Ground Source Heat Pump Association

GSHP association

GROUND SOURCE ENERGY EXPO 2015

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Contents
GSHP Market

- The Past Five Years
- The Present Position
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The Past Five Years:
GSHP Market Volumes

	2008	2209	2010	2011	2012	2013	2014
Ground/water to water	3,980	3,980	3,850	2,950	3,000	2,605	2,190
Air to water – splits systems	1,080	1,335	2,600	4,230	3,240	3,550	2,950
Air to water – monoblocs	2,200	6,990	9,240	10,700	14,000	15,400	13,410
Total	10,568	18,664	20,750	23,371	23,372	24,368	20,564
% change	-	57%	22%	12%	12%	6%	-13%

Source: BSRIA, *Heat pump market report 2014,* (2015)

The Past Five Years:
GSHP Market Volumes

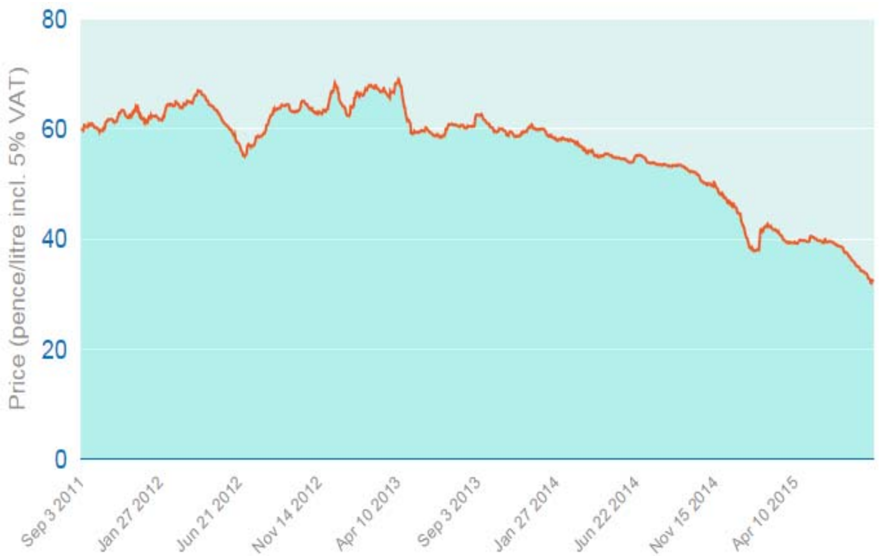
- Rise in popularity of air source and exhaust air heat pumps

	2013	2014
Air to water – splits systems	3,550	2,950
Air to water – monoblocs	15,400	13,410

Source: BSRIA, *Heat pump market 2014,* (2015)

The Past Five Years:
GSHP Market Volumes

- Rise in popularity of air source and exhaust air heat pumps
- Falling price of oil



Source: BoilerJuice, (2015)

The Past Five Years:
GSHP Market Volumes

- Rise in popularity of air source and exhaust air heat pumps
- Falling price of oil
- Removal of effective support under CERT with insignificant support under Energy Company Obligation (ECO)
- Reduced impact of local planning conditions demanding renewables
- Ineffective RHI

The Past Five Years:
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- Falling price of oil
- Removal of effective support under CERT with insignificant support under Energy Company Obligation (ECO)
- Reduced impact of local planning conditions demanding renewables
- Ineffective RHI
- Rise in the popularity of biomass

Domestic RHI

Table 2.1 - Number of applications and accreditations by technology type, Great Britain, April 2014 to July 2015

New installations[2]

Tariff Band	**Accreditations**	
	Number	% of total
Air source heat pump	4,518	33%
Ground source heat pump	840	6%
Biomass systems	6,762	49%
Solar thermal	1,631	12%
Total	13,751	100%

Source: DECC, *RHI Market Statistics August 2015,* (2015)

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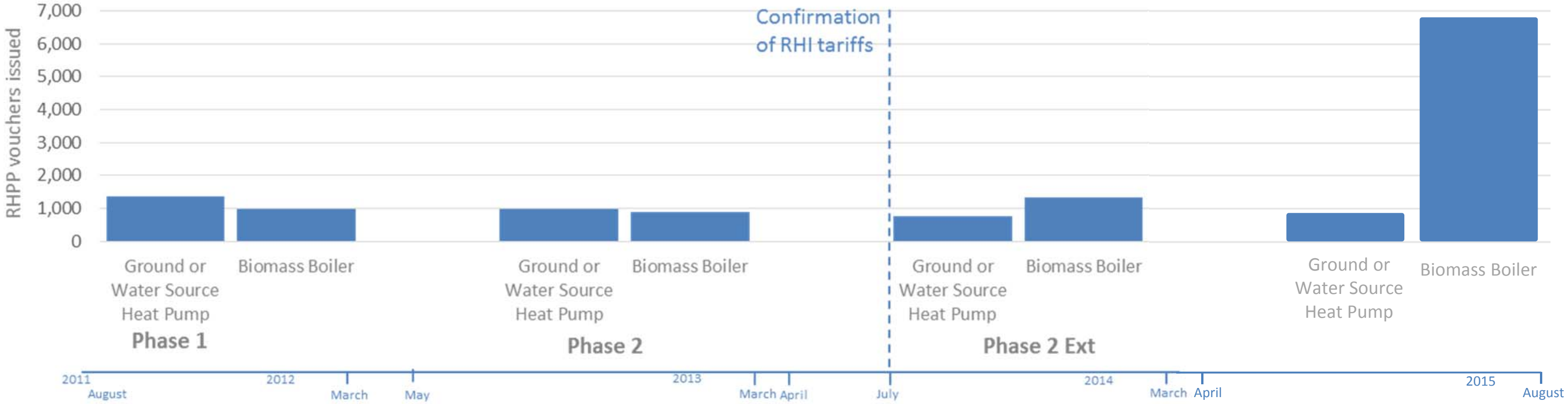
The Past Five Years:
The Rise of Biomass

- GSHPs were more popular than biomass boilers in the Householder Stream of the Low Carbon Buildings Programme, and significantly more popular in the Public Building Stream

Low Carbon Buildings Programme (LCBP)	Householder Stream	Public Building Stream (Ph 2) Schools, village halls, social housing
Grant	Around 10% of installed capital cost	Between 35% - 50% of installed capital cost
GSHP	843 grants issued	£15.72m total grant spend
Biomass	603 grants issued	£1.6m total grant spend

The Past Five Years:
The Rise of Biomass

- GSHPs were more popular than biomass boilers in the Householder Stream of the Low Carbon Buildings Programme and significantly more popular in the Public Building Stream
- GSHPs and biomass boilers were deploying at similar levels on the domestic RHPP scheme until the proposed RHI tariffs were announced in the Summer of 2013



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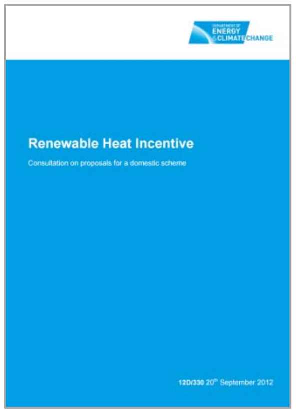
- Launch biomass tariffs were far, far higher than the high-point of the range proposed in the 2012 domestic RHI consultation

	Biomass	ASHP	GSHP	Solar Thermal
Tariff (p/KWh)	5.2 - 8.7	6.9 - 11.5	12.5 - 17.3	17.3



Source: DECC, *Renewable Heat Incentive - Consultation on proposals for a domestic scheme,* (2012)

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The Rise of Biomass

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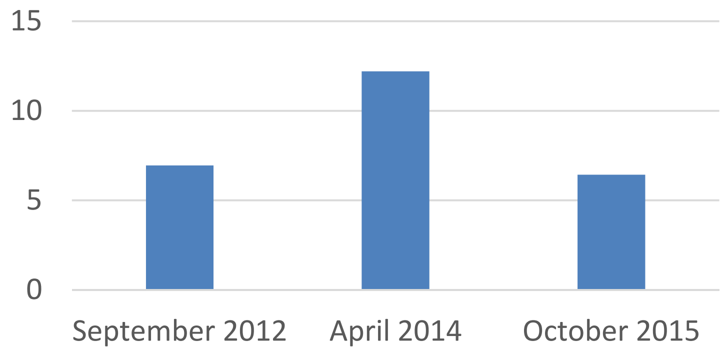
- Launch biomass tariffs were far, far higher than the high-point of the range proposed in the 2012 domestic RHI consultation
- *RHI triggered a substantial and sustained switch towards biomass boilers* which has resulted in degression reducing the tariff to the mid-point of the range included in the consultation

Sep-12	6.95p kWh	Mid-point of proposed tariff range
Apr-14	12.2p kWh	Launch Biomass tariff
Oct-15	6.43p kWh	Degressed Biomass tariff



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- *RHI triggered a substantial and sustained switch towards biomass boilers* which has resulted in degression reducing the tariff to the mid-point of the range included in the consultation
- Has given DECC a real issue as many of these biomass boilers will likely be removed after the conclusion of the seven year RHI payment period as oil is currently a far cheaper heating fuel
- Biomass boilers are the 'big winners' in the non-domestic RHI with the late revision of GSHP tariffs having no impact on overall deployment levels

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The Past Five Years:
The Rise of Biomass

Tariff Band[1]	Accredited installations		Capacity of accredited installations	
	Number	% of total	MW	% of total
Small Solid Biomass Boiler (< 2	10,418	89%	1,266.1	68%
Medium Solid Biomass Boiler (	709	6%	426.7	23%
Large Solid Biomass Boiler (> 1	23	0%	135.1	7%
Small Solar Thermal (< 200 kW)	190	2%	2.9	0%
Small Water or Ground Source	279	2%	7.3	0%
Large Water or Ground Source	38	0%	20.6	1%
Biomethane[5]	24	0%	-	-
Biogas	21	0%	11.3	1%
Air Source Heat Pumps	14	0%	0.7	0%
CHP	0	0%	0.0	0%
Deep Geothermal	0	0%	0.0	0%
Total[4]	11,716	100%	1,870.6	100%

Source: DECC, *RHI Market Statistics August 2015,* (2015)

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The Present Position:
Changes to other subsidies

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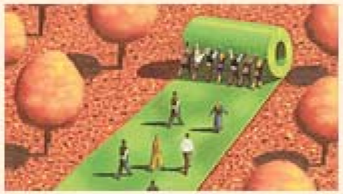

September 2, 2015

Green heating subsidies to be pruned

...to the **Renewable Heat** Incentive , a scheme designed to encourage a shift to low-carbon heating systems. The Decc...Jim Pickard and Pilita Clark

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The Present Position:
DECC attitude towards Heat Pumps

- DECC met with the heat pump industry in March

Attendees

IAG Members

- Bean Beanland (ISO)
- Tony Bowen (HPA)
- Kelly Butler (BEAMA)
- John Davies (Dimplex)
- Graham Hazell (HPA)
- Phil Hurley (NIBE)
- Simon Lomax (Kensa)
- David Matthews (GSHPA)
- Neil Schofield (Worcester Bosch)
- James Timbs-Harrison (Mitsubishi)
- James Fowler (Vailliant)
- Robert Meek (ICE)

Also in Attendance from DECC

- Patrick Allcorn, Head of Domestic RHI Policy (Dom Pol)
- Joe Dashley, Operations Officer
- Amy Salisbury, RHI Engineering Team, (Eng.)
- Margarita Vigrande-Ashe, RHI Stakeholder Engagement and Communications (SEC)
- Karen Smith Dom RHI Policy Officer

Department of Energy & Climate Change

Renewable Heat Industry Advisory Group-Sub-Group on Heat Pumps

Minutes

11:00 to 12:30 – 24th March 2015

Chair – Sarah Redwood, Head of Domestic RHI, DECC

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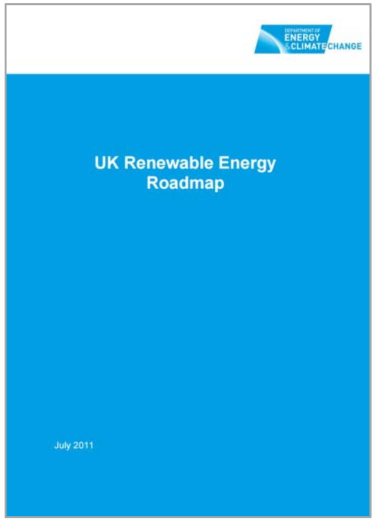
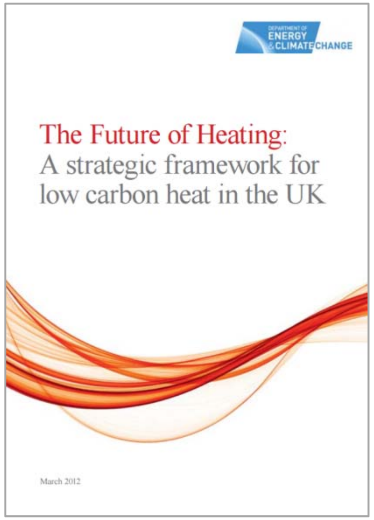
Please note – meeting minutes refer to organisations or officials based on the terms used in brackets in the attendance list (above). Where the term 'Group' has been used, this refers to all non-DECC members of the IAG Sub-Group.

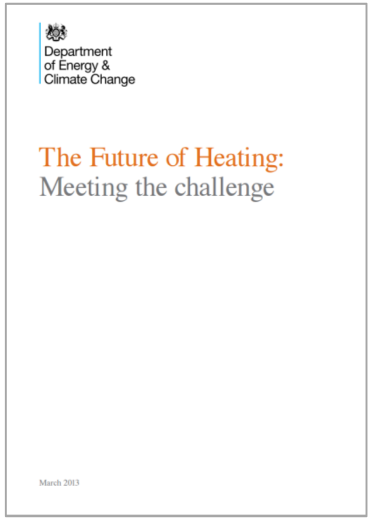
IAG Sub-Group on Heat Pumps/2015/24/03

The Present Position:
DECC attitude towards Heat Pumps

- DECC met with the heat pump industry in March
- DECC strategy and the Committee for Climate Change recommendations continue to suggest mass deployment of heat pumps is required to meet 2030 and 2050 carbon emission reduction targets



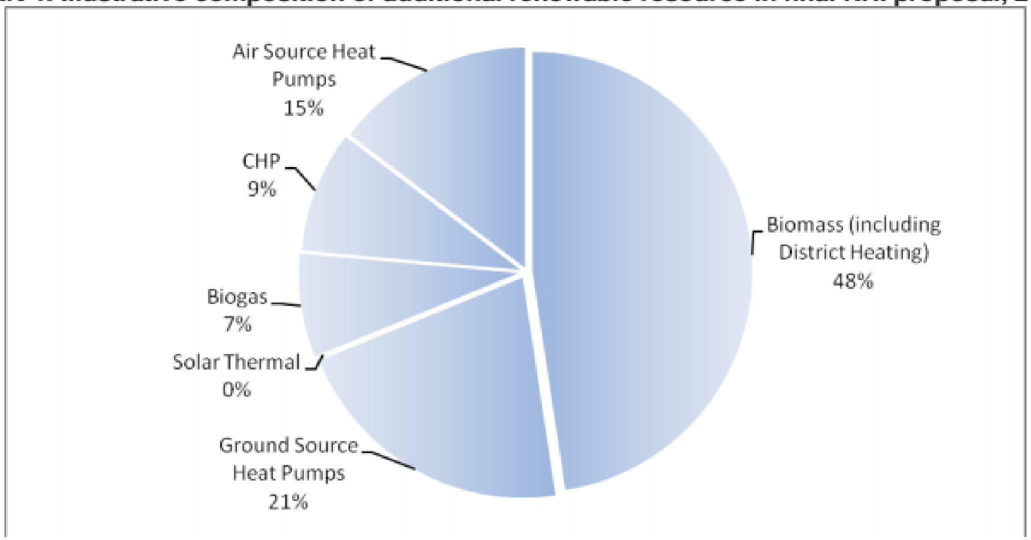




The Present Position:
DECC attitude towards Heat Pumps

- DECC met with the heat pump industry in March
- DECC strategy and the Committee for Climate Change recommendations continue to suggest mass deployment of heat pumps is required to meet 2030 and 2050 carbon emission reduction targets
- Current deployment is falling far short of DECC expectations

Chart 4: Illustrative composition of additional renewable resource in final RHI proposal, 2020



Source: DECC, *RHI Impact Assessment,* (2011)

Source: NERA, *UK Renewable Heat Supply Curve,* (2009)

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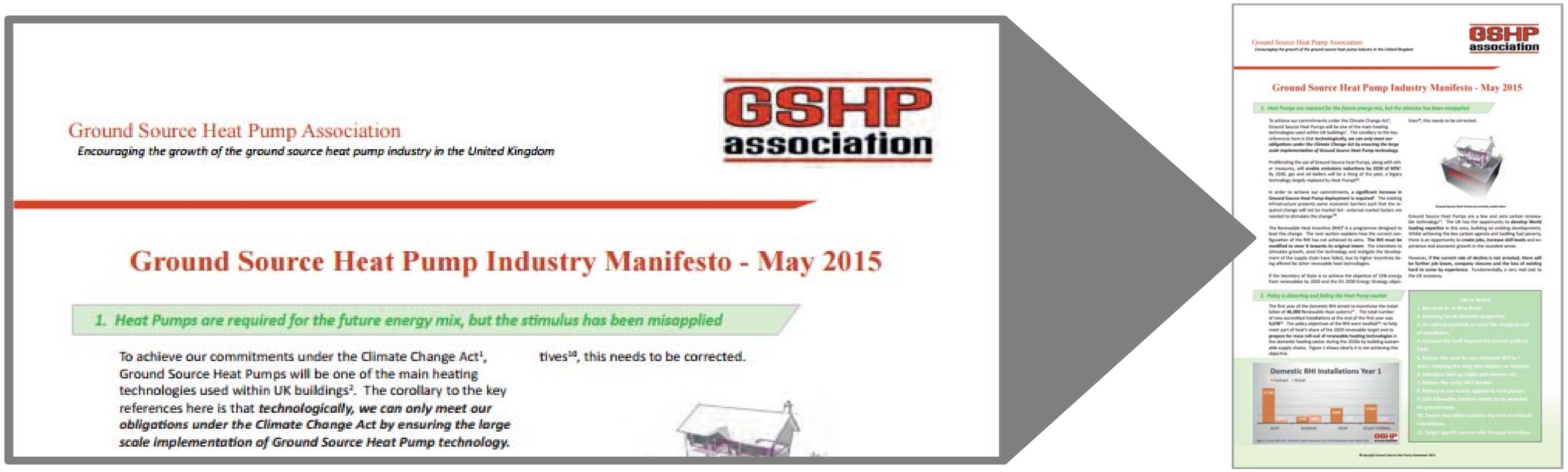

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- DECC Minister, Lord Bourne, will be visiting Trent & Dove Housing, a social landlord which has installed 130 heat pumps, in late September
- The DECC RHI Team has appointed a 'Heat Pump Champion'

Lord Bourne

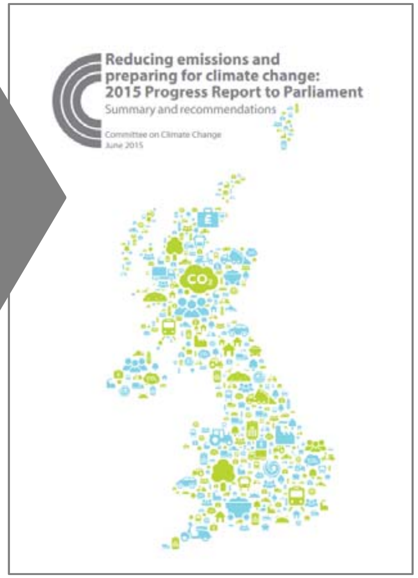
Hope for the Future:
Strengths of Ground Source Heat Pumps

- All the strengths of ground source heat pumps remain and are time-proven
- Government increasingly looking at key national infrastructure projects to drive economic recovery
- Increasing array of innovative projects delivering promised results
- Industry can be re-invigorated by relatively modest spend

Hope for the Future:
Other Drivers

- DECC's final (and long-awaited) report on RHPP monitoring may confirm that ASHPs do not perform efficiently enough to be classified as a renewable technology
- Increasing concerns around in-situ performance of biomass boilers has triggered DECC activity
- Committee for Climate Change is still very supportive of GSHPs

> Overall, however, the policy landscape is complex and in places inconsistent. Our assessment of existing policies is that some of these are at risk of failing to deliver, either due to design and delivery problems, or because they are currently unfunded. Even if these policies delivered in full, there would be a policy gap to achievement of the fourth carbon budget (2023-27) and the cost-effective path to the 2050 target. This reflects that commitments to some policies are due to end and that policies have not yet been developed in other areas (Figures 3 and 4).



Hope for the Future:
Committee for Climate Change

- Government must formally report to the CCC by October 15 2015.

---------- Forwarded message ----------
From: **Hill, Jenny (CCC)** <Jenny.Hill@theccc.gsi.gov.uk>
Date: 2 September 2015 at 11:48
Subject: RE: Loop vs borehole
To: Simon Lomax <simon.lomax@thekensagroup.com>

Hi Simon

Thanks for pulling together this information – much appreciated.

Hope for the Future:
GSHPA Lobbying

- GSHPA has invested in renewed lobbying efforts conducted by Chris Davidson and Karl Drage

Chris Davidson

Karl Drage

Hope for the Future:
GSHPA Lobbying

- GSHPA invested £6,000 to support lobbying efforts conducted by Chris Davidson and Karl Drage
- Announcement on 2016-2020 Comprehensive Spending Review scheduled for 25th November 2015

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News story

Spending Review launched by Chancellor

From: HM Treasury and The Rt Hon George Osborne MP
First published: 21 July 2015

Chancellor launches Spending Review 2015, the next stage in the government's plan to fix the nation's finances.

The review, which will be published on 25 November 2015, will set out how the government will both invest in priority public services and deliver the £20 billion further savings required to eliminate Britain's deficit by 2019/2020.

With the fastest-growing economy in the G7, and employment at near-record levels, the Chancellor is clear that now is the time to finish the job of fixing the public finances.