

Submission to DCCAE Public Consultation “On the Design and Implementation of a Renewable Heat Incentive in Ireland”

Consultation paper available at <http://www.dccae.gov.ie/energy/en-ie/Pages/Consultation/Renewable-Heat-Incentive-Consultation.aspx>

FINAL VERSION - 3/3/2017

To: Department of Communications, Climate Action and Energy (DCCAE)
From: Irish Bioenergy Association (IrBEA)
E-mail: IrBEA CEO gerdevlin@irbea.org and contact@irbea.ie
3RD March 2017

Re: RHI Public Consultation Response

Dear DCCAE –

Please find enclosed the response to the Public Consultation on the design and implementation of a renewable heat incentive in Ireland from the Irish Bioenergy Association (IrBEA). These detailed responses are based on the responses co-ordinated by the IrBEA RHI Working Group on behalf of it’s members and those who responded accordingly to each of the questions raised concerning the design options for the RHI.

Regards

Dr Ger Devlin

CEO

Irish Bioenergy Association

<http://www.irbea.org>



“Working Towards a Sustainable Future with Biomass Energy”

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2 Introduction

The Irish Bioenergy Association (IrBEA) welcomes the intended introduction of a Renewable Heat Incentive (RHI) by the Department of Communications, Climate Action and Energy (DCCAE), and is pleased to respond to the consultation paper.

Irish consumers can benefit from bioenergy by displacing fossil fuels with biomass fuels and maintain competitiveness. Reducing Ireland's reliance on fossil fuel imports, reducing greenhouse gas emissions and improving domestic fuel security are key benefits to the Irish economy supported by bioenergy.

The bioenergy sector also stimulates rural development and local job creation, through the many jobs required in fuel supply, systems installation and operation and maintenance. The sector also provides a valuable local market for the growing private forestry resource and a market opportunity for growers of dedicated energy crops.

2.1 About the Irish Bioenergy Association

IrBEA is an industry association with over 150 members representing the bioenergy industry on the island of Ireland. IrBEA seeks to increase understanding of issues related to biomass supply chains used to generate energy in the form of heat, electricity and motion. The main objectives of the association are to influence policy makers, to promote the development of bioenergy, and to promote the interests of its members. Improving public awareness, networking and information sharing, and liaising with similar interest groups are other key areas of work in promoting biomass as an environmentally, economically and socially sustainable energy resource.

Overall direction is provided by the management committee which comprises 15 members from all parts of the bioenergy industry.

IrBEA operates a group structure where different parts of the bioenergy industry collaborate on topics such as transport biofuels, wood energy, biogas/AD, domestic biomass fuels, energy crops and biomass power generation.

IrBEA established a dedicated group working on renewable heat in January 2015.

2.2 Background to this Consultation Paper

This is a second and final consultation. DCCAE carried out a first consultation in September 2015. IrBEA prepared separate submissions to this:

On solid biomass combustion: <http://www.irbea.org/irbea-renewable-heat-incentive-report/>

On anaerobic digestion (AD) and biomethane: <http://www.irbea.org/joint-cre-irbea-submission-ad-rhi-consultation/>

3 General Consultation Process Comments

The consultation document is coherent and well-structured and is an important step towards an actual RHI open for business.

We would however make the following observations about the DCCAE consultation process:

- None of the consultation responses from September 2015 are published to-date. Consultees are operating in an information vacuum about the diversity of stakeholder needs and opinions, which could have been informed by publication of these.
- The financial analysis and stakeholder surveys commissioned by DCCAE and completed by Element Energy in 2016 for Res-H technologies not published.
- Similarly the ongoing analysis for development of a RES-E policy is not available, which will have a significant impact on Biomass CHP potential revenue.
- A further report on AD CHP and biomethane (By Ricardo), has not been published.
- As this is a final consultation it should clearly have more visibility on financial aspects.

3.1 Timelines

An RHI scheme was first officially conceived as part of the Bioenergy strategy consultation in May 2013, and formally announced in the October 2014 Draft Bioenergy Plan.

There has been a significant impact of carrying on with business as usual over recent years. Approximately 550 toe (tonnes of oil equivalent) of additional fossil fuels are burnt each day as the policy is being developed. Since 2014 c. 800,000 toe have been avoidably consumed.

There is also a negative social and economic impact associated with business as usual. There are many bioenergy businesses that have ceased to exist due to industry stagnation since 2008. Many skilled people have applied themselves to other technologies or other jurisdictions to make ends meet.

Certainly the ambition to have a scheme open to applicants in 2017 is welcome, but based on past record, a change in gears is required to have a realistic chance of achieving this.

3.2 Moving Beyond 2020 and EU targets

The primary motive behind the proposal to introduce an RHI is to meet Ireland's 2020 Renewable Energy targets, as legislated for in adopting binding EU agreements to meet 16% RES by 2020.

A very large effort is being invested in developing a scheme, which is targeted towards a very short term 2020 target. The policy needs to cater for our climate change policies and energy ambitions over a longer horizon.

2030 commitments have been already made under the revised EU RES directive. This is useful to support the development of national legislation, but we should not need to be continually nudged along by EU targets and the threat of sanctions. This is not the best approach to policy-making in a post-brexite world – there is a need for a national vision, embraced by our citizens and our public representatives. Things should be done because of the threats posed by climate change, rather than undertaking them because we signed up to an EU target.

3.3 Other Aspects to Consider

3.3.1 Range of Technologies

Almost every possible technology option is on the table, with notable exception of district heating.

While this might theoretically please everyone, there is a finite pot and differences in cost-benefit for each technology option, which have not been fleshed out in the consultation document.

Leaving all options open also adds substantially to the complexity of scheme design and administration. The technology scope is wider than the current UK RHI, and the approach in the UK was to phase the introduction of additional technologies over time.

The following technologies are listed as being “Included for consideration”:

- Biomass boiler
- Biomass combined heat and power (CHP)
- Biomass direct air heating
- Ground-source heat pump / Air-source heat pump / Water-source heat pump
- Deep geothermal
- Anaerobic digestion (AD) CHP / AD boiler
- Biomethane grid injection
- Energy-from-Waste (IrBEA would like more clarity here)
- Solar thermal

IrBEA recommends that renewable cooling be included as a specific eligible pathway, due to the growing demand for cooling at data centres and other industrial premises around the country.

There is a need to facilitate enabling technology, especially district heating and thermal energy storage. District heating is an expensive long-term infrastructure investment in comparison to a standalone biomass boiler and is likely to need separate policy support.

4 Specific Consultation Responses

The consultation paper has set out specific consultation questions along with a preferred approach from DCCAIE. The position of IrBEA is set out below under the relevant sub-heading.

Question 5.2 - Should the ETS sector be included or excluded ?

While the inclusion of the ETS sector may appear to be a quicker route to meeting 2020 targets and mitigate against potential future EU fines. However, given the likely scenario that Ireland may have to import biomass in the medium term to meet projected demand, the RHI needs to work in tandem with the efforts to mobilise our biomass resource base and the associated supply chains to ensure that supply and demand grow in sync. The case for investment in this sector continues to remain a challenge against a global backdrop of low fossil fuel prices and higher capital costs for the technology.

The initial priority should be given to the non-ETS sector in order to maximise the benefits and the number of participants.

While we recognise the role the ETS sector can play in meeting the 2020 RES-H targets, the priority should be given to the non-ETS sector in order to maximise the benefits and the number of participants. This will spread the benefit across a wider area and will affect more workplaces and communities. The development of the associated regional supply chains will in turn underpin the mobilisation of indigenous biomass resources and the creation of rural jobs. The visibility of the scheme would therefore be greater, which we expect would help continue the normalisation and acceptance of bioenergy among the general public.

Large ETS projects will represent a low cost delivery model for the allocated budget. However, they are likely to take 12-24 months to build and therefore they could be categorised differently and be allocated from a different budget and tariff which could be under review. These projects would also further help develop the supply chain and provide demand when seasonal heat from other projects is not required. Large ETS projects can use lower grade biomass and facilitate the cost of the emission abatement technology associated with it.

If ETS sites are to be eligible, we must ensure that the majority focus of the scheme is on non-ETS sites, in keeping with DCCAIEs stated preference. Since we currently have no information on budget allocation, financial modelling of the proposed tariffs (that should have been in this consultation document from DCCAIE) then it is still difficult to define critically.

Question 5.4 - Should Energy Efficiency Standards be included?

It is recommended that energy efficiency standards are included as part of the RHI scheme as it promotes tighter control, governance and reduces investment opportunism that may be contradictory to overall energy policy.

Having said that the imperative here is about promoting the switch from fossil based fuels to renewables so overly cumbersome energy-efficiency criteria should not be allowed become a barrier to implementation and impair the RHI scheme – a balance is needed. Higher efficiency technology also implies more energy tons displaced with less biomass consumed which would help alleviate the constraints on limited indigenous biomass supply.

Where the Commercial BER and/or DEC is applicable, the required level should be set so as to allow premises with a currently sub-standard rating to achieve an acceptable threshold following installation of a RHI-approved technology.

With regard to the introduction of the SEAI's EXEED programme we believe that this scheme will add considerable delay, as well as substantial additional costs out of proportion to the scale of a proposed RES-H project. A simple and more cost effective alternative to EXEED must be found if energy efficiency is to be demonstrated. An energy audit and/or design approval by a competent person would be far more practicable than an EXEED design certification process.

The Energy Efficiency Obligation Scheme (EEOS) should also be considered as a qualifying criteria (though not to the exclusion or disadvantage of non-obligated parties)- it promotes verification of energy efficiency savings at the concept stage.

We do see great opportunity in the agriculture sector, but don't see that EXEED or another existing programme would be fit for purpose to ensure energy-use best practice here. There is an ongoing onus on industry and state stakeholders (especially Teagasc and SEAI) to ensure energy-efficiency good practice guidance is widely disseminated and adhered to. The proposal to tier tariffs should ensure that there is a disincentive to run systems wastefully when there is not a clear justifiable economic need.

The priority must be on fuel switching, and consumers will make their choice on capital cost and expected operating costs first and foremost.

Question 5.5 - Should Minimum Technology Standards be included?

It is recommended that minimum technology requirements are introduced as part of the scheme.

We note the existence of EU legislation in this area and the existing UK RHI requirements.

IrBEA refers to the extensive study completed by Fehily Timoney on behalf of the association in 2016:

<http://www.irbea.org/wp-content/uploads/2016/12/IrBEA-BiomassEmissionsReport.pdf>

Some of the key recommendations included:

- The RHI scheme should, from the outset, specify a requirement in relation to means by which RHI eligible biomass (and other) installations must be installed by an appropriate qualified and certified individual/organisation and through any adopted or approved certification scheme.
- There is currently no “centrally approved” certified (or accredited) installer/competent person scheme in existence for biomass combustion appliances in Ireland. Such a scheme would be a positive development in ensuring the appropriate installation of appliances
- Consider the adoption of the existing UK RHI emission certification system, for biomass installations which do not have an appropriate air emissions permit/licence, as part of RHI. Support this recommendation by verifying applicability of the UK RHI emission limit values in an Irish context and assessing the interactions of these values with requirements of the Eco-design and MCP Directives.

In principal the Triple E register should be a good means of maintaining product quality standards. The Triple E (Excellence in Energy Efficiency) Products Register is an initiative introduced by the SEAI which gives recognition to products within Ireland that are ‘best in class’ in terms of energy efficiency. Under the European Communities (Energy Efficient Public Procurement) Regulations 2011 (S.I. 151 of 2011), it is a requirement that public bodies must purchase products that are specifically listed on the register.

Question 5.6 - Eligibility of Heat Use for the RHI

We recommend that only economically justified heat for space heating, water heating and industrial process heating should be eligible. The definitions as outlined in section 7.14 of the first RHI consultation document refer specifically to ‘useful heat’ and ‘justifiable demand’ in the context of co-generation and REFIT-3. The definition of ‘useful heat’ in the context of a RHI will need to consider that the load can be shown to be an existing or new heat requirement (i.e. not created artificially, purely to claim the RHI) and that the acceptable uses are space heating, water heating or process heat:

- Heat for new builds
- Heat a space in an enclosed building or structure that is permanent
- Heat water within a building for commercial use
- Carry out a process within a building or boundary site

Exemptions should be made for the drying of biomass prior to combustion i.e. high-moisture, low-grade biomass may require pre-drying to maximise its calorific value during combustion which ultimately will increase the energy content (calorific value) of the biomass and displace more fossil energy tonnes will less biomass required than if it was used at a higher moisture content. There may also be economic benefits of pre-conditioning bark for example prior to it being used as a blended biomass fuel.

Similar needs to be considered for AD where renewable heat generated in an AD-CHP could be used in a pre-treatment process for the purpose of increasing biogas production on that plant. Such a process can create a more efficient AD plant. Various pre-treatment technologies require thermal heat to operate and pre-treatment technologies are widely acknowledged as a requirement to facilitate growth in the AD market.

It will be important to define the types of structures eligible and the definition of ‘permanent’ structure as there are many types that may be more difficult to classify such as portacabins, static mobile homes, greenhouses, shipping containers, drying sheds etc. Consideration will need to be given to whether the building is required to be wholly enclosed with four walls and a roof.

Question 5.7a - Should the WFQA be Mandatory?

Yes, the WFQA (wood fuel quality assurance) should be mandatory as a means for ensuring the supply of quality-assured wood fuel. IrBEA established the WFQA and is the custodian, although it has an oversight committee which includes a range of stakeholders beyond IrBEA members. This includes among others the Department of Agriculture, the SEAI and the NSAI. It has an independent auditor, a standalone website, branding and quality mark. IrBEA recognises that WFQA should, however, potentially only apply to installations that are not already licensed or are operating under a permit / licence such as the Industrial Emissions Directive and the IPPC as this again would cause further burden and administrative costs to the RHI scheme.

Many fuel suppliers are already certified through the WFQA. IrBEA does recognise the need to expand the range of fuels and the number of certified providers under the WFQA if it is a mandatory requirement and will position itself to complete this accordingly.

The task of WFQA is to assure the buyer that the quality of the delivered fuel is in agreement with what was specified in the contract. This is done by internal WFQA procedures followed by a quality declaration to the customer. WFQA thus does not have to mean that the quality of the fuel is as required by a standard. From a compliance perspective EN ISO 17225-2:2014 Solid biofuels - Fuel specifications and classes - General requirements, could be applied.

From there, supplier and customer can agree to a set of specifications for a contract. QA checks that the delivered fuel complies with that agreement. Members of the WQFA submit their internal quality control measures for external auditing. The scheme includes random testing to see if the quality of the products is in agreement with the contracts. The WFQA has developed a quality mark, so that one can see on the packing materials or on the delivery notice that the products comply to the quality requirements.

Question 5.7b - Should Minimum standards for PM and NOx emissions be required?

IrBEA agrees with the adoption of minimum standards for PM and NOx emissions similar to those in the UK through Emissions Certification and on-site emission testing where required.

However, IrBEA recognise that some applicants may already be regulated under license as mentioned in question 5.7a. Again, to avoid duplication and additional administration burden and cost, the limits set out in the relevant license should apply and the compliance testing and reporting should satisfy the SEAI (assuming they are the nominated regulator).

Question 5.8 – Biomass Sustainability Criteria

IrBEA recommend that standardised sustainability and GHG emission reduction criteria should apply to both domestic and imported biomass and for all fuel sources. The Paris Agreement and the EU Climate and Energy Framework set ambitious but necessary targets. These impose important challenges for reducing greenhouse gas (GHG) emissions by phasing out the technologies and infrastructures that cause fossil carbon emissions. The climate impact of bioenergy is of critical importance in the EU since bioenergy is currently the largest renewable energy source: 44% of total renewable energy production in the EU in 2014. Most Member States have in absolute terms increased the use of forest biomass for energy to reach their 2020 renewable energy targets

A series of sub-questions are posed here.

- (i) Should the same biomass sustainability criteria apply to domestic and imported biomass?**

Yes, as installations should be able to source fuel from NI and further afield under a harmonised approach.

- (ii) Should the same biomass sustainability criteria apply to forestry & energy crop based biomass?**

No, the LCA treatment and LULUCF are established as being different land-use categories for forestry and energy crops. A reasoned assessment of sustainability criteria needs to be made for each.

- (iii) Should EU, UK or other biomass sustainability criteria apply?**

There is a preference for harmonisation with EU legislation, which has to be transposed into Irish legislation in any case. If there are delays in using EU criteria, UK criteria are acceptable as an interim solution.

- (iv) Should maximum biomass lifecycle emissions eligibility criteria apply? How should compliance be demonstrated?**

No. The focus should be on supply chain assessment and harmonisation with EU criteria.

- (v) Should the certification of GHG be mandatory?**

Yes, in keeping with the Renewable Energy Directive, which will make this mandatory for installations above 1MW.

- (vi) Should tariffs be differentiated by CO2 intensity?**

The intent of the question is not entirely clear.

We cannot envisage a functioning or equitable RHI that would have a variable tariff based on CO₂ intensity. We would not support a situation where a particular technology was given a tariff linked to the CO₂ intensity as a whole. This is in no way linked to competitiveness, or a reasoned analysis of the IRR required to stimulate RES-H.

(vii) How should GHG reductions in specific supply chains be demonstrated?

In principal the “UK Solid and Gaseous Biomass Carbon Calculator” could apply. The most commonly applied metric to quantify climate effects is Global Warming Potential (GWP), which is used to calculate results in “CO₂ equivalents.” Under RED the liquid biofuels sustainability criteria are assessed using the open access BioGrace II GHG Tool – Harmonised greenhouse gas calculations for electricity, heating and cooling from biomass. A similar approach and use of BioGrace could be looked at for the RHI sustainability criteria that follow RED II or combine aspects of the UK RHI.

Question 5.9 – Differentiation of Tariff by Renewable Heat Technology

IrBEA recommends the introduction of tariff differentiation by technology type. In principle tiering should provide a better balance for higher risk and larger scale projects. Key criteria for setting the tariffs should be - Gas as the counterfactual fuel rate (including large energy user rebates / discounts) - ‘Retrofit’ projects – the market reference should not be to displace a fully depreciated fossil fuel boiler at the end of its useful life. To realise high GHG savings, it is critical that policies and regulations create a situation where the promotion of bioenergy and other non-fossil energy options leads to fossil fuel displacement rather than competition among non-fossil options. The impact that bioenergy production has on decreasing investments in technologies and infrastructure that rely on fossil fuels is also important, since this has implications for future emissions.

Question 5.10 – Differentiation of Tariff by Installation Size or Output

IrBEA recommends the introduction of tariff differentiation by technology type using a tiered approach. There is no public information on the financial modelling completed by Element Energy or Ricardo Energy & Environment on the scheme which leaves it difficult to critically comment as a result.

Question 5.11 – Age of Existing Fossil Fuel Heating Technologies being Targeted for Replacement

Targeting only counterfactual technologies that are at the end of their useful life will significantly limit uptake to the scheme.

IrBEA recommend that the scheme should not be limited to technologies that are at the end of their useful life or new builds. The cost assessments need to assume that the existing technology is not fully depreciated. End of life varies on a case by case basis and is difficult to determine correctly as it requires data on level of use, quality of equipment, service intervals and maintenance.

Any tariff clearly needs to address this via choice of counterfactual scenario. The cost assessment methodology should not depreciate the existing boiler to end of life, and assume the baseline that an investment was going to be made at that time.

Earlier replacement has the positive side-effect of improving energy efficiency, in addition to fuel-switching and this should to be accommodated.

Question 5.12a – Duration of Support and Profile of Payments to Scheme Participants

The use of biomass for energy is likely to make economic and environmental sense if accompanied by a package of measures to promote best practices for climate change mitigation. IrBEA's consensus is to support the proposed 15-year tariff payment period (with possible quarterly payments) which would not alone exert less pressure on the exchequer and refrain the participants from reverting to the counterfactual but also give certainty to the biomass supply chain.

Question 5.12b - Profile of Payments

The view of IrBEA is that a 15 year period with an absolute minimum IRR of 12% is seen as a desirable outcome. However, an actual IRR of 15% would be more beneficial to secure investment more easily. If the time period is too long and the tariff too small then it will affect the uptake based on investment into the sector.

Question 5.13 – Payments based on Metered heat or Deemed Heat

To avoid any abuse of the system the scheme must be based on metered heat. Metered heat will reduce the risk of any under / over payments.

Question 5.14 – Systematic Adjustment to Tariffs

IrBEA's view is that linking the RHI tariff to CPI is not seen as the most appropriate index to use for the RHI as it contains goods that are not relevant to commercial users and does NOT take account of commercial fuel prices. It could therefore mean that in situations where fuel costs change substantially (either increase or decrease) and the extent of the change would not be reflected to any significant extent by the CPI.

Consideration should be given to using the CSO's Wholesale Price Index (WPI) or one of its constituent indexes such as that for Energy Products (i.e. Fuels purchased by Manufacturing Industry) as this index is wholly or largely based on prices for fuel or energy products paid for by industry or commercial users and should be used.

The CSO collects information on Energy Purchased by Manufacturing Industry and creates wholesale price indices for electricity and petroleum fuels purchased by manufacturing industry.

It must also be considered that when setting the new initial tariff rate, the DCCAE must be aware that the RHI consultation document submitted by IrBEA some 18 months ago in August 2015 reflected fossil fuel prices then. So the tariff must be based on most recent fuel price data.

Question 5.15 – Budget Management Mechanism / Cost Controls

A tariff degression and budget cap mechanism similar to the UK is welcomed. However, activation of either mechanism should detail a minimum early warning time window to allow projects which may have commenced sufficient time to claim accreditation. If such an advance warning system is not put in place then it presents a risk to projects whose feasibility depends on the RHI.

Question 5.17 – Implementation Options

While this section doesn't ask for a direct response it is imperative that once SEAI are acting as administrators that they resource accordingly to avoid any unnecessary delays. Given that biomass installations can take anywhere from 12 – 24 months to fully commission and become operational, adding administrative delays due to lack of personnel in SEAI would be extremely frustrating and undesirable.

Question 5.18 – Pre-accreditation

To give stakeholders of large and complex projects the security to invest in technologies supported by the RHI scheme we recommend that pre-accreditation should be included for installations over 1MW in size. As the lead time for these projects can range from 12 to 24 months the pre-accredited tariff rate must be “locked in” and continue to apply at the final commissioning date.

This would reduce risks for investors and help fast track developments. Applications could be made for pre-accreditation at a “locked in” tariff.

Some thought needs to be given to avoiding widespread pre-accreditation of projects that won't proceed. An application fee may be appropriate, or a rule that prevents applicants from applying for pre-accreditation of the same site in two successive tariff periods.