



Western Development Commission

Response to consultation on the Renewable Heat Incentive- Technology Review
Consultation

Submitted to: Department of Communications, Energy and Natural Resources

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www.wdc.ie

Introduction

The Western Development Commission (WDC) is a statutory body promoting economic and social development in the Western Region of Ireland (the counties Donegal, Sligo, Leitrim, Roscommon, Mayo, Galway and Clare). The WDC¹ is involved in policy analysis and development, the promotion of regional initiatives and the operation of the Western Investment Fund.

The WDC has been actively involved in the renewable energy sector since 2003, and specifically involved in the bioenergy heat market since 2006 delivering a range of development projects and policy analysis. The WDC was a member of the National Bioenergy Working Group under the Department of the Communications, Energy and Natural Resources (2008 – 2010) and served on the Supply Chain and Market Development Sub-groups. The WDC was also a member of the Irish Bioenergy Association (IrBEA) Renewable Heat Incentive Group and has provided input into the IrBEA report “Delivering a Renewable Heat Incentive for the Republic of Ireland”.

The WDC was lead partner of the EU funded bioenergy project BioPAD (Bioenergy Proliferation and Deployment) 2012-2014 , which targeted the Northern Periphery of Europe and was funded under the EU’s Northern Periphery Programme (NPP). It had partners in Scotland, Northern Ireland and Finland and provided learning opportunities for organisations and businesses in the Western Region. It promoted the wider use of bioenergy and increased awareness of the opportunities it provides. The project helped the development of bioenergy and improved understanding of the links between supply and demand by looking at supply chains for a variety of bioenergy fuels and different ways of converting these fuels into sustainable energy. Understanding the supply chains and the ways bioenergy moves from fuel source to energy provision can help the establishment of robust and efficient supply services which can match local demand. The WDC was also lead partner on RASLRES (Regional Approaches to Simulating Renewable Energy Solutions). RASLRES² a €2.8 million EU bioenergy project (2010-2012) funded under the Northern Periphery Programme aimed to increase the deployment of biomass fuels in rural communities and grow the number of local businesses involved in the bioenergy sector.

The WDC is interested in the development of the renewable heat sector in the Western Region and nationally as it makes use of abundant natural resources (particularly wood biomass and energy crops, as well as fuel from anaerobic digestion) and provides local jobs in the energy sector. It also contributes to security of supply, and sustainability in the region and enables a move to a low carbon regional economy.

Given our experience in renewable and bioenergy the WDC welcomes the opportunity to submit a response to the consultation on the Renewable Heat Incentive. We first highlight some general issues of relevance to a Renewable Heat Incentive (RHI) and then address some of the questions outlined in the consultation document.

Strategic market and policy interventions, must be cognisant of the wider market environment in order to design and deliver an effective, value for money schemes and identify actions which result in sustainable market growth. The OECD report “Linking Renewable Energy to Rural Development”³

¹ See www.wdc.ie for more information

² See www.raslres.eu for more information and for project publications

³ OECD, 2012, *Linking Renewable Energy to Rural Development*, OECD Green Growth Studies, OECD publishing. <http://dx.doi.org/10.1787/9789264180444-en>

contains a very useful examination of policy options and actions in fifteen OECD regions. It highlights what makes effective renewable energy policy and shows how bioenergy in the Heat market can provide greater local and national economic benefits than other renewable energies.

While the focus of this consultation is on the development of an RHI, it is important that this is accompanied by other policies which will support the development of renewable heat and which will result in a better uptake of the RHI. High level targets such as those for renewable heat must be translated into a regional and local context if they are to drive delivery of market growth rates.

Regions have varying levels of competitive advantage in renewable energy for heat and regions must develop their resources in the most effective and appropriate manner given their conditions and characteristics. The development of local loops of demand and supply typically result in sustainable, efficient deployment of resources. A supply chain development approach is necessary to tackle the barriers to growth and achieve sustainable development of the sector. Policy for the development of renewable heat should be broader than the RHI in order to support its uptake and increase use of renewable heat in general.

The WDC believes the following are key issues for the development of the bioenergy sector and which should be addressed in any policy for renewable heat. A regional approach is particularly useful.

- The renewable heat market has the potential to create considerable levels of employment across the Western Region and to provide long-term stable markets for low value wood fuels which can compete with fossil fuels and so reduce and fix energy prices for end users. Local wood biomass resources are finite, however, and as demand for biomass increases in a variety of markets, a greater understanding of the available resources at both a county and regional level is required. Under RASLRES the WDC prepared resource assessments which provide an overview of the potential supply of wood based biomass and estimate demand for renewable heat market within each county. They also highlight the issues regarding the potential impacts of large scale projects such as Bio-Refineries and/or Combined Heat and Power (CHP) plants on county and regional supply chains.
- Renewable policy interventions are typically most effective when delivered at a regional and/or local level where they can be tailored to local resources and conditions. This focus on ensuring the most suitable development takes place in the right location is important in ensuring that the widest benefits are levered from the development.
- Policy should be designed in such a way as to incentivise the use of local renewable fuels rather than imported fuels.

Response to a selection of Suggested Questions

It should be noted that as the WDC was a member of the IrBEA Renewable Heat incentive Group some of the answers refer to the report of that group.

1. Is the structure and approach to the process to develop the support scheme appropriate?

The structure and approach to the scheme's development is well thought out. It is important, however, that the timelines are adhered to and that the scheme can commence as soon as possible, and without additional delays.

2. Are there any additional considerations to build into the process?

While a key objective is to incentivise renewable heat so that we can meet targets for renewable energy the potential employment and the opportunity to use local resources should also be considered. Renewable heat from local resources (biomass produced locally, AD, and biogas from waste) can all provide significant benefits to a local economy. The scheme should aim to have as broad an uptake as possible and should focus on installations of all sizes. It should be designed in such a way as to ensure that the use of local fuels is incentivised. This is likely to be achieved through a wider spread of smaller installations than through a small number of very large installations.

3. Are there any additional aspects, such as policies, publications or reports that should be considered?

The wider benefits of investing in renewable energy should be taken into account in developing policy and in ensuring that these are maximised as a consequence of policy design. These wider benefits include:

- new jobs and business opportunities;
- new sources of revenue in rural areas;
- innovations in products and practices;
- capacity building within local communities through their use of renewable energy;
- more affordable energy.

As noted above, the OECD report “Linking Renewable Energy to Rural Development” highlights the benefits of biomass for heat and suggests how policies should best be designed to maximise these. It is recommended that the relevant section of the report is considered.

In addition, as noted above (with further details in the attached appendix) the WDC has been promoting the development of bioenergy in the Western Region in the last five years. This has largely been through the €2.8m RASLRES project (EU Northern Periphery Programme) and the €0.7m follow up project BioPAD. The RASLRES project undertook detailed assessments of the available resources in each of the 7 western counties. **Resource Assessments of the Western Region** (see publications list in the appendix). These provide interested parties with an overview of the potential supply of wood based biomass and estimated demand for renewable heat market within each county. They also highlight the issues regarding the potential impacts of large scale projects such as Bio-Refineries and/or Combined Heat and Power (CHP) plants on county and regional supply chains.

The RASLRES project also published a **Review of Woodchip Supply in the Western Region of Ireland**: This market research report presents an overview of the woodchip supply sector in the Western Region. In addition in relation to the mobilisation of biomass use **Energy from Wood Biomass – Environmental Management Considerations**: This report raises awareness of potential environmental impacts and how to mitigate them when increasing the uptake of biomass in terms of forestry.

As part of the BioPAD project, a number of case studies were carried out on different fuel types and conversion technologies in each of the partner regions. A summary of the case studies carried out in the BioPAD project can be found in BioPAD e-zine issue 5 here: [BioPAD E-ZINE Issue 5 – Case Studies](#) . More detail is also available at www.biopad.eu

Six short pilot actions were also prepared for the BioPAD project to highlight different issues and impediments to development of the sector along the bioenergy supply chain in Ireland. The objective was to help find solutions to issues along the bioenergy supply chain for suppliers, support services and users. Advice was provided to six pilot businesses on potential resolutions for their problems and strategies for the development of their enterprises by specialist bioenergy consultants. They provided information, advice and support to each pilot action client and prepared a short report on each describing the barriers to growth and options for overcoming them. More general learnings and options for tackling obstacles in

bioenergy supply chains also formed part of each of the report. You can see the pilot action report here: [BioPAD Supply Chain Pilot Actions Final 23.09.14](#)

In May 2014 SLR Consulting Ltd was commissioned by the Western Development Commission (WDC) to conduct a study of the local economic and social benefits of bioenergy installations and their associated supply chains for the BioPAD project. The aim of this study was to measure and highlight where the employment from bioenergy occurs at a local level and to demonstrate the contribution that bioenergy development can make to rural and peripheral areas. The summary of the full report can be seen here: [Local Economic and Social Benefits- summary final 23.09.14](#)

Further details of publications and reports from the BioPAD and RASLRES projects are included in the appendix to this submission.

5. What technologies should be considered for support?

A wide range of technologies should be considered for support. It is particularly important that the scheme is designed in such a way that it can be responsive to newer or increasingly popular technologies which have proved effective elsewhere. It is not always possible to predict what such technologies will be, but as the scheme is to support renewable heat, the technology used should be flexible, provided it is clearly renewable.

6. What are the likely characteristics of deployment?

It is likely that many of the installations will be at a smaller scale (under 200kW) the median installation under the Reheat scheme (2007-2011) was 165kW.

7. Is there a range of potential deployment characteristics, for example in terms of technology type, installed capacity, fuel etc?

It is important that the scheme is applicable to a wide range of users in all types of contexts for process heating as well as space heating and for service as well as manufacturing industries. The scheme should not just be focused on large industrial users (as noted in 7.8). The scheme should be made favourable to smaller enterprises as these are the most numerous (though of course they are not as significant in terms of heat use). The Western Region would tend to have a higher proportion smaller scale enterprises than other parts of Ireland.

13. Who are the potential applicants for support under the scheme?

All commercial heat users/ suppliers should be considered potential applicants under the scheme. While the aim is to that the scheme should make a significant contribution to meeting the RE 2020 targets, and so there could be an emphasis on attracting larger users, it is important that the RHI is viewed as a policy for achieving a longer term move to renewable heat in all businesses. Therefore the scheme should be made as appealing as possible to smaller users who do not have strong expertise or understanding of renewable energy. For this reason, in addition to ensuring that the scheme is appropriate to smaller users (through administration design and appropriate banding), the scheme should also be open to heat suppliers using an ESCO model and District Heat suppliers.

15. Should they always be the owner of an installation?

Not necessarily. A heat supplier using an appropriate ESCO model or a District Heat supplier should also be able to apply for the scheme. This means that the smaller user, who does not have the energy expertise or administrative capacity can benefit from the scheme, while an ESCO supplier can build up expertise in the Scheme, its application, and administration and should be able to pass on further savings to the heat purchaser. This would encourage more ESCOs and also smaller users to benefit.

20. Do you have any considerations in the context of the three heat uses outlined as eligible heat uses?

The WDC agrees that the scheme should only support the displacement of fossil fuels in heat which would otherwise be required.

24. Should energy efficiency measures/audits form part of the eligibility criteria for inclusion in the RHI? If so what measures would be appropriate?

It would be important that any applicant has carried out appropriate energy audits and taken recommended actions to ensure that the heat supported under the scheme is not being wasted.

30. Is a direct fixed premium payment for renewable heat the most effective way to provide the support?

While the focus of this consultation is on the development of a RHI, it is important that this is accompanied by other policies which will support the development of renewable heat and which will result in a better uptake of the RHI.

The WDC considers that the barriers to uptake of bioenergy include:

Market awareness and confidence: Many energy users are simply unaware of the technology and the fuel supply options available. In addition there can be a lack of market confidence in the technology and fuel supply chain because it is relatively new to the region. For the market to develop there needs to be greater confidence in the reliability and convenience of the supply chain.

Market development: In order to grow the market, the technical, design and practical skills in the installation, operation and conversion of fuel resources to energy must be developed. The business case and fuel supply models must be understood. The investment process is typically more complex than in the fossil fuels markets and specialist expertise may be required. This investment is therefore more time consuming and risky than an investment in established fossil fuel technologies.

Integrated supply chain: There is a low level of awareness of the market opportunities, and limited knowledge and technical expertise of the fuel supply chain amongst potential suppliers/producers. New investment in equipment and infrastructure will be required in order to respond to market opportunities. In the Western Region many of the plantations that are most suitable for wood energy production are dispersed and small in scale and therefore must be 'clustered' to make market entry commercially viable.

Supportive policy: Supportive planning policies will help to increase the rate of market development. For instance there is a lack of awareness among potential users as to the planning requirement for a wood heat facility. Similarly, better understanding of the benefits of bioenergy systems and technology is needed to improve their passage through the planning process.

Finance: Bioenergy development is capital intensive. Although bioenergy feedstock is usually significantly cheaper than fossil fuels the capital investment required for installation is higher. In countries with more established bioenergy use this is widely recognised and accessing private finance from a bank is relatively straightforward and bioenergy projects are not considered unusual. In Ireland where the sector is less established, and where banks have less experience of the sector, and where there are significant difficulties in gaining finance for all project types, lack of access to loans is an important restriction on the development of the sector.

Some of these barriers will be addressed or reduced by the introduction of an RHI but other supportive policy should also be introduced to tackle these issues alongside the RHI.

32.Should the payments be level throughout or sculpted differently?

Given that marginal costs are higher for smaller users there should be a small number of different bands or tiers for payment, highest for smaller users.

33.Should competitive allocation form part of the allocation of support under the RHI?

While there are advantages to competitive allocation, given the slow uptake of renewable heat options at the moment and the need to increase this quickly, competitive allocations should probably not be introduced at this stage as it might disincentivise some applications.

34.Do you have any points for consideration in the setting of limits or controls on the scheme?

Targets (both financial and energy) should be set for the scheme and when these have been met the scheme should be limited or reduced.

35.Should degression be introduced for tariffs under the RHI? If so on what basis should tariffs be degressed?

A degression option should be introduced to allow the scheme to respond to changes in technologies and costs if considered necessary.

36.Do you consider inflation relevant to any of the costs components and if so what index do you consider appropriate?

Consideration should be given to using the CSO's Wholesale Price Index (WPI)⁴⁵, or one of its constituent indices.

The WPI is derived from :

- i. Manufacturing Industries Output Price Index which contains the overall Manufacturing Industries Output Price Index as well as breakdown by Home and Export Sales together with separate series of:
- ii . industrial producer price indices classified by NACE2 + sector;
- iii. wholesale price indices for building and construction materials;
- iv. wholesale price indices for capital goods;
- v. wholesale price indices for energy products purchased by manufacturing industry

The CSO notes that the indices are also used in contracts by the building and construction industry as a measure of allowable price increases or decreases over the term of these contracts (i.e. elements of a contract price can be linked to the relevant index within the WPI). The CSO might suggest the most appropriate index.

⁴ <http://www.cso.ie/en/media/csoie/releasespublications/documents/prices/2013/wpiintro10.pdf>

⁵ <http://www.cso.ie/en/releasesandpublications/er/wpi/wholesalepriceindexmay2015/>

Conclusion

The WDC welcomes the development of a Renewable Heat Incentive and the opportunity to input into this consultation.

For further information or discussion of any points raised, or to find out more about WDC work on renewable energy please contact helenmchenry@wdc.ie

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Appendix

The BioPAD project- outputs of interest

Developing a local bioenergy market can provide significant opportunities for rural and remote areas, by improving security of supply, contributing to reduction in CO₂ emissions and stimulating the local economy by creating jobs and keeping payments for energy within the community.

A new project, BioPAD (Bioenergy Proliferation and Deployment), which targets the Northern Periphery of Europe, aims to ensure that bioenergy becomes more widely used and that awareness of the opportunities for it provides are increased. The project will help the development of bioenergy and improve our understanding of the links between supply and demand by looking at supply chains for a variety of bioenergy fuels and different ways of converting these fuels into sustainable energy. Understanding the supply chains and the ways bioenergy moves from fuel source to energy provision will help the establishment of robust and efficient supply services which can match local demand.

The Project is led by the Western Development Commission (Ireland) and is funded under the EU's Northern Periphery Programme (NPP) and has partners in Scotland (Environmental Research Institute, UHI), Northern Ireland (Action Renewables) and Finland (Finnish Forest Research Institute, METLA). Along with these four partners, the €0.7 million two year project includes 11 associated partners representing five countries with experience throughout the supply chain.

As part of the BioPAD project, a number of case studies will be carried out on different fuel types and conversion technologies in each of the partner regions. A summary of the case studies carried out in the BioPAD project can be found in BioPAD e-zine issue 5 here: [BioPAD E-ZINE Issue 5 – Case Studies](#) more detail is also available at www.biopad.eu

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A bioenergy tool which highlights key steps along the supply chain for each fuel type or conversion method has been made available in a variety of formats (for web, mobile and app). The promotion of this information system and tool are important elements of the BioPAD project and should contribute to the development of bioenergy through the project region.

RASLRES publications

The RASLRES project has been responsible for the drafting and dissemination of a number of important publications in the bioenergy field – all of which are available to download for free from <http://www.raslres.eu/publications/>

These publications include:

- **Resource Assessments of the Western Region:** These provide interested parties with an overview of the potential supply of wood based biomass and estimated demand for renewable heat market within each county. They also highlight the issues regarding the potential impacts of large scale projects such as Bio-Refineries and/or Combined Heat and Power (CHP) plants on county and regional supply chains.
- **RASLRES ESCO Model Contracts and Guidance Notes:** The ESCO model contracts and guidance notes were developed to provide a template for public ESCO model contracts which would be available to business or public sector users seeking to use a heat purchase contract.
- **District Heating as an Enabling Technology for Biomass in the Western Region:** examines issues for District Heating as an Enabling Technology for Biomass in public sector buildings and the wider community in the Western Region.
- **Wood Energy Guide:** The Wood Energy Guide is an ‘all you need to know guide’ for end users in considering locally produced timber as a renewable energy resource for their homes and businesses
- **Energy from Wood Biomass – Environmental Management Considerations:** This report raises awareness of potential environmental impacts and how to mitigate them when increasing the uptake of biomass in terms of forestry
- **Wood Energy in the Western Region of Ireland:** A series of reports on Wood Energy in Western Region of Ireland resulting from the RASLRES pilot projects, including:
 - **Bioenergy in the Western Region of Ireland:** This report aims to assist the Local Authorities in reviewing the benefits of bioenergy and how they may be leveraged
 - **Review of Woodchip Supply in the Western Region of Ireland:** This market research report presents an overview of the woodchip supply sector in the Western Region
 - **Wood Energy Installations in the Western Region of Ireland:** This market research report presents a review of medium scale wood energy installations (defined as systems with a boiler size range of 60kW to 1MW) in the Western Region of Ireland
- **Energy Crop Opportunities in the Western Region:** This report presents an analysis of the potential of energy crops in the Western Region of Ireland based on the application of the national bioenergy Geographical Information System (BGIS), and discusses key factors impacting on the future development of the energy crop sector
- **Research on Wood Energy in the West of Ireland:** The results of research that has been carried out through the RASLRES project into the availability and need for wood energy in the West of Ireland is available in 3 specific publications
- **Technical Reports:** These 2 Technical Reports share lessons from the RASLRES project with other potential industrial heat users- specifically on “Process Drying” and “Biomass Boilers for Process Steam”