

Cabinet

Meeting date: 19 September 2023

Public Questions (2 total)

1. Question from Nick Hardy to Cabinet Member for Climate Emergency, Councillor Alisha Lewis

I have submitted a suggestion that the council look at the potential for deep geothermal energy to provide heating to the new developments. The town overlies a hot aquifer at around 2500m which could provide heating and hot water to the entire developments at Elm Park and Cyber Park - a source of energy that has been overlooked by both the council and developer (who have only included ASHP and GSHP system in their applications). The council's own "Climate Emergency Action Plan - Pathway to Net Zero" states that the council has a commitment to review the feasibility of alternative energy sources, new technologies and innovations.

Will the council look fully into this resource that could provide a continuous, fully renewable heating resource for houses, offices, school, medical facilities etc for many years to come as district heating plants have been running for more than 100 years in many area around the world and overlooked in this country (with the exception of Southampton which has been using this technology since 1986).

Cabinet Member response

CBC recently took part in a study funded by the Government Department for Business, Energy and Industrial Strategy (BEIS) working with a consultant specialising in renewable heat networks and district heating, to investigate the potential for heating zones within Cheltenham. The data from this study was fed into the evidence base for the new Energy Security Bill and has directly impacted current Government policy. We have been awarded further funding to carry out a more detailed Stage 2 feasibility study of two areas of interest, in order to explore the potential to develop heat network zones at the Golden Valley Development site and in the Town Centre.

The initial feasibility study focused on the renewable technologies of air and ground source heat pumps and combined heat and power. The capital expenditure for the proposed Network 1 was estimated at £4.9m and for Network 2 at £31.5m, although costs could be significantly more in light of current building costs price inflation.

The International Renewable Energy Alliance (IREA), found that geothermal energy was the second most expensive renewable energy source to install, due to the need for deep well drilling, suggesting that the initial cost may be greater than that for the proposed networks.

District heating allows for a relatively quick transition to lower carbon technologies, because areas can be decarbonised without changing heating systems at the building level. It can also allow a combination of multiple technologies, again something often not practical at the building level. The carbon benefits associated with heat networks offer a potentially cheaper and quicker transition over deep drilling for geothermal energy, but this requires more detailed cost benefit and risk analysis.

The council therefore remains open-minded in relation to the potential for utilising geothermal energy sources and indeed, how the government may look to support such technology, including the potential for public or private sector investment, in relation the UK's overall energy supply strategy.

2. Question from Saskia Whitfield to Cabinet Member for Climate Emergency, Councillor Alisha Lewis

Most councils have Climate Emergency Committees based on international Net Zero policies. However, 5G is recognised as a massive energy consumer. It has been projected to “increase power consumption by 61 times from 2020 to 2030, due to its energy demands” as reported in 2020 by the ABI Research Data Center Forum. It is said too that a 5G mast consumes 3 times as much energy as a 4G mast –

<https://ehtrust.org/report-5g-to-increaseenergy-consumption-by-61-times/>

Similarly, a report published by France's High Council on Climate warned that rolling out 5G technology could lead to a sharp increase in power consumption and greenhouse gas emissions. “The report, published in December 2020, found that 5G networks could be responsible for an extra 3 to 7 billion extra tonnes of CO₂ released into [the] atmosphere [in France].” https://www.hautconseilclimat.fr/wp-content/uploads/2020/12/hcc_rapports_5g-en.pdf

The whole Net Zero Climate Emergency agenda is based on the notion that human activity is already generating too much CO₂, which is heating up the earth. It is important to recognise that the resulting plan to implement Low Traffic Neighbourhoods, Active Travel and 15-minute cities all require the high-energy consuming infrastructure of the 5G network.

Please can the member for Climate advise how this is compatible with CBC's plans for Net Zero by 2030 and what steps are being undertaken to mitigate these effects on CO₂ emissions?

Cabinet Member response

5G is absolutely indispensable for driving technological growth and innovation. It is a cornerstone of maintaining a strong technology sector in the UK, which is vital for Cheltenham's economic growth and the success of the Golden Valley Development.

While we acknowledge the environmental impacts, as many new technologies come with environmental costs, we are keen to encourage proactive steps to reconcile 5G rollout with the needs of the planet. A 5G rollout that relies on eco-friendly infrastructure and energy-efficient equipment can ensure we continue to thrive technologically, whilst minimizing the carbon footprint of this technology.