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UK ETS & heat networks - call for evidence

techUK's response

About techUK

techUK is the trade association which brings together people, companies and organisations to realise the positive outcomes of what digital technology can achieve. With around 1,000 members (the majority of which are SMEs) across the UK, techUK creates a network for innovation and collaboration across business, government and stakeholders to provide a better future for people, society, the economy and the planet. By providing expertise and insight, we support our members, partners and stakeholders as they prepare the UK for what comes next in a constantly changing world.

techUK's award-winning Data Centres Programme provides a collective voice for UK operators. We work with government to improve the business environment for our members. To date we've saved UK operators over £150M, alerted them to business risks, mitigated regulatory impacts and raised awareness, most recently negotiating key worker status for the sector. techUK is a signatory of the Carbon Neutral Data Centre Pact.

Introduction

techUK welcomes the government's commitment to encourage heat export and reuse. We appreciate the proactive steps taken by the Department for Energy Security and Net Zero to explore various measures to advance this initiative.

By providing heat to nearby communities or public and industrial facilities, data centres can reduce the reliance on fossil fuel-based heating, significantly cutting emissions beyond their own operations. The measures proposed in this call for evidence would establish a transparent system that acknowledges and rewards such efforts, at the same time making heat export projects more financially viable and sending the right market signals to stimulate investment and foster innovation.

This being said, we wish to highlight that the low activity in this space within the data centre sector in the UK is largely due to the lack of infrastructure and other challenges, rather than a lack of profitability perception. Our report titled "Warming Up to Efficiency: Understanding the Potential Benefits and Pitfalls of Data Centre Heat Export in the UK" as well as response to the consultation on heat network zoning proposals detail our position thoroughly. It is imperative for the government to prioritise the development of the necessary infrastructure,

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as the success of any incentives will ultimately depend on having the fundamental systems for heat export in place.

Furthermore, it is crucial to emphasise that the relevance of the UK ETS to most data centres is minimal. For background, data centres fall within the scope of the UK ETS primarily because of the installed combustion plants on-site, which include back-up generators. If a data centre's combustion units have a total thermal input capacity exceeding 20MW, it must be permitted under the UK ETS. Operators below this threshold have the option to opt out as ultra-low emitters (under Article 27a) after three years of compliance. This exemption applies to a significant number of UK sites. Consequently, while we appreciate the intention behind the proposals in this call for evidence, incentivising heat export via the UK ETS will not have a significant impact on the majority of the data centre industry.

Despite the above considerations, we respond to the call for evidence questions, representing the position of data centres that participate in the UK ETS.

Answers to consultation questions

Question 58: Do you agree that the UK ETS should be used to support heat offtake through the ETS? (Y/N) Please outline your reasoning and provide evidence to support your views.

Yes. The proposals included in this call for evidence would create a transparent system where all participants in the decarbonisation process are recognised and rewarded for their contributions. They also have the potential to offer financial incentives, leading to increased investment in heat recovery and driving long-term innovation.

Question 59: Do you have a view on what incentive mechanism (e.g., free allowances, subtraction of a number of allowances from the UK ETS obligation, etc.) would work best to encourage the export and utilisation of heat? (Y/N). Please provide as much detail as possible to support your answer.

techUK members believe that the provision of free allowances to data centres engaged in heat export activities would reduce the financial burden often associated with such projects, making them more economically viable. It would also send the right market signals, catalysing investment and encouraging innovation.

Question 60: Do you think that policies to incentivise heat offtake should apply to surplus or waste heat, as well as heat produced for the purpose of export? (Y/N). Please provide as much detail as possible to support your answer.

techUK believes that the most sensible approach would be incentivising heat offtake across all of these categories. However, this should be achieved through tailored mechanisms.

Offtake of surplus or waste heat should be encouraged through free allowances. For further details, please refer to our response to Question 59.

For heat produced specifically for export, reducing allowances is likely to be a more effective measure, particularly for heat network operators, as it would provide a stronger incentive for them to decarbonise.

Question 61: If an incentive is provided, how should the level of incentive be determined, e.g., should it be linked to emissions that are offset by exporting heat, the volume of emissions associated with the production of heat, etc.? (Y/N) Please provide as much detail as possible to support your answer.

For surplus or waste heat, incentives should be based on the emissions reductions achieved by exporting the heat, as well as the cost savings from avoiding CAPEX in alternative heat generation plants. This approach not only aligns incentives with environmental benefits, effectively promoting decarbonisation, but also provides the appropriate market signals to overcome current cost barriers, thereby enhancing the financial viability of heat export projects.

It is important to note that the primary emissions from data centres covered by the UK ETS are those from back-up generators rather than emissions arising from electricity consumption. The call for evidence does not explicitly address the concern that the incentives for heat recovery might disproportionately outweigh the actual emissions reductions achieved, given that back-up generators (used only for testing and during emergencies) have a relatively small carbon footprint.

As such, to ensure that the incentives for heat recovery are fair and effective, they should be aligned with the actual avoided emissions from heat recovery. The incentive mechanism should be adjusted to consider the emissions in scope of the UK ETS (from back-up generators), the avoided emissions resulting from reduced cooling needs for the data centre, and any additional emissions reductions at the off-taker's location.

The specific methodology for calculating the emissions offset should be developed in consultation with industry experts and stakeholders.

For heat produced specifically for export, we suggest the incentive is linked to the volume of emissions generated during heat production. This would encourage heat network operators to seek lower carbon heat sources.

Question 62: Do you have a view as to whether incentivising heat offtake through the UK ETS could have any perverse consequences? (Y/N). Please provide as much detail as possible to support your answer.

It is possible that incentivising heat produced for the purpose of export could have the unintended ramifications, such as prioritisation of heat generation over optimisation of energy efficiency where the incentives associated with heat offtake are perceived as generous. The industry consensus is that heat export should ideally be explored after a data centre has been optimised from an energy point of view. This is because residual heat represents energy which operators are paying for, but which is being lost because of physical inefficiency in the hardware. Aside from providing clear all-round environmental benefits, for data centres, energy efficiency translates into cost savings.

Perverse consequences could also arise if regulations related to heat export are implemented too fast or in a wrong order. Companies facing multiple new regulations in a short space of time, in this case the expansion of the UK ETS and the upcoming heat network zoning regulations, need to be properly supported and prepared. Otherwise, the effective development of heat export projects could be hindered by administrative and

financial burdens associated with meeting new, complex compliance requirements. While incentives for heat offtake within the UK ETS could motivate companies to act quickly, it is important to ensure that this urgency does not lead them to neglect critical aspects of heat export project implementation.

techUK members would also like to use this opportunity to alert the government to a potential issue that could discourage heat reuse if not addressed in the heat network zoning regulations. A recent German court case (C-207/23) ruled that a cogeneration plant should charge VAT on residual heat given away to a farm at no cost, illustrating potential regulatory pitfalls. As expressed previously, most data centre operators may not want to charge for supplying residual heat, treating this as a pro bono activity. Therefore, it is important to include a provision in the new regulations that allows for free residual heat without VAT, avoiding a situation similar to the one observed in Germany.

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