



Department
of Energy &
Climate Change

Early findings from an evaluation of the UK government's Non-Domestic Renewable Heat Incentive

Andrew Charlesworth – 9th September 2014



Overview

The Non-Domestic Renewable Heat Incentive (RHI)

1. Scheme design
2. Performance to date

Evaluation

1. Key research questions
2. Research design

Findings

1. Who are applicants?
2. Motivations and barriers
3. Experiences of the scheme



The Non-domestic RHI

- Launched in November 2011 to support renewable heating in the **commercial, public, industrial, community infrastructure, and district heating sectors**

Aims include;

1. **incentivise the roll out of renewable heating technologies to contribute to the UK's 2020 renewable energy target;**
 2. **deliver significant reductions in the carbon emissions resulting from heating;** and
 3. **prepare for mass rollout of renewable heating technologies beyond 2020** by building sustainable supply chains, improving performance, reducing costs and increasing awareness of these technologies.
- The eligible technologies for the non-domestic scheme are; **solid biomass, ground-source, air-source or water-source heat pumps, solar thermal collectors, biomethane injection, combined heat and power (CHP), deep geothermal and biogas combustion.**

Support for air-source heat pumps, combined heat and power (CHP), and deep geothermal was added to the non-domestic RHI after this research commissioned and therefore was not in scope of the evaluation.



The application process

- The scheme is administrated by Ofgem (Office of Gas and Electricity Markets)
- Applicants must submit a range of information about the system and heat use to demonstrate they comply with scheme regulations
- Once the application is received Ofgem will either accredit, request further information, or reject the application
- THE RHI provides successful applicants with **payment for each kilowatt hour (kWh) of renewable heat generated**, payable over 20 years

Owner decides to install renewable heating system



Owner completes online application form on Ofgem website & provides necessary evidence



Ofgem accredits installation (subject to rules) and owner becomes RHI scheme participant

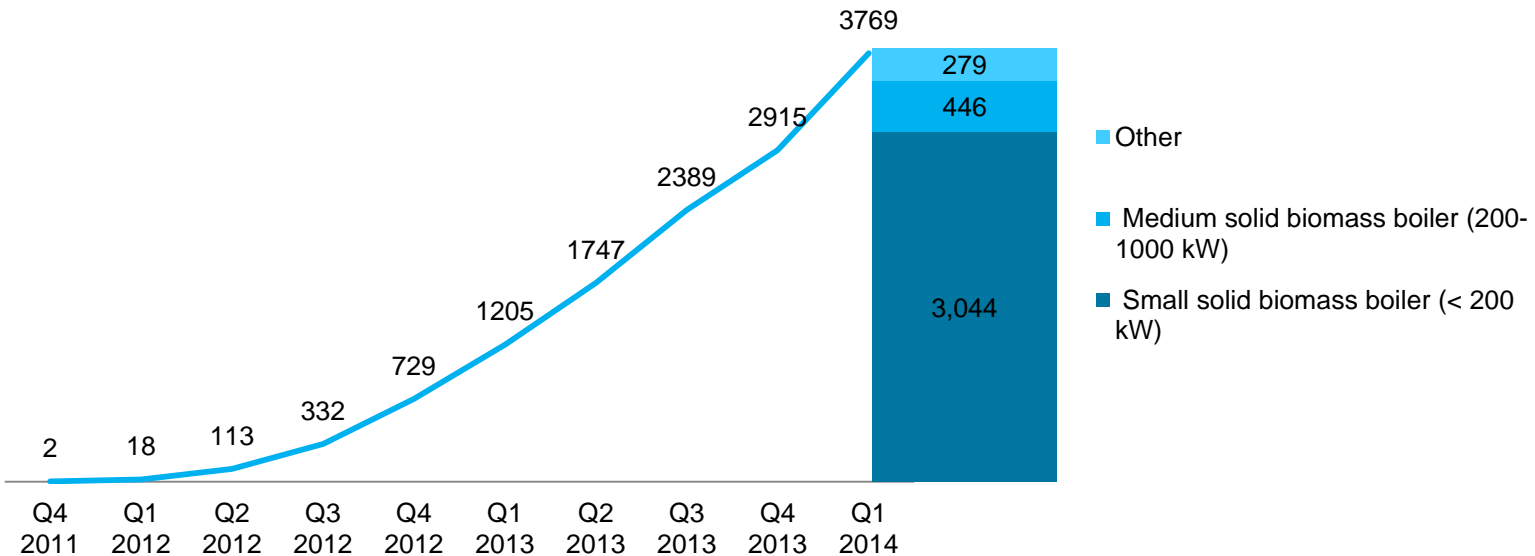


Owner receives quarterly payments (based on metered data) for 20 years



Non-domestic Renewable Heat Incentive cumulative accreditations as of 31st March 2014

- Over 90 per cent of accreditations are for small and medium biomass boilers
- Number of accreditations per quarter is increasing





Research questions

	High level research questions
How is the scheme being administered?	<ul style="list-style-type: none">• How effectively and efficiently has the scheme been administered and delivered?
The customer journey/experience	<ul style="list-style-type: none">• What factors (for example confidence, awareness, cost, or environmental concerns) have enabled or prevented uptake of renewable heat technology (RHT) through the RHI?• What has the impact of installing RHT been for customers?
The market and supply side	<ul style="list-style-type: none">• How is the installer market adapting to the introduction of the RHI?• What has been the impact of the RHI on the RHT industry, supply chain and investment community?• What has been the impact of the RHI on the development of RHTs?
High-level outcomes	<ul style="list-style-type: none">• How much renewable heat has been produced (TWh) under the RHI?• How many, and what type of, renewable heating systems have been installed?



Research Design

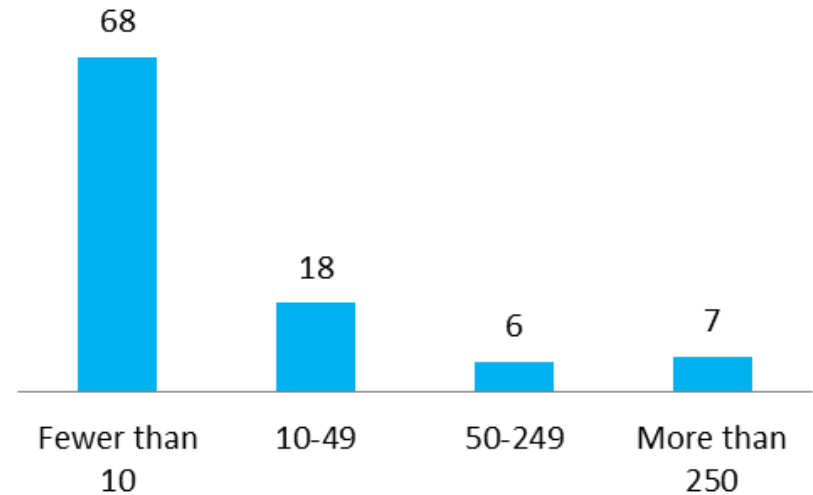
	Wider Non-Domestic awareness survey	Qualitative research with possible applicants	Survey of applicants	Qualitative research with multiple applicants
Sample size	620	23*	620	20
Sample frame	Online panel of business and public sector organisations	Bespoke sample frame drawn from business registers	All applicants to the scheme as of December 2013, n=4,199	A purposive sample of multiple applicants (more than 1 accredited installation as of December 2013)
* The initial research designed aimed for 40 interviews however recruitment of suitable organisations was challenging				



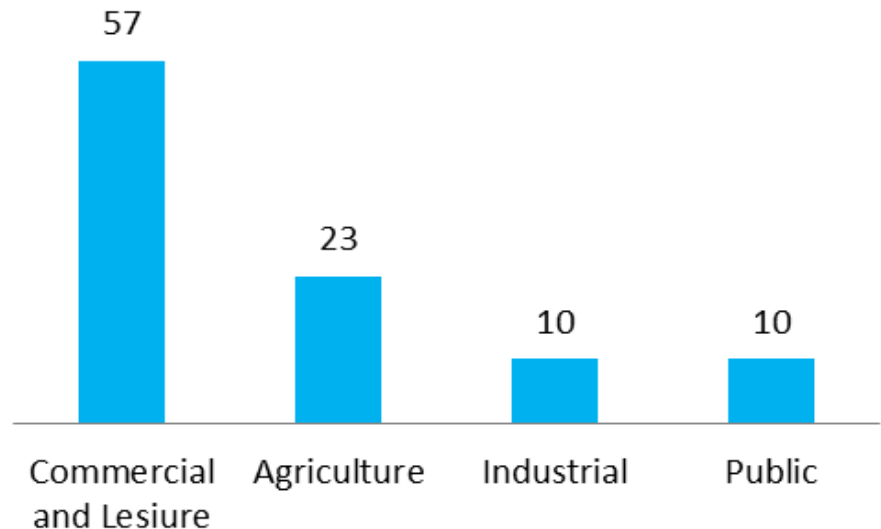
Findings – Who are applicants?

- Located in rural and/or off-gas areas (73% do not have access to mains gas)
- Likely to be small organisations – this reflects the profile of UK organisations
- Over half from the commercial and leisure sector
- Number of agricultural organisations high relative to UK distribution

Number of employees



Industrial sector



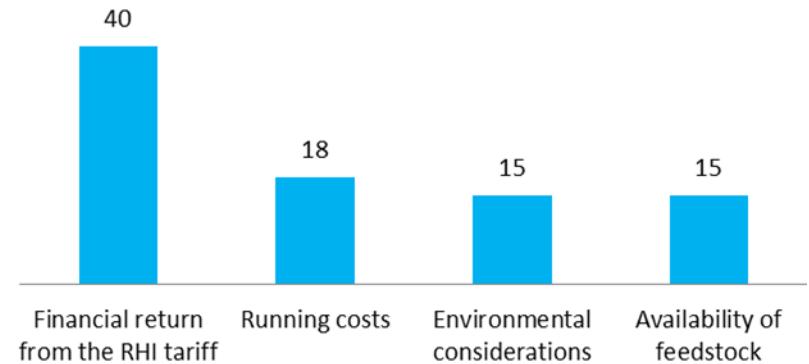
Figures from applicant survey, Base = 620



Findings – Motivations

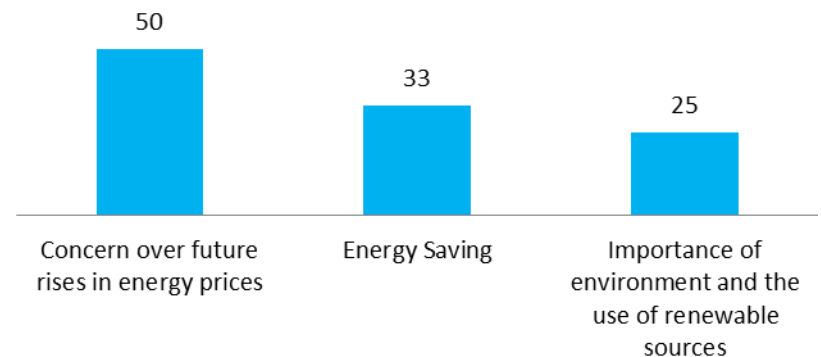
- Motivations for installing renewable heat technologies correspond with priorities reported by organisations in the wider awareness survey
- Although a similar amount reported financial returns, running costs, and environmental considerations as motivations for their installations, twice as many reported financial return as the most important reason compared to any other reason.

Most important reason for RHI installation



Applicant survey (Base = 620)

Per cent of (wider non-domestic) organisations 'very concerned' about;

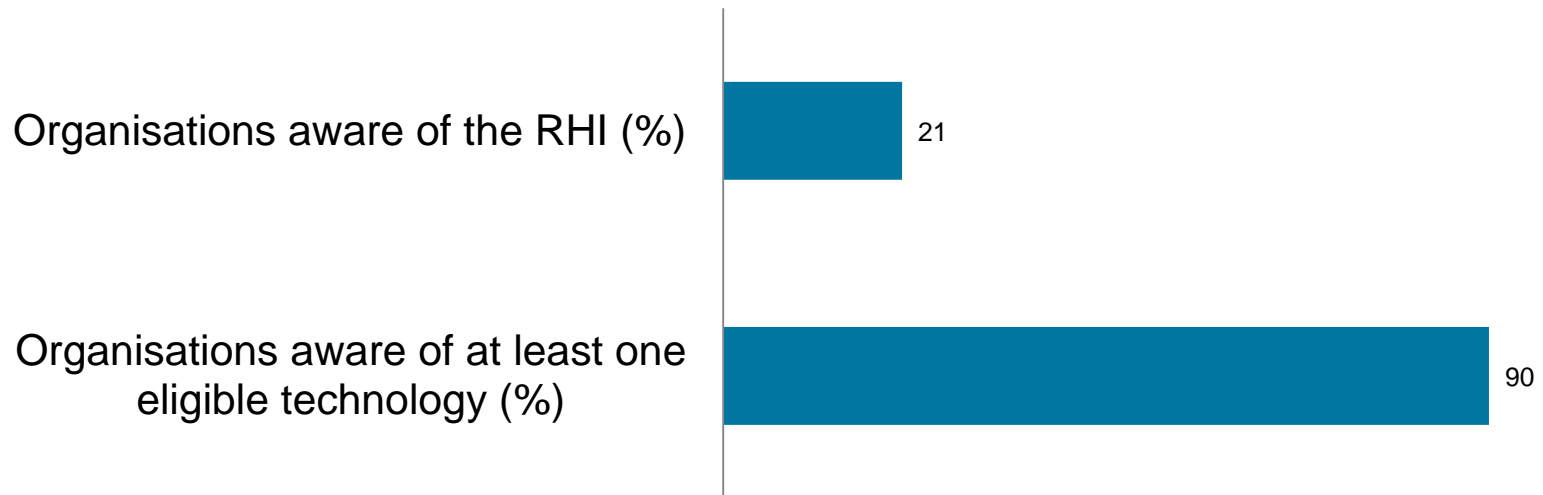


Wider awareness survey, Base = 620



Findings – Barriers

- Awareness of the eligible technologies isn't necessarily associated with awareness of the scheme



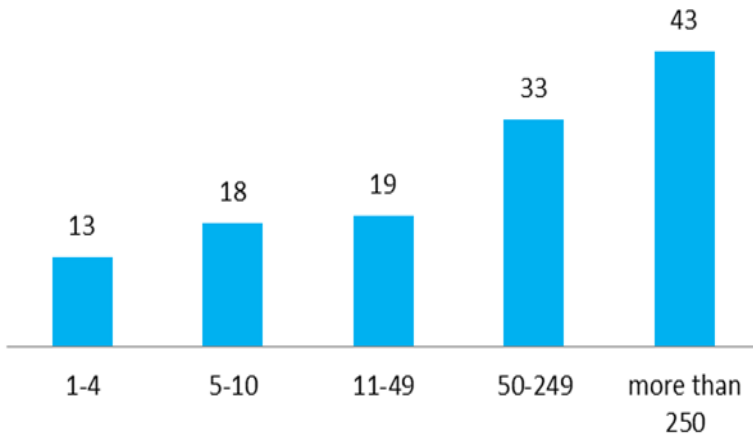
Figures from wider awareness survey, Base = 620



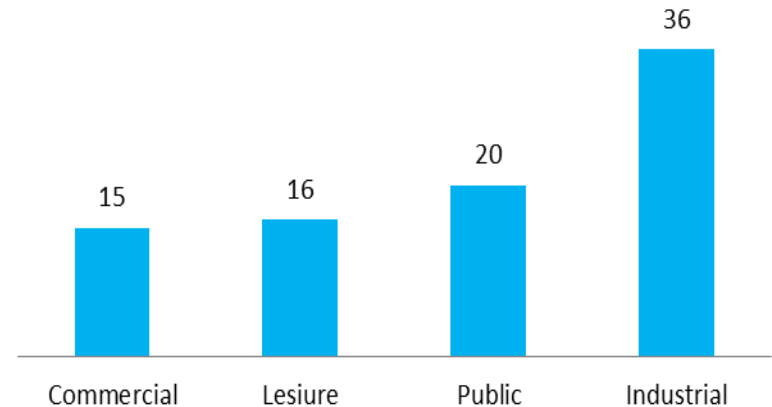
Findings – Barriers

- Larger and industrial organisations are more likely to be aware of the RHI
- Organisations more likely to have specialist energy departments?

Awareness of RHI by organisation size



Awareness of RHI by industrial sector



Figures from wider awareness survey, Base = 620



Findings – Barriers

- Qualitative evidence of;
 - uncertainty about specific elements of the scheme design
 - eligibility of systems
 - metering requirements
 - worries over fuel sources and storage for biomass
 - difficulty securing finance for installations
 - concerns about the efficiency of renewable heating technologies in general, and their ability to deliver energy savings
 - Applicants also reported concerns about the performance of the technologies - listed as the most important uncertainty prior to installation by 17% (the heat output) and 16% (reliability)



Findings – Experiences of the scheme

- Applicants reported experiencing problems with the application process (54%)
 - multiple applicants gave more detail about these citing areas where they felt the application process could be streamlined or the burden reduced
- Installation of the system itself was rated as easy or very easy by 63% of respondents;
 - the most commonly cited problems were unexpected costs or delays to installation (cited by 32 and 33% of respondents respectively).
- Despite reservations prior to installation, applicants were overwhelming happy with the performance of their systems once installed;
 - 90% of non-domestic RHI applicants were very or fairly satisfied with their renewable heating systems
 - 93% would recommend their renewable heating technology.



Summary

1. Amongst applicants and the wider population financial motivations dominate, with energy saving or green motivations present but generally secondary. In this context the RHI is playing an important role in incentivising the installation of renewable heat technologies.
2. Awareness of renewable heat technologies is higher than awareness of the RHI. Increasing awareness of the RHI may have a positive effect on uptake, especially for those already aware of the renewable heat technologies.
3. Although all groups in this research expressed concerns about the performance of the technologies prior to installation, these were not matched by applicant's experiences, where 90% are satisfied with system performance.
4. Once the benefits of the technologies become better known (93% of applicants would recommend their system) these barriers may reduce.
5. Although there is evidence the scheme is creating demand, the current spread of technologies is small.



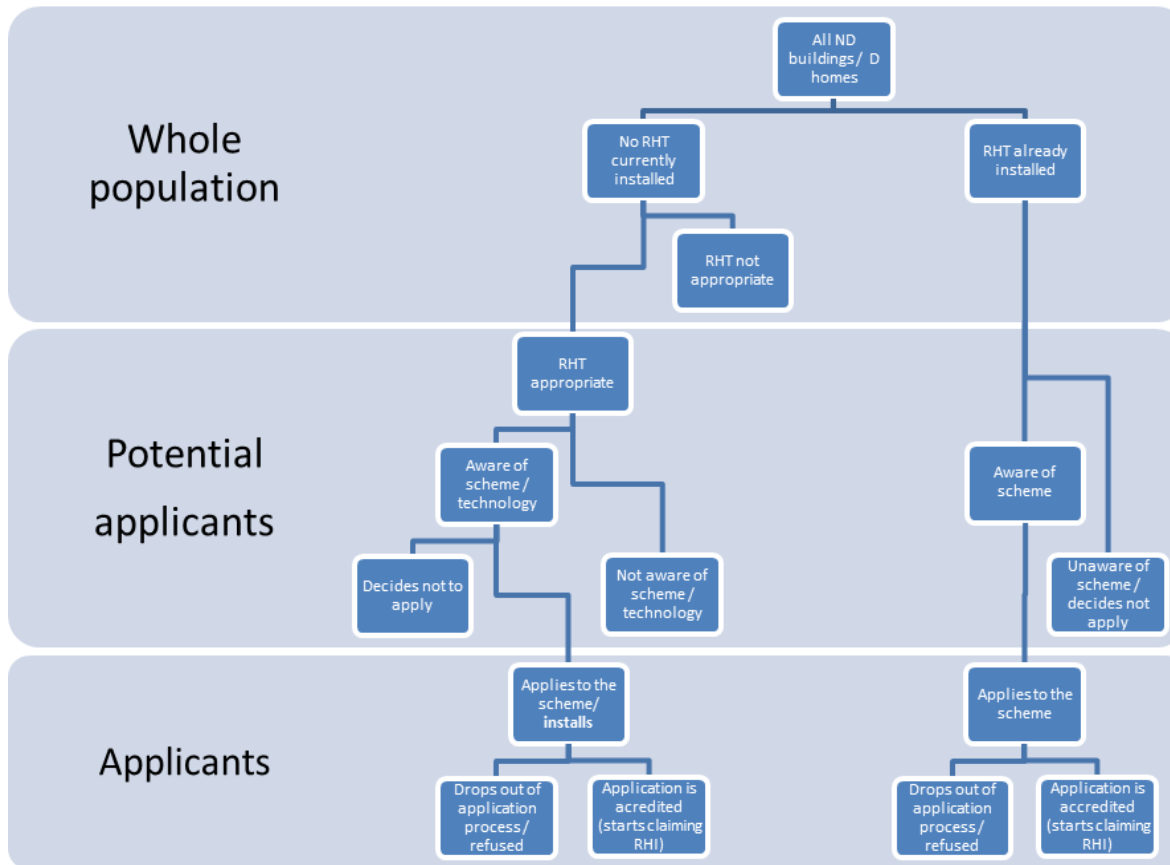
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Interim report published at:

<https://www.gov.uk/government/publications/evaluation-of-the-renewable-heat-incentive-interim-report-the-non-domestic-scheme>



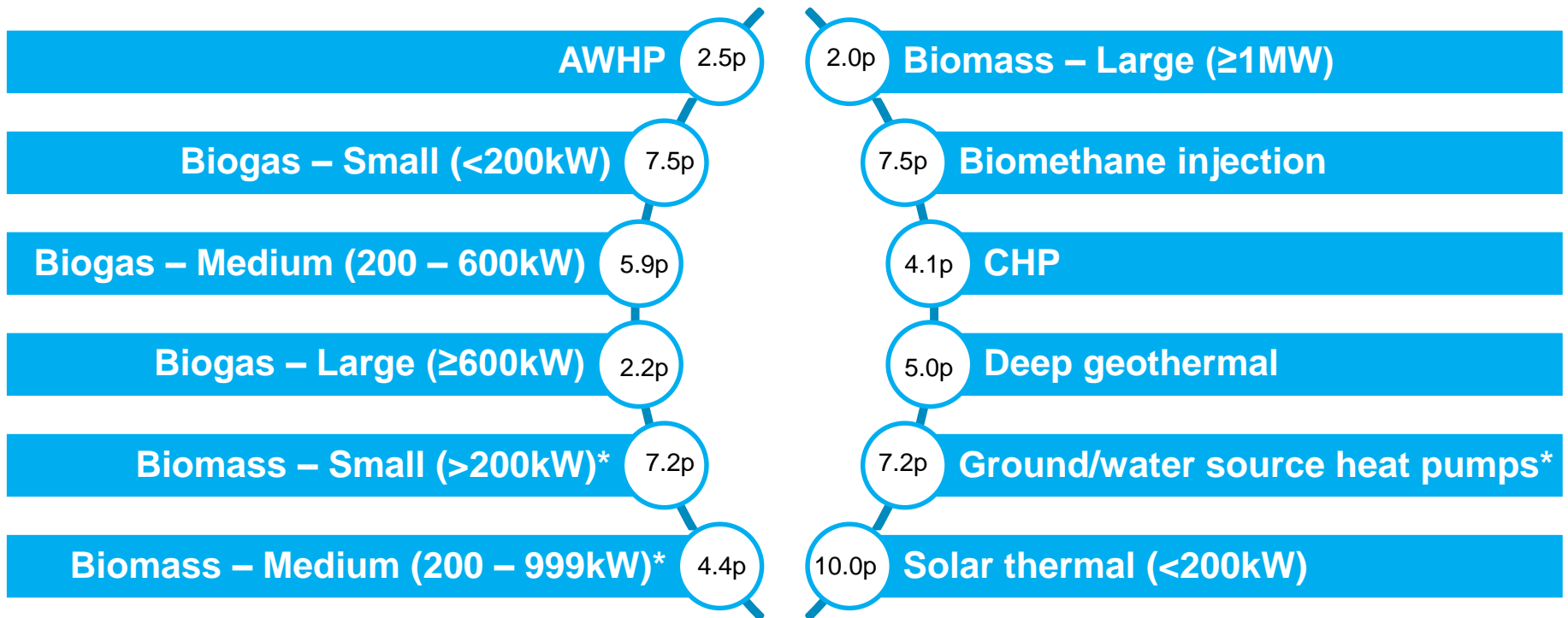
Target populations for evaluation research





Tariffs

- New and increased tariffs for some technologies, from 28 May 2014



*Figures provided are untiered – this equate to tiered tariffs of: Small Biomass 8.8p/2.3p; Medium Biomass 5.1p/2.2p, G/WSHP 8.7p/2.6p