

## Written evidence submitted by Bright Blue (DHH0004)

In February 2019, Bright Blue published our report [Pressure in the pipeline: Decarbonising the UK's gas](#), which examines the key issues concerning deeper decarbonisation of the gas network. It concludes by recommending new policies for the UK to reduce natural gas use and decarbonise the gas network affordably and with minimal disruption.

*6) What incentives and regulatory measures should be employed to encourage and ensure households take up low carbon heat, and how will these need to vary for different household types?*

### **Recommendation: Amend the Gas Safety (Management) Regulations and the Gas (Calculation of Thermal Energy) Regulations to enable a higher proportion of low carbon gases to flow in the gas network**

Under existing regulations, there are restrictions on low carbon gases – especially hydrogen – being used in the gas network. These restrictions arise from two regulations: first, the Gas Safety (Management) Regulations, which only permit up to 0.1% hydrogen (by volume) in the gas network. Second, the Gas (Calculation of Thermal Energy) Regulations, which include Calorific Value (CV) requirements regarding the composition and price of gas. This limits the use of different low carbon gases in the gas network. Biomethane suppliers, for example, must add propane to their feed in order to increase the CV of gas they supply to the network.

A higher proportion of hydrogen in the gas network is highly likely to be permissible in the near-future, if a growing number of trials prove its safety and effectiveness. Currently, several European countries permit varying levels of hydrogen to be injected into their gas networks.<sup>1</sup> Indeed, historically, the UK used 'Town Gas', which included 50- 60% hydrogen.<sup>2</sup> Therefore, the current Gas Safety (Management) Regulations should soon be amended to reflect the technical capability of the gas network to accept higher intensities of hydrogen, as well as biomethane.

Furthermore, under the existing gas billing methodology, set out in the Gas (Calculation of Thermal Energy) Regulations, the Calorific Value (CV) of gas injected into the network must fall within a particular range. Also, customers are charged less for a gas which has a lower CV (such as hydrogen) since they will need to burn more of it to generate a given amount of heat compared to the use of gas with higher CV (such as natural gas). Although fair to customers, this regulation has the unintended consequence of diminishing the incentive of supplying low carbon gas to the network. The existing CV requirements therefore limit the usage of low carbon gas in the gas network.

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<sup>1</sup> Ofgem, "Future insights series: the decarbonisation of heat", [https://www.ofgem.gov.uk/system/files/docs/2016/11/ofgem\\_future\\_insights\\_programme\\_-\\_the\\_decarbonisation\\_of\\_heat.pdf](https://www.ofgem.gov.uk/system/files/docs/2016/11/ofgem_future_insights_programme_-_the_decarbonisation_of_heat.pdf) (2016), 7.

<sup>2</sup> E4tech, "Scenarios for deployment of hydrogen in contributing to meeting carbon budgets and the 2050 target", 7 ; Carbon Connect, "Future Gas Series: Part 1: Next steps for the gas grid", [https://www.policyconnect.org.uk/cc/sites/site\\_cc/files/report/676/fieldreportdownload/nextstepsforthegasgridweb.pdf](https://www.policyconnect.org.uk/cc/sites/site_cc/files/report/676/fieldreportdownload/nextstepsforthegasgridweb.pdf) (2017), 14.

The CV requirements on composition and price of gas should be responsive to increased usage of low carbon gases. Over time, the requirement to blend hydrogen, and biomethane in fact, with a certain amount of natural gas to achieve compliance with CV requirements should be lessened. And, in the long-term, the price of low carbon gases should not exceed consumer prices to natural gas in order to achieve compliance with CV regulations. This will be challenging but it is likely that the costs of low carbon gases will fall over time as their production increases in scale.

The amended requirements set out in both of these regulations should be reviewed periodically to ensure they remain up-to-date.

**Recommendation: The methodology for calculating the Energy Performance Certificate (EPC) rating of buildings should be changed**

The methodology for producing EPC ratings is currently based on assumptions that do not necessarily lead to an accurate assessment of a building's energy efficiency. EPC assessment methodology uses data from a building's smart meter to assess running costs.

But energy efficiency cannot reliably be determined from household energy prices alone, particularly when heat pumps are used.

Instead, the determination of energy efficiency should be based primarily on the standardised use of passive heat or temperature sensing equipment to determine the thermal mass of a building relative to its surroundings.

**Recommendation: Introduce 'Home Affordability Assessments' (HAAs) alongside a new HAA rating**

Previous attempts to require disclosure of detailed information about properties being sold – notably the Home Information Pack (HIP) – were met with opposition due to the additional burden compiling such information, often with the requirement of a paid expert, placed on sellers.

Nevertheless, there is a need for high-quality information to be made available to buyers to help them understand how affordable a home is that takes into consideration more than the sale price.

We propose that 'Home Affordability Assessments' (HAAs) be introduced for new-build homes which takes account of a property's sale price and maintenance costs over its expected lifetime, including annual energy bills. It should also provide an overall HAA rating. By requiring this information only from newbuilds, private individuals who sell their property will not be encumbered by the costs of producing this additional material.

It should be noted that while Energy Performance Certificate (EPCs) do provide information on the energy efficiency of a home, this information is not routinely regarded as having an impact on affordability in the same way as mortgage costs are. HAAs would provide prospective homeowners and mortgage providers fuller information about - and a more comprehensive and comparable rating on - how affordable a property is.

Disclosure of an HAA rating should be mandatory for newly built properties, making total costs more visible to potential buyers. This would encourage home builders to include measures that bring down the running costs of new homes, especially energy efficiency measures, in order to make them more attractive to potential buyers.

**Recommendation six: Increase the requirement for domestic gas boilers to be 95% efficient**

The minimum Energy-related Products (ErP) requirement for domestic gas boilers should be raised from the existing level of 92%<sup>3</sup> to 95% energy efficient.

The current ErP requirement for new boilers sold in the UK was incorporated into Building Regulations in April 2018. It has helped save energy and reduce bills for consumers. Previous regulatory requirements around performance standards for boilers, such as those introduced in Building Regulations in 2005, have proven to lead to reductions in greenhouse gas emissions from the buildings sector.<sup>4</sup>

However, many new boilers are already more than 95% efficient. A more ambitious target for new boilers would ensure manufacturers continue to lead the market in high energy efficiency appliances and reduce consumers' energy bills.

**About Bright Blue**

Bright Blue is an independent think tank that champions liberal conservatism. Our work is guided by five research themes: social reform; immigration and integration; ageing society; green conservatism; and human rights. We were shortlisted for the 2016, 2017 and 2018 and 2019 UK social policy think tank of the year and UK environment and energy think tank of the year awards in the prestigious Prospect Magazine annual awards.

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<sup>3</sup> BEIS, "Heat in buildings", [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/651853/Boiler\\_Plus\\_final\\_policy\\_and\\_consultation\\_response.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/651853/Boiler_Plus_final_policy_and_consultation_response.pdf) (2017), 4.

<sup>4</sup> Ibid.