

Date : 10/11/2011 21:07:23
From : "Iain Morrow"
To : "'Mahmoud Abu-ebid"' , "'Oliver Edberg"'
Cc : "Mark Cockburn"
Subject : FW: Northern Ireland RHI - Follow-up work
 Mahmoud, Oliver

Please see below. This sounds like a reasonably significant piece of work to me, so I think we need to scope it carefully and give DETI a realistic estimate of time required.

I'll try and give you a call tomorrow to discuss.

Regards

Iain

From: Hutchinson, Peter [mailto:Peter.Hutchinson@detini.gov.uk]
Sent: 10 November 2011 18:02
To: Iain Morrow
Cc: McCutcheon, Joanne
Subject: RE: Northern Ireland RHI - Follow-up work

Iain,

Thanks for your reply, will try to cover all your queries and be clearer than before!

1. I think the first step is the banding. You are right that basically it is exploring the implications of different banding for the technologies, primarily biomass but also GSHP if possible. It would be to generate a low level band (<45kw), a mid range band (45-350/500/1000?) and then a high range band (>350/500/1000). This would take the emphasis away from small scale applications and provide a better breakdown above 45kw, at the minute >45 is too big a range.
2. Then the technologies, just to check the impact both in terms of heat output and cost of removing bioliquids and ASHPs from outset and introducing in 2013, would also want a potential tariff and banding (bearing in mind the issue at point 1) confirmed. For bioliquids, yes it would be useful for you to review the OFTEC material also. *It might also be an option for you to review the material received on geothermal also at this stage and consider what a tariff might look like from 2013 also, but this would be dependent on how long this would take you and cost.*
3. In terms of large industrials, it is basically ensuring there is an appropriate tariff set (open-ended tariffs similar to GB) and then assessing what the impact of that would be on i) uptake (how many large industrials might switch to renewables from either oil, coal or gas), ii) cost (what the impact of this would be on budgets, is it affordable?), iii) a very high level assessment on what the impact might be on existing gas (how many current gas would switch? Of course, the large tariff would still be set against oil counterfactual so no existing gas may switch but need to check what impact could be).
4. Tariffs, following all the above steps we would then have a new set of tariffs with different bands and ASHPs and Bioliquids removed but with 2013 tariff (maybe geothermal as well??). Then in terms of biomass we would need to review the current NI biomass prices and assess whether the biomass tariff might change. We would also need to revise the future energy price projections and make sure we can stand over them.
5. Finally, the development of some high level tables to demonstrate how the tariffs have been designed and the 12% ror applied, this is just for clarity and to use when explaining the tariffs to stakeholders, especially if they remain considerably lower than GB (which they will most likely). Would also need to update any other tables on the overall impact of the scheme on CO2 and renewable heat output. In terms of the tariffs I have prepared some example tables below to be used.

	CAPEX £/kW	OPEX £/kW/year	Efficiency %	Load Factor %	Size kW	Life time Years	Fuel cost £/MWh	Upfront barrier costs (including admin costs) £	Ongoing barrier costs (including admin costs) £/year
Renewable technology									
Oil									

	Annuitised Capital cost at 12% rate £	Annual operating costs £	Annual fuel costs £	Annuitised Upfront barrier costs £	Ongoing barrier costs £
Renewable					
Oil					
Difference					
Renewable technology Resource costs	(sum of difference row)				

Tariff design

Subsidy on annualised capital costs is xxp/KWh
Subsidy on operating costs is xxp/KWh (may be a negative)
Subsidy on barrier costs is xxp/KWh +

TARIFF IS XXp/KWh

I hope this makes sense, in its most simple terms it is to revise the banding to have bands above 45kw, assess impact of introducing ASHP and Bioliquids (and Geothermal?) in 2013 with agreed tariffs and bands; ensure large industrial can access a tariff and what the impact of this might be on overall renewable heat, cost of scheme and gas displacement, finalising tariffs with the new banding and with updated figures on biomass prices in NI, and production of high level tables for each technology to demonstrate tariff design.

Happy to speak tomorrow Iain if any issues remain unclear or confusing.

Thanks,

Peter

Peter Hutchinson

Sustainable Energy
Department of Enterprise, Trade & Investment
Netherleigh
Massey Avenue
Belfast, BT4 2JP
Tel: 028 9052 9532 (ext: 29532)
Textphone: 028 9052 9304
Web: www.detini.gov.uk

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

From: Iain Morrow [<mailto:Iain.Morrow@cepa.co.uk>]
Sent: 10 November 2011 13:38
To: Hutchinson, Peter
Cc: McCutcheon, Joanne
Subject: RE: Northern Ireland RHI - Follow-up work

Dear Peter

I've had a more detailed read through what you sent last night. Would you mind if I asked you some questions about it, just to be clear what it is you are looking for? This will affect how many people we need to dedicate to the work. I don't want to make too big a deal of something that you suggest should only be a few days work, but on the other hand I want to make sure we can do what you really want!

I've marked my questions beside various parts of your email below.

Very happy to talk through this if that's the best thing to do. I'm out this afternoon but contactable on my mobile. I'm then in the office tomorrow and all next week.

Regards

Iain

(p.s. glad to hear there is strong support for the scheme!)

Iain Morrow
Managing Consultant

Cambridge Economic Policy Associates
Queens House, 55-56 Lincoln's Inn Fields
London, WC2A 3LJ

Tel +44 20 7269 0220 (direct)/ +44 20 7269 0210 (switchboard)
Mobile Personal information redacted by the RHI Inquiry
Fax +44 20 7405 4699
Email iain.morrow@cepa.co.uk
Web www.cepa.co.uk

From: Hutchinson, Peter [<mailto:Peter.Hutchinson@detini.gov.uk>]
Sent: 09 November 2011 17:45
To: Iain Morrow
Cc: McCutcheon, Joanne
Subject: Northern Ireland RHI - Follow-up work

Iain,

I hope you are well.

We have just recently concluded our consultation on the Northern Ireland RHI and have been going through the responses. There is widespread support for the introduction of the scheme, however, perhaps unsurprisingly we received a high number of responses focussing on the lower tariff levels and the different banding structure. Whilst we always accepted tariffs would be lower given the different counterfactual positions we do now need to revisit some of the figures and banding before making a final policy decision.

Given time constraints we were considering if it would be possible to re-engage with yourselves to reassess some of the technology assumptions, revisit the banding issue and run a couple of model scenarios with different options to assess potential policy options. If this were to be possible it would need to be through the route of a Single Tender Action and before embarking on that action I wanted to get your view on whether yourselves would be available to carry out this work in a very short time period and get your view on the requirements and possible costs of such a project.

The work would solely relating to revisiting the tariffs and would involve the following;

- **Revisit the banding:** We are concerned that as it stands the RHI is overly focussed on small scale commercial and domestic applications with banding generally up to 45kw and then above, the >45kw is a large range that needs broken down further. This probably relates mostly to the biomass tariff and whilst we wouldn't necessarily want to be in line with GB we could examine banding of up to 45kw; 45kw to 350kw and 350kw above. We may also want to look at GSHP banding also. *[Iain Morrow]* OK what I understand here is that you want to explore the implications of splitting the >45kW biomass band into two. Is that right? And do you have any more detail on what you want to consider on GSHPs?
- **Technologies:** We are also likely to withdraw ASHPs and Bioliqids from the initial phase however with a commitment to introduce in April 2013. Would need to consider the impact of this on the model and confirm the likely tariff levels (OFTEC provided information on bioliqids that suggested a higher tariff level.) *[Iain Morrow]* My initial comment would be that this isn't going to make a huge difference, since uptake in 2012/13 is a very small proportion of what is installed by 2020. Might be a lower priority to look at, or maybe we just provide some words about why it wouldn't make much of a difference? As far as bioliqids are concerned, it sounds like you want to update the technology cost assumptions and see the impact. Is that right?
- **Large industrials:** For a range of issues, including State Aid concerns, we are unlikely to exclude large industrials, we would therefore need to be sure what impact 2/3 large industrials switching to renewable might have re costs and have more information on the tariff level. Also might need to assess the potential impact on future gas extension for our own information only. *[Iain Morrow]* When you say 2/3 of large industrials, do you mean 2/3 of all of them, or only of the ones that we thought might be suitable for renewable heat? In other words, do you want to explore the possibility that some of those now on gas will move to, say, biomass?
- **Tariffs:** Need to have a final run through the tariffs and make sure we are content with them, the rationale and the expected uptake. Also received comments about biomass prices being higher in NI than in GB that hasn't been factored in, also received comments about the potential impact of the Rep of Ireland Carbon Tax and the GB RHI on future biomass prices. *[Iain Morrow]* For the first part of this, is it just a case of showing some worked examples of how the tariff gives a 12% return for a reference installation? Or is there more than that? Also, I understand that you want us to update the biomass costs. Do you have specific figures for what they should be (from the responses) or do you want us to work it out?
- **Other:** Just in completion of State Aid applications and future policy documents we would be seeking the development of some high level tables on uptake, on the design and background of the tariffs and examples of how the RHI delivers the 12% rate of return in a range of applications. *[Iain Morrow]* I'm not sure how this is different to the previous point re: running through the tariffs.

Hope this all makes sense. At this stage I just wanted to check your availability and get your views on the potential requirements. If you were available and interested in carrying out this follow-up work we would also need your assessment of the task and expected costs. We would need this work done quickly, probably no more than a week and would seek to begin as soon as we had the necessary approvals (hopefully within the next fortnight).

If you could consider and let me know your thoughts that would be great, happy to discuss further if needed.

Thanks,

Peter

Peter Hutchinson

Sustainable Energy
Department of Enterprise, Trade & Investment
Netherleigh
Massey Avenue
Belfast, BT4 2JP
Tel: 028 9052 9532 (ext: 29532)
Textphone: 028 9052 9304
Web: www.detini.gov.uk