VATTENFALL

A guide to the value of the heat network vs low carbon building level solutions in Bristol

Comparing heating systems and their value isn't straightforward. Each system differs in its initial costs, as well as the installation, operational and maintenance charges – so it's not a like-for-like comparison.

There is also no standard industry method for comparing heating solutions. To address this challenge, in April 2025, we produced a Bristol-specific assessment using real buildings with up-to-date cost data.

The report, developed with independent consultants: Stantec, Hoare Lea and Gleeds, provides a detailed view of system costs and performance for both connections to the heat network and typical alternative systems (referred to as a building level solution).

We've produced this guide to summarise the results.

Download report

Download the full report

If you have any questions or would like to discuss further, please contact our team at **bristolbusdev@vattenfall.com**.

How does the cost of the heat network compare to individual building level solutions?

The report shows that connecting to the Bristol heat network is **commercially comparable to other low carbon alternatives across capital, operational and the whole-life cycle costs**.

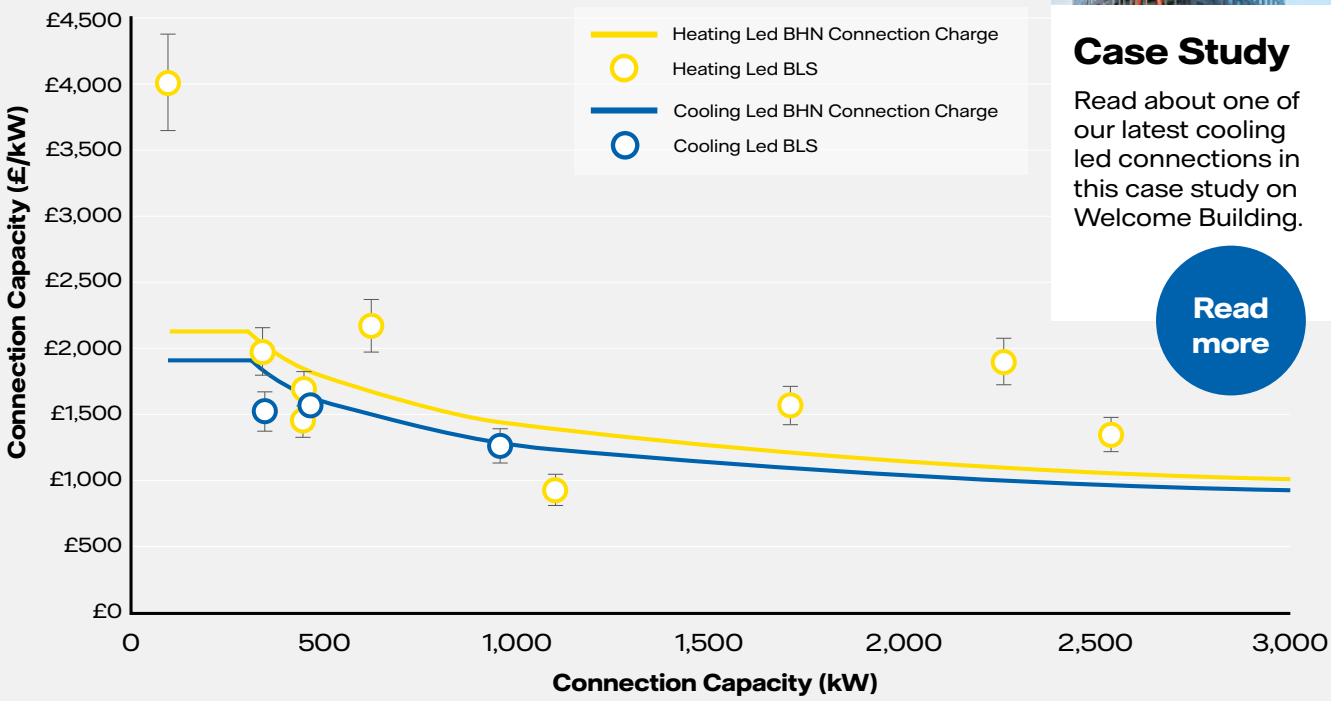
This table shows that the upfront and blended running costs associated with a heat network connection vs a building level solution are comparable across capital, operational and the whole-life cycle costs.

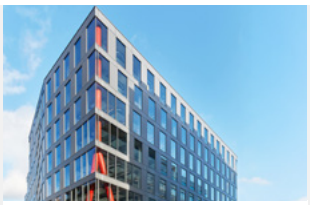
Type of cost	Heat network	Building level solution
Upfront connection costs (£ / kW of heating capacity)	Ranges from £1,000 to £2,115 /kW	Ranges from £900 to £4,000 /kW
Blended running costs (total annual bill including O&M, REPEX, fixed tariff & variable tariff)	27p / kWh / yr *(simple average)*	27p / kWh / yr *(simple average)*
40-year levelized cost of energy (heating and cooling)	36p / kWh / yr *(simple average)*	38p / kWh / yr *(simple average)*

Please note, row 2 provides a sample of blended running costs and is not an example of our fixed and variable tariffs. For our latest fixed and variable tariffs, visit the Bristol City Leap website for more information **here**.

VATTENFALL

This graph demonstrates the cost similarity of a heat network vs a building level solution for both heating (residential) and cooling (commercial) led connections.





Case Study

Read about one of our latest cooling led connections in this case study on Welcome Building.

Read more

Please note, heating led connections cover most residential developments, whilst cooling led connection cover most commercial developments.

Beyond cost: key considerations in heating system comparisons

While the report shows that connecting to the Bristol heat network is commercially comparable to other low carbon alternatives, it's important to recognise that not all benefits can be easily priced or included in a direct comparison.

The Bristol heat network offers several advantages that go beyond upfront costs:

1

Resilience and reliability

Unlike most building-level systems, the Bristol heat network has backup capacity from a city scale operation that maintains heat supply during maintenance or unexpected outages.

2

Electrical infrastructure

Buildings using alternatives such as air source heat pumps require significantly more electrical capacity. By connecting to the heat network, the buildings in this study reduced electrical demand by 15% in comparison to their alternative solution. This could save on costly grid reinforcement works and increase available capacity for other developments.

3

Structural and spatial requirements

Alternative solutions typically require rooftop plant and associated structural reinforcements, adding complexity and cost to developments. Heat network plant space requirements are of equivalent size, but connections are at ground floor or basement level freeing up rooftop space for increased accommodation, gardens or solar.

4

Lifecycle and maintenance

We host the heat source (an energy centre) away from your building, meaning there is no need for maintenance, upgrades or replacement of individual systems on site. Vattenfall manages all maintenance and replacements, reducing cost and management responsibilities for building owners, whilst ensuring maximum efficiency of operations and minimising disruption for tenants.

VATTENFALL

Why is the heat network good for Bristol and its built environment?

The Bristol heat network is a strategic infrastructure investment that strengthens the city's energy security, both now and in the future. The Bristol heat network supports the city's net zero ambitions by enabling city-scale decarbonisation of heat across both new and existing buildings, making Bristol a place where people want to live, work and invest.

1

Credible sustainability credentials

Bristol's advanced heat network infrastructure is a tangible demonstration of its **climate leadership**, helping developers meet ESG targets and attract sustainability-focused investors.

2

Planning alignment

The Local Plan mandates heat network connections for new developments, ensuring long term integration and growth.

3

Scalable and future-ready

The Bristol heat network is designed to expand with the city, with investment into new low carbon energy centres being developed to deliver reliable, low carbon heat to a growing number of buildings.

4

Unlocking new heat sources

Innovative projects like the **University of Bristol's computing heat recovery** show the network's ability to integrate innovative energy sources.

5

Supporting value creation

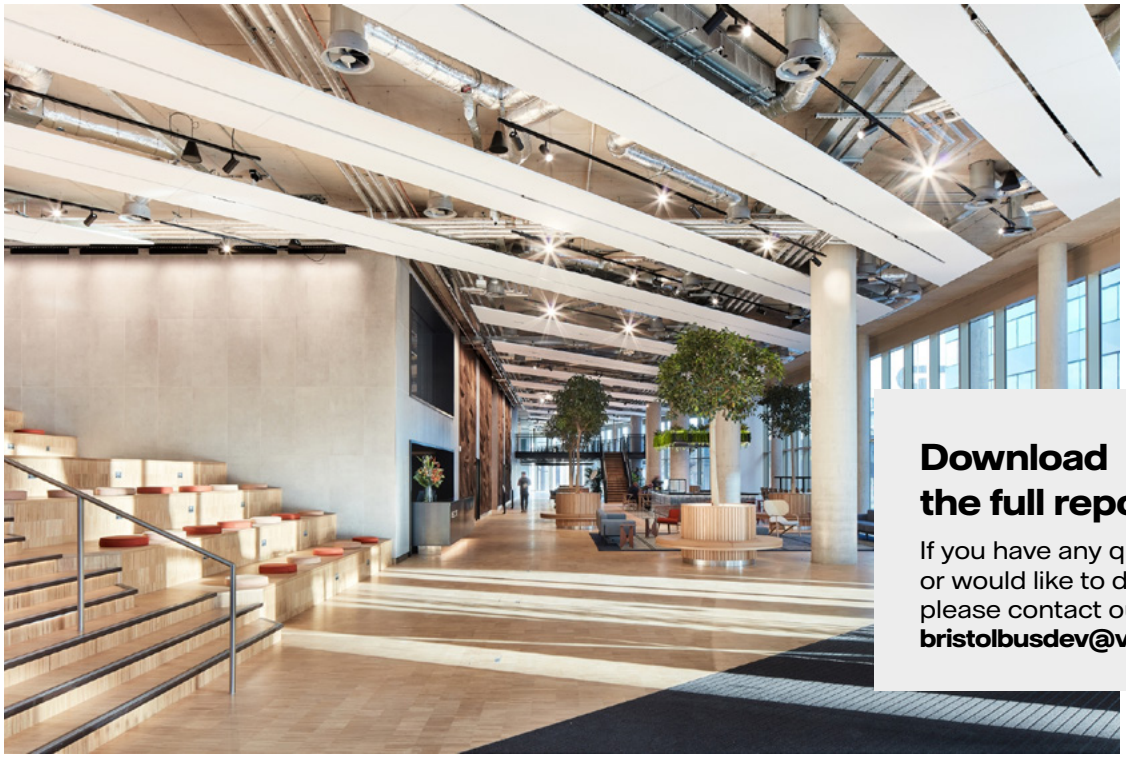
By improving EPC ratings, freeing up space and reducing operational complexity, the Bristol heat network enhances the commercial viability of developments whilst improving the quality of the city's property.

6

Prioritising consumer protection

As the statutory regulator, Ofgem will have oversight of pricing practices with powers to intervene if they believe pricing principles are not being adhered to. The requirement of treating customers fairly will be an overarching condition for all operators and suppliers.

For developers and investors, the Bristol heat network offers a heating solution that will adapt to technological innovation and regulatory change, reduces heating carbon intensity and contributes to the long-term resilience and appeal of Bristol's built environment. For building operators, the management and responsibility of a heating system is removed, with the end users (tenants) benefiting from reliable heating.



Download report

Download the full report

If you have any questions or would like to discuss further, please contact our team at **bristolbusdev@vattenfall.com**.