Chapter 20 – Emerging awareness in the public sector of the RHI and its flaws

20.1 The Inquiry has received written and oral evidence from many witnesses – including officials, Ministers and SpAds in both DETI/DfE and DFP/DoF – not one of whom realised the inherent weaknesses of the non-domestic RHI scheme nor the real reasons why, by late 2014 into 2015, it had become so popular with soaring uptake levels, or why the usage patterns and budget impacts were so different from those modelled originally. While both Dr Crawford and Timothy Cairns were aware, by July 2015 at the latest, of the perverse incentive to waste heat in order to gain tariff, the Inquiry was told that the first time that many others were alerted to the fact that the subsidies exceeded the cost of the fuel was after publication of the very critical report by the Northern Ireland Audit Office in June 2016, more than four years after CEPA’s addendum tariff proposals in February 2012 had been adopted by DETI and approved by DFP for the launch of the RHI scheme later that year.

20.2 In marked contrast, a number of other Government and public sector bodies soon became aware of the attraction of the RHI scheme and its distortive impacts on the heat market, even, in some instances, actively promoting it and increasing the budgetary pressures which DETI would then face.

20.3 This was also true for the private sector where, as discussed in chapter 21 of this Report, within three weeks of the launch of the non-domestic RHI scheme in November 2012, the attraction of the medium biomass tariff with no tiering became very obvious to a number of individuals and commercial organisations. Indeed, the Inquiry was told by boiler installers that initial uptake in relation to the scheme was slow because potential users thought it was too good to be true and therefore hesitated to make the necessary investment.

20.4 One might expect, however, that there would be a more open and frank exchange of information between public sector bodies in relation to potential concerns with the scheme than could be anticipated from the commercial sector, since public sector bodies ought to be more attuned to the requirement of securing value for public money. In the following sections of this chapter, examples of information received by organisations in the public sector and understanding of the scheme gained by them are discussed, as well as the extent to which this was then shared, or not, with the Department which was responsible for the running of the scheme.

Cross-departmental co-operation

20.5 The Inquiry considers that strong and transparent co-operation within and between the Departments of any devolved administration is essential, particularly where the expenditure of large sums of public money are at stake. In Northern Ireland the pledge of office taken by Ministers and junior Ministers, contained in the Ministerial Code, obliges them to “serve all the people of Northern Ireland equally” and “to promote the interests of the whole community.”

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1049 And the Deputy Secretary in DETI, Mr Stewart, was informed by Mr Cairns at some point – probably during the summer of 2015 – of concerns about potential fraud or abuse of the scheme (discussed further in chapter 29 of this Report).
1050 WIT-195711
1051 DOF-00004
Minister Foster, in her letter to her ministerial colleagues on 21 June 2011, referred to in chapter 6 of this Report, highlighted the importance of inter-departmental and agency co-operation, emphasising that for opportunities to be maximised and for the optimum potential of the local renewable heat market to be reached there needed to be a cross-departmental approach. Her letter recorded:

“To this end, I would propose the establishment of a Renewable Heat Strategy Group to consider issues relating to the development of the renewable heat market.”

The new group would sit under the Sustainable Energy Inter-Departmental Working Group (SEIDWG), which the DETI Minister chaired.

SEIDWG had been established with the aim of ensuring a co-ordinated approach across the Northern Ireland Executive to the promotion of sustainable energy. The objective was to enable Departments to ensure that energy related policies and practices were in concert with each other, with the aim of maximising the use of public funding and delivering value for money in the support of sustainable energy initiatives. It was established in 2008 and met for the first time on 28 January 2009. The final meeting of SEIDWG took place on 15 January 2015, after which the group was reconstituted to focus on wider strategic energy issues.

The Renewable Heat Strategy Group was a sub-group of SEIDWG which was specifically to focus on renewable heat and, as noted above, was to “consider issues relating to the development of the renewable heat market”. It was originally to include membership from DETI, OFMDFM, DFP (Central Procurement and Properties), DRD, DARD, DOE, DHSSPS and Invest NI. It represented one means by which to encourage effective inter-departmental working in the area of renewable heat. There were, of course, other less formal means by which such cooperation and information-sharing could have been achieved; but such a sub-group, with representation from a number of Departments and a specific focus on renewable heat, was obviously a potentially extremely helpful way of securing these objectives.

The evidence seen by the Inquiry confirmed that the Renewable Heat Strategy Group was established in January 2011. However, it met upon only three occasions on 18 October 2011, 4 July 2012 and 20 May 2013, albeit the intention from the papers at the time was that it would meet twice a year.

The Group clearly had good intentions as a forum for bringing people together from across Departments. It appears to have been briefed by, and had its meetings supervised by, Peter Hutchinson and Joanne McCutcheon, with the latter chairing its meetings. The Group’s Terms of Reference were included in the papers for its first meeting in October 2011. It had three primary objectives, the first of which, in relation to the Northern Ireland RHI, was to:

“Advise on the design and implementation of the Northern Ireland RHI and, following implementation, provide an ongoing monitoring and advice function to ensure that the RHI (and any other policy initiatives) are supporting the delivery of the 10% renewable heat target.”

1052 DFE-143714 to DFE-143716
1053 See the group’s Terms of Reference at DFE-63876: “Following Executive endorsement of the strategy/road map and the full implementation of the RHI, the group will meet biannually to review progress.”
1054 DFE-63969
1055 DFE-63870 to DFE-63884
1056 DFE-63874
20.11 The Inquiry also notes that, at the meeting on 4 July 2012, one of the Action Points agreed was that there should be discussion between DETI and DARD about interaction between the NI RHI and Government grant schemes.\textsuperscript{1057}

20.12 The Inquiry was unable to discover precisely why the Renewable Heat Strategy Group ceased to meet after May 2013. The only explanation which was provided to the Inquiry was pressure on resources. Ms Hepper’s written evidence to the Inquiry was that:

“The work of the group was paused, following discussion with the Minister in the context of the wider SEIDWG work programme. This was because the Division and the Renewable Heat Branch was under considerable resource pressures and could not sustain the servicing of a number of groups associated with SEIDWG, including the Renewable Heat Strategy group [sic]. With a very small team working on renewable heat further prioritisation was required and the focus had to be on the work to complete the RHI and work on a wider Road Map/Strategy or affiliated issues needed to be given a lower priority at that time. The Top Management of the Department would have been made aware of the Minister’s decision on this.” \textsuperscript{1058}

20.13 The Inquiry considers it unfortunate that the work of the Group was paused, particularly when the business case for the NI RHI scheme (discussed in chapter 11 of this Report) had indicated that an inter-departmental Renewable Heat Strategy Group would monitor the progress of the RHI in terms of achieving the necessary 2020 Programme for Government target.

20.14 Minister Foster’s oral evidence to the Inquiry was that she believed she was made aware of the Group’s work being paused due to resource pressures at the time but that she did not think she had realised the significance of it at the time, in terms of the Group’s monitoring role for the scheme. Minister Foster emphasised that she believed the work to have been ‘paused’, rather than ‘stopped’\textsuperscript{1059} – although it appears to the Inquiry that the work of the Group was not resumed, at least during the period of the RHI scheme being open to applications.

20.15 The absence of the Renewable Heat Strategy Group, after its work was paused, is likely to have reduced the opportunity and/or incentive for the sharing of information relevant to the RHI scheme between Departments. Such a group, if it also had private sector involvement (such as the earlier Oversight Group which oversaw the AECOM/Pöyry work, discussed in chapter 2 of this Report) could have been an additional means by which DETI could have obtained information relevant to the RHI scheme from a variety of sources. In this respect, the Inquiry notes that there had been a recommendation from the ETI Committee in its renewable energy inquiry that there be a group which included representatives from the renewable energy sector to advise on Government policy on renewable energy,\textsuperscript{1060} and that there was strong support for the Renewable Heat Strategy Group in the DETI 2011 consultation, which indicated that it might undertake a range of monitoring functions.\textsuperscript{1061}

20.16 In any event, despite the emphasis on cooperation by Minister Foster in her letter of June 2011, in practice cooperation with, and the supply of information and assistance to, DETI from other public sector bodies rarely seems to have emerged in relation to the NI RHI scheme.

\textsuperscript{1057} DFE-64010
\textsuperscript{1058} WIT-16705; See also TRA-01798 and TRA-02295
\textsuperscript{1059} TRA-08525
\textsuperscript{1060} DFE-380878 (from an update provided to the ETI Committee in August 2011)
\textsuperscript{1061} See the analysis of consultation responses at DFE-05745
Mr Sterling, the DETI Permanent Secretary during the development, and early operation of the RHI scheme, told the Inquiry that a particular cause of concern was to “break down barriers between Departments” and he thought that there was still “a little bit of silo-based mentality in Departments”. Sir Malcolm McKibbin, Head of the Northern Ireland Civil Service between 2011 to 2017, stated that:

“The culture should’ve existed that would have allowed people, when they saw a problem with the use of public resources that that should have been flagged up to a more significant level.”

The following sections highlight some of the shortcomings in this regard which came to light in the course of the evidence heard by the Inquiry.

**Department of Justice and the Desertcreat Project**

On 27 November 2012, when the NI RHI regulations had been in operation for less than a month, Brian Hood, then Managing Director of Sheridan & Hood Limited, a building services and engineering company, wrote to David Ford, then Minister at the Department of Justice (DOJ). Sheridan & Hood had been asked to provide cost proposals for a tender in respect of a biomass energy centre for the Desertcreat training facility (then a proposed new police, fire and prison training college to be situated near Cookstown).

Mr Hood noted that the energy proposals by the consulting engineers for the project involved two 1MW biomass boilers with extensive underground heating distribution pipework fuelled with woodchip and running for approximately 3,000hrs per annum. He acknowledged that boilers of such magnitude fell outside the then current NI RHI scheme but suggested, as an alternative, individual 99kW biomass boilers for each of the ten (of 12) buildings to be heated. He suggested that these would be small in physical size and would not be unsightly, being located adjacent to each building. The remaining two buildings would require larger plants, which would also qualify for subsidy under the scheme.

Mr Hood costed the heating proposals specified by the consulting engineers at £1.5 million with running costs of around £199,337 plus VAT per annum. Using biomass pellets and the individual 99kW boilers which he proposed, he estimated that the annual fuel bill would be £130,494 which, deducted from an annual RHI subsidy of £175,230, would leave an annual surplus for the college of £44,740. He pointed out that the heating system which he proposed, operated over the 20-year grandfathered lifetime of the NI RHI scheme, should yield a total net income of £894,800 as compared to a deficit in excess of £2 million under the arrangement proposed by the consultants.

Mr Wayne Cullen of BS Holdings Ltd, the relevant installers and another company connected to Mr Hood, had taken the precaution of confirming through an RHI enquiries email account (which appears to have been operated by Ofgem) on the same date as the Sheridan & Hood letter, 27 November 2012, that completely separate generating plants each serving their own separate heat distribution systems would meet the NI RHI scheme criteria. Although the response to Mr Cullen indicated that appropriate evidence would have to be supplied with the
applications for accreditation, the response stated that: “According to the details you have provided it seems that your clients would meet the criteria to be able to apply for multiple installation.”

Mr Hood’s letter to DOJ was sent by email and the email was said to have been copied to four MLAs: Mr Sammy Wilson, DFP Minister; Mr Danny Kinahan; Mr Patsy McGlone; and Mr Ross Hussey. Mr McGlone, who was then the chair of the ETI Committee, told the Inquiry that had he seen the letter he would have passed it to the clerk of the Assembly Justice Committee, but he had no recollection of having received it. Mr Wilson, Mr Kinahan and Mr Hussey each told the Inquiry in written statements that they had no recollection of receiving the letter either. As appears from the further exchanges below however, it is clear that DOJ did receive the letter.

On 10 January 2013 Mr Cullen received a reply on behalf of DOJ to Mr Hood’s letter and to an email he had sent to DOJ on 21 December 2012. With regard to the proposal that a number of individual 99kW boilers would be economic, the Desertcreat programme director, Mr McCrossan, said:

“It may be possible to split the circulation to meet the maximum size permitted within the current design. …However, whether it is appropriate for a Government funded facility to attempt to exploit possible loopholes in the RHI and recover the benefit is an interesting question. The principle of deliberately splitting the load over a number of small boilers not linked together, albeit on one site, could be interpreted as a deliberate attempt to circumvent the intent of the RHI, which is to give priority to smaller installations. We are not certain that this is something that the Government would wish to pursue.”

Mr Hood told the Inquiry that, immediately upon receipt of the letter of 10 January, his company made a telephone call to Mr Hutchinson at DETI who confirmed that there could be no objection to multiple boilers each separately installed in separate buildings. They explained the nature of the response that had been received from DOJ and the suggestion that their proposal of multiple boilers was wrong or in some way illegitimate, but, according to Mr Hood, Mr Hutchinson: “came back and said we were correct”. The Inquiry notes Mr Hood and Mr Cullen had already liaised with Mr Hutchinson and Ms McCutcheon during 2012 in order to familiarise themselves with the proposed RHI scheme.

A response in accordance with Mr Hutchinson’s advice was then sent by Mr Cullen to the Desertcreat project co-ordinator on 11 January 2013. After a further communication from the Desertcreat project team of 1 February 2013 in which it maintained its opinion that “this project could not obtain RHI approval for the system as suggested by Sheridan & Hood”, as well as raising other issues of concern with the Sheridan & Hood proposal, Mr Hood wrote
On 21 February 2013 Mr Hood received a response from the Minister of Justice referring to his communication with the Desertcreat programme team and continuing in the following terms:

“I am satisfied that the Programme Team has properly considered the correspondence from BS Holdings Ltd and am content with their advice not to re-open the issue.”

This correspondence appears to have brought the discussion about the possible use of the Sheridan & Hood proposed heating scheme at the Desertcreat site to a close.

However, the same potential ‘saving’ of public money in respect of the Desertcreat project by the use of multiple boilers was raised by Mr Cullen in emails sent to the then DFP Minister’s Assembly email address on 6 December 2012 and again on 10 December 2012, when he also contacted Mr McGlone MLA in whose constituency the project was located and who was known to be very supportive of its development. Mr McGlone also tabled an Assembly question relating to the use of biofuel at the college on 5 December 2012, but it did not raise the points about which Mr Cullen and Mr Hood had made representations, in particular what Mr Cullen described as: “the potential massive savings of taxpayers [sic] money.”

While the Inquiry appreciates that the proposed multiple medium-sized boilers were to be installed in separate buildings, it seems clear that the Desertcreat programme team, including Mr McCrossan, perceived the proposal as exploiting a ‘loophole’ in the scheme, and constituting a deliberate attempt to circumvent the intention of the scheme. Mr Hood’s letter also explained in clear terms how it was possible to make use of the scheme not only to secure heat which was essentially free but, also, in a way which generated a profit from public funds. Notwithstanding this, the Inquiry was not presented with any evidence of any relevant enquiry/warning being sent to DETI by DOJ.

The Inquiry was provided with a witness statement from Nick Perry, the Permanent Secretary of DOJ, which discussed DOJ’s involvement in this episode. In addition, in representations made to the Inquiry, DOJ has emphasised that it satisfied itself that Ofgem, the scheme administrator, was already aware of, and concerned about, the potential to seek to manipulate the NI RHI scheme by using smaller, multiple boilers. This point is made by reference to the Desertcreat project team’s response to Mr Cullen of 1 February 2013, in which it was noted that:

“Ofgem, who are responsible for administering the scheme in Northern Ireland, are particularly concerned with efforts to access the RHI, via system manipulation, with multiple boilers below the 100kW limit.”

Reference was then made to Volume 1 of the Guidance published in relation to the NI RHI scheme, particularly the section dealing with eligibility.
20.31 However, it does not appear that the Desertcreat project team consulted Ofgem directly, although they clearly did consider the published NI RHI Guidance. Ofgem’s approach to the interpretation of the NI RHI regulations relating to multiple boilers is discussed in detail elsewhere in this Report. It may well have been the case that the passage in the NI RHI Guidance relating to multiple installations led the project team to consider that the NI RHI scheme could not be ‘exploited’ in the way which had been suggested by Sheridan & Hood. In fact however, it could be so exploited, even though that appears to have been contrary to DETI’s original policy intent.

20.32 In the Inquiry’s view, DOJ could and should have done more to communicate this potential issue to DETI, particularly in light of how insistent Messrs Hood and Cullen had been about the correctness of their approach. It would not have been a difficult step for someone in DOJ to contact someone in DETI, as Mr Hood suggested in his correspondence, in order to ascertain whether the scheme could be used in the way in which it had been suggested (which DOJ had considered involved the exploitation of a loophole) and, if so, to ascertain whether DETI, which was responsible for the scheme, was aware of this. DOJ may well have been right to have accepted its programme team’s advice not to re-open the design of the biomass heating strategy for the proposed college in order to avail of the NI RHI scheme (for a range of different reasons) but that does not mean that it could not have drawn the issues raised with it to the attention of DETI for its information or further enquiry.

**Invest NI**

20.33 Invest Northern Ireland is a Non-Departmental Public Body (NDPB) the sponsor or parent body of which was DETI, now DfE. It was established by and operates under the Industrial Development Order (Northern Ireland) 1982 as amended by the Industrial Development Act (Northern Ireland) 2002 and its functions are dealt with in section 2 of that Act. Section 2 provides that it will “exercise the functions which immediately before the appointed day were functions of the Department” and a number of pieces of legislation are then listed. One of those pieces of legislation is the Energy Efficiency (Northern Ireland) Order 1999, article 3 of which provides:

> “Invest Northern Ireland may take such action as it thinks appropriate for the purpose of promoting the efficient use of energy in industry.”

20.34 The Inquiry heard oral evidence from Alastair Hamilton, then Chief Executive of Invest NI, as well as from Jim Clarke, an Invest NI official, and Alastair Nicol, an independent expert contracted by Invest NI to perform certain services for its client companies relevant to the RHI scheme.

20.35 Mr Hamilton explained that the primary function of Invest NI was the delivery of projects on behalf of the Department and also on behalf of the Northern Ireland Executive, in the execution of its Programme for Government.\(^{1081}\) Independence was exercised in relation to the adoption of the target or objective and managing the available resources, both people and budget, in the delivery of that target or objective. Apart from that function, Invest NI is completely aligned to all of the Government codes and practices, including Managing Public Money Northern Ireland, the Nolan Principles and the various other principles that govern public life.\(^{1082}\) Its functions are to be carried out in the public interest in the spirit, as well as the letter, of the law. It is a body that must observe high ethical standards and achieve value for money.\(^{1083}\)

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1081 TRA-13482
1082 TRA-13471
1083 TRA-13472 to TRA-13473
Invest NI is an organisation which has about 50,000 customer engagements a year and 6,000 live letters of offer. In order to discharge its functions it has recruited to its staff a significant number of individuals from the private sector for the purpose of benefiting from their commercial knowledge and experience. Mr Clarke is but one example. Mr Hamilton confirmed that no one on the senior team at Invest NI was aware of the non-domestic RHI scheme until probably somewhere in 2014-15 and he agreed that the commercial knowledge and experience to which Invest NI had access could have been available in the course of the development of the scheme had it been sought by DETI.

Mr Hamilton explained that the equivalent body in Scotland discharges the Scottish Government’s responsibilities on energy efficiency in the same way as it discharges export, trade and inward investment. In such circumstances it is difficult to see why Invest NI was not consulted at the development stage of the non-domestic RHI, if not for delivery of the project at least for the benefit of advice as to the commercial market development of the scheme. In oral evidence the Inquiry notes that DETI Finance’s Mr Cooper suggested that Invest NI would have been a more natural home for RHI, a view that was shared by his finance colleague, Bernie Brankin.

Mr Hamilton said that he had been unaware of an official Invest NI presence on the Renewable Heat Group until the Inquiry had commenced. He emphasised, however, that representatives from Invest NI were only present on that group to provide technological rather than commercial or economic advice.

The Inquiry also heard oral evidence from Mr Alastair Nicol, an engineer from Element Consultants, who worked as a consultant for Invest NI. If an Invest NI business client had an annual bill of £30,000 or more for water, waste and/or energy they were entitled to have a consultation with an expert in the relevant field who would then produce a report providing advice. Mr Nicol was such an expert and he produced reports for Invest NI clients and for Invest NI from early 2013 onwards. Mr Nicol is a mechanical and electrical engineer by profession, with a specific interest in combustion that encompasses biomass technologies. He is the co-author of a number of publications addressing the design and operation of biomass combustion plant. Such publications include the ‘Invest NI Guide to Biomass Heating’.

His relationship with Invest NI was as one of a framework of sustainable development technical consultants consisting of independent specialised experts engaged to deliver technical consultancy reports to the businesses of Invest NI clients. As such a consultant, he was required to act impartially and seek to identify the most energy efficient solution to the business in question.

A typical assignment would require him to attend at the client’s business premises in order to obtain an informed view of their heating demands. He would then produce an independent...
report illustrating the best technical and energy efficient way in which such demands could be met. That report would then be furnished to an Invest NI technical adviser, such as Jim Clarke, who would scrutinise it and, if approved, the report would be issued to the client. Mr Nicol was familiar with the GB RHI scheme and, in particular, the tiering of tariffs imposed by that scheme. He believed tiering to be a sensible concept that should broadly reflect the heat required and place some limitation upon revenue from subsidy.\(^\text{1094}\)

20.42 In total, Mr Nicol appears to have produced more than 30 such consultancy reports for Invest NI clients relating to the NI RHI scheme between 2012 and 2016, most of which have been listed in an appendix to his witness statement.\(^\text{1095}\) During his oral evidence, Mr Nicol was only asked about a selection of these reports, although it is important to note that many of the issues raised in them, and summarised below, appear to have been repeated in other reports which were not opened in evidence.

20.43 The first report to which Mr Nicol was referred during his oral evidence dated from January 2013, some two or three months after the non-domestic NI RHI scheme had been launched.\(^\text{1096}\) That report included the following commentary on the NI RHI scheme:

> “In many ways, technical due diligence is irrelevant, and you just install the largest boiler that you can claim RHI for...the Renewable Heat Incentive, now available in Northern Ireland completely distorts the economic case for biomass and the best technical solution cannot now be recommended on economic grounds. Instead the project must be considered as an opportunity for revenue generation and the recovery of the maximum amount of RHI revenue support over the 20 years that an accredited RHI project will receive funding.” \(^\text{1097}\)

20.44 In October 2013 Mr Nicol reported on a large project, the optimal heating solution for which would have been a wet system with convectors and a large biomass boiler outside.\(^\text{1098}\) However, the proposal being considered for the project in question involved installing several 99kW boilers outside on individual hydraulic circuits. In the course of his work on this project, but before completion of his report, Mr Nicol emailed Dr Ward at Ofgem on 15 August 2013 for advice, noting that in this particular project the client was adamant that a multiple boiler solution should be used to maximise RHI benefits.\(^\text{1099}\) At that time Dr Ward was a senior technical manager within Ofgem’s E-Serve, equivalent to grade 7 in the Northern Ireland Civil Service, with responsibilities in respect of both the GB and NI RHI schemes. To Mr Nicol’s surprise, Dr Ward confirmed that each of the installations would be eligible for the RHI because they were hydraulically separate.\(^\text{1100}\)

20.45 Mr Nicol also made a telephone call to DETI but he was unsure as to the identity of the official to whom he spoke – it may have been Mr Hutchinson, but Mr Hutchinson told the Inquiry he had no clear recollection of this call. The official who spoke to Mr Nicol about the issue told him to “take it up with Ofgem.”\(^\text{1101}\)
20.46 In a report for a different project in April 2014 Mr Nicol wrote:

“The installation of a biomass boiler offers a payback of 3.5 years and NPV of £100,000 – no regular boiler installation can offer a similar return on investment (if at all!!!).”\footnote{WIT-147181 to WIT-147220 at page WIT-147186}

20.47 At a further point in the same report he noted:

“The structure of the RHI essentially dictates the commercial solution and it is really pointless installing a biomass boiler that is technically suited to the application for this will not provide adequate commercial return.”\footnote{WIT-147188}

Later in the same report he recorded:

“Over a 20-year period eligible heating plant would receive quarterly payments for metered heat consumed. The payments are extremely generous – in this case and because of the plant size 6.1p/kWh and are indexed over twenty years. So in this case a wood installation that is not as efficient as gas and costs more to run can actually generate a very large potential saving solely from public funding. Although the initial cost of the installation of the heating technology may be significant, the RHI payments will more than compensate for this over the course of the agreement. On average, it takes just over three years for an organisation switching from oil to wood pellets to recoup their installation money.”\footnote{WIT-147217}

20.48 In a report for a different project in October 2014, Mr Nicol wrote:

“The RHI has created some anomalies. The first being the payment of RHI on multiple 99kW installations. Ofgem are apparently aware that this loophole has been exploited. There are examples of multiple 99kW boilers being used to heat poultry or similar sheds. Ofgem are apparently investigating this loophole and the intention is to prevent further inappropriate uses….Ofgem are apparently aware of numerous process activities that may not be operated at optimal efficiencies but where these may conceivably remain eligible for RHI funding. Again the levels of efficiency achieved in many potential industrial processes may be benchmarked to prevent inappropriate utilisation.”

In that particular case the client was using multiple 99kW boilers to dry woodchip.\footnote{WIT-148813 to WIT-148814}

20.49 In the course of a separate report compiled by Mr Nicol in November 2014 he wrote:

“The RHI rules state that a boiler of up to 99kW may receive 6.3p/kWh on any unit of heat produced (and used for useful purpose)....this rule has, perhaps unsurprisingly distorted the market and the price of equipment. The RHI allows...for an owner to install more than one 99kW facility and claim the higher rate on each one so long as they are discreet [sic] and hydraulically separate installations. Therefore in installing any 99kW installation it is in your best interest to run the boiler flat out all the time for the fuel is free and the more heat you produce the more money you may recover under the RHI.”\footnote{WIT-148908 to WIT-148943 at WIT-148923}
The final point made in that report was that:

“This project is only viable because of the Renewable Heat Incentive. There is fundamentally no energy saving basis for the project and receipt of RHI is therefore the only underpinning commercial reason for development.”

20.50 In a further report dated December 2014 Mr Nicol noted in relation to a wood drying business:

“If you stay below 99kW and qualify for RHI in fact it is a profitable exercise. Unfortunately there would be absolutely no incentive to dry it efficiently – in fact quite the opposite.”

20.51 In January 2015 he provided a report in which he expressed the view that:

“The RHI in Northern Ireland imposes commercial constraints that inevitably lead to technically inferior installation.”

20.52 In a report in February 2015 Mr Nicol recorded that the client had asked for consideration to be given to four hydraulically separate boilers “so as to generate the maximum RHI.” Mr Nicol noted that such a solution would be “technically inappropriate” and that “very high RHI revenue payment is essentially driving the installation of multiple small boilers”, whereas the onus on him was to identify the technically appropriate solution.

20.53 In a report compiled in May 2015 Mr Nicol wrote:

“Unfortunately the RHI payments are so large in Northern Ireland that it pays to waste heat – in other words the RHI payment is larger than the fuel cost. Economically and environmentally this is a very undesirable situation.”

20.54 These reports, which were provided to Invest NI officials by Mr Nichol, were clearly articulating concerns about the efficacy of the NI RHI scheme, and its value for money. The Inquiry has quoted from a range of these reports to demonstrate just quite how clear the issues of market distortion and incentivisation of heat wastage were to those who were advising in relation to heating installations in this field in the years after the introduction of the NI RHI scheme; and how, at least in Mr Nicol’s case, there was plainly no intention to keep this quiet in some way.

20.55 Quite apart from what Mr Nichol was saying in the reports he filed with Invest NI, on 25 June 2014 Invest NI published a guide on biomass written by Mr Nichol. In the section ‘Sizing a Biomass Boiler’ the following passage appeared:

“In some respects, the size of a biomass boiler will be dictated by the amount of money that can be recovered by the RHI. Because plant of less than 99kW will receive 6.3p/kWh for every unit of heat produced and plants above this will receive 1.5/kWh, the economic pressure influences boiler sizing. This leads to under sizing...”

1107 WIT-148928
1108 WIT-149050 to WIT-149100
1109 WIT-149076
1110 WIT-149245
1111 WIT-148944 to WIT-148977
1112 WIT-148949
1113 WIT-149667 to WIT-149692
1114 WIT-149685
1115 OPB-00042 to OPB-00105
...and far from optimal installations in some cases. The situation is further confused by the fact that the current rules allow two smaller boilers to serve the same premises so long as they serve separate hydraulic circuits. Thus 396kW of biomass installation could qualify for revenue support at 6.3p/kWh if the boilers served four hydraulically separate circuits. Of course the cost of four smaller boilers in relation to the revenue generated from load may not be worthwhile, but the situation might be beneficial for some installations."

20.56 As mentioned earlier, the Inquiry also heard evidence from Invest NI official Mr Clarke. He possessed a Bachelor of Science degree in Chemistry/Chemical Engineering and an MBA and, prior to joining Invest NI in 2008, had worked for some 20 years in the commercial sector. He achieved promotion to deputy principal in 2014 and then became a technical adviser with the sustainable development team.

20.57 Mr Clarke described how, in a typical case, a client company would contact Invest NI for assistance in resolving energy efficiency and cost savings issues. Mr Clarke would then draw up a technical specification, in consultation with the client, and provide that to one of the framework of 21 consultants, of whom Mr Nicol was one. The report from the technical consultant would be furnished to Mr Clarke who would then scrutinise the report for corrections and/or comment, after which it would be submitted to the client. The cost of the reports provided by technical consultants were met out of public funds supplied to Invest NI. In answer to Inquiry Counsel, Mr Clarke described how Invest NI officials attended courses to ensure that processes were carried out correctly, public service values were observed – including value for money – and that no funds were “unnecessarily wasted or misdirected within the organisation.”

20.58 Mr Clarke confirmed that, in October of 2014, he had seen a report in which two 99kW boilers on separate heating systems were showing a payback of three and a half years and an internal rate of return of 31%. The latter figure may be compared with the 12% return assumed in the original CEPA calculations. He confirmed that such paybacks did not strike him as being unique. He also agreed that he was aware of the existing “loophole” that allowed the installation of multiple hydraulically separate 99kW boilers, each attracting the maximum subsidy. In his oral evidence he explained that he felt that a “loophole” was something that was contrary to the intention of the scheme, represented something “wrong” with the scheme, involved the expenditure of public funds and was something that the scheme designers would want to have drawn to their attention. When asked by the Inquiry as to why he had not drawn that “loophole” to the attention of DETI, or any of the other flaws identified by Mr Nicol as inhibiting the establishment of efficient energy use, Mr Clarke replied:

“The view at the time was that in the unit that I worked for it was Government Policy - it was DETI Policy – therefore, why question Government Policy?”
20.59 It is important to record that Mr Clarke was only one of a number of technical advisers at Invest NI who dealt with these matters and that he also accepted, on reflection, that his attitude had been wrong, emphasising that he was new to the job and that he had to line manage two staff. The Inquiry has not seen evidence to suggest that Mr Clarke’s approach was different to that of his colleagues; and he was called to give evidence at the Inquiry as representative of those within Invest NI performing a similar role, rather than because there was any particular concern about his individual conduct. The same is the case for Mr Nicol, as representative of consultants who assisted Invest NI in this field.

20.60 Mr Clarke’s attention was also drawn to the description by one of his colleagues, Mr Batch, of “the cash cow called pellets.” Mr Clarke agreed that Invest NI had been aware of a number of ways in which the NI RHI scheme could be abused and/or exploited, including those identified by Mr Nicol in his reports. He agreed that everybody “on our team” was aware of these issues and that, upon occasion, he would discuss these issues with his line manager, Peter Larmour. Mr Clarke told the Inquiry that Mr Larmour’s opinion was that it was DETI policy “so why would we question DETI Policy.” Mr Clarke added “to be fair to my Line Manager, I didn’t push that as I should have pushed it in terms of loopholes but the attitude was that it was Government Policy.” For his part, in the course of his written statements of evidence to the Inquiry, Mr Larmour stated that:

“I would have reported any issues that I felt required to be raised with my Line Manager at any stage. At no stage was I aware of any issues relating to the RHI scheme which were flagged in Technical Consultant’s Reports which would have required discussion with my line Manager.”

20.61 Mr Larmour has stated that he does not believe that Mr Clarke raised any issues or complications with the NI RHI scheme prior to July 2015, when he mentioned that he was going to contact DETI RHI team about clarification of rumoured changes to the scheme.

20.62 When it was put to Mr Clarke by the Inquiry that, effectively, a Government Department was introducing and delivering a scheme which was running counter to one of the basic legislative functions of Invest NI (namely, promotion of the efficient use of energy in industry) he accepted that, reading through the various technical consultant reports, the only conclusion that could be made was that the system was de-incentivising energy efficiency. However, Mr Clarke emphasised that it was not Invest NI that was delivering the scheme. He agreed that the reports from the technical consultants repeatedly demonstrated interconnected themes of heat waste, high return and manipulation/gaming.

20.63 Mr Clarke further said that in 2015, in the course of reading the publications that he regularly received, he read a concise article about similar schemes in Britain, Germany and Austria which included the use of a tiered tariff and cost controls. He said that, once he had read that article, it occurred to him that perhaps the DETI policy had not been modelled correctly or set up or structured correctly.
20.64 Around June 2015 Mr Clarke had noticed an increased number of clients showing a particular interest in biomass and RHI who had mentioned that they were aware of anticipated changes in the NI RHI scheme. After learning of the deficiencies in the DETI scheme Mr Clarke was concerned about a rush on the part of applicants to obtain the benefits of RHI accreditation regardless of technical merit.\footnote{WIT-306529 to WIT-306530}

20.65 In the event, he decided to contact DETI at the end of July 2015. He had no difficulty in contacting Mr Hughes and an exchange of emails then took place. Mr Clarke advised that the current RHI tariff structure obviously favoured 20-99kW and that there was now a rush to install such boilers in many businesses “regardless of technical feasibility just to maximise payments.”\footnote{WIT-307596} However during the course of the email exchanges, which subsequently also involved his technical adviser colleague, Mr Batch, as well as Mr Larmour, Mr Clarke did not mention any of the trends that had emerged from the reports of technical consultants such as those of Mr Nicol and others over the course of the preceding two years. There was no reference to the absence of tiering, exploitation of multiple boilers, the perverse incentive, two/three-year paybacks, returns in excess of 30%, or the adverse impact upon energy efficient use of heat.\footnote{OPB-00010 to OPB-00012} When questioned by the Inquiry, Mr Clarke said that he had assumed at the time that DETI “were fully aware of the issues.”\footnote{TRA-13445 to TRA-13456}

20.66 The net result was that Invest NI, a Government body that was legislatively empowered to promote the efficient use of energy in industry and subject to the rules and principles governing the expenditure of public money, was actively engaged in projects that were found by its own commercially experienced technical consultants to be very financially attractive but technically sub-optimal solutions in terms of energy efficiency. None of the scheme’s obvious flaws/loopholes were communicated to DETI, its sponsor Department, despite regular accountability meetings taking place between both bodies.

20.67 The Inquiry found an almost total absence of a cooperative, open relationship between DETI and Invest NI over the NI RHI scheme. The relationship did not involve good communication, nor common purpose with regard to the practical operation of scheme. In the context of the public receiving value for money in the expenditure of public funds, the Inquiry found this to be a major failing.

**Action Renewables**

20.68 Mr Michael Doran, then Managing Director of Action Renewables, gave evidence about that organisation and its interaction with the NI non-domestic RHI scheme. He told the Inquiry that it was a body created by DETI in 2003 in response to European, UK and Northern Ireland Government commitments to renewable energy as one strand of a policy to combat climate change and environmental pollution and to increase fuel diversity.

20.69 The DETI Reconnect scheme (the grant funding scheme in respect of domestic renewable energy installations mentioned elsewhere in this Report) was managed by Action Renewables, which also was responsible for disbursement of payments to the applicants.
Mr Doran took up his role with Action Renewables in 2009, at which time the DETI representative on the board of Action Renewables was Ms Clydesdale. As a DETI Third Party Organisation (TPO) for the period 2003 to 2011 Action Renewables received funding from DETI. From 2009 to 2011 that funding was reduced until Action Renewables ceased to be a TPO and moved out of the public sector in 2011.

Action Renewables continued as a registered charity and the organisation shifted towards commercial activities, and the profits were given back to the charity to enable it to continue to deliver on its charitable objectives. As a charity, Action Renewables has a board of trustees. The first charitable objective of Action Renewables is to “advance to the benefit of the public the protection and improvement of the environment through the promotion of energy efficiency and renewable energy.” The second charitable objective is to “advance the education of the public in energy efficiency and renewable energy.”

Mr Doran agreed with Inquiry Counsel that, in broad terms, there was a significant focus on the promotion of energy efficiency.

While Action Renewables was funded by DETI it had an ongoing relationship with Invest NI Renewable Energy Group and occasionally contributed to seminars and conferences to promote awareness of renewable energy and climate change. Subsequent to the end of funding from DETI in 2011 and as part of its commercial activities, Action Renewables assisted applicants to become accredited to the NI RHI scheme in approximately one quarter of all RHI applications. The organisation charged for this service, which provided a revenue stream for it.

Action Renewables also provided approximately 40 technical reports to Invest NI and its client businesses relating to renewable projects. Mr Doran confirmed that Action Renewables always had a fairly close relationship with DARD, the predecessor to DAERA, with regard to what DARD was doing with biomass strategy particularly in the years 2010, 2013 and 2014.

In July 2012 the ETI Committee secured DETI’s permission to release papers to, and seek the views of, Action Renewables with regard to the draft NI RHI regulations. This may provide some indication of the esteem in which the organisation was held for its expertise in relation to such matters. In the course of its response to the ETI Committee, Action Renewables expressed itself to be generally very supportive of the proposal but continued:

“There is a significant drop in biomass support from 5.9p to 1.5p at the 100kW level. This will lead to applicants installing boilers with a smaller capacity than is required, at the 100kW level and supplementing their heat from oil generation, as it will be the most remunerative way of exploiting the scheme.”

Action Renewables also responded to the 2011 DETI RHI consultation in September 2011 but, in doing so, omitted to give any clear recommendation or warning that tiering should be introduced in the scheme.

In the course of giving his evidence to the Inquiry Mr Doran accepted that in 2012, when asked to give advice to the ETI Committee, Action Renewables had known that the proposed

1134 WIT-185016 to WIT-185017
1135 TRA-14454
1136 WIT-185022
1137 TRA-14455
1138 TRA-14458
1139 ETI-06318 to ETI-06319
1140 CEP-05236 to CEP-05241
tariff level in the 2012 CEPA addendum for the 20-99kW band was 5.9p/kWh, that the price of fuel was less than 5.9p/kWh, that Action Renewables was aware of the purpose of tiering, and that the tiering that had been adopted in the GB RHI scheme had not been included in the proposed NI RHI scheme. In such circumstances, he agreed that Action Renewables ought to have advised DETI to consider the need for tiering and he did not know why he had not raised the matter with the ETI Committee. Mr Doran had no recollection of making a decision not to raise the issue of tiering with the ETI Committee, although he speculated that it might have been a desire to avoid further delay in launching the NI RHI scheme.1141

20.76 On 25 September 2012, two months prior to the launch of the NI RHI scheme in November, Action Renewables made a presentation at Dimplex Renewables, a member of the Action Renewables Association (an association, membership of which was open to commercial and public sector bodies, which provided to its members seminars, conferences and information on renewable energy).1142 Included in the presentation were slides showing a comparison between a 99kW woodchip boiler and a 110kW boiler running 3,000 full-load hours per annum. The capital cost of the former was given as £40,000 while the latter had a capital cost of £43,000. Running the 99kW boiler for 3,000 full-load hours at the tariff of 5.9p/kWh produced £17,523 RHI subsidy per annum whereas running the 110kW boiler for the same full-load hours at the tariff of 1.5p/kWh produced £4,950. The payback time for the former was 2.28 years, and the latter 8.7 years. In the course of his oral evidence Mr Doran accepted that there was a very fine line between simply explaining the construction of the scheme to potential scheme applicants and encouraging the use of 99kW boilers to optimise financial returns.1143

20.77 Mr Doran and Action Renewables also organised a conference on 20 June 2013, some seven months after the NI RHI regulations came into force to raise awareness about the scheme. The document advertising the conference was headed ‘Book now to find out how to generate heat and get paid for it! The Renewable Heat Incentive explained.’ (the Inquiry’s emphasis).1144

20.78 At that conference Ms Gaynor Hartnell, the CEO of the not-for-profit trade association known as the Renewable Energy Association, gave a talk about the GB RHI regulations. She explained why her association had advocated tiered tariffs to limit the perverse incentive to size projects to fall just below a threshold and/or divide a single installation into several smaller entities.1145 In the course of her talk Ms Hartnell also emphasised the need to give the scheme administrator (Ofgem) clear guidance, to avoid perverse incentives and, if there were such perversities, to warn the Government.1146

20.79 At the same event Mr Connel McMullan of Alternative Heat, which was a private company involved in renewable heat, gave a presentation in the course of which he set out what income could be obtained with the different sizes of boiler in terms of tariff income and fuel savings depending upon how many full-load hours the boiler was to run during a year. He then presented a number of case studies, including a hotel which was on target to save £11,420 on fuel cost in the first year and generate more than £17,000 of RHI income, making a total annual saving of £28,720 with a payback of the investment in three years. A second example was a

1141 TRA-14483 to TRA-14486
1142 TRA-14450
1143 TRA-14512 to TRA-14515
1144 DAE-13503
1145 DAE-17796 to DAE-17816
1146 DAE-17811 to DAE-17813
poultry house using two 99kW boilers with separate hydraulic systems, therefore attracting two separate RHI accreditations, which was on target to save £6,320 on fuel cost and generate £23,480 RHI income per annum, representing a total annual saving of £29,800 and payback of the capital investment within three years. The Inquiry heard oral evidence from Mr McMullan which is discussed in the next chapter of this Report.

20.80 During his oral evidence Mr Doran accepted before the Inquiry that the examples provided in Mr McMullan’s presentation at the conference demonstrated how lucrative the NI RHI scheme was and he accepted that he had not communicated any of the relevant material to DETI. When referred specifically to Ms Hartnell’s advice that DETI should be told about perversities, Mr Doran responded “Yes. Again I accept, in hindsight, I should have done that, and, if criticism is levelled at me over that, I accept that fully.” Mr Doran accepted that he had been actively promoting the NI RHI scheme at the event of 20 June 2013.

20.81 As mentioned above, between 2013 and 2016, Action Renewables, just like Alastair Nicol, provided Invest NI and its client businesses with technical consultancy reports in respect of renewable heat technologies. In total, Action Renewables provided approximately 40 such reports, many of which addressed biomass heating. The reports were provided in accordance with the consultancy framework agreement operated by Invest NI for this purpose. Most of the Action Renewable reports were signed off with a template which bore the names of Mr Doran or Mr Jonathan Buick or both, although Mr Doran told the Inquiry that their names on such a template did not necessarily mean that either of them had written the full report. Nonetheless, in the course of giving oral evidence to the Inquiry, Mr Doran confirmed that he stood over all the reports. In a subsequent written statement, Mr Doran confirmed that either he or Mr Buick had responsibility for the initiation and final approval of each technical report. The dates and significant recommendations of a number of reports were discussed with Mr Doran in his oral evidence by Inquiry Counsel.

20.82 A report dated February 2013 demonstrated that a woodchip boiler provided a substantial fuel cost saving as compared with oil. The estimated installation cost came to £86,400, with the cost of annual maintenance at £3,000. The use of woodchip would provide a fuel cost saving of £21,000 and the RHI income was estimated at £23,600. The annual saving was said to be £28,791 producing a simple payback period of three years. Mr Doran agreed that such a payback figure would represent a much better rate of return than 12%. The report recommended that a 99kW biomass boiler installation represented the fastest payback at around three years.

20.83 Another report dated March 2013 again considered the installation of a 99kW biomass boiler compared to oil. In this case, the use of woodchip represented an annual cost saving of £27,800 and the income from RHI subsidies totalled £27,376. The annual saving was estimated at £37,326 with a simple payback period of 2.3 years. At paragraph 3 of this report Action Renewables recorded that:

1147 DAE-17730 to DAE-17752
1148 TRA-14527
1149 TRA-14531
1150 TRA-14537
1151 WIT-187516 to WIT-187517
1152 WIT-144701 to WIT-144746
1153 TRA-14539
1154 WIT-144803 to WIT-144827
“A biomass boiler could supply the primary heating with a buffer tank, in the range of 100kW. Such a system would maximise returns from the Northern Ireland RHI.”

20.84 A third report dated March 2014 recorded that the site in question:

“…appears suitable for the installation of a 179 kW biomass system, consisting of 2 boilers smaller than 99 kW to maximise the RHI incentive, with a simple payback on 1.7 years, if self-financed.”

Under the heading “Optimum Sizing” this report recorded that:

“The NIRHI payments artificially encourage large biomass systems to be installed. Because of the payments, made per kWh of heat generated, these systems are operated longer than necessary, generating more heat and making significant returns on investment. This however requires large capital investments and high fuel costs, but allows for receiving high RHI payments. While this philosophy is not wrong, it is not considered the most ‘cost-effective’ due to higher capital outlay.”

20.85 Mr Doran accepted that paragraph was repeated in very many of the reports. When asked to comment upon that paragraph, Mr Doran agreed that it was incorrect and should not have been written. He went on to say to the Inquiry:

“The philosophy is wrong if you’re going to burn heat which is not required, so that is incorrect. Having said that, that’s not what we recommended in this case. And it’s cut and pasted into several reports, and I fully accept we should not have written that because, whilst this philosophy is not wrong, that is completely inaccurate. That philosophy is wrong and it’s probably also illegal.”

20.86 The report proceeded to record that, to make sure the maximum heat load of 178kW could be supplied to the building, two biomass boilers should be installed. The system required two hydraulically separate biomass boilers qualifying them each to receive the RHI at a higher tariff. Mr Doran agreed that such advice was given in order to maximise RHI payment. He also accepted that the phenomenal rate of return at some 60% could fairly be described as a “windfall”.

20.87 Another report, dated December 2014, referred to the site as:

“Suitable for the installation of a 150kW biomass system, consisting of two boilers smaller than 99kW to maximise the RHI incentive, with a simple payback on 3.2 years, if self-financed.”

At paragraph 7.52 of that December 2014 report under the heading “System Design” Action Renewables referred to two “philosophies” to consider when sizing biomass boilers for heat load. One was to maximise RHI payment using boilers sized below 99kW and the second was
to maximise system efficiency and reduce capital costs, which would require the installation of one large biomass boiler sized at 150kW. The report continued:

“A system to maximise the financial return from the RHI will be modelled in this study, with two hydraulically separate biomass boilers modelled with a total installed capacity (TIC) of 150kW. It will be necessary to install two separate biomass boilers with individual heat exchangers...It is proposed that both boilers are housed in one contained unit. The boilers are not hydraulically linked through pipework and the heat produced is metered by two heat meters, qualifying them to receive the RHI.”1163

20.88 Inquiry Counsel put to Mr Doran that: “It very much looks like you’re saying ‘don’t worry about efficiency. Go for the one that maximises revenue.’” To which Mr Doran responded: “That’s not actually what we were saying, but it’s poorly worded, and I accept that it’s poorly worded.”1164

20.89 In a report dated February 2015, concerning the installation of a 99kW biomass boiler at a cost of £55,000, RHI income was estimated to offer a potential payback period of 1.7 years, equivalent to a return of 58%.1165

20.90 Finally, in a report dated September 2015 Action Renewables recorded the following observations with regard to payback in accordance with the existing RHI tariff:

“The two biomass heating systems (sized at 99kW and 50kW) are hydraulically separate. Both biomass systems generate heat for the building. The heat will be released through existing blow heaters... In comparison to the alternative option of installing a new gas boiler that would avail of a seasonal efficiency of 90%, the biomass option will have a seasonal efficiency of approximately 85%. This will lead to annual fuel cost savings of £1,000 as the client would use pellets instead of natural gas. In addition the client would receive £24,476 for the annual heat load of 382,432kW hours at the current incentive rate of 6.4p/kWh.”1166

20.91 In the course of his oral evidence to the Inquiry, after being referred to the above reports, Mr Doran agreed that the fact that the RHI tariff income was higher than the fuel cost, coupled with the absence of tiering, was a clear flaw in the scheme and that the reports had highlighted that if the desire was to maximise returns, separate systems under 99kW were better than one larger system.1167

20.92 Mr Doran was also asked by Inquiry Counsel why neither his initial written statement of evidence nor his response to the section 21 Notice served upon him by the Inquiry made any reference to Action Renewables providing technical consultancy reports to Invest NI (in the first instance). The Inquiry was only made aware of the existence of such technical consultants’ reports by Invest NI and none of the reports were provided to the Inquiry by Action Renewables itself until the Monday of the week in which Mr Doran gave his evidence.

20.93 Mr Doran agreed that, prior to his oral evidence, the Inquiry had not received any explanation from Action Renewables about the failure to provide such reports.1168 As noted above, Mr Doran

1163 WIT-148702
1164 TRA-14556 to TRA-14558
1165 WIT-149761 to WIT-149789
1166 WIT-295526 to WIT-295562 at WIT-295552
1167 TRA-14567 to TRA-14568
1168 TRA-14575
himself had made no mention of any such reports in the course of his response to the section 21 Notice. He accepted and apologised for his response being “substantially misleading.”

Mr Doran agreed that he had been served with section 21 Notices requiring a written statement of evidence and disclosure of all potentially relevant documents on 1 June 2017, to which replies were made on 3 July. He denied that Action Renewables had been trying to hide anything but accepted criticism for his failure, for which he apologised, pointing out that: “We shouldn’t have done this and I accept that the witness statement is completely inaccurate in places.”

For example, Mr Doran’s answer to question 10 of the section 21 notice was that Action Renewables did not carry out any calculations for clients in respect of returns on investment or assessing the financial aspects of schemes. That reply was flatly contradicted by the technical reports prepared by Action Renewables for Invest NI.

Mr Doran also accepted that he had not passed on to the Inquiry any of the information contained in the technical consultancy reports to DETI, providing as a reason that they were being compiled for Invest NI and he thought that informing that body (Invest NI) was sufficient. He also accepted that, in the course of completing some 500 accreditation applications to the RHI scheme, Action Renewables had become aware of certain trends including the use of multiple hydraulically separate small boilers with very high load factors.

Mr Doran was also asked about an interview that had taken place between him and a journalist acting for the Irish News which had appeared in the edition of the newspaper on 26 January 2017. After referring to the large number of accreditation applications which Action Renewables processed, the Irish News article continued in the following terms:

“Action Renewables Managing Director Michael Doran last year appeared on a BBC Spotlight programme outlining flaws in the RHI scheme.

However, when asked last week why no-one within the charity relayed the concerns to the Government, he told the Irish News: ‘That’s not what we were employed to do. If you are employed on behalf of a client to make an application it would be ethically improper to then undermine that application by trying to have it withdrawn. The fact that the Government created the scheme that some people now think is over incentivised is not our responsibility.”

Mr Doran explained that he had been interviewed over the telephone when he was standing in a security queue in Frankfurt airport at about 10.00am and that he didn’t have any media training. He accepted that: “I shouldn’t have taken the call. And I said something that was wrong and inappropriate, on the hoof.”

Action Renewables were also made the subject of an investigation by the Charity Commission, which recorded that, at a meeting with the Commission, the charity trustees of Action Renewables, including Mr Doran and Mr Buick, stated that they were not aware of anything
being wrong with the scheme when it was in operation.\textsuperscript{1175} However, Mr Doran agreed with Inquiry Counsel that Action Renewables had in fact been aware at all material times that there were certain things wrong with the NI RHI scheme, in particular the absence of tiering, the use of multiple boilers and the potential for overcompensation.\textsuperscript{1176}

**Department of Agriculture and Rural Development (DARD) (DAERA from May 2016)**

20.99 In the course of his evidence to the Inquiry Mr Sterling indicated that the Northern Ireland Civil Service has been “investing in building a more collaborative and joined-up culture across departments and agencies in recent years” and that this work was already underway before the RHI Inquiry was established.\textsuperscript{1177} However, several elements of the evidence which the Inquiry heard have given rise to concern about the effectiveness of such purported collaboration.

20.100 In that context the Inquiry notes the remarks of Ms Michelle O’Neill, the DARD Minister between 2011 and 2016, who stated in written evidence that:

> “It was for the DETI Minister and Department to ensure the scheme was fit for purpose and value for money. It is not the role of a Minister or Department to scrutinise the work of another Minister or Department. Such an approach would be impractical and necessitate the duplication of expertise across all government departments.\textsuperscript{1178} The reality is that the specialisation and expertise was available in the sponsoring department.”\textsuperscript{1179}

20.101 Although it is correct that, generally, it is not the role of a Department to scrutinise the work of another, certainly in relation to policy functions, there is plainly a role for information-sharing, knowledge exchange and dialogue between Departments and their officials where responsibilities overlap or converge, including (where appropriate) the provision of challenge and warnings.

20.102 The Inquiry notes that DARD had been represented at Director level on the SEIDWG group and had representation on a number of the sub-groups. The structure and purpose of SEIDWG is set out in detail earlier in this chapter at paragraph 20.7 but its basic purpose was to produce a co-ordinated approach and ensure that departmental energy related policies were in concert.

20.103 It is also interesting to compare Minister O’Neill’s fairly robust statement with Minister Foster’s evidence to the Inquiry. When asked about the apparent lack of co-operation between the Departments she said:

> “Certainly I had thought, at official levels, that they were co-operating. Certainly, through the sustainable interdepartmental working group, there was some synergies there between Departments, and they should’ve had information between themselves there.”

\textsuperscript{1175} WIT-144117 to WIT-144120
\textsuperscript{1176} TRA-14601 to TRA-14602
\textsuperscript{1177} INQ-101307
\textsuperscript{1178} WIT-163509
\textsuperscript{1179} WIT-163512
20.104 Minister Foster accepted that the important word in that answer was should've (the Inquiry’s emphasis). Minister Foster also told the Inquiry that she had not been aware of DARD’s activities as early adopters and demonstrators of the RHI scheme.1180

20.105 The evidence considered by the Inquiry has disclosed, however, that DARD officials were in a position to, and did, understand a good deal about how the RHI scheme worked and how beneficial it could be to claimants, particularly those in the agricultural industry with high heat requirements.

CAFRE’s Cathal Ellis

20.106 In February 1974, during a period of direct rule, Cathal Ellis joined the Department of Agriculture for Northern Ireland as an official within that Department’s College of Agriculture, Food and Rural Enterprise (CAFRE). He continued to work for CAFRE when it came under the control of, initially, DARD and, subsequently, DAERA until December 2017. From September 2012 until the date of his retirement in December 2017 Mr Ellis was engaged as a renewable energy technologist. That role involved him in the investigation and promotion of potential renewable energy technologies which could be applied across the agricultural sector. He had responsibility for establishing and operating CAFRE’s renewable energy installations such as biomass boilers, wind turbines and solar panels. He also had responsibility for CAFRE’s Heat from Biomass Technology Project, the aim of which was to increase the knowledge of the potential for biomass heat within the agricultural industry.

20.107 As a renewable energy technologist, Mr Ellis was at the agricultural inspector grade 3 level, which equates in Northern Ireland Civil Service terminology to the grade of staff officer. He had experience in the horticultural and mushroom production sectors. Frequent contact with renewable heat boiler installers and fuel suppliers was a major component of Mr Ellis’s work between 2007 and 2015. During that period, CAFRE installed biomass boilers on three of its campuses: Greenmount in Antrim, Loughry in Cookstown and the Enniskillen campus.

20.108 Mr Ellis met installers of biomass boilers in the course of running Practical On-Farm Renewable Energy (POFRE) events and he was also responsible for the trade show side of the event, contacting relevant firms and inviting them to attend. Mr Ellis’s main contact with DETI officials was with Mr Hutchinson, while he was in post, and both he and Mr Hutchinson delivered lectures at POFRE events. Mr Ellis’s main role in relation to the DETI officials was to relay questions raised about the NI RHI scheme by farmers and agricultural business owners to Mr Hutchinson or, subsequently, Mr Hughes, thereby opening up lines of communication.1181

20.109 Mr Ellis first became aware of the NI RHI scheme as a consequence of the 2011 DETI RHI public consultation. Mr Ellis confirmed that he took the consultation documents off the Internet and scan-read them, but he himself had not been involved in any formal response to the consultation.1182

20.110 Mr Ellis recalled, in oral evidence to the Inquiry, reading about the NI RHI tariff in documents used by Mr Hutchinson for a presentation in February 2013 at the first POFRE presentation after the implementation of the RHI regulations.1183 In broad terms, he understood the tariff

1180 TRA-08502 to TRA-08503
1181 WIT-88026 to WIT-88079
1182 TRA-07268 to TRA-07269
1183 WIT-86415 to WIT-86454
to cover the cost difference between generating heat with fossil fuel and generating heat with renewable technology. He told the Inquiry that he was not aware of details such as a presumed load factor of 17% and a rate of return of 12% and simply made the assumption that DETI had used its own technical staff and its own economist to assist in preparing the RHI scheme. While he could not remember the details, he was almost certain that he had spoken to Mr Hutchinson about the mushroom sector being interested in the scheme.

The Inquiry asked Mr Ellis about certain internal documentation in DARD which indicated that the capital expended upon the biomass installation could be repaid very quickly within the first two to four years of the 20-year period of tariff payments. He accepted that such a result obviously provided scope for very large returns and that was something that would have been obvious to DARD but was not drawn to the attention of DETI. He agreed that he had been aware of the potential for people to see the scope to generate heat to earn tariff income as a result of the tariff payments for the key banding – the 20-99kW band – being higher than the cost of fuel. However, he told the Inquiry that he had not been aware of tiering as a means of protecting against the perverse incentive until 2015, when rumours began to circulate about potential changes to the scheme and the reasons behind such changes.

CAFRE organised some 58 renewable energy events in which reference was made to the NI RHI scheme between November 2011 and October 2015. Those events were attended by 2,358 individuals. Mr Ellis pointed out that a number of the events would have been concerned with the general review of renewable energy, including different technologies, and that a much more limited number would have specifically targeted renewable heat from biomass. Mr Ellis agreed that he was involved in approximately 27 of the events, which would have included 12 specific ‘heat from biomass events’ and that he had produced a slide presentation used at POFRE events on 29 October 2013 and 26 February 2014. That presentation included fuel prices for biomass, tariffs for biomass, a case study and a worked example. The case study involved the installation of two 99kW pellet boilers and four 60kW pellet boilers in June and September 2013. The installation produced a saving of £6,000 per annum in terms of fuel and an income of RHI tariffs of some £23,000 per annum with a payback period of less than three years. The worked example produced similar results with regard to two hydraulically separate 99kW biomass boilers resulting in a payback period of approximately two years.

Each October CAFRE produced a POFRE booklet for farmers. The 2013-14 booklet produced in October 2013 showed that, as of September 2013, there had been 46 applications to join the NI RHI scheme. The booklet prepared with regard to the 2014-15 year showed that, as of 4 September 2014, there had been a total of 264 applications for the NI RHI scheme.
20.114 A case study in the September 2014 booklet featured a pig producer who had installed a wood pellet boiler in his farrowing unit in January 2014. The potential savings from the NI RHI scheme included approximately £5,500 in respect of fuel costs and £21,097 RHI income per annum based on the 6.3p/kWh tariff. Thus the overall annual saving on heating was some £26,602 and, taking into account the capital cost of the boiler system at £34,500, the payback time was estimated to be 1.3 years.

20.115 Mr Hutchinson contributed an article on the NI RHI to the 2013-14 booklet and Mr Wightman similarly contributed to the 2014-15 booklet.1196

20.116 Inquiry Counsel showed Mr Ellis a leaflet dating from 2015 produced by Solmatix Renewables, a private company engaged, amongst other things, in the installation of biomass heating systems.1197 That leaflet included the following reference:

“Our wood pellet-burning Biomass Boilers offer a cost-effective heating solution that can massively reduce your heating bills. And when you factor in your guaranteed quarterly RHI income, you’re effectively benefitting from FREE heat plus a significant financial reward. It’s cash…for ash.”1198

20.117 At the same time Mr Ellis was referred by Inquiry Counsel to the evidence given to the Inquiry by Mr Neil Elliott, whose business designed and installed biomass systems. Mr Elliott had attended many of the POFRE events as a trade exhibitor. Mr Elliott had said that, at such events, promotional materials were on the stools of suppliers and installers which were in similar terms to the leaflets from Solmatix referred to above, and these materials included posters and pop-up stands. Mr Elliott agreed in his oral evidence to the Inquiry that such materials would have promoted things like the level of return, the payback periods and exhibited slogans such as “Cash for Ash”.1199

20.118 Mr Ellis confirmed that he would have been through the event hall but that he had not seen the Solmatix leaflet until the day before giving oral evidence to the Inquiry and he could not recall the display of any similar posters or displays at those events.1200 Mr Ellis was reminded that when he commenced his oral evidence he had confirmed that, with regard to renewable heat, his primary role had been contact with the providers, installers and fuel suppliers and he was asked how he had apparently failed to notice everything that other people at the event appeared to have seen. Mr Ellis pointed out that his dealings with the installers were primarily on technical issues and did not encompass any financial details. He said that his “gut feeling” was that he represented a Government Department and that consequently the people he spoke to may have been wary of highlighting those issues to him because:

“We would have been duty-bound to, you know, bring that forward, or I would have felt that I would have had to make a much stronger case to my management to bring that forward to DETI.”1201

20.119 Mr Ellis stated that he had no commercial or business background but he was unable to explain why neither he nor Mr Hutchinson, who had also attended the POFRE events in question, and

1196 WIT-86132 to WIT-86349
1197 TRA-07346
1198 COM-06308 to COM-06309
1199 TRA-04648
1200 TRA-07350
1201 TRA-07356 to TRA-07357
whose evidence on this issue is considered elsewhere in the Report, became aware of the information that had been picked up by the industry. Speaking for himself, he said "we didn’t feel, at my level, didn’t feel the responsibility to, you know, question what DETI were doing."  

20.120 Mr Ellis attended a meeting with representatives of Moy Park on 24 September 2014. He was asked to attend as an independent person with technical expertise to advise with regard to the installation of boilers for heating systems installed in poultry houses. A number of installers and heating engineers also attended. Immediately after the meeting Mr Ellis made a note of relevant matters. He listed a number of points relevant to the relationship between CAFRE and Moy Park including:

- “All new Moy Park houses will be fitted with hot water heating, biomass boilers with gas backup.”
- The cost per house for biomass hot water system is £30k
- Payback from RHI is estimated at £10k per year.
- To date 104 farms have installed biomass hot water systems.
- A further 180 farms have committed to installing biomass hot water systems.
- The total number of installs by the end of 2015 has been estimated at 320 -340
- Moy Park have their own payback calculator for biomass hot water systems.”

20.121 In the course of giving oral evidence Mr Ellis confirmed that at the time, in September 2014, he realised that Moy Park’s poultry farmers were likely to opt for the NI RHI scheme in large numbers. That could mean many hundreds of additional RHI applications, with every boiler on a separate system. Mr Ellis explained that the information contained in the note had only been passed to his own line management and that he had not recommended that it should be provided to DETI despite the potential for hundreds of further applications. Mr Ellis agreed that he knew that there had been a relatively low number of applications to that point. He told the Inquiry that he would be surprised if he had not mentioned it to Mr Hughes, but he was unable to say that such a conversation had taken place. Mr Ellis accepted that the information ought to have been passed on to DETI. It would not be until the end of February 2015 that DETI official Stuart Wightman learnt that there were likely to be 200 applications in 2015 from Moy Park suppliers. He received this information directly from Moy Park when discussing planned changes to the NI RHI scheme. As discussed later in this Report, it caused him to realise that DETI did not have sufficient budget for the number of applications that were to come, and take steps in relation to the availability of RHI funding.

20.122 On 9 June 2015 DETI’s Mr Hughes sent Mr Ellis an email asking for assistance with an undertaking to assess the average heat required for poultry houses to help in identifying future RHI budget requirements. He noted that Mr Ellis would have access to colleagues within CAFRE who worked within the poultry sector.
20.123 Mr Ellis assumed that DETI wanted information about how the interest from the poultry sector might impact on the budget for the scheme, since he appreciated that DETI was considering introducing tiering, similar to the arrangement in GB. In the circumstances he understood the importance of the information being sought and the reliance that DETI might put upon his paper. Mr Ellis confirmed to Mr Hughes that he would carry out the work and that in doing so he would consult installers. He contacted three – R&S Biomass, Original Heating and Alternative Heat – and told them of DETI’s request for information.

20.124 Around this time in July 2015, it is clear that Mr Hughes and Mr Wightman at DETI were also in contact with some installers and they too informed them about the CAFRE work. A consequence of this was described in an email of 9 July 2015 from Fergal Hegarty of Alternative Heat to John Smyth of CHP Mechanical who described how he had put Tom Forgrave in touch with Mr Ellis. Mr Forgrave was a poultry farmer who, by that stage, was an RHI scheme member with a number of accredited boilers and who was also a representative on both the Moy Park growers committee and the poultry committee of the Ulster Farmers’ Union. He went on to provide data from his poultry sheds for Mr Ellis to use. Mr Hegarty noted in his email that “Tom was pretty happy that the information that will now be provided to DETI will echo the UFU’s recommendations.”

20.125 In the course of his oral evidence to the Inquiry Mr Ellis confirmed that he had discussed the draft of his paper with Mr Forgrave and that, at about the same time he spoke to Mr Forgrave, Mr Ellis also ran his figures past David Mark of Moy Park during a telephone conversation.

20.126 In the course of his oral evidence to the Inquiry Mr Ellis confirmed that on 10 July 2015 he emailed a draft of the paper to Mr Forgrave for comment. No additional comments appear to have been made. In a further email to Mr Forgrave on 17 July 2017, Mr Ellis wrote:

“Please find attached final version of the document on heating as sent to DETI. Happy for you to share with UFU Poultry Committee, but probably wise if DETI don’t know you have seen final version. Good luck with your meeting, and many thanks for all your assistance.”

20.127 Mr Forgrave shared the paper he received from Mr Ellis with others in the UFU. After forwarding copies of the paper to them, Mr Forgrave was asked if it could be discussed with UFU’s Chris Osbourne, to which he replied “Yes, no problem but DETI can’t know that we have seen this!!”

20.128 On 17 July 2015 Mr Ellis had also provided DETI with the final paper.

20.129 Mr Forgrave and Mr Osborne subsequently received an official copy of the paper in an email of 22 July 2015 from Mr Hughes to Mr Osborne, copied to Mr Forgrave and Mr Wightman, which referred to the upcoming meeting between DETI and the UFU on 22 July and attached Mr Ellis’ paper and commented that CAFRE is “happy for us to share this with you.”
20.130 Mr Ellis accepted that the paper he provided to DETI contained no reference to Mr Forgrave, the UFU or Moy Park as a source of any information contained therein,1216 and he was unable to provide the Inquiry with any logical reason why he was so concerned about letting DETI know that there had been an input from Mr Forgrave/UFU.1217 Looking back, he accepted that he ought to have made it clear to DETI that the paper had included input from Mr Forgrave and any input that there may have been from Moy Park.1218

20.131 Mr Wightman told the Inquiry that it was not until he was preparing for the Inquiry that he first appreciated how Mr Forgrave had been a major contributor to the CAFRE paper.1219 He had assumed that the paper had been produced by an independent but fellow Government agency. He told the Inquiry that he now felt as if “we had been sort of taken for a ride.”1220
**Findings**

114. Officials in the Department of Justice (DOJ) were made aware of a potential loophole with the non-domestic RHI scheme less than a month after the NI RHI regulations had been implemented. Given that DOJ recognised this as a potential loophole and a possible deliberate attempt to circumvent the intent of the NI RHI scheme, this should have been communicated to DETI and not just raised with Ofgem (if indeed it was raised with Ofgem).

115. When Brian Hood sought clarification from Mr Hutchinson about whether it was permissible to install multiple boilers in separate buildings, and bearing in mind Ofgem’s November 2011 legal review warning, this represented a missed opportunity for DETI to recognise the real risk that heating system design might be influenced or even distorted in order to attract the most generous RHI tariffs and to give the issue some further consideration at that point.

116. The work carried out over several years by and on behalf of Invest NI clearly showed the distortive impact of the RHI scheme on the design and development of efficient renewable heat biomass projects. The Inquiry found that there was a major failing in cooperation between Invest NI, a body accountable to DETI, and DETI, its parent organisation. This meant that the very clear emerging picture within Invest NI was never communicated by Invest NI to DETI or questioned with colleagues responsible for the RHI scheme in DETI.

117. The Inquiry finds that, in its interaction with both DETI and the ETI Committee in 2012, Action Renewables failed to draw attention to the need for tiering of the 20-99kW biomass tariff, even though Action Renewables was aware that tiering was necessary. This represented a significant failing on the part of Action Renewables, a body whom both DETI and the public could reasonably have expected to have warned DETI and the ETI Committee of this flaw in the scheme, not least because of Action Renewables’ charitable objects, its close ties to DETI up until 2011, and the fact that the ETI Committee had, as part of its consideration of the draft RHI regulations during 2012, specifically sought its views.

118. Action Renewables failed to advise DETI of the trends it was observing through its technical consultancy work for Invest NI. These trends included the very high returns that were available under the scheme and how it could be exploited or abused through the installation of multiple, hydraulically separate, biomass heating systems.

119. The Terms of Reference of the Inquiry provide that it shall have access to all the documentation it seeks and the cooperation of all relevant witnesses to enable the Inquiry to produce a comprehensive report in the course of seeking to restore public confidence in the workings of Government. However the Inquiry finds that Action Renewables failed to provide the Inquiry with relevant documents, namely technical consultants’ reports, until shortly before Mr Doran gave oral evidence and only after the Inquiry prompted Mr Doran for them after becoming aware of their existence from Invest NI’s witness statement. Action Renewables also supplied an incomplete, inaccurate witness statement as well as misleading responses to the Inquiry’s section 21 notices. Mr Doran, the Managing Director of Action Renewables, accepted that
inaccurate evidence was also given to an investigation by the Charity Commissioners. In fairness to Mr Doran, the Inquiry acknowledges that the evidence given to the Inquiry and the Charity Commissioners was the subject of a very careful and thorough investigation by both Senior and Junior Counsel appointed by Action Renewables. The report of that investigation concluded that neither Mr Doran nor Action Renewables had intended to suppress or give incorrect/misleading evidence to the Commissioners or the Inquiry.

120. In relation to DARD, the Inquiry observes that no great degree of expertise or specialisation would have been required by DARD officials concerned with the development and promotion of renewables simply to draw DETI’s attention to what was happening on the ground. Cathal Ellis of CAFRE had many contacts with providers, installers and fuel suppliers and he accepted that he was aware of the very rapid payback and large returns produced by the NI RHI which he did not draw to the attention of DETI. He also agreed that he knew that Moy Park’s poultry farmers were likely to opt for the RHI scheme in large numbers and also be attracted to multiple boiler solutions. He passed that information to his line management without recommending that it should be provided to DETI.

121. Mr Ellis was quite unable to provide the Inquiry with any logical reason why he was so concerned about not revealing to DETI that the paper he had provided to Mr Hughes, on reasonable heat use in poultry broiler houses, had an input from Mr Forgrave, who was an RHI scheme member with roles on behalf of Moy Park growers and the UFU. That paper had also been ‘run past’ Mr Mark of Moy Park. The Inquiry finds that Mr Ellis’s evidence confirmed a clear failure to ensure inter-departmental co-operation in the interest of guarding against the excessive expenditure of public funds. The Inquiry is satisfied that DETI ought to have been made fully aware of the discussions with, and any input from, Mr Forgrave, UFU and Moy Park as part of preserving open and transparent relations between Government Departments which is so much in the public interest. Such relations are essential, particularly when evidence has been sought from one Department to assist another Department in making an informed policy decision.

122. The Inquiry considers that the remarks of DARD Minister O’Neill in her written evidence to the Inquiry quoted in this chapter, that it was not for her to scrutinise the work of another Minister, do not seem to deal with the need for basic departmental cooperation in the interest of avoiding excessive expenditure of public funds. The Inquiry has no difficulty in accepting the primary liability of DETI for the implementation and development of the NI RHI scheme. However, no particular degree of technological expertise or specialisation was required in order for officials on the ground at many public events and presentations to appreciate the potential for the scheme to provide excessively generous rewards. Effective departmental cooperation would have required making those facts known to DETI.