

I'm content that this appraisal has been carried out in accordance with the NIGEAE guidance and that the approach adopted represents value for money and is the most effective way of allocating the resources provided by HMG for the purpose of a Northern Ireland RHI.

Whilst there is a significant cost associated with this policy, it will reduce carbon emissions and facilitate the development of a renewable heat sector within Northern Ireland, helping Northern Ireland to achieve its 10% renewable heat target by 2020.

If you require any further information, please do not hesitate to contact me.

Regards
Sam

Samuel Connolly
Analytical Services Unit
Department of Enterprise, Trade & Investment
Netherleigh
Massey Avenue
Belfast, BT4 2JP
Tel: 028 9052 9287 (ext: 29287)
Textphone: 028 9052 9304
Web: www.deni.gov.uk

Please consider the environment - do you really need to print this e-mail?
over that, and I’ve drawn out the fact that, in fairness to you, Philip Angus was pointing out that you would’ve been a challenger, as it were — carrying out the scrutiny role. And the —.

We have them here; the panel know them; you will know them. If I put it this way: the papers for the RHI casework process amount to 641 pages. And I made a point of having them visually available so that people following on, members of the public interested watching the Internet feed of the proceedings could see that that is two lever arch files of dense material that just apply to this case, and they’re available again today to make that point. They run from — and the panel have looked at them before — DFE-398062 to 398703.

And I drew attention, when Shane Murphy was giving evidence, to a series of documents that were not in the casework papers. So, the July 2011 consultation document was not there. The original draft regulations weren’t there. There was no draft regulatory impact assessment. The consultation analysis document that was produced in November 2011 and sent to the ETI Committee was not there. The final draft regulations, or the final draft regulatory impact assessment, wasn’t there. There was no draft business case. That was not part of the papers that were brought to you. And, also, there were no previous submissions to the Minister about the subject so that you would’ve seen what the Minister had or had not been told. And Shane Murphy made the point to the panel that, “Well, you know, we had an enormous amount of documents. We didn’t really want to be going looking for more documents”.

The question I’m asking you as you reflect back on that: do you have any views, looking back now, about the papers that you did have and what you didn’t have? Should they have been more copious than they already were, including some of the things that I’m explaining?

**Mr Cooper:** I think it would’ve been helpful to have some of the things for the committee, certainly.

**Mr Aiken:** And am I right in saying that it didn’t occur to you and your colleagues at the
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From: David Thomson
Date: 2 March 2012
To: Trevor Cooper

CASEWORK PAPERS FOR THE NORTHERN IRELAND RENEWABLE HEAT INCENTIVE AND THE RENEWABLE HEAT PREMIUM PAYMENT SCHEME

You will have received papers outlining the proposals from Energy Division regarding the introduction of a Northern Ireland Renewable Heat Incentive (RHI) and Renewable Heat Premium Payments (RHPP). These papers are to inform the meeting of the Casework Committee scheduled for Friday, 9th March 2012 at 2pm.

The RHI is a major new policy initiative from Energy Division and has been signposted in the Strategic Energy Framework (SEF), Ministerial statements and a public consultation process initiated in July 2011. The aim of the RHI, and the associated RHPPs, is to develop the renewable heat market to an overall market share of 10% by 2020, in-line with EU and SEF targets. To support the uptake of these technologies, the RHI will aim to equalise the cost of conventional heating and alternative renewable heating technologies over a period of 20 years, in a similar way to the incentives in place for renewable electricity under the Northern Ireland Renewables Obligation.

Significant work and research has already been undertaken by Energy Division to assess the appropriate support levels for these technologies. This work includes an initial study into the Northern Ireland heat market, an economic appraisal into the potential incentive mechanisms, a consultation on the proposed design of the RHI and a feasibility study into administration systems. The Northern Ireland RHI is similar in many ways to the RHI scheme which was introduced in GB in November 2011; it is therefore important that the Northern Ireland scheme is implemented as a matter of urgency to ensure that the local renewable heat market is not unduly disadvantaged.
It is proposed that the RHI will be introduced in two phases; the first phase will be for the non-domestic market with the domestic market becoming eligible at a later date. Short term capital support for domestic customers in the form of Renewable Heat Premium Payments will be made available to domestic customers in the interim; again this is similar to proposals already in place in GB.

I am content that the proposals outlined have been thoroughly researched, analysed and appraised and note the supportive comments from the DETI economist, specifically that the proposed scheme is the most effective way of allocating the resources provided by HMG. From the evidence available, I consider that the implementation of the RHI in Northern Ireland represents the most appropriate way for the renewable heat market to be incentivised to a level of 10% by 2020. The development of the renewable heat market will support wider Energy Division policy, and indeed Departmental and Executive policy goals of energy security, reduced emissions and ‘green jobs’. I am also content that the introduction of short term domestic grants (RHPAs) is appropriate and that the administration of the RHI scheme via Ofgem is value for money.

I would be grateful if you consider the documentation provided in assessing the appropriateness of this scheme.

DAVID THOMSON
Head of DETI Policy Group

cc  Fiona Hepper
    Philip Angus
    Shane Murphy
    Joanne McCutcheon
    Peter Hutchinson
    Dan Sinton
    Sam Connelly
Angus described — you’d read the synopsis, and he’d then, sort of, dip into some sections of
some things that were things that would resonate with him. Is that how you would’ve done
it, or would you’ve read it from cover to cover regardless?

Mr Cooper: I would’ve tried to read as much of it as I — like, there would be bits in that
that, you know —. There’re photographs and there’re descriptions of technology that aren’t,
you know — doesn’t particularly —

Mr Aiken: Doesn’t really matter for what you’re doing. Yes.

Mr Cooper: — matter for what I’m doing. But I would’ve —. I read most of that.

Mr Aiken: Right. And that would be your practice?

Mr Cooper: Yes.

Mr Aiken: Cos presumably you don’t remember reading it now —

Mr Cooper: Absolutely.

Mr Aiken: You’re describing your general practice rather than you specifically remember
these papers.

Mr Cooper: And the smaller ones — it’s easier to read every single page.

Mr Aiken: Now, I want to just show on the screen DFE-398062, please, which is the type
of covering letter you’re describing. This is from David Thomson in the context of RHI. And
the panel has looked at this document before. There are six drafts of it, so it seems to be
something that’s prepared for the grade 3 by the branch that’s bringing forward the case,
but in summary, it’s effectively an endorsement of what you’re about to find.

What I wanted to ask you is: it’s written for the casework. You know, you can see it’s got
in its title:

“CASEWORK PAPERS FOR”.

So it’s for your purpose, as it were, for the panel to read, and —. What’s your understanding
of what the grade 3 is doing here? Would you’ve assumed he’d read all that you’d read, or
all that you’d been expected to read for the casework process?

Mr Cooper: I wouldn’t have assumed he’d’ve read every single page —

Mr Aiken: Right. What would you have assumed he’d have done?

Mr Cooper: I would’ve assumed that he would’ve done something similar if there are photographs and technical descriptions that are not relevant, but the relevance of it I would’ve assumed he would’ve read.

Mr Aiken: Because the — and we’ll have to ask him about this — but the difficulty with this type of letter — you know, you would read this letter and assume that the author of it has, you know, carried out the analysis that’s then described in this letter, but, in fact, we know that this letter is produced from beneath, if I can put it that way. You know, someone in the branch is producing this letter, so it’s not — it maybe is adopted in the same way as your submissions are adopted, but if that is the process, then it creates a —. It’s not the author’s own work, if I can put it that way. Do you understand the point I’m making to you?

Mr Cooper: Yes, I do. I —

Mr Aiken: But you, as the reader of it, what I’m trying to understand is what —. If you get a letter from the grade 3 that basically says, “It’s all good in here”, do you take that as a, “Right. We’re on a good start here”? 

Mr Cooper: No.

Mr Aiken: No.

Mr Cooper: I don’t take it as a, “This is something that’s OK”. Absolutely not, but what I do take it as — and this was the reas — this was introduced when there was a broadband project which was quite a lot of money, I think, um, and the grade 3 at the time felt that it was more than reasonable to get an assurance that the grade 3 in the policy division where it emanated from was actually —

Mr Aiken: They are standing over this.
Mr Cooper: Standing over it.

Mr Aiken: Yes. And —

Mr Cooper: So it was a, “Yes. I stand over this”. That doesn’t mean that the casework’s role is any different.

2:30 pm

Mr Aiken: No, I’m not suggesting that. What I’m asking is —

Mr Cooper: But it is a, “I stand over this”. That’s the context in which that was introduced. It was a specific project sparked in the head of the grade 3 at the time, “Well look, you know” —

Mr Aiken: You stand to it.

Mr Cooper: — “it’s very important that others are standing over this as well”.

Mr Aiken: And that became then the standard practice —

Mr Cooper: Yes.

Mr Aiken: — the grade 3 would provide the note. Now with —

The Chairman: Have you ever come across a project in which the grade 3 has said, “Well, it seems to me, it’s all right, but I’m not convinced about a, b and c”?

Mr Cooper: It wouldn’t have been submitted.

The Chairman: It wouldn’t have got there, would it?

Mr Cooper: It couldn’t’ve —.

The Chairman: The grade 3 is always going to stand over it?

Mr Cooper: Hmm. Would it —. Could’ve had got there? The —.

The Chairman: Well have you — you’ve no experience of it?

Mr Cooper: There’s a theoretical possibility it could’ve got there. In practice it shouldn’t have ever got there, but this was an explicit record that they were standing over.

The Chairman: All I’m asking you about is: it’s never happened — that’s never happened
Mr Murphy: It certainly can do up to point. With this amount of paper, I’d be surprised if it didn’t involve a bit of my own time as well, quite frankly, but I can’t say for sure.

Mr Aiken: And that’s just comes with the territory, and you just get the job done.

Mr Murphy: That comes with the territory and the responsibility, yes.

Mr Aiken: Now, it’s —

The Chairman: Is there a record of actually when this witness received the papers?

Mr Aiken: There’s not —

The Chairman: Just for our record, if we could get it.

Mr Aiken: No. The covering letter, which we’re going to come to, is dated the 2nd of March —

The Chairman: All right.

Mr Aiken: But although it’s dated the 2nd of March, it doesn’t necessarily mean he got it with the papers.

Mr Murphy: My recollection was somebody from energy division brought up a lever arch file that looked very like this, which, I say, I now still have, and left it on my desk. The reason why I remember that was that usually I would have to do a lot of printing for these things, and for somebody to hand you a set of papers, it was all very nice.

The Chairman: Roughly, how long was that before the hearing? Roughly?

Mr Murphy: I’ve no reason to believe that it wasn’t in and around the 2nd of March, it wasn’t in and around the week before. No reason to believe.

The Chairman: Thank you.

Mr Murphy: The reason why I say that, if papers were very late, sometimes panellists would give off that —

Mr Aiken: And you don’t remember doing that in this context —

Mr Murphy: And I don’t remember that in this. So I’ve no reason to think that we didn’t
get them in and around the 2\textsuperscript{nd}.

Mr Aiken: Now, it’s important that I draw attention to what’s not in these papers, especially in light of an issue that came up with Ms Hepper yesterday and which the Chairman was addressing. What’s not in them is the 20\textsuperscript{th} of July 2011 consultation document. Now, members of the panel, that runs from DFE-63726 to 62737. That’s the “Dear consultee” letter from Peter Hutchinson that went out with the consultation papers.

And then the consultation document itself — which is some, in excess of 100 pages — runs from DFE-63728 to 63837. Now, that document: it would’ve been, obviously, published but it wasn’t in your papers. Can I take it, other than the casework committee, you don’t have a particular reason to be going reading consultation documents? [Laughter.]

Mr Murphy: I would be —. Well, the chances are, almost certainly, you know, I wouldn’t be looking at consultation documents on issues that I wasn’t personally involved in.

Mr Aiken: Yes.

Mr Murphy: At the time of the casework committee, given that there was plenty of stuff to read in the documents, I doubt if I went and searched for even more to read. I thought it highly unlikely that I would have searched that out, either at the time it was published or at the time of the committee. Highly unlikely.

Mr Aiken: And the reason for that is that the original draft regulations, albeit that original draft would not show the tariffs as they were set out in the second CEPA report and, therefore, in the Peter Hutchinson synopsis document that is in the casework papers. So, that original set of draft regulations, which was an annex to the consultation document, because the consultation document’s not in your papers, neither is that annex with the draft regulations. And there isn’t another set of more up-to-date draft regulations in your papers. Do you remember seeing draft regulations?

Mr Murphy: Almost certainly, I wouldn’t have read the draft regulation. I’m not a legal
Mr Aiken: Well, I don’t think anybody’s going to disagree with you about that, but the phrase I think the panel have used is “tipping point”, and we’re going to look at it now in the context of the challenge fund. But to not put a tooth in it, how much more expensive did this all need to be before someone said, “Hold on a minute”? Now, before you answer that, I want to put this in context, please, by — just, if you bear with me for a moment. You’d the papers a week in advance. You’ve described two to three weeks — sorry, two to three days total preparing, and you’ve explained how that would be done —.

Mr Murphy: I was including the day of the committee in that two to three days.

Mr Aiken: Sure. You’ve explained that the meeting is likely to have lasted between two to three hours, and can you remember consulting —? It’s clear you made notes; there’s no doubt about that. The panel have them; the context of them seems to suggest some were made in advance. Can you recall having a meeting with your panel members before the committee meeting?

Mr Murphy: I recollect having a pre-meeting — that’s the terminology used — beforehand. Not uncommon for that to happen for casework committees. Doesn’t happen every time; depends on people’s schedules and so forth, but we did have a pre-meeting, and I recall at that pre-meeting I brought up the issue about —

Mr Aiken: Do you think that was the same day, Mr Murphy, or an earlier day?

Mr Murphy: I believe it may have been the 10 to 15 minutes before we went in.

Mr Aiken: Right, because what I can —

Mr Murphy: Again, that wouldn’t be uncommon.

Mr Aiken: What I can say is that Mrs Hepper gave evidence, as I understand it — and the panel will correct me if I’ve got this wrong — that Trevor Cooper did give her prewarning that they would, as in the casework, would want energy to explain this challenge fund issue.
So, if your recollection is right, whatever time the meeting happens, you raised that between the three of you, and it looks like Trevor Cooper has then communicated that to Fiona Hepper so that they’re on notice of the point when they come in.

3:00 pm

Mr Murphy: And to be honest, I might have even said, for example to Sam —. Because, at casework committees, again, we’re not trying to trip someone up. It’s important that they bring the right people, otherwise you’re coming back on another day when they do bring the right people. So, it’s far from impossible that I actually may have said to Sam, “We’ll want to talk about why the Department and energy don’t want to do the challenge fund”. So, that may well have happened. If Trevor communicated, by the chance then, by the sound of it, it may not have happened. That pre-meeting may not have happened on the day.

Mr Aiken: Or it may have been earlier in that day.

Mr Murphy: It may have been earlier; that is possible. But my recollection is we had a pre-meeting, and it is my recollection that we brought this up, so maybe as a logical sequence, if Trevor did say to Fiona, you know, they’re prepared to explain all this, that that was the time —. Again, there’s nothing necessarily unusual about that. I quite happily admit. I’ve said to lots of people in the past I know there, “I think we’ll be raising a, b and c. Make sure you bring the people who can talk about those things”. Because it’s very frustrating if the people come along and you start asking questions and they say, “Well, we don’t know. It’s such and such in another area”. That’s quite frustrating.

Mr Aiken: There’s logistical issues that mean you don’t want to have wasted meetings.

Mr Murphy: You don’t have to have wasted meeting, talking to people —

Mr Aiken: Who can’t provide the answer.

Mr Murphy: — who can’t give assurance on the key questions.

Mr Chairman: That was why I asked you this morning about the benefit of you being an
Mr Murphy: I’m sure there can be intrinsic benefits. Again, it’s fulfilling a corporate role.

The Chairman: Who are the right people? That’s the question.

Mr Murphy: And again, that’s potentially a question about whether casework committee are constituted in the way that they ought to be. You know, they are constituted in the way they are, and I was part of that.

Dr MacLean: Can I just ask? You mentioned there that it was likely that you’d have spoken to Sam Connolly about this issue coming up. In the days when you were going through this and when it struck you as being an issue, did you have any conversations with Sam Connolly about —

Mr Murphy: I can’t remember whether we got into explaining, cos that’s the role of the casework committee. It’s for the committee to hear that. I think there’s a reasonable chance that I would’ve said to Sam, “There’s gonna be a line of questioning about why the challenge fund was not taken ahead and why the RHI because there’s quite a big difference in the NPC and the document just doesn’t explain that. So, you know, make sure the team comes prepared to explain such things”. I think there’s a fair chance, cos I have done that before in equivalent cases for the reasons of making sure the right people are there to answer the questions as opposed to the wrong people shrugging their shoulders.

Mr Aiken: I’m gonna come to that point, and I want to do it in a particular way.

Mr Murphy: OK.

Mr Aiken: You’ve explained in your witness statement —. If we put on the screen, please, 19543, just paragraph 16. I want to just cover this very briefly with you. CEPA, you explain, and I’m not going to go to it, but in paragraph 26, you explain they’re one of a handful of specialist consultancies across the UK that would have the capability or competence to undertake the work. Now, obviously, we’ve had a whole series of issues with it, but that was
1. Background

TC asked for a brief overview of the proposed project.

FH advised that the work on the Renewable Heat Incentive (RHI) came as a result of the Renewable Energy Directive (RED), published in June 2009, which requires the UK to ensure that 15% of its energy consumption comes from renewable sources by 2020. In September 2010, the Northern Ireland Executive endorsed a target of 10% renewable heat in NI by 2020 (against a baseline of 1.7% in 2010). This target is included in the Strategic Energy Framework (SEF) and an interim target of 4% by 2015 is included in the Programme for Government (PfG).

FH explained that the NI RHI was largely based on the GB RHI which provides a continuous income scheme of 20 years (the lifetime of the technology) for those who generate renewable heat. The main differences between the NI and GB schemes is that the NI tariffs are set against an oil counterfactual whereas the GB tariffs have been set against a natural gas counterfactual; this results in lower tariffs being required in Northern Ireland. The reason for this is that the NI heat market is dominated by oil (over 75%) with an emerging gas market (17%), in GB gas is the market leader (70%) with oil a secondary heating source (10%).

FH also explained that the introduction of the RHI would be through a phased approach. The scheme will firstly be open to the non-domestic sector and include the most well-established renewable heating technologies. The domestic sector would then be introduced in phase 2; this phase might also include additional technologies. In the interim, domestic householders will be able to apply for Renewable Heat Premium Payments to assist in the capital cost of installations. Those who do avail of the RHPP will still be able to get a RHI but for a lesser period i.e. 18 years instead of the full 20 years as the RHPP represents two years of RHI payments.

FH also advised that another major component of the RHI would be the administration of the scheme. Her Majesty’s Treasury (HMT) has provided DETI with funding of £25m over the next four years for the development of the renewable heat market. However HMT has advised that this funding is only to be used for the RHI itself and not the administration of the scheme. Therefore the costs of administration will have to be paid by the DETI. The Department of Energy and Climate Change (DECC) in GB has paid Ofgem (the GB energy regulator) over £5m for the development of the system, of which IT systems are a large part; it expects to pay around £10m over the next 4 years for the administration of the system. By contracting with Ofgem and utilising systems and processes already in place, DETI can expect significant savings whilst enjoying the benefits of the Ofgem administration systems.

SM clarified that the approvals being sought were for the RHI scheme, the RHPP scheme and the costs for administering these schemes. TC confirmed that it would be essential to address all the costs that arose from any policy proposal including administration consequentials.
FH added that by growing the renewable heat market there are significant opportunities for Northern Ireland to reduce our dependence on imported fossil fuels and increase NI’s fuel security and diversity of supply, this in turn will reduce carbon emissions.

2. Policy Context

TC asked what would happen if the NI target of 10% renewable heat generation by 2020 was not met, given the target set under the RED. TC also asked if DECC was comfortable with the target set for NI.

FH advised that Northern Ireland, whilst not an EU Member State, is expected to contribute to the UK target of 15% renewable energy by 2020. To support this target, DETI has set targets of 40% renewable electricity and 10% renewable heat by 2020. If the UK as a whole fails to achieve its target of 15%, then it would be expected that the EU Commission would impose infraction fines at Member State level. It would then be up to Whitehall to pro-rata fines depending on how each of the regions had contributed to the target. It is therefore important that Northern Ireland demonstrates a significant increase in renewable heat levels by 2020. DECC is content with targets set by DETI for Northern Ireland.

FH added that 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. There is a need to consider the implementation of both policy instruments and financial incentives as there is a risk of market failure and of Northern Ireland not achieving the targets set. 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%.

SM confirmed that he was content that there were legal and statutory obligations to be met. PA asked if NI is not on course to meet its target, is there room to negotiate with DECC on the NI target? FH advised that GB would probably look at how the other regions were progressing with their targets. However, if NI did alter its target, this would affect the amount of funding from HMT. As with the NI Renewables Obligation (NIRO), the Department has sought to counteract the possibility of not meeting targets by including periodic reviews of the RHI scheme; the first review is scheduled for 2014. However, the Department has also included an option to hold emergency reviews, if the need arises.

PH added that a RHI roadmap will also be developed, with other NI Departments, and that the Renewable Heat Strategy Group would facilitate this.

TC confirmed that the policy development and implementation had been thorough and robust and showed that there was a definite need to implement a renewable heat scheme in Northern Ireland in line with EC and National obligations and in particular given the provision of GB funding for the policy (although not for the administration thereof).
3. Options

SM asked why the challenge fund was not taken forward as the preferred option, as evidence in the consultant’s report showed it to be a viable alternative.

PH advised that the report by CEPA and AEA Technology examined a number of options to incentivise the renewable heat market. The two main type of options included capital grant/challenge fund options, which would provide a one off payment to consumers, and renewable heat incentive options that provide a long term, 20 year, stream of payments to consumers to make up the difference in the whole-life cost of a renewable heating system compared to an oil based heating system.

The June 2011 economic appraisal recognised that each approach had its own merits but it was not unequivocal in its overall conclusion. In addition, since then, the feasibility study report compiled by Ofgem has provided further information on the cost of administering a RHI scheme. Whilst the June 2011 analysis suggested that a challenge fund option could produce the most renewable heat at the lowest cost, Energy Division was conscious of a number of other key factors that needed to be taken account of in the final policy decision. These factors have been very influential in the conclusion, by Energy Division, to proceed with the RHI option. They include the following:

- **Affordability of Administration**
  In terms of administration, the costs of running a Challenge Fund were considered to be prohibitive, especially in comparison to potential costs of administering the NI RHI. Previous experience of running Reconnect demonstrated administration costs of £1.48m for a grant scheme worth £10.5m (14%). The Reconnect scheme was for domestic customers only, and on a ‘first-come-first-served’ basis. A challenge fund, dealing with commercial applications and involving complex evaluation metrics, could be expected to be at least as, if not more, costly than the Reconnect scheme, equating to potentially £3.5m over the first 4 years. **This would not be available within DETI budget.**

  The RHI option, whilst requiring complex administration arrangements, can be implemented at a fraction of the cost through building on existing systems already in place for the GB RHI. The expected costs of the RHI scheme have been assessed and project development costs of £386k and running costs of £710k over the first 4 years. These administration costs are much more affordable in comparison to the Challenge Fund option.

- **Challenge Fund Assumptions**
  Under the Challenge Fund options it is assumed that only the most cost effective systems are incentivised given that applications are ranked via a set of evaluation criteria. On reflection, it has been considered that this assumption is much too idealistic,
in that it relies on cost effective applications being made in the first instance. If, however, applicants unduly focus on less efficient technologies then the scheme will be skewed towards these less efficient systems. The experience learned from Reconnect was that in a capital grant scheme applicants will focus on technologies that are most affordable, not the most appropriate or efficient. Under Reconnect the most popular technology, the one installed most often (50% of the time), was solar thermal. Within this analysis solar thermal is shown to be the most costly and least efficient renewable heating technology. If this experienced was repeated, in a RH grant scheme, the target would be missed, funding would be skewed towards the most costly and inefficient systems and the appraisal's NPC would undoubtedly be wide of the mark.

The RHI operates a technology neutral approach in that the same methodology is used to determine each tariff and a specific tariff set for each technology. This, in theory, results in each technology being as attractive as each other and therefore consumers are free to select the most appropriate application. As the tariff factors the whole life cost of the technology (capex, opex, fuel and non-financial hassle costs) consumers are expected to select the most efficient system. This in turn supports the achievement of the renewable heat targets, as well as helping to build overall capacity within the renewable heating industry as it should support a wider range of technologies, helping this market to grow further than might be expected under a challenge fund.

- **Ability to meet targets over set timescales**
  The RHI scheme provides the most certainty in terms of achieving the targets of 4% and 10% renewable heat by 2015 and 2020 respectively, as set out in the Programme for Government. This is because an RHI will deliver more heat earlier than a challenge fund as the initial annual payments to consumers will be smaller compared to capital grants, thus enabling more installations to be facilitated within each budgetary period. Whilst the Challenge Fund could also meet the targets, and potentially deliver more renewable heat, it is likely that this would be at a later date. As designed currently the RHI will achieve around 11% renewable heat by 2020.

- **Risk**
  It has been considered that the RHI presents a lower level of risk than the potential Challenge Fund. This is largely due to the fact that incentives will be paid on actual heat output. RHI payments will only be made on metered heat output with installers paid for the amount of heat generated. This ensures that installations are kept in working order and used therefore meeting the renewable heat targets.

As the Challenge Fund would be contributing to the capital costs of the installation (rather than the whole life costs under the RHI) a risk would develop that, after a short time, installations would stop generating renewable heat. This could be because the renewable heat fuel is no longer affordable, that a fossil fuel alternative (such as gas) become available or more attractive, that the site is no longer in business etc. In these circumstances clawback arrangements would need to be initiated, which could be costly and complicated, and the target would be hindered. As the RHI only rewards actual heat output there is less risk and less impact if sites stop generating renewable heat.
Also, in terms of risk, an RHI delivers earlier against the target. In the event that corrective action were required then the RHI option would identify this need earlier and also allow more time, scope and budgetary flexibility for action to be taken to put the scheme back on track.

- **Consistency with GB**
  Whilst energy is a devolved matter Energy Division is mindful that a high number of commercial operators wishing to avail of support for renewable heat in Northern Ireland will operate jointly in GB. Whilst it is wholly appropriate for a specific incentive mechanism to be developed in Northern Ireland given the variances in the two energy markets, Energy Division is conscious that consistency in approach with GB would be beneficial to those availing of support in both Northern Ireland and GB. Therefore a specific NI RHI, whilst addressing the NI heat market, would be a more consistent approach with GB and will assist policy development options in the future.

- **Example of the NIRO**
  The NIRO was launched in Northern Ireland in 2005 to support the development of renewable electricity installations. Similar to the RHI, the NIRO offers no up-front capital support for installations but instead offers 20 years of payments over the lifetime of the technology with payments determined by actual energy output. This example has proved successful with installers and has led to an increase of renewable electricity levels from 3% to over 12% currently. This experience increases confidence in a RHI scheme to generate investment in renewable heat. On the other hand the potential uptake under the Challenge Fund option would be subject to greater unknowns.

On the basis of the information presented above, the Casework Committee accepted that the RHI was the most appropriate method of incentivisation for the Northern Ireland renewable heat market.

TC asked how the tariffs had been designed and whether Energy Division felt that the various tariffs and types of technologies were appropriate.

PH advised that the 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’. This provides certainty for an investor by setting a guaranteed support level for projects for their lifetime in a scheme, regardless of future reviews. The tariffs will be amended on a yearly basis, for existing installers and new schemes, to reflect the rate of inflation (RPI).

PH further explained that 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 is chosen to develop a consistent tariff across technologies and scales; and
- The net costs (difference between capital and operating costs of fossil fuel counterfactual and renewable alternative) are calculated and a tariff determined.

In order to generate the appropriate tariff, the difference is determined in the costs between the renewable technology and the fossil fuel counterfactual and this figure is divided by annual heat output to arrive at the appropriate tariff. For most of the tariffs a discount rate of 12% is applied, this is consistent with the GB approach in designing the GB RHI and other renewable energy schemes, for ‘domestic’ tariffs a discount rate of 16% is assumed, again this is consistent with GB. The solar thermal tariff is set differently, in-line with GB, as to set the tariff in the same way would result in a tariff vastly higher than the other incentives given the cost of solar thermal and could lead to a large amount of the funding being skewed to the least efficient technology.

PH explained that the scheme would be open for new installations until 31 March 2020 and therefore the final payments would be made in 2040. The length of payment is set as the lifetime of the technology. The first review of the scheme would begin in 2014, with proposed changes implemented in 2015. In addition to this, phase 2 of the scheme would begin in April 2013 and involve the introduction of the domestic sector and consideration of tariffs for additional technologies (bioliquids, air-source-heat-pumps, deep geothermal etc).

PA asked what factors have been taken account of when scheduling a review of the RHI scheme.

FH explained that the NI RHI will have scheduled reviews built-in to the scheme to allow DETI to ensure that the scheme remains fit for purpose and value for money for the duration. The scope of these reviews will include analysis of tariffs (either to be reduced or increased), the appropriateness of technologies (remove existing technologies or add new innovative ones) and the assessment of effectiveness and success.

PH added that it may be that the tariff levels are not sufficient to encourage uptake or that they are too generous (very unlikely) and hence uptake is such that there is insufficient budget. This is a main risk of the RHI and to help counteract this risk, Ofgem will provide regular management reports which will enable uptake to be carefully monitored and forecast expenditure. The RHI will be reviewed in 2014 (and at regular intervals thereafter) and tariff levels may be adjusted, for new installations, if appropriate.

TC asked why each accredited technology was guaranteed payment for 20 years and how can we ensure that the renewable heat technology was being utilised. PH advised that tariffs are paid for 20 years as this is the lifetime of the technology. Currently, the RHI only applies to the non-domestic sector therefore all renewable heat installations will be required to be accompanied with a heat meter that will determine actual heat output. Heat meters are already common in many commercial applications and therefore should not be a barrier to uptake. Meters will allow for accurate readings to be taken of actual heat usage and appropriate payments made. They will also ensure accurate statistics are maintained throughout the lifetime of the scheme.
SM sought clarification on the fact that the scheme appeared to be backdated to September 2010. PH explained that applicants who had technologies installed on or after that date would be able to avail of the RHI scheme but the payment would not be backdated to that date. It was confirmed to TC and SM that no retrospective payments would be given out under the NI RHI and RHPP schemes.

On the basis of the evidence presented, the panel accepted that of the options presented the proposed RHI scheme was the most appropriate option to implement in NI.

**ACTION**

- The business case to DFP (and the Minister) should explicitly address the reasons why the RHI is favoured over the Challenge Fund option.

### 4. Value for Money / Additionality / Displacement

FH advised that without Government subvention for renewable heat installations, the target of 10% renewable heat by 2020 would not be met. This would impact on the UK’s delivery of 15% renewable energy set under the RED. FH also said that it was important that the scheme was not over-subsidising the renewable heat sector; the consultant’s work ensured that there was a balance created in terms of the technologies to be incentivised and the tariffs to be given.

The DETI Economist has reviewed the approach taken by the consultants and is content that the proposed scheme represents the best value for money.

In terms of displacement, the main area where displacement might occur, as a result of the RHI, will be in the established heating markets. Displacement is likely to be greatest in the oil market given the fact that tariffs are set against an oil counterfactual (and therefore provide oil customers with a greater incentive). However, this displacement is necessary to ensure a more diverse heating market and reduced carbon emissions. Displacement of natural gas is likely to be much more limited. In terms of job displacement, the RHI is expected to create new jobs, given the need for installers and suppliers. However, these jobs will, to a certain extent, be displacing existing jobs in the fossil fuel market.

TC enquired whether it would also be beneficial to switch natural gas customers to renewable heat as well as oil consumers.

FH stated that the Department was not excluding gas customers from switching and that they could avail of the RHI. However, the Department had based the NI RHI on an oil counterfactual because oil was the predominant fuel source in NI. Oil is also a greater polluter (through carbon emissions) than natural gas. Gas customers are also relatively new and it would be wasteful for consumers to switch whilst their boilers which were reasonably new whereas a large proportion of oil boilers had reached the end of their life.

### 5. Budgetary management solutions
TC asked what commitment there was from HMT that payments made up to 2015 would be met for 20 years and how would the Department manage the payments based on the current budgets.

FH highlighted the financial commitment made by HMT in the GB RHI and the subsequent funding made available to DETI for the Northern Ireland scheme. FH also advised that HMT had informed DETI that any commitments made under this initial budget would be met by HMT for the lifetime of the scheme i.e. meeting the 20 year payment commitment. The RHI is a flagship policy for DECC and whilst budgets have only been set until 2015/2016 it is expected that further monies will be made available in the next budget period. This is demonstrated by the GB scheme being open to 2020 and in documentation provided by DECC to the EU Commission suggesting expected subsidies of £2.2bn in 2020.

In terms of managing payments, PH explained that there would be monthly draw downs to maintain and manage the financial aspect of the RHI to ensure that the budget would not go into overspend on any particular year. PH further advised that Ofgem has significant experience in financial profiles and budget handling as it has also worked on the GB Renewable Obligation, the NIRO and the GB RHI.

FH added that a monitoring committee would also be established in respect of the budget and the Department would receive monthly reports from Ofgem on the applications, accreditations and spend budget for the NI scheme.

TC asked how often the meters would be read for non-domestic customers. PH advised that meters would be read on a quarterly basis. The amount paid will be based on metered heat output and the tariff for the type of technology installed. This would also allow the Department and Ofgem to calculate annual forecasts for the RHI budget. If necessary the scheme could be closed to new applicants mid-year if applications were higher than expected and budgets risked being overspent.

FH confirmed that Energy Division would return to the casework committee within the next year to seek approval for the implementation phase 2 of the NI RHI.

**ACTION**

- Energy Division to seek casework committee approval in advance of Phase 2 of the RHI scheme.

6. Governance / Ofgem management arrangements

TC asked what controls would be in place for the project management aspect of the contract with Ofgem. JMC advised that discussions had taken place with CPD and Ofgem. TC asked for assurance that any contract would include detail on performance targets, remedies, safeguards in place for under-performance, and breakpoints. PA enquired if the Department would have a separate contract or be part of the DECC contract in place with Ofgem. JMC confirmed it would be a separate contract.
PA asked if we had a right of audit entry included in the contract. FH assured that this would be put in place.

TC stated that IAS should be consulted in relation to the proposed management arrangements (in particular in regard to validation of amounts due and controls over payments as appropriate), and assurances that any contract would give DETI/NIAO etc appropriate inspection/monitoring/audit rights. FH stated that IAS had not yet been consulted but this would be done.

TC stated that when seeking approval for any contract, Accounting Officer approval should also be sought on the basis of the appointment of an external delivery/management organisation.

FH confirmed that a request for approval of a Direct Award Contract would be submitted to the Permanent Secretary, David Sterling along with a Third Party Organisational delivery award.

SM asked if the Utility Regulator was to be involved in the management of the RHI scheme. FH explained that the Utility Regulator was to have no role in the scheme; it was felt that it was more appropriate to deal directly with Ofgem to ensure that all of the Department’s corporate and governance requirements were put in place.

**ACTIONS**

- Energy Division to obtain the respective approvals from DAO and Minister for the appointment of Ofgem through a Direct Award Contract (if confirmed as appropriate by CPD) and Third Party Organisation Delivery Award.
- Energy Division to engage with Internal Audit regarding Ofgem management arrangements and, in particular on the requirement for External Delivery Organisation (EDO) audit inspections to be carried out on Ofgem as administrators of the scheme.
- Energy Division to confirm Casework Committee that any contract with Ofgem for administration of the RHI scheme would have performance targets, remedies, safeguards in place for under-performance, and breakpoints.

**7. Funding issues arising from Ofgem and internal resources**

TC asked how the Ofgem feasibility study had been financed and was advised that it had been paid from Energy Division’s consultancy budget. FH added that Energy Division would be putting in a bid for the budget to cover Ofgem’s development and operating costs. For the NI RHI, estimates are £386k capital spend to develop the system and then a further £136k operational spend in the first year. TC stated that the costs of any scheme would need careful consideration and as noted above, TMT approval would need to be sought.
PA enquired whether there is the possibility of developing and operating the RHI system in-house. FH explained that there were neither the skills, expertise nor resources within DETI or the wider NI Civil Service to currently undertake the administration of the NI RHI.

SM expressed concerns over the 100% contingency budget for the development of the IT systems. JMC advised that this contingency was for the development phase and would only be required for a short period of time. Energy Division had sought clarification on the Ofgem proposal for £1m legal budget. Ofgem has accepted that DETI already has a separate legal contract in place to cover DETI’s legal responsibilities and it was not anticipated that the existing budget would be exceeded. TC asked if there had been much experience of legal claims. FH confirmed that there had been one recent incident under the NIRO but the matter was concluded satisfactorily without any legal involvement.

**ACTION**

- Energy Division to send a paper to the Top Management Team seeking approval for the ongoing administration costs for Ofgem to operate and maintain the NI RHI system.

8. **State Aid**

TC enquired about the current status of the state aid application.

FH advised that in December 2011, the Department sent a detailed submission to the Commission, outlining the NI RHI proposals. This submission took on board lessons learned from the GB application that was approved in November 2011. An addendum to the December application was submitted in February 2012 advising on proposed changes as a result of further economic analysis carried out by external consultants.

TC was advised that as and when the tariffs are amended or revised, the Department would have to reapply for State Aid approval.

9. **Risk management**

PH provided a brief overview of the risks and uncertainties in implementing a renewable heat incentive in Northern Ireland: These are:

- Incorrect subsidy level - subsidy levels proposed for the RHI are either too high or too low. This risk will be managed through regular, planned, reviews of subsidy levels.

- Risk of harm to other sectors - an increase in renewable heat may lead to a reduction in the demand for conventional heating (oil, gas, coal and electric heating). At a high level, the short term harm to any sector should be relatively small, especially given the current scale of the oil market. However if the uptake of
renewable heat impacted disproportionately on the gas sector this could have negative consequences for the extension of the gas network.

- Risk of failure of renewable heat supply - supplies of renewable fuel (i.e. biomass, biogas and bioliquids) may be disrupted. In addition, new skills will be required if installations can be made. DETI will work with colleagues in DARD and DEL to mitigate against this.

- Risks of low take-up – This could be a result of tariffs or other possible barriers include planning restrictions, a lack of awareness, and negative perceptions of the reliability and/or cost of renewable heat. The Department has budget cover to deliver messages about renewable heat to homes and businesses.

- Risk of failure to implement targets set by EU Renewable Energy Directive - the RED is the key driver for the work undertaken by the Department on renewable heat. The requirement to meet the very challenging 12% renewable energy target falls at Member State level, not at Devolved Administration (DA) level. Each DA is expected to contribute as much as possible to the overall UK target and the Department has undertaken to introduce a renewable heat scheme in Northern Ireland in order to mitigate this risk.

- Risk of insufficient budget for administration or future payments - there may be the possibility of a higher than expected uptake leading to a requirement to manage the annual budget and higher administration costs. This will be mitigated by liaison with Ofgem to assess uptake levels and expected spend against profiled budget. The Department has also been liaising with the DECC finance team regarding future financing and with HMT relating to the budget for existing commitments.

- Risk of failure to receive State Aid approval - the EU Commission may refuse to approve the NI RHI scheme. The Department took on board the lessons learned from the GB state aid application. This is a low risk; it would be more likely that the scheme would be amended.

- Risk of instances of fraud - instances of fraud could include duplicate applications, unusual meter readings (too high for expected output), lack of information being provided to the administrator and using unregistered installers. The Department has put in place measures to counteract instances of fraud and where there are instances of suspected fraud, the participant will be investigated and payments will be stopped.

- Risk of failure in administration of RHI - there is the potential for delays in dealing with applications, accreditations and payments for the NI RHI scheme which would lead to stakeholders complaining about application process. This could be as a result of difficulties in IT systems or a lack of communication between Ofgem and the Department. The Department will establish a joint project team with Ofgem as the scheme is implemented.
10. Conclusion and Agreed Actions

The Casework Committee confirmed that they were content to approve the RHI and the RHPP schemes to proceed to DFP conditional on completion of the following agreed actions:

- Energy Division to obtain the respective approvals from DAO and Minister for the appointment of Ofgem through a Direct Award Contract (if confirmed as appropriate by CPD) and Third Party Organisation Delivery Award;
- Energy Division to confirm Casework Committee that any contract with Ofgem for administration of the RHI scheme would have performance targets, remedies, safeguards in place for under-performance, and breakpoints;
- Energy Division to engage with Internal Audit regarding Ofgem management arrangements and, in particular on the requirement for External Delivery Organisation (EDO) audit inspections to be carried out on Ofgem as administrators of the scheme;
- Energy Division to send a paper to the Top Management Team seeking approval for the ongoing administration costs for Ofgem to operate and maintain the NI RHI system;
- Energy Division to seek casework committee approval in advance of Phase 2 of the RHI scheme;
- The business case to DFP (and the Minister) should explicitly address the reasons why the RHI is favoured over the Challenge Fund option; and
- Energy Division to send submissions concurrently to DFP and Minister seeking approval for the RHI scheme.

11. Approval of Note

Signed:

Trevor Cooper,
Panel Chairman

Date: 30 Mar. 12
paragraph 36?

Mr Scoffield QC: Yes. I think that was just —

The Chairman: Thank you very much.

Mr Scoffield QC: — processed into the Inquiry’s evidence bundles yesterday.

The Chairman: Thank you.

Mr Scoffield QC: Mrs Hepper, we were talking about some of the funding emails, and I think we had established that you learnt in April that this was an unusual type of funding and that was re-emphasised then to you and others by Ms Brankin in her May email.

I just want to take you then to DFE-29342. That’s page 2218 of your witness bundle. And the reason that I’m taking you to this is because this is, I think, the first submission that goes to the Minister on the topic of renewable heat after the exchange with Ms Brankin. So this is a submission of the 27th of May 2011. It’s about correspondence from Chris Huhne, and it ties in with how a legislative consent motion — the legislative consent motion having been granted, how the legislative powers might be taken forward. The only reason I want to take you to this is because you’ll see that financial implications is dealt with, as is common, on the first page of the submission, and the Minister is simply told there that:

“HMT has advised that £25m of AME is available over the spending period”

And I think we see that formulation then repeated in other submissions which go to the Minister thereafter. The question I have arising out of that is, having had these exchanges with Treasury and then with finance division, was there any consideration given to amending how the funding was described in submissions to the Minister, given that you now knew that this was a particularly unusual type of public funding?

Ms Hepper: I think having looked at a number of the exhibits in the bundle, you know, we do just keep referring to it as 25 million of AME, and I think we have obviously been aware of the qualification on it but we keep using that as the shorthand, and I think that is clear in the
The Chairman: I’m sorry. I didn’t understand that answer.

Ms Hepper: We just keep referring to 25 million of AME; we don’t, you know, put a qualification in in the further iterations of when we put this in statements or in submissions. We just refer to AME and that’s a fact —

The Chairman: Even though you’re —

Ms Hepper: Even though we’ve, yes, we’ve just used as it shorthand.

The Chairman: Just wait a moment. Even though you’re now making a submission to the Minister about what the funding is.

Ms Hepper: Yes, I’m afraid we do, yes.

The Chairman: Right.

Mr Scoffield QC: With hindsight do you think that the funding, in light of what you then knew, could’ve been more accurately described?

Ms Hepper: I certainly think it wouldn’t have been unhelpful to have been a little more explicit, but it’s with hindsight, absolutely. In writing it at the time I think we probably made an assumption that people knew there was a qualification there which does not reflect with hindsight.

Dame Una O’Brien: Can I just ask Mrs Hepper, I mean, how could the Minister have assumed — been assumed to have known this if she hadn’t been informed?

Ms Hepper: I think we had informed her but what we didn’t do was each time we did a submission we didn’t, you know, put it in every time, and I mean, that is clear from the bundle that further statements — or further submissions refer to the 25 million of AME. And we don’t put open brackets with a DEL consequence.

Dame Una O’Brien: So you had informed her that it had a DEL consequence?

Ms Hepper: I’m pretty sure we had done. And, as well as that, it was always our intention
that we would live within the 2/4/7/12; we would not be overspending. And, you know, we were quite clear: we would monitor and we would try our best to make sure that that did not happen. But it’s in the documentation that we just keep referring to 25 million of AME.

Dame Una O’Brien: Is there a submission or somewhere where the consequences of Jon Parker’s email were pointed out to the Minister, or are you saying it was done in a meeting?

Ms Hepper: I’m not sure. I definitely know that there was not a specific submission on the matter, but I think that she was aware — I think I may well have told her — and I think she may well have seen it in some budget documents, but I couldn’t be clear.

Mr Scoffield QC: Do you have a specific recollection of a conversation with the Minister about that?

Ms Hepper: Not a specific recollection, no, but I would be fairly sure that she would have been informed. But I can’t point to something particular.

Mr Scoffield QC: Given what Ms Brankin had said about the significance and the unusual nature of this funding arrangement, is that not the type of thing that you would want to make sure you’d a good paper trail on, where the Minister who’s making decisions — and, we’ll see, soon to make a significant decision about what’s happening with the renewable heat incentivisation — would you not want her to have that piece of paper in front of her?

Ms Hepper: With hindsight, yes. And I can only say that our absolute intent was that this money was constrained in each year to 2/4/7 and 12, and we would not be moving over and above that.

Mr Scoffield QC: OK. I wonder if I could just ask you, then, a question about the means of communication between Ms Clydesdale and Mr Parker, because you’ve said in your second witness statement — paragraph 223, if you want to turn to that; I don’t think it should be controversial — you’ve said that it wouldn’t be normal practice for officials in Departments, other than DFP, to deal directly with HMT, but you go on to point out that DETI had
to actually get CPD on board in relation to that Ofgem arrangement.

Dr MacLean: So, is it clear that that was something that really needed to be in place in order for the committee to be content with the proposals full stop?

Mr Cooper: Yes.

Dr MacLean: But that doesn’t — is that reflected somewhere in the minutes? I don’t know: is it an action or a condition?

Mr Aiken: There were a series of actions, and we can see the list at the end that were to be taken, and that process was worked through. In fact, if we just scroll down to the end, we’ll see the list — because you make various changes to the risk management section as well — if we just move down, there’s the list of actions that are to be engaged in. Now, I want to, unless there’s something specific you want to address, Mr Cooper, I want to move on from this casework process.

Mr Cooper: Could I?

Mr Aiken: Yes, yes, go ahead. If there’s something you want to —.

Mr Cooper: I think the one thing in relation to knowing that this funding was limited — the change that I made in relation to the risk register to me absolutely, on the record demonstrates that I knew, at that point, that this was not expenditure that you could not go over budget on.

Mr Aiken: Is this a point slightly further up?

Mr Cooper: Yes.

Mr Aiken: Yes, if we scroll up, please.

Mr Cooper: So we’re talking about overspending.

Mr Aiken: Is it this portion here?

Mr Cooper: Yes.

The Chairman: Where is this now?
Mr Aiken: This is the third bullet point from the bottom.

Mr Cooper: So, I think the nature of the funding and the fact that people could not overspend was clearly discussed during this meeting.

Mr Aiken: So —

Mr Cooper: And that's the point that I would like to make.

Mr Aiken: — the distinction you're drawing is that the original draft as presented to you might have implied that overspends were acceptable and they'll have to be dealt with, whereas you're changing the meaning to make it clear that overspends are not acceptable and the budget has to be managed so that that doesn't arise.

Mr Cooper: We can't overspend here.

The Chairman: Well, there was no reference to overspend in the original draft. All you have inserted there is:

"a requirement to manage the...annual budget".

Mr Cooper: But, sorry —.

Mr Aiken: He's taken out the word “overspends”.

The Chairman: Yes, I know. What concerns the — concerns me, anyway — this is a form of funding which you will have impacted on your DEL if you overspend.

Mr Cooper: Yes.

The Chairman: Where is the reference to that? You knew it, obviously.

Mr Cooper: Well, sorry, I'm —.

The Chairman: That's it, is it?

Mr Cooper: That's a summary in minutes reflecting that that was discussed. That's all I can say.

The Chairman: So, if I'm a Minister or even a common-sense outside person, I can read that and I will know the content of the Parker emails. I will know that this — no, that's not
there.

Mr Cooper: I agree with you: absolutely, you wouldn’t know.

The Chairman: But surely that was a vital thing to be put in and discussed between the other members of the panel.

Mr Cooper: And —

The Chairman: It never was.

Mr Cooper: — the point that I’m making is it was discussed on the day.

The Chairman: Why is it not in the minutes?

Mr Cooper: But it is — it actually is in the minutes.

The Chairman: So you say that represents a discussion held within the casework committee about the special nature or unusual nature, whatever you want to call it, of the Parker emails: that there is a limited figure which, if you overspend, will impact on DEL.

Mr Cooper: I’m not saying that it was discussed in the context of, “This would be a 5%” etc, etc, but what I’m saying is that it was discussed in terms of, “We can’t overspend on this”, be it AME, be it whatever it is, “We cannot overspend, there are consequences here”.

So, you know, no one was taking this as — certainly, in my mind — as being anything other than something that you had to absolutely live within. That’s the point that I’m trying to make, I’m maybe not —. And I fully accept your point: it’s not described — again, it’s not described completely, but it is actually described in terms of, “You’re required to stay within your budget here. You can’t overspend here”.

The Chairman: I get the impression from what you tell us today and possibly on the last occasion that you contributed to this discussion by considering in detail the difference in NPC between the challenge fund and the RHI: is that right?

3:15 pm
difference that was obvious in the tariff tables, essentially. They had this thing called tiering.

We didn’t, and I was asking the question, “Well, what is that? Why do we not have it?”

Dr MacLean: Yes.

Mr Connolly: There was nothing more to it than that. It was just an obvious difference between the two schemes.

Dr MacLean: OK, we’ll probably come back to —

Mr Lunny: We’re going to come back to —

Dr MacLean: — responses and further discussions around that.

Mr Lunny: We are. We’re going to look at whether what CEPA said at various points then about tiering, whether you considered that an adequate response to you flagging it up. We’ll look at those — the draft report, your June comments and the June report, and what they all say about tiering — shortly.

But, to deal with funding before then, it comes before those events in time. If we could bring up a series of emails that are at DFE-5413, please. I want to ask you, Mr Connolly, just about your knowledge of the funding —

Mr Connolly: OK.

Mr Lunny: — for the scheme. This is the last in a chain — a small chain — of emails about scheme funding, that run from April to May 2011. And this particular email, which is the last in the chain, is dated the 4th of May, and it’s from Alison Clydesdale to Peter Hutchinson, but it copies in both Fiona Hepper and you.

Mr Connolly: Yes.

Mr Lunny: And I draw your attention to that just at the outset, because that’s the only one in the chain that is copied to you. So, you’re not involved in any of the earlier emails, but you’re copied in to the last one and to the chain that lies beneath it.

Dr MacLean: And that includes the Jon Parker —
Mr Lunny: It starts with the Jon Parker email, and we’re going to come to that. Now, you’ve looked at these again recently.

Mr Connolly: Uh-huh.

Mr Lunny: You clearly are one of the recipients on the 4th of May. Do you recall getting those emails?

Mr Connolly: I don’t recall getting them. I think I’ve mentioned in my witness statement that I was off for an extended period of annual leave at around that time, so —.

Mr Lunny: Yes, you’d been off on annual leave for a number of weeks —

Mr Connolly: For three weeks, yes.

Mr Lunny: — and you came back on, I think, the 8th of May, is that correct?

Mr Connolly: That’s correct, so, you know, it was obviously in my inbox at that time.

Whether I read it in any great detail, I’m not sure. Certainly, any issue concerning funding was being taken forward by Peter at that time.

Mr Lunny: So, you may or not have read it. If you read it, you may have thought “This is largely a matter for Peter Hutchinson”.

Mr Connolly: Correct, yes.

Mr Lunny: I want to take you just to some of the detail of the chain to see whether you became aware of certain things. If we could scroll down to 5416, please, and see the Jon Parker email that Dr MacLean has just mentioned. If we could maybe just scroll down below that, you’ll see the email that starts it all is one from Mrs Clydesdale to Jon Parker in HMT, and she’s asking a number of questions about the funding. She wants to know about the 20-year commitment and whether it can be used — the money, the 25 million that is available — whether that can be used solely for an RHI or whether they can use it for a grant. She’s using RHI as a reference to the GB type of scheme: a tariff —

Mr Connolly: A tariff type.
Mr Lunny: — scheme, it appears. And if we scroll up, we’ll see Mr Parker’s reply. He indicates, in the first bullet, Roman numeral i), he indicates that:

“With DECC, we have agreed that they can make commitments to spending in future years (up to 20 years) for installations that are installed within the SR period (i.e. the initial payments have to be affordable within the SR profile).”

So, he’s making that clear — commitments incurred within the spending review, which we know, in Northern Ireland’s case, is up to the end of March 2015. They’re within the spending review profile. Those commitments will be honoured for 20 years. And he makes it clear that the payments will be basically flat over the 20 years in real terms.

He then deals with what DECC’s profile is and what Northern Ireland’s share of that might be. And then, in the third paragraph, he says:

“This funding does have to be used for renewable, but if NIE decide you would like to use it for a grant scheme or some such then this would be permissible as long as the cost of NIE spending is constrained to the AME consequential.”

So, he’s saying, “You can use it for a grant scheme.” And he then, in the final paragraph, says:

“The other key point ... is that the DECC RHI spending is not being treated as standard AME, where the Exchequer takes on all risks of overspend. Instead, there is a risk-sharing arrangement whereby should RHI spending in one year exceed the SR profile, then DECC would need to repay this in future years. They can do this through announcing changes to the SR that will bring cost savings relative to the SR profile in future years. However, a small proportion of any required future savings (still to be determined, but likely to be of the order of 5%) will have to be funded through contributions from DECC's DEL. Again, these rules would be applied in equivalent fashion to NI.”

Now, do you remember being advised of the various aspects of that email? The first one, I suppose: do you remember becoming aware at or about that time that financial
alternative that’s 300 million cheaper. You mightn’t know it’s 300 million cheaper at the time you’re reading the CEPA reports, and we’ll come to that, but it’s another viable option.

There’s no mention of it, and you’ve got the cover note, as it were, from the economist, that independent ASU assessment that says, “RHI value for money”. We’ll look at the detail of what he says. Did that not make you question, “Hold on a minute. How’s this come about?”

He’s been involved throughout. He’s giving the assessment.

There’s no mention of this alternative, even if it’s to line it up to knock it down, for reasons that we’ll come to, it’s just not there in the papers that are —. It’s in the report, as it were, in the woods, and I’m gonna come to that with you. But it’s not flagged up. It’s not, “There was another way of doing this but it’s not gonna work for the following reasons”, and you discover that that’s the position. Did that not make you uneasy about how this had all come about?

Mr Murphy: I’m not sure if it made me uneasy. Certainly me, being me, endeavoured to read as many papers as I could —

Mr Aiken: And you read, and just to be clear, you read an awful lot and we’re gonna show that, in fairness to you.

Mr Murphy: And so, you know, I probably didn’t, sort of, look suspiciously at, “The synopsis says this and the appraisal has lots of other extra material”. Of course, the appraisal was dated whatever it was, June. And so, I would imagine that this looked like the process of a journey and, on reading those papers, the impression of affordability was coming in. Now, affordability is not an economic matter, so it’s not something that Sam would adjudicate on.

Mr Aiken: Just to be clear now, what you’re talking about is, “There wasn’t admin budget, so if you can’t afford to do a scheme, well it’s not affordable”, and, therefore, that might rule out something like —

Mr Murphy: Yes, and that was the discussion at the casework. Now, while I was reading
the papers, I was reading questions about, or was noting down questions about, in effect:

did the money from Treasury, was that pushing us down an RHI route. And so, if that was the
case, and I didn’t know whether or not what —

**Mr Aiken:** Yes.

**Mr Murphy:** — was the answer to that. But it was looking like, you know, “Is this money
only for an RHI?”. And if it is only for an RHI, I was probably wondering, “Why did we spend a
lot of time looking at something which maybe doesn’t fit that money?”, and that was a line
of questioning which —

**Mr Aiken:** And I’m gonna come to that, but what I’m asking you, Mr Murphy, is whether,
looking back on it now, having saw this chain of events where, in effect, your economist is
performing two roles —. I don’t want to overegg it but you’ve described it as maybe
creeping or going over the line, as it were, in terms of what he was being asked to do. It
wasn’t elevated to you at any stage, so; but what I’m asking you about is whether what you
then found in the papers, in the way that they were framed, did that not raise concern —
not about the casework process and whether to approve this policy or not; we’ll come to
that — but whether the way in which the economist’s role had been conducted in this policy
instance was correct?

**Mr Murphy:** OK. Honestly, at no stage did I think that Sam had been, sort of, captured or
turned, turned, turned native, um, in relation —

**Mr Aiken:** That’s not —. I’m not —. Well, that’s good, but that’s not quite what I’m
getting at. What I’m getting at is: you can see in the NIGEA guidance about optimism bias.

**Mr Murphy:** Yes.

**Mr Aiken:** It’s that issue about marking your own —. You then get a set of papers where a
viable alternative isn’t to be found on the face of them. You go looking and you find that —.
Does it not cause you some concern, then, that that’s not been addressed by your economist
From: Clydesdale, Alison
To: "Parker, Jon - HMT"
Cc: Hutchinson, Peter; Garcia, Nicolas - HMT; Parkinson, Mark - HMT; Mike.brennan@dfpni.gsi.gov.uk
Subject: RE: [RESTRICTED] RE: RHI NI
Date: 15 April 2011 12:36:18

Jon

Many thanks - this is most helpful and will help us clarify our options in our economic appraisal.

We will of course still require Ministerial and DFP approval in due course for any scheme proposed here.

DFP would, I think, lead on feeding back to you on forecasting so I have passed on your email to our finance team here who will liaise with DFP in that regard.

Best Regards

Alison

Alison Clydesdale
Sustainable Energy
Department of Enterprise, Trade & Investment
Netherleigh
Massey Avenue
Belfast, BT4 2JP
Tel: 028 9052 9248 (ext: 29248)
Mob: 028 9052 9304
Textphone: 028 9052 9304
Web: www.detini.gov.uk

Please consider the environment - do you really need to print this e-mail?

From: Parker, Jon - HMT [mailto:Jon.Parker@hmt treasury.gsi.gov.uk]
Sent: 15 April 2011 12:13
To: Clydesdale, Alison
Cc: Hutchinson, Peter; Garcia, Nicolas - HMT; Parkinson, Mark - HMT; Mike.brennan@dfpni.gsi.gov.uk
Subject: [RESTRICTED] RE: RHI NI

Alison,

Sorry for the delay in coming back to you. Taking your points in turn:

i) With DECC, we have agreed that they can make commitments to spending in future years (up to 20 years) for installations that are installed within the SR period (i.e. the initial payments have to affordable within the SR profile), and providing that the policy is set up so that payments should be basically flat over the 20 year period in real terms (i.e. no backloading to ease short-term affordability pressures). This same agreement would apply to any NI scheme.

ii) DECC’s GB RHI profile is £56m/133m/251m/424m. NI’s share of this is 2.98%, so £1.7m/4.0m/7.5m/12.6m. The NI scheme would need to follow this profile as much as possible – on which further below. We will need you to feed into us forecasts of
NI RHI spending for the Office of Budget Responsibility’s bi-annual forecasts – this can be fed through me or Mark Parkinson (in the Devolved Countries Unit within Treasury).

iii) This funding does have to be used for renewable heat, but if NIE decide you would like to use it for a grant scheme or some such then this would be permissible as long as the cost of NIE spending is constrained to the AME consequential.

The other key point it is necessary to let you know about is that the DECC RHI spending is not being treated as standard AME, where the Exchequer takes on all risks of overspend. Instead, there is a risk-sharing arrangement whereby should RHI spending in one year exceed the SR profile, then DECC would need to repay this in future years. They can do this through announcing changes to the SR that will bring cost savings relative to the SR profile in future years. However, a small proportion of any required future savings (still to be determined, but likely to be of the order of 5%) will have to be funded through contributions from DECC’s DEL. Again, these rules would be applied in equivalent fashion to NI.

Happy to discuss any of these issues in more detail.

Jon

Jon Parker | Joint Head, Energy Branch | Energy, Environment and Agriculture
HM Treasury, 1/N2, 1 Horse Guards Road, SW1A 2HQ | 020 7270 5641

Please consider the environment before printing this email.

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From: Clydesdale, Alison [mailto:Alison.Clydesdale@detini.gsi.gov.uk]
Sent: 11 April 2011 13:00
To: Parker, Jon - HMT
Cc: Hutchinson, Peter
Subject: RHI NI

Jon

We spoke briefly the other day about the £25m allocation to NI for an RHI.

Can I ask you to clarify for me :-

(i) The position with the commitment to 20 year payments within NI.

(ii) The process for advising on the spending profile of the £25m AME that we have been allocated.

(iii) If the £25m can solely be used for an RHI - or we can use it to incentivise in a different way e.g grant ?

Happy to discuss.

Alison

Alison Clydesdale
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Mob: Personal information redacted by the RHI
Textphone: 028 9052 9304
Web: www.detini.gov.uk

Please consider the environment - do you really need to print this e-mail?
Table 2: Projected level of payments on NI RHI Scheme from 2019-20 to end of Scheme

<table>
<thead>
<tr>
<th>Tariff Option</th>
<th>Total payments (to nearest £5 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CPI</td>
</tr>
<tr>
<td>Retain tariff structure under 2017 and 2018 legislation</td>
<td>440</td>
</tr>
<tr>
<td>Revert to tariff structure under 2012 Regulations</td>
<td>945</td>
</tr>
<tr>
<td>Proposed long term tariff</td>
<td>70</td>
</tr>
<tr>
<td>Compulsory Buy-Out</td>
<td>35</td>
</tr>
</tbody>
</table>

It should be noted that the payments to date and projected future payments set out above are based on small and medium sized biomass boilers only. There are additional costs in respect of the other technologies on the non-domestic NI RHI Scheme as well as the domestic NI RHI Scheme.

The Reconnect Programme

16. DfE has provided to the Inquiry an Evaluation Report prepared by KPMG in respect of DETI’s ‘Reconnect’ incentive programme (DFE-399565 to 399690). The Inquiry seeks clarification and/or confirmation, from DfE, of the following matters relating to the Reconnect programme

(Please provide all costs in the money value of the KPMG report, in 2010 money and in 2016 money)

Given the passage of time since the Reconnect Scheme was in operation, and the time available to prepare the response, it has not been possible to view raw data. At the time, data for the Scheme was held on a secure database operated by the managing agents, Action Renewables. This database was removed and all data files permanently deleted from services in August 2009.

It would appear from records held that KPMG were given temporary access to the database at time of the evaluation. It is a reasonable assumption
therefore that the figures used in the KPMG evaluation were based on accurate information available at that time. Responses to the queries raised by the Inquiry have therefore been based on the information provided in the Evaluation.

Where the request is for figures on renewable heat the following technologies have been included:

- Air Source Heat Pump
- Ground Source Heat Pump
- Water Source Heat Pump
- Solar Water Heating
- Wood Fuel Boiler
- Wood Pellet Stove

Where the request is for figures on biomass the following technologies have been included:

- Wood Fuel Boiler
- Wood Pellet Stove

Costs have been converted to 2010 and 2016 prices using the GDP Deflators which can be found at: https://www.gov.uk/government/statistics/gdp-deflators-at-market-prices-and-money-gdp-march-2019-spring-statement.

Costs have been provided in both calendar and financial years.

a. **The total cost of the programme (showing grants, administration, and marketing separately);**

On the basis of information available, we believe that costs are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Calendar Years</th>
<th>Financial Years</th>
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<tbody>
<tr>
<td>Admin</td>
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<tr>
<td>Marketing</td>
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<td>£891,301</td>
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</table>

b. The budget(s) for the programme (showing grants, administration and marketing separately);

<table>
<thead>
<tr>
<th>Budget</th>
<th>Calendar Years</th>
<th>Financial Years</th>
</tr>
</thead>
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<td></td>
<td>2010</td>
<td>2016</td>
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<tr>
<td>KPMG Report - Dec 2008</td>
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</tr>
<tr>
<td>Admin per annum</td>
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<td></td>
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<td>Admin for total period</td>
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<td>Marketing '07</td>
<td>£600,000</td>
<td>£618,959</td>
</tr>
<tr>
<td></td>
<td>£680,435</td>
<td>£681,201</td>
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</tbody>
</table>


c. The total cost of grants awarded to support renewable heat;

<table>
<thead>
<tr>
<th></th>
<th>Calendar Years</th>
<th>Financial Years</th>
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<tbody>
<tr>
<td>KPMG Report - Dec 2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wood Pellet boilers and stoves</td>
<td>£7,584,770</td>
<td>£7,824,432</td>
</tr>
<tr>
<td></td>
<td>£8,601,575</td>
<td>£8,611,253</td>
</tr>
</tbody>
</table>


d. The total cost of grants awarded to support biomass boilers;

<table>
<thead>
<tr>
<th></th>
<th>Calendar Years</th>
<th>Financial Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>KPMG Report - Dec 2008</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biomass Boilers</td>
<td>£3,954,547</td>
<td>£4,079,502</td>
</tr>
<tr>
<td></td>
<td>£4,484,689</td>
<td>£4,489,735</td>
</tr>
</tbody>
</table>


e. The total renewable heat capacity supported;

Estimated 52,468.68kW

f. The total biomass capacity supported;

- Wood Fuelled Boilers – 41.465.60 kW
• Wood Pellet Stove – 429.30kW
• Total – 41,894.90kW

g. The average capital cost per kW of biomass capacity;

<table>
<thead>
<tr>
<th></th>
<th>Calendar Years</th>
<th>Financial Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dec 2008</td>
<td></td>
</tr>
<tr>
<td>£ per kW of biomass</td>
<td>£ per kW of</td>
<td></td>
</tr>
<tr>
<td>capacity</td>
<td>biomass</td>
<td></td>
</tr>
<tr>
<td>Wood Fuel boilers</td>
<td>£224.09</td>
<td>£231.17</td>
</tr>
<tr>
<td>Wood Fuel Stove</td>
<td>£316.49</td>
<td>£326.49</td>
</tr>
</tbody>
</table>

h. The average grant support paid per kW of biomass capacity;

• Wood Fuel Boiler - £95.37
• Wood Pellet Stove - £145.12

i. The proportion of the total capital cost for (i) renewable heat and (ii) biomass that was, on average, met by grant and met by the householder.

<table>
<thead>
<tr>
<th></th>
<th>Calendar Years</th>
<th>Financial Years</th>
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<tr>
<td></td>
<td>Dec 2008</td>
<td></td>
</tr>
<tr>
<td>Total capital cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for renewable heat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>met by grant</td>
<td>£7,584,770</td>
<td>£7,824,432</td>
</tr>
<tr>
<td>(36%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total capital cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for renewable heat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>met by householder</td>
<td>£13,716,057</td>
<td>£14,149,455</td>
</tr>
<tr>
<td>(64%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total capital cost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of biomass met</td>
<td></td>
<td></td>
</tr>
<tr>
<td>by grant</td>
<td>£4,016,846</td>
<td>£4,143,770</td>
</tr>
<tr>
<td>(43%)</td>
<td></td>
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</table>
Statement of Truth

I believe that the facts stated in this witness statement are true.

Signed:

Dated: 22 March 2019
BUDGETARY ISSUES ASSOCIATED WITH THE ADMINISTRATION OF THE NORTHERN IRELAND RENEWABLE HEAT INCENTIVE (RHI) AND RENEWABLE HEAT PREMIUM PAYMENTS (RHPP)

As you may be aware, Energy Division presented the proposed Renewable Heat Incentive scheme for scrutiny at Casework Committee on Friday 10 March. An action flowing from this, requested by Trevor Cooper (Chair of Casework Committee), was that I draw to TMT’s attention the budget requirements for the administration of the scheme over the next four years. To place this in context, and for ease of reference, I have provided an overview of the constituent parts of the scheme.

Background

2. 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 and a target of 10% renewable heat for NI by 2020 was therefore included within the Strategic Energy Framework. There is an interim target of 4% renewable heat by 2015 in the Programme for Government. These are challenging targets given that the current level in Northern Ireland is 1.7%.

3. £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 (£6m in 2012-13, £7m in 2013-2014 and £12m in 2014-2015). However, it has been stipulated that this funding is for the actual incentive and cannot be used for administrative costs.

4. The Department for Energy and Climate Change (DECC) introduced a GB RHI in November 2011. Given the very different heat market in Northern Ireland, it was agreed that it would be appropriate to separately assess how the NI renewable heat market could best be developed.
NI Renewable Heat Incentive (NI RHI)

5. Following an economic appraisal and a public consultation, Energy Division is proposing the introduction of a NI specific RHI. The proposal 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 eligible installations (following accreditation).

6. The NI RHI will be introduced in two phases. Phase 1 will commence as soon as possible after 1 April 2012 and will be for non domestic installations and particular technologies. Phase 2 will commence as soon as possible after 1 April 2013 and will extend the scheme to domestic customers; it may also extend the list of eligible technologies. This phasing is in line with the scheme in GB.

7. It is expected that the NI RHI will be open to new installations until 2020, meaning the final payment from the scheme will be in 2040. The NI RHI will have scheduled reviews built-in to the scheme to allow DETI to ensure that the scheme remains fit for purpose and value for money for the duration.

8. Commencement in NI is dependent on both DFP and State Aid approval. Following DETI Casework Committee, we are finalising the papers to seek DFP approval and the State Aid papers were submitted last December.

Renewable Heat Premium Payments (RHPPs) for the domestic sector

9. As the incentive scheme will not be immediately available to domestic installations, it is proposed to introduce a RHPP for the domestic market. These one off grant payments will assist in the capital costs of the renewable heat installation. Again, this proposal is in line with GB.

10. Those availing of the RHPP will remain eligible for a longer term tariff when Phase 2 of the RHI commences. However, the lifetime of the tariff under the RHI will be reduced accordingly so that all customers are equally incentivised. For example, a domestic customer who has availed of the RHPP will only receive 18 years of an RHI rather than the standard 20 years (the value of the RHPP has been set at the equivalent of 2 years RHI payments).

11. Customers will apply direct to the Department, where an initial assessment of eligibility will be undertaken. Successful applicants will then be issued with a voucher guaranteeing the RHPP once the technology is installed subject to terms and conditions. Once the installation is completed it will be inspected and payment made. Vouchers will not be redeemable beyond 31 March 2013.

Development of administrative systems

12. With a budget of £25m over the next four years it is vital that both the RHI and the RHPP scheme have proper administrative management systems in place. The RHPP scheme will be administered within DETI Energy Branch. It is difficult to predict the level of uptake but, based on the experience of the GB scheme, we
might expect to issue between 250-300 vouchers and have about half of them redeemed. At this level, it is hoped the scheme can be managed within existing resource. However, if the number of applications were to be higher than the above estimates then additional resource (probably around EOII- EOI level) would be required.

13. The RHI requires a system capable of managing enquiries and applications, accrediting installations, ensuring participants meet ongoing obligations throughout the life of the scheme, processing payments, preventing fraud and providing management information. The expertise required to develop such a system is not available within Energy Division, nor is there the resource to operate the scheme on an on-going basis. The Office of Gas and Electricity Markets (Ofgem) has developed a bespoke system for DECC and is already managing the administration of the GB RHI. In addition, it has experience of delivering other large scale incentive schemes such as the Renewables Obligation, (including the NI Renewables Obligation for DETI), and the Feed-in-Tariff.

14. It was considered that there could be significant advantages in utilising the existing systems and a feasibility study was undertaken to assess if and how the DECC GB RHI system could be used as the basis for an administrative system for the NI RHI. The study concluded that Ofgem had the operational structures in place to deliver an administrative system, tailored specifically for NI, following a development phase of approximately 4 months. **The cost of the development work would be £386K (plus £386K contingency).** Forecasts of operating costs for the next four years are £136K, £157K, £198K and £249K based on NI accounting for a 3% share of the workload.

15. Exploiting synergies with the GB RHI will drive down the costs of administering the scheme whilst maintaining a high quality service to generators. For example, using the existing Customer Relationship Management (CRM) Software will save NI an estimated £100-150K, while using the existing SUN system to make generator payments, instead of a payment service provider, could save in the range of £100 - 500K. In addition, using the main existing RHI register instead of commissioning a bespoke IT system is expected to save between £2m and £3m. Overall, it is estimated that using Ofgem’s existing systems could save somewhere between £3.2million and £5.15million with additional ongoing operational savings.

16. The completion of this feasibility study provides clear evidence that there are substantial gains (both in terms of efficiency and cost) to be had from utilising the existing GB system. Looking forward, there is the additional advantage that we would only be required to pay our share of any future development or enhancement costs. I will therefore be seeking approval from the Accounting Officer to appoint Ofgem as the administrator of the NI RHI under a Direct Award Contract (DAC). The papers on this will issue shortly.

**Budget Requirements**

17. The money provided from HMT (£25m) **cannot** be used to cover the administration of the scheme and there is **currently no provision within Energy Division’s budgets for this work.** I will therefore need to bid for the money at the appropriate in year monitoring round. The estimated costs associated with the administration of the NI RHI (as per the feasibility study) for the next four years are as follows:
<table>
<thead>
<tr>
<th>Year</th>
<th>Development Costs</th>
<th>Operating costs</th>
<th>Total Costs</th>
</tr>
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<tbody>
<tr>
<td>2012-2013</td>
<td>£386K (plus £386K contingency)</td>
<td>£136K</td>
<td>£522K (plus £386K contingency)</td>
</tr>
<tr>
<td>2013-2014</td>
<td></td>
<td>£157K</td>
<td>£157K</td>
</tr>
<tr>
<td>2014-2015</td>
<td>£198K</td>
<td></td>
<td>£198K</td>
</tr>
<tr>
<td>2015-2016</td>
<td>£249K</td>
<td></td>
<td>£249K</td>
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</table>

In addition, there will be further development costs associated with Phase 2 of the scheme. This expenditure will be at the end of 2012/2013 or start of 2013/2014. At this stage we are uncertain of how many (if any) additional technologies will be added or what other amendments we might need to make and so it has not been possible to get an estimate of costs. However, by undertaking this work at the same time as DECC, we will only bear our share (3%) of the development costs.

18. I appreciate that the above costs will add pressures within the DETI system and it is unfortunate that HMT stipulated that the £25m could not include a (small) element for administration. However, it is the case that if the money for administration is not made available we will not be in a position to deliver the RHI; the £25m will have to be returned to HMT (as it was ring-fenced solely for this purpose); we will also fail to meet the Executives PfG and SEF targets as well as fail to contribute to the UK’s binding EU targets (and have to thereby take responsibility for any share of an infraction that may result).

19. I would appreciate confirmation that TMT is either content that I proceed, or, that I advise the Minister that funding is a potential difficulty and you have instructed that work stops at this point.

20. Happy to discuss.

FIONA HEPPER
Ext 29215

cc: Joanne McCutcheon
    Peter Hutchinson
Fiona Hepper, 15th of March, to the top management team: David Sterling, David Thomson and Trevor Cooper. And if we scroll — you can see the heading. It’s:

“BUDGETARY ISSUES ASSOCIATED WITH THE ADMINISTRATION OF THE NORTHERN IRELAND RENEWABLE HEAT INCENTIVE (RHI) AND RENEWABLE HEAT PREMIUM PAYMENTS (RHPP)”

And, if we scroll down within it, it’s at paragraph 17, at the very bottom there:

“Budget Requirements

The money provided from HMT ... cannot be used to cover the administration of the scheme and there is currently no provision within Energy Division’s budgets for this work. I will therefore need to bid for the money at the appropriate in year monitoring round. The estimated costs associated with the administration of the NI RHI (as per the feasibility study) for the next four years are as follows:”.

And she then sets out the costs and then talks about some additional costs that may be required. She says:

“I appreciate” —

at paragraph 18 —

“that the above costs will add pressures within the DETI system and it is unfortunate that HMT stipulated that the £25m could not include a (small) element for administration. However, it is the case that if the money for administration is not made available we will not be in a position to deliver the RHI; the £25m will have to be returned to HMT (as it was ring-fenced solely for this purpose); we will also fail to meet the Executives [sic] PfG and SEF targets as well as fail to contribute to the UK’s binding EU targets (and have to thereby take responsibility for any share of an infraction that may result).”

And at paragraph 19 she said:

“I would appreciate confirmation that TMT”,

which, I think, is “top management team”,

“is either content that I proceed, or, that I advise the Minister that funding is a potential difficulty and you have instructed that work stops at this point.”
So, that’s her alerting the top management team to the fact that some money’s going to be required to administer the RHI. And we won’t go back and look at it, but you will recall, yesterday, you were copied in to the draft public consultation from June 2011, and it doesn’t mention administration costs as a reason for not proceeding with the challenge fund: you remember that. And, I wonder, having looked at these various documents, given that you appear to be sure that you were told the challenge fund is off the table because of administration costs, I want to explore precisely what you were told about that and what questions you asked. Because we’ve already seen there’s a £218 million difference between challenge fund and Northern Ireland RHI in terms of their net present values — a huge amount of money over their lifetime. Who told you that the challenge fund was off the table because of administration costs?

Mr Connolly: Um, I think I alluded to this yesterday. I’ve no precise knowledge, but the meetings at that time would’ve included Peter, Fiona and Alison and, presumably, Fiona, being the senior responsible officer.

Mr Lunny: Were you told that the challenge fund is simply going to be more expensive than the RHI, or were you given precise details?

Mr Connolly: I wasn’t given precise details.

Mr Lunny: Were you told that the challenge fund isn’t just going to be more expensive; the amount required for it is simply — it’s beyond a line or a threshold — it cannot be provided?

Mr Connolly: There was no —

Mr Lunny: Were you told anything like that?

Mr Connolly: — specific details given, but the expectation was that, you know, going down the route with Ofgem was always going to be the much cheaper option.

Mr Lunny: And we looked at it yesterday, but you would have remembered, you’d be fully
aware, regardless of whether Ofgem pointed this out, that there is always a danger, when
you come to spend money, whether you’re a government Department or an individual
person, there’s always a danger of false economies.

Mr Connolly: Yes.

Mr Lunny: And we saw a very clear warning, a clear analysis in CEPA’s 2011 report, where
they set out how DETI adopting the GB tariffs in an effort to save in admin costs could
potentially be an enormous false economy because of the substantial difference in cost,
looking at net present values, between the Northern Ireland RHI with its tailored tariffs or an
RHI with GB tariffs: remember that?

Mr Connolly: Yes.

Mr Lunny: You’d have been aware of that. Did you raise any issue when you were being
told about the admin costs being a reason for knocking the challenge fund off the table? Did
you raise the issue of a potentially enormous false economy?

Mr Connolly: No, I didn’t raise that issue. As an economist undertaking that role, my main
concern in relation to admin costs is that it’s reflected in the appraisal as far as possible. If
I’m told that there’s affordability constraints, I have to largely accept that. There’s no real
route for me to challenge that if someone says that, you know —

Mr Lunny: Well, I mean, when we explore that, you had the 28th of June ’11 CEPA report.
It estimates that the lifetime costs of a challenge fund are likely to be approximately 10% —
the administration costs. And, at that point, the lifetime subsidy spend on the challenge fund
was 160-something million: do you remember that?

Mr Connolly: [Nods.]

Mr Lunny: So they’re estimating around £16 million over its lifetime in present value
terms is what it will cost to administer this. And we know that 14% was what it cost with
Reconnect, so, even if you factor it up to 14%, you’re still looking at a £20-something million

over the lifetime of the scheme to administer it. And we know that, once you had the Ofgem
figure of £1.1 million, you, relatively quickly, were able to factor that out over the lifetime of
the scheme and come up with £9 million.

Mr Connolly: Yes.

Mr Lunny: So we’ve a difference, potentially, in administration costs of £10/15 million,
taken at a high level, and you would have known that the net present value difference
between the challenge fund and the Northern Ireland RHI was £218 million, so, potentially,
£200 million more than the administration cost difference. So, it was, potentially, precisely
the sort of false economy that CEPA had drawn to DETI’s attention and warned them
against.

Mr Connolly: Yes.

Mr Lunny: And you say that you would have had no way of, if I can put it like this,
wielding any type of stick at energy division to get them to change their approach, but could
you not have said, “I will not be able to sign this off as value for money when you are
suggesting going down the road of adopting a scheme that is going to cost £218 million more
for the sake of £10 or 15 million in administration cost budgets”? Could you not have said
something like that?

Mr Connolly: I certainly could’ve drawn attention to it, and I think that the project would
have benefited from a clear description between the options of the administration costs.

Mr Lunny: Because we have seen in that letter that Fiona Hepper wrote that you could
characterise some of the paragraphs — 16, 17, 18 and 19 — as almost putting pressure on
the top management team to get the administration costs for her or for the scheme. She’s
making it clear that, “If the money’s not available, we’ll just have to send the £25 million
back and we’ll probably not meet our target, and there might be a fine.” And would you
agree it would have been perfectly possible to write a letter, in similar terms, saying, “Well,
if you’re not going to make the money available for administration costs for a challenge
fund, then we’ll just have to do the scheme that’s cheaper to administer, and it will cost x
number of hundred million pounds over its lifetime more”.

1:00 pm

Mr Connolly: I would accept that argument could be made, yes.

Mr Lunny: But you didn’t make any suggestions along those lines or threaten to refuse to
sign the scheme off?

Mr Connolly: No, certainly I didn’t, no.

Mr Lunny: Is it the sort of thing, and appreciating you were a very junior official at the
time and might not have encountered this sort of issue before —?

Mr Connolly: No.

Mr Lunny: No. Was it the sort of thing that you thought, “I’d better go and speak to
somebody like Shane Murphy about this”?

Mr Connolly: No, I can’t say that that thought did occur to me. I mean, issues like this
around, you know, bidding for resources and monitoring rounds was really a matter for the
business area, and I don’t think it’s something that I would have got involved in as an
economist.

Mr Lunny: Well, I won’t labour the point, but it does touch upon value for money, which
you accept.

Mr Connolly: I accept that.

Mr Lunny: And —

Mr Connolly: I think if things had’ve been clearer — more clearly set out — within the
documentation, this point could’ve maybe featured.

Mr Lunny: But I appreciate you’ve very clearly indicated you didn’t make the false
economy point to them — to DETI energy division. But did it not strike you, at the time, that
the arm’s-length body or the NDPB — you know, there was strains with relationships —

whether, you know, something was being escalated.

Mr Aiken: Yes.

Mr Murphy: You know, so, it’s not — it wasn’t unknown for me to get a call that such-and-such is complaining that this case is taking a long time. It was commonly the case that, “This is stuck with the economists” or “The economists are holding it up”. So, every now and again, I’m would’ve got a call like that, including some calls that, you know, where people will get me under pressure from influential figures, you know, to hurry up with their projects. And so, one of my rules was probably to take some of that heat —

Mr Aiken: Yes.

Mr Murphy: — to let people get on with their roles.

Mr Aiken: Not a pun, I’m sure, intended.

Mr Murphy: Sorry.

Mr Aiken: You didn’t take the heat in this case, and that’s what I want to ask you about.

Standing back from it now, now I want you to try to avoid hindsight as best you can.

Mr Murphy: Yes, I know that.

Mr Aiken: All right. But you can work out the question that is coming I’m sure, which is:
your economist is faced with, in and around the 28th of February, a request to rubber-stamp, as it were, or give his endorsement to an RHI. He, having got the CEPA 2 report, now knows, and we’ll come to the precise facts of it, that the net-present cost of the RHI over an alternative option, which you later become involved in in casework, is somewhere north of 300 million, but there are subjective non-monetised reasons that are being put forward to justify taking this more expensive route. But that more expensive route is £300 million.

Mr Murphy: Just to be clear, there is subjective non-monetary reasons and an affordability reason, which we would understand to be not an issue about balance of
advantage but an issue — a sort of a binary stop/go — either it’s doable or not doable.

Mr Aiken: Well, what that shakes down to, just to be clear, is it’s being said it costs £5 million to do that one, it costs — whether that’s right or not because there’s debate about whether it should be three and a half — it’s one a half admin costs to do the RHI. So, you do the rough maths; taking it at its worst, an extra 3.5 million of DEL budget is needed to avoid spending 300 million of AME budget. So, what I’m asking you is, when you look at it now, in the cold light of day, is the fact he was being asked to agree that not something that should have been brought to your attention?

Mr Murphy: I’m not sure Sam was being asked to agree that an option shouldn’t be taken forward for affordability reasons. That is a function that has to be defended by Fiona and her team at casework, because it’s not an economic decision, and so I would not expect Sam to advise on, say, a legal issue or an engineering issue —

Mr Aiken: I’m not suggesting that, Mr Murphy —

The Chairman: Yes, but you may not expect him to advise on an affordability issue per se. Where that affordability issue involved considering a three and a half million extra cost set against a 300 million extra cost, surely you would expect him to chip in and say that or ask about it, or you would?

Mr Murphy: Again, without knowing the detail of what he did or didn’t ask —

The Chairman: But you saw that in the CEPA report; that was all there.

Mr Murphy: Yes. Again, without going into the detail as to what he did and didn’t ask, ultimately, that’s not an issue for economist advice; that is something which the responsible people have to defend, and the arena to defend that was at the casework committee.

The Chairman: You may be misunderstanding me.

Mr Murphy: Perhaps I am.

The Chairman: I understand perfectly your assertion that affordability, as such, is a
“excludes deliberately wasting or dumping heat with the sole purpose of claiming incentive payments.”

And I pre—

Mr Murphy: Again, this is economic terminology. But it’s jumping into me head, and I’m making a note.

Mr Aiken: I presume, just for context, that we get this on the record, you would by nat—. You would assume that all the statements being made to you — yes, you’re doing a checking function, but that your colleagues are telling you what the actual position is.

Mr Murphy: Again, as a casework panel, you’re not there —. We’ll say, you’re discharging the function of the accounting officer; you don’t necessarily have your calculators out; you’re not necessarily into looking at the spreadsheets. Yes, I’m an economist, but I’m discharging a corporate role; it could’ve been anyone. And so, you’re looking at the overall assurance around the policy, albeit some of the notes that I do take are more economic in nature and more technical in nature than probably your average casework panellist.

Mr Aiken: And you can see —.

Dr MacLean: Sorry, can I just ask Mr Murphy, because it’s a point I keep coming back to: you mentioned there that you don’t get your calculator out. Who should get the calculator out? [Short pause.] To check the basic arithmetic.

Mr Murphy: Are we talking about tariffs here?

Dr MacLean: Just in the process. We’ll see, if we look at them, that you’ve got tables in front of you here where the numbers don’t add up. You’ve got a tariff calculation that gives you a completely different answer from the one that you’re told it gives you. And so on and so forth. And so far, I haven’t found anybody who believes they’re the right person to have got their calculator out and checked the basic arithmetic.

Mr Murphy: Well, I’m happy to talk about why I didn’t I get my calculator out, if you want
Dr MacLean: No, I don’t, the question, who —. I’m not saying it should’ve been you. I’m just really interested in your opinion as to who should’ve done that.

Mr Murphy: For me, that’s a policy analysis role. And so, whoever’s deeply involved in policy analysis, you would expect them to understand the scheme and to understand the numbers in the driving of the scheme. That would be my —.

Mr Aiken: So, are you talking about CEPA or you are talking about the energy officials?

Mr Murphy: I think —. Given that CEPA seemed to me to be providing the policy analysis role, primarily in this case, that —.

Mr Aiken: Can I cut through it this way, Mr Murphy. You expect that the experts you’re paying for, not to have to need to check their mathematics?

Mr Murphy: In the same way that, if the key piece of evidence was a legal evidence, I would accept that. If it was about the design of an FE college, well, what do I know about where to put the fire doors? The assurance that, on technical matters, that the policy area got the appropriate professional technical people to do that, as opposed to having a go at them themselves, would be a key part of the assurance.

Mr Aiken: So, I think, if I put it this way, in fairness to you, that, with hindsight, because it’s replete with errors, there’s a, “Why is no one getting their calculator out?”, the point I understand you to be making to the panel, and it will be matter for the panel to weigh up, is it’s not reasonable to expect policy officials, including the ones on the casework committee doing their work, to be rechecking the mathematics of the very experts who were paid for this task because that’s what they were expert in.

Mr Murphy: Typically, when you come to casework, you would not want —. You know, again, part of having things “shovel-ready”, to use that expression again, is that everything should be lined up and correct, and you would not expect that there would be material errors by the time — whether it be a technical aspect, an economic aspect, a legal aspect. If
you were to come to casework, you would expect to have things ready to go.

Mr Aiken: So, the point you’re making is unless something jumps out at you — and we’ll come back to whether something should or should not jump at you — because something jumps at everybody now, but the point you’re making is whether it should jump at anybody then might be a different thing. Unless there’s something obvious that jumps at you, your working assumption is that what’s put in front of you is accurate.

Mr Murphy: Uh-huh. Yes. That is the —

Mr Aiken: And the point you’re making to the panel, as I understand it, as a matter of fairness to you, is it’s reasonable for you to take that approach and you shouldn’t be criticised for not checking all of the mathematics in a report that’s been provided by an expert.

Mr Murphy: It would be unusual for us to start getting into —

Dr MacLean: And to be absolutely —

Mr Murphy: — unless a line of investigation had prompted that, that would probably be the only expectation when you would start to get into the detail is when there’s a line of investigation where you ask questions, you don’t seem to get appropriate response, you go a little deeper. So, that would be the only, sort of, circumstance where you would really get into the nitty-gritty.

Dr MacLean: Yes. And to be absolutely clear, I was not suggesting that your role at casework was to do it. I’m just — one of the things that I would see as a success factor of the process is if I find out who it would be in that process. So I’m just interested in your opinion.

Mr Murphy: Well, I probably will return to something associated with that point in a while.

Dr MacLean: OK, we’ll come back to that. Thank you.

Mr Aiken: I’ve explained to Dr MacLean we’ve got a Christmas present for him, and that’ll
out to consultation and the feedback from that was these were too low, and then there was
calls made to increase those, that the effect on cost was higher. So, I think there would have
been an acknowledgement or a deducement [sic] that the cost had moved on.

Mr Aiken: Yes.

Mr Murphy: Whether there was an acknowledgement, certainly, there is nothing on the
record to indicate that that was the figure, or that would have been the figure, had you
there taken 445 and knocked off, you know, the equivalent for the social cost of carbon, yes.
I think there would have been a realisation and an expectation that the bill probably went up
in between, because there was no hiding that the tariffs were higher after consultation than
before and the report was done before.

Dr MacLean: Would your expectation there have been that the 242 represented those
increased costs — that you were being presented at the committee with the final figures?

Mr Murphy: Sorry. I think my — because the 242 was in the CEPA report. Now, whether it
was in — I think, in my head, I would have understood that that figure would now be higher.
That’s not to say that would have been in the head of Philip or Trevor.

Dr MacLean: Mmm.

Mr Aiken: Well, we have your — and that’s why it was to your credit, spending some time
showing the level of work that you did do, Mr Murphy. And I appreciate all of these things
are very easy with hindsight, and you’re having to face questions from me about it, but —

Mr Murphy: Okay.

Mr Aiken: — what I’m drawing attention to is the fact that there are a number of
different issues. One is you’ve said, “Well, I would have known that they were higher than
written on the synopsis page”. That’s one thing. Whether your colleagues knew that, we’ll
ask them and see.

Mr Murphy: Yes. I appreciate that.
From: Fiona Hepper
Date: 19 December 2012
To: Top Management Team: David Sterling
                                   David Thomson
                                   Colin Lewis

Copy Distribution List Below

BUDGETARY ISSUES ASSOCIATED WITH THE ADMINISTRATION OF THE
NORTHERN IRELAND RENEWABLE HEAT INCENTIVE (RHI) AND RENEWABLE
HEAT PREMIUM PAYMENTS (RHPP)

You will recall that in March 2012 I briefed you on the budget requirements for the
administration of the NI RHI over the next four years. At that time the forecasted costs
associated with the administration of the NI RHI (as per the feasibility study) for the next
four years were as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Development Costs</th>
<th>Operating costs</th>
<th>Total Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-2013</td>
<td>£386K (plus £386K</td>
<td>£136K</td>
<td>£522K (plus £386K</td>
</tr>
<tr>
<td></td>
<td>contingency)</td>
<td></td>
<td>contingency)</td>
</tr>
<tr>
<td>2013-2014</td>
<td>£157K</td>
<td>£157K</td>
<td>£157K</td>
</tr>
<tr>
<td>2014-2015</td>
<td>£198K</td>
<td>£198K</td>
<td>£198K</td>
</tr>
<tr>
<td>2015-2016</td>
<td>£249K</td>
<td>£249K</td>
<td>£249K</td>
</tr>
</tbody>
</table>

Ofgem was already administering the GB RHI and these costs were based on NI
accounting for 3% of the overall costs of both schemes.

Current Position

2. The original feasibility study was based on the NI RHI launching in April 2012 (and
no later than June 2012). However, the commencement of the scheme was delayed
due to time taken to secure State Aid approval and the need to lay legislation in the
Assembly. As a result the testing of the NI system no longer dove-tailed with work
on the GB system and this has impacted on both the development and operational
costs for this year. The updated costs for the scheme are given in the following
tables.

Development and Operational costs 2012/13

<table>
<thead>
<tr>
<th>Delivery Component</th>
<th>Cost (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Scheme Development delivery team (including:</td>
<td></td>
</tr>
<tr>
<td>Band C Operational Manager – recruitment process &amp; Stakeholder</td>
<td>£96,000</td>
</tr>
<tr>
<td>Engagement Costs</td>
<td>Cost (£)</td>
</tr>
<tr>
<td>------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Internal Ofgem legal costs</td>
<td>£67,000</td>
</tr>
<tr>
<td>IT delivery costs</td>
<td>£190,000</td>
</tr>
<tr>
<td>Independent risk assessment</td>
<td>£5,000</td>
</tr>
<tr>
<td>Overheads</td>
<td>£75,000</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>£433,000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operational Costs</th>
<th>Cost (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revised 2012/13 operational costs (pre IT delay)</td>
<td>£121,000</td>
</tr>
<tr>
<td>Additional 2012/13 operational costs due to delay to IT launch</td>
<td>£19,000</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>£140,000</strong></td>
</tr>
<tr>
<td><strong>Total 2012-13 forecast costs:</strong></td>
<td><strong>£573,000</strong></td>
</tr>
</tbody>
</table>

- You will wish to note that the £433K development costs are inclusive of £49K contingency.

**Estimated Operational Costs 2013/14 – 2015/16**

<table>
<thead>
<tr>
<th>Financial years</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIRHI Estimated costs</td>
<td>£164,636</td>
<td>£223,809</td>
<td>£341,639</td>
</tr>
</tbody>
</table>

- The above figures are current estimates based on NI still accounting for 3% of the total scheme operating costs. These costs are higher than the original forecasts due to the fact that Ofgem now has a clearer idea of the times taken to process applications (the GB scheme has now been running for over a year).

- However, Ofgem proposes to actually charge DETI on the following basis:-

\[
\text{DETI costs} = \frac{\text{Total RHI operating cost} \times \text{Value of NI tariff payments}}{\text{Value of Total (NI+GB) tariff payments}}.
\]

- If NI volumes are more than 3% of the total scheme, we anticipate that NI will have smaller installations compared to GB which are quicker to process, resulting in reduced accreditation time/ resources required. This means that the 3% would still be a reasonable maximum estimate.

- Should any additional funding be required this will need to be agreed via the Change Control process.
And then it is explained in this letter that the costs were:

“based on NI accounting for 3% of the overall costs of both schemes.”

And if we scroll down, please:

“The original feasibility study was based on the NI RHI launching in April 2012”.

Reasons are given, including state aid, that that hasn’t been possible:

“As a result the testing of the NI system no longer dove-tailed with work on the GB system and this has impacted on both the development and operational costs ... The updated costs for the scheme are given in the following tables.”

And if we scroll down, please. I’ve no idea why we’ve had that redacted, so we’ll have to get that undone because there’s no basis for that to be redacted. Mr Kearney, if you can sort that for me. But in the end, if I put it this way, we end up with a set of costs that are amounting instead from 1·1 million, they’re now broadly 1·8 million.

So, the costs for the same period, from what you were told in the casework committee process in March 2012, have now gone out from 1·1 million to 1·8 million. And this is being explained to the top management team. So if we scroll down a little further, please, we can see the estima— the memo’s not entirely clear, but you can — when you do the maths of it, unless someone corrects me, the result is four years are now 1·8 million than 1·1 million.

And these are said to be:

“current estimates based on NI still accounting for 3% of the total scheme operating costs. These costs are higher than the original forecasts due to the fact that Ofgem now has a clearer idea of the times taken to process applications (the GB scheme has now been running for over a year).”

It can’t be based on “clearer idea” of the Northern Ireland times required cos nothing has yet happened in terms of applications. And then the formulation of the charging mechanism is set out that Ofgem intend to implement as far as Northern Ireland RHI is concerned.

And then it’s being flagged up in the last bullet point that, if any additional funding is
Now, there are two things that can have happened, Mr Cooper, I’m gonna ask you to reflect on. Either Mr Sterling has read the note — and we’ll have to check this with him — and he has, from reading the note, wondered about whether this is now the change from 1.1 to 1.8, whether he himself has taken the view, “That might be a material change which might require further consideration by the casework committee”. Or, somebody has been in his ear to make that point to him, that they felt it was a material change that needed to go back to the casework committee. If you can’t remember, just at this point indicate, “No, I don’t remember”.

10:45 am

Mr Cooper: I can’t —

Mr Aiken: You don’t?

Mr Cooper: I don’t. I’m sorry.

Mr Aiken: That’s fine. Let’s look at the next email, which is an hour and a half later: DFE-382650. So, Fiona Hepper, copying everybody else in that we’ve been mentioning, says to the permanent secretary:

“This is not a material change that would require a return to casework. As discussed this morning, this is a refinement of the estimates originally provided by Ofgem in the feasibility study and based on Ofgem’s experience of actually running the GB scheme over the last year. The original figures were presented at Casework as forecasts, as was the issue of NI being 3% of the overall costs. Casework was also advised that going forward, Ofgem would be passing on the actual costs of running the scheme. The new figures are still forecasts based on 3% of the overall costs.

However, all these figures are still only estimates. The actual costs will have to be agreed between us each year and a refinement is that charging will be on the percentage of tariff payments made. That is, Ofgem has indicated that they will calculate the actual NI costs on the basis of the percentage of tariff payments
Mr Aiken: You took it at face value that they could do what they said they were going to do.

Mr Angus: Yes. So in terms of budgetary management, I was quite happy.

Mr Aiken: Because of how your understanding of how the assurances were being conveyed?

Mr Angus: Hmm-mmm.

Mr Aiken: What I want to put on the screen, please, is DFE-414047. If we just maximise that out, please. You have the discussion about the challenge fund, and the six explanations are given. Mr Murphy has explained that, for him, affordability was the key, and the panel are aware, and Dame Una in particular is aware, of the nature of administration cutbacks that are going on in budgets. What was the key, if any, for you to be content that, “OK, the RHI should proceed and the challenge fund can stop”?

Mr Angus: Yes. I wouldn’t be quite so definitive in saying that the administration costs was the stop-go that Shane mentioned. I think I would have weighed up all six. Not sure whether I would’ve given them any weighting at the time of the casework committee, but certainly the fact that, if you don’t have the money to find the staff to administer a scheme, then it is a bit of a show stopper.

12:30 pm

Mr Aiken: Can you remember it being part of your thinking or the committee’s analysis that — this is the point Dame Una was covering at the end with Shane Murphy, and I’d covered it with him yesterday — “Hold on a minute. This is a choice between spending 3·5 million of admin money that we don’t have to do a challenge fund or not spending that 3·5 million and instead spending an extra 200 to 300 million”?

Mr Angus: That discussion didn’t take place, as far as I’m aware. Again, maybe I’m a bit narrow-focused, but, again, the 242 wasn’t really in my head, so I wasn’t comparing that as a
**Ms Hepper:** There weren’t quantified. No.

**Mr Scoffield QC:** And assuming that the team hadn’t done that, then I imagine, from what you’ve said, that you think it’s unlikely that the casework committee themselves undertook that type of exercise.

**Ms Hepper:** Oh no, they definitely didn’t. They definitely didn’t.

**Mr Scoffield QC:** In terms of your team’s thinking, is it possible for you to indicate, of those six reasons, which you think is the most important? For instance, are they listed there in order of priority or order of significance, or are they in no order whatsoever?

**Ms Hepper:** I don’t think they’re in any particular order. If I was looking at them now, the ones that I would put further up the scale would be the consistency with GB, the ability to meet targets over the timescales, and, possibly, the example of the NIRO, with some of the others just nestling in underneath that. But that’s just what I think might be the case now.

**Mr Scoffield QC:** Might be the case now. OK.

**Dr MacLean:** Sorry, can I just pick up on the question there that Mr Scoffield put? We’d reached a point now, although it wasn’t clear to everybody, where the difference is £329 million between a cost of 24 million — a net cost of 24 million for the challenge fund — and the 353 — I think it was that we heard; let me just get it right: yes, 353 — that it had become through the changes that were made. So, £329 million. How big would the difference have had to be to overcome the advantages that you saw through aligning with GB, having a greater certainty over delivery and being consistent with the NIRO?

**Ms Hepper:** [Short pause.] I don’t actual—. I don’t know. As I sit here today, I don’t know. We would have wanted to balance them out a little bit more and, you know, close that gap a bit further and that, maybe, would’ve been sufficient. I don’t know.

**The Chairman:** In the end of the day, bearing in mind the factor, which is an important one in this case, of hindsight, looking back on what your decision-making — how the
decision-making worked — was it a situation in which a small department, maybe, at most, three people, lacking in resources, instinctively felt that they should take advantage of whatever savings or administration costs there were, and saving themselves the possibility of being criticised about technical expertise when they knew that a similar scheme in many ways was being run by 70 people, who included experts, in England? I’m not exactly convinced that, sitting back now, you were faced with the situation of, “Look, you can save 329 million by going off on a scheme which is completely different from Great Britain in which you’ll have to pay the administrative costs” —. Is that beginning to resemble what might’ve been a practical situation at that time?

Ms Hepper: I think certainly at the time we would have been very cognisant of the approach that colleagues in DECC had taken and the fact that there was a big team there who had had the time to do the research and to work out the issues. We learnt from that, to an extent, as best we could with such a small team. I do think that policy consistency issue and doing something which was similar to match up into a UK market, I think, was an important factor.

The Chairman: I think probably the only concern I’d have about that is that you, unfortunately, chose not to include points that were very important that GB had.

Ms Hepper: And we were doing that on an iterative basis following along in their wake. I appreciate the point you make.

The Chairman: You weren’t, perhaps, following on in the wake with the emergency stop. It had been done in June, I think, of 2012, and you still hadn’t, but your —

Ms Hepper: Yes, and there is a timing issue there, which I’m sure we’ll come on to, but when they actually brought theirs in place in July, we had already our regulations with the committee. We had all our approvals in place, and we were on the cusp of, you know, a decision to go.
Committee to decide which one is best to proceed with. Rather business areas take fully worked up or “shovel ready” proposals to Casework Committee where the proposal is subjected to challenge from the committee around the priority, affordability, deliverability and value for money of the preferred course of action. The Committee can either agree for the proposal to continue onto DFP or the Minister for approval or it could withhold that agreement (and so block it) – but that role does not extend to choosing an option or instructing the business area to pursue an option.

85. See the responses at paragraphs 50 to 55 which cover all of these questions around AME.

86. I previously (around a year ago) handed over my original RHI Casework Committee papers to the Department. I came across these, along with other papers on other unrelated Casework Committee meetings, when I was moving office at that time. These papers are in the custody of the Department.

I also previously shared with the Inquiry some notes that I found from around the time of the Committee Meeting in March 2012. I cannot be certain but it is possible that these particular notes are some combination of points I took when reading the papers, followed by some notes added during the Casework Committee meeting itself.

Audit Committee

87. I am not, and was not, a member of the Audit Committee. As a result I am not best placed to provide this information to the Inquiry.

88. See response at 87.

89. See response at 87.
Those papers were clear that there was a £25m envelope for the RHI scheme over the budget period to end March 2015, and that this funding was some form of NI share of UK funding provided by HMT and was set aside for RHI in Northern Ireland. The £25m budget available for RHI was referenced several times and, as I understood it, all the options developed by CEPA in their June 2011 were all developed to fit within that constraint of a £25m budget until the end of 2014-15.

Whether the term “AME” was actually used in the papers (I don’t think the term AME was specifically used in the papers), nevertheless it was pretty apparent from the description in the papers that the source of funding was AME. Certainly, in my notes, for the 2012 Casework Committee I jotted down the words “This is AME”. A copy of these notes were supplied to the Inquiry alongside my previous written statement of 9 May 2017 – see the attachment entitled “RHI Notes (Circa March 2012)” and see the 5th page of that PDF document.

51. To take any spending proposal to Casework (and DFP) a business area would typically also be expected to demonstrate that their proposals were well advanced, affordable and ready to proceed to the next stage. So having a clear cut Budget in place (or a strong expectation of receiving such a budget) is usually something of a prerequisite for project to successfully navigate through the Casework Committee. That the proposal in front of Casework Committee had a clear cut budget in place, up to £25m over the budget period, would have been considered a strength of the proposals. I do not believe that the source of the funding had any real bearing on the decision of the Committee – rather the key factor was that the proposals being advocated by Energy Division had a budget in place, and this would have been taken as one sign that they had their “ducks lined up” in order to launch such a scheme.

52. See response at paragraph 50 also. It was apparent to me from the description in the papers to the Casework Committee that the source of funding was AME, and that there was a £25m envelope for the RHI
sequence here, and I’m not sure if I’ll remember it all off the top of my head. I don’t think
the committee was on the cusp of rejecting it. The key thing was about whether the
challenge fund was really a runner or not and, you know, sort of my view in recollection was
that that was resolutely defended for some of the reasons we’ve touched on already and I’m
sure we may go into again. And outside of that reason, you know, was this a priority? It was.
There was a legal driver for this and, as I understand it, if we didn’t play our part, any
infraction fines might come the way of the UK which would be diverted to us.

There was an awful lot of policy development work went into this. They’d got the
appropriate experts for the technical aspects of it. They had undertaken public consultation.
They had budgets in place for, actually, the subsidy spend and the administration of it. They
had their state aid notification. There was a lot —. They really did have their ducks in a line
here and, once you got past the challenge fund issue, you know, things were you know, in
terms of sort of governance and so forth, things seemed to be well lined up. So, once you got
past that issue, I know they’re —. I don’t want to use the words that it was straightforward
or anything like that, but I think I may have used the phrase, once you get over that, there
was not a reason to block this, I think would’ve been the conclusion or, at least, my
interpretation anyway on that committee.

Mr Aiken: So, what I’m illustrating, in fairness to you, is you’ve experience sitting on these
panels. You’re not behind the door and have blocked things that you considered needed to
be blocked. This was not one of them. There was an issue for you, which we’ll come to in
detail, about the challenge fund. And once you were satisfied about that, and you must have
been satisfied about it, then everything else looked like it was the way it should be.

Mr Murphy: Yes.

Noon

Mr Aiken: And, whether that turned out to be right or not, that was the —
had a budget line and budget profile. That level of detailed preparatory work undertaken by Energy Division would suggest that the preference for the RHI approach, over say the Challenge Fund, had emerged within the Department some time prior to the date of the Casework Committee.

19. My involvement in the creation of RHI revolved around the Casework Committee, held on 9 March 2012, and by that stage Energy Division had a stated preference to take forward an RHI scheme as opposed to say a challenge fund.

It is important to note that the role of the Casework Committee (which I discuss in detail later in this response) is not one where a business area takes a menu of choices to Committee for the Committee to decide which one is best to proceed with. Rather business areas take fully worked up or “shovel ready” proposals to Casework Committee where the proposal is subjected to challenge from the committee around the priority, affordability, deliverability and value for money of the preferred course of action. The Committee can either agree for the proposal to continue onto DFP or the Minister for approval, or it could withhold that agreement (and so block it) – but that role does not extend to choosing an alternative option or instructing the business area to pursue a different option.

In line with its challenge function the Casework Committee asked Energy Division to explain why they preferred to proceed with the RHI approach as opposed to the Challenge Fund approach. From recollection, and judging by the minutes, a good deal of time was devoted to this line of questioning by the committee and it was one of our main lines of questioning.

The reasons offered by Energy Division are recorded in the Casework Committee minutes (See WIT – 00900 to 00902) and these reasons were also then set out in the summary Business Case that was subsequently sent to DFP Supply. The reasons set out in these
Mr Aiken: Now —

Mr Angus: I think that demonstrates just that —. Those are the areas I concentrated on, so I wasn’t — I did defer to Trevor and Shane for the more esoteric aspects of finance and economics.

Mr Aiken: Now, as I have indicated to all of the witnesses, this is an inquisitorial process. You kindly sat in yesterday; you listened to the evidence of Mr Murphy; you saw me open copious numbers of documents to make various points; and I’ve done that again today. And I want to ask you whether there are any issues that I covered with Mr Murphy that there’s something you would like to say about them. There are some issues I will take you to, but I’m just — having listened in and being aware, I was going to say to you, “Is there anything about those that you want to draw attention to?” Is there anything that you want to pick up on arising from the points I was looking at and testing with him?

Mr Angus: Um [Short pause] couple of points, maybe. There’s one about was there a predetermined preference by the division — by energy division — to take forward an RHI. Well, when you come to a casework committee, you are presented with a proposal. So, yes, there was a proposal for an RHI. I wouldn’t say it was a predetermined preference but it was a considered conclusion. So, they had, obviously, considered, “What are the options?”

Mr Aiken: Yes.

Mr Angus: “This is the option that seems to be preferred”, so there was a momentum behind it, in that sense, but it wasn’t for any reason other than they felt it was the best option.

Mr Aiken: Well, you heard me take Mr Murphy through the sequence of events in terms of policy development and what had been said publicly and what the Minister had been engaged with, and then it comes to you. Did you feel under any —? Given that this issue of the challenge fund comes up, and, as I understand it, Mr Murphy took the lead on that but
The Casework Committee identified the issue of a choice between the challenge fund, and the RHI scheme, and that as the RHI Scheme was preferred, set as a condition that the reasoning for this selection should be set out by Energy Division in writing to the Minister. The RHI scheme case had been progressed to such an advanced stage that the option to progress the challenge fund was negatively influenced by the lack of parallel progression of the Challenge Fund option. That is to say, at the time of the Casework Committee meeting, there were obvious disadvantages surrounding the length of time it would have taken to get a challenge fund up and running. The RHI scheme was much further advanced at the time of Casework Committee meeting. The Casework Committee had also been erroneously informed during the casework process that Northern Ireland had to contribute to the National target on renewable heat. As such the delivery of the RHI Scheme was a priority project, not just in Northern Ireland, but on a national level, in light of the potential for fines emanating from the EU were the national target not to be met.

3. OfGEM

The Casework committee identified OfGEM as a third party and highlighted the need for audit arrangements.

4. Internal Audit

The Casework Committee advised Energy Division to engage with Internal Audit regarding the proposed management arrangements as would be usual for any grant scheme.
points arising out of casework committee, which are important to the delivery of the policies, might be better incorporated into the DETI operating plan. Now, one would hope that they would be in the branch operating plans and, indeed, that’s where you might get some continuity in handover because operating plans should say what you’re trying to achieve on a yearly basis. And the branch operating plans would go into more detail than the published departmental operating plan. So, perhaps, maybe, the committee should be asked, “Is there anything that you have required the operating division to do to deliver a policy?” That those should be mandatorily put into at least the branch operating plan, if not the departmental operating plan, which gets scrutiny by the departmental board.

Dr MacLean: Yes. And if, like Mr murphy, you were to get annoyed about things, are the failure to fulfil the assurances that you were given something that would, in those circumstances, make you annoyed?

Mr Angus: Well, you could be very annoyed about inaccurate figures being given to you. I meant that’s —.

Dr MacLean: Yes.

Mr Angus: I mean —

Dr MacLean: I’m not limiting the number of things you can be annoyed about [Laughter.]

Mr Angus: On the other hand, we do live in the real world and we’re only human, and I’m sure I’ve made mistakes. I’m not going to admit to what those are [Laughter] but, [short pause.] No. There’s nothing particularly I could point to, no. Other than, other than I don’t — I certainly wouldn’t like to get inaccurate information and then to base decisions on it. I mean, that’s just — that should just not happen.

Dr MacLean: Thank you.

Dame Una O’Brien: My question has to do with your comment right there, at the end, that the casework committee, at the time, was quite an innovation in DETI, back in 2005.
And of course, it predates a major drive across the Civil Service, in all four parts of the United Kingdom, to introduce systematically programme project management and to group activity that’s not business as usual under those headings and processes and management techniques. So I wonder, looking back on it now, whether you would have any observations about, was the casework committee really, in some senses, fit for purpose for the job it was being asked to do in relation to that kicking of the tyres on the RHI project, given what we know about how programme project management disciplines can address a number of these different issues. For example, coming to a conversation with senior independent-minded officials, such as you were, much earlier in the process would be one example of how that discipline would apply.

**Mr Angus:** Yes. I think it’s not something I’ve really thought about before, but bringing it forward in the process, I think you — if I could use the word — you start to interfere perhaps with the management team’s work then, because how I might introduce a policy might be different how somebody else might introduce a policy. Oh, maybe that’s a good debate.

**[Laughter.]**

**Dame Una O’Brien:** Well that’s the question, isn’t it? Kicking the tyres, another set of eyes on a complex area of policy.

1:00 pm

**Mr Angus:** I think also — and this is maybe not a very good point — but we’re all very busy, and there is a bit of, “That’s their work, you know. They’re being paid a lot of money to work out this out. I’m being paid a lot of money to do other things that I need to concentrate on. Are they going to help me do mine as well?”, you know. So there’s a practical aspect there. But I do think it’s right that, when a policy reaches a fairly worked-up state, I think — this shovel-ready state that Shane coins — is a good backstop before it is implemented, because, if you’re steeped in it, you do start to miss the obvious, and maybe bringing in the
fresh look at the very end, provided you’re given the accurate information and it’s not
buried in 400 pages that you have to find it, is a good policy.

Dame Una O’Brien: Thank you.

Mr Angus: Can I just add though, I mean, I haven’t looked at them in detail, but the
current protocol for casework committee is much more detailed and much more complex
than it was in 2005 or 2009, not the least the invitation, as, I think, has been mentioned in
some witness statements, the invitation of DFP on a regular basis — sorry, DOF as it is now
— on a regular basis to such casework committees. That wasn’t really a — it wasn’t a feature
in my day.

Dame Una O’Brien: Thank you.

Mr Aiken: That document you referred to is an annex to Mr Murphy’s statement, so we
have access to that.

Mr Angus: Can I help with anything else? Is that —?

The Chairman: I don’t think so. I think Mr Aiken is finished with Mr Angus.

Mr Aiken: Yes. I’ve no more questions for him, Chairman.

The Chairman: May I simply just reinforce what Mr Aiken said, Mr Angus? If there is
anything that you think you ought to have looked at, by all means notify us in writing and
that should be enough. It’s unlikely, I think, that we’d need to call you back again, so you can
return to that happy state of retirement that I once had the benefit of [Laughter.]

Dr MacLean: All three of us.

Mr Angus: I will do. I have been following online the proceedings, and I think I will
continue to do so. So if that jerks any —

The Chairman: That might, yes.

Mr Angus: — further points.

The Chairman: That might give you a good stimulant to do that.
want, but we took that to the Minister a year ago and she’s decided it’s an RHI”?

Mr Murphy: I don’t recall that. I think we would’ve understood, given the gestation and the consultation exercise, and given the work that would’ve been undertaken, that there would obviously have been a development — policy development process, which would, obviously, involve the Minister. I would’ve known that generally, but did I know specifically that there was a submission to the Minister a number of months ago which the Minister had endorsed a choice? I didn’t know that specifically, or at least —

The Chairman: Is your question more specific than that? Are you asking about a submission to the Minister that pointed out the financial difference?

Mr Aiken: No, I’m happy with where —

The Chairman: Right.

Mr Aiken: I’m going to then move into the point you’ve just made, Chairman.

Mr Murphy: So, as far as I can recall — and, again, you know, I don’t have notes or minutes to, sort of, help fill in any blanks in my memory. I don’t recall —

Mr Aiken: Let me —

Mr Murphy: — but I am resting on my recollection and —

Mr Aiken: Well, let me explain why it’s important. Because it doesn’t, from the minutes, suggest you knew that. And it’s important for this reason: we’re going to look, and we’ll look briefly with Mr Angus, who required it to be inserted, about the issues around the challenge fund being spelled out, as it were, to DFP and, in brackets, the Minister. And, therefore, for the panel’s deliberation, it may well be important for them to understand whether that requirement from the casework committee was being made in the context of having known, “In fact, the Minister’s already decided about this, but we want her to see it again”, or,

“She’ll be seeing it for the first time”. Do you understand me?

Mr Murphy: Absolutely. Can I say with categorically [sic] — I can’t say anything
1 categorically — but if you put my head on a block, asked me one way or the other, I would
2 — the extent of my recollection would be I would not have necessarily known that
3 submission to the Minister, which she had taken some sort of conclusive proactive decision
4 to do an RHI fund — I would not have necessarily known that. I would’ve known that there
5 would’ve been a general policy development process which the Minister would’ve been, sort
6 of, aware of and involved in, but that had, sort of, went into a step of a, sort of, a proactive
7 conclusive decision. I wouldn’t necessarily have known that that was the case, but, you
8 know, I don’t have any direct evidence to point to, to back up —

9 Mr Aiken: Well, can I turn it round this way, then: if it had been said to you, “Listen, we
10 dealt with that already; we dealt with it in June 2011, and the Minister’s decided”, would
11 that not be something important to be in the minutes?

12 Mr Murphy: It — that’s not an unreasonable statement, yes.

13 Mr Aiken: Is that a yes?

14 Mr Murphy: Oh yes; I finished with a yes.

15 Mr Aiken: It should be in the minutes. If you were told that and that’s what happened,
16 you would expect to find it in your minutes?

17 Mr Murphy: Yes. Yes, I think that’s reasonable.

18 Mr Aiken: Now, you cite in your witness statement three principal reasons that were
19 given to you for why the challenge fund was rejected — and if we just see 19546 — the
20 three that you give here in your statement are:

21 “The Cost of Administration.”

22 And you explain that energy division held that out to you as one of the key factors in their
23 preference for an RHI.

24 10:15 am

25 Mr Murphy: And I think I described yesterday how that was viewed as very much a stop-
Mr Aiken: — from sifting through this material:

“Action — the business case to DFP (and the Minister) should explicitly address the reasons why the RHI is favoured over the Challenge Fund option.”

Now, I just want to ask you, as far as you can — I appreciate it’s looking back now — to explain to the panel why, when you read the draft you were given, you wanted this inserted.

Mr Angus: Right, you asked Shane a question, if I may just sort of —

Mr Aiken: Sure.

Mr Angus: — start there — if he had known that the Minister had been asked the same question back in 2011 —

Mr Aiken: Yes.

Mr Angus: — in the initial submission. I think, maybe naively or not, I’d forgotten — sorry, I didn’t appreciate that point, so I’m maybe thinking here, “Hey, hang on a minute, you know, not just present a single option to the Minister; you need to tell her why we haven’t chosen the other one.”

Mr Aiken: Let me just pause, just in case — bear with me, because what I asked Mr Murphy was whether he could recall being told that in June 2011, “Look guys, the Minister’s decided this already.” Do you have any recollection of that?

Mr Angus: No, none whatsoever, no. And I wouldn’t have been copied in to those submissions.

Mr Aiken: No, no, I’m not suggesting you would —

Mr Angus: No, no, I’m just saying, you know, so there was no opportunity other than at the casework committee or through the papers.

Mr Aiken: And you don’t have a recollection of it. The reason I’m asking you is if you had known that — and I appreciate this is with hindsight — your phrase here might have said, “Again, as far as the Minister’s concerned”.
without any context or description and so forth I have no way of knowing when or why it was produced, nor by whom.

Obviously I cannot be certain but looking at the document, and deducing the calculations presented within it, I can only really presume that Sam has produced this in order to make a number of points or observations to the Inquiry. Assuming there is some rounding of the figures, the calculations appear to take the input cost of pellets (0.044 in Year 1) from the CEPA work, uprate them to 2011 prices and then convert them into output costs (0.054 in Year 1) using the projected efficiency of a biomass boiler within the CEPA report (85%). This then seems to be compared to the 5.9p tariff, before the assumed CEPA load demand for the medium biomass boiler category (50kW Boiler running 17% of the time) is then contrasted against the maximum load for a 99kW boiler.

Obviously I cannot be certain but it does look to me that Sam is endeavouring to make a point about how the load assumption in the CEPA / AEA work turned out. You will see later in this response that I myself make a number of observations around just how far away actual loads deviated from the load assumptions used by CEPA in setting the tariffs.

a to g. – see above.

31. Please see response at paragraph 26.

Creation of the RHI Scheme – Tiering of Tariffs

32. My involvement in the creation of RHI revolved around the Casework Committee, held on 9 March 2012. The papers provided to the panel did reference tiering to a certain extent (for example on p65, p130 & 131 of CEPA June 2011, and footnote 9 in the synopsis paper within the suite of casework papers). The reasons put forward for not proceeding with tiering revolved around the RHI Tariffs not being above the incremental
fuel cost in all cases, and so the rationale around tiering within the reports provided to Casework revolved around their role in discouraging over use.

As a result I believe that, at the time of the casework, my understanding of the role of tiering related only to its role in discouraging over use.

Much later, during my work on, and leading up to, the 2017 RHI regulations, (primarily during December 2016 to February 2017 I was drafted in to work on the financial modelling and the business case for the 2017 Regulations) I came to appreciate that the second and, in my view now, more important role of tiering is to regulate the rate of return to scheme participants. It is my view that, whether or not the incremental fuel cost is above the subsidy, that some means (such as tiering) is required in order to regulate the rate of return and guard against excessive returns to individual installations.

33.

a. See above. This aspect of tiering was not apparent within the papers provided to the 2012 Casework Committee. It was only much later, during my work on the 2017 RHI regulations, I came to appreciate and understand that an important role of tiering (in my view the most important role) is to regulate the rate of return to scheme participants and avoid over-compensation.

b. See above. The role of tiering in discouraging over use was touched upon in the papers to the casework committee in March 2012 and so I would have had some appreciation of it at this stage. The papers provided to the panel did reference tiering to a certain extent (for example on p65, p130 & 131 of CEPA June 2011, and footnote 9 in the synopsis paper within the suite of casework papers). The reasons put forward for not proceeding with tiering revolved around the RHI Tariffs not being above the
compensation is avoided. Tariffs are paid for 20 years (the lifetime of the technology) and are ‘grandfathered’, 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\(^3\) is chosen to develop a consistent tariff across technologies and scales; and
- The net costs (difference between capital and operating costs of fossil fuel counterfactual and renewable alternative) are calculated and a tariff determined.

19. To generate the appropriate tariff the difference in costs between the renewable technology and the fossil fuel counterfactual is determined and this figure is divided by annual heat output to demonstrate the appropriate tariff. For example;

**Technology assumptions for medium biomass tariff.**

<table>
<thead>
<tr>
<th></th>
<th>CAPEX £/kW</th>
<th>OPEX £/kW/year</th>
<th>Efficiency %</th>
<th>Load factor %</th>
<th>Size kW</th>
<th>Life time Years</th>
<th>Fuel cost p/kWh(^4)</th>
<th>Upfront barrier costs (including admin costs) (^5) £</th>
<th>Ongoing barrier costs (£/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomass</td>
<td>608</td>
<td>4.60</td>
<td>85</td>
<td>17</td>
<td>50</td>
<td>20</td>
<td>4.39</td>
<td>3.951</td>
<td>828</td>
</tr>
<tr>
<td>Oil</td>
<td>97</td>
<td>3.45</td>
<td>93</td>
<td>17</td>
<td>50</td>
<td>15</td>
<td>4.86</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

\(^3\) Provides certainty for an investor by setting a guaranteed support level for projects for their lifetime in a scheme, regardless of future reviews

\(^4\) 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.

\(^5\) Note that this is the fuel cost in 2012. The model takes account of expected future fuel costs in determining tariffs.

\(^6\) Calculated following the GB RHI approach (i.e. a number of days times an assumed hassle cost per day).
in order to draw the reader’s attention to the point. And the point here, and then you can
see Mr Murphy’s annotated it as well, is that there’s going to be inbuilt reviews.
Now, what I want to ask you is: what did you — and please do the best you can to leave
hindsight out of it — what did you, at the time you read this, understand that to mean?
What was it telling you?

Mr Cooper: Well, it wouldn’t — I can tell you exactly. It certainly wouldn’t have meant to
me, because I wouldn’t have known that it had to be in legislation, so “built in” — I think you
previously asked the question around “built in”: is it something that you would expect to
have been in legislation? No, because I wouldn’t — you know, I’m not a legislative expert. I
wouldn’t’ve had legislative background. So — no. What I would have expected, or what I
would have — would have? What I understood was: there were going to be regular, detailed
reviews of this scheme. Now, there are other parts of the document that would reinforce
the point around, as well as regular scheduled reviews, ongoing review of the scheme —

Mr Aiken: Monitoring, as it were?

Mr Cooper: Absolutely: monitoring, and monitoring in particular of the constituent
components of the tariff, as well as demand, but fuel cost in terms of capital costs and so on
and so forth. So that was gonna be constantly looked at. It wasn’t just in scheduled reviews.

Mr Aiken: So the assurance —. What you came away with, as I understand the point
you’re making, is, “We are going to be keeping a close eye on all that goes on within this
scheme”.

Mr Cooper: Absolutely.

Mr Aiken: Now —.

The Chairman: What was the basis for that? What was your basis for thinking, “Well,
that’s a good assurance”? You didn’t have the regulations; you say that wouldn’t have
occurred to you anyway — the legislative way of doing it; you didn’t have any written
requirement, such as, “There will be a review every six months”, “We will monitor the returns from Ofgem every six months”, “We will review tariffs after the first year”. The scheme itself didn’t take any contractual form or written form, so all you had, really, to reassure yourself was something you were told by a member of the Department who was selling the scheme. In other words, they’re saying, “Oh, don’t worry. We will be doing reviews”. Now, what I’d like to know is: you, with your challenging reputation, why would you take that without being, “Show me. Show me where’s the obligation to have reviews. Where is it? Is it written down?”?

Mr Cooper: Um, the point — um, I go back to I would not have known the need to have this in regulation.

The Chairman: There may not have been a need, but why were you not asking how — what happens if there’s a change of personality in the Department? How will they know you have to have reviews? Is there a log saying you must have reviews?

Mr Cooper: Well, there was a risk register, which —

Mr Chairman: Which said you had to have reviews every six months or every year?

Mr Cooper: Well, it said that tariffs were gonna be — tariffs were one of the main risks, either over- or under-subsidy. It said that Ofgem and the division were gonna be close to the installers, so they were gonna have prior knowledge of what’s happening out there on the supply side and demand side in terms of what’s coming through. So, you know, that is not a scheduled piece of work. That’s an absolute ongoing requirement.

The Chairman: Let me put in a slightly different way: if they had said to you, “Don’t worry. We’re going to have reviews — regular reviews”, what was the difference, if any, between them telling you that and saying, “Reviews are built in”?

Mr Cooper: Sorry, Chair, could you mention that again?

The Chairman: If they came along — if they’d come into the casework committee and
said, “Don’t worry. We’re aware of the risk of fuel prices changing, of tariffs changing. We’re
going to have regular reviews. Not going to tell you every year or every six months”. What
would be the difference between them telling you, “We’re going to have regular reviews”
and the description of the reviews they’re going to have as built in?

Did it mean anything to you at all?

Mr Cooper: Well, yes, it —

The Chairman: Well, that’s what I’m trying to find out. How was it built in?

Mr Cooper: Sorry, the term “built in” —

The Chairman: Yes.

Mr Cooper: — in itself didn’t mean something to me. But there were — within the
casework papers, there was a, “We will have regular scheduled reviews. The first review will
be in 2014”, I think —

Mr Aiken: Yes.

Mr Cooper: — I think is the answer to that. So, you have, “We’re going to have these
regularly, the first one’s going to be in 2014”.

The Chairman: So they’re really, simply, assurances by the people from the Department,
is that right? That’s what they were.

Mr Cooper: Well —

The Chairman: You were relying on that.

Mr Cooper: It’s — the accountable person, who is presenting the case, is absolutely
representing a position that they are responsible for delivering on. Now, if someone doesn’t
deliver on a very material representation, I don’t think it’s unreasonable to — when they
know that they’re giving you that representation in the context of a yes or a no decision, I
don’t think it’s unreasonable for them to recognise, “This is an important statement that I
am giving to this panel, who are making a decision on foot of what I am saying to them”. I
just f—you know, if I was saying, “This is going to happen to a committee that was making a
decision on a case involving substantial amounts of money”, I would know, and I would
make sure to the best of my ability that it was going to happen. So, —

The Chairman: You’d no — there was no subsequent check here. You were relying
entirely on what you were told. You may or may not have understood the term “built in” to
mean something, but that was it. And th—at—I’m trying to do is to see just how effective
the challenging role of this committee may have been. And, if somebody says, “Look, don’t
worry about this; we have reviews built in”, some people might think that that would
stimulate, “Well, how are they built in? How are you going to ensure that those reviews
continue on a yearly basis or a six-monthly basis or whatever it is? What document,
regulation, whatever — whatever objective requirement will there be to have those?”, but
none of those questions were asked.

Mr Cooper: Hands up, I wouldn’t’ve known to ask the regulation question, to be perfectly
frank.

The Chairman: It’s only one of a number of questions.

Mr Cooper: Yes, I understand and accept —

The Chairman: And you —

Mr Cooper: — that, but —

The Chairman: This whole scheme was going to be structured on a set of regulations. And
the regulations weren’t included in the documents, were they?

Mr Cooper: No, they weren’t, no.

The Chairman: There was no legal representative anywhere along the line, so —

Mr Cooper: That’s correct.

The Chairman: — one can maybe understand the fact that you didn’t look to see whether
or not there was a legal obligation to have built-in reviews.
Mr Aiken: I wonder — can we show on the screen, please, DFE-382576? And this is internal page 7 of what ends up being the signed minutes. And I'm drawing attention to the passage — 382576 — just the passage that is after — you can see the single line:

“PA asked”

and then

“FH explained that the NI RHI will have scheduled reviews built-in to the scheme to allow DETI to ensure that the scheme remains fit for purpose and value for money for the duration. The scope of these reviews will include analysis of tariffs ... appropriateness of technologies ... assessment of effectiveness and success.”

And, just above that, you can see the point you’ve just made, Mr Cooper; if we just see:

“The first review of the scheme would begin in 2014, with proposed changes implemented in 2015.”

The draft of the minutes which you didn’t see had January ’14 and April ’15, and then it changed to this form, but, ultimately, this is what gets signed off.

Mr Cooper: And —

Mr Aiken: And, you can see then — just let me finish the point — then, slightly further down, you can see:

“PH added that it may be ... tariff levels are not sufficient to encourage uptake”.

And he goes on to make a point about it again, it:

“will be reviewed in 2014 ... tariff levels may be adjusted, for new installations, if appropriate.”

2:45 pm

Now, if I understand, the point you’re making in answer to the Chairman is, whenever the policy officials, in the context of this is submitted — grade 3 is signed off on it. If a grade 5 tells you this is what they’re going to do, you take it at face value that this is, in fact, what they’re going to do. Rightly or wrongly, as it turns out, to do that, that’s what you did at the time.

Mr Cooper: Absolutely.
Mr Aiken: And your point is — and it’s a matter for the panel, ultimately, whether they accept it or not — but your point is, it was reasonable for you to take that position.

Mr Cooper: Absolutely. I firmly believe that.

Mr Aiken: Now, you mentioned the risk register —

Mr Cooper: Uh-huh.

Mr Aiken: — and what I want to do is look at that because it’s something — a document we haven’t looked at in significant detail. It strikes on the very point you’ve just made, and I was going there anyway, as it turns out.

What I want to do, first, is move through to DFE-398077, which is internal page 14 of the synopsis document. So this is the 14th of 16 pages that make up the synopsis, and it’s the risks section. Now, can I take it that, for someone like you, this is one of the most important areas, as in, “What are the risks and how are they going to be dealt with?”?

Mr Cooper: Uh-huh.

Mr Aiken: And we can see that — if we just scroll up a little bit so we can see paragraphs 54 and 55 on the page at the same time, thank you — the risks section involves half a page, as it were and, frankly, just lists out the 10 risks that there are said to be, and then you’re told:

“These risks will be monitored and managed as part of the risk register”

and you’re referred to the risk register, which is “Annex E” in the casework papers.

Did it not strike you as odd that the risks section — something that casework, as it were, as the challenger, would be interested in — was in this form, which was, frankly, not really addressing the risks but telling you, “Here is what they are, and the answer as to how they’ll be dealt with you can find in the body of the material”?

Mr Cooper: I don’t think it did, to be honest.

Mr Aiken: It didn’t look odd to you at the time?
Feasibility Study for the development and implementation of the Northern Ireland Renewable Heat Incentive (NI RHI)

Regular Contact between Ofgem and DETI

6.2. From our experience, regular, informal contact between the Ofgem and DETI teams is critical to ensure the delivery project is a success. A good flow of information between the two teams will help minimise surprises and misunderstandings which can hinder implementation. To this end we would recommend regular contact between the two teams via telephone and emails, and sharing of project plans and draft documents. At the very least the two teams should schedule weekly conference calls with core team members from both organisations. In the majority of cases Catherine McArthur and Jonah Anthony will be the main points of contacts for DETI officers.

Joint Ofgem/DETI NI RHI Administration Board

6.3. The purpose of the joint NI RHI Administration Board is to take decisions regarding development and delivery of the project, monitor key risks and issues and act as a change control mechanism for covering any items previously out of scope. We envisage that this Board will initially meet fortnightly throughout the development stage before moving to a monthly cycle once the scheme has become established. At this time we should aim to have a face-to-face meeting at least quarterly with the Senior Responsible Owners from both organisations. Refer to ‘Cost Control’ below for further details of ongoing quarterly meetings.

6.4. We recommend the following people are standing members of the Administration Board (with additional members called to attend as necessary).

   a) Fiona Hepper, Senior Responsible Owner and Director of Energy - DETI (Joint Chair)
   b) Joanne McCutcheon, Programme Director, Sustainable Energy - DETI
   c) Peter Hutchinson, Project Manager, Sustainable Energy - DETI
   d) Matthew Harnack, Senior Responsible Owner and Associate Director Commercial - Ofgem (Joint Chair)
   e) David Fletcher, Project Manager and Senior Manager NI RHI - Ofgem
   f) Ofgem Project Manager (TBC)
   g) Representatives from the Northern Ireland Authority (NIAUR) depending on how the scheme will be administered formally.

RHI Implementation Board

6.5. This is a key internal Ofgem programme board which will be used to oversee both the development and ongoing implementation of the GB RHI scheme and the NI RHI scheme. We recommend that this board has oversight of both schemes alongside each other both schemes will share operational personnel and IT systems. There is also likely to be much overlap in future developments of both schemes. The Board comprises of representatives of the operational team, development team and IT colleagues, as well as Matthew Harnack and Bob Hull.
Feasibility Study for the development and implementation of the Northern Ireland Renewable Heat Incentive (NI RHI)

6.6. All key issues are to be escalated or passed on for information to the Management Committee and joint Ofgem/DETI Administration Board. At present the RHI Implementation Board meets fortnightly.

Management Committee

6.7. The Management Committee meets weekly and is used by senior managers to review all operational issues in Ofgem E-Serve. It meets weekly and is attended by Matthew Harnack and Bob Hull, who will represent the NI RHI scheme on the Committee. It is chaired by Stuart Cook, the Managing Director of Ofgem E-Serve.

GEMA

6.8. The Gas and Electricity Market Authority (referred to as “the Authority” or GEMA) is the ultimate decision making body in the organisation, from which all powers are derived. A sub-committee of GEMA is the Audit Committee, which provides a robust internal check on all the activities undertaken by Ofgem. This will include the NI RHI scheme if Ofgem is selected to administer it.

6.9. At present there are no mechanisms in place to control costs of the scheme in the event that uptake is considerably higher than anticipated.

Cost Control

6.10. DETI have expressed some concerns around the need for controls to be developed to ensure the costs of the NI RHI remain within budget.

6.11. Ofgem would propose that the joint DETI-Ofgem Administration Board be continued after the Development Phase has been completed into an ongoing operational board to monitor scheme operations, costs and uptake. The Board could meet on a quarterly basis and review scheme expenditure, uptake, technologies and capacities of installations. This board could give additional scrutiny to scheme functions and identify trends in uptake to proactively make adjustments to the scheme to control uptake steadily instead of taking a reactive approach should scheme costs grow beyond the proposed budget.

Enforcement

GB RHI enforcement framework

6.12. Under the current GB RHI system Ofgem is responsible for enforcement issues, and has enforcement powers under the relevant legislation. However this was based on the fact that Ofgem were the statutorily appointed administrators of the GB RHI scheme, and had been awarded particular enforcement powers.
The Chairman: So, the proposal that there should be such a board simply disappeared, did it?

Mr Hutchinson: I think that’s probably — until that April ’14 time, that we said, “Look, let’s have a more formal kind of process”, but even then, I —. Well, I don’t know. It may not have mirrored that proposal; it might’ve been more monthly teleconferences at a lower level, again.

The Chairman: Should it have been brought to the attention of someone higher up that this is a proposal by Ofgem that would help to monitor the development of this new, expensive scheme?

Mr Hutchinson: I think there’s no question it definitely should’ve been implemented, and it should’ve been —

The Chairman: I know, but who should have decided it, Mr Hutchinson? That’s what I’m trying to get at. I’m not suggesting that you should’ve done it.

Mr Hutchinson: I don’t know. Whenever no one decides, it is hard to determine who should’ve decided it is my — . You know. I suppose it could’ve come from anyone. It could’ve come from anyone looking at that report at that stage. It could’ve come from myself or Joanne or Fiona or anyone who had seen that, or the casework could come back and say, “Why haven’t you done that?”, and, “You need to do that now”.

The Chairman: But nobody did?

Mr Hutchinson: No.

The Chairman: Thank you very much. What is Mr Hutchinson’s position in terms of evidence now?

Mr Lunny: We’re not finished phase 1, unfortunately. I think it’s taking longer than Mr Hutchinson or the Inquiry had anticipated. I think that’s partly because we are looking at documents that Mr Hutchinson had a very detailed involvement in. He is able to cast some
TC asked what commitment there was from HMT that payments made up to 2015 would be met for 20 years and how would the Department manage the payments based on the current budgets.

FH highlighted the financial commitment made by HMT in the GB RHI and the subsequent funding made available to DETI for the Northern Ireland scheme. FH also advised that HMT had informed DETI that any commitments made under this initial budget would be met by HMT for the lifetime of the scheme i.e. meeting the 20 year payment commitment. The RHI is a flagship policy for DECC and whilst budgets have only been set until 2015/2016 it is expected that further monies will be made available in the next budget period. This is demonstrated by the GB scheme being open to 2020 and in documentation provided by DECC to the EU Commission suggesting expected subsidies of £2.2bn in 2020.

In terms of managing payments, PH explained that there would be monthly draw downs to maintain and manage the financial aspect of the RHI to ensure that the budget would not go into overspend on any particular year. PH further advised that Ofgem has significant experience in financial profiles and budget handling as it has also worked on the GB Renewable Obligation, the NIRO and the GB RHI.

FH added that a monitoring committee would also be established in respect of the budget and the Department would receive monthly reports from Ofgem on the applications, accreditations and spend budget for the NI scheme.

TC asked how often the meters would be read for non-domestic customers. PH advised that meters would be read on a quarterly basis. The amount paid will be based on metered heat output and the tariff for the type of technology installed. This would also allow the Department and Ofgem to calculate annual forecasts for the RHI budget. If necessary the scheme could be closed to new applicants mid-year if applications were higher than expected and budgets risked being overspent.

FH confirmed that Energy Division would return to the casework committee within the next year to seek approval for the implementation phase 2 of the NI RHI.

**ACTION**

- Energy Division to seek casework committee approval in advance of Phase 2 of the RHI scheme.

6. Governance / Ofgem management arrangements

TC asked what controls would be in place for the project management aspect of the contract with Ofgem. JMC advised that discussions had taken place with CPD and Ofgem. TC asked for assurance that any contract would include detail on performance targets, remedies, safeguards in place for under-performance, and breakpoints. PA enquired if the Department would have a separate contract or be part of the DECC contract in place with Ofgem. JMC confirmed it would be a separate contract.
and budgets risked being overspent.”

Now, we know, and I can take you to another draft of the minutes, an earlier draft of the minutes, we know that that section about:

“If necessary the scheme could be closed to new applicants mid-year”.

That’s something you added to the draft minutes. Do you recall doing that?

Mr Hutchinson: No, I don’t.

Mr Lunny: Ok. Well, I’ll take you to it, briefly. It’s DFE-80568. This should hopefully be version 3 of the minutes, so it’s an earlier version than the ones we’ve looked at. You can see that’s the first page and if we scroll down to 80571, we should hopefully see that you’re the person amending it. If we zoom in on the middle of the page, again, we can see that PH1 beside that comment which, I think, indicates it’s your first comment.

Mr Hutchinson: Uh-huh.

Mr Lunny: And if we scroll down to 80574, and you can see there the first paragraph where you’ve added, it appears, the sentence:

“If necessary the scheme could be closed to new applicants mid-year if applications were higher than expected and budgets risked being overspent.”

Mr Hutchinson: Uh-huh.

Mr Lunny: Does that help you recall adding it or —.

Mr Hutchinson: No. Well, I’ve no doubt that I did, you know. It states it there. I think, probably, at that stage we were thinking, “Will we have the primary powers to make regulations on the administration of the scheme?” So, in a worst-case scenario, that the budget risked an overspend and you could use those primary powers to introduce regulations to either suspend or close the scheme in some way, to revoke the existing regulations or do something that would meant that you didn’t have to take any new applications or accreditations.
Mr Lunny: We know, obviously, that that representation or assurance has been given, ultimately, to the casework committee. Either it was given to them orally at the meeting and that’s a record of it or it’s been added to the minutes that have been signed off by Mr Cooper. But we know there was no suspension power, automatic or otherwise, in the regulations akin to that introduced in GB IN 2012. And we know as well there was no guarantee that the scheme could remain open after the 31st of March 2015 to new applicants. If you recall, you —.

Mr Hutchinson: Yes, it would depend on the new budgets for agreement.

Mr Lunny: Exactly: so there was no guarantee that any new accreditations, any new applicants, could enter the scheme after the 31st of March 2015. Knowing that, having given that assurance, can you explain why there wasn’t, then, some step taken to make sure that the scheme could be suspended or closed quickly?

Mr Hutchinson: No, I think we always had an element of confidence that the scheme could be closed by the primary powers and subordinate regulations, maybe not being mindful about the length of time that that would take.

Mr Lunny: You would have known that, for any form of legislation to be enacted, it might require a public consultation firstly.

Mr Hutchinson: Yes.

Mr Lunny: And it’s going to require some drafting.

Mr Hutchinson: Yes.

Mr Lunny: And it’s going to require, potentially, the Assembly —

Mr Hutchinson: Approving it.

Mr Lunny: — the ETI Committee —.

Mr Hutchinson: Yes, agreeing to it, yes, in that, sort of, draft affirmative methodology, yes.
Mr Lunny: So it wouldn’t necessarily be a swift way of dealing with a potential budgetary problem?

Mr Hutchinson: No. It would take a period of time. I think that’s why we thought, look, it’s important to make projections or monitor and then, if there is an issue, then you address it. And that was at that stage, and there’s always a view that, well, what kind of element of cost control might come forward in the future. And that’s the reference to the 23rd consultation, where you’d have been suggesting a more, sort of, mechanism where it’s closed automatically, if you like, by regulations.

4.00 pm

Mr Lunny: I’m going to take you just to one other DFE document that you won’t have seen, unfortunately, before that’s only come recently to our notice, but it’s just about how DFE perceive that statement within the minutes. It’s at DFE-336697. This is an email. I think it’s from a number of people within — amongst a number of people in internal audit and it dates from the 9th of March 2016, so it’s a much more recent document looking back at what did or didn’t happen. It has an attachment to it, which is headed:

“Summary of actions agreed at the casework committee meeting 9 March 2012”.

And the author, who’s called Dovile Bagdonaite, is writing to Michael Woods in DETI, saying:

“I have drawn a summary of actions agreed and promises given at the Casework Committee on 9 March 2012 as requested. See attached above.”

And if we scroll down to the following page, we’ll see the summary of actions agreed and promises given. So they’re set out in a table form. So they’ve attempted to list what actions were agreed, promised made. If we scroll down to row 8, we can see there that one of the promises or actions that is recorded is:

“If necessary the scheme could be closed to new applicants mid year if applications were higher than expected and budgets risked being overspent.”
The Chairman: I’m not sure that regulation not being your thing is the answer. It seems to me that if someone says it can be cut down mid-year, without knowing what he’s talking about, you could simply say, “How?”. And if he did believe — I know that he says that — if he did believe that it would take regulations, it would take consultation — that’s what he was talking about — I have no doubt that you and a number of the other committee members would’ve further asked him, “Well, how can that possibly be able to shut it down mid-year?”. And all it required was a little nudging or further question on him saying, “If necessary, it can be closed to new applicants mid-year”.

Mr Aiken: Can I ask you —

Mr Cooper: I do think there’s a diametric opposite still in the representation that was given and the knowledge that the person giving the representation had. That’s the only point that I can make, I’m sorry.

Mr Aiken: Can I put it to you this way, Mr Cooper? If you had, for a second, thought that the assurance that we could shut this down in year meant policy, consultation, regulations, ETI Committee, Assembly, what would the response have been to that statement then?

Mr Cooper: The response would’ve been, “That isn’t good enough. That doesn’t work”. It doesn’t work.

Mr Aiken: Well, that’s what —. And he’s given evidence and says, when he said he could shut it down in year, that’s what he meant by that, and what you’re saying is you don’t know how he could say to you in year shutting the thing down if, in fact, what he meant was all I’ve just described.

Dr MacLean: Perhaps there’s one letter missing: instead of “in year”, it should’ve been “in a year”.

Mr Aiken: In a year.

Dr MacLean: [Laughs.]
“meters would be read on a quarterly basis. The amount paid will be based on metered heat ... and the tariff for the type of technology installed. This would ... allow the Department and Ofgem to calculate annual forecasts for the RHI budget. If necessary, the scheme could be closed to new applicants mid-year if applications were higher than expected and budgets risked being overspent.”

Now, you can probably see the point I’m about to make, Mr Cooper, but here is an assurance that’s being given about how one of the key risks would be managed. And I think, when we come to look at phase 2, you’ll explain that you and the grade 3 assumed that, in fact, what he described here was available as a thing to do quickly within the legislation. But he’s giving this assurance to you that:

“If necessary the scheme could be closed to new applicants mid-year if applications were higher than expected and budgets risked being overspent.”

What I want to ask you, which — I didn’t cover this, so I’m doing something new that I didn’t do with Mr Murphy and Mr Angus, though I presume they will accept the point; if necessary, we’ll check that with them. But nobody seems to have noticed that this assurance does not form part of the content of the risk registers.

Mr Cooper: That’s correct.

Mr Aiken: And this is a continuation, as it were, of the point the Chairman was making: that here is an assurance that’s given against which a check could be performed. Now, the check, as far as the casework committee is concerned, mightn’t necessarily be getting the legislation and seeing what it looks like in practice, but he’s told you, “This is what we can do if needs be”. And, for some reason, he’s able to give you that assurance and it’s not in their own risk register.

Mr Cooper: Uh-huh.

Mr Aiken: I presume that wasn’t identified at the time.

Mr Cooper: [Short pause.] It mustn’t have been.
Mr Aiken: If it had been — can I maybe turn it this way round? If you had, as the casework committee, identified that this type of assurance was being given, which was effectively a stronger assurance than just monitoring, “Here’s the emergency action we can take if there’s a problem.” If you had identified that that wasn’t recorded as an action in the risk register, in terms of how this risk of going over budget would be dealt with, presumably you and your colleagues would’ve said to them, “Hold on a minute, that’s not in the risk register; why’s that?”.

Mr Cooper: I accept that.

Mr Aiken: Now, just to be clear and to be fair to you, it’s not just you. He’s made the point. Energy division created the risk register. Energy division didn’t include it in the risk register, but the assurance is given to you, and the challengers, as it were, don’t spot it.

Mr Cooper: Uh-huh.

The Chairman: Mr Cooper, you knew that this was a novel scheme. It was a scheme led by demand.

Mr Cooper: Uh-huh.

The Chairman: And what that amounted to in practice was that, providing an applicant satisfied the administrator — Ofgem in this case — that he had complied with the regulations and installed the equipment, you had to pay him; public money had to be given to him.

Mr Cooper: Uh-huh.

The Chairman: Do you remember being aware of that when the casework committee was sitting, that this is a scheme in which, if they get through certain hoops, that’s it, you have to pay them?

Mr Cooper: The pre-accreditation point: I’m not 100% sure if I knew that or not. But I knew, once someone was successful within the scheme, that we had to pay them.
The Chairman: Well, was that not why the existence or non-existence of an emergency power such as this was absolutely crucial?

Mr Cooper: Correct. And the scheme that we approved had a big red button to stop it.

The Chairman: Where?

Mr Cooper: As approved. We were told that. We were given that assurance. Now, again, it being in legislation or not is not something that I would’ve been aware of.

The Chairman: No, I can understand that. What I do have difficulty with is, knowing the nature of the scheme, the importance of finding out more about your big red button must’ve been obvious, surely, to people. How do you stop this? Do you say, “No, we’ve got no more money”? That’s not going to be an answer, because if the people who have got — who have passed accreditation — they are entitled to be paid. So, I just have difficulty in understanding, given the nature of this scheme, its unique quality, virtually unique — certainly for Northern Ireland — and being told that you can relax because there is a power to stop it mid-year, which you say is a big red button, that nobody asked Mr Hutchinson, “What is your button? Where is it? How do you work it?”

3:00 pm

Mr Cooper: [Short pause.] Yes. I can’t say —.

The Chairman: It’s very difficult to look back.

Mr Cooper: Yes, it is.

The Chairman: And hindsight is a wonderful thing, but —

Mr Cooper: Look, I know, I know I asked lots of questions. They’re not all in the minutes. “Did I ask that?” I can’t say I did. What I do know is, I was absolutely attuned to this thing cannot overspend.

The Chairman: Yes.

Mr Cooper: I was absolutely attuned to it. I do have a point about the novelty of it. You
1 **The Chairman:** You knew that.

2 **Mr Connolly:** Well —

3 **The Chairman:** You had never seen a scheme like this before.

4 **Mr Connolly:** No. I, maybe naively, assumed that Ofgem would start receiving applications and that, once the budget was being reached, the scheme would just close off to new applicants. Now, I didn’t know anything about the legal mechanism that would be set up to do that; I wouldn’t’ve had the experience to understand that.

5 **The Chairman:** Well, you might not have known what the technical legal mechanism was, but you did know, I would’ve thought, that there was a risk, and thereby, surely, arises a need for enquiry.

6 **Mr Connolly:** Well, I would’ve thought that that risk at that time would simply be managed by telling Ofgem to stop receiving new applications — something as simple as that — because budgets were being monitored, and it seemed obvious at the time that, once you approached your budget, you would stop receiving applications.

7 **The Chairman:** So you thought it was obvious that, who? That DETI?

8 **Mr Connolly:** Yes.

9 **The Chairman:** Would tell Ofgem, “Stop applications”? That was just something that you worked out for yourself; you didn’t get any reassurance of that or ask anybody about that?

10 **Mr Connolly:** No, but, certainly, I think that point was mentioned at the casework committee meeting; maybe not in those terms, but there was an expectation that the scheme could be stopped if necessary.

11 **12:15 pm**

12 **The Chairman:** This is the reference to Peter Hutchinson’s mid-year suspension.

13 **Mr Connolly:** Yes.

14 **The Chairman:** Didn’t ask about that. Just assumed —
**Mr Connolly:** I didn’t ask for the details. It wouldn’t have — it wouldn’t have occurred to me to ask for them, but I understood or I assumed that this could be stopped relatively straightforwardly.

**Mr Lunny:** You knew there was a budget limit.

**Mr Connolly:** Yes.

**Mr Lunny:** You knew that, when they open this scheme, they don’t know how many people will apply, and you’d have known there was a bit of uncertainty about what the use each of those people might make of their boiler was, so that — I think you’ve said there was an awareness that there were a lot of assumptions and there was an uncertainty around those assumptions.

**Mr Connolly:** Yes.

**Mr Lunny:** So we don’t know how many people are going to apply; we don’t know whether they’re all going to use their boilers for 17% of the time, 10% of the time or 30% of the time; and all of those things — the number of applicants, their level of use of their boilers — they would all have an impact on how much the Department has to pay out every year. So, you’d have known all of that, and you knew, regardless of whether it was AME or DEL or a mixture, that there was a fixed amount of funding available each year.

**Mr Connolly:** Uh-huh.

**Mr Lunny:** And did you ever ask any detailed questions about how are the costs going to be controlled?

**Mr Connolly:** No.

**Mr Lunny:** No. And did you not think, knowing there were those uncertainties — number of applicants, level of use — did you not think that, given all those uncertainties, it would be important to know what the cost controls were?

**Mr Connolly:** Hem, I have to say the thought didn’t occur to me at the time.
Mr Lunny: So it never — you never thought to ask what the cost controls might be.

Mr Connolly: No.

Mr Lunny: And, what you know about potential ways of mitigating those risks are — that you picked up from documents and from casework — that monitoring and review would be one of them, and you picked up — it wasn’t in answer to your question or enquiry — you picked up at the casework committee that Peter Hutchinson said, “We can stop the scheme mid-year”.

Mr Connolly: Yes.

Mr Lunny: So you picked that up, albeit that was an answer to somebody else’s question, and then you assumed, yourself, without checking or asking that there would be some sort of ability to stop payments.

Mr Connolly: Yes.

Mr Lunny: Do you not think now that you should’ve been asking questions about cost control, that running over budget was a risk, that one of your roles was to look at how the risks were being mitigated or addressed and you ought to have been asking questions about that?

Mr Connolly: I would accept that, yes.

Mr Lunny: And do you know why you, why you didn’t then ask those questions?

Mr Connolly: Hem. [Short pause.] I just don’t believe I would’ve had the experience at that time to appreciate those risks.

Mr Lunny: In fairness to you, you had had eight to 10 months in an external organisation immediately after university, doing some economic appraisals.

Mr Connolly: Yes.

Mr Lunny: You then had your Utility Regulator period, which had nothing to do with economic appraisals or these types of projects, and then, by the time you started working on
the view that’s not what you understood the in-built review message to have meant.

Mr Murphy: Yes, and, you know, if I was a person to get upset about things, I’d probably feel very upset that, for whatever reason, the assurances didn’t turn into tools, which were needed.

The Chairman: Well, it would be a matter of common sense, really, Mr Murphy. If you just take one of the variables you’ve referred to — price of oil — the price of oil doesn’t hang about and go down —

Mr Murphy: Absolutely.

The Chairman: So you’d need to respond to that, and responsiveness would have to mean quickly.

Mr Murphy: That would be my interpret —. And, again, that’s what I’m sort reflecting here.

The Chairman: That’s what you’re saying.

Mr Murphy: The position that energy were saying in 2015 seemed very at odds with what I’d perceived we were signing up for. And, again, I’m not making any view as to whether the words that were given to the panel were, sort of, warm words that we wanted to hear or whether these were things that were supposed to be done that weren’t done. I’m not giving a view on that. I simply don’t know, but, in the circumstances where —. And to be fair, know, Trevor, know there, he’s well known in casework committees for asking about governance, risk and so forth, and this is a typical sort of area that Trevor would ask about. That, know there, worst-case scenarios can be avoided. So, things like in-built reviews and the ability to shut the thing down were key part of the assurances in my mind and I would strongly suspect Trevor’s and Philip’s mind as well.

Mr Aiken: We’ll hear from Philip. We do know from Trevor Cooper’s statement in a different context when he’s talking about his discussions with David Thomson about
you write on the side:

“In-built Reviews”.

What I want to understand, so that you can assist the panel, is, as a civil servant working in policy and checking policy and doing, you know, caseworks, when you see a phrase, “built-in”, what does that actually mean to you as an informed civil servant? Because it may not mean the same thing to me or the panel members. What did it mean to you?

**Mr Murphy:** Well, what I took from it would be —. There would be a mechanism. Exactly what that would be I wouldn’t necessarily know, but there would be a mechanism whereby changes to tariffs could be actioned.

**Mr Aiken:** So, you wouldn’t have read any more into it necessarily than a signal that an eye is going to be properly kept.

**Mr Murphy:** Well, the eye —

**Mr Aiken:** What I’m saying is: you didn’t read it as a statutory mechanism in the regulations to do something. It could have been that, but it might have been something else as —

**Mr Murphy:** Well, I wouldn’t necessarily have understood whether that had or hadn’t to be. I know they are statutory. Certainly, I had an expectation that there would be something which could be actioning [sic] those assurances given, whatever it be, and again, I wouldn’t have been over the detail of legislation and what can or can’t be in legislation. But given the circumstances where you’re setting something which has tariffs in an area where circumstances would inevitably change, we would expect a, vigilance and then b, responsiveness, and I took that as assurance that those attributes would be there because, inevitably, things would change.

**Mr Aiken:** So it didn’t convey a specific tool, but it was conveying — a message was understood?
Mr Murphy: Yes. So I don’t think I assumed that this would be a statutory mechanism. I didn’t necessarily assume it wouldn’t be either, because I wouldn’t necessarily know that it did have to be or it didn’t have to be.

Dr MacLean: Mr Murphy, sorry —

The Chairman: Sorry, go on.

Dr MacLean: In terms of responsiveness, would you think that a system whereby there would be a six- to 12-month delay in being able to take any action was responsive in your definition of the term?

Mr Murphy: Well, certainly what I’ve said in my statement — when it come [sic] to 2015, and we were asking energy what can they do, the tariff review hadn’t been done; it was supposed to have been done. They didn’t seem to have any tools — well, that’s what they were saying — they didn’t have any tools to respond, and that seemed very much at odds.

Dr MacLean: Exactly.

Mr Murphy: Now, I’m not here to —

Mr Aiken: If we can put up on the screen, please, WIT-19558, just to be fair to you, Mr Murphy, which is what you are referring to, I think, in your statement — paragraph 43.

Mr Murphy: Yes.

Mr Aiken: You are explaining:

“taking those new tariffs through the Committee, and then through the Assembly (which all seemed a pretty slow response compared to the assurances provided to the Casework Committee back in March 2012).”

Now, what, as I understand it, the panel are asking you is: if in-built reviews were intended to convey to you in terms of responsiveness and reaction and vigilance that you would have to take legislation through with a consultation process and then the making of the legislation in order to effect change, that doesn’t appear to have been what you, when you’re writing your statement, in any event — you seem to have, in 2015, when looking back on this, have
on a regular basis?

Mr Hughes: Well, yes, my experience within DARD would’ve been that those sort of corporate-type documents, if you want to call them that, would’ve been reviewed on a fairly regular basis, yes.

The Chairman: And that would include a risk register, if there was one, for that project?

Mr Hughes: It would, yes.

The Chairman: And whether or not you were conscious of an increasing risk or a new risk, there would be an obligation to review it on a time basis.

Mr Hughes: Yes.

The Chairman: So, that even if it was just quarterly, you would put in, “1st April 2015 — no change in risk”, something like that.

Mr Hughes: Yes.

Dr MacLean: But if you didn’t do that in DARD, would that have been something that your grade 7 was doing?

Mr Hughes: That would’ve been done by the head of branch, yes.

Dr MacLean: Right. So it wasn’t one of the things you’d been asked to do.

Mr Hughes: No, no.

The Chairman: But it’d be done by the grade 7, would it?

Mr Hughes: Yes.

The Chairman: Thank you very much.

Dame Una O’Brien: Can you recall when you first saw this document?

Mr Hughes: Just there now.

Dame Una O’Brien: So, the first time you’ve seen the risk register —

Mr Hughes: I haven’t seen that, no.

Dame Una O’Brien: — of the RHI scheme —
Mr Hughes: I haven’t seen that document, no.

Dame Una O’Brien: — the non-domestic scheme RHI scheme is today?

Mr Hughes: Yes. Well, it was in the bundle, but —.

Mr Aiken: It’s not something you —

Mr Hughes: No, no.

Mr Aiken: — had any involvement in during your time in the job. And, in fairness to you, you, in your PwC interview, if we can look at 04650, please? And this is four boxes from the bottom of the page. You were asked about the risk register, and you say:

“Certainly, I physically wouldn’t have been working on the risk register so I don’t know”,

who might have been.

Mr Hughes: Yes.

Dame Una O’Brien: I only mention the significance of it because, obviously, quite a lot of the actions, albeit they were already very out of date, were assigned to Peter Hutchinson. So, there’s — insofar as it was in anyone’s memory how those had been updated — there was clearly a lot to pass on about that.

Mr Aiken: Well, it’s not in the —

Dame Una O’Brien: It’s not in the handover.

Mr Aiken: — handover —

Dame Una O’Brien: Thank you.

Mr Aiken: — note that I’m aware of.

I’m going to turn to the domestic scheme with you now. You’ve said you had that as your priority when you arrived. And when you arrived, just to ground the context, the domestic scheme had moved through casework on the 9th of June of 2014. There was much — and I dealt with Ms McCay — much interaction over the minutes, and changes to the minutes, and debate about administration costs and so on. The SL1 submission had gone to the Minister
4. Please set out any further significant evidence you have or of which you are aware, having regard to the Inquiry’s Terms of Reference, which has not been adequately addressed in your previous written or oral evidence.

a. The Role of the Casework Committee:

i. The role of the Casework Committee has come under a lot of scrutiny throughout this process and I would like to address some of the issues arising from it. Despite the fact that the Scheme was presented with assurances from Energy Division’s Grade 3, David Thomson, that he stood over the case presented, the Casework Committee challenged this complex case in a number of areas.

ii. In doing so, we identified a number of specific areas of concern:

1. The need for robust project management arrangements by Energy Division:

   We sought assurances from Energy Division in relation to this and received assurances, in writing (WIT-18688) from the Grade 5 (Fiona Hepper) regarding contract/project management after the casework had finished and specifically that Central Procurement Directorate advice was and would be taken on board. Further, subsequent to the casework committee meeting I met, on 2 April 2012, with both Grade 3 (David Thomson) and Grade 5 (Fiona Hepper) officers and received further confirmation on the assurances previously provided in writing.

2. The relationship between the Challenge Fund and the RHI Scheme:
Renewable Heat Incentive Scheme Case Work Committee

Friday 9th March 2012 @ 2.00pm
DETI Headquarters, Netherleigh House

Present:
Casework Committee panel: Trevor Cooper (Chair)
Philip Angus
Shane Murphy

Energy Division: Fiona Hepper
Joanne McCutcheon
Peter Hutchinson
Susan Stewart (note taker)

Economics - Analytical Services Unit: Sam Connolly

Documentation provided:
1. Synopsis of Renewable Heat Incentive Scheme Project
2. Assessment of the Potential Development of Renewable Heat in Northern Ireland - AECOM Pöyry
4. CEPA/AEA additional analysis
5. Ofgem Feasibility Study
6. Risk Register
7. State Aid application / Addendum to application
8. DFP – Strategic Outline Case & DFP response
9. Economists comments

Issues addressed
1. Background
2. Policy Context
3. Options
4. Additionality
5. Budgetary management solutions
6. Governance / Ofgem management arrangements
7. Funding issues arising from Ofgem and internal resources
8. State Aid
9. Risk management
10. Conclusion and Agreed Actions
1. Background

TC asked for a brief overview of the proposed project.

FH advised that the work on the Renewable Heat Incentive (RHI) came as a result of the Renewable Energy Directive (RED), published in June 2009, which requires the UK to ensure that 15% of its energy consumption comes from renewable sources by 2020. In September 2010, the Northern Ireland Executive endorsed a target of 10% renewable heat in NI by 2020 (against a baseline of 1.7% in 2010). This target is included in the Strategic Energy Framework (SEF) and an interim target of 4% by 2015 is included in the Programme for Government (PfG).

FH explained that the NI RHI was largely based on the GB RHI which provides a continuous income scheme of 20 years (the lifetime of the technology) for those who generate renewable heat. The main differences between the NI and GB schemes is that the NI tariffs are set against an oil counterfactual whereas the GB tariffs have been set against a natural gas counterfactual; this results in lower tariffs being required in Northern Ireland. The reason for this is that the NI heat market is dominated by oil (over 75%) with an emerging gas market (17%), in GB gas is the market leader (70%) with oil a secondary heating source (10%).

FH also explained that the introduction of the RHI would be through a phased approach. The scheme will firstly be open to the non-domestic sector and include the most well-established renewable heating technologies. The domestic sector would then be introduced in phase 2; this phase might also include additional technologies. In the interim, domestic householders will be able to apply for Renewable Heat Premium Payments to assist in the capital cost of installations. Those who do avail of the RHPP will still be able to get a RHI but for a lesser period i.e. 18 years instead of the full 20 years as the RHPP represents two years of RHI payments.

FH also advised that another major component of the RHI would be the administration of the scheme. Her Majesty’s Treasury (HMT) has provided DETI with funding of £25m over the next four years for the development of the renewable heat market. However HMT has advised that this funding is only to be used for the RHI itself and not the administration of the scheme. Therefore the costs of administration will have to be paid by the DETI. The Department of Energy and Climate Change (DECC) in GB has paid Ofgem (the GB energy regulator) over £5m for the development of the system, of which IT systems are a large part; it expects to pay around £10m over the next 4 years for the administration of the system. By contracting with Ofgem and utilising systems and processes already in place, DETI can expect significant savings whilst enjoying the benefits of the Ofgem administration systems.

SM clarified that the approvals being sought were for the RHI scheme, the RHPP scheme and the costs for administering these schemes. TC confirmed that it would be essential to address all the costs that arose from any policy proposal including administration consequentials.
FH added that by growing the renewable heat market there are significant opportunities for Northern Ireland to reduce our dependence on imported fossil fuels and increase NI’s fuel security and diversity of supply, this in turn will reduce carbon emissions.

2. Policy Context

TC asked what would happen if the NI target of 10% renewable heat generation by 2020 was not met, given the target set under the RED. TC also asked if DECC was comfortable with the target set for NI.

FH advised that Northern Ireland, whilst not an EU Member State, is expected to contribute to the UK target of 15% renewable energy by 2020. To support this target, DETI has set targets of 40% renewable electricity and 10% renewable heat by 2020. If the UK as a whole fails to achieve its target of 15%, then it would be expected that the EU Commission would impose infraction fines at Member State level. It would then be up to Whitehall to pro-rata fines depending on how each of the regions had contributed to the target. It is therefore important that Northern Ireland demonstrates a significant increase in renewable heat levels by 2020. DECC is content with targets set by DETI for Northern Ireland.

FH added that 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. There is a need to consider the implementation of both policy instruments and financial incentives as there is a risk of market failure and of Northern Ireland not achieving the targets set. 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%.

SM confirmed that he was content that there were legal and statutory obligations to be met. PA asked if NI is not on course to meet its target, is there room to negotiate with DECC on the NI target? FH advised that GB would probably look at how the other regions were progressing with their targets. However, if NI did alter its target, this would affect the amount of funding from HMT. As with the NI Renewables Obligation (NIRO), the Department has sought to counteract the possibility of not meeting targets by including periodic reviews of the RHI scheme; the first review is scheduled for 2014. However, the Department has also included an option to hold emergency reviews, if the need arises.

PH added that a RHI roadmap will also be developed, with other NI Departments, and that the Renewable Heat Strategy Group would facilitate this.

TC confirmed that the policy development and implementation had been thorough and robust and showed that there was a definite need to implement a renewable heat scheme in Northern Ireland in line with EC and National obligations and in particular given the provision of GB funding for the policy (although not for the administration thereof).
3. Options

SM asked why the challenge fund was not taken forward as the preferred option, as evidence in the consultant’s report showed it to be a viable alternative.

PH advised that the report by CEPA and AEA Technology examined a number of options to incentivise the renewable heat market. The two main type of options included capital grant/challenge fund options, which would provide a one off payment to consumers, and renewable heat incentive options that provide a long term, 20 year, stream of payments to consumers to make up the difference in the whole-life cost of a renewable heating system compared to an oil based heating system.

The June 2011 economic appraisal recognised that each approach had its own merits but it was not unequivocal in its overall conclusion. In addition, since then, the feasibility study report compiled by Ofgem has provided further information on the cost of administering a RHI scheme. Whilst the June 2011 analysis suggested that a challenge fund option could produce the most renewable heat at the lowest cost, Energy Division was conscious of a number of other key factors that needed to be taken account of in the final policy decision. These factors have been very influential in the conclusion, by Energy Division, to proceed with the RHI option. They include the following:

- **Affordability of Administration**
  In terms of administration, the costs of running a Challenge Fund were considered to be prohibitive, especially in comparison to potential costs of administering the NI RHI. Previous experience of running Reconnect demonstrated administration costs of £1.48m for a grant scheme worth £10.5m (14%). The Reconnect scheme was for domestic customers only, and on a ‘first-come-first-served’ basis. A challenge fund, dealing with commercial applications and involving complex evaluation metrics, could be expected to be at least as, if not more, costly than the Reconnect scheme, equating to potentially £3.5m over the first 4 years. **This would not be available within DETI budget.**

  The RHI option, whilst requiring complex administration arrangements, can be implemented at a fraction of the cost through building on existing systems already in place for the GB RHI. The expected costs of the RHI scheme have been assessed and project development costs of £386k and running costs of £710k over the first 4 years. These administration costs are much more affordable in comparison to the Challenge Fund option.

- **Challenge Fund Assumptions**
  Under the Challenge Fund options it is assumed that only the most cost effective systems are incentivised given that applications are ranked via a set of evaluation criteria. On reflection, it has been considered that this assumption is much too idealistic,
in that it relies on cost effective applications being made in the first instance. If, however, applicants unduly focus on less efficient technologies then the scheme will be skewed towards these less efficient systems. The experience learned from Reconnect was that in a capital grant scheme applicants will focus on technologies that are most affordable, not the most appropriate or efficient. Under Reconnect the most popular technology, the one installed most often (50% of the time), was solar thermal. Within this analysis solar thermal is shown to be the most costly and least efficient renewable heating technology. If this experience was repeated, in a RH grant scheme, the target would be missed, funding would be skewed towards the most costly and inefficient systems and the appraisal's NPC would undoubtedly be wide of the mark.

The RHI operates a technology neutral approach in that the same methodology is used to determine each tariff and a specific tariff set for each technology. This, in theory, results in each technology being as attractive as each other and therefore consumers are free to select the most appropriate application. As the tariff factors the whole life cost of the technology (capex, opex, fuel and non-financial hassle costs) consumers are expected to select the most efficient system. This in turn supports the achievement of the renewable heat targets, as well as helping to build overall capacity within the renewable heating industry as it should support a wider range of technologies, helping this market to grow further than might be expected under a challenge fund.

- **Ability to meet targets over set timescales**
  The RHI scheme provides the most certainty in terms of achieving the targets of 4% and 10% renewable heat by 2015 and 2020 respectively, as set out in the Programme for Government. This is because an RHI will deliver more heat earlier than a challenge fund as the initial annual payments to consumers will be smaller compared to capital grants, thus enabling more installations to be facilitated within each budgetary period. Whilst the Challenge Fund could also meet the targets, and potentially deliver more renewable heat, it is likely that this would be at a later date. As designed currently the RHI will achieve around 11% renewable heat by 2020.

- **Risk**
  It has been considered that the RHI presents a lower level of risk than the potential Challenge Fund. This is largely due to the fact that incentives will be paid on actual heat output. RHI payments will only be made on metered heat output with installers paid for the amount of heat generated. This ensures that installations are kept in working order and used therefore meeting the renewable heat targets.

As the Challenge Fund would be contributing to the capital costs of the installation (rather than the whole life costs under the RHI) a risk would develop that, after a short time, installations would stop generating renewable heat. This could be because the renewable heat fuel is no longer affordable, that a fossil fuel alternative (such as gas) become available or more attractive, that the site is no longer in business etc. In these circumstances clawback arrangements would need to be initiated, which could be costly and complicated, and the target would be hindered. As the RHI only rewards actual heat output there is less risk and less impact if sites stop generating renewable heat.
Also, in terms of risk, an RHI delivers earlier against the target. In the event that corrective action were required then the RHI option would identify this need earlier and also allow more time, scope and budgetary flexibility for action to be taken to put the scheme back on track.

- **Consistency with GB**
  Whilst energy is a devolved matter Energy Division is mindful that a high number of commercial operators wishing to avail of support for renewable heat in Northern Ireland will operate jointly in GB. Whilst it is wholly appropriate for a specific incentive mechanism to be developed in Northern Ireland given the variances in the two energy markets, Energy Division is conscious that consistency in approach with GB would be beneficial to those availing of support in both Northern Ireland and GB. Therefore a specific NI RHI, whilst addressing the NI heat market, would be a more consistent approach with GB and will assist policy development options in the future.

- **Example of the NIRO**
  The NIRO was launched in Northern Ireland in 2005 to support the development of renewable electricity installations. Similar to the RHI, the NIRO offers no up-front capital support for installations but instead offers 20 years of payments over the lifetime of the technology with payments determined by actual energy output. This example has proved successful with installers and has led to an increase of renewable electricity levels from 3% to over 12% currently. This experience increases confidence in a RHI scheme to generate investment in renewable heat. On the other hand the potential uptake under the Challenge Fund option would be subject to greater unknowns.

On the basis of the information presented above, the Casework Committee accepted that the RHI was the most appropriate method of incentivisation for the Northern Ireland renewable heat market.

TC asked how the tariffs had been designed and whether Energy Division felt that the various tariffs and types of technologies were appropriate.

PH advised that the 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’. This provides certainty for an investor by setting a guaranteed support level for projects for their lifetime in a scheme, regardless of future reviews. The tariffs will be amended on a yearly basis, for existing installers and new schemes, to reflect the rate of inflation (RPI).

PH further explained that 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 is chosen to develop a consistent tariff across technologies and scales; and
The net costs (difference between capital and operating costs of fossil fuel counterfactual and renewable alternative) are calculated and a tariff determined.

In order to generate the appropriate tariff, the difference is determined in the costs between the renewable technology and the fossil fuel counterfactual and this figure is divided by annual heat output to arrive at the appropriate tariff. For most of the tariffs a discount rate of 12% is applied, this is consistent with the GB approach in designing the GB RHI and other renewable energy schemes, for ‘domestic’ tariffs a discount rate of 16% is assumed, again this is consistent with GB. The solar thermal tariff is set differently, in-line with GB, as to set the tariff in the same way would result in a tariff vastly higher than the other incentives given the cost of solar thermal and could lead to a large amount of the funding being skewed to the least efficient technology.

PH explained that the scheme would be open for new installations until 31 March 2020 and therefore the final payments would be made in 2040. The length of payment is set as the lifetime of the technology. The first review of the scheme would begin in 2014, with proposed changes implemented in 2015. In addition to this, phase 2 of the scheme would begin in April 2013 and involve the introduction of the domestic sector and consideration of tariffs for additional technologies (bioliquids, air-source-heat-pumps, deep geothermal etc).

PA asked what factors have been taken account of when scheduling a review of the RHI scheme.

FH explained that the NI RHI will have scheduled reviews built-in to the scheme to allow DETI to ensure that the scheme remains fit for purpose and value for money for the duration. The scope of these reviews will include analysis of tariffs (either to be reduced or increased), the appropriateness of technologies (remove existing technologies or add new innovative ones) and the assessment of effectiveness and success.

PH added that it may be that the tariff levels are not sufficient to encourage uptake or that they are too generous (very unlikely) and hence uptake is such that there is insufficient budget. This is a main risk of the RHI and to help counteract this risk, Ofgem will provide regular management reports which will enable uptake to be carefully monitored and forecast expenditure. The RHI will be reviewed in 2014 (and at regular intervals thereafter) and tariff levels may be adjusted, for new installations, if appropriate.

TC asked why each accredited technology was guaranteed payment for 20 years and how can we ensure that the renewable heat technology was being utilised. PH advised that tariffs are paid for 20 years as this is the lifetime of the technology. Currently, the RHI only applies to the non-domestic sector therefore all renewable heat installations will be required to be accompanied with a heat meter that will determine actual heat output. Heat meters are already common in many commercial applications and therefore should not be a barrier to uptake. Meters will allow for accurate readings to be taken of actual usage and appropriate payments made. They will also ensure accurate statistics are maintained throughout the lifetime of the scheme.
SM sought clarification on the fact that the scheme appeared to be backdated to September 2010. PH explained that applicants who had technologies installed on or after that date would be able to avail of the RHI scheme but the payment would not be backdated to that date. It was confirmed to TC and SM that no retrospective payments would be given out under the NI RHI and RHPP schemes.

On the basis of the evidence presented, the panel accepted that of the options presented the proposed RHI scheme was the most appropriate option to implement in NI.

**ACTION**

- The business case to DFP (and the Minister) should explicitly address the reasons why the RHI is favoured over the Challenge Fund option.

4. **Value for Money / Additionality / Displacement**

FH advised that without Government subvention for renewable heat installations, the target of 10% renewable heat by 2020 would not be met. This would impact on the UK’s delivery of 15% renewable energy set under the RED. FH also said that it was important that the scheme was not over-subsidising the renewable heat sector; the consultant’s work ensured that there was a balance created in terms of the technologies to be incentivised and the tariffs to be given.

The DETI Economist has reviewed the approach taken by the consultants and is content that the proposed scheme represents the best value for money.

In terms of displacement, the main area where displacement might occur, as a result of the RHI, will be in the established heating markets. Displacement is likely to be greatest in the oil market given the fact that tariffs are set against an oil counterfactual (and therefore provide oil customers with a greater incentive). However, this displacement is necessary to ensure a more diverse heating market and reduced carbon emissions. Displacement of natural gas is likely to be much more limited. In terms of job displacement, the RHI is expected to create new jobs, given the need for installers and suppliers. However, these jobs will, to a certain extent, be displacing existing jobs in the fossil fuel market.

TC enquired whether it would also be beneficial to switch natural gas customers to renewable heat as well as oil consumers.

FH stated that the Department was not excluding gas customers from switching and that they could avail of the RHI. However, the Department had based the NI RHI on an oil counterfactual because oil was the predominant fuel source in NI. Oil is also a greater polluter (through carbon emissions) than natural gas. Gas customers are also relatively new and it would be wasteful for consumers to switch whilst their boilers which were reasonably new whereas a large proportion of oil boilers had reached the end of their life.

5. **Budgetary management solutions**
TC asked what commitment there was from HMT that payments made up to 2015 would be met for 20 years and how would the Department manage the payments based on the current budgets.

FH highlighted the financial commitment made by HMT in the GB RHI and the subsequent funding made available to DETI for the Northern Ireland scheme. FH also advised that HMT had informed DETI that any commitments made under this initial budget would be met by HMT for the lifetime of the scheme i.e. meeting the 20 year payment commitment. The RHI is a flagship policy for DECC and whilst budgets have only been set until 2015/2016 it is expected that further monies will be made available in the next budget period. This is demonstrated by the GB scheme being open to 2020 and in documentation provided by DECC to the EU Commission suggesting expected subsidies of £2.2bn in 2020.

In terms of managing payments, PH explained that there would be monthly draw downs to maintain and manage the financial aspect of the RHI to ensure that the budget would not go into overspend on any particular year. PH further advised that Ofgem has significant experience in financial profiles and budget handling as it has also worked on the GB Renewable Obligation, the NIRO and the GB RHI.

FH added that a monitoring committee would also be established in respect of the budget and the Department would receive monthly reports from Ofgem on the applications, accreditations and spend budget for the NI scheme.

TC asked how often the meters would be read for non-domestic customers. PH advised that meters would be read on a quarterly basis. The amount paid will be based on metered heat output and the tariff for the type of technology installed. This would also allow the Department and Ofgem to calculate annual forecasts for the RHI budget. If necessary the scheme could be closed to new applicants mid-year if applications were higher than expected and budgets risked being overspent.

FH confirmed that Energy Division would return to the casework committee within the next year to seek approval for the implementation phase 2 of the NI RHI.

**ACTION**

- Energy Division to seek casework committee approval in advance of Phase 2 of the RHI scheme.

**6. Governance / Ofgem management arrangements**

TC asked what controls would be in place for the project management aspect of the contract with Ofgem. JMC advised that discussions had taken place with CPD and Ofgem. TC asked for assurance that any contract would include detail on performance targets, remedies, safeguards in place for under-performance, and breakpoints. PA enquired if the Department would have a separate contract or be part of the DECC contract in place with Ofgem. JMC confirmed it would be a separate contract.
PA asked if we had a right of audit entry included in the contract. FH assured that this would be put in place.

TC stated that IAS should be consulted in relation to the proposed management arrangements (in particular in regard to validation of amounts due and controls over payments as appropriate), and assurances that any contract would give DETI/NIAO etc appropriate inspection/monitoring/audit rights. FH stated that IAS had not yet been consulted but this would be done.

TC stated that when seeking approval for any contract, Accounting Officer approval should also be sought on the basis of the appointment of an external delivery/management organisation.

FH confirmed that a request for approval of a Direct Award Contract would be submitted to the Permanent Secretary, David Sterling along with a Third Party Organisational delivery award.

SM asked if the Utility Regulator was to be involved in the management of the RHI scheme. FH explained that the Utility Regulator was to have no role in the scheme; it was felt that it was more appropriate to deal directly with Ofgem to ensure that all of the Department’s corporate and governance requirements were put in place.

**ACTIONS**

- Energy Division to obtain the respective approvals from DAO and Minister for the appointment of Ofgem through a Direct Award Contract (if confirmed as appropriate by CPD) and Third Party Organisation Delivery Award.
- Energy Division to engage with Internal Audit regarding Ofgem management arrangements and, in particular on the requirement for External Delivery Organisation (EDO) audit inspections to be carried out on Ofgem as administrators of the scheme.
- Energy Division to confirm Casework Committee that any contract with Ofgem for administration of the RHI scheme would have performance targets, remedies, safeguards in place for under-performance, and breakpoints.

### 7. Funding issues arising from Ofgem and internal resources

TC asked how the Ofgem feasibility study had been financed and was advised that it had been paid from Energy Division’s consultancy budget. FH added that Energy Division would be putting in a bid for the budget to cover Ofgem’s development and operating costs. For the NI RHI, estimates are £386k capital spend to develop the system and then a further £136k operational spend in the first year. TC stated that the costs of any scheme would need careful consideration and as noted above, TMT approval would need to be sought.
PA enquired whether there is the possibility of developing and operating the RHI system in-house. FH explained that there were neither the skills, expertise nor resources within DETI or the wider NI Civil Service to currently undertake the administration of the NI RHI.

SM expressed concerns over the 100% contingency budget for the development of the IT systems. JMC advised that this contingency was for the development phase and would only be required for a short period of time. Energy Division had sought clarification on the Ofgem proposal for £1m legal budget. Ofgem has accepted that DETI already has a separate legal contract in place to cover DETI’s legal responsibilities and it was not anticipated that the existing budget would be exceeded. TC asked if there had been much experience of legal claims. FH confirmed that there had been one recent incident under the NIRO but the matter was concluded satisfactorily without any legal involvement.

ACTION

- Energy Division to send a paper to the Top Management Team seeking approval for the ongoing administration costs for Ofgem to operate and maintain the NI RHI system.

8. State Aid

TC enquired about the current status of the state aid application.

FH advised that in December 2011, the Department sent a detailed submission to the Commission, outlining the NI RHI proposals. This submission took on board lessons learned from the GB application that was approved in November 2011. An addendum to the December application was submitted in February 2012 advising on proposed changes as a result of further economic analysis carried out by external consultants.

TC was advised that as and when the tariffs are amended or revised, the Department would have to reapply for State Aid approval.

9. Risk management

PH provided a brief overview of the risks and uncertainties in implementing a renewable heat incentive in Northern Ireland: These are:

- Incorrect subsidy level - subsidy levels proposed for the RHI are either too high or too low. This risk will be managed through regular, planned, reviews of subsidy levels.

- Risk of harm to other sectors - an increase in renewable heat may lead to a reduction in the demand for conventional heating (oil, gas, coal and electric heating). At a high level, the short term harm to any sector should be relatively small, especially given the current scale of the oil market. However if the uptake of
renewable heat impacted disproportionately on the gas sector this could have negative consequences for the extension of the gas network.

- Risk of failure of renewable heat supply - supplies of renewable fuel (i.e. biomass, biogas and bioliquids) may be disrupted. In addition, new skills will be required if installations can be made. DETI will work with colleagues in DARD and DEL to mitigate against this.

- Risks of low take-up – This could be a result of tariffs or other possible barriers include planning restrictions, a lack of awareness, and negative perceptions of the reliability and/ or cost of renewable heat. The Department has budget cover to deliver messages about renewable heat to homes and businesses.

- Risk of failure to implement targets set by EU Renewable Energy Directive - the RED is the key driver for the work undertaken by the Department on renewable heat. The requirement to meet the very challenging 12% renewable energy target falls at Member State level, not at Devolved Administration (DA) level. Each DA is expected to contribute as much as possible to the overall UK target and the Department has undertaken to introduce a renewable heat scheme in Northern Ireland in order to mitigate this risk.

- Risk of insufficient budget for administration or future payments - there may be the possibility of a higher than expected uptake leading to a requirement to manage the annual budget and higher administration costs. This will be mitigated by liaison with Ofgem to assess uptake levels and expected spend against profiled budget. The Department has also been liaising with the DECC finance team regarding future financing and with HMT relating to the budget for existing commitments.

- Risk of failure to receive State Aid approval - the EU Commission may refuse to approve the NI RHI scheme. The Department took on board the lessons learned from the GB state aid application. This is a low risk; it would be more likely that the scheme would be amended.

- Risk of instances of fraud - instances of fraud could include duplicate applications, unusual meter readings (too high for expected output), lack of information being provided to the administrator and using unregistered installers. The Department has put in place measures to counteract instances of fraud and where there are instances of suspected fraud, the participant will be investigated and payments will be stopped.

- Risk of failure in administration of RHI - there is the potential for delays in dealing with applications, accreditations and payments for the NI RHI scheme which would lead to stakeholders complaining about application process. This could be as a result of difficulties in IT systems or a lack of communication between Ofgem and the Department. The Department will establish a joint project team with Ofgem as the scheme is implemented.
10. Conclusion and Agreed Actions

The Casework Committee confirmed that they were content to approve the RHI and the RHPP schemes to proceed to DFP conditional on completion of the following agreed actions:

- Energy Division to obtain the respective approvals from DAO and Minister for the appointment of Ofgem through a Direct Award Contract (if confirmed as appropriate by CPD) and Third Party Organisation Delivery Award;
- Energy Division to confirm Casework Committee that any contract with Ofgem for administration of the RHI scheme would have performance targets, remedies, safeguards in place for under-performance, and breakpoints;
- Energy Division to engage with Internal Audit regarding Ofgem management arrangements and, in particular on the requirement for External Delivery Organisation (EDO) audit inspections to be carried out on Ofgem as administrators of the scheme;
- Energy Division to send a paper to the Top Management Team seeking approval for the ongoing administration costs for Ofgem to operate and maintain the NI RHI system;
- Energy Division to seek casework committee approval in advance of Phase 2 of the RHI scheme;
- The business case to DFP (and the Minister) should explicitly address the reasons why the RHI is favoured over the Challenge Fund option; and
- Energy Division to send submissions concurrently to DFP and Minister seeking approval for the RHI scheme.

11. Approval of Note

Signed:

Trevor Cooper,
Panel Chairman

Date: 30 Mar. 12
Fiona

I think I have only one significant comment as tracked in the draft - ie that the business case should explicitly address the reasons for rejecting the Challenge Fund option.

Philip

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Please consider the environment - do you really need to print this e-mail?

Fiona

Please see attached draft minutes of casework committee which you presided over on Friday. I would be grateful if you could consider these and if you feel changes are required track these on the document and return to me. Once content, I'll arrange for a hard copy for Trevor's signature as chair.

In parallel, we are progressing with the Actions agreed - including, DAC paperwork to go to David S and Minister; the Ministerial submission and the business case material for DFP and hopefully a number of these can issue before the end of the week to keep up the pace re implementation.

Comments as soon as possible would be welcome - although I appreciate you all have other work pressures,
Thanks in anticipation ….

Fiona
Renewable Heat Incentive Scheme Case Work Committee

Friday 9th March 2012 @ 2.00pm
DETI Headquarters, Netherleigh House

Present:
Casework Committee panel: Trevor Cooper (Chair)
Philip Angus
Shane Murphy

Energy Division: Fiona Hepper
Joanne McCutcheon
Peter Hutchinson
Susan Stewart (note taker)

Economics - Analytical Services Unit: Sam Connolly

Documentation provided:
1. Synopsis of Renewable Heat Incentive Scheme Project
2. Assessment of the Potential Development of Renewable Heat in Northern Ireland - AECOM Pöyry
4. CEPA/AEA additional analysis
5. Ofgem Feasibility Study
6. Risk Register
7. State Aid application / Addendum to application
8. DFP – Strategic Outline Case & DFP response
9. Economists comments

Issues addressed

1. Background
2. Policy Context
3. Options
4. Additionality
5. Budgetary management solutions
6. Governance / Ofgem management arrangements
7. Funding issues arising from Ofgem and internal resources
8. State Aid
9. Risk management
10. Conclusion and Agreed Actions
1. Background

TC asked for a brief overview of the proposed project.

FH advised that the work on the Renewable Heat Incentive (RHI) came as a result of the Renewable Energy Directive (RED), published in June 2009, which requires the UK to ensure that 15% of its energy consumption comes from renewable sources by 2020. In September 2010, the Northern Ireland Executive endorsed a target of 10% renewable heat in NI by 2020 (against a baseline of 1.7% in 2010). This target is included in the Strategic Energy Framework (SEF) and an interim target of 4% by 2015 is included in the Programme for Government (PfG).

FH explained that the NI RHI was largely based on the GB RHI which provides a continuous income scheme of 20 years (the lifetime of the technology) for those who generate renewable heat. The main differences between the NI and GB schemes is that the NI tariffs are set against an oil counterfactual whereas the GB tariffs have been set against a natural gas counterfactual; this results in lower tariffs being required in Northern Ireland. The reason for this is that the NI heat market is dominated by oil (over 75%) with an emerging gas market (17%), in GB gas is the market leader (70%) with oil a secondary heating source (10%).

FH also explained that the introduction of the RHI would be through a phased approach. The scheme will firstly be open to the non-domestic sector and include the most well-established renewable heating technologies. The domestic sector would then be introduced in phase 2; this phase might also include additional technologies. In the interim, domestic householders will be able to apply for Renewable Heat Premium Payments to assist in the capital cost of installations. Those who do avail of the RHPP will still be able to get a RHI but for a lesser period i.e. 18 years instead of the full 20 years as the RHPP represents two years of RHI payments.

FH also advised that another major component of the RHI would be the administration of the scheme. Her Majesty’s Treasury (HMT) has provided DETI with funding of £25m over the next four years for the development of the renewable heat market. However HMT has advised that this funding is only to be used for the RHI itself and not the administration of the scheme. Therefore the costs of administration will have to be paid by the DETI. The Department of Energy and Climate Change (DECC) in GB has paid Ofgem (the GB energy regulator) over £5m for the development of the system, of which IT systems are a large part; it expects to pay around £10m over the next 4 years for the administration of the system. By contracting with Ofgem and utilising systems and processes already in place, DETI can expect significant savings whilst enjoying the benefits of the Ofgem administration systems.

SM clarified that the approvals being sought were for the RHI scheme, the RHPP scheme and the costs for administering these schemes. TC confirmed that this is the position.

FH added that by growing the renewable heat market there are significant opportunities for Northern Ireland to reduce our dependence on imported fossil fuels and increase NI's fuel security and diversity of supply, this in turn will reduce carbon emissions.
2. Policy Context

TC asked what would happen if the NI target of 10% renewable heat generation by 2020 was not met, given the target set under the RED. TC also asked if DECC was comfortable with the target set for NI.

FH advised that Northern Ireland, whilst not an EU Member State, is expected to contribute to the UK target of 15% renewable energy by 2020. To support this target, DETI has set targets of 40% renewable electricity and 10% renewable heat by 2020. If the UK as a whole fails to achieve its target of 15%, then it would be expected that the EU Commission would impose infraction fines at Member State level. It would then be up to Whitehall to pro-rata fines depending on how each of the regions had contributed to the target. It is therefore important that Northern Ireland demonstrates a significant increase in renewable heat levels by 2020. DECC is content with targets set by DETI for Northern Ireland.

FH added that 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. There is a need to consider the implementation of both policy instruments and financial incentives as there is a risk of market failure and of Northern Ireland not achieving the targets set. 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%.

SM confirmed that he was content that there were legal and statutory obligations to be met. PA asked if NI is not on course to meet its target, is there room to negotiate with DECC on the NI target? FH advised that GB would probably look at how the other regions were progressing with their targets. However, if NI did alter its target, this would affect the amount of funding from HMT. As with the NI Renewables Obligation (NIRO), the Department has sought to counteract the possibility of not meeting targets by including periodic reviews of the RHI scheme; the first review is scheduled for 2014. However, the Department has also included an option to hold emergency reviews, if the need arises.

PH added that a RHI roadmap will also be developed, with other NI Departments, and that the Renewable Heat Strategy Group would facilitate this.

TC confirmed that the policy development and implementation had been thorough and robust and showed that there was a definite need to implement a renewable heat scheme in Northern Ireland.
3. Options

SM asked why the challenge fund was not taken forward as the preferred option, as evidence in the consultant’s report showed it to be a viable alternative.

PH advised that the report by CEPA and AEA Technology examined a number of options to incentivise the renewable heat market. The two main type of options included capital grant/challenge fund options, which would provide a one off payment to consumers, and renewable heat incentive options that provide a long term, 20 year, stream of payments to consumers to make up the difference in the whole-life cost of a renewable heating system compared to an oil based heating system.

The June 2011 economic appraisal recognised that each approach had its own merits but it was not unequivocal in its overall conclusion. In addition, since then, the feasibility study report compiled by Ofgem has provided further information on the cost of administering a RHI scheme. Whilst the June 2011 analysis suggested that a challenge fund option could produce the most renewable heat at the lowest cost, Energy Division was conscious of a number of other key factors that needed to be taken account of in the final policy decision. These factors have been very influential in the conclusion, by Energy Division, to proceed with the RHI option. They include the following:

- **Affordability of Administration**
  In terms of administration, the costs of running a Challenge Fund were considered to be prohibitive, especially in comparison to potential costs of administering the NI RHI. Previous experience of running Reconnect demonstrated administration costs of £1.48m for a grant scheme worth £10.5m (14%). The Reconnect scheme was for domestic customers only, and on a ‘first-come-first-served’ basis. A challenge fund, dealing with commercial applications and involving complex evaluation metrics, could be expected to be at least as, if not more, costly than the Reconnect scheme, equating to potentially £3.5m over the first 4 years. **This would not be available within DETI budget.**

The RHI option, whilst requiring complex administration arrangements, can be implemented at a fraction of the cost through building on existing systems already in place for the GB RHI. The expected costs of the RHI scheme have been assessed and project development costs of £386k and running costs of £710k over the first 4 years. These administration costs are much more affordable in comparison to the Challenge Fund option.

- **Challenge Fund Assumptions**
  Under the Challenge Fund options it is assumed that only the most cost effective systems are incentivised given that applications are ranked via a set of evaluation criteria. On reflection, it has been considered that this assumption is much too idealistic, in that it relies on cost effective applications being made in the first instance. If, however, applicants unduly focus on less efficient technologies then the scheme will be skewed towards these less efficient systems. The experience learned from Reconnect was that in a capital grant scheme applicants will focus on technologies that are most affordable,
not the most appropriate or efficient. Under Reconnect the most popular technology, the one installed most often (50% of the time), was solar thermal. Within this analysis solar thermal is shown to be the most costly and least efficient renewable heating technology. If this experience was repeated, in a RH grant scheme, the target would be missed, funding would be skewed towards the most costly and inefficient systems and the appraisal's NPC would undoubtedly be wide of the mark.

The RHI operates a technology neutral approach in that the same methodology is used to determine each tariff and a specific tariff set for each technology. This, in theory, results in each technology being as attractive as each other and therefore consumers are free to select the most appropriate application. As the tariff factors the whole life cost of the technology (capex, opex, fuel and non-financial hassle costs) consumers are expected to select the most efficient system. This in turn supports the achievement of the renewable heat targets, as well as helping to build overall capacity within the renewable heating industry as it should support a wider range of technologies, helping this market to grow further than might be expected under a challenge fund.

- **Ability to meet targets over set timescales**
  The RHI scheme provides the most certainty in terms of achieving the targets of 4% and 10% renewable heat by 2015 and 2020 respectively, as set out in the Programme for Government. This is because an RHI will deliver more heat earlier than a challenge fund as the initial annual payments to consumers will be smaller compared to capital grants, thus enabling more installations to be facilitated within each budgetary period. Whilst the Challenge Fund could also meet the targets, and potentially deliver more renewable heat, it is likely that this would be at a later date. As designed currently the RHI will achieve around 11% renewable heat by 2020.

- **Risk**
  It has been considered that the RHI presents a lower level of risk than the potential Challenge Fund. This is largely due to the fact that incentives will be paid on actual heat output. RHI payments will only be made on metered heat output with installers paid for the amount of heat generated. This ensures that installations are kept in working order and used therefore meeting the renewable heat targets.

As the Challenge Fund would be contributing to the capital costs of the installation (rather than the whole life costs under the RHI) a risk would develop that, after a short time, installations would stop generating renewable heat. This could be because the renewable heat fuel is no longer affordable, that a fossil fuel alternative (such as gas) become available or more attractive, that the site is no longer in business etc. In these circumstances clawback arrangements would need to be initiated, which could be costly and complicated, and the target would be hindered. As the RHI only rewards actual heat output there is less risk and less impact if sites stop generating renewable heat.

Also, in terms of risk, an RHI delivers earlier against the target. In the event that corrective action were required then the RHI option would identify this need earlier and also allow more time, scope and budgetary flexibility for action to be taken to put the scheme back on track.
• **Consistency with GB**
  Whilst energy is a devolved matter Energy Division is mindful that a high number of commercial operators wishing to avail of support for renewable heat in Northern Ireland will operate jointly in GB. Whilst it is wholly appropriate for a specific incentive mechanism to be developed in Northern Ireland given the variances in the two energy markets, Energy Division is conscious that consistency in approach with GB would be beneficial to those availing of support in both Northern Ireland and GB. Therefore a specific NI RHI, whilst addressing the NI heat market, would be a more consistent approach with GB and will assist policy development options in the future.

• **Example of the NIRO**
  The NIRO was launched in Northern Ireland in 2005 to support the development of renewable electricity installations. Similar to the RHI, the NIRO offers no up-front capital support for installations but instead offers 20 years of payments over the lifetime of the technology with payments determined by actual energy output. This example has proved successful with installers and has led to an increase of renewable electricity levels from 3% to over 12% currently. This experience increases confidence in a RHI scheme to generate investment in renewable heat. On the other hand the potential uptake under the Challenge Fund option would be subject to greater unknowns.

The Casework Committee was content that the Challenge Fund option should not be pursued and that, for the reasons above, the RHI was the most appropriate method of incentivisation for the Northern Ireland renewable heat market.

**Action – the business case to DFP (and the Minister) should explicitly address the reasons why the RHI is favoured over the Challenge Fund option.**

TC asked, how the tariffs had been designed and whether Energy Division felt that the various tariffs and types of technologies were appropriate.

PH advised that the 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’. This provides certainty for an investor by setting a guaranteed support level for projects for their lifetime in a scheme, regardless of future reviews. The tariffs will be amended on a yearly basis, for existing installers and new schemes, to reflect the rate of inflation (RPI).

PH further explained that 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 is chosen to develop a consistent tariff across technologies and scales; and
- The net costs (difference between capital and operating costs of fossil fuel counterfactual and renewable alternative) are calculated and a tariff determined.
In order to generate the appropriate tariff, the difference is determined in the costs between the renewable technology and the fossil fuel counterfactual and this figure is divided by annual heat output to arrive at the appropriate tariff. For most of the tariffs a discount rate of 12% is applied, this is consistent with the GB approach in designing the GB RHI and other renewable energy schemes, for ‘domestic’ tariffs a discount rate of 16% is assumed, again this is consistent with GB. The solar thermal tariff is set differently, in-line with GB, as to set the tariff in the same way would result in a tariff vastly higher than the other incentives given the cost of solar thermal and could lead to a large amount of the funding being skewed to the least efficient technology.

PH explained that the scheme would be open for new installations until 31 March 2020 and therefore the final payments would be made in 2040. The length of payment is set as the lifetime of the technology. The first review of the scheme would begin in 2014, with proposed changes implemented in 2015. In addition to this, phase 2 of the scheme would begin in April 2013 and involve the introduction of the domestic sector and consideration of tariffs for additional technologies (bioliquids, air-source-heat-pumps, deep geothermal etc).

PA asked what factors have been taken account of when scheduling a review of the RHI scheme.

FH explained that the NI RHI will have scheduled reviews built-in to the scheme to allow DETI to ensure that the scheme remains fit for purpose and value for money for the duration. The scope of these reviews will include analysis of tariffs (either to be reduced or increased), the appropriateness of technologies (remove existing technologies or add new innovative ones) and the assessment of effectiveness and success.

PH added that it may be that the tariff levels are not sufficient to encourage uptake or that they are too generous (very unlikely) and hence uptake is such that there is insufficient budget. This is a main risk of the RHI and to help counteract this risk, Ofgem will provide regular management reports which will enable uptake to be carefully monitored and forecast expenditure. The RHI will be reviewed in 2014 (and at regular intervals thereafter) and tariff levels may be adjusted, for new installations, if appropriate.

TC asked why each accredited technology was guaranteed payment for 20 years and how can we ensure that the renewable heat technology was being utilised. PH advised that tariffs are paid for 20 years as this is the lifetime of the technology. Currently, the RHI only applies to the non-domestic sector therefore all renewable heat installations will be required to be accompanied with a heat meter that will determine actual heat output. Heat meters are already common in many commercial applications and therefore should not be a barrier to uptake. Meters will allow for accurate readings to be taken of actual heat usage and appropriate payments made. They will also ensure accurate statistics are maintained throughout the lifetime of the scheme.

SM sought clarification on the fact that the scheme appeared to be backdated to September 2010. PH explained that applicants who had technologies installed on or after that date would be able to avail of the RHI scheme but the payment would not be backdated to that date.
TC and SM confirmed that no retrospective payments would be given out under the NI RHI and RHPP schemes.

The panel confirmed that they were content that RHI scheme was the most appropriate option to implement in NI.

4. Value for Money / Additionality / Displacement

FH advised that without Government subvention for renewable heat installations, the target of 10% renewable heat by 2020 would not be met. This would impact on the UK’s delivery of 15% renewable energy set under the RED. FH also said that it was important that the scheme was not over-subsidising the renewable heat sector; the consultant’s work ensured that there was a balance created in terms of the technologies to be incentivised and the tariffs to be given.

The DETI Economist has reviewed the approach taken by the consultants and is content that the proposed scheme represents the best value for money.

In terms of displacement, the main area where displacement might occur, as a result of the RHI, will be in the established heating markets. Displacement is likely to be greatest in the oil market given the fact that tariffs are set against an oil counterfactual (and therefore provide oil customers with a greater incentive). However, this displacement is necessary to ensure a more diverse heating market and reduced carbon emissions. Displacement of natural gas is likely to be much more limited. In terms of job displacement, the RHI is expected to create new jobs, given the need for installers and suppliers. However, these jobs will, to a certain extent, be displacing existing jobs in the fossil fuel market.

TC enquired whether it would also be beneficial to switch natural gas customers to renewable heat as well as oil consumers.

FH stated that the Department was not excluding gas customers from switching and that they could avail of the RHI. However, the Department had based the NI RHI on an oil counterfactual because oil was the predominant fuel source in NI. Oil is also a greater polluter (through carbon emissions) than natural gas. Gas customers are also relatively new and it would be wasteful for consumers to switch whilst their boilers which were reasonably new whereas a large proportion of oil boilers had reached the end of their life.

5. Budgetary management solutions

TC asked what commitment there was from HMT that payments made up to 2015 would be met for 20 years and how would the Department manage the payments based on the current budgets.

FH highlighted the financial commitment made by HMT in the GB RHI and the subsequent funding made available to DETI for the Northern Ireland scheme. FH also advised that HMT had informed DETI that any commitments made under this initial budget would be met by HMT for the lifetime of the scheme i.e. meeting the 20 year payment commitment. The RHI is
a flagship policy for DECC and whilst budgets have only been set until 2015/2016 it is expected that further monies will be made available in the next budget period. This is demonstrated by the GB scheme being open to 2020 and in documentation provided by DECC to the EU Commission suggesting expected subsidies of £2.2bn in 2020.

In terms of managing payments, PH explained that there would be monthly draw downs to maintain and manage the financial aspect of the RHI to ensure that the budget would not go into overspend on any particular year. PH further advised that Ofgem has significant experience in financial profiles and budget handling as it has also worked on the GB Renewable Obligation, the NIRO and the GB RHI.

FH added that a monitoring committee would also be established in respect of the budget and the Department would receive monthly reports from Ofgem on the applications, accreditations and spend budget for the NI scheme.

TC asked how often the meters would be read for non-domestic customers. PH advised that meters would be read on a quarterly basis. The amount paid will be based on metered heat output and the tariff for the type of technology installed. This would also allow the Department and Ofgem to calculate annual forecasts for the RHI budget. If necessary the scheme could be closed to new applicants mid-year if applications were higher than expected and budgets risked being overspent.

FH confirmed that Energy Division would return to the casework committee within the next year to seek approval for the implementation phase 2 of the NI RHI.

**ACTION**

- Energy Division to seek casework committee approval in advance of Phase 2 of the RHI scheme.

**6. Governance / Ofgem management arrangements**

TC asked what controls would be in place for the project management aspect of the contract with Ofgem. JMC advised that discussions had taken place with CPD and Ofgem. TC asked for assurance that contract would include detail on performance targets, remedies, safeguards in place for under-performance, and breakpoints. PA enquired if the Department would have a separate contract or be part of the DECC contract in place with Ofgem. JMC confirmed it would be a separate contract.

PA asked if we had aright of audit entry included in the contract. FH assured that this would be put in place.

TC asked if the panel was content with the procurement standards for the administration contract. FH confirmed that a request for approval of a Direct Award Contract would be submitted to the Permanent Secretary, David Sterling along with a Third Party Organisational delivery award.
SM asked if the Utility Regulator was to be involved in the management of the RHI scheme. FH explained that the Utility Regulator was to have no role in the scheme; it was felt that it was more appropriate to deal directly with Ofgem to ensure that all of the Department’s corporate and governance requirements were put in place.

The panel confirmed it was content with the governance and project management arrangements for the contract with Ofgem

**ACTIONS**

- Energy Division to obtain the respective approvals from DAO and Minister for the appointment of Ofgem through a Direct Award Contract and Third Party Organisation Delivery Award.
- Energy Division to engage with Internal Audit regarding Ofgem management arrangements and, in particular on the requirement for External Delivery Organisation (EDO) audit inspections to be carried out on Ofgem as administrators of the scheme.
- Energy Division to advise Chair of Casework Committee on contractual requirements established with Ofgem for administration of the RHI and RHPP schemes.

7. Funding issues arising from Ofgem and internal resources

TC asked how the Ofgem feasibility study had been financed and was advised that it had been paid from Energy Division’s consultancy budget. FH added that Energy Division would be putting in a bid for the budget to cover Ofgem’s development and operating costs. For the NI RHI, estimates are - £386k capital spend to develop the system and then a further £136k operational spend in the first year.

PA enquired whether there is the possibility of developing and operating the RHI system in-house. FH explained that there were neither the skills, expertise nor resources within DETI or the wider NI Civil Service to currently undertake the administration of the NI RHI.

SM expressed concerns over the 100% contingency budget for the development of the IT systems. JMC advised that this contingency was for the development phase and would only be required for a short period of time. Energy Division had sought clarification on the Ofgem proposal for £1m legal budget. Ofgem has accepted that DETI already has a separate legal contract in place to cover DETI’s legal responsibilities. TC asked if there had been much experience of legal claims. FH confirmed that there had been one recent incident under the NIRO but the matter was concluded satisfactorily without any legal involvement.

**ACTION**

- Energy Division to send a paper to the Top Management Team detailing the ongoing administration costs for Ofgem to operate and maintain the NI RHI system.
8. State Aid

TC enquired about the current status of the state aid application.

FH advised that in December 2011, the Department sent a detailed submission to the Commission, outlining the NI RHI proposals. This submission took on board lessons learned from the GB application that was approved in November 2011. An addendum to the December application was submitted in February 2012 advising on proposed changes as a result of further economic analysis carried out be external consultants.

TC advised that as and when the tariffs are amended or revised, the Department would have to reapply for State Aid approval.

9. Risk management

PH provided a brief overview of the risks and uncertainties in implementing a renewable heat incentive in Northern Ireland: These are:

- Incorrect subsidy level - subsidy levels proposed for the RHI are either too high or too low. This risk will be managed through regular, planned, reviews of subsidy levels.

- Risk of harm to other sectors - an increase in renewable heat may lead to a reduction in the demand for conventional heating (oil, gas, coal and electric heating). At a high level, the short term harm to any sector should be relatively small, especially given the current scale of the oil market. However if the uptake of renewable heat impacted disproportionately on the gas sector this could have negative consequences for the extension of the gas network.

- Risk of failure of renewable heat supply - supplies of renewable fuel (i.e. biomass, biogas and bioliquids) may be disrupted. In addition, new skills will be required if installations can be made. DETI will work with colleagues in DARD and DEL to mitigate against this.

- Risks of low take-up – This could be a result of tariffs or other possible barriers include planning restrictions, a lack of awareness, and negative perceptions of the reliability and/ or cost of renewable heat. The Department has budget cover to deliver messages about renewable heat to homes and businesses.

- Risk of failure to implement targets set by EU Renewable Energy Directive - the RED is the key driver for the work undertaken by the Department on renewable heat. The requirement to meet the very challenging 12% renewable energy target falls at Member State level, not at Devolved Administration (DA) level. Each DA is expected to contribute as much as possible to the overall UK target and the Department has undertaken to introduce a renewable heat scheme in Northern Ireland in order to mitigate this risk.
• Risk of insufficient budget for administration or future payments - there may be the possibility of a higher than expected uptake leading to overspends in annual budget and higher administration costs. This will be mitigated by liaison with Ofgem to assess uptake levels and expected spend against profiled budget. The Department has also been liaising with the DECC finance team regarding future financing and with HMT relating to the budget for existing commitments.

• Risk of failure to receive State Aid approval - the EU Commission may refuse to approve the NI RHI scheme. The Department took on board the lessons learned from the GB state aid application. This is a low risk; it would be more likely that the scheme would be amended.

• Risk of instances of fraud - instances of fraud could include duplicate applications, unusual meter readings (too high for expected output), lack of information being provided to the administrator and using unregistered installers. The Department has put in place measures to counteract instances of fraud and where there are instances of suspected fraud, the participant will be investigated and payments will be stopped.

• Risk of failure in administration of RHI - there is the potential for delays in dealing with applications, accreditations and payments for the NI RHI scheme which would lead to stakeholders complaining about application process. This could be as a result of difficulties in IT systems or a lack of communication between Ofgem and the Department. The Department will establish a joint project team with Ofgem as the scheme is implemented.

10. Conclusion and Agreed Actions

The Casework Committee confirmed that they were content to approve the RHI and the RHPP schemes to proceed to DFP conditional on completion of the following agreed actions:

- Energy Division to obtain the respective approvals from DAO and Minister for the appointment of Ofgem through a Direct Award Contract and Third Party Organisation Delivery Award;
- Energy Division to advise Chair of Casework Committee on contractual requirements established with Ofgem for administration of the RHI and RHPP schemes;
- Energy Division to engage with Internal Audit regarding Ofgem management arrangements and, in particular on the requirement for EDO audit inspections to be carried out on Ofgem as administrators of the scheme;
- Energy Division to send a paper to the Top Management Team detailing the ongoing administration costs for Ofgem to operate and maintain the NI RHI system;
- and Energy Division to seek casework committee approval in advance of Phase 2 of the RHI scheme;
• Energy Division to send submissions concurrently to DFP and Minister seeking approval for the RHI scheme.

11. Approval of Note

Signed:

Trevor Cooper,
Panel Chairman

Date:
for the 25 million up to 2015. There was the tail — that was understood by the Department
and by DFP — but the detail of that will come forward in the next case and the next case.

Dr MacLean: And I understand that, and in some ways that was money coming from GB,
but the admin — and this particular section with, you know, is thinking about the prohibitive
costs of the challenge fund — I think it’s the first of the reasons which appears in the
minutes for why you have the preference, and yet that is DETI’s own budget. That is
something that you’re going to have to stand true to right throughout the time.

Ms Hepper: And I think there was an understanding at casework committee that that
would be rolling forward. I think that was clear to them. I take your point that we haven’t —

Dr MacLean: It’s not explicitly clear in the documentation —

Ms Hepper: No, I take your point —

Dr MacLean: — and my point is that, from an authority point of view — getting the
authority for that — I’m quite surprised that you were not required to produce
documentation which showed what that long-term commitment would be and to have that
authorised or weighed up in the balancing act.

Ms Hepper: No, I take your point, but, you know, we would’ve — it would’ve been clear
in the discussions that that was the case, but we weren’t asked to put forward that case, and
I take your point: we didn’t.

Mr Scoffield QC: So just picking up on that, does that mean that there was no figure put
on the additional administrative costs after the first four years?

Ms Hepper: Not at this point. We had worked out what it would be, but it’s not in these
papers. I do accept that.

Mr Scoffield QC: Would that have been discussed with the casework committee, or did
they just focus on the figures that we see in the minutes?

Ms Hepper: I think they largely focused on the figures in the minutes. It’s not to say we
Mr Aiken: So, to take that to its logical conclusion is a point that we covered earlier — and we’re going to come back and deal with the challenge fund specifically in the morning, in the context of the minutes. But, the point that you’re making is: the decision that you reached was your own decision; you were happy with it at the time that you made it, based on the information that was in front of you; you weren’t under any pressure to make it; and you made the decision that you felt was the right decision at the time that you made it.

Mr Murphy: I am comfortable that the committee asked the right questions and, at the end of that, we didn’t have a strong reason to block this and we let it through. And I’m comfortable with that, yes.

The Chairman: Irrespective of whether or not Fiona or anybody else had felt embarrassment, you were presented with a proposition in which you were, I think, to be fair to you, surprised when you found a reference to a challenge fund. It wasn’t a question of you being presented with, “Look, there are these two alternatives. It’s hard to choose between them. There are reasons for it. We prefer this one, but what do you think?” You were surprised. In all of the documents you got, including the synopsis, including the other submissions, there was only one winner, and that was the RHI.

Mr Murphy: And again — I know we’re going to deal with this in the morning and we’ve touched on this in the past — my interpretation of it was, on the affordability issue, that was a stop-go.

The Chairman: That was a stop-go.

Mr Murphy: That was my interpretation in the context that the Department was in at the time. Those statements were perfectly believable in the context of budgets reducing — my own budget reducing. I had the finance director beside me, who would understand and know whether such claims were credible. So, did I believe that energy did not have the administration budget to do this? Yes, I believed that.
The Chairman: Well, I can shorten this, Mr Murphy. Do you agree that the assertion by DETI that it wasn’t affordable put an end to any objective consideration of the challenge fund?

Mr Murphy: That would be —

The Chairman: The answer must be yes.

Mr Murphy: Yes. It took it off the table, in my interpretation.

The Chairman: Yes. A quarter to —

Mr Aiken: A quarter to ten.

The Chairman: — ten in the morning. We will try, I hope, to finish both you and Mr Angus tomorrow. I appreciate that it’s difficult for you to come back. Do think about the points that were raised with you. It may be possible for you to deal with those in a written submission: it may not. Think about it and see what you feel about it.

Mr Murphy: Some of those things require a bit of thought, so —

The Chairman: You don’t need to convince me of that. [Laughter.]

Mr Murphy: — maybe after Christmas, I’ll give some thought to that. [Laughs.]

The Chairman: Thank you very much.

[The hearing was adjourned at 5:06 pm]
From: Clydesdale, Alison  
Sent: 15 April 2011 12:25  
To: Hepper, Fiona; Brankin, Bernie  
Cc: Hutchinson, Peter  
Subject: FW: [RESTRICTED] RE: RHI NI  
Importance: High

Fiona - for info.

Bernie - see below regarding reporting against the £25m that we have been allocated for RHI - can you advise how this will work in practice for us - I am presuming that DFP will work through your side on this?

Can you also advise if this years’ allocation of £1.7 m will show in Energy's budget line?

Happy to discuss.

Alison

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From: Parker, Jon - HMT [mailto:Jon.Parker@hmtreasury.gsi.gov.uk]  
Sent: 15 April 2011 12:13  
To: Clydesdale, Alison  
Cc: Hutchinson, Peter; Garcia, Nicolas - HMT; Parkinson, Mark - HMT; Mike.brennan@dfpni.gsi.gov.uk  
Subject: [RESTRICTED] RE: RHI NI

Alison,

Sorry for the delay in coming back to you. Taking your points in turn:
i) With DECC, we have agreed that they can make commitments to spending in future years (up to 20 years) for installations that are installed within the SR period (i.e. the initial payments have to affordable within the SR profile), and providing that the policy is set up so that payments should be basically flat over the 20 year period in real terms (i.e. no backloading to ease short-term affordability pressures). This same agreement would apply to any NI scheme.

ii) DECC’s GB RHI profile is £56m/133m/251m/424m. NI’s share of this is 2.98%, so £1.7m/4.0m/7.5m/12.6m. The NI scheme would need to follow this profile as much as possible – on which further below. We will need you to feed into us forecasts of NI RHI spending for the Office of Budget Responsibility’s bi-annual forecasts – this can be fed through me or Mark Parkinson (in the Devolved Countries Unit within Treasury).

iii) This funding does have to be used for renewable heat, but if NIE decide you would like to use it for a grant scheme or some such then this would be permissible as long as the cost of NIE spending is constrained to the AME consequential.

The other key point it is necessary to let you know about is that the DECC RHI spending is not being treated as standard AME, where the Exchequer takes on all risks of overspend. Instead, there is a risk-sharing arrangement whereby should RHI spending in one year exceed the SR profile, then DECC would need to repay this in future years. They can do this through announcing changes to the SR that will bring cost savings relative to the SR profile in future years. However, a small proportion of any required future savings (still to be determined, but likely to be of the order of 5%) will have to be funded through contributions from DECC’s DEL. Again, these rules would be applied in equivalent fashion to NI.

Happy to discuss any of these issues in more detail.

Jon

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From: Clydesdale, Alison  
Sent: 11 April 2011 13:00
To: Parker, Jon - HMT
Cc: Hutchinson, Peter
Subject: RHI NI

Jon

We spoke briefly the other day about the £25m allocation to NI for an RHI.

Can I ask you to clarify for me :-

(i) The position with the commitment to 20 year payments within NI.

(ii) The process for advising on the spending profile of the £25m AME that we have been allocated.

(iii) If the £25m can solely be used for an RHI - or we can use it to incentivise in a different way e.g grant ?

Happy to discuss.

Alison

Alison Clydesdale
Sustainable Energy
Peter

I spoke with Bernie yesterday at length about this.

This presents a significant challenge.

DFp will require evidence of our ability to control the scheme in order to minimise over/under spending in any one year.

From a finance perspective grant is the riskiest route financially as it is hard to control the number of applications especially at the end of the programme. But from the policy side I expect we will need some element of front loaded grant to stimulate demand.

You will need to ask CEPA to factor this in as a risk factor in the economic appraisal - I didn't see any evidence of this in the draft that we have already received - but it will need to be fully addressed - especially as finance have asked to see the final proposals.

I also raised with Bernie the fact that the non grant route i.e. RHI will require admin funding to cover the cost of Ofgem administering the scheme. We will need to make a bid in June monitoring (I'll discuss with Sandra) but she was not hopeful that funding could be found.

It might be useful to get the IA for the grant funded element of the DECC scheme if we can - so as we can see how DECC are addressing this risk as their AME funding is being treated in the same way.

Alison

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Please consider the environment - do you really need to print this e-mail?

From: Brankin, Bernie
Sent: 03 May 2011 15:40
To: Clydesdale, Alison
Cc: Cooper, Trevor; Hepper, Fiona; Hutchinson, Peter
Subject: FW: [RESTRICTED] RE: RHI NI

Alison

Energy Division's AME has now been confirmed. I have spoken to Stuart Stevenson regarding RHI NI
at the resources that are applied to GB versus here there is a question mark. There are any number of
technologies, there are any number of tariffs which means there are any number of moving parts which
means you need someone who, sorry a team who, have that understanding and you need them to be
engaging with their managing agent.”

And if we move three pages on in the interview at IND-04019 — again, in box 8 on the page;
if we just maximise that, please — you make the point:

“Yes and that was a risk that was constantly flagged around, is the Department the right area to be doing
the schemes? You know we have had an expert sort of delivery body in terms of Invest NI, which is probably
a more natural home for these sorts of things in terms of the experience of people around monitoring and
managing, so there were reviews of the Department over the years in terms of restructuring it ... and that
was a question that arose on a number of occasions ... I would have been firmly of the belief that if we could,
we should have moved such schemes out of the Department, but we didn’t.”

10:00 am

So, reflecting back, you’re making the point that — and Bernie Brankin made this point to
the panel — that she had a view, and you’re expressing that you had a view, that, really,
DETI was not the place to be running schemes. It might be the place to devise them, but the
actual carrying them out should be done somewhere else.

Mr Cooper: Absolutely, yes.

Mr Aiken: Now, you —. One might have the impression from what you’ve said that that
was a view being expressed at the time. But, can I say this to you? If I put it this way — I’m
not going to go to it now — but, for instance, in the casework minutes, there doesn’t seem
to be that fundamental question saying, you know, “Us”, as in the casework committee or
Trevor Cooper says, “Why are we doing this at all? This isn’t something we should be doing
because” or, “Can you tell me the reasons why we should be doing it?”.

So, given that that’s not there, and I presume you’re going to tell me there was no
discuss like that, can you explain to the panel was it that that’s your underlying view but it’s just not the way the world was and, therefore, you just got on with it, or why did that not feature as a big question, “Why are you guys trying to do this”? 

Mr Cooper: The minutes are the minutes. I believe I did ask that question. In fact, I know I asked that question. I know I asked that question. So, you know, in my mind, the question was could we have slotted in NI specific rates and GB manage them. So they could have two separate rates. You know, they could’ve had a GB scheme and they could’ve an NI scheme with NI specific rates but managed wholly within GB. I know I did ask that.

Mr Aiken: So you —. Let me just —

Mr Cooper: And it’s not in the minutes, but I asked it.

Mr Aiken: So there’s two different things there and it’s important that we look at both of them. What I was saying to you was should we be doing this scheme at all? And you had that underlying feeling. But what you’re also —. Generally, what you’re also saying is that in the context of RHI, you had in your mind, “Why can’t we just have in the UK scheme —

Mr Cooper: Yes

Mr Aiken: — a set of Northern Ireland rates —

Mr Cooper: Absolutely.

Mr Aiken: — and have it all done by the one entity”? What answer did you get to that?

Mr Cooper: Ha. I got a lot of legal jargon to be —. You know, I got — there were legislative reasons, couldn’t be done, certainly couldn’t be done by — with the mechanisms that were there. I accepted that. I now understand we can, basically, do anything with legislation almost. So, if someone had wanted to, that it could actually have been done, I think.

Mr Aiken: A way could’ve been found.

The Chairman: Sorry, let’s just take this slowly. Are you telling us now, Mr Cooper, that, at
the casework committee, you asked — not what you felt, you may have felt all sorts of

things — but that you actually asked two questions: (a) should we be doing this at all and (b)

if w—. Well, we have to get this straight in terms of evidence. So just could you tell us what

you actually said?

Mr Cooper: I asked —

The Chairman: As far as you can.

Mr Cooper: — could this be done in England? Could this be totally managed in England?

The Chairman: But you didn’t say, “Why are we doing this at all”?

Mr Cooper: No.

The Chairman: No. So, could it be done in England — and you said that you got a lot of

legal reasons about legislation. Who gave you that?

Mr Cooper: It would’ve been Fiona.

The Chairman: Fiona gave you that? Now, we know that apart from the minutes that are

the formal minutes —

Mr Cooper: Uh-huh.

The Chairman: —there were several drafts of this document.

Mr Cooper: Uh-huh.

The Chairman: That doesn’t appear, or seem to appear, in any of those drafts.

Mr Cooper: No.

The Chairman: One of those drafts, at least, must have gone before you.

Mr Cooper: Yes.

The Chairman: Well, did you not think, having asked the question and having been given

quite strong negative reasons for not doing what you suggested, it should have been

included?

Mr Cooper: It should have, yes, and I didn’t include it. I reacted to what was given to me.
It should have been included, yes.

**The Chairman:** You didn’t make any attempt to include it? You didn’t go back and say, “Look, I want this in”, or put it in yourself in a —

**Mr Cooper:** No, I didn’t include it, but I should have, yes, I fully accept that.

**Mr Aiken:** I think a point you were making to me, Mr Cooper — and it’ll be a point that pervades your evidence, as I understand it — is, as you look back now, given what has happened, there are a whole series of things you wish you’d done that would’ve evidenced things that happened —

**Mr Cooper:** Correct.

**Mr Aiken:** — and this is an example of that; that the reason why it’s not in the minutes was at the time you were given an explanation, it seemed like a reasonable one. As you sit here today, you truly wish what you remember happening was there to be read by the panel —

**Mr Cooper:** That’s —.

**Mr Aiken:** — as opposed to just taking your word for it.

**Mr Cooper:** Correct. Absolutely.

**The Chairman:** Well, never mind the panel. As the chairman, was it not quite important that an objection like that, which sounds to me a rational suggestion, ought to have been included in minutes that potentially would act as a record for those higher up.

**Mr Cooper:** I totally accept that.

**The Chairman:** Yes.

**Mr Cooper:** I totally accept it.

**The Chairman:** I don’t think the panel’s a concern here. It’s having an accurate record of something that an individual such as you felt was a real concern.

**Mr Cooper:** Yes.
AME allocation. RHI spending is not being treated as standard AME. This means that your RHI NI budget allocation is being treated the same as DEL allocations. If you underspend in any year, that part of your budget is lost to the department and, if you overspend in any year, DETI's budget will be reduced by the amount of overspend in future years. The NI Block lost all underspent budgets in 10/11 and DFP are currently in negotiations with Treasury about end year flexibility for the Block for this year and future years.

As discussed, you will need to take this treatment of AME into consideration when drawing up your proposals on how you will spend this allocation particularly if you are considering grants (which Energy Division knows from past experience are fraught with control problems). Please copy Finance into your draft proposals which would need to address the controls that you would put in place to prevent significant under/over spending. These proposals will also require DFP approval.

Happy to discuss further.

Bernie

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Please consider the environment - do you really need to print this e-mail?

From: Brankin, Bernie
Sent: 15 April 2011 16:04
To: Clydesdale, Alison
Cc: Cooper, Trevor; Hepper, Fiona; Hutchinson, Peter
Subject: FW: [RESTRICTED] RE: RHI NI

Alison

AME budgets have just been confirmed by Treasury/DFP. Your AME allocation for RHI is £2m in 11/12, £4m in 12/13, £7m in 13/14 and £12m in 14/15. This will be confirmed in writing to you early next week. I will discuss further with DFP and come back to you.

Bernie

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