



# Community Heat Hubs

Delivering zero carbon heating for low density housing

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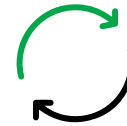
# Future-Proof Heating for New Communities

Introducing GTC's Community Heat Hub solution for low-rise developments – the ultimate future-proof solution for heating new homes and businesses while meeting the latest planning regulations and achieving future net-zero goals. As we transition from gas, our Community Heat Hub provides a cost-effective, straightforward, and sustainable solution for new development, with the added benefit of substantial cost savings for housebuilders and residents.

GTC's Community Heat Hub award-winning solution is

**Innovation of the Year 2024**

Showhome Awards



## Simple Gas Swap

For housebuilders, it's a straightforward swap from gas. The gas pipe is replaced with our heat pipe, and the gas boiler is replaced with our heat interface unit (HIU). Plus, there is no need for a hot water cylinder. For planners, no external plant or equipment maintains a clean exterior without impacting the street scene.



## Added Peace of Mind

Our established heat business, Metropolitan, owns all equipment, including the HIU and meter. Residents are free from maintaining or replacing equipment or managing breakdowns, with everything covered in their bills.



### Highly Sustainable

Our solution meets the Future Homes Standard, with high-efficiency heat pumps supplying hot water through our highly insulated heat network. It will achieve net-zero emissions without further work and will help minimise grid demand in the meantime.



### Cost & Space Saving

Our solution is cost-effective, with around £1,000 lower cost per plot than fitting individual Air Source Heat Pumps (ASHPs). No external kit or hot water cylinder saves space. Plus, using public open space for the Community Heat Hub, with fewer domestic substations avoids loss of valuable development land.



### Lower Energy Bills

Residents' annual energy costs will be typically 20% less than those of homes with individual ASHPs. Charges are fully inclusive, and Ofgem-protected billing and service standards provide added peace of mind.



### Smart Grid Efficiency

Thermal stores use green electricity to store two hours of hot water, allowing operation of plant to be time-shifted and optimised. This reduces site peak grid demand by 45%.



### Green Communities

Our Community Heat Hub serves as a focal point and flagship environmental initiative. We can collaborate on social and environmental activities, fostering community and environmental stewardship.



# A multi-utility provider you can trust

**GTC is part of the BUUK Infrastructure Group, the leading provider of last-mile multi-utility networks in the UK, giving you assurance that we're a solid choice. As a group we operate networks serving more than 2 million homes, and we've led the way in opening up the utilities sector to competition and new levels of customer service.**

BUUK Infrastructure provides multi-utility networks on new-build developments across England, Scotland, and Wales, securing contracts in the competitive market through our Metropolitan, GTC, and Power On businesses.

We can design, construct, own and operate all the utility networks for a development, providing investment and expertise to lower the upfront installation costs.



## A winning team

We already own and operate heat networks and we have built on this experience to offer an innovative and cost-effective heat network solution for low-density sites. Our scalable heat network design is the ultimate future-proof means of heating new homes and businesses to meet the latest planning regulations and achieve future net zero.

**From start to finish you can trust us to deliver.**



Our team manage **every stage** of the heat hub and network build. We understand the importance of constructing quality assets and getting it right first time.



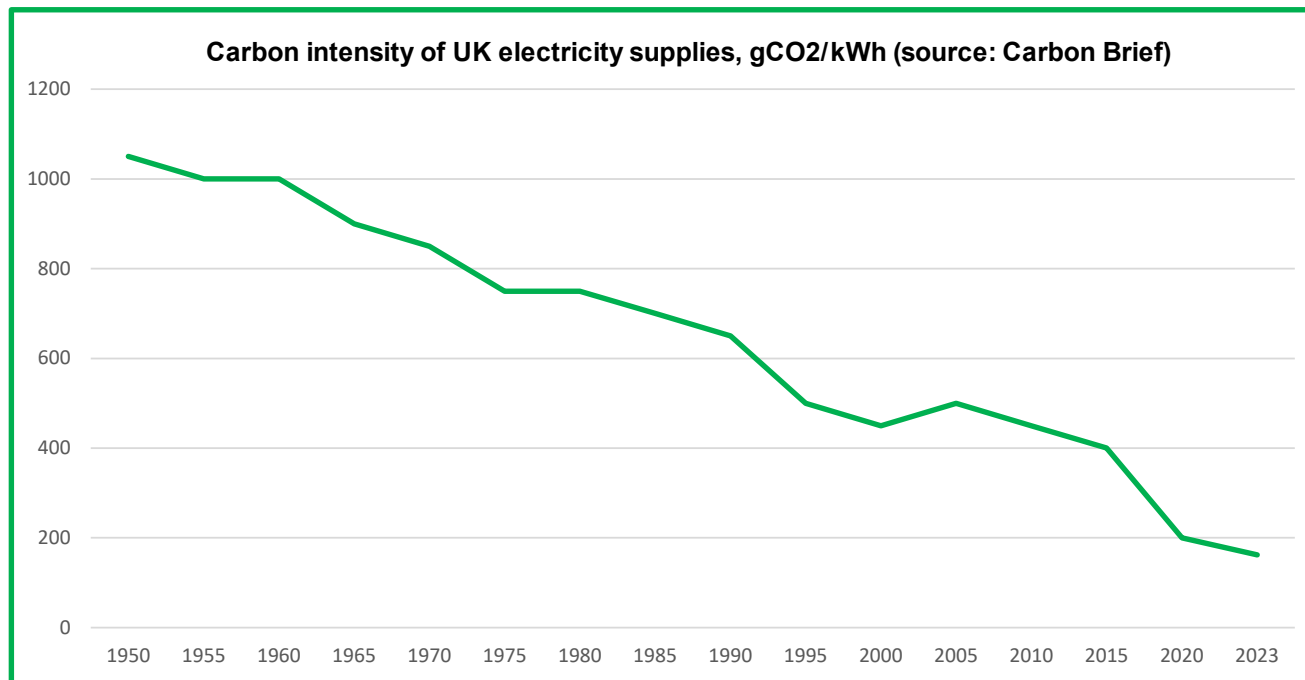
We provide excellent ongoing support and service for customers. It's our mission to deliver **reliable low carbon heating** and a high quality customer experience.



# The road to net zero

**Reducing carbon emissions and finding alternative solutions is now a top priority for the UK with Building Regulations supporting the transformation.**

Our networked heat pump solution provides a sustainable heating approach that will significantly contribute to net zero plans across the country and help homeowners transition to low carbon heating smoothly. The heat hub smoothly transitions to net zero as the grid decarbonises.



## Did you know?

The amount of CO<sub>2</sub> associated with each unit of electricity in the national grid has reduced since 1950. There has been a shift away from coal to lower carbon fuels and, more recently, to renewables. In 2023, fossil fuels reached a record-low 33% share. Renewables (including wind, solar and hydro) contributed 43%. Carbon intensity fell to a record-low. UK government aims to fully decarbonise the grid by 2035.

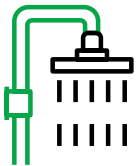
Source: [www.carbonbrief.org/analysis-uk-electricity-from-fossil-fuels-drops-to-lowest-level-since-1957/](https://www.carbonbrief.org/analysis-uk-electricity-from-fossil-fuels-drops-to-lowest-level-since-1957/)



# Leaving **fossil fuels** behind

Burning fossil fuels, like gas and oil, releases carbon dioxide (a greenhouse gas) which contributes to climate change. Heat networks are part of the plan to remove individual gas boilers - so heating homes becomes **cleaner and greener**.

**But what is a heat network?** Put simply, heat pumps in a central community heat hub will generate low carbon heat that's delivered to homes on a development through a network of pipes.



Heat pumps take heat from the air, ground or water and boost the temperature using a compressor, a bit like a fridge in reverse. The heat is then sent into the network so that it's ready to keep each **home cosy on the coldest of nights** and to make sure anyone can have the steamiest of showers, whenever they want one.



Until recently, heat networks have operated with water temperatures of around **85-90°C**. New building regulations and industry guidelines now allow us to operate at lower temperatures, making plastic pipes a practical long-term solution and heat networks a very competitive option for low-density housing.



Our innovative new design uses highly insulated plastic pipes to carry water at 60°C, making it a much more **cost-effective** way to heat sites while still keeping our customers' homes reliably warm. Plus, there's no need for a cylinder in the home as the network will provide instantaneous heat and hot water.



# The community heat hub explained

Low carbon heat is produced in a community heat hub using **large-scale, heat pumps, powered by low carbon electricity**. Heat is pumped to each home, in the form of hot water, using our underground flow and return high efficiency pipe network.

The thermal water storage tank in the Community Heat Hub will be replenished when wholesale electricity costs are lower. This store will reduce peak demand on the grid, reducing the need for reinforcement. Back-up electric boilers ensure a resilient supply of hot water.

The community heat hub enables a smart grid. The heat hub is a single, controllable exit point for the electricity grid. Thermal stores are a pragmatic demand side response (DSR). The stores provide two hours of storage in the coldest winter conditions, and longer at other times. This allows the plant in the heat hub to be switched off when demand on the grid is high. This gives potential to reduce site wide grid capacity.



We are working on ways to further improve smart heat network designs to reduce requirements on the grid at peak times. This work is being done with electricity operators and funded by the regulator Ofgem. We are exploring additional thermal stores and battery storage at the heat hub.



## Being part of something new

Everyone wants to love where they live, that's why each of our community heat hubs is designed to fit in with the local surroundings. Heat will be pumped to each home using underground pipes, making sure nothing looks out of place and that there's no unsightly equipment spoiling the view.

### Hassle free heating and hot water

Every home will have a Heat Interface Unit (HIU) - which is about the same size as a gas boiler - and an integrated smart meter.

As the network provides instant heat and hot water homes don't need a cylinder, which saves valuable space.

Metropolitan own and maintain all the equipment, including the HIU, so our customers don't need to worry about a thing.



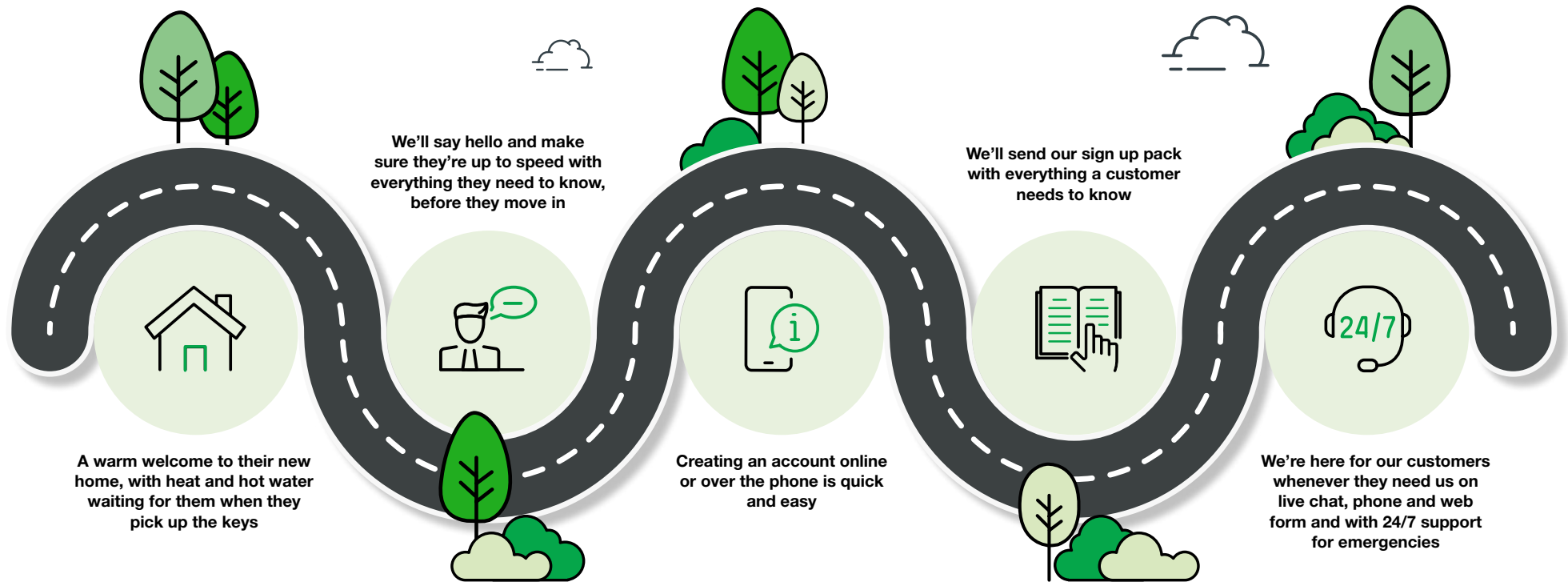
### Did you know?

Heat networks aren't new. There are already over 14,000 heat networks in the UK supplying heat and hot water to around 500,000 homes. Most of them are in our towns and city centres but we're ready to start making the change outside our urban areas.

# For our customers

At Metropolitan we're determined to help our customers leave gas boilers in every home behind us and look to a cleaner, greener heating future. We want to make zero carbon heating easy and straightforward for all.

**We'll be there to help from the day customers move into their new home.**





## Customer choice

**Every customer is different. Our service is designed to make sure that they can set up their account in a way that suits them.**



We know that one size doesn't fit all, that's why we offer a number of **different ways for our customers to pay bills**. We also know there are more interesting things to do than pay for heat, so we want to make it easy. Fixed Direct Debit, variable Direct Debit, online banking or card – it's their choice.



Keeping in touch – we're flexible! Customers can let us know how best to keep them updated. An online account keeps everything together and **easily accessible**.



Every so often we all need some extra support, and we want to be able to help all our customers in the best way possible. That's why we ask them to let us know if they or anyone in their home needs a little **extra support**, perhaps because of their age, health or a disability, or if they're going through a difficult time in their lives. It doesn't matter whether it's a temporary or a permanent situation.



# Making pricing and payment **simple**

**Living on a heat network won't cost more.** It's important to us that our prices are fair and that we're transparent about how they're calculated. We want to reassure our customers that their heating bills won't typically be any higher than those for a new home using an individual heat pump.

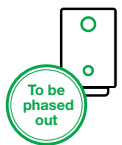
A key benefit for customers on a heat network is that they pay an all-inclusive price, that rolls all the heat they use, repair and replacement, plus maintenance and servicing costs into one.

There are no additional bills for servicing or emergencies, giving customers peace of mind that there won't be any nasty surprises.

This isn't always the case for homes heated by a traditional gas boiler or individual heat pump where these costs, plus the long-term cost of replacing the equipment, can be additional to the monthly heating bill.

Our prices include continuity of service with the comfort of knowing that any servicing, maintenance and future replacement costs are covered.

In addition, government will regulate heat networks from 2024 offering our customers complete peace of mind that their prices and the standard of service they receive will be protected.



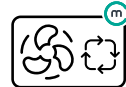
### Gas boiler includes:

- Daily standing charge
- Gas used
- VAT

### Extra costs

- Servicing & maintenance
- Repair
- Replacement

### Recommended



### Heat network ASHP includes:

- Daily standing charge
- Heat used
- VAT
- HIU and smart meter maintenance and repair
- HIU and smart meter replacement
- Network maintenance and repair



### Individual ASHP includes:

- Daily standing charge
- Electricity used
- VAT

### Extra costs

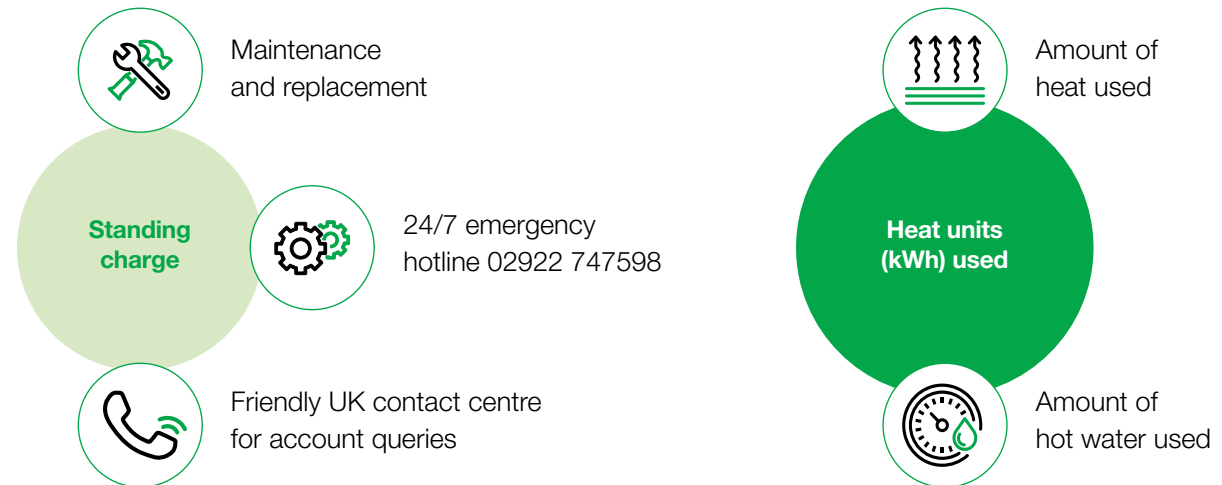
- Servicing & maintenance
- Repair
- Replacement

# Our promises

- We'll always offer a variety of ways to pay
- Our prices will be fair and guided by the UK Regulator for Heat
- We'll always let customers know at least 31 days in advance of any changes to our prices
- We won't review our prices more than once every 6 months
- We'll always send clear bills or statements that are easy to understand
- We'll support those who are struggling to pay their bills

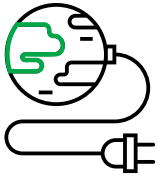
# How we calculate our bills

We use 2 pieces of information to calculate our bills, the standing charge and the heat units used. The standing charge is a fixed, daily cost that contributes towards the upkeep and management of the heat network, heat hub and Heat Interface Unit. The number of heat and hot water units used is tracked by a smart meter and the unit rate is applied. All customers pay VAT at 5%.



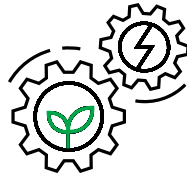
# Putting customers first

You can be sure that with Metropolitan leading the way, your customers will be looked after on their journey to low carbon heat.



## Keep it clean

The heat pumps in our community heat hubs will create less CO<sub>2</sub> than conventional heating systems, delivering **75-80% carbon savings** from the day they start running. As the electricity grid becomes zero carbon, so will our heat network – there's no need for retrofitting or bolt-on technology. Homes are already future proofed to support zero carbon living.



## Running smoothly

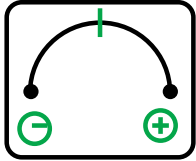
We guarantee our supply of heat and hot water **24/7/365** – no matter what the weather is doing. The community heat hub has back-up boilers and hot water stores ready for every eventuality.



## Peace of mind

**We'll take care of everything.** We'll service and maintain the whole heat system at no extra cost to our customers. So, there's no need for additional premiums and no nasty surprises if something goes wrong. And, of course, customers can rely on us to sort out any problems quickly. Safety is our top priority and to make sure that we can always meet the standards customers expect we'll service each Heat Interface Unit (HIU) and meter every two years, free of charge.





### Total control

We know that rising household bills are a huge worry for everyone. Our customers will always **be in control** of what they use with our smart metering and HIU (Heat Interface Unit). The HIU transfers heat from the network into the home sending it to the radiators, or underfloor heating, and hot water to taps, showers and baths. It also keeps track of what's being used.

Nobody wants to pay more than they should, so we strive to always provide **accurate heating bills** that are based on actual readings, rather than estimates. Our technology enables us to read our heat meters without needing to visit - keeping things super simple for our customers.



### Fair and square

It's important to us that our customers know they are treated fairly when it comes to pricing and service. Heat networks are set to be regulated by the government in 2024, but in the meantime each of our networks is registered with The Heat Trust, the industry-led initiative setting outstanding customer service standards.

#### **This means our customers can expect:**

- Excellent customer service standards, delivered by our UK based team
- Reassurance that if things go wrong they will be dealt with quickly and fairly. They can also be passed to an independent complaint handling service
- We'll always listen to their feedback and look for ways to improve our service



### Customers at the heart

Our UK based team will always be there when customers need them and provide **exceptional service.**

We know customers rely on us. That's why we guarantee minimum standards of service. Our standards are aligned with Heat Trust recommendations and if we don't meet the standards we've promised, we'll put things right.



# Making **zero carbon heating** easy and straightforward for all



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