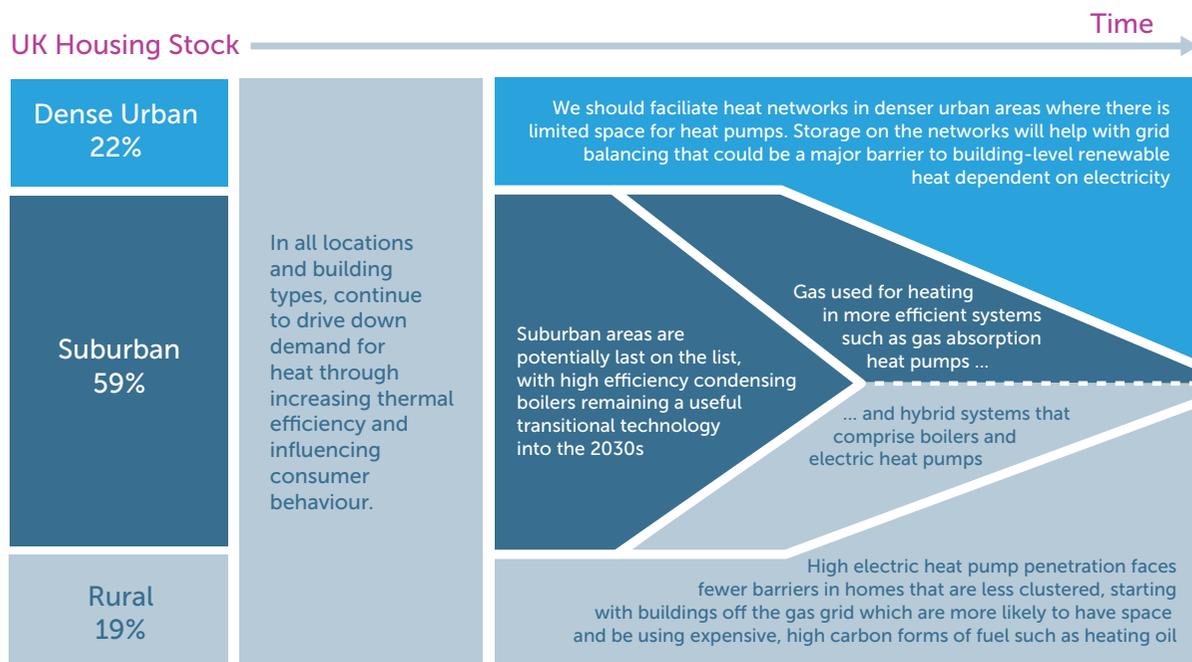


DOMESTIC HEAT PUMP INDUSTRY MANIFESTO

BACKGROUND

Renewable Heat and the Domestic Heat Pump Opportunity

The Department of Energy and Climate Change has consistently laid out in its scenarios the importance of heat pump market growth to meet the UK's 2050 energy policy objectives. *The Future of Heating: Meeting the Challenge (2013)* made the outlook for heat pumps very clear and was a signal for investor activity across the heating supply chain.



Source: DECC

FIGURE 1: UPDATED STRATEGIC FRAMEWORK FOR LOW CARBON HEAT IN BUILDINGS OVER TIME

BY 2050, DECC SCENARIOS INDICATE THAT THE ELECTRICITY GRID WILL HAVE DECARBONISED AND DIVERSIFIED. ELECTRICITY, ESPECIALLY ELECTRIC HEAT PUMPS, WILL BE USED MORE WIDELY FOR HEATING THAN CURRENTLY, SUBJECT TO COST.

THE CURRENT MARKET SITUATION

Since the announcement of the Renewable Heat Incentive (RHI) in 2009, the market showed steady growth assisted by the RHPP grant but since the tariffs were announced, the **domestic heat pump market has been declining.**

In addition, we know that the Government backed Microgeneration Certification Scheme (MCS) which underpins the dRHI and which is a considerable cost burden to installers and manufacturers, will soon see a heat pump supply chain 'meltdown'; since the launch of the Domestic RHI, 77%

of MCS registered ground source heat pump installers and 52% of air source heat pump installers have not installed a heat pump. The design and paperwork requirements for heat pumps is a huge burden over the "light" requirements for biomass installations.

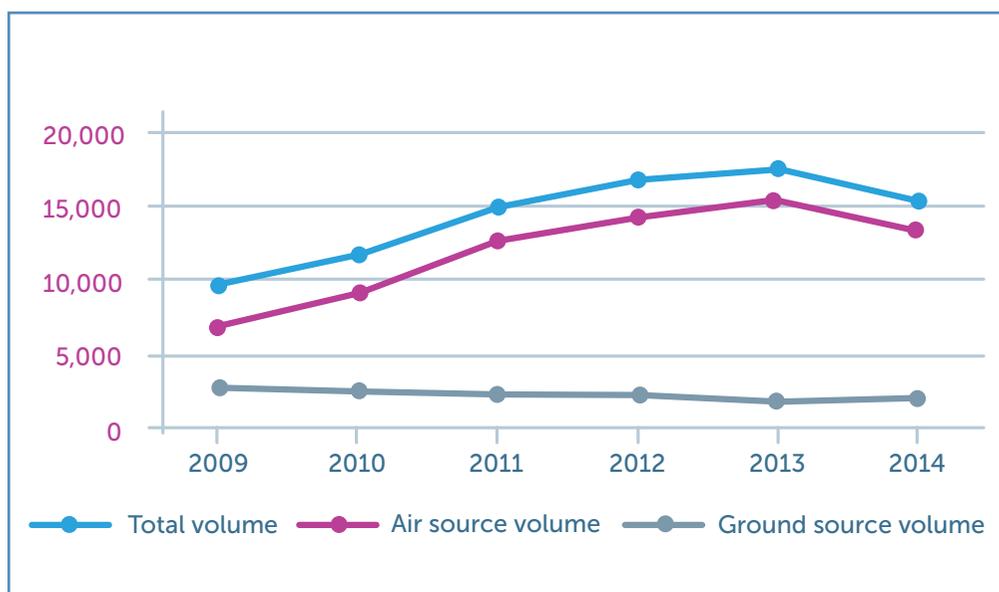


FIGURE 2: HEAT PUMP MARKET 2009-14

Source: BSRIA market data

The conclusion is that the Domestic RHI is:

- Failing a supply chain which geared up to meet policy objectives
- Failing to tackle fuel poverty
- Failing to attract the retrofit market which unlocks mass market deployment
- Missing carbon savings
- Not proving a platform for a flexible energy system
- In need of urgent reform by April 2016

HOW POLICY IS DISTORTING AND FAILING THE HEAT PUMP MARKET

The table below demonstrates the considerable fuel bill and CO₂ savings achievable by deploying heat pumps off the gas network. Heat pumps are an important technology for tackling fuel poverty and providing a safe, secure and cost effective long term energy future. However, as the marginal cost of the heat pump is high (i.e. the cost versus the equivalent oil or LPG boiler replacement), it is clear that not only is a suitable incentive required to encourage a switch to renewable heat, but a significant **upfront payment is necessary to facilitate change**. It is unrealistic to assume that householders can afford the marginal cost.

There are inherent policy problems which need resolution:

- The current Domestic RHI does not have a mechanism to provide an upfront payment, and therefore does not remove the upfront cost barrier. Poor tariff calibration (inaccurate system costs assumptions and an unrealistic counterfactual fuel price i.e. oil) makes the rate of return unattractive for securing retail finance options.
- Poor tariff calibration has failed to take into account the fact that biomass boilers are cheaper to purchase and install (typically £11,000 for a 12kW boiler), and therefore biomass customers are receiving an unrealistically high incentive with a low upfront cost and a rate of return that distorts availability of finance and investment decisions. In a single policy move, the heat pump market has been driven towards biomass boilers rather than providing a balanced market in which the right technologies are targeted to the right customers.
- Policy makers have forced the industry to adopt a very expensive administrative burden within MCS solely for heat pumps. The average installer registration cost is £2,000 and the additional cost of MCS administration per heat pump sale is estimated at a minimum of £300.
- Government backed building energy models (SAP) use unrealistic and unsupportable performance deflators (i.e. in use factors) which means heat pumps do not appear to be as efficient and cost effective as they are in situ.
- Ofgem introduced a policy for Distribution Network Operators (DNOs) to socialise heat pump connection costs to the electricity network but this connection policy has been changed at last minute to target only 10% of heat pumps.

TABLE 1 : FUEL BILL AND CO₂ SAVINGS ACHIEVABLE BY DEPLOYING HEAT PUMPS OFF THE GAS NETWORK.

Assuming 4 bed detached home with 12kW heat pumps	Oil (cost c. £3,500)			LPG Boiler (cost c. £2,500)		
	Marginal	Savings	CO ₂	Marginal	Savings	CO ₂
Air source heat pump (cost c. £11,500)	£8,000	£555	3,900kg	£9,000	£1,805	3,500kg
Ground source heat pump (cost c. £15,700)	£12,000	£725	4,500kg	£13,200	£1,975	4,100kg

Notes: (i) Heat pump costs include estimated additional £300 cost for MCS
(ii) Fuel bill and CO₂ savings based on Energy Saving Trust figures www.energysavingtrust.org.uk

POLICIES TO UNSHACKLE THE DOMESTIC HEAT PUMP MARKET

- **Reform the policy to provide the necessary upfront payment** which should cover at least the marginal cost of the heat pump.
- **Increase the tariffs to ensure enough incentive is available** over and above the marginal cost one off payment and introduce a dwelling look up table to make it easier for the customer to identify the value of RHI to be received and the one off payment value.
- **Broaden the scheme to include new build applications** for ground source heat pumps, linking Allowable Solution credits to be awarded for ground loop investment.
- **Require only A+ rated heat systems in new dwellings from 2016** where a dedicated central heating system is being installed (i.e. all systems except for those specified with resistance heating and district/communal heat solutions).
- **Reduce the costly MCS burden** by stripping away red tape paperwork that links to scheme to RHI (e.g. the Compliance certificate, start ratings for heat pumps and Energy Performance Certificate requirements).
- **Immediately reduce the in use factors** applied to heat pumps in building models that penalise performance assumptions without statistical basis.
- **Examine the rules for connecting heat pumps** to the energy network and ensure Distribution Network Operators are fulfilling their obligations to Ofgem rules and socialising the cost of **all** connections.



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