

Action Renewables Association

23 April 2010

*Overview of the GB RHI and
current DETI synopsis*



Overview

- Renewable Heat Incentive in GB
 - Background
 - How it will work
 - Eligibility
 - Issues
 - Next Steps

- DETI Renewable Heat Study
 - Background
 - Outputs
 - Preliminary findings
 - Next Steps



Background to RHI

- DECC published their consultation on the proposed RHI financial support scheme on 1st February
- The GB Renewable Energy Strategy sets a target of 15% of overall energy consumption by renewable sources by 2020
- Currently 1% of heat in GB comes from renewable sources, the target for 2020 is 12%
- Main drivers for the RHI
 - Reduce carbon
 - Reduce dependency on foreign fuels
 - Economic opportunities
 - Legal obligation (EU Renewable Energy Directive)



Key aspects of the RHI

- Will support a range of technologies
- Payment will be claimed by, and made to, the owner of the equipment
- For small and medium sized installation, the installers and the equipment need to be MCS accredited
- Payments will be over a number of years, annually for microgen and quarterly basis for installations over 45kW
- Mixture of heat metering and deemed payments
- Open to new projects to 2020
- OFGEM to administer the scheme



Eligibility

- New equipment from 15 July 2009
 - Increase in capacity will be eligible
 - Replacement technologies are also eligible
- Heat used for generating electricity or produced by AD for use in the plant not eligible
- Wood burning stoves, air heaters, open fires and similar applications are excluded
- Bioenergy standards
 - Bioliquids - greenhouse gas emissions
 - Biomass - European Commission standard
- Basic minimum level of energy efficiency
 - 125mm loft insulation
 - Cavity filled wall where appropriate



Tariffs

Small installations

Received from DfE on 02.05.2017
Annotated by RHI Inquiry

Technology	Scale Proposed	tariff (pence/kWh)	Deemed or metered	Tariff lifetime (years)
Solid biomass	Up to 45 kW	9	Deemed	15
Bioliquids	Up to 45 kW	6.5	Deemed	15
Biogas on-site combustion	Up to 45 kW	5.5	Deemed	10
Ground source heat pumps	Up to 45 kW	7	Deemed	23
Air source heat pumps	Up to 45 kW	7.5	Deemed	18
Solar thermal	Up to 20 kW	18	Deemed	20

DFE-10



Tariffs

Medium installations

Technology	Scale Proposed	tariff (pence/kWh)	Deemed or metered	Tariff lifetime (years)
Solid biomass	45-500 kW	6.5	Deemed	15
		2 (fuel tariff)	Optional: for metered kWh above deemed number of kWh	15
Biogas on-site combustion	45-200 kW	5.5	Deemed	10
Ground source heat pumps	45-350kW	5.5	Deemed	20
Air source heat pumps	45-350Kw	2	Deemed	20
Solar thermal	20-100kW	17	Deemed	20

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Tariffs

Large installations

Technology	Scale Proposed	tariff (pence/kWh)	Deemed or metered	Tariff lifetime (years)
Solid biomass	500kW and above	1.6 -2.5	Metered	15
Ground source heat pumps	350kW and above	1.5	Metered	20

Biomethane injection

Technology	Scale Proposed	tariff (pence/kWh)	Deemed or metered	Tariff lifetime (years)
Biomethane injection	All scales	4	Metered	15



Example of calculating RHI entitlement

- Three bed semi-detached household with cavity wall type construction with an energy demand for heat of 15,000 kWh per year. The household plans to switch from gas to a combination of biomass and solar thermal.
- An on-site assessment by an accredited installer determines the following level of RHI. Reasonable space heating requirement for the property is 10,000 kWh (taking into account some straight forward energy efficiency measures).
- Hot water will require approximately 3,700 kWh/year meaning the total heat load for this house will be deemed as 13,700 kWh/ year.



Example of calculating RHI entitlement

- Solar thermal panels would provide 60% of the hot water requirement (2,200 kWh), with the biomass boiler providing the rest (1,500 kWh) as well as the space heating requirement (10,000 kWh).
- In this case the RHI entitlement would be:
 - Solar thermal: $2,200 \text{ kWh} \times 18\text{p} = \text{about } \pounds 400 \text{ per year for } 20 \text{ years}$
 - Biomass boiler: $11,500 \text{ kWh} \times 9\text{p} = \pounds 1,035 \text{ per year for } 15 \text{ years}$
 - Total RHI payments would be over $\pounds 1,400$ per year for the first 15 years (and around $\pounds 400$ per year for the following 5 years).
- This amount would be paid as a deemed annual amount regardless of actual energy use.



Further work required

- Tariffs for large installations need more consideration
 - Biogas above 200kW
 - ASHP above 350kW
 - Solar Thermal 100kW
- Innovative technologies
 - Water source heat pumps
 - Deep Geothermal
- Support for district heating and up front capital costs
- Impact on fuel poverty
- Third party ownership



Issues

- Deeming v Metering
 - Paying for heat installations that may not be used
 - Lack of data collection
- Administration
 - OFGEM
 - Validation
 - MCS ability to install
 - Negative impact on the industry
- Higher standard of Energy Efficiency
 - Only basic requirements
 - RHI tariffs to encourage EE?
 - DECC do not wish to create barriers



Next Steps

- Consultation closes on 26th April
- Consultation on Regulations in Autumn 2010
- Debated in House of Commons and House of Lords December 2010/January 2011
- Legislation enacted 1st April 2011
- First review of the RHI scheduled for 2013



DETI Renewable Heat Study

- NI not included in the GB RHI
 - NI specific issues needed to be considered
- Draft SEF outlined a target of 10% Renewable Heat for 2020, subject to validation
- AECOM Ltd and Pöyry Energy Consulting appointed to undertake study
- Study to complete end April and will inform future policy decisions and wider strategy for Renewable Heat



Study Outputs

- Up to date and accurate statistics on the current heat and renewable heat usage in NI.
- A base heat map using GIS.
- Benchmarking the potential for renewable heat in NI against renewable heat markets in GB, RoI and other European regions.
- Options on how the renewable heat market in NI could be most appropriately encouraged.
- Assessment of the need for an interim measure in NI in light of the introduction of the Renewable Heat Incentive in GB.
- Development of an evidence based target for renewable heat to 2020.



Preliminary findings

- **Existing market**

- Heat demand of 17.4 TWh per year
- Existing renewable heat level of 1.7%
- Domestic equates to 61% of total heat demand
- Industrial, 22%
- Commercial, 12%
- Public, 4%

- **Resource**

- Home grown biomass currently at 4-5% of overall heat demand. Potential to increase though limited.
- Biogas – AD and injection to grid
- Geothermal – Potential NI sites
- Heat pumps – Significant role



Preliminary findings (cont.)

- **Targets and incentives**
 - Draft target of 10% to be assessed
 - Ensuring that the appropriate technologies are encouraged in the most cost-effective manner
 - Mix of technologies / schemes
- **Potential Schemes**
 - Domestic microgen
 - District Heating – NI high heat / housing density
 - Biogas – AD or grid injection
 - Industrial
 - New builds



Issues to be considered

- Retrospective eligibility
 - DECC scheme runs from 15 July 2009
- Cost / funding
- Impact on fuel poverty
 - Use of District Heating
- Role of Energy Efficiency
- Increasing resource
 - Maximising biomass resource
 - Importing biomass
 - Waste products



Next Steps

- Report to be finalised by end April
- Potential policy options to be considered by Minister
- Executive Summary to be published in May 2010
- Public consultation process
- Legislative timetable



Thank you

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