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## **Phasing out the installation of fossil fuel heating in homes off the gas grid**

Suffolk County Council welcomes the opportunity to contribute to this important consultation. The decarbonisation of heating in off-gas grid homes is a particularly significant issue in Suffolk, where approximately 92,000 homes, 24% of the homes are off the gas grid.

As set out in The Suffolk Climate Emergency Plan<sup>1</sup>, which is led jointly by all Suffolk Public Sector Leaders.

*“Some of our residents face acute challenges and may feel unable to take on saving the planet.”*

However:

*“Our energy actions take those residents into account by helping to ease fuel poverty, create new skills and job opportunities and to improve wellbeing. This is not going to be simple. We know where we want to get to, but we’ll need to build many of the stepping-stones to get there. We are confident that Suffolk will do this and lead the way.”*

Suffolk County Council considers that it is essential for the Government’s programme for the decarbonisation of heat in off gas grid homes to take the same

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<sup>1</sup> <https://www.suffolk.gov.uk/assets/planning-waste-and-environment/Pledge-to-climate-emergency-declaration/Suffolk-Climate-Emergency-Plan.pdf>

approach. Therefore, our principal concerns with the substance of this consultation are as follows:

- The proposals set out within the consultation are to end new installation of high carbon heating for off gas grid homes by 2026. Such an approach will expose the off-gas grid population to significantly greater risks of adverse outcomes because the technologies and markets, for alternative heating systems are immature. There is therefore a significant risk that existing inequalities and rural fuel poverty will be further entrenched. **The proposed heat pump first approach also has significant risks in these circumstances, in terms of perceived lack of choice and public acceptance.** (See question 1)
- **The vulnerability of rural distribution networks to extended outage is not adequately addressed in this consultation** (see question 6, 7 and 17). A heat pump first approach will increase the vulnerability of households to the adverse impacts of extended power outages. As high demand equipment, such as heat pumps, cannot be readily powered by modest backup or emergency generators.
- If the program for off gas grid domestic buildings is to retain the 2026 deadline, **there should be no heat pump first presumption**, (see questions 1, 2 and 3) rather the scheme should be technologically agnostic. Decarbonisation of domestic heat could then **respond to specific local circumstances and opportunities, encouraging the development of innovation and flexible local solutions.**
- A combination of both geographical and temporal phasing of this process, to ensure that localities with a concentration of “hard to treat” dwellings and fuel poverty, benefit from a more flexible approach, or a willingness by policy makers to accept widespread use of “drop in” alternatives such as, solid biofuel, or Hydrotreated Vegetable Oil (HVO). The **earliest adopters**, that is, those forced to change their systems due to the failure of an existing boiler in 2026, **are likely to face significant additional risk and cost in comparison with later adopters.** (See question 1, 2 and 14)
- **There is a significant danger of mis-selling as part of this process, many new entrants are likely to rush to the market, with some installers using the wider policy environment to drive consumers to make inappropriate decisions.** Furthermore, the consultation itself recognises that those occupants of off gas grid homes are more likely to be at risk customers including the elderly, single parent families and the disabled. (See questions 15 and 17)
- **Guidance should be provided, by Government to homeowners (and landlords),** that helps them identify if a heat pump solution is, or can be

made, appropriate for their home, and be supported by the local distribution network, but should also clearly **identify when this would not be appropriate or may be a marginal decision compared with other options.** (See question 4)

- If the 2026 deadline is to be retained, it is essential that **effective communication with the public, and especially at risk and vulnerable groups, takes place well in advance of the last date at which existing heating systems can be replaced.** (See question 15)

In summary, whilst the Council supports the ambition of a 2026 end date for installation of new fossil fuel heating systems, it does not consider that the proposed approach is acceptable or will achieve public acceptance.

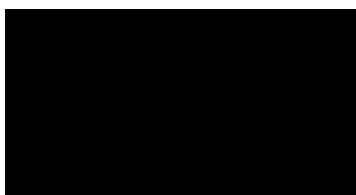
Furthermore, the proposed inflexible approach in terms of technology, does not adequately recognise the risks of further entrenching fuel poverty in rural communities.

The Council recognises that the decarbonisation of heat for those living off the gas grid is an important and difficult challenge, and that it is necessary to be ambitious to resolve this problem. The Council's intention is that its response will contribute to making that ambition a reality.

Detailed responses to the consultation questions are appended to this letter.

Separately, a *draft* of the *Suffolk Local Energy Asset Representation Report*, is also included in this submission. This document provides further information, relevant to this consultation. A link to the final version of this report can be provided following its publication.

Yours sincerely,



Richard Rout

Cabinet Member for Environment and  
Deputy Leader of Suffolk County Council

## Appendix

### **1. Do you agree with the principle of working with the natural boiler replacement cycle as the key trigger to deploy low carbon heat? Please provide evidence to support your response.**

Using the natural cycle of boiler replacement is likely to receive greater public acceptance, and retain public confidence, in carbon reduction and climate adaptation measures more widely. However, even if it is accepted that 80% of the 1.1 million off gas grid homes are, or can be made suitable for, low temperature heat pumps, on that basis, 220,000 homes are not suitable for such an installation. It is suggested these numbers should be treated cautiously, as the number of off gas grid homes may be incorrect, due to the misidentification of off and on gas grid, areas.<sup>2</sup> Furthermore, given that a more granular modelling approach is emerging in the Future Energy Scenarios, around Regional Heat Modelling,<sup>3</sup> it is suggested that this baseline assumption would benefit from further refinement.

The proposals set out within the consultation are to end new installation of high carbon heating for off grid homes by 2026, whilst at the same time the last date for on gas grid homes to phase out installation of new gas boilers is 2035<sup>4</sup>. Such an approach will expose the off-gas grid population to significantly greater risks of adverse outcomes because the technologies and markets, for alternatives, are immature. There is therefore a significant risk that existing inequalities and rural fuel poverty will be further entrenched. The proposed *heat pump first* approach also has significant risks in these circumstances, in terms of perceived lack of choice and public acceptance.

Therefore, it is suggested that if the program for off gas grid domestic buildings is to retain the 2026 deadline, there should be no heat pump first presumption, rather the scheme should be technologically agnostic. Decarbonisation of domestic heat could then respond to specific local circumstances and opportunities, encouraging the development of innovation and flexible local solutions.

### **2. Would a 2026 end date for the installation of fossil fuel heating in homes off the gas grid give industry and consumers sufficient time to prepare for the regulations? Please provide evidence to support your response.**

The roll out date of 2026 is challenging, therefore it would be appropriate to consider a combination of both geographical and temporal phasing of this process, to ensure that localities with a concentration of “hard to treat” dwellings and fuel poverty, benefit from a more flexible approach, or a willingness by policy makers to accept widespread use of “drop in” alternatives such as, solid biofuel, or Hydrotreated Vegetable Oil (HVO) in place of 28

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<sup>2</sup> p54 [Transforming Heat – Public Attitudes Research](#) Jan 2020

<sup>3</sup> <https://www.nationalgrideso.com/document/226971/download>

<sup>4</sup> p154 Heat and Buildings Strategy  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1036227/E02666137\\_CP\\_388\\_Heat\\_and\\_Buildings\\_Elay.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1036227/E02666137_CP_388_Heat_and_Buildings_Elay.pdf)

Second Kerosene. It is considered that this proposed approach is consistent with other Government proposals that, *“The use of sustainably produced biofuels should therefore be prioritised for the sectors in which they can make the greatest contribution to achieving our net zero targets. This means that for heating, any role for biofuels will likely be limited to use in off gas grid buildings in which a heat pump installation is not reasonable or practical<sup>5</sup>.”* (See question 3).

The earliest adopters, that is, those forced to change their systems due to the failure of an existing boiler in 2026, are likely to face significant additional risk and cost in comparison with later adopters. (This is expanded upon in the answers below)

To support the challenging 2026 timeline, it is essential to ensure Distribution Network Operators, DNOs, have the regulatory freedom required to undertake the necessary anticipatory investment. In addition, incentives to expand the availability and installation of alternative fuels, including solid and liquid biofuels, are required.

**3. Do you agree with a heat pump first approach to replacement heating systems in fossil fuel heated homes off the gas grid that can reasonably practicably accommodate a heat pump? Please provide evidence to support your response.**

The heat pump first approach should not be so doctrinaire as to limit customer choice. Whilst a heat pump will be both the most acceptable and practicable option in many cases, the public should have a range of options at its disposal to make informed choices. This is essential to retain public confidence in, and acceptance of, climate adaptive changes. Given the challenges of decarbonising heat in off gas grid areas, and especially rural areas, a pragmatic and technologically agnostic approach would be preferable, particularly considering the 2026 timeline.

Furthermore, although the consultation recognises the need to move heat pump systems away from hydrofluorocarbon-based refrigerants (HFC), it does not identify a pathway for this to occur. Therefore, a substantial roll out of heat pumps may embed significant legacy issues with gases that have a very high carbon dioxide equivalent, at a time when utility providers are phasing out the use of gases with high Global Warming Potential (GWP)<sup>6</sup>

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<sup>5</sup> P19 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1026607/clean-heat-market-consultation.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1026607/clean-heat-market-consultation.pdf)

<sup>6</sup> <https://www.energylivenews.com/2021/12/10/national-grid-futureproofs-its-assets-with-greener-insulating-gas/>

**4. Do you have any views on the design or content of guidance that will help households and installers determine whether it is reasonably practicable to install a heat pump? Please provide evidence to support your answer.**

There is a significant danger of mis-selling as part of this process, many new entrants are likely to rush to the market, with some installers using the wider policy environment to drive consumers to make inappropriate decisions.<sup>7</sup> Guidance should be provided, by Government to home owners, that helps them identify if a heat pump solution is, or can be made appropriate for their home, but should also clearly identify when this would not be appropriate, or may be a marginal decision compared with other options.

**5. Do you have any additional evidence on the size and characteristics of the cohort of homes off the gas grid that have the greatest deployment potential for ground source heat pumps?**

See question 17

**6. Do you agree that the performance of replacement heating systems in homes off the gas grid that cannot reasonably practicably accommodate a heat pump should reflect the current high standards of performance that can be delivered through high temperature heat pumps and solid biomass systems? Please provide evidence to support your answer.**

Whilst high temperature heat pumps (HTHP) are superficially attractive as an alternative to low temperature heat pumps in some circumstances. These systems, like heat pumps in general, are likely to be problematic across many rural areas where quality and consistency of electricity supply, across the legacy distribution network, may not be sufficient. *“For high temperature heat pumps, the biggest barrier is achieving a sufficiently high coefficient of performance such that the electrical demand does not exceed the maximum allowable current draw for a dwelling.”*<sup>8</sup> HTHP installations have significantly greater capital cost, a lower Seasonal Coefficient of Performance (SCOP) in comparison with a low temperature system, and connecting customers, in rural areas, are likely to be asked to upgrade their supply before installation.<sup>9</sup>

Therefore, the proposal to *“consult on the detailed criteria governing the choice of replacement heating systems where households cannot reasonably practicably install a low temperature heat pump ahead of implementation”*, is critical to eliminate fossil fuel from domestic heat by the late 2030's.

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<sup>7</sup> <https://www.theguardian.com/money/2018/nov/25/homeowners-trapped-solar-panels>

<sup>8</sup> p2

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/762596/Technical\\_Feasibility\\_of\\_Electric\\_Heating\\_in\\_Rural\\_Off-Gas\\_Grid\\_Dwellings.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/762596/Technical_Feasibility_of_Electric_Heating_in_Rural_Off-Gas_Grid_Dwellings.pdf)

<sup>9</sup> p39

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/565239/Domestic\\_High\\_Temperature\\_HP- FINAL2.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/565239/Domestic_High_Temperature_HP- FINAL2.pdf)

**7. Do you agree that future use of solid biomass to decarbonise heat in homes off the gas grid should be limited to rural, off-gas grid areas where air quality can be better controlled, and in ‘hard to treat’ properties that are not suitable for other low carbon heating technologies? Please provide evidence to support your response.**

In the absence of appropriate air quality control technology, it would be reasonable to limit solid biomass to both hard-to-treat dwellings and rural areas, and this being consistent with the Biomass Policy Statement.<sup>10</sup> Although it is noted that alternative liquid fuels may be suitable in pollution sensitive locations.<sup>11</sup>

However, definitions of rurality, and the potential impacts on consumer choice, as well as issues of acceptance would need careful consideration. Furthermore, it is agreed that “Hard to Treat” homes would need to retain maximum flexibility, notwithstanding a rural or urban location. However there appears to be some inconsistency between this consultation and the response to the Boiler Upgrade Scheme.<sup>12</sup> It is also likely to be appropriate to review the definition of “hard to treat”, to ensure that it adequately covers listed dwellings, dwellings in conservation areas, and dwellings where the distribution network cannot support adequate electric heating, even when the property itself may be suitable.

Furthermore, rural areas may offer additional opportunities to take innovative approaches that are not available in urban or peri-urban areas. Such as using biomethane,<sup>13</sup> either as fuel directly, or in local heat networks.<sup>14</sup> It is understood that the forthcoming Biomass Strategy will “*ensure sustainable sourcing and environmental and health protections*”<sup>7</sup> of biomass fuels.

**8. Do you have any views on the development of heating fuels and systems which will be consistent with wider government objectives on net zero emissions, environmental sustainability, and air quality, and offer a secure and affordable fuel supply to consumers, from 2026? Please provide evidence to support your answer.**

As discussed previously, given the combination of urgent need, short timelines, and limited development of market capacity, a technologically agnostic approach to decarbonisation of off gas grid homes would be preferred. For example, regarding the limited availability of alternative liquid fuel, set out in this consultation, this is being addressed by the UK Trade Remedies Authority.<sup>15</sup>

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<sup>10</sup> Pp25-26

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1031057/biomass-policy-statement.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1031057/biomass-policy-statement.pdf)

<sup>11</sup> P. 79 “PM emissions are up to 77% lower for biodiesel than heating oil”

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/831069/Bioenergy\\_heating\\_options\\_in\\_off-gas\\_grid\\_homes.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/831069/Bioenergy_heating_options_in_off-gas_grid_homes.pdf)

<sup>12</sup> P24 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1026446/clean-heat-grant-government-response.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1026446/clean-heat-grant-government-response.pdf)

<sup>13</sup> p48 <https://www.regen.co.uk/wp-content/uploads/Regen-Heat-Paper-WEB2-Single-Page.pdf>

<sup>14</sup> <https://bhesc.co.uk/rural-heat-networks-sussex-kent>

<sup>15</sup> <https://www.gov.uk/government/news/uk-trade-remedies-authority-proposes-trade-measures-for-biodiesel>

**9. Do you agree with an end date for the use of remaining fossil fuel heating in homes off the gas grid by the late 2030s? Please provide evidence to support your answer.**

This is an appropriate and realistic aspiration; however, for it to be realised it would need to be accompanied by a specific comprehensive strategy, and approach to; “hard to treat” dwellings as well as private rental properties and Homes of Multiple Occupation (HMO) the potential impacts on fuel poverty, and the entrenchment of existing inequalities.

For example, *“Overall, the average fuel poverty gap for households that were fuel poor in 2019 was £216. However, the average fuel poverty gap for fuel poor households in Rural Villages, Hamlets and Isolated Dwellings was £585.”*<sup>16</sup> It should be noted that this data applies to England only, and that conversations with devolved administrations are likely to identify even more significant issues of fuel poverty elsewhere.<sup>17</sup>

To meet this target, government will need to focus its efforts beyond the cohort of dwellings and localities which the market can reach, with minimal or no support. Furthermore, it will also need to focus its efforts on those who have the least available resources with which to make the transition. There is also a need to recognise that in rural areas fuel poverty, like poverty in general, can be hidden within apparently “affluent” areas<sup>18</sup>.

**10. Do you have any views on measures the Government could introduce to ensure that fossil fuel heating will no longer be used in homes off the gas grid by the late 2030s? Please provide evidence to support your answer.**

It is agreed that home sales or tenancy changes in the late 2030’s are likely to be an appropriate cut off mechanism for the decommissioning and replacement of legacy fossil fuel systems in domestic settings. Although such an approach may have a long tail beyond that date, it will maximise public acceptance and minimise hardship.

However, it is recognised that such a gradualist approach would not be appropriate in all cases, for example, for flats or HMOs with shared heating systems.

**11. Do you have any views on how best to ensure compliance with the proposed regulations laid out through this consultation? Please provide evidence to support your answer.**

If compliance control measures beyond the scope of building regulations, as suggested in the consultation are implemented, Local Authorities would need to be appropriately funded to carry out this work. The use of home sales and tenancy changes to drive technology change would be likely to minimise or eliminate the requirement for this.

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<sup>16</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1013323/Individual\\_fuel\\_poverty\\_section\\_-\\_word\\_final.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1013323/Individual_fuel_poverty_section_-_word_final.pdf)

<sup>17</sup> <https://www.scottishhousingnews.com/articles/highland-councillors-react-to-concerning-prevalence-of-fuel-poverty> : [https://www.eas.org.uk/en/scottish-fuel-poverty-map\\_59455/](https://www.eas.org.uk/en/scottish-fuel-poverty-map_59455/)

<sup>18</sup> Fig 5 - [https://www.healthysuffolk.org.uk/jsna/state-of-suffolk-report/sos19-where-we-live#Live\\_4.2\\_Fuel\\_poverty](https://www.healthysuffolk.org.uk/jsna/state-of-suffolk-report/sos19-where-we-live#Live_4.2_Fuel_poverty)



**12. Do you have any views on what more could be done to address financial barriers to heat pump deployment? Please provide evidence to support your answer.**

Heat pumps have a significantly higher upfront cost than current fossil fuel systems and some alternative low carbon systems, which presents a major barrier. The future planned mechanism of grant support (Boiler Upgrade Scheme<sup>19</sup> - £5k ASHP/£6k GSHP) does provide upfront capital assistance, but this alone is not considered generous enough to make the switch to a heat pump an affordable option for many households in off gas grid locations.

Use of finance products for heating systems is relatively low compared to use of finance for products such as cars, homebuying and other home renovations such as kitchens. While the finance industry is planning trials of new financial measures, coordinated by the Green Finance Institute, it remains to be seen what consumer uptake might be, especially when set against consumer desire to use finance for other more desirable products.

Government should ensure that consumers taking out any Government financial support for heat pumps are also permitted by Regulations to take out other financing options.

For those with a heat pump that do not have on-site renewable electricity generation, the price of electricity could be a significant issue for running costs. There are some heat pump tariffs available, however, these are not reflective of the lower carbon content of mains electricity, compared to higher carbon fuels.

Government should ensure the lower externalities of lower carbon fuels are rewarded. Government should work with financiers, energy retailers, and Ofgem, to ensure there are no barriers to development of specific heat pump tariffs and these are promoted effectively to consumers.

**13. Do you have any views on how we should encourage smart-enabled heating in homes off the gas grid? Please provide evidence to support your answer.**

No Comments

**14. Do you have any views on what more could be done to galvanise supply chains for low carbon heating? Please provide evidence to support your answer.**

The Government has an important role to play in creating certainty of a low carbon heating market, through policy and incentives and through anticipatory investment, supporting upskilling and new entrants to deliver the scale of growth needed to support the deployment of decarbonisation of heating.

Early adopters are needed to create momentum in the market, therefore, to accelerate this transition and galvanise supply chain, there must be central anticipatory investment to upskill and train this workforce. Through the creation of a wide and deep talent pool of competent workforce, market certainty, and confidence, is increased in those businesses that are already heavily involved in fossil fuel appliances, and looking to move to low carbon solutions, alongside new market entrants.

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<sup>19</sup> P15 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1026446/clean-heat-grant-government-response.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1026446/clean-heat-grant-government-response.pdf)

Decarbonisation of heating will be a task carried out in every household across the UK, this is an opportunity not to be missed with regards to work inspiration. We have always struggled with inspiring young people into work that they can't 'see or feel'. This work will be immediately in front of them and should be capitalised.

**15. Do you have any additional evidence on how groups protected under the Public Sector Equality Duty may be affected by our proposals to phase out high carbon fossil fuel heating in homes off the gas grid?**

The recognition in this consultation that occupants of off gas grid homes are more likely to be at risk customers, and elderly, is welcome, as is the recognition that these people may be at higher risk of early failure of existing heating systems, after 2026. Therefore, it is suggested that robust measures to protect these people from both mis-selling and fuel poverty after 2026 is essential, as is effective and early communication with this cohort.

It should be noted that this cohort is geographically focussed. For example, East Suffolk currently has a population over 65 of c27%, whereas the England figure is c18%<sup>20</sup>.

Within those more elderly residents there is a greater prevalence of women rather than men – in those aged 90 or over, 2/3 of the population in Suffolk are women. Measures which impact on older people disproportionately are therefore particularly likely to impact on older women, and gender is a protected characteristic.<sup>21</sup>

Healthy Suffolk<sup>22</sup> demonstrated that single parent families are disproportionately likely to be fuel poor, and hence those families may be hit particularly hard by requirements to phase out high carbon fossil fuel heating in homes off the gas grid, this is relevant under the protected characteristic of age (children).

We also know that there is a strong socio-economic gradient associated with disability, across households where the householder has a disability, and across households where a child or children have disabilities. These households are more likely to be relatively socio-economically deprived, and therefore hit disproportionately hard by an unfunded requirement to switch heating sources. The 2011 Census<sup>23</sup> asked everyone if their activities were 'limited a little bit' or 'a lot' in their day-to-day activities. 10.1% of Suffolk residents reported their daily activities were 'limited a little bit': a higher figure compared to the East of England and nationally. 7.9% said they were 'limited a lot', which was higher than the regional figure but lower than that for England.

See also questions 9; 10 and 17

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<sup>20</sup> <https://www.healthysuffolk.org.uk/jsna/state-of-suffolk-report/sos19-who-we-are>

<sup>21</sup> <https://www.ons.gov.uk/datasets/mid-year-pop-est/editions/mid-2019-april-2020-geography/versions/1>

<sup>22</sup> <https://www.healthysuffolk.org.uk/jsna/annual-public-health-report/aphr-2020-types-of-health-inequalities-in-suffolk/aphr-2020-protected-characteristics-quadrant>

<sup>23</sup> <https://www.ons.gov.uk/census/2011census>

**16. Do you have any views on what more could be done to ensure households, and communities, affected by our proposals experience a smooth transition to clean heat? Please provide evidence to support your answer.**

See question 1

**17. Do you have any further comments to make on our proposals to phase out high carbon fossil fuel heating in homes off the gas grid? Please provide evidence to support your answer.**

The current proposals, and their early implementation, are, without substantial additional safeguards, likely to lead to significant adverse impacts. Especially the further embedding of fuel poverty in rural areas, given the condition of housing stock<sup>24</sup>, the existing entrenched fuel poverty, combined with a population age profile<sup>16</sup> and a higher-than-average prevalence of disability in the population, such that occupants are more likely to be at home all day.

Finally, the vulnerability of rural distribution networks to extended outage is not adequately addressed in this consultation.<sup>25</sup> A heat pump first approach will increase the vulnerability of households to the adverse impacts of extended power outages at a time when the risk of these is expected to increase<sup>26</sup>, especially because high electricity demand equipment cannot be readily powered by modest backup or emergency generators.

As set out by Professor Richard Dawson in evidence to the Joint Committee on the National Security Strategy, when it was taking evidence on Critical national infrastructure and climate adaptation<sup>27</sup>

*"It is not just about power anymore, it is not just about electricity, but about all the services that support and back up. As we transition our infrastructure to a net-zero, reduced carbon emissions setting, we have to ensure that we do that in a way that does not enhance these challenges and that we are mindful of this increased reliance on electricity for powering all these critical services."*

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<sup>24</sup> Nearly half of the housing stock in Suffolk is over 50 years old and almost 1 in 5 (18.0%) houses were built before 1900 - L. Smith and J. Hill, "Suffolk Housing Stock Database: Headline Energy Report," 2015

<sup>25</sup> <https://www.ofgem.gov.uk/publications/terms-reference-review-networks-response-storm-arwen>

<sup>26</sup> <https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA3-Chapter-4-FINAL.pdf>

<sup>27</sup> P4 <https://committees.parliament.uk/oralevidence/3202/pdf/>