

**From:** McCoy, Laura  
**Sent:** 17 November 2016 15:49  
**To:** Coyne, Terence  
**Subject:** RE: HPRM: FW: Non-Domestic Renewable Heat Incentive  
**Attachments:** FW: Non-Domestic Renewable Heat Incentive

Terry


Please see attached email with correspondence from Mark Cockburn of 4 November, is this what you were looking for?

Thanks.

Laura

## Laura McCoy

Permanent Secretary's Office  
Department for the Economy  
Netherleigh  
Massey Avenue  
Belfast, BT4 2JP  
Tel: 028 9052 9200 (ext: 29200)  
TextRelay: 18001 028 9052 9200  
Web: [www.economy-ni.gov.uk](http://www.economy-ni.gov.uk)

 Follow @Economy\_NI



[NI Year of Food & Drink 2016](#)

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

**From:** Coyne, Terence  
**Sent:** 17 November 2016 14:51  
**To:** McCoy, Laura  
**Subject:** FW: HPRM: FW: Non-Domestic Renewable Heat Incentive

Hi Laura

Mark Cockburn sent an e mail below to Andrew on 04 November 2016 at 15:37 in response to Andrew's 26 October letter. Could you check to see if there was a formal letter of response or any other response to Andrew's letter.

Regards


Terry

## Terence Coyne

Governance Accountability and Casework

Received from DFE on 04.05.2017  
Annotated by RHI Inquiry

Department for the Economy  
Netherleigh  
Massey Avenue  
Belfast, BT4 2JP  
Tel: 02890529406 (ext: 29406)  
Mob: Personal information redacted by the RHI Inquiry  
TextRelay: 18001 02890529406  
Web: [www.economy-ni.gov.uk](http://www.economy-ni.gov.uk)

 Follow @Economy\_NI



[NI Year of Food & Drink 2016](#)

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

---

**From:** Mark Cockburn [<mailto:mark.cockburn@cepa.co.uk>]  
**Sent:** 04 November 2016 15:37  
**To:** McCormick, Andrew (DFE)  
**Subject:** Fwd: Non-Domestic Renewable Heat Incentive

Sent from my iPhone

Begin forwarded message:

**From:** "Abu-ebid, Mahmoud" <[Mahmoud.Abu-ebid@ricardo.com](mailto:Mahmoud.Abu-ebid@ricardo.com)>  
**Date:** 4 November 2016 at 16:32:55 CET  
**To:** Mark Cockburn <[mark.cockburn@cepa.co.uk](mailto:mark.cockburn@cepa.co.uk)>, "Haydock, Heather" <[Heather.Haydock@ricardo.com](mailto:Heather.Haydock@ricardo.com)>  
**Subject:** RE: Non-Domestic Renewable Heat Incentive

Dear Mark,

From Andrew McCormick's letter of 26 October to you, there appear to be two issues on which you are seeking details of the underlying rationale:

1. The assumption of a 17% load factor
2. The use of a 50kW boiler size as being representative for the 20-100 kW tariff band

Unfortunately, Oliver Edberg and Nick Barker are no longer with Ricardo and so we have had to go back over internal communications, spreadsheets and reports to determine how the assumptions were developed.

### **17% load factor**

For the 2011 report, the total heat consumption for each sector in NI was calculated based on the 2010 AECOM

report 'Assessment of the Potential Development of Renewable Heat in Northern Ireland: Final Report', Table 7 together with IDBR and public building stock data obtained from the Northern Ireland Statistics and Research Agency. We defined the smallest 98% of service sector buildings as being 'small' and estimated an average heat consumption for small service sector buildings of 29,961 kWh/yr. The load factor depends on the size of boiler assumed, but from our experience of biomass boilers we knew that a load factor of around 20% was typical. This is also in line with the typical number of hours during the year when heating is needed in commercial and administrative types of building. The smallest common standard boiler size required to give a load factor at around 20% for the annual heat consumption of 29,961 kWh/yr is 20kW, giving a load factor of 17%.

### **50 kW boiler size**

Following the consultation, feedback on the split of tariff bands at 45kW set out in the 2011 report, we reviewed the assumed average boiler sizing and increased it to 50kW for the proposed 20 to 100 kW band. As explained in the footnote under Table 3.1 in the 2012 report, we concluded that 20kWt was too small for a typical 'small' biomass boiler application in non-domestic properties. At this scale we saw no reason to adjust the load factor, so the 17% was maintained for a building with a higher annual heat consumption in proportion with the increase in assumed boiler size.

I hope this provides a clear picture of the rationale we followed at the time.

Best regards  
Mahmoud

---

**From:** Mark Cockburn [<mailto:mark.cockburn@cepa.co.uk>]  
**Sent:** 27 October 2016 14:50  
**To:** Abu-ebid, Mahmoud <[Mahmoud.Abu-ebid@ricardo.com](mailto:Mahmoud.Abu-ebid@ricardo.com)>; Haydock, Heather <[Heather.Haydock@ricardo.com](mailto:Heather.Haydock@ricardo.com)>  
**Subject:** FW: Non-Domestic Renewable Heat Incentive

Dear Mahmoud and Heather

Please see attached the letter I received yesterday. Amongst the questions they raise a couple are engineering related, for instance on why 50kw was chosen as the reference boiler. I'd be grateful if you could take a look. I'm trying to get back with the information by Nov 4<sup>th</sup>.

Thanks

Mark

---

**From:** McCoy, Laura [<mailto:Laura.McCoy@economy-ni.gov.uk>] **On Behalf Of** McCormick, Andrew (DFE)  
**Sent:** 26 October 2016 11:16  
**To:** Mark Cockburn <[mark.cockburn@cepa.co.uk](mailto:mark.cockburn@cepa.co.uk)>  
**Cc:** Cousins, Heather <[Heather.Cousins@economy-ni.gov.uk](mailto:Heather.Cousins@economy-ni.gov.uk)>; Dukelow, Victor <[Victor.Dukelow@economy-ni.gov.uk](mailto:Victor.Dukelow@economy-ni.gov.uk)>; McCann, Brendan <[Brendan.McCann@economy-ni.gov.uk](mailto:Brendan.McCann@economy-ni.gov.uk)>; Woods, Michael (DFE) <[Michael.Woods@economy-ni.gov.uk](mailto:Michael.Woods@economy-ni.gov.uk)>; Stewart, Chris (DFE) <[Chris.Stewart@economy-ni.gov.uk](mailto:Chris.Stewart@economy-ni.gov.uk)>; Wightman, Stuart <[Stuart.Wightman@economy-ni.gov.uk](mailto:Stuart.Wightman@economy-ni.gov.uk)>; Marten, Lucy <[Lucy.Marten@economy-ni.gov.uk](mailto:Lucy.Marten@economy-ni.gov.uk)>; Murphy, Shane <[Shane.Murphy@economy-ni.gov.uk](mailto:Shane.Murphy@economy-ni.gov.uk)>; Smith, Alan <[Alan.Smith@economy-ni.gov.uk](mailto:Alan.Smith@economy-ni.gov.uk)>

**Subject:** Non-Domestic Renewable Heat Incentive

Mark

Please see attached correspondence from Andrew McCormick.

Regards,

**Laura McCoy**

Permanent Secretarys Office  
Department for the Economy  
Netherleigh  
Massey Avenue  
Belfast, BT4 2JP  
Tel: 028 9052 9200 (ext: 29200)  
TextRelay: 18001 028 9052 9200  
Web: [www.economy-ni.gov.uk](http://www.economy-ni.gov.uk)

 Follow @Economy\_NI



[NI Year of Food & Drink 2016](#)

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

---

This e-mail and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this e-mail in error please notify the sender immediately and delete this e-mail from your system. Please note that any views or opinions presented in this e-mail are solely those of the author and do not necessarily represent those of Ricardo (save for reports and other documentation formally approved and signed for release to the intended recipient). Only Directors are authorised to enter into legally binding obligations on behalf of Ricardo. Ricardo may monitor outgoing and incoming e-mails and other telecommunications systems. By replying to this e-mail you give consent to such monitoring. The recipient should check e-mail and any attachments for the presence of viruses. Ricardo accepts no liability for any damage caused by any virus transmitted by this e-mail. "Ricardo" means Ricardo plc and its subsidiary companies.

Ricardo plc is a public limited company registered in England with registered number 00222915.  
The registered office of Ricardo plc is Shoreham Technical Centre, Shoreham-by Sea, West Sussex, BN43 5FG.

---