Title: Continuation of Northern Ireland Renewable Heat Incentive cost control measures for a further 12 month period to 31st March 2019 to enable development of longer term policy.	**Regulatory Impact Assessment (RIA)**
	Date: 30 March 2018
	Type of measure: Primary Legislation
Lead department or agency: Northern Ireland, Department for the Economy	**Stage:** Final
	Source of intervention:
Other departments or agencies: N/A	**Contact details:** Jonathan McAdams
	DfE, RHI Taskforce
	Ext 29259

Summary Intervention and Options

What is the problem under consideration? Why is government intervention necessary? On 1 November 2012[1], DETI[2] launched the non-domestic Renewable Heat Incentive (RHI) Scheme, no cost controls were included at Scheme introduction. Following the announcement of proposed Regulations to introduce cost control measures in 2015[3], there was an unprecedented spike in applications which led to the decision to suspend the RHI Scheme to new applicants on 29th February 2016. Subsequently the 2017 Regulations[4] were introduced placing the same cost control measures introduced in 2015 on all accredited small and medium biomass installations thereby ensuring the costs of the RHI Scheme stayed in line with NI Budget allocation. The cost control measures introduced by the 2017 Regulations for installations accredited prior to 18th November 2018 cease to have effect on 31st March 2018. If the 2012 Regulations are not amended there will be no statutory authority to make payments for the 1,713 affected installations.

As no Northern Ireland Executive has been formed following the 2nd March 2017 Assembly election, these cost control measures cannot be extended by the normal process through the Assembly. Therefore legislation via Westminster is required in order to provide a continuation of cost control measures for a further 12 month period to 31st March 2019 during which time the Department intends to develop and consult on longer term cost control measures.

What are the policy objectives and the intended effects? Originally, the Department intended that the RHI Scheme would provide a typical rate of return of 12% (depending on boiler size) in line with the approach for the parallel GB scheme. However, the average rate of return, prior to the introduction of the 2017 Regulations, was substantially higher than 12%, particularly for those installations with a high load factor. The proposed continuation of the cost control measures, to include the tiered tariff and annual cap, through the introduction of legislation at Westminster will assist DfE to balance its obligation to the Scheme beneficiaries with its wider obligation to safeguard the public purse. The Northern Ireland (Regional Rates and Energy) Act 2018 amendments to the 2012 regulations will allow DfE to continue to provide a rate of return of at least 12% for typical RHI recipients while maintaining the cost controls to ensure that the Scheme does not provide incentives to produce unnecessary heat.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base) Options considered to meet the objectives of this business case within the short timeframe available include:

1. Do nothing/minimum – If the Department does not put in place a replacement tariff structure for the period commencing 1 April 2018, the legal advice is that there is no statutory authority to make payments for small and medium biomass installations accredited before 18 November 2015.
2. Status Quo - Continue the tiered tariff structure introduced under 2017 Regulations with inflationary uplift until 31st March 2019 or until an appropriate long term tariff structure can be implemented.
3. Apply GB Tariff- Apply the equivalent GB tariffs from autumn 2015 when most applications were made to the NI Scheme, taking account of subsequent inflationary uplifts. This option would involve no usage limit being placed on the amount of heat eligible for RHI payments.
4. Revert to 2012 Regulations- Apply the previous single tier tariff to all small and medium biomass boilers.

Will the policy be reviewed? Yes	**If applicable, set review date:** after 12 months

Cost of Preferred (or more likely) Option		
Total outlay cost for business	**Total net cost to business per**	**Annual cost for implementation**

[1] The Renewable Heat Incentive Scheme Regulations (Northern Ireland) 2012 SR.2012 No. 396
[2] On 8 May 2016, DETI merged with the Department of Employment and Learning to form the Department for the Economy (DfE). References in this guidance to DETI and DfE should be read relevant to the 6 May 2016 transfer.
[3] The Renewable Heat Incentive Schemes (Amendment) Regulations (Northern Ireland) 2015 SR.2015 No. 371
[4] The Renewable Heat Incentive Scheme (Amendment) Regulations (Northern Ireland) 2017 SR.2017 No. 32

£m	**year** £m	**by Regulator** £m
The policy does not impose direct costs on business	The policy does not impose direct costs on business	£445k 2016 - 2017

Does Implementation go beyond minimum EU requirements?			**NO** ☒	**YES** ☐
Are any of these organisations in scope?	**Micro** Yes ☒ No ☐	**Small** Yes ☒ No ☐	**Medium** Yes ☒ No ☐	**Large** Yes ☒ No ☐

Approved by: Jonathan McAdams, Grade 6, RHI Taskforce Date: 30/03/2018

Summary: Analysis and Evidence

Description: Continuation of Northern Ireland Renewable Heat Incentive cost control measures for a further 12 month period to 31st March 2019 to enable development of longer term policy

ECONOMIC ASSESSMENT (Net benefit £23 million NPV)

Costs (£m)	Total Transitional (Policy) (constant price)	Years	Average Annual (recurring) (excl. transitional) (constant price)	Total Cost (Present Value)
Low	Optional		Optional	Optional
High	Optional		Optional	Optional
Best Estimate	0		£0 million	£m 23 million

Description and scale of key monetised costs by 'main affected groups' Maximum 5 lines
The cost relates to the projected level of RHI payments to scheme participants in the 2018-19 financial year only, in advance of a long term tariff structure being put in place. The payments are intended to offset the additional costs of running a renewable heat boiler, as well as providing a 12% rate of return on the additional capital investment. Reversion to the previous 2012 Regulations and the associated significant levels of over compensation would be expected to cost approximately £50 million in the next financial year alone.

Other key non-monetised costs by 'main affected groups' Maximum 5 lines
The main benefit from the scheme is in respect of a reduction in carbon emissions in 2018-19 which has been updated to reflect the latest advice from BEIS and HMT. The scale of this benefit depends on the extent to which heat would have been generated from fossil fuel sources in the absence of the RHI scheme. As the 400,000 kWh usage limit was introduced as part of the cost control measures to reduce the incentive to generate more heat than required, it is not expected that it will have had a significant impact on the level of carbon emissions.

Benefits (£m)	Total Transitional (Policy) (constant price)	Years	Average Annual (recurring) (excl. transitional) (constant price)	Total Benefit (Present Value)
Low	Optional		Optional	£1 million
High	Optional		Optional	£3 million
Best Estimate			N/A	£2 million

Description and scale of key monetised benefits by 'main affected groups' Maximum 5 lines
The positive employment benefits from the scheme were expected to have come primarily from the installation of boilers, which will already have been accrued. The RHI was never intended to subsidise the wider business interests of scheme participants whilst the reduced level of payments will have a positive impact on public sector employment. Overall, there is not expected to be a significant net economic impact.

Other key non-monetised benefits by 'main affected groups' Maximum 5 lines
The overcompensation of scheme participants and perceptions of widespread abuse have undermined public confidence in the RHI, with implications for other public services. A key non-monetary benefit will be to show that the scheme is now under control with scarce public resources being deployed efficiently and effectively.

Key Assumptions, Sensitivities, Risks Maximum 5 lines
In deriving the estimated costs it is assumed that the average annual level of heat generation by scheme participants does not change, apart from being limited to 400,000kWh, whilst tariffs are expected to rise by 4.1% in 2018-19, in line with the rate of RPI inflation recorded for December 2017.

BUSINESS ASSESSMENT (Option)

Direct Impact on business (Equivalent Annual) £m				
Costs: N/A	**Benefits:** N/A	**Net:** N/A		

Cross Border Issues (Option)

How does this option compare to other UK regions and to other EU Member States (particularly Republic of Ireland) Maximum 3 lines
The Republic of Ireland is preparing to introduce a RHI Scheme in 2018, subject to European Commission State aid approval.

Background

In September 2010, the Executive adopted a target of 10% renewable heat in Northern Ireland by 2020 and an interim target of 4% by 2015. The target was in line with obligations under the EU Renewable Energy Directive (RED) that each Member State had to secure certain levels of renewable energy by 2020. In November 2012, the Non-Domestic Renewable Heat Incentive Scheme was introduced in pursuit of these targets, although it was always intended that the scheme would only make a minority contribution. A Domestic Renewable Heat Scheme was introduced in 2014. Around 4,700 renewable heating installations have been incentivised to date under the Non-Domestic and Domestic NI RHI Schemes.

The RHI is aimed at incentivising boiler owners to change to renewable heat from traditional fossil fuels by providing compensation for the additional costs of renewable heat. For Non-Domestic RHI, the compensation was to be delivered via ongoing payments linked to heat output produced rather than an up-front capital grant. The additional costs include capital costs, operating costs and the non-financial 'hassle' factors that are involved in replacing existing heating systems with renewable heating technologies. Except for solar thermal, the initial tariffs for the Non-Domestic NI RHI were intended to provide an average rate of return of 12% over the lifetime of the technology, in line with the parallel scheme operating in the rest of the UK.

In light of the novel nature of the Scheme there was limited evidence available on actual costs and boiler usage and characteristics with the result that assumptions had to be made in setting the original tariff. The 2012 tariff for medium biomass boilers was set by external consultants using a number of assumptions regarding typical use. For example, it was based upon a 50kW boiler, operating 17% of the time and with a capital cost of £608 per kW. It was also assumed that the boiler would use a more expensive form of wood pellet rather than cheaper wood chip and that it would be installed in place of an oil boiler. It was recognised at the time that not every accredited boiler would share these characteristics. However, the assumptions were considered at that time to be sufficiently representative of predicted usage to provide a suitable basis for tariff calculation.

As it transpired, these assumptions were totally unrepresentative of the actual operation of the scheme. In the first instance, the most common boiler installed was a 99kW biomass boiler, accounting for 1,307 boilers out of 1,801 installations (72.6%) accredited prior to November 2015. Less than 10% of installations were around the assumed typical boiler size.

The actual average load factor (42%) was, and is, almost 2.5 times that initially assumed (17%). Taken together this means that the assumed heat load for the medium biomass tariff is around five times (365,000kWh versus 74,460kWh) higher than what was envisaged in the setting of the initial tariff.

Further, evidence from applications to the Scheme suggests that the actual capital cost of boilers per kW was approximately one half that assumed when setting the tariff. Overall, without appropriate action, the rate of return on eligible installations was significantly higher than that envisaged at Scheme initiation and European Commission State aid approval at 12%.

In the first 3 years of the Non-Domestic RHI Scheme's life, because the funding for the scheme had been based on the GB scheme which was introduced earlier than in Northern Ireland, there was a £15m under-spend. Publicity campaigns aimed at promoting uptake were run during 2014 and early 2015 and there was a significant increase in uptake from spring 2015.

Following the announcement of proposed Regulations to introduce cost control measures in September 2015 and prior to their implementation in November 2015, there was an unprecedented spike in applications. It became clear that the budget would be overspent in 2016-17 and subsequent years, which led to the decision to suspend the RHI Scheme to new applicants on 29th February 2016. However, the extent of the increase in applications both before the introduction of the cost control measures and in advance of the suspension of the scheme means that the scheme payments were projected to continue to be significantly in excess of the available budget. Furthermore, the cost control measures did not address the excess returns being earned by the large majority of scheme participants who had joined the scheme before November 2015

Subsequently the 2017 Regulations extended the cost control measures to all accredited small and medium biomass installations thereby ensuring the costs of the RHI Scheme stayed in line with NI Budget allocation; and providing a rate of return expected to be in line with State aid approval. Under the 2017 Regulations all small and medium biomass boilers moved to the same tiered tariff structure as introduced by the 2015 Regulations for NI, following the approach that was adopted at the outset for the GB scheme. This 'tiered' tariff structure operates on a 12-month basis, starting with an installation's date of accreditation or its anniversary. During this 12 month period, the initial amount of heat generated by the installation running at its installation capacity for 1,314 hours will be paid at the higher Tier 1 tariff. Any further heat generated during the 12 month period will be paid at the lower Tier 2 tariff, up to a maximum of 400,000kWhth, as an additional control not included in the GB scheme. The extension of tiering and the 400,000kWh usage limit under the 2017 Regulations has significantly reduced the amount of heat generated under the Scheme in 2017-18.

The 2017 Regulations were introduced as an interim measure in preparation for a much more substantial review of tariff levels with a view to ensuring that it operates in a manner consistent with the original intention and objectives.

In extending these tariff structures, the Department adopted a justified, fair and proportionate approach, in light of the extent to which the Scheme was operating contrary to the original intention and assumptions and also in light of the serious financial consequences for Northern Ireland.

In June 2016, the Comptroller and Auditor General for Northern Ireland ("CAGNI") published his report into the Department's expenditure accounts for the 2015/16 financial year. In particular, the CAGNI decided to qualify his audit opinion of DETI's expenditure accounts due to two concerns arising from the RHI Scheme:

- £11.9M was expended during the period March – October 2015, without the necessary Department of Finance and Personnel approvals. He therefore considered this expenditure to be irregular;
- He did not consider there were sufficient systems and safeguards in place to prevent or detect abuse of the Scheme. He was therefore unable to obtain enough evidence to be assured that the expenditure on the non-domestic RHI Scheme had been incurred for the statutory purposes intended.

The CAGNI Report included both recognition and an analysis of the extent to which the pre-November 2015 tariffs resulted in subsidies and a rate of return on investment which were much more generous than those available under the equivalent GB Scheme.

As a result of the CAGNI's decision to qualify DETI's expenditure accounts for 2015/16, the Public Accounts Committee conducted an inquiry into the non-domestic RHI Scheme. It held a number of evidence sessions during the autumn of 2016. During these evidence sessions, the DfE[5] Permanent Secretary explained to the Committee that the Department was undertaking work and examining options for amending the RHI Scheme to reduce the risks to Northern Ireland funding over the lifetime of the Scheme. He also advised that options were being examined to challenge any identified examples of illegitimate expenditure.

The concerns about the management and development of the Scheme and the escalating costs of the Scheme over its lifetime are well documented. Given the serious nature of these concerns, an independent inquiry, chaired by the Rt Hon Sir Patrick Coghlin, was announced on 24 January 2017 to '*investigate, inquire into and report on the scheme including its design, governance, implementation and operation, and efforts to control the costs of that scheme, from its conception in 2011 to the conclusion of the Inquiry'.*

Problem under Consideration

The 2017 Regulations came into force on 1 April 2017. The new tariff structure was applied to payments for any heat generated after 1 April 2017. Participants received the previous tariff (uncapped) for heat generated before 1 April 2017, calculated on a pro rata basis. For the typical installation, this has the same effect, over a 12-month period, as starting the tariffs and usage cap from zero on 1 April 2017. These Regulations will cease to have effect on 31st March 2018.

Work is ongoing in respect of the development of the long term tariff structure for the scheme with external policy advice nearing completion. This will inform the development of the business case required to bring about any changes to the Scheme. In addition, work has commenced on the comprehensive audit of installations.

The proposed amendments to the 2012 Regulations will continue the tariff structure introduced in April 2017 for installations accredited before 18 November 2015, thereby ensuring all small and medium biomass installations accredited under the Scheme are subject to the same cost control measures.

The continuation of the tiered tariff structure for a further 12-month period (1st April 2018 to 31st March 2019) will enable the Department to complete its review of the Scheme, to carry out public consultation, to obtain approval from the European Commission and to introduce any necessary legislative changes. This decision is described in more detail below.

NI RHI Funding

Funding for the NI RHI is provided through Annual Managed Expenditure (AME) funding, which is distinct from the NI block grant which takes the form of Department Expenditure Limit (DEL) funding. However, the Statement of Funding Policy, which sets out the funding arrangements for the devolved administrations, makes it clear that:

"*Where a devolved administration wishes to offer more generous terms for an AME programme, then the excess over that implied by adopting broadly similar criteria to the relevant UK government department ….must be met from within their DEL budgets*."

Budgetary pressures led to the suspension of the Domestic and Non-Domestic RHI Schemes for new applications from 29 February 2016. Even with Scheme suspension for new applications, available AME budget from 2016/17 onwards exceeded existing RHI commitments.

When DETI introduced the Non-Domestic RHI Scheme, it guaranteed that recipients would receive support for 20 years, which continues to be the case. The RHI is intended to provide a 'reasonable' rate of return for Scheme recipients. Evidence suggests that the average rate of return for non-domestic participants prior to the 2017 Regulations was substantially higher than the 12% anticipated when the Scheme launched.

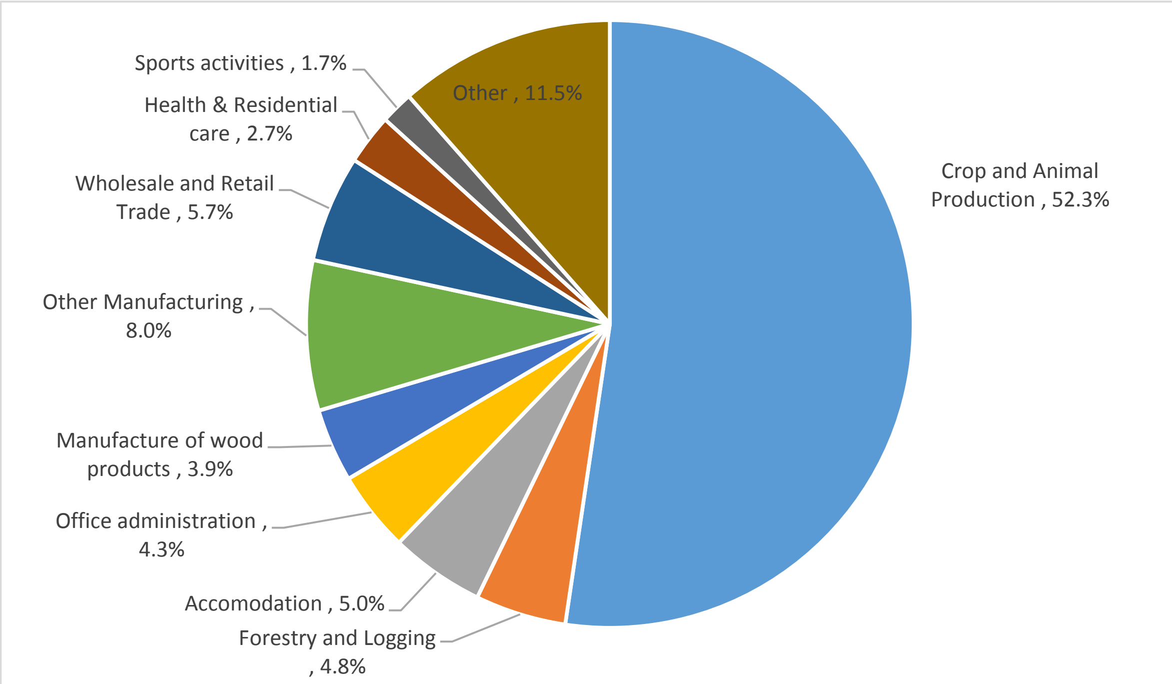
Further, State aid and scheme requirements mean that only 'useful heat' is eligible for payment under the RHI Scheme. In other words, only, heat which would otherwise have to be met by fossil fuels. The extension of cost control measures will help to achieve this by removing the incentive for generating heat simply to receive payments through the introduction of a tiered tariff and a cap on usage.

[5] The Department of Enterprise, Trade & Investment (DETI) was combined into the Department for the Economy (DfE) as part of the restructuring of NI Executive departments in 2016.

Business Sectors Benefitting from RHI

As part of the accreditation process, participants were asked to specify the sector in which their business operated. The proportion of users within each sector is summarised in the chart below. The most popular sector was Crop and Animal Production (52.3%). Within that sector the predominant use was poultry farming. This was reflected in the sample selection of the PwC audit, where 38% of successful inspections were in the poultry sector. The Department's analysis of responses to a question in the application form in which applicants describe how heat generated by their installation would be used suggests that potentially 847 (39.8%) accredited boilers operate in the poultry sub-sector.

Chart 2: RHI Boilers by Sector



Urban/Rural Split

The Department compared postcodes provided on beneficiaries' application forms with the Northern Ireland Statistics and Research Agency's Postcode Directory (updated in November 2016) to ascertain the urban / rural split of the location of installations accredited under the Scheme.

The breakdown, which is set out in Tables 1 to 3, indicates that the majority of all accredited installations are in rural areas (88%). This figure is the same whether the installations were accredited before or after the 18 November 2015 tariff changes which first introduced the tiered tariff structure and annual cap.

The percentage of payments rises from 91% for rural installations accredited before 18 November to 94% for rural installations accredited after the November 2015 tariff changes. These figures indicate that the overwhelming financial benefit of the Scheme went to rural businesses with either pre or post 18 November installations.

Table 1: Pre 18 November 2015 Count & % of Installations and Count & % of Payments Split by Urban/Rural

	Number	%	Payments to 31 October 2017	%
Urban	212	12%	£7.1m	9%
Rural	1547	88%	£70.6m	91%
Total	1759	100%	£77.8m	100%

Table 2: Post 18 November 2015 Count & % of Installations and Count & % of Payments Split By Urban/Rural

	Number	%	Payments to 31 October 2017	%
Urban	39	12%	£0.3m	6%

Rural	274	88%	£4.2m	94%
Total	313	100%	£4.5m	100%

Table 3: Total Count & % of Installations and Count & % of Payments Split by Urban/Rural

	Number	**%**	**Payments to 31 October 2017**	**%**
Urban	251	12%	£7.4m	9%
Rural	1821	88%	£74.8m	91%
Total	2072	100%	£82.2m	100%

Direct costs and benefits to business

There have been over 2000 renewable energy installations approved to date under the Non-Domestic NI RHI with an overall installation capacity of approximately 221,000kW. Although there has been a smaller number of applications to the scheme than originally projected this has been offset by each installation generating significantly more heat than expected. This means that the level of heat generated under the scheme in 2018/19 is expected to be broadly in line with the original projections.

The Scheme was never intended to provide enhanced economic benefits for individual businesses. Instead, the RHI tariffs in NI were designed to bridge the gap between existing heating systems and the renewable heat alternative, with consideration given to the capital costs, operating costs and the non-financial 'hassle' factors that are involved in replacing existing heating. The 2011 consultation advised the tariffs for the Non-Domestic NI RHI would be developed using similar methodology to that used by DECC in designing the tariffs for the GB RHI. The tariffs set by DECC were designed to provide a rate of return of 12% (considering the capital costs, operating costs and non-financial 'hassle' costs) across each technology.

The 10% renewable heat target was set on the basis that the additional renewable heat would act as a replacement for heat previously generated by fossil fuels. However, in their application forms to the Scheme only one third of participants indicated that their boiler would be replacing an existing heating source. In addition, the meter readings provided to date suggest that some installations are generating more heat than is required. The extension of the 400,000kWh usage limit under the 2017 Regulations is expected to significantly reduce the amount of heat generated under the Scheme in 2017-18. However, as a significant proportion of the heat previously generated above this level was based on maximising RHI payments rather than the operational needs of scheme participants, it is considered that this will have limited impact on carbon emissions, as the ultimate objective of the scheme.

Without the 2017 Regulations and the extension of the tiered tariff structure via the Northern Ireland (Regional Rates and Energy) Act 2018, additional unnecessary heat would continue to be generated as a result of the unintended incentives in the Scheme. This is clearly detrimental to the environment and does not help achieve the policy objectives of the Scheme. The continuation of the cost control provisions introduced by the 2017 Regulations ensures these safeguards will continue to be in place while the longer-term policy for the Scheme is developed.

The projected cost of the subsidised heat under the Non-Domestic RHI, without the 2017 Regulations and its extension through the Northern Ireland (Regional Rates and Energy) Act 2018, would have been over £50million per annum by 2020 compared with the budget of £29 million per annum. Clearly this is not financially sustainable.

The continuation of the annual usage limit of 400,000 kWh (equivalent to a load factor of 46% for a 99kW boiler) places the same cap on all accredited small and medium sized biomass boilers for heat generated. The extent of the impact therefore depends upon individual usage levels and also the period of time during which the operator has already received payments under the 2012 Regulations.

Rationale for Intervention/Policy Objective

The Department is committed to finding a long-term solution to the pressing problems relating to Scheme behaviours and ongoing budgetary pressures. The Department is considering a number of options as part of the long term approach for the Scheme, which will be informed by the ongoing expert policy review of the tariff structure. However, it would not be possible to implement these options by the 31st March 2018.

In order to allow sufficient time for a longer term tariff structure to be developed and approved, it is necessary to assess the case for extending the cost control provisions introduced by the 2017 Regulations.

The rationale for the continued use of the tiered tariff structure first introduced on 18th November 2015 remains largely the same as in respect of the 2017 Regulations. In particular, the values of the Tier 1 and Tier 2 tariffs remain reasonable as an interim measure, while securing State aid approval for a change from the existing tariff structure would have required significantly more time.

Rationale and evidence that justify the level of analysis used in the RIA (proportionality approach)

The Department continues to develop long-term options to address the issues within the Non-Domestic Scheme. Evidence on reduction in heat use resulting from the introduction of the tiered tariff structure for all eligible installations, the outcome of the recent judicial review of the 2017 Regulations, the ongoing Public Inquiry and tariff review commissioned by the Department and consultation will all inform the long-term solution. However, this cannot be completed prior to 31st March 2018.

In the interim, measures must be taken to reduce the excessive costs to the public purse while giving due consideration to the impact for Scheme participants. This impact assessment considers interim options to meet these objectives within the short timeframe available.

Description of Options Considered

Whilst longer-term options have the potential to address the issues within the Non-Domestic Scheme, few could be implemented within the timescale necessary in the applicable circumstances. Interim options considered include:

1. **Do nothing/minimum** – If the Department does not put in place a replacement tariff structure for the period commencing 1 April 2018, the legal advice is that there is no statutory authority to make payments for small and medium biomass installations accredited before 18 November 2015.
2. **Status Quo** - Continue the provisions introduced by the 2017 Regulations for a further 12 month period to 31st March 2019, adding the Retail Prices Index uplift for calendar year 2017.
3. **Apply GB Tariff**- Applying the equivalent GB tariff from autumn 2015 when most applications were made to the Northern Ireland Scheme, taking account of subsequent inflationary uplifts. This option would not include a usage limit being placed on the amount of heat eligible for RHI payments.
4. **Revert to 2012 Regulations**- Applying the single tier tariff which previously applied to all heat generated i.e. excluding the reduced Tier 2 tariff and the 400,000kWh usage limit.

Analysis of Options (Incl Admin Burden)

The UK Government provides funding to Northern Ireland for the RHI Scheme, calculated as a population based share of the budget for the equivalent Scheme operating in the rest of the UK. In the 2015 Spending Review it was forecast that the UK budget for the Scheme would increase by 15% in 2018-19, rising from £780 million in 2017-18 to £900 million. NI accounts for approximately 2.86% of the GB population, adjusting for VAT abatement factor[6], which implies that £25.7 million in funding will be available from the UK Government for the NI Scheme in 2018-19, compared with £22.3 million in 2017-18.

This funding will be used for both the Non-Domestic and Domestic NI RHI Schemes with the latter having a projected spend of £3.1 million in 2018-19, compared with £3.0 million in 2017-18. This leaves £22.6 million for the Non-Domestic RHI Scheme.

Monetised and non-monetised costs and benefits of each option

Table 4 below sets out the estimated level of expenditure for each option under the non-domestic RHI Scheme when compared with the available funding. As with the business case for the 2017 Regulations the option of reverting to the single tier tariff with no usage limit (Option 4) would result in a significant cost to Northern Ireland of £27 million. Although the level of available funding has increased, the expected rate of inflation means that the extension of the 2017 Regulations will still result in a cost to NI. However, this is much lower than Option 1 and lower than the projected cost in 2017-18.

Table 4: Projected Level of Expenditure and Cost to NI by Option

£ million	Cost to NI Block Grant
Option 1: Do Nothing/Minimum	0.0
Option 2: Extend 2017 Regulations into 2018-19	0.2
Option 3: Apply GB Tariff from autumn 2015	0.0
Option 4: Revert to 2012 Regulations	26.8

The application of equivalent GB tariffs from when most of the applications to the Non-Domestic NI Scheme were made, under Option 3, would significantly reduce the cost of the Scheme with the impact of the lower tariffs outweighing the removal of the usage limit.

[6] An abatement factor of 0.975 is applied to funding for the NI Executive through the Barnett formula as any value added tax paid by the NI Executive is refunded by HM Customs and Excise.

In addition to examining the costs and benefits to the public sector, it is also important to consider the impact for Scheme participants.

While the rates of return for the typical participant on the scheme under Options 2-4 are all higher than the 12% target set for the scheme the rate of return under Option 4 is excessive . In addition, under Option 4 the rate of return increases in line with load factor with no limit, reflecting the perverse incentive in the single tier tariff to generate more heat than is required.

The analysis set out above shows that reverting to the previous single tier tariff structure would impose significant costs for NI, reducing the level of available funding for public services. In contrast, the option of extending the 2017 Regulations would lead to expenditure moving closer in line with the available funding whilst at the same time still providing Scheme participants with a generous rate of return.

As Option 4 is characterised by reversion to the previous single tier tariff it carries with it the inevitability that the AME budget will again be breached, with associated impact on the funding for public services.

As Option 4 would involve a return to the previous single tier tariff there is a material likelihood that most participants would generate returns significantly in excess of the acceptable range referenced when the Scheme secured State aid approval. This would not represent value for money for the taxpayer or an effective use of the scarce resources available to NI.

The primary objective of the RHI Scheme was to make a contribution to the achievement of the target that 10% of the heat generated in NI should come from renewable heat sources by 2020. However, setting the initial tariff at too high a rate meant that it was not possible for the Scheme to fund the required amount of renewable heat from the available funding. Furthermore, whilst the intention was that the RHI Scheme would fund the replacement of heat from conventional fossil fuel boilers, in only one third of applications was this actually the case.

In this context, whilst Option 2 would involve less heat being eligible for RHI payments, due to the 400,000kWh usage limit, it would be expected that a significant proportion of the additional heat paid for under Option 4 would represent inefficient or ineffective generation inconsistent with the spirit of the renewable heat target.

It would be expected that Option 2 would require the least time to secure State aid approval from the European Commission as it is based on simply extending the same tariff structure that was approved earlier in 2017. In contrast, any change to the tariff structure would be expected to take at least 9 months.

However, securing State aid approval is expected to be most difficult, if not improbable, for Option 4. In particular, the European Commission is likely to have concerns with any attempt to revert to a single tier tariff structure that has been shown to not represent value for money, in the context of the potential for Scheme participants to use the over compensation from RHI payments to cross-subsidise their wider business interests. Option 3 would be expected to require more time to secure State aid approval than Option 2 but less than Option 4.

The Department considers Option 2 – Continue the provisions introduced by the 2017 Regulations into 2018-19 – to be the preferred option. This option represents the lowest risk and highest non-monetary benefit. Whilst it has a forecast cost greater than Option 3, it has a significantly lower cost than Option 4. In addition, it is considered to be more closely aligned to the original intention of the Scheme and to deliver a rate of return to participants in line with the related State aid approval.

Funding from the UK Government for the purpose of the RHI Scheme is forecast to be in the region of £25.7 million in 2018-19. This funding will be used for both the Non-Domestic and Domestic NI RHI Schemes with the latter having a projected spend of £3.1 million in 2018-19. This leaves £22.6 million for the Non-Domestic RHI Scheme. The forecast cost of the preferred option is £22.8 million which leaves a small projected shortfall to be funded by Northern Ireland. Therefore the preferred option is deemed affordable.

Risks and Assumptions

There is a range of risks associated with each of the options. Most of the risks are the same as those for the introduction of the 2017 Regulations, as set out below;

Budgetary

As Option 4 potentially involves reversion to the previous single tier tariff, it will inevitability breach the AME budget with associated impact on the funding for public services. Although the projected impact on Northern Ireland is substantially lower for Option 2 and not at all for Option 3, the risk remains that the assumptions underpinning the cost projections are not reflected in the actual outcomes. These include:

- Installations not yet accredited - although a conservative approach has been adopted, there is significant uncertainty in respect of when, or if, the outstanding applications will be accredited onto the Scheme, as well as what their level of usage will be;
- Variation in fuel usage over time - the assumption has been that the level of heat generation in 2018-19 will be in line with the average to date. However, this average has often been on the basis of a small number of quarterly readings. Furthermore, whilst the overall average load factor for the Scheme is broadly stable between years, the monitoring of meter readings has highlighted significant variations for individual installations; and

- Behavioural response - the monitoring data suggests that the main behavioural response by participants in response to the 2017 Regulations has been in respect of the overall 400,000kWh usage limit. Although this has already been reflected in the cost projections there remains the possibility that there will be a significant reduction in the usage of boilers towards the 1,314 hours Tier 1 threshold. There is a particular risk under Option 4 that greater awareness of the potential to receive excess payments would result in a significant increase in heat generation.

Close monitoring will be required in advance of, and during, 2018-19 to gauge these various budgetary risks and to update the cost projections where necessary.

Financial Return

As Option 4 would involve a return to the previous single tier tariff, there is a material likelihood that most participants would generate returns significantly in excess of the acceptable level previously specified by the European Commission when providing State aid approval. This would not represent value for money for the taxpayer or an effective use of the scarce resources available to Northern Ireland.

Although the continuation of the tiered tariff structure and overall usage limit under Option 2 will reduce the level of over compensation for Scheme participants operating more than 1,314 hours per year, the risk remains that the rates of tariff are too high. In light of the information provided by participants in their application forms to the Scheme, it would appear that too high a level of capital cost was used when originally setting the tariff. In addition, although the Tier 1 tariff will have increased by almost 20% since it was first calculated (as a result of inflationary uplifts), it is unclear that the net cost of renewable heat will have increased by this amount.

The review of tariff structure will examine the most appropriate tariff rates and other elements to reduce the risk of over or under compensation. However, this will be constrained by the extent of heterogeneity in the characteristics of Scheme participants and the need to minimise the costs of administering the Scheme.

Legal Risk

The main legal risk under Option 2, 3 and 4 is in respect of securing the necessary legislative approval for the new legislation before the start of the 2018-19 financial year. As no Northern Ireland Executive has been formed following the 2nd March 2017 Assembly election, legislation cannot be made by the normal process through the Assembly. However this risk has been mitigated and an alternative has been put in place to take the necessary legislation through Westminster for Option 2.

In relation to the risk of legal challenge in Option 2 which proposes extending the provisions introduced by the 2017 Regulations. The 2017 Regulations are a legal challenge which was heard by the High Court. The High Court Judgement on 21 December 2017 found that the 2017 Regulations are not ultra vires and were necessary to achieve the following legitimate aims:

- Ensuring that the RHI Scheme was in accordance with the UK's obligations under the Renewable Heat Directive
- Ensuring that the scheme operated in a manner consistent with the objectives of the scheme
- Ensuring that the scheme operated in a manner consistent with State aid approval
- Protection of the Northern Ireland Budget

An appeal has been lodged and is expected to be heard in June 2018.

Whilst the risk of a legal challenge from boiler owners may be small under Option 4 there would, however, be a risk of other members of the public making application for a Judicial Review on the grounds that public services may suffer as funds are diverted from them to the RHI Scheme.

Although Option 2 will still require State aid approval to be sought from the European Commission, as it follows the current tariff structure, the process would be expected to be relatively quick and uncontroversial. Option 3 would be expected to be more difficult, although ameliorated by the use of the GB tariff structure.

In contrast, there is a very high risk that the European Commission would not approve Option 4. In particular, having previously accepted DfE's rationale for introducing the 2017 Regulations, it would be very difficult to justify a return to this structure.

Option 1 - 'Do nothing' approach also involves legal risk. As the Department would have no statutory authority to make payments for affected installations and this would inevitably require legal resolution.

Operational Risks

The Scheme is administered by Ofgem on behalf of the Department. Any change in tariff must be able to be implemented on its IT and operational systems and as a result there are operational risks in taking forward any change to tariff structures. Although the risk is least under Option 2, the experience of the introduction of the 2017 Regulations would suggest that either Option 4 or Option 3 could also be introduced with around a 12-week implementation timeframe to allow necessary changes to their systems, however it should be noted that there would be additional IT and administrative costs incurred.

Risk of failure to implement targets set by EU RED –

The primary objective of the RHI Scheme was to make a contribution to the achievement of the target that 10% of the heat generated in NI should come from renewable heat sources by 2020. However, setting the initial tariff too high meant that, whilst the intention was that the RHI Scheme would fund the replacement of heat from conventional fossil fuel boilers, in only one third of applications was this actually the case.

Risk of not receiving State aid approval

Option 2 would require the least time to secure State aid approval from the European Commission as it is based on simply extending the same tariff structure that was approved earlier in 2017. Indeed, State aid approval has been secured to proceed on the basis of Option 2 for a further year, In contrast, any change to the tariff structure would be expected to take at least nine months. Securing State aid approval is expected to be difficult, if not improbable, for Option 4. In particular, the European Commission is likely to have concerns about any attempt to revert to a single tier tariff structure that has been shown by the Department to not represent value for money, in the context of the potential State aid issues that Scheme participants may have used the over compensation from RHI payments to cross-subsidise their wider business interests. Option 3 would be expected to require more time to secure State aid approval than Option 2 but less than Option 4.

Environmental Impact and Sustainable Development

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. The preferred option must support RHI to deliver benefits that include a reduction in CO2 emissions as fossil fuels are displaced and an increase in fuel security as Northern Ireland's dependence on imported heating fuel diminishes. The initial tariff structure has been associated with misaligned incentives and environmentally harmful behaviours on the part of some Scheme participants.

In particular, as a result of the variable cost of heat production being less than the tariff payable, per kilowatt hour, an incentive had been created for the production of unnecessary heat, or the production of heat for purposes not intended by the Scheme, in order to increase payments. This will clearly have had a negative effect on the Scheme's aim of decreasing carbon emissions.

Rural Proofing

A rural proofing exercise has been carried out.

Enforcement and Sanctions

The Department has appointed Ricardo Energy and Environment to undertake a series of pilot audits for the Non-Domestic Renewable Heat Incentive (RHI) Scheme.

The Department for Economy is overseeing the audit programme. Audits will cover compliance with the Scheme Regulations and supporting Scheme Guidance including the participant's ongoing obligations.

Depending on the level of non-compliance with the Scheme's regulations, there is a number of enforcement actions which might be taken ranging from providing advice on how to increase energy efficiency, the withholding of payments, financial penalties, or permanently excluding participants from the Scheme as set out in the Scheme regulations.

Conclusion

The 2017 Regulations came into force on 1 April 2017 and expire on 31 March 2018. During this time, the Department has been considering options for the longer term review of the RHI Scheme against a background of a Judicial Review of the 2017 Regulations, ongoing public inquiry and difficulties in securing a tender to undertake the planned audit programme. The Department is continuing of the provisions introduced by the 2017 Regulations. The Department is progressing on the basis of a further 12-month period so that an appropriate long term tariff structure can be implemented on or before 1st April 2019. State aid approval has been secured for a further 12-month period.

Evidence on reduction in heat use resulting from the 2017 introduction of the tiered tariff structure for all eligible installations, the outcome of the recent unsuccessful judicial challenge to the 2017 Regulations and subsequent ongoing appeal, the ongoing Public Inquiry and a tariff review commissioned by the Department together with planned public consultation will all inform the long-term solution.

Monitoring and Review

The Department, in liaison with Ofgem, will continue to monitor the Non-Domestic Renewable Heat Incentive Scheme to assess if the elements of the Scheme are delivering the anticipated benefits. The Department will also be cognisant of the findings of the Public Inquiry into the design, governance, implementation and operation, recent Judicial Review and the ongoing tariff review.