

# **Ground Source Heat Pump Association**

## **GSHPA** promotes **GSHPs**

Edward Thompson – ICAX Ltd





#### **GSPHA:**

- promotes the efficient and sustainable use of ground source heat pumps
- raises awareness of the benefits of ground source heat pumps
- develops ground source installation <u>Standards</u>
- encourages high standards of training for the industry
- provides a forum for information interchange
- liaises with related organisations to benefit the ground source industry
- <u>Lobbies for Ground Source Energy</u> industry in matters of local, national and international interest to members.



#### Dramatic Increase in Commercial RHI tariffs for GSHPs from 2013

Commercial RHI – Paid over 20 years	RHI tariff p/kWh 2013	RHI tariff p/kWh 2014
Ground Source Heat Pumps	3.5	8.7
Air to water heat pumps	0.0	2.5
Solar thermal <200kW	9.2	10.0
Solid biomass <200kW	8.6	8.4
Solid biomass 200-1000kW	5.0	5.1
Solid biomass >1000kW	1.0	2.0

Increased RHI tariffs for GSHPs apply to accreditations since 21 January 2013



### Domestic RHI introduced 9 April 2014

Domestic RHI – Paid over 7 years	RHI tariff p/kWh
Solar Thermal	19.2
Ground Source Heat Pumps	18.8
Biomass	12.2
Air Source Heat Pumps	7.3

Domestic RHI tariffs for GSHPs apply to systems commissioned since 15 July 2009

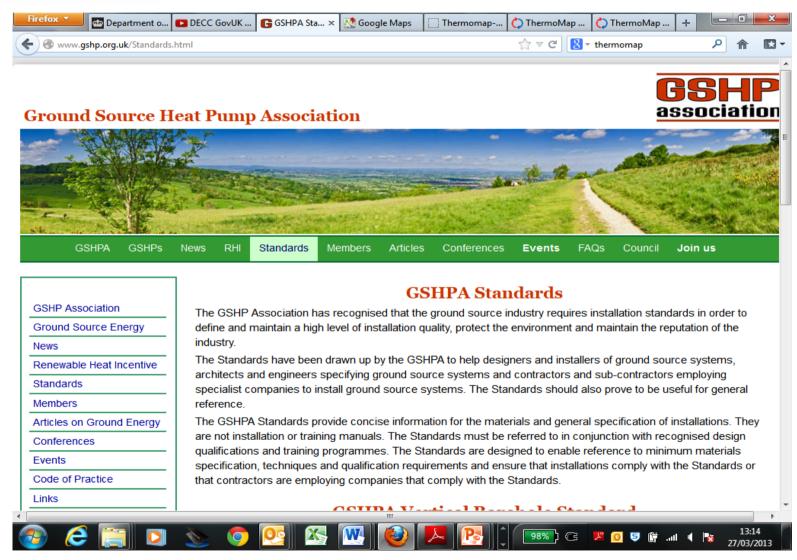


### GSPHA needs to convince DECC to recognise Renewable Cooling:

- Gas boilers cannot provide any cooling
- Biomass boilers cannot provide any cooling
- ASHPs cannot provide cooling efficiently on hot days, because heat exchange with hot air is expensive – CoP less than 2
- GSHPs can provide efficient cooling on hot days by heat exchanging with cold ground instead of hot air – CoP more than 20

There is a massive opportunity for UK to save carbon emissions





The GSHPA website explains the merits of ground source energy



#### Ten key reasons to use GSHPs:

- The most economic route to on-site renewable energy
- Very low running costs
- Exploits Thermal Energy Storage capacity of the ground
- No problems of "intermittency"
- Ground source systems longer life than other renewable systems
- GSHPs are "good citizens" silent, reliable, invisible
- GSHPs can recycle heat through the ground from summer to winter
- Can be reversed to provide cooling in summer
- Provides skilled employment in Britain
- Contributes to the energy security of the UK



#### Ten key reasons to use GSHPs:

- The most economic route to on-site renewable energy
- Very low running costs
- Exploits Thermal Energy Storage capacity of the ground
- No problems of "intermittency"
- Ground source systems longer life than other renewable systems
- GSHPs are "good citizens" silent, reliable, invisible
- GSHPs can recycle heat through the ground from summer to winter
- Can be reversed to provide cooling in summer
- Provides skilled employment in Britain
- Contributes to the energy security of the UK

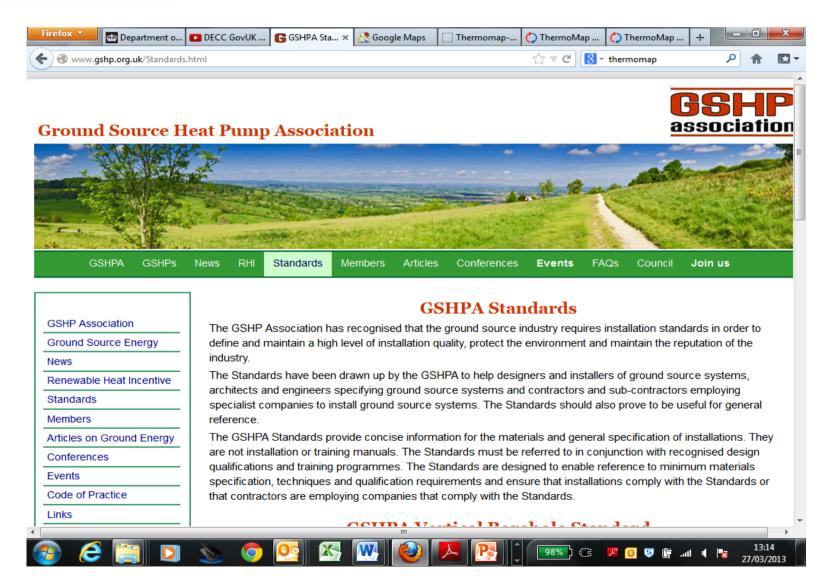






Plas Newyyd, 18<sup>th</sup> Century National Trust Property, Anglesey will save £40,000 a year on switching to heat pumps from oil. Heat pumps can be used successfully on old buildings as well as new buildings.







# **Ground Source Heating Cooling**

is

Durable Efficient Reliable Invisible Versatile Economic

## **Edward Thompson**

edward.thompson@icax.co.uk www.gshp.org.uk

