Energy UK

Heat Networks Industry Council

Heat Networks

Driving local growth through a new economic model



August 2026

Executive summary

The UK has embarked on a historic journey: transitioning around 30 million buildings to low-carbon heating sources. Heat networks are likely to be the primary solution for densely populated urban environments, complementing the role of key technologies such as heat pumps and heat batteries.

Heat networks are large-scale infrastructure that supply domestic and non-domestic customers with heat produced from a central source and are common across much of Europe. The Government's Warm Homes Plan recognises that heat networks will offer the lowest cost form of clean heat to more than 50% of the UK's largest towns and cities and are likely to supply almost 20% of the UK's heating demand by 2050; up from around 3% today.[1]

Supporting heat network development is a significant growth opportunity for the UK, with the sector expected to unlock £5 billion of investment by 2030, £17 billion by 2035 and £100 billion by 2050. Heat networks also bring significant community benefits and energy system savings. The flexible capacity alone that heat networks with large thermal stores can provide has the potential to save customers between £5 billion and £7 billion in avoided distribution network upgrades to 2035.[2]

The sector is ready to deliver on the ambitious targets that the Government has outlined in the Warm Homes Plan. But this investment is predicated on greater policy support from Government; the current policy framework is not consistent with achieving these targets nor realising the benefits that heat networks can enable.

The current situation is challenging – city-scale heat networks are struggling to compete on price with buildings that have existing gas systems. Incumbent gas boilers are around 50% cheaper for building managers to own and operate than connecting to a new low-carbon heat network.[3] This is hampering growth in this strategically significant sector.

The combination of high non-domestic electricity prices and the significant capital costs incurred by laying kilometres of pipes under busy, city-centre roads, means heat networks face challenges in competing commercially with existing gas systems. Long timelines for development, connecting customers and reaching revenue maturity mean accessing affordable, patient capital is a challenge to developers.

Realising the potential of heat networks in line with Government targets will require a step change in policy support.

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[1] Department for Energy Security and Net Zero (2026), Warm Homes Plan
[2] Department for Energy Security and Net Zero (2026), Warm Homes Plan
[3] Please see section 1 of the appendix for more details

In the short term, an additional public investment of £1 billion would crowd in significant private capital, enabling £5 billion worth of heat networks projects currently unable to reach Final Investment Decision (FID) to come to fruition by 2030.[4]

From 2030, a Regulated Asset Base (RAB) funding structure would provide the revenue assurance needed to help close the gap to gas – enabling other grant funding schemes to be withdrawn and boosting investor confidence, which would help reduce the Weighted Average Cost of Capital (WACC) of these projects, lowering customer's bills.[5]

From 2035, legislating for the decarbonisation of non-domestic buildings would be the most effective and low-cost option for Government, as heat network operators would be competing on price with other clean heat technologies. Introducing minimum energy efficiency standards (MEES) for non-domestic buildings, in combination with additional policies that help reduce the cost of electricity to businesses, would help lower the level of intervention required to begin scaling the heat networks sector in the UK.[6]

Heat networks present a strategic opportunity to the UK: attracting billions in private investment, and unlocking thousands of jobs to support growth in communities across the country, while ensuring customers in urban environments have access to the cheapest source of clean heat. With the right policies, these benefits are within our reach.

Heat networks provide multiple benefits to the energy system

Heat networks bring multiple benefits to their customers, local economies, and energy system savings.

Heat networks can deliver 17% lower bills for large non-domestic buildings in densely populated urban areas compared to in-building air source heat pumps (assuming no subsidy support for the heat network, and pre-industry cost reductions for capital and operational costs).[7] Through the Government's heat network zoning methodology, the Warm Home Plan estimates that heat networks could represent the lowest-cost, low-carbon heating option for more than 50% of buildings in cities such as Manchester and London.[8] Some heat networks can also offer cooling, meaning they can meet the changing energy needs of buildings that are susceptible to urban heat and extreme heatwaves.

Low-carbon heat networks that take advantage of demand diversity across hundreds of buildings require much less electrical capacity to serve the same amount of heat to a given set of buildings when compared to individual heat pumps on those same buildings[9]. This

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[4] Please see section 2 of the appendix for more details

[5] Please see section 3 of the appendix for more details

[6] Energy UK and the Confederation of British Industry (2026), Cutting Business Energy Costs: The case for action

[7] Please see section 5 of the appendix for more information

[8] Department for Energy Security and Net Zero (2026), Warm Homes Plan

[9] Heat Network Technical Assurance Standard, Draft Technical Standard 1, Page 73

means that if the heat networks sector expands significantly, the UK will require much less generation, storage, transmission and distribution capacity than if heat networks were not built. This translates into savings on electricity bills from avoiding some of the upgrade costs for the electricity system that would otherwise be required.

Growing the heat networks sector to deliver 20% of space heating by 2050 is a £100 billion investment opportunity for the UK. Heat Networks Industry Council (HeatNIC) members aim to draw £5 billion investment into new heat network infrastructure in the UK by 2030 and £17 billion by 2035, before ultimately unlocking £100 billion investment by 2050.[10] HeatNIC estimates that the sector will sustain around 48,000 direct jobs in 2050, rising from a baseline of 4,000 in 2024.[11] The total number of jobs that the sector supports could rise to 100,000 by 2050.[12] These inherently local jobs will span a broad range of different responsibilities and skillsets, adding lasting economic value to the communities hosting new heat networks and creating collaborative opportunities for local colleges to provide appropriate training and direct routes into employment.

Heat networks are a key devolution opportunity, with heat network zoning aiming to empower local governments to direct and deliver decarbonisation opportunities for its constituent buildings in a way that meets the needs of its community. Tackling the cost of low-carbon heat is key to realising this ambition.

The Warm Homes Plan estimates that heat networks could save energy customers between £5 billion and £7 billion in avoided electricity distribution network upgrades to 2035, where they are meeting 7% of heating demand – owing to the flexible capacity that heat networks with large thermal stores can provide to the wider system.[13] However, the total system savings generated by heat networks will be much greater, as this modelling does not account for savings in the transmission and distribution network, storage, renewable generation or interconnection services.

Energy UK's 'Better Connected: Unlocking heat network potential' prospectus provides more detail on the myriad benefits of heat networks and shares a range of case studies from its members.[14]

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[10] Please see section 2 of the appendix for more information

[11] Energy UK (2026), Clean Heat: Jobs and skills for the future

[12] The ONS multiplier for the construction sector shows 5.35/£m and 11.85/£m for direct and indirect jobs, respectively, yielding a multiplier of 2.215. 48,000 direct jobs therefore equates to 106,000 direct and indirect jobs in the heat networks sector. Taken from: ONS (2025), Employment multipliers and effects in the UK

[13] UK Government (2026), Warm Homes Plan

[14] Energy UK (2026), Better Connected: Unlocking Heat Network Potential

The heat networks sector is at a critical juncture

The Warm Homes Plan has, for the first time, published the Government's vision for growth in the heat network sector. This includes the ambition for heat networks to deliver 7% of heat demand by 2035, up from 3% in 2026.[15] While the funding and policy support announced for heat networks in the Plan were welcome, there remains a substantial gap in the viability of realising this ambition due to the high cost of low-carbon heat.

Heat networks need support to overcome the cost challenge of low-carbon heat, so that the sector can start to build from its nascency and unlock the economic, community and energy system benefits heat networks will bring.

Heat networks have a higher Weighted Average Cost of Capital (WACC) compared to other utilities, such as electricity distribution networks, because of the lack of policy certainty and demand assurance facing the sector. Furthermore, operators of heat networks producing heat with large air source heat pumps are exposed to high non-domestic electricity prices.[16] This combination of significant capital and operational costs mean heat networks struggle to compete on price with incumbent gas boiler systems.

With £5 billion worth of projects unable to reach FID, there is a material risk that global investors do not see the UK as a viable market for investment without further government action.[17] Projects are at risk of being abandoned by investors, which would lead to public money already invested returned to the Green Heat Network Fund (GHNF). This would lead to key demand loads being lost for the long-term as boilers are replaced like-for-like in the absence of a viable alternative. This puts wider government projects, such as heat network zoning, at significant risk.

Analysis by HeatNIC finds that a typical non-domestic customer connecting to a low-carbon heat network would have a system that is 11p/kWh more expensive to own and operate than an existing gas boiler. In other words, their energy costs would increase by around 50%.[18]

The industry is ready to play its part in driving cost reductions and has formally committed to Government that it will strive to reduce capital and electricity costs by 7.5% and 20% respectively by 2030.[19] Developers are driving down capital and operational costs in many ways, for example through use of directional drilling, which is a more efficient way to lay pipes, and time-of-use tariffs allied with large thermal stores to optimise heat generation costs. These measures bring wider energy system savings that benefit all customers.

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[15] Department for Energy Security and Net Zero (2026), Warm Homes Plan

[16] Energy UK and the Confederation of British Industry (2026), Cutting Business Energy Costs: The case for action

[17] Please see section 2 of the appendix for more information

[18] Please see section 1 of the appendix for more information

[19] Commitments made by HeatNIC on behalf of industry

However, industry alone cannot drive the cost of low-carbon heat to equivalence with the cost of gas heat.

Without action to address the cost of low-carbon heat to customers, developers cannot secure demand assurance and investor confidence. This risks losing a £100 billion investment opportunity, along with the thousands of new jobs it will create, while increasing the cost to customers of decarbonising the UK's building stock.

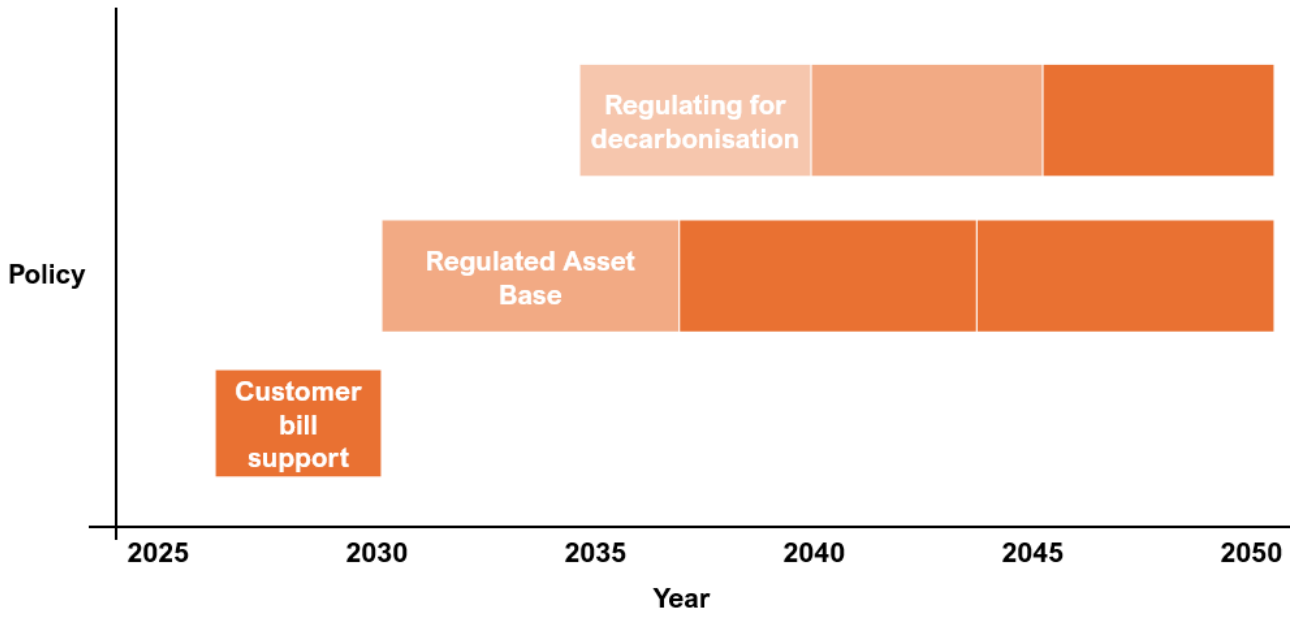
The cost of low-carbon heat challenge must be resolved

Meeting the Government's growth trajectory for the low-carbon heat network sector relies on laying pipes in the ground and building energy centres today. It takes years for a heat network to be fully built out, and a large volume of customers connected. While there are regulatory levers that the Government can pull to remove barriers to development, together they are insufficient to fully close the gap to gas and ensure clean heat from heat networks can compete commercially with incumbent gas boiler systems.

The Government must take action to resolve the cost of heat challenge to enable heat networks to start being built today.

In this paper, three sequential policy solutions are explored that can build on one another to bridge the gap for low-carbon heat, as set out in Figure 1. They are explained in more detail below.

Figure 1: Sequential policy intervention that would help to scale the heat networks sector. The darkest orange blocks denote the period in which the policy intervention will likely have the biggest material impact on the sector.



1. Customer bill support – bridging the gap to gas for near-term developments with £1 billion Government investment between 2027 and 2030.

Five billion pounds' worth of heat networks projects are ready to build but currently unable to reach Final Investment Decision (FID). A £1 billion public investment in the short-term to 2030, in addition to what has already been committed by Government, would enable these projects to be taken forward. [20]

This investment would help bring down costs to consumers connecting to heat networks to enable an initial cohort of city-scale, low-carbon heat networks to commence operation before 2030. Global investor confidence in the sector hangs in the balance, and a £100 billion investment opportunity risks being lost if the UK market is not deemed to be a viable market for growth. Enabling these projects to start laying pipes will enable proof of concept of these large schemes, helping to increase skills, knowledge and capacity in the sector that will in turn enable more development.

Public investment should be announced at the Autumn Budget 2026 and be available from April 2027.

2. Introduce a Regulated Asset Base (RAB) for heat networks.

What is a RAB?

A RAB is a funding mechanism that enables the pooling of public and private investment into the building of monopoly utility infrastructure, and is commonly used for water, gas and electricity networks. A RAB allows investors to receive a guaranteed return on investment for the lifetime of the asset.[21] It is a tried and tested funding model that has created significant public-private investment into large-scale infrastructure in the UK.

A heat network is like many other utilities in that once a building is connected, it effectively becomes a monopoly supplier of an essential, regulated service.

The benefits of a RAB funding structure

There are two primary benefits of using a RAB funding structure for heat networks, which includes reducing the Weighted Average Cost of Capital (WACC), thereby lowering the prices charged by the heat network to customers, and providing a price control that offers further protection.

A RAB funding structure will lower the WACC for new heat network developments by providing regulated returns for investors, boosting confidence and reducing risk. The WACC for electricity distribution networks is typically 3.9%, a relatively low rate that is helped by the regulated returns that networks can offer their investors.[22]

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[20] Please see section 2 of the appendix for more information

[21] Low Carbon Contracts Company (2026), Regulated Asset Base

[22] Ofgem (2022), RIIO-ED2 Final Determinations Finance Annex

Today, heat networks currently have a higher WACC because their revenues are unsecured by regulation. There is also a high proportion of equity investment in the sector.[23] Private sector investors may evaluate the heat network over much shorter periods than the operational life of the asset, and at a level of return that accounts for the risk associated with a nascent sector. A heat network developer may have to pay back investors over 20 years, despite the infrastructure being operational for more than 100 years.

Lowering the WACC will help significantly with reducing the cost of heat. HeatNIC estimates that, for a low-carbon heat network with a WACC of 10%, lowering this by 4.1 percentage points (to 5.9%) through a RAB covering 80% of CapEx would typically equate to a 5.3p/kWh reduction in the Levelised Cost of Heat (LCOH), which is nearly 50% of the gap to a gas boiler.[24]

How could a RAB for heat networks be established?

Establishing a RAB funding structure would require primary legislation that would confer new powers to Ofgem to develop RABs for heat networks. Ofgem would confirm the value of payments that need to be made to the licenced heat network operator under its RAB. This would typically be administered by a third party, such as the Low Carbon Contracts Company (LCCC), which runs the Sizewell C RAB.[25] The powers for Ofgem to establish a RAB for heat networks could be taken in the forthcoming Energy Independence Bill.

The design of the RAB would need to be tailored to heat networks, but it should cover the construction and operational phase to drive the biggest reduction in WACC.

How could a RAB be paid for?

As with existing RAB models, the aim for heat network RABs should be that they are ultimately in the future paid for solely by the heat customers. However, this is only reasonable once the customers are connected to the network, once there are sufficient heat network customers connected nationally, and only up to the point where costs are competitive with alternative heating systems.

Under the current policy environment, this would mean that heat customers do not pay for the RAB costs even once the heat network is operational because the low-carbon heat network costs that are not covered by the RAB are already higher than a gas boiler (Figure 4 in Section 3 of the appendix). However, if action is taken to reduce non-domestic electricity prices or regulate for an end to the installation of new gas boilers in non-domestic

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[23] Department for Energy Security and Net Zero (2026), Warm Homes Fund: Call for Evidence

[24] The LCOH is total cost to a consumer per kWh of a low-carbon heat network. This cost includes total lifetime capital costs and operational expenditure, incorporating the required return on investment. It includes current policy support, such as the Green Heat Network Fund.

[25] Low Carbon Contracts Company (2026), New nuclear project will deliver low carbon power and long-term value for consumers

buildings to change the counterfactual, then direct heat customers would pay some, or all, of the RAB costs.

Until the policy and regulatory environment enables RAB costs to be paid for by heat network customers, there is a range of alternative payment options. This includes exchequer funding, socialising costs across bills, or a hybrid approach of the two.

A RAB funding structure reduces the WACC and helps to close the gap to gas. By additionally shifting the remaining costs either to taxation or to be socialised across a broader base of customers, the LCOH gap can be reduced significantly from 11p/kWh down to 0.76p/kWh.[26] In this scenario, the RAB is the only policy support structure required from Government, which means capital grant schemes such as the Green Heat Network Fund can be withdrawn.

In a scenario where the RAB is funding 80% of the expected £100 billion in capital costs of all new heat networks being developed up to 2050, the annual cost of the RAB is estimated to be around £4 billion per year.

The most progressive way to pay for the RAB costs is through the Exchequer. This is the fairest approach, with higher income households contributing more and avoiding a scenario where low-income households with high energy consumption are disproportionately affected.

Paying for the RAB across electricity bills would only be viable in a scenario where heat networks are delivering sufficient energy system savings – such that non-heat network customers still experience a net saving on their bill once the cost of the RAB has been factored in. Energy UK is committed to exploring all options to reduce electricity prices and would therefore only support socialising these costs where heat network development still leads to lower bills for all customers.

City-scale heat networks with large thermal stores provide flexible capacity that reduce transmission and distribution network upgrade requirements, suggesting this scenario would be possible. Indeed, the Government's Warm Homes Plan estimates £5 billion to £7 billion of savings can be achieved by 2035 as a result of heat network development.[27]

Socialising costs on a geographic basis could help ensure customers experience only a net saving on their bill. For example, a local DNO could collect the tariff for the RAB via network charges, but would also be passing savings onto customers from avoided distribution infrastructure upgrades, enabled by the flexible capacity of the heat network. A geographical approach would mirror aspects of the Thames Tideway Tunnel funding structure, where part of the investment is recovered from local customers' water bills.[28]

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[26] Please see section 3 of the appendix for more information

[27] Department for Energy Security and Net Zero (2026), Warm Homes Plan

[28] Stonehaven (2026), Recycling Heat

A hybrid funding approach could see the Government funding the RAB in the construction phase, before moving to socialise the cost once the heat network is operational across the connected customers – or electricity customers if it is tangibly bringing benefits to the energy system and lowering bills as a result.

As with Sizewell C, allowing revenue during construction and not just operation would reduce the overall risk profile of the heat network project and therefore enable a lower cost of capital from the outset, delivering greater savings to connected customers. [29]

Energy UK will undertake additional analysis of the cost-benefit of funding heat network development via RABs compared to the potential system savings that they can bring to energy billpayers. This will also take into consideration the avoided capital costs to owners of buildings where connecting to a heat network in a zone is cheaper than installing individual clean heat technologies.

3. Regulating for decarbonisation

A reliance on gas in the UK is pushing up energy bills and increasing costs across the economy. The price of gas has been the biggest driver of the overall increase in energy bills since 2021.[30] Gas is not only volatile in price but also polluting. In 2023, buildings accounted for 17% of UK emissions, of which the use of fossil fuels for space heating and hot water was the primary contributor.[31]

Helping households and non-domestic buildings to move off fossil fuels will support energy security, bring down bills, and help progress towards the UK's carbon obligations.

Removing barriers to clean heat and improving customer choice is essential to the decarbonisation of buildings. Regulation will also have a role to play, particularly in the non-domestic sector, providing clarity and a future roadmap for building performance.

Strengthening minimum energy efficiency standards (MEES) in the non-domestic private rented sector to improve minimum performance and carbon standards for heating systems would change the nature of the conversation for heat network developers and their prospective customers. The Government's national zoning methodology shows that low-carbon heat networks can be the lowest-cost decarbonisation pathway for many high-demand buildings in town and city centres. From an investor's point of view, regulating for decarbonisation will help facilitate negotiations by changing the counterfactual from incumbent gas heating systems to new clean heating technologies.

The Government has recently announced its plans to raise MEES to Energy Performance Certificate (EPC) B by 2031.[32] However, the intervention is limited by two significant caveats

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[29] Slaughter and May (2025), Regulated Asset Base models

[30] Energy UK (2026), UK Energy Transition

[31] Climate Change Committee (2025), Seventh Carbon Budget

[32] Department for Energy Security and Net Zero (2026), Minimum Energy Efficiency Standards (MEES) in the non-domestic Private Rented Sector: interim response

included in the proposed regulations. Firstly, the standard will only apply to buildings over 1,000 square metres, which comprise just 6% of all commercial buildings, and secondly, only measures with a maximum seven-year payback period are in scope.[33] This means that many small premises on town-centre high streets that would be suitable for a heat network connection would not be in scope of the MEES. The limitations on payback period further make the case for connection challenging. These caveats need resolving to ensure MEES can have the maximum positive impact on decarbonisation of the non-domestic sector. It is also important that the EPCs that underpin the MEES suitably incentivise and reward the presence of clean heating systems in the building.

If MEES for non-domestic buildings were introduced today, this intervention would create a level playing field for clean heat technologies, and reduce the scale of additional intervention and public investment that is currently required to grow the clean heat sector. However, the high cost of non-domestic electricity prices means it would be challenging to implement this policy without further action to bring down bills to enable clean heat to be competitive with fossil fuel systems. This includes the measures set out in Energy UK's recent report 'Cutting Business Energy Costs' published in partnership with the Confederation of British Industry (CBI).[34]

The Government should urgently progress its commitment in the Warm Homes Plan to reduce non-domestic electricity prices, to support the implementation of stronger regulation. These regulations could then be introduced from the mid-2030s, once low-carbon heating systems are more widespread and customers more familiar with clean heat options. These conditions may enable the Government to introduce stronger regulations still, such as ending the installation of gas boilers in non-domestic buildings.

In the near-term, delaying the decarbonisation trajectory for heat networks by allowing a greater proportion of gas generation would help to reduce the Levelised Cost of Heat to an extent. A long-term decarbonisation trajectory has been the approach in many countries both historically and in recent years. Denmark gradually decarbonised from 50% of generation from fossil fuels in its heat network infrastructure in 2013, down to 13% in 2023.[35] The European Union's Energy Efficiency Directive Article 26 requires district heating to use at least 50% low-carbon heat sources until 2040, at which point the threshold rises to 75%.[36] In contrast, heat network zoning regulations in England will require 85% of heat generated in energy centres to be derived from low carbon sources from 2030.[37]

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[33] Energy UK and the Confederation of British Industry (2026), Cutting Business Energy Costs: A blueprint to boost growth

[34] Energy UK and the CBI (2026), Cutting Business Energy Costs: The case for action

[35] RAP (2025), Making Europe's homes 'Hygge'

[36] European Union (2024), COMMISSION RECOMMENDATION 2024/2395

[37] Department for Energy Security and Net Zero (2026), Heat network zoning consultation 2023: summary of government response

However, allowing greater use of gas in heat network developments would not sufficiently close the gap to gas boilers on its own. Analysis by HeatNIC finds that dropping the carbon allowance threshold for heat networks down from 85% to 68% low-carbon generation reduces the gap to gas for heat networks from 11p/kWh to 9p/kWh.[38] While this change marginally closes the gap to gas, it is insufficient to make a material difference to connection negotiations and subsequently demand assurance. Therefore, additional government support would be required even if higher-carbon thresholds were allowed for a period of time.

Conclusion

Developing heat network infrastructure will bring significant economic and social benefits to the local communities they serve across the whole of the UK, as well as delivering bill savings to all customers of the energy system.[39]

The heat networks sector represents a £100 billion investment opportunity for the UK, with the potential to unlock 100,000 jobs by 2050. However, this is at risk of being lost if the Government does not take further action to improve investor confidence over this Parliament.

Reducing the cost of low-carbon heat from heat networks will improve demand assurance by facilitating negotiations between city-scale heat network developers and prospective customers.

Establishing a RAB funding structure in the medium-term would be the most impactful intervention by Government in terms of reducing the overall cost of infrastructure and providing regulated returns to investors.

[38] Please see section 4 of the appendix for more information.

[39] Energy UK (2026), Better Connected: Unlocking Heat Network Potential

Appendix

1. HeatNIC analysis finds that the cost to a non-domestic end customer of being supplied by a low-carbon heat network is around 11p/kWh more expensive than a gas boiler under existing policies.

HeatNIC commissioned modelling by Capital NG Limited to illustrate the 'levelised cost of heat' (LCOH) as a total cost to a consumer per kWh of a low-carbon heat network. This cost includes total lifetime capital costs and operational expenditure, incorporating the required return on investment. It is compared to the total lifetime cost of heat from a gas boiler.

The 'gap to gas' is referred to as the total value of support that is needed, and which can be delivered via a range of policy levers, as explored in the paper. The value of the gap to gas will depend on the generation technology. Heat networks utilising water-source heat pumps require the most support; air source heat pumps a medium level of support, and waste heat the least support.

For a heat network utilising large air source heat pumps, the additional cost to the end customer relative to a gas boiler is 11p/kWh, as shown in Figure 2.

Figure 2: HeatNIC Levelised Cost of Heat (LCOH) waterfall diagram based on existing policies. Generation mix is 85% air source heat pump and 15% gas boiler. The gap to gas is shown before and after support received from the Green Heat Network Fund, and pledged industry cost reductions.



Under existing market frameworks, heat networks can derive electricity cost savings from tariff-led flexibility, where they utilise large thermal stores to shift demand at times when power is cheapest. However, energy market design needs to be improved further so that large-scale flexible assets like heat networks can more easily participate in capacity markets, and secure additional revenue from dispatchable flexibility.

2. **The heat networks sector requires £1 billion public investment to unlock £5 billion of total investment in the UK by 2030 to help it begin scaling up from a nascent market.**

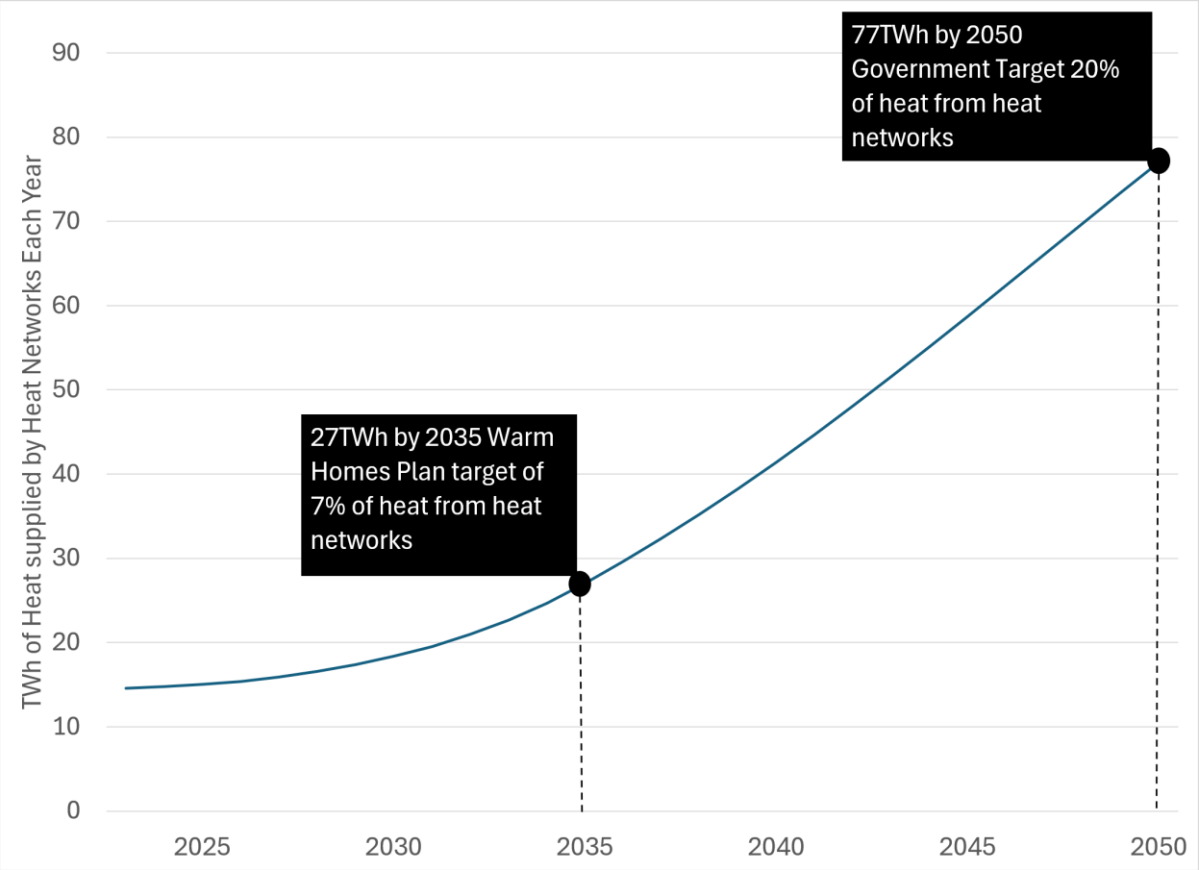
Figure 3 shows the growth in the supply of heat from heat networks required to meet the Government's ambitions in the Warm Homes Plan. This chart illustrates that heat networks are expected to supply 18.4TWh of heat by 2030, up from 15.4TWh in 2026. Heat networks are built out slowly, owing to the time required to construct energy centres, connect to the grid, lay pipes, negotiate long-term contracts with customers and connect them.

In the short term to 2030, £5 billion investment is required for the sector to deliver 18.4TWh. However, projects being planned today are unable to reach Final Investment Decision (FID) due to the lack of revenue certainty which is in part owing to the high cost of low-carbon heat.

With an 11p/kWh LCOH differential between low-carbon heat networks and gas boiler systems, a public investment of £1 billion would close the gap to gas to 2030 and ensure that low-carbon networks are a competitive proposition for customers.

This support can then be replaced as progress is made on policy developments such as introducing a RAB, reducing non-domestic electricity prices, and providing a clear, regulated pathway for non-domestic decarbonisation.

Figure 3: Heat supplied by heat networks (TWh/yr) according to Warm Homes Plan growth assumptions 2023 – 2050.



3. A Regulated Asset Base (RAB) would reduce the Levelised Cost of Heat (LCOH) from heat networks.

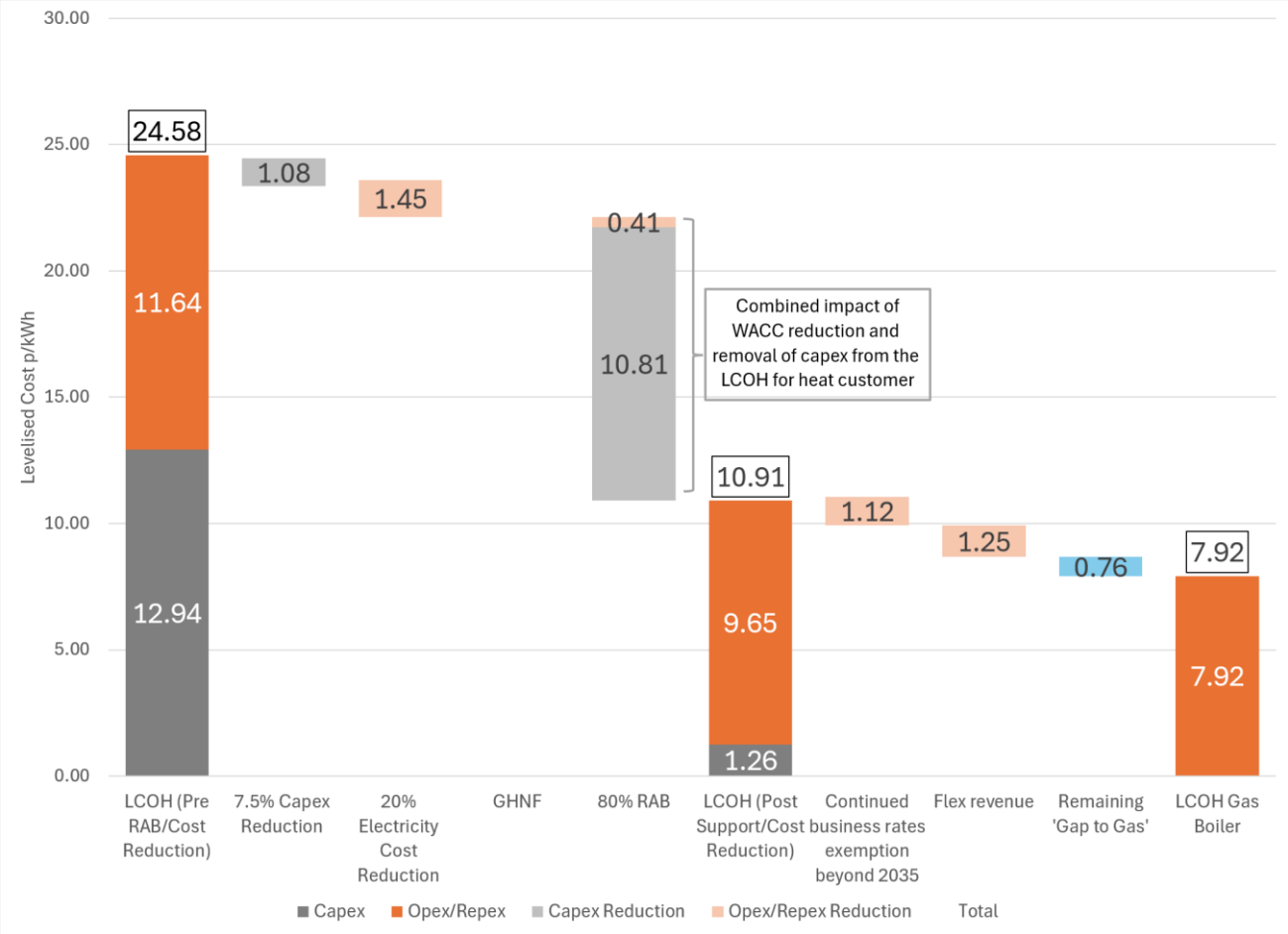
Figure 4 shows that where a RAB covers 80% of the CapEx for a low-carbon heat network, then the gap to gas is reduced significantly, from 11p/kWh down to 0.76p/kWh.

The RAB removes a total of 11.22p/kWh from the LCOH.

If 80% of the expected £100 billion CapEx to 2050 for heat network infrastructure up to 2050 is supported by a RAB, the annual support would rise to around £4 billion per year as shown in Figure 5. This figure shows the effect of the WACC reduction stemming from a RAB (before and after curves, plus the difference curve). For presentational purposes, we have shown the LCOH in Figure 2 and the initial LCOH in Figure 4 as though business rates are being paid from 2035 onwards. The current exemption that applies to heat networks is then highlighted in the waterfall diagram, which takes 1p/kWh off the LCOH. Energy UK's recommendation is that this exemption continues from 2035. Energy UK will explore further

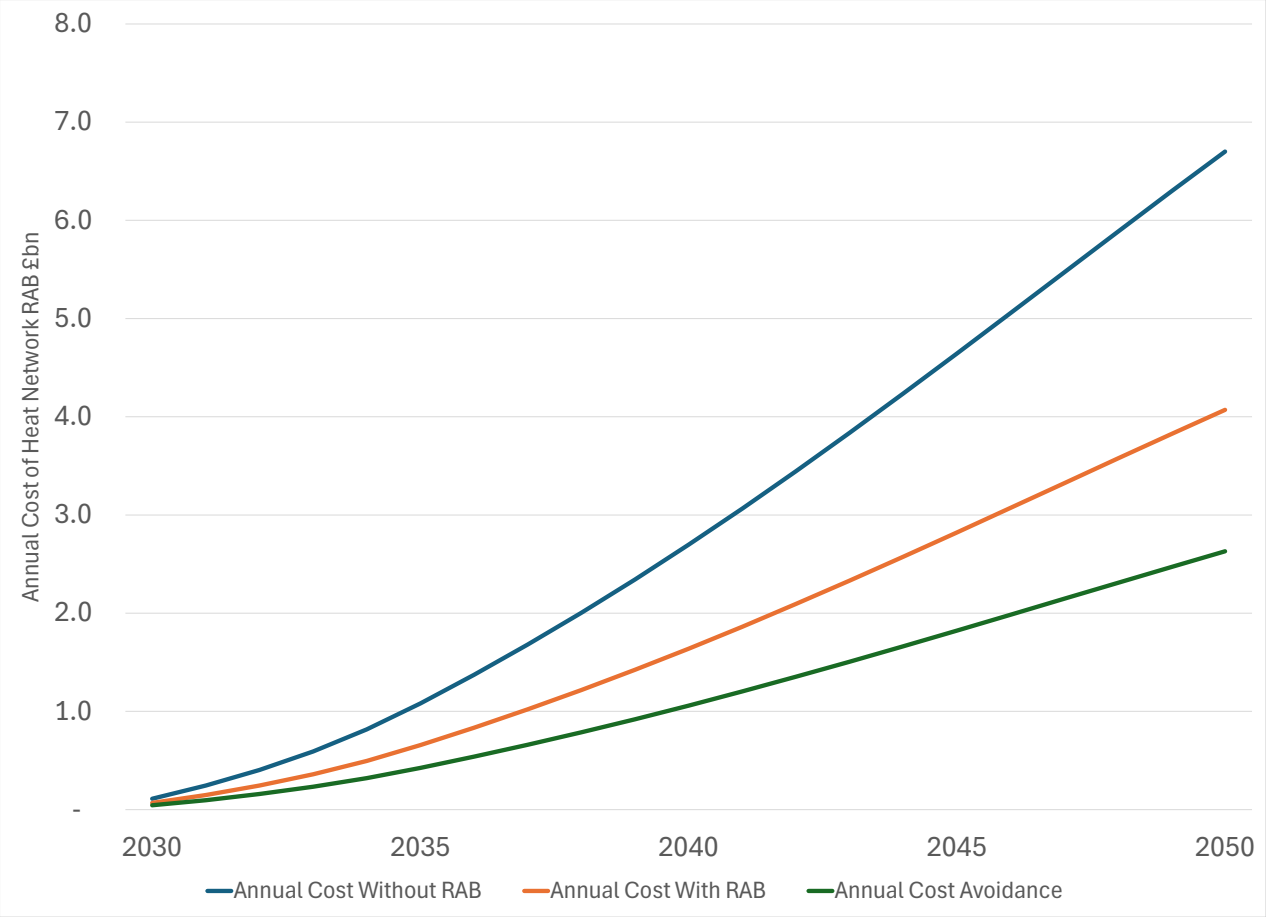
how this can be achieved in its forthcoming paper on regulation to support growth in the clean heat sector.[40]

Figure 4: HeatNIC levelised cost of heat (LCOH) Waterfall Diagram, where 80% of CapEx is under a Regulated Asset Base, and the generation mix is 85% air source heat pump and 15% gas boiler.



[40] Energy UK (2026), Clean Heat Hub

Figure 5: Total annual cost of heat network RABs from 2030 to 2050, where 80% of total CapEx is paid for through the RAB.



4. Delaying decarbonisation trajectories for heat networks reduces the gap to gas.

Figure 6 presents analysis conducted for HeatNIC showing the impact on the gap to gas of heat networks with low or medium carbon intensity. This table shows that the viability of a new scheme increases as the carbon allowance rises because the gap to gas, the counterfactual price, will be lower. However, the difference is not material enough to have a significant impact on addressing the high cost of new heat network developments and improving demand assurance.

Figure 6: Impact on Levelised cost of heat (LCOH) and gap to gas where greater carbon allowances are introduced.

Heat source for heat network ▼	Low-carbon	Medium-carbon
85% ASHP, 15% gas boiler	ü	
68% ASHP, 27% CHP, 5% gas boiler		ü
40 yr average heat carbon factor (gCO_2/kWh):	42	164
Remaining gap to gas (proxy for level of subsidy needed) (p/kWh):	10.65	9.19

Adding a CHP to supply electricity to the ASHP reduces LCOH by 1.85p, and increases carbon intensity to 164gCO2/kWh for the time that the CHP is in use (CHP would be turned off when electricity is cheaper from the grid).

5. Heat networks reduce the total cost of decarbonising heat for large non-domestic buildings in towns and city centres by 17%.

Analysis conducted for HeatNIC shows that the levelised cost of heat from a heat network to a high demand non-domestic building in a city-centre environment will be on average 17% cheaper compared to an in-building heat pump system. This analysis is consistent with findings from new government-backed research on the counterfactual cost of installing individual building air source heat pumps for large non-domestic buildings in some locations.[41]

HeatNIC estimates that the LCOH from a heat network to a non-domestic building is on average 24.58p/kWh, compared to 29.68p/kWh to install and operate a non-domestic building-specific low carbon heat solution (generating 85% of its heat from heat pumps, and the remainder from retained gas boilers). The cost drivers for these average prices are set out in Figures 7 and 8.

This scenario assumes no government support for the heat network, and pre-industry cost reductions for capital and operational costs. This is because GHNF is not guaranteed for every project, and the industry cost reductions are targets rather than currently delivering reductions in cost.

Figure 7: Cost drivers for supply to a non-domestic building by a low-carbon heat network in a dense, city-centre environment.

Cost item	Levelised cost (p/kWh)	Includes
Fuel	8.21	Electricity and gas, network heat losses
O&M	0.8	Operations and maintenance
RepEx	0.67	Accrual for plant replacements
Other costs	1.96	Additional electricity fixed charges to increase capacity for heat pumps, business rates
CapEx (Incl ROI)	12.94	Capital cost for heat network (and investor return), without any grant funding
Total	24.58	

[41] UK District Energy Association, Department for Energy Security and Net Zero, AECOM and WSP (2026), Heat revenues and connection charges counterfactual study

Figure 8: Cost drivers for supply to a non-domestic building by a building-specific, low-carbon heating solution (generating 85% of its heat from heat pumps, and the remainder from retained gas boilers) in a dense, city-centre environment.

Cost item	Levelised cost (p/kWh)	Includes
Fuel	6.01	Electricity and gas
O&M	0.53	Operations and maintenance
RepEx	3.10	Accrual for plant replacements
Other costs	0.52	Increased electricity fixed charges for additional capacity to supply heat pumps
CapEx	19.52	Capital cost (and investor return) for installation of air source heat pumps, including heat pumps, structural works to support heat pumps, acoustic treatment, mechanical and electrical engineering works, electrical system reinforcement
Total	29.68	

Heat Networks Industry Council

Energy UK is the trade association for the energy industry, representing companies investing billions of pounds to secure our country's current and future energy needs.

From growing start-ups to major electricity generators, grid and infrastructure developers and energy suppliers, our members are driving change across power, heat, transport and flexibility.

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The Heat Networks Industry Council (HeatNIC) is a joint industry and Government forum that exists to grow the heat network sector and help deliver long-term transformation of the UK energy system.

Heat networks are one of the most cost-effective ways of providing secure, reliable and affordable heat to consumers whilst enabling us to meet our net-zero targets.

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