# Consultation Response: BEIS Future support for Low Carbon Heat

**Responding Organisation**: The Energy Saving Trust

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Territorial extent: The consultation is for England, Scotland and Wales. Administrator: Ofgem

**Remit**: The Energy Saving Trust (EST) is the leading, impartial organisation working to promote sustainable energy in homes, communities and transport. Promoting energy efficiency, particularly in homes and consumer products has always been at the centre of our work. EST is a key delivery partner for Scottish, Welsh and Northern Irish regulator in residential energy efficiency and fuel poverty programmes. On behalf of the Scottish Government we deliver the Home Energy Scotland advice service, work closely with Scottish local authorities and support the energy efficiency supply chain. We are involved in delivering all of Wales's national home energy programmes. EST is the administrator of the NISEP, the Northern Ireland energy efficiency supplier obligation. -

Of particular relevance here is the specialist advice service and loan fund that we run for the Scottish Government. The advice service provides impartial and tailored advice to householders about renewable energy technologies, energy storage and/or solid wall insulation in order to promote uptake of these improvements. Funded by the Scottish Government, it is managed by the Energy Saving Trust and delivered regionally across Scotland by Home Energy Scotland (HES). Customers of the service can receive advice from a specialist advisor through either, or both a home visit and 'remote' in-depth support via telephone, email conversation or face-to-face at an event.

Loan: Householders interested in installing a renewables system or energy efficiency improvements can apply for financial assistance through the Home Energy Scotland loan scheme. In 2019/20, the loan schemes have funded/ committed to fund a total of 533 heat pumps (445 air source and 88 ground source). Many of these households have been supported to make the change by our specialist advisors.

## Green Gas Scheme

In the spring budget, the government committed to a new energy levy to fund the production of biomethane for blending into the grid: '*To encourage more environmentally-friendly ways of heating homes and other buildings, the government will also introduce a Green Gas Levy to help fund the use of greener fuels*[1].

**The strategic approach should precede new consumer levies**: Our understanding is that 2.1TWh of biomethane is currently injected into the grid (enough to heat more than 170,000 homes[2]) via the Non Domestic Renewable Heat Incentive (NDRHI) funded by the exchequer. This proposal would continue this (with a further 2.8TWh) but with a shift to funding it by energy bill payers rather than the exchequer via a new levy applied to bills for between 10 and 15 years. This proposed new mechanism could be also be used to support other low carbon gas such as hydrogen (following further consultation). As the scheme would run from 2021/2 to 2025/6, this could mean bill payers would be liable for the levies up to 2041. This would seem a long commitment given that we do not

[1] https://www.gov.uk/government/publications/budget-2020-documents

[2] http://adbioresources.org/docs/Biomethane_-_Pathway_to_2030_-_Full_report.pdf

yet have clarity on the long-term approach to the gas grid and how this might differ in different areas.

We note that the Government has not yet set out its strategic approach to heat decarbonisation (expected in the forthcoming Heating and Buildings Strategy and Energy White Paper) nor the approach to financing and distributing the costs of Net Zero (forthcoming Treasury Net Zero Review). Given this, we would urge caution in the use of consumer levies.

We note that increased use of bio-methane blending is recommended by the Committee on Climate Change as a 'low regrets'[3] action for the 2020s and would reduce emissions from the heating homes. We also appreciate that the Government is proposing this scheme now to avoid any disruption to the bio-methane sector when the NDRHI closes next year.

This lack of disruption however, could also be achieved by extending the exchequer-funded NDRHI scheme for a further year as the government is suggesting for the domestic part of the scheme as part of this consultation. It would further ensure that any new proposals for consumer levies sit within rather than precede a new strategic context.

**This levy would set a new precedent**: Whilst the subject of this consultation is on the *design* of the scheme, our focus in this response is on the implications that a potential new levy on gas bills could have and the potential *precedent* that this would represent.

Consumers currently fund a range of environmental and social programmes through levies on their electricity bills. These have partly funded the transformation of the power sector and currently account for around 20 percent of electricity bills. Whilst not unanimously supported[4], there has been a limited impact on heating affordability since most households (85 percent) use gas rather than electricity for heating. Although two schemes currently receive funding through a gas levy, this accounts for a very small portion of gas bills (1.6 percent in 2019 compared with over 20.4 percent for electricity levies[5]) and, notably, fund schemes that are designed to reduce energy consumption (ECO and the smart meter programme[6]).

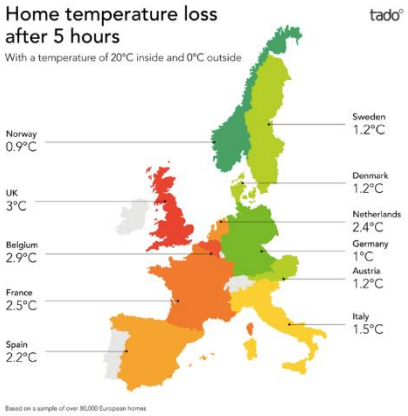
**The right to a warm home**: The Energy Saving Trust strongly believes that before we consider any incremental increases in the cost of heat, we must focus on bringing demand down to offset the future financial impact on households. At minimum, this should involve ensuring that all households (where feasible) reach EPC 'C' by 2030. Without significant steps towards both this, and a means of financially compensating those who might struggle to afford adequate heating, we cannot support additional levies on either electricity or heat.

Two thirds of the housing stock is below an adequate efficiency of EPC 'C' and there is currently little financial or non-financial support (in England) to help households or landlords to act. The cost of more expensive measures such as external wall insulation and heat pumps are out of reach for many consumers (even if they were aware of them). Increasing heating costs without corresponding action to support people to take action to control this (and to compensate them where they cannot) will exacerbate existing inequalities in the energy market and the housing and health issues already compounded by the Covid-19 crisis.

**Net Zero is an opportunity:** Whilst challenging, the need for wholesale change brings opportunities with it to fix issues with our current system. Whilst, on average our per unit costs for gas as our main

[3] https://www.theccc.org.uk/publication/next-steps-for-uk-heat-policy/
[4] https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1773754
[5] https://www.ofgem.gov.uk/publications-and-updates/infographic-bills-prices-and-profits
[6] https://www.gov.uk/government/publications/energy-trends-june-2017-special-feature-article-changes-to-eurostat-tables-methodology

heating fuel are below average (compared to EU & International Energy Agency member countries[7]); we now import more gas than we produce; our homes are amongst the leakiest in Europe (with corresponding levels of fuel poverty) and there are issues with comfort, overheating and damp. This visual from Tado[8] (a smart thermostat manufacturer), clearly illustrates the problem. Tado's analysis of 80,000 homes across Europe suggests that British[9] homes are losing heat up to three times faster.




And, whilst we spend £2.3bn on welfare each year helping people who can not to afford their heating bills we spend less than a third of that (£0.7bn) on improving energy efficiency so these households can afford their bills without any extra help. If we build our approach to decarbonisation without first resolving these fundamental issues, we will miss the opportunity to improve financial and comfort outcomes for people that comes with the challenge of net zero.

## Financing low carbon heat

We recognise that decarbonising heating is an immense challenge and likely to cost a similar amount to that already invested in decarbonising the power sector. If the approach is to be largely funded by consumers rather than taxpayers however, then there will have to be careful consideration as to the distributive impacts including how these costs are spread and what is funded.

**Levies:** Overall, the current levy scheme has had a positive impact for the average consumer. Whilst levies currently add about 13 percent to bills (£146, based on Ofgem's latest estimate of average bills[10]), this is outweighed by the average bill savings from improved energy efficiency from schemes funded through the levies since 2008 (£290)[11].

However, this focus on the average impact obscures the impact on low income households upon whom energy bill levies can have a regressive impact. In this new report, Reducing inequality resulting from UK low-carbon policy[12] (Owen, A; Barrett J, 2020), the authors highlight the disproportionate impact that levies can have on low-income households:

i) energy costs account for a larger share of the household budget (10+ percent of the least affluent households income but only 1.5 percent of the most affluent)
ii) they are less likely to be able to take effective action to reduce their bills (often lacking the relevant finance, information or ability in the case of tenants to improve their insulation or upgrade their heating).

[7] https://www.gov.uk/government/publications/energy-trends-june-2017-special-feature-article-changes-to-eurostat-tables-methodology
[8] https://www.tado.com/t/en/uk-homes-losing-heat-up-to-three-times-faster-than-european-neighbours/
[9] There is no smart meter programme in Northern Ireland so it was not included in the Tado study.
[10] https://www.ofgem.gov.uk/publications-and-updates/infographic-bills-prices-and-profits
[11] https://www.theccc.org.uk/publication/energy-prices-and-bills-report-2017/
[12] https://www.tandfonline.com/doi/full/10.1080/14693062.2020.1773754?scroll=top&needAccess=true

Clearly too, whilst all low income households pay the levy (and many will receive the Warm Homes Discount), only a portion receive energy efficiency measures through the ECO scheme.

As well as how costs are distributed, there is an issue on what types of scheme are funded through levies. Currently only 17 percent[13] of the levy revenue is used to support low income household. This means that low-income households benefitting from these schemes are effectively (more than) self-funding the measures they benefit from. In 2016, for example, the poorest 10 percent of households contributed £271 million towards low-carbon policy cost, whereas over the same period, the revenue recycled to the poorest homes was £220 million.

**Taxation**: The Barrett and Owen report highlights how general taxation could be a more equitable route to funding climate change policies particularly where (as with the current Green Gas levy proposal) they would result in a net *increase* rather than *decrease* in consumer bills.

Their modelling suggests that if existing levies were funded via taxation rather than energy bill levies then the lowest income group would save £98 a year with the highest income group paying an additional £458 a year. They note that '*A saving of £98 a year for the lowest income households could make a significant difference to their welfare, while an additional cost of £9 a week for the households with the highest income is relatively small'.*

**Insufficient carbon price**: whilst our user-centred approach means that we do not support new heating levies without comprehensive action to ensure all homes are bought up to a minimum level of energy efficiency (EPC 'C' or equivalent), we recognise that there are currently inconsistent price signals in this area that will need to be resolved.

These include:

i) the current distribution of energy bill levies between electricity and gas increases the relative cost of electricity creating an additional barrier to heat pump take-up.
ii) whilst electricity (now the lower carbon 'fuel') is subject to a upstream carbon price (the European Carbon Trading Scheme and Carbon Floor Price), gas and other heating fuels are not, resulting in an implicit subsidy.[14]
iii) energy consumption receives a reduced VAT rate whilst many energy / carbon saving measures such as solar panels are subject to a 20 percent VAT rate.

Whilst we recognise that most heating in the UK receives an effective subsidy[15] (via the reduced VAT rate and lack of carbon pricing), we do not think that this can be addressed by adding new levies to heating. Instead, efforts to change this must start with ensuring that all households can afford adequate heating.

**Carbon tax to fund energy efficiency:** A progressive carbon tax could offer a route to do both these things. Modelling carrying out by LSE[16] suggests that a progressive tax for heating could raise around £5 billion a year. This would be sufficient to fund energy efficiency measures in low income homes (to EPC 'C'); subsidise more expensive measures for able-to-pay households in 'hard to treat' homes such as solid wall insulation and heat pumps and financially compensate households struggling to afford energy bills (whilst waiting for their homes to be improved or if measures were not sufficient).

For the tax to be accepted by households, we would advocate for *all revenue* raised to be ring-fenced for supporting households to transition to net zero heating (unlike the LSE proposal highlighted above) with an emphasis on affordability.

[13] 12% on demand reduction measures under ECO and 5% on reducing the cost of energy bills through the Warm Homes Discount from Owen, A; Barrett J, 2020, ibid.
[14] https://es.catapult.org.uk/wp-content/uploads/2019/05/Updated-Effective-Carbon-Prices-and-Emissions.pdf
[15] Ibid
[16] http://www.lse.ac.uk/GranthamInstitute/publication/distributional-impacts-of-a-carbon-tax-in-the-uk/

Once this funding had been used to support all homes to reach an adequate level of efficiency (EPC 'C' or equivalent), revenues could be directed to other low carbon heating opportunities as set out in the Government's strategic approach (whilst continuing to compensate low income households where necessary). The LSE modelling suggest that this could be feasible in the late 2020s.

1. **Do you agree that the tiering structure as outlined above is appropriate and would deliver the best value for money? Yes/No. Please provide evidence to support your response.**

2. **What are your views on the impact of a 15-year tariff period to support biomethane? Please provide evidence to support your response.**

3. **What are your views on the advantages and disadvantages of a shorter 10- or 12- year tariff period and whether they would help maximise value for money? Please provide evidence to support your response.**

4. **Do you have any views on the appropriate tariff level, within these ranges? Please provide evidence to support your response.**

5. **Do you have suggestions of other mechanisms that could be introduced to ensure tariffs deliver the best possible value for money – for example, additional evidence on costs and revenues that applicants to the Green Gas Support Scheme could be required to provide?**

6. **From experience of degression, how do you think elements such as the frequency and size of degression, and spend triggers, should change in order to ensure value for money, whilst meeting the need for investment certainty?**

7. **Please provide evidence to support your response. Do you have further suggestions, beyond those mentioned in this consultation, which would help the Green Gas Support Scheme to deliver the best possible value for money? Please provide evidence to support your response.**

8. **Do you agree with the proposals for tariff guarantees for biomethane? Yes/No. How could this be improved? Please provide evidence to support your response.**

9. **What are your views on increasing the minimum percentage of waste feedstocks above 50%, now or in the future? What could be a suitable new threshold? Please provide evidence to support your response.**

10. **In light of recent amendments to sustainability criteria in the RED II, do you have any views on whether the UK should look to take into account similar changes for the Green Gas Support Scheme?**

11. **Do you have any views on how the feedstock reporting process for biomethane should be amended compared to the existing RHI requirements?**

12. **What measures and technologies exist for reducing ammonia emissions from digestate and what are the barriers to their widespread deployment?**

13. **What are the reasons for the lack of commercial demand for digestate and how can the market for digestate be strengthened?**

14. **Do you agree with the proposal not to include an additional capacity mechanism within the Green Gas Support Scheme? Yes/No. Please provide evidence to support your response.**

15. **Do you have any views on how a change of scheme participant mechanism may differ in the Green Gas Support Scheme to the RHI? Yes/No. Please provide evidence to support your response.**

16. **Do you agree with the proposal to not allow any interaction between the RHI and the Green Gas Support Scheme? Yes/No. Please provide evidence to support your response.**

17. **Do you agree with our proposal to allow biomethane producers to decide how much biomethane they wish to claim Green Gas Support Scheme payments for within a given quarter? Yes/No. Please provide evidence to support your response or provide an alternative proposal for scheme interaction.**

18. **What are the main barriers to the deployment of biomethane AD plants and what potential solutions could help to overcome these?**

19. **Do you have views on how the Green Gas Support Scheme could be improved, beyond the ways described in this consultation? Please provide evidence to support your response.**

20. **Do you have any views on the most appropriate market-based mechanism for green gas support in the longer term, and how this might operate? Please provide evidence to support your response.**

21. **Do you have any views on industry readiness for a market-based mechanism to support green gas in the longer term? Please provide evidence to support your response.**

## Building level technologies

**Our main point here is that the scale of funding provided is not sufficient.**

**Has the RHI delivered?** The intention of the RHI was to *'prepare the market for mass roll out in the 2020s*' (DECC, 2013). However, the delivery of heat (and heat pumps) under the scheme has been significantly lower than forecast with issues including the limited consumer appeal of the tariff mechanism and issues of 'gaming' reducing the value for money of the scheme[17] (NAO, 2017)

In 2013, the year before the domestic RHI started, there were 104,000 heat pumps in the UK with sales averaging 18,000 units per year.[18] There are currently fewer than 250,000 heat pumps with only 27,000 installed in 2019. A critical National Audit Office report in 2018 suggested that the domestic scheme will deliver only 15% of the heat that it was originally expected to.[19]

**What scale of funding is sufficient?** In their 2016 report on heating[20], the Committee on Climate Change (CCC) stated that the tariff mechanism was not driving a sufficient take-up of heat pumps and the market had '*flat-lined*[21]' since the RHI was introduced. Their recommendation was this whilst this could be addressed within the existing budget to 2020 if the scheme was refocussed or shifted to an upfront grant from 2016 to 2020, beyond 2020 an *increase* in budget was required: *'Achieving greater heat pump uptake is likely to need adjustment of subsidy rates, or a shift towards upfront funding, which could be accommodated within the existing funding pot. Beyond 2020, funding will need to increase in line with the higher required roll-out'.*

**The proposal reduces the budget at a time when a scaling-up is needed:** Whilst the RHI was refocussed, an upfront grant was not introduced and market growth is still low. The CCC had recommended an increase in budget in 2020 even if take-up had improved. The slow take-up should increase this need. However, the proposal represents a decrease in funding by two thirds – from an estimated spend in 2020/21 of £140 million[22] to a proposed per annum spend of just £50 million.

**The strategic need still remains**: As the strategic need remains (and arguably has increased – see point below on the potential need for hybrid heat pumps even in a gas-led pathway) but we are not in a position to facilitate '*mass roll out in the 2020s',* strong intervention would seem to be required.

Heat pumps account for just 1 percent of heating systems, outweighed by the 100,000 new gas connections each year and dwarfed by the 1.7million boiler sales (2019). There is an insufficient business case for the 4+million 'low regrets' households currently using electric heating to upgrade to heat pumps and not a clear enough case for the 1.5 million (BEIS 2020) households on high carbon, high cost fuels such as oil, coal and LPG to change (note the current low oil prices is eroding the limited business case here).

There is an urgent need to drive this market so that it can deliver (at least) the 2.3 million heat pumps by 2030 that the CCC has identified as the minimum installed level needed[23]. Beyond 2030,

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[17] https://www.nao.org.uk/report/low-carbon-heating-of-homes-and-businesses-and-the-renewable-heat-incentive/
[18] Nowak et al.(2014) from M.J Hannon (2015) https://core.ac.uk/download/pdf/77002787.pdf
[19] National Audit Office (2018) Low-carbon heating of homes and businesses and the Renewable Heat Incentive. https://www.nao.org.uk/wp-content/uploads/2018/02/Lowcarbon-heating-of-homes-and-businesses-and-the-Renewable-Heat-Incentive.pdf
[20] https://www.theccc.org.uk/publication/next-steps-for-uk-heat-policy/
[21] https://www.theccc.org.uk/publication/next-steps-for-uk-heat-policy/
[22] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/889663/RHI_budget_cap_publication_-_data_to_end_of_April_2020.pdf
[23] CCC Fifth Carbon Budget, Central Scenario

whichever heat pathway(s), the UK opts for, heat pumps will play a key role. They are likely to be the lowest cost option[24] for most off-grid homes, and given the challenge of producing enough low carbon gas at an affordable price, play a key role (albeit in a hybrid form) in gas-led pathways (for example, the Navigant pathway for the Energy Networks Association[25] uses hybrid electric and gas systems as the dominant on-grid technology). All this would point seem to justify a greatly increase level of support and intervention rather than a reduction.

**Scale**: We broadly support the design of the scheme and welcome the simplicity, the voucher approach and the upfront capital grant. However, the proposed scale is in no way sufficient. Given the current underdevelopment of the market and the strategic need to meet the demand from the new build from 2025, a much larger fund **of £1 billion** allocated over 4 years (to provide continuity to the supply chain) would be better aligned with the consultation's objectives. (Following this, the scheme should be reviewed to assess what further support is required to enable mass deployment).

An expanded scheme could install up to 250,000 heat pumps, doubling the total installed base to date but delivering this at a lower cost than the £1.4billion of RHI payments made between November 2011 and August 2017.[26] To put this in context, the CCC forecast the need for an additional spend of £1.5-2.5 billion a year[27] (not including support for the fuel poor), for the rollout of energy efficiency and low-carbon heat through the 2020s.

If located within a wider framework of policy support to reduce the cost of the environmental levies on the electricity bill; to support consumers with free and impartial expert advice (as provided by the Scottish Government to drive take-up) and appropriate regulation (for new builds where smaller heat pumps can be integrated at lower cost and for replacement high-carbon systems in off-grid dwellings), this would put the CCC's minimum target of 2.3 million heat pumps by 2030 within reach.

**22. Do you agree with targeting support at domestic and non-domestic installations with a capacity up to and including 45kW? Yes/No. Please provide evidence to support your response.**

Yes.

EST works with the domestic and SME sector therefore the size is sufficient for the sectors we work with. Consumer protections and product and installer standards can be met via the MCS scheme.

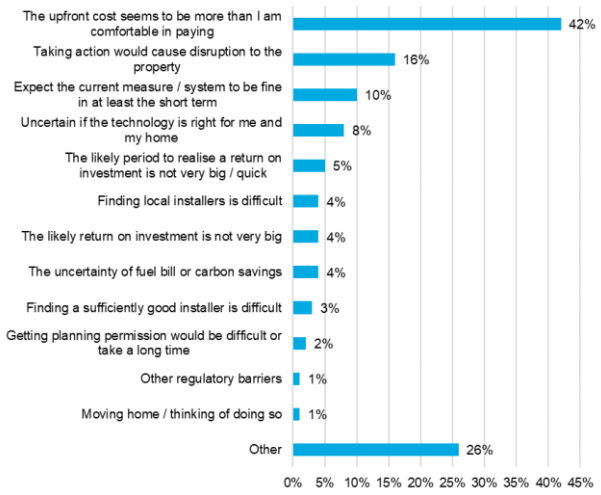
**23. Do you agree that support for buildings technologies should change from a tariff to a grant? Yes/No. Please provide evidence to support your response.**

Yes, as long as the grant is large enough to achieve the scale of installations required. The grant reduces the upfront capital barrier and is far simpler for consumers to understand.

The Scottish Government provides zero interest loans for consumers[28] to support households to install measures such as heat pumps. Evaluation work carried out by the Scottish Government (see below) suggest that the upfront cost is the viewed as the key barrier to installing recommended

[24] Over the lifetime of the measure – the higher upfront costs outweighed by the lower running costs
[25] https://www.energynetworks.org/assets/files/gas/Navigant%20Pathways%20to%20Net-Zero.pdf
[26] https://www.nao.org.uk/report/low-carbon-heating-of-homes-and-businesses-and-the-renewable-heat-incentive/
[27] https://www.theccc.org.uk/wp-content/uploads/2016/10/Next-steps-for-UK-heat-policy-Committee-on-Climate-Change-October-2016.pdf

measures such as heat pumps. Given that the proposed grant will reduce this barrier, this will suggests that it will improve take-up.




**24. Do you agree with our proposal to offer a technology-neutral grant level? Yes/No. Please provide evidence to support your response.**

Yes and no – the flat grant should drive higher uptake of heat pumps over biomass as the grants will make up a higher proportion of the overall cost. However, the £4,000 grant is unlikely to be a sufficient incentive for households for whom larger heat pumps or ground source heat pumps will be most suitable.

We have some concerns that it could drive lower cost rather than more efficient heat pump types even though it is the latter that is likely to be better for the consumer in the longer term (through lower running costs).

We would recommend offering a higher incentive of £6,000 for ground source heat pumps as suggested by the Heat Pump Association[29] or the scheme would disincentivise these due to the higher upfront cost of these. Note heat pumps in larger homes can require higher associated ancillary equipment costs (for example changing more heat emitters) so a higher grant would help offset these costs.

Similarly, a higher rate e.g. £5,000 could be available in specific cases for larger/ more efficient ASHPs if it were linked to the efficiency of the system and the heat demand of the home and tied to the installer meeting system design standards under MSC. This would require MSC standards being kept up to date to ensure oversizing is not allowed to take place

**Compatibility with other schemes**

The Energy Saving Trust runs loan, grant and consumer advice schemes for the Scottish and Welsh governments. Here our recommendation is that the new grant is compatible with other schemes in the same way that the RHI currently is. This match funding ability should include both current and

[29] ibid

future schemes (such as the next round of ECO, the proposed new Home Upgrade Grant and future schemes from city regions/ other).

This will be particularly important in rural areas where heat pumps may need to be larger to suit larger/ hard to treat homes. If match funding is not viable under this scheme, it would reduce its applicability to fuel poverty targets and could reduce uptake in the devolved nations where there are a higher number of rural households.

25. **Do you agree that £4,000 is an appropriate grant amount to meet the aims of the scheme? Yes/No. Please provide evidence to support your response.**

As above

Our response here is that £4,000 would be an appropriate amount for air source heat pumps (ASHPs) at the initial stage however this should be reviewed on a quarterly basis to assess if installation rates are likely to meet targets. If the rate of installations is not sufficient then the grant should be raised accordingly in the same way RHI tariffs were designed to reduce should targets be exceeded.

Note: the level of grant that would be sufficient to drive action is also dependent upon the wider policy framework (see our notes at the beginning of this section). A £4,000 minimum grant would be sufficient to drive the market in a conductive wider policy environment.

26. **Do you agree with the recommendation for a flat-rate grant? Yes/No.**

As above

27. **Please provide evidence to support your response. If you believe a variation by capacity should be considered, please provide evidence to justify a process and level for varying the grant.**

As above

In 2019/20, the loan fund EST manages for the Scottish Government has funded/ committed to fund 533 heat pumps (445 air source and 88 ground source).

28. **Please provide any relevant views to help inform development of the delivery mechanism.**

The application could require evidence that a survey has been carried out on site as part of the first stage and could require set a time-limit to the whole process (along with a clear process for extending this where appropriate).

Suggested evidence:

i) Review of quote (i.e. proof of survey)

ii) Post install invoice. (to guard against double charging)

iii) MCS certificate. (there needs to be a process to cross check this against the MCS database)

iv) Post install EPC

It would be a significant consumer incentive if the grant were deducted from their invoice and paid directly to the installer following claim verification. This process will need to occur though an online system that can automate checking and payments in straightforward cases to ensure swift payment to installers.

Ideally, households would also have spoken to an independent and impartial organisation about their heating options to make sure they are fully informed (for example Home Energy Scotland in Scotland).

29. **Do you agree with the minimum efficiency requirements for heat pumps and evidence requirements? Yes/No. Please provide further evidence to support your response.**

The Home Energy Scotland loan that EST administers for the Scottish government requires evidence that the measure installed will save carbon and or costs, based on our own or the installer's modelling (we use slightly different SCoP for GSHP vs ASHP).

We recommend that this should be monitored and potentially increased to continue to align with Ecodesign standards.

30. **Do you agree with the proposal to require electricity metering for all heat pump installations? Yes/No. Please provide further evidence to support your response.**

Yes – meters should be installed as standard as the data is valuable for evaluating usage of the overall scheme/ technology and for consumers.

31. **Do you agree with the proposed air quality requirements set out above? Yes/No. Please provide further evidence to support your response.**

Yes. We would support the applicant being required to evidence that biomass is under both the scheme criteria and permitted locally under air quality laws.

32. **Do you have any comments on how best to ensure ongoing compliance with fuel sustainability and quality requirements following the redemption of a grant?**

33. **Please provide views on the appropriate requirements for the heat loss calculation, as well as the minimum heat loss value that should need to be demonstrated.**

If applying for biomass applicants should have to provide evidence that they got at least one heat pump quote / consultation and why it's not suitable

34. **Please provide views on any other criteria to ensure that biomass support is focused on hard to treat properties only.**

Our recommendations here include:

- Requiring three quotes from installers all confirming that a heat pump would not be suitable (even with insulation such as loft top up and cavity wall)
- An affordability criterion – this would allow biomass where running costs were more affordable
- It would be good in these cases, if the scheme could flag that the (current and/ or future) occupants are at risk of fuel poverty) and refer to other organisations / schemes to support customers

In general the level of the grant and the higher capital cost of biomass heating is likely to reduce the number of heat pump applications.

## Consumer protection

Here we note that the consultation proposes MCS certification or equivalent for products and installers, and installer membership of a consumer code will be required for this scheme. We would welcome clarity around what is equivalent / who decides this

**35. What do you consider to be the main consumer protection risks of providing support through an upfront grant and how might they be mitigated? Please provide evidence to support your response to question.**

As in any scheme, the upfront grant could increase the risks of mis-selling (poor installation, inappropriately sized installation etc.). The MCS role will therefore play a critical role in consumer protection in checking adherence to a consumer code. This must be properly policed with a high proportion of audit checks.

A higher standard of consumer protection would ensue if other parts of the UK set up an additional independent, impartial advice like that provided by Home Energy Scotland (HES). HES provides an additional system of checks and balances that consumers can draw on to ensure that they are fully aware of their options, typical costs and installation standards.

## Non-financial barriers to low carbon heat

The most significant barrier (for supply chain) here is the absence of a clear market signal on the future shape of the market. Confirming the proposals to phase out gas connection in new build from 2025 and 2020 consulting on a possible date for phasing out the replacement of high fossil heating systems in off-grid dwellings would provide investors with the confidence to invest.

Skills and jobs: A clear commitment to deliver at least the 2.3 million 'low regrets' heat pumps by 2030 would deliver in the region of 27,000 additional jobs (based on the HPA's analysis). We support the recommendations in the HPA's Heat Roadmap for upskilling of existing boiler installers and creation of a new apprentice and training scheme for new entrants

Engaging citizens and supporting consumers: There is a low general awareness from the population of the need to switch away from conventional heating. We would welcome a comprehensive focus from the government to address this. The CCC has emphasised that where people are involved in the changes are required, it is likely to be achieved faster and at less cost.[30] Current though, there is very

[30] https://www.theccc.org.uk/publication/net-zero-the-uks-contribution-to-stopping-global-warming/

low awareness of how people can take action. A recent survey by the Energy Systems Catapult[31] for example, found that less than half the 2,000 people they surveyed were aware that their gas boiler was contributing to climate change (it is responsible for around a third of the average household's emissions). There was far higher awareness of transport, air travel and household waste, despite these all having a lower impact (27 percent; 12 percent and 3 percent according to ESC calculations). Our experience is that where an appropriate policy framework is put in place to build awareness, support consumer and incentivise action, then this is the most effective means of driving action

**36. Do you agree with the proposed budgetary control mechanisms as a means of preventing scheme overspend? Yes/No. Please provide evidence to support your response.**

**37. Do you agree that quarterly grant windows would prevent overspend and manage demand to ensure an even spread of deployment? Yes/No. Please provide evidence to support your response.**

We do not feel that this will be sufficient due to the very limited total grant available. We have seen in past schemes (for example, the Low Carbon Buildings Programme) where grants have gone within the first 12 hours.

As we highlighted earlier, the total grant is too low to achieve the objectives set out and a £1bn fund is required. If consumers take the initial steps but then find out that they need to wait for a further three months to (potentially) progress to the next stage this will not build consumer confidence in the technology or product and they are therefore less likely to move to low carbon heating. This is particularly the case for those who have researched an alternative to their current system and are waiting for it to fail or be uneconomical to service. In that case they will need to move quickly to replace their system and do not have time to wait up to 3 months for grant availability.

**38. Do you agree with not supporting process heating under the Clean Heat Grant? Yes/No. Please provide evidence to support your response.**

No comment

**39. Do you agree with not supporting biogas combustion under the new policies? Yes/No. Please provide evidence to support your response, including any wider detail on decarbonisation opportunities for biogas combustion in rural areas.**

Yes

**40. Do you agree with not supporting solar thermal systems under the Clean Heat Grant? Yes/No. Please provide evidence to support your response.**

No – whilst there has been little take up of solar thermal in the RHI, we think it should be left in so that there is some support for the sector

[31] https://es.catapult.org.uk/reports/net-zero-a-consumer-perspective/

41. **Do you agree with not supporting hybrid systems under the Clean Heat Grant? Yes/No. Please provide evidence to support your response.**

We feel that, as noted above, the budget allocated to the scheme is insufficient to deliver its objectives. On that basis we support the focus on non-hybrid units.

It would be useful, however to keep this under review – we would potentially support grants going to individual retrofit of heat pumps into properties that already have fossil fuel units

## Compliance

42. **What improvements could be made to the proposed approach for tackling noncompliance for participants under the Green Gas Support Scheme?**

43. **What are the main risks of non-compliance, fraud or gaming associated with the Clean Heat Grant?**

A higher percent of audits (see below) and the requirement for a revised Energy Performance Certificate and MCS certificate to be sent through as part of the evidence that the measure has been installed (as it is in Scotland).

44. **What would be the most important features of an audit regime to minimise the risk of non-compliance?**

EST would support a robust audit regime. Under Scotland's national fuel poverty programme (Warmer Homes Scotland) which is delivered by Warmworks Scotland (a joint venture partnership between Energy Saving Trust, Everwarm and Changeworks).

100 percent of installations are audited. This level of audit is appropriate here given the scheme's focus on fuel poverty and to ensure that the measures are working effectively for consumers and that Government loans/ grants (where application) have been spent effectively. Whilst this level of audit may not be feasible for a larger scheme, we feel that, for example, spot checking 1 percent of schemes would be too low.

An audit of 10 percent of installations could provide an appropriate balance here.

We believe an appropriate audit regime would address the following points which have proven to be a problem in the renewables industry in the past:

- Fast action to deal with non-compliance infractions and remove repeat offenders from the scheme
- Transparent reporting of non-compliance infractions on a public, searchable database