

Response from the Institution of Gas Engineers & Managers (IGEM) to the Department for Business Energy & Industrial Strategy (BEIS) consultation on 'future support for low carbon heat'

Introduction:

Licensed by the Engineering Council, IGEM is the professional engineering institution for gas. As advocates of excellence, our core aim is to help all those involved with gas to achieve and maintain the highest standards of professional competence. Working with stakeholders from across the industry we seek to represent the views of our members and the wider gas community and to inform and influence current and future gas and energy policy.

IGEM are playing a key role in supporting the evidence base for the application of low carbon gases such as hydrogen in the gas network. As well as developing the first Hydrogen Technical Standards, IGEM are facilitating a change in regulations on the quality of gas allowed to be injected into the transmission and distribution network.

Our role in the government's Hydrogen Programme Development Group, sees us working directly with gas network companies, safety experts, academia and policy advisors to assess the evidence base and develop informed recommendations on the future of the gas grid.

We welcome the opportunity to respond to this consultation and aim to represent the collective views of IGEM Members and our gas industry stakeholders. We have selected questions from the consultation which are of greatest relevance to our Members and answered these below.

Green gas - Approach to tiering and plant size

1. Do you agree that the proposed tiering structure is appropriate and would deliver the best value for money?

Yes.

We are overall supportive of the revised three-tiered tariff bands, which is a model the industry is accustomed to.

The Tier 1 increase to 60,000MWh is welcomed as this will encourage larger plants which can maximise economies of scale.

However, BEIS must be mindful of the impact on smaller biomethane plants that have limited access to feedstock, and recognise the value of smaller plants for locations where demand for biomethane is lower.

We would also like to highlight the risks associated with slow ramp up rates to full production, and gas network capacity being taken up by plants not injecting to the full capacity stated on their Network Entry Agreement. These issues can impact the revenue plants receive and the budget allocated to them, and in turn what is left for other new plants. A solution that has come to IGEM's attention is for BEIS to review of *actual* capacity and injection rates, against *dedicated* capacity and a mechanism to release capacity/budget under the scheme.

Green gas - Tariff length

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

Plant costs are a significant investment, therefore offering longer tariff periods provides a clear message to industry and will encourage capital growth in the market. There is some support amongst IGEM Members for a 15-year tariff period.

However, concerns have been raised by some Members that a move to a 15-year tariff period would threaten the economic viability of biomethane plant.

The ongoing costs for biomethane are high – beyond the payback period for capital investment, unlike wind/solar projects – and therefore the economic viability of plants once the tariff period runs out is of great concern. A longer tariff period is needed to account for these ongoing operational costs, otherwise we may not see the scale and growth of plant required to maximise the opportunity of biomethane.

We encourage BEIS to review the level of the tariff itself, against the tariff period. Looking at the experience with the RHI - the proposed tariff level would only be suitable if a 20-year tariff is retained. The Tier 1 tariff may need to rise to make a 15-year tariff period economically viable. It has been suggested that a slightly lower 20-year tariff may be more viable than a higher 15-year tariff.

We also urge BEIS to pursue any evidence that the price of selling gas will be sufficient alone when the tariff period ends, before finalising a 15-year tariff period.

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?

Echoed in our response to question 2, Members are concerned that shorter tariff periods do not adequately take into account the high ongoing operational cost associated with biomethane plants, and that plants would become uneconomic at the end of a 10/12-year tariff period.

At the end of the 10/12-tariff period the price of selling gas would not be enough to cover ongoing costs and operators would be making a loss – this risks operators decommissioning the plant once the tariff period ends.

An option presented is to provide a lower tariff after the initial period ends, to cover ongoing operational costs.

Green gas - Tariff setting

4. Do you have any views on the appropriate tariff level, within these ranges?

Any tariff level needs to consider that it is common for biomethane plants to have to pay to take away food waste. It can also be more expensive to process and therefore costs are higher than for a plant using a lower proportion of waste feed stocks. This adds to the high ongoing operation costs.

The RHI has illustrated that projects have become un-investible when Tier 1 tariffs paid over a 20-year period have fallen below 5p/kWh. A 15-year tariff would require higher tariffs that would give a similar return to a 20-year tariff at 5p/kWh.

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?

A range of mechanisms can be considered to maximise value for money and scheme effectiveness:

- Build in a regular review of costs for biomethane plants.
- Although it would be more complex, a tariff that is flexible to the moving price of selling gas would help ensure that biomethane developers are being compensated for the extra costs of biomethane compared to natural gas at a given time.
- Biomethane targets - tariff levels could be related to achieve a biomethane injection target in practice.
- Valuing the storage and time of injection into the gas grid, to help meet peak demand - To some extent this will be dictated by the wholesale price of gas, but it is worth considering whether the role of biomethane in helping to meet seasonal peak demand could be further supported.
- The value of biomethane to support gas usage in areas off the gas grid should also be considered, given that it could replace the need to extend the gas grid. This includes biomethane serving peak demand to support the deployment of hybrid heating systems.

Green gas - Ensuring Value for Money through tariff changes

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?

Degression, to date, has led to a rush of plants seeking to commission/connect before the deadline. This has resulted in a very intensive stop-start approach, rather than a staggered, managed approach throughout the year.

This rush also puts a significant burden on gas network companies to support green gas producers in finalising their connection to the network. This is particularly challenging and stressful, given the complexity of technology and safety standards and regulations that must be adhered to. The degression 'cliff edge' also increases the likelihood of unsafe behaviours through the supply chain.

A more dynamic approach would be useful to prevent the build-up of a cliff edge. There is support for an annual review mechanism to allow increases as well as decreases to the level, ensuring that the best value for money is maintained throughout. It has also been suggested that a manual review process is introduced to take into account industry views.

Degression should also be scheduled in a way that takes into account network management challenges, such as seasonal demand pressures. The gas networks have indicated that they would be happy to work with BEIS on the design of degression windows.

There is support for a review of the definition of commissioning. The standards and practices set out by the Energy Networks Association (ENA), on what constitutes commissioned, should be explicitly referred to in the new scheme to provide clarity.

There is also some support for the level of degressions to be capped at 5% - closing the scheme to new applicants and reopening at the same level. This would mean plants bid to build the available capacity for that period.

It has also been suggested that an incentive mechanism designed to track the construction / development phase of a plant may be more befitting. i.e. the tariff is guaranteed if plant

construction activities are progressing with delivery plan and completed within the agreed timescales.

7. 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?

Other areas that have been raised include:

- Reducing reliance on importing feedstock – will minimise the environmental impact of shipping from overseas and strengthen the UK's energy security.
- Considering the proportion of waste in the biomass feedstock and the level of fugitive emissions.
- Developing a process whereby plants are bidding to build the available capacity within a pre-determined budget. This approach could move towards a more market based scheme, like that seen in the capacity market scheme for electricity, helping to support biomethane capacity at the lowest cost, whilst providing an acceptable return for investors.
- Considering the role of capacity auctions in incentivising larger developers and a more collective approach to managing agricultural wastes by allowing plants to form cooperatives.
- Introducing incentives for those developers using biopropane instead of fossil propane – to further reduce emissions. This could be in the form of a boosted tariff, to help support the additional cost of biopropane.

Green gas - Tariff guarantees

8. Do you agree with the proposals for tariff guarantees for biomethane? How could this be improved?

There is broad support for tariff guarantees, and acceptance that the commissioning window will end at the same time as the end of the support scheme. However, the current commissioning windows for plants with tariff guarantees have, to date, led to a rush of plants seeking to commission in a short period of time before each deadline. Deadlines for plants to connect should be sufficiently staggered and based on a certain number of months after their tariff guarantee application is approved by Ofgem for example, rather than all plants in a wave of applications being required to commission by a hard deadline.

As such, it is important there is clear understanding as on what constitutes commissioned, referring to appropriate industry standards and practices. These standards and practices should be explicitly referred to in the new scheme to provide clarity.¹

There is also support for more flexibility on the deadlines for plants to commission, for example, a mechanism within the scheme for changes in certain, unforeseen circumstances such as severe weather conditions.

The commissioning of biomethane plant is highly complex and time is needed to balance various processing elements once the plant is operational - consideration should be given to the idea of allocating a period of time, after the official commissioned date and securing the subsidy tariff, to allow the developer to stabilise biomethane production and gas quality ready for the first injection into the network.

¹ Energy Networks Association, *Open Letter on Commissioning Biomethane Plant* (2019) available at: <https://www.energynetworks.org/assets/files/gas/futures/190923%20ENA%20Open%20letter%20on%20biomethane%20plant%20commissioning.pdf>

There is support for an incentive for the expansion of existing connected plants and also an incentive for the conversion from CHP to gas injection.

Green gas - Waste feedstock

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?

There is some support for increasing the minimum percentage of waste feedstocks above 50%, however the following challenges have been raised:

- Distinguishing between anaerobic digestion and bio-SNG. Bio-SNG will include the gasification of waste, but this is separate to this support scheme.
- Measuring the proportion of waste feedstocks by a rolling yearly average, rather than over a shorter period, as agricultural waste production is very variable, and it is more efficient to keep the AD plant running continuously.
- The opportunities and risks of residual waste that is not turned into energy.
- Considering the need to support agricultural incomes is also relevant, which may lend support to limited energy crop growing.
- 50% is currently challenging to achieve for some developers, and there is some uncertainty around volumes of available waste feedstocks. An increase to this percentage now may only add to the challenge.
- There are added costs of dealing with a higher percentage of waste feedstocks that would need to be reflected. Although more complex to manage, there could be a different tariff for different elements within feedstock, so plants that were able to access more than 50% waste feedstock (say, because they were located next to a food waste facility for example) could receive a different rate.

It has been suggested that the proportion of waste feedstocks should be monitored and reported on publicly to support transparency and aid continuous improvement.

Green gas - Sustainability criteria

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?

Yes, the UK scheme should align with RED II:

- Buyers of green gas certificates would need to be RED II certified, and would have to do this whatever the Green Gas Support Scheme requires. It is not sensible to have numerous different sustainability criteria.
- Renewable Transport Fuel Certificates (RTFCs) are also relevant, and it would be sensible to alignment with RED II as the sustainability standard.

Green gas - Feedstock reporting

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

No Comment

Green gas – Digestate

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

No Comment

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

It has been indicated to IGEM that one of the key issues is the quality of the digestate. If there are contaminants that are hard to remove, it may be easier to dispose of the digestate rather than upgrade it. It may also be the case that energy crop feedstocks produce fewer contaminants than waste feedstocks, and so there may be an inverse relationship to the proportion of waste feedstock and the amount of digestate that can be sold.

Green gas - Additional capacity

14. Do you agree with the proposal not to include an additional capacity mechanism within the Green Gas Support Scheme?

Given the tariff tiered structure there is no support for an additional capacity mechanism within the scheme.

Green gas - Change of scheme participant

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?

There is support for the change of scheme participant mechanism to be the same as the RHI.

Green gas - Interaction with RHI

16. Do you agree with the proposal to not allow any interaction between the RHI and the Green Gas Support Scheme?

There is general support for prohibiting interaction between the two schemes. However, caution is advised in the following areas:

- Starting the 20-year clock on RHI tariff payments the moment their RHI application is submitted could lead to a short hiatus in the market while participants wait to apply under the new scheme.
- Conversely, where final RHI tariffs are seen as more attractive than those under the incoming scheme there could be a rush to receive support under the final tranche of RHI support and then very few plants will come through under the new scheme if tariff levels/lengths are not set appropriately.
- Allowances should be made for biogas CHP plants (that may be receiving RHI support for the heat fraction) to reconfigure to inject biomethane into the gas grid, where there is a business case and capacity on the network.

Green gas - Interaction with other government schemes

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?

There is support for this proposal.

It will enable dual participation in both the Green Gas Support Scheme and the Renewable Transport Fuel Obligation (RTFO), which is a good example of a whole systems approach that will also support growth in transport running on biomethane.

Green gas - Barriers to deployment

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

Policy uncertainty:

Evidenced by periods of stable policy and the resulting market and supply chain growth, there is support for subsidy mechanisms that provide long term certainty (particularly those that are at least one step removed from Government funding) which is critical for delivering ambitious biomethane injections plans. There is broad support for a clear policy approach from government and a long term commitment to biomethane plant development.

Standardisation across the network:

This is an issue that the gas networks are already trying to address – in terms of standardising the industry's approach to connections. There is great appetite to demonstrate transparency and control over how these standards and other associated commercial and regulatory methodologies are developed over time.

Planning permission delays:

The typical delays in obtaining planning permission will undoubtedly make achieving ambitious net-zero targets much more difficult. There is support for biomethane plant planning approval to be fast-tracked, or at the very least ensure that existing estimated approval timelines be met more consistently.

Grid capacity:

In some areas, the capacity of the local gas distribution network is insufficient, especially in summer when demand is lower. Capacity constraints resulting from supply and demand imbalances will become a key barrier as the proportion of biomethane in the system grows.

Some IGEM Members are advocating investment in smart control systems and compression to higher pressure tiers on the network, and are urging Ofgem to allow for this mechanism in the next price control period.

It should be possible to offer flexible entry capacity to biomethane producers – whereby producers would inject biomethane at the times and rates that meet customers' demand requirements displacing the natural gas supplies currently used at those times. To deliver biomethane in this way producers may need to fund on-site solutions such as provision of storage or other new technologies so that they can inject biomethane at the times and rates it is needed.

Network codes:

Some of the gas network codes are written for natural gas with large injection points, not for a greater number of smaller injection points. The networks have been pursuing a programme to standardise connections since late 2018 to address this, to simplify the connection process and hence lower project costs.

Propanation:

To meet gas quality requirements propane is added to biomethane before grid injection. This protects consumers by ensuring that they receive the energy content they pay for, but negates some of the environmental benefit of biomethane. Oxygen limits also pose an issue for biomethane, which tends to have higher oxygen content than natural gas.

The revised gas quality standard being developed by IGEM, with the support of industry, addresses the oxygen issue by allowing up to 1% oxygen throughout the network. The Future Billing and Real Time Networks projects would also allow customers to be billed based on the actual energy content of the gas they receive, rather than a flow-weighted average. This would remove the need for propanation and the additional costs associated with propane.

Agricultural waste:

Agricultural waste is not addressed within the current tariff guarantee scheme. As gas grids are typically not in rural areas, the scheme would benefit from the deployment of collection hubs and virtual pipelines.

Hub models:

The current RHI tariff guarantee does not incentivise hub models (like Portsdown Hill) as full planning for all daughter sites together with the hub sites. If entry points were created in association with the networks, then this would remove this barrier. This would be a tool to help match grid capacity to feedstock availability.

In order to maximise the injection level of biomethane, there is also strong support for further investment to link connecting systems as well as investment in seasonal storage.

Network investment can be made to:

- Link the biomethane system with another system through new pipelines would enable natural gas used in other systems across the year to be displaced. This would present a more efficient system and can serve multiple sites in the same area, preventing each site having to adopt its own measures.
- Enable the storage of biomethane in periods of low demand so that it is available for use during periods of higher demand.
- Compress gas from one system into upstream systems operating at higher pressure. The biomethane would then satisfy demands in other parts of the network fed by that upstream system.

Green gas - Further information

19. Do you have views on how the Green Gas Support Scheme could be improved, beyond the ways described in this consultation?

Some IGEM Members advocate a more ambitious approach in the scheme, whereby the target of an additional 2.8 TWh per annum of additional biomethane capacity is doubled as a minimum.

With regard to the scheme being restricted to biomethane from AD - the RHI for gas injections has been technology neutral to date and earlier consultations have recognised the potential to modify the scheme should a degressed tariff be insufficient to support an emerging technology. New sources of green gas are vital as the feedstocks for biomethane from AD are limited, and the current scheme proposal is a disincentive for businesses to innovate and develop new technologies. We would urge that the scheme does not specifically restrict to biomethane from AD.

There is support for the scheme to encourage alternative solutions to propane enrichment, not only due to its high cost for plant operators but also because of its negative green credentials.

There is also support for a target for a 'percentage of green gas in the networks by 2030' to be adopted, including blue and green hydrogen, to help drive the rollout of green gas.

Green gas - Green gas support in the longer term

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?

As mentioned previously, we can see how support for biomethane plants could move to a mechanism that resembles the capacity market for electricity where plants bid in to a sealed reverse auction with the lowest price per kWh they could economically build their plants. This could help ensure plants continue to come forward and ensure value for money.

There is support for a Contract for Difference (CfD) type mechanism. It is well understood and has worked well in bringing forward considerable renewable electricity generation capacity. With an auction mechanism, it has also led to considerable cost reductions. It could work for both biomethane and hydrogen injection into the network.

There are, however, several points of detail worth emphasising:

- A CfD would only incentivise green gas production that meets minimum sustainability criteria, which is particularly important for bio-feedstocks, and so a top-up if sustainability criteria are exceeded should be considered. Similarly, if the CO₂ from AD plants is captured and stored, or used for e.g. methanation of fuels, it could be incentivised by a top-up to the CfD.
- Depending on the outcome of the ongoing BEIS work on hydrogen business models, auctions for green and blue hydrogen may need to be in different categories, given the different cost levels of the two technologies.
- Consideration should also be made as to whether different categories may be required for other types of green gases.

Some members would recommend that a CfD be adopted as soon as practical, depending on the outcome of the ongoing hydrogen production and CCUS business models work. Industry is expected to rapidly gear up once a longer-term business model is visible.

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

We believe this will depend upon the market mechanism that is introduced. We believe there could be a fairly easy transition to a capacity type mechanism where plants compete in a reverse auction process to deliver the target biomethane capacity for a period. There is potential to mirror the mechanisms in the capacity market.

To help drive long term certainty, encourage investment and drive efficiencies, there is support for a Net Zero Heating Obligation (NZHO), as proposed by ENA, requiring the increasing deployment of low carbon heating technologies over time and supporting increasing biomethane and hydrogen production.

There is Member support for the introduction of a NZHO by 2025, to align with the new Future Homes Standard and to allow sufficient time to industry to prepare for the transition.

Building level technologies - Scope of support

22. Do you agree with targeting support at domestic and non-domestic installations with a capacity up to and including 45kW?

Yes.

Typically, domestic and non-domestic installations are harder to transition to renewable technologies and therefore targeted support for this area of the market is sensible. Currently the majority of installations of heat pumps would be covered by this capacity range.

Consideration should also be given to large properties e.g. farmhouses whose current heat load may be up to 70kW, although these are in the minority, so perhaps different finance mechanism can be used for this.

Building level technologies – Grants

23. Do you agree that support for buildings technologies should change from a tariff to a grant?

Yes.

There is broad support for any continued support mechanism for building level technologies, in which ever form.

The current RHI tariff scheme has not been successful in encouraging the move to lower carbon heating at the scale the UK needs to realise. A grant scheme could overcome the initial investment barrier faced by property owners.

Building level technologies - Recommended support level

24. Do you agree with our proposal to offer a technology-neutral grant level?

Yes.

There is a support for a simple, clear system.

However, there is also support for offering a different level of funding, where there is strong evidence that the installation costs are higher i.e. due to the building's construction. Perhaps limiting to off-gas grid communities only to ensure the best use of budget.

There is also concern that this mechanism will lead to fewer ground source heat pumps being installed overall, as they are more expensive and so the grant covers a lower % of the overall cost.

25. Do you agree that £4,000 is an appropriate grant amount to meet the aims of the scheme?

There is concern amongst Members that the £4,000 grant will not be enough to meet the aims of the scheme.

There is acknowledgement that the £4,000 contribution exceeds many other European countries offering contributions. However, because there is a £50m annual cap, it will limit installations to around 12,500 per year. This is fewer than current RHI installations.

It is hard to gauge expected take-up of the grant at this stage, which suggests that a budget with some flexibility and careful monitoring will be needed to ensure the scheme is responsive to market demand.

Building level technologies - Variation with capacity

26. Do you agree with the recommendation for a flat-rate grant?

Yes.

With one of the key barriers to take-up being the initial investment required by the property owner, there is support for a flat-rate grant.

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

N/A

Building level technologies - Delivery mechanism

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

The proposed process of application and voucher redemption is appropriate.

However, consideration should be given to smaller installation companies that may not be able to absorb the initial cost of the product before payment for the voucher is made. They will also be more susceptible to late payment issues from the consumer after installation.

29. Do you agree with the minimum efficiency requirements for heat pumps and evidence requirements?

Yes.

There is support for the proposed minimum efficiency requirement of heat pumps and evidence requirements.

30. Do you agree with the proposal to require electricity metering for all heat pump installations?

There is some support for the requirement of electricity metering for heat pump installations. However, this additional cost may not actually be required as manufacturers have performance information built into the software to monitor energy usage and efficiency.

Building level technologies – Biomass

31. Do you agree with the proposed air quality requirements set out in the consultation?

Yes.

There is support for the proposed air quality requirements set out in the consultation.

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?

No comment.

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.

There is support for the requirements of EN 12831 in undertaking a heat loss calculation.

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

It has been noted that if a flat rate grant is implemented, then additional measures would seem to be aimed solely at limiting the use of biomass in homes that could feasibly select a heat pump. If this is the case, then there does seem to be an acceptance that heat pumps may not be an attractive proposition for many households compared to biomass. If take up is a strong driver then enabling a wider range of customer and community friendly options, would be a better approach to protect scarce biomass resources e.g. connecting to green gas.

It has been suggested that 'hard to treat' properties could be defined as those requiring high temperature heat flow (for example above 60oc) or where the total heat demand exceeds the capacity of a single phase electric heat pump.

Building level technologies - Consumer protection

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?

There is support for the recommendations in the guidance: "We propose that MCS certification or equivalent for products and installers, and installer membership of a consumer code will be required for this scheme. This would avoid the significant costs and duplication of effort for the government and industry that would be required in introducing a separate system of consumer protection."

However, consideration should be made to the risk of:

- Installers not passing on the full voucher to the consumer and putting prices up.
- Pressure selling – with installers claiming vouchers before a customer has agreed to a job

Ideally, quotes should be in place before a voucher claim is made and confirmation provided that the consumer is fully aware of what they are installing.

Financial management of funding delivery

36. Do you agree with the proposed budgetary control mechanisms as a means of preventing scheme overspend?

Yes.

There is support for the proposed budgetary control mechanisms.

However, the level of the cap should enable sufficient biomethane production, in order to reach our target of 20 TWh per annum of biomethane capacity by 2030.

37. Do you agree that quarterly grant windows would prevent overspend and manage demand to ensure an even spread of deployment?

Yes.

There is support for quarterly grant windows to ensure more even deployment over the year, however this will still result in quarterly peaks. There is also the chance that those with immediate heating needs are forced to choose an alternative technology, so therefore perhaps monthly windows could be considered.

Technologies and uses not supported through this policy

38. Do you agree with not supporting process heating under the Clean Heat Grant?

We support this approach as finite biomass feedstocks need to be used as efficiently and effectively as possible. Cleaning up biogas and injecting it to the gas grid enables its storage and its use in any number of applications critical to decarbonisation.

39. Do you agree with not supporting biogas combustion under the new policies?

No comment.

40. Do you agree with not supporting solar thermal systems under the Clean Heat Grant?

Yes.

As the scheme is intending to replace high carbon heating systems and not solely hot water generation.

However, some acknowledge that solar thermal could become a key way to generate hot water and also help balance the grid. Continued support by BEIS would help in their technological development, whether through this scheme or a separate scheme.

41. Do you agree with not supporting hybrid systems under the Clean Heat Grant?

No.

There is overwhelming disagreement with this strategy across our membership.

Risks/disadvantages of not supporting hybrid systems:

- There are many off-grid installations that will be unable to transition to a full low carbon heating system, without significant remedial changes to the property.
- Not supporting off-gas-grid hybrids would undermine the excellent progress made to date in this space and would result in far fewer heat pump installations.
- It removes a credible and practical option for poorly insulated homes to reduce their heating emissions significantly at the earliest opportunity
- It limits consumer choice
- It weakens energy system resilience by limiting fuel switching flexibility
- Risk of over-building renewable generation capacity and flexible power capacity at great expense

Opportunities/benefits of including hybrid systems:

- Hybrid heating systems are an important part of a decarbonised heating mix, avoiding the peak electricity demand issues of full heat pump solutions
- Hybrid systems help reduce the load on the gas system, increasing the proportion that can be supply by biomethane or hydrogen.
- There are already parts of the network where year-round biomethane levels are reaching the levels required to supply a boiler with green gas, should hybrid systems be widely adopted in the area.
- Hybrids offer the greatest carbon savings and do not lock-in fossil fuel any more than heat pumps or boilers on their own do.
- Hybrids offer an enduring and flexible solution whilst industry works to decarbonise gas and electricity. Maximising low carbon electricity when it is available and falling back on green gases when required.
- Hybrid heating systems can meet the energy demand for all dwellings irrespective of the energy performance of a building.
- Hybrid heating systems can optimise based upon cost, switching between renewable electricity with the heat pump and decarbonised gas with the boiler, to always guarantee lowest cost heat for a net zero outcome – of particular benefit to fuel poor households

IGEM urges you to review a paper prepared by Navigant on 'Benefits of Hybrid Systems in a low Carbon Energy System' for further analysis on the opportunities for hybrid systems.

There is strong agreement with the Committee on Climate Change (CCC) assessment that:

"It [the forthcoming Buildings & Heat Strategy] should be supported by tax or levy changes that favour low-carbon heating over fossil fuels and funding for capital grants (including for hybrid heat pumps) at a much larger scale than existing plans."

"Hybrid heat pumps should be eligible under future schemes (unlike proposals in the recent BEIS consultation)."

The commitment to hybrid heating systems, as part of a whole energy systems approach, needs to be adopted by BEIS in order to reach our net-zero target.

Compliance

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

No comment

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

The Green Deal Home Improvement Fund saw vouchers being claimed without having a legitimate customer 'attached' to the claim – and banking vouchers in anticipation of them being used. Mechanisms should be in place to avoid this happening with the Clean Heat Grant.

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

Claiming the money but not completing the installation.

There is support for any audit regime to include checks on the efficient running of the heat pump installation, so the consumer does not incur exorbitant fuel bills.

Geographical Area

Does your interest in this consultation relate to a particular geographical area? (select all that apply)

UK wide

Please note:

We are happy for our response to be published.

We would like to be contacted when the consultation response is published.