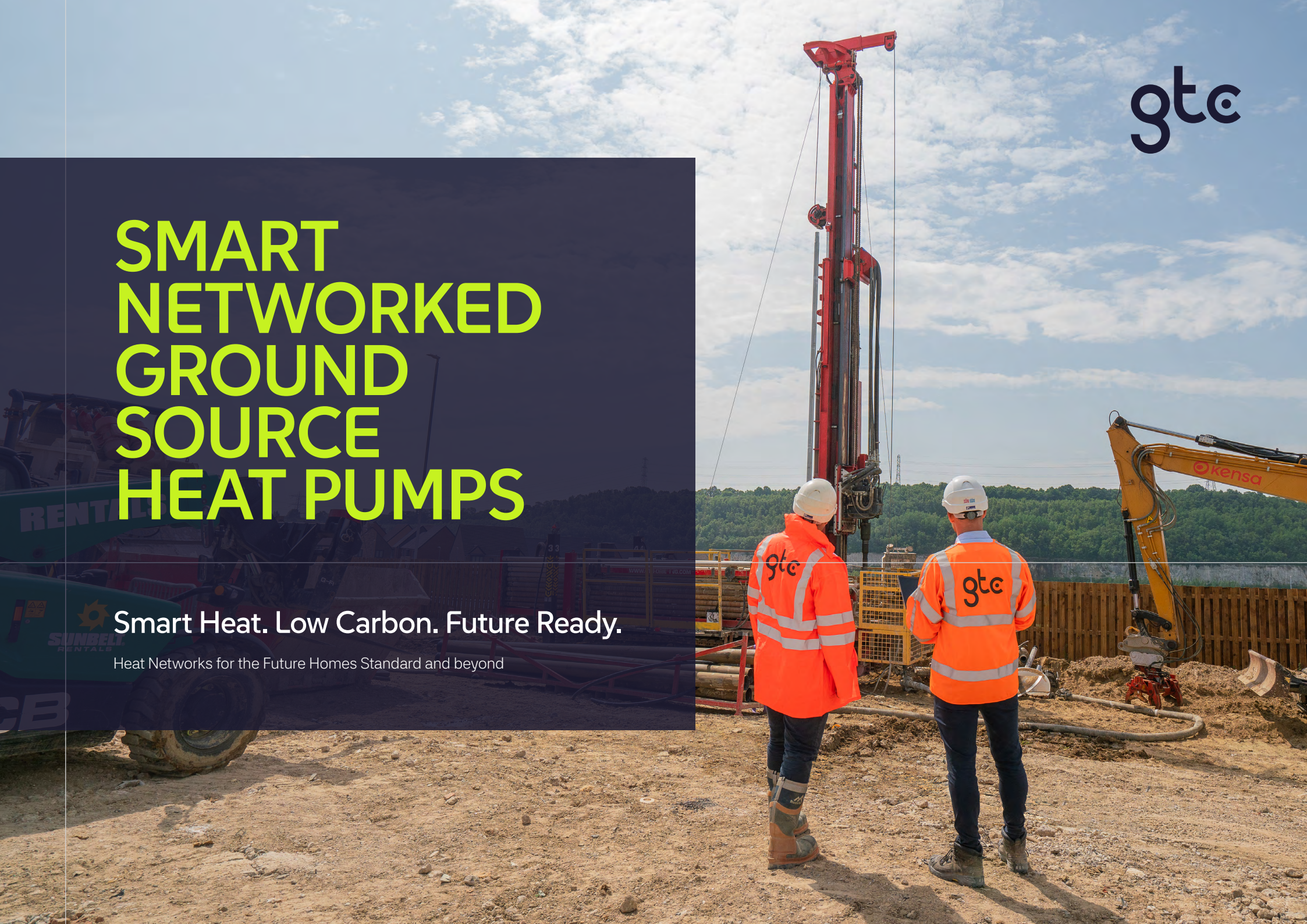
SMART NETWORKED GROUND SOURCE HEAT PUMPS

Smart Heat. Low Carbon. Future Ready.

Heat Networks for the Future Homes Standard and beyond



BUILD FUTURE HOMES WITH CONFIDENCE

Smart Networked Ground Source Heat Pumps

GTC's Smart Networked Ground Source Heat Pumps is a funded, fully managed heat network designed for new developments.

It provides a low-risk, low-cost route to Future Homes Standard compliance while reducing grid restraints, simplifying delivery and removing long-term heat responsibility from the housebuilder.

We design, build, own, operate and maintain the entire utility network for the lifetime of the development – so you can focus on building homes, while we deliver reliable infrastructure and ongoing service for residents.

AT A GLANCE

Lower Costs. Reduced Risk. Proven Delivery.

Our Smart Networked Ground Source Heat Pumps system uses stable underground temperatures to deliver exceptional efficiency and reliability. It outperforms individual air source heat pumps on comfort, running costs, emissions, resilience, and aesthetics – and costs significantly less per plot to install.

Lower Costs

For Residents & Developers

- Significantly lower cost per plot than individual ASHPs
- No grid reinforcement – same load as gas
- Up to 44% lower whole home energy bills for residents*
- Simple monthly charge covering service and maintenance

High Performance

Year-Round Reliability

- Stable ground temperatures deliver consistent efficiency
- No cold weather performance drop or defrost cycles
- Quiet, compact in-home pumps with no external units
- Passive cooling option supports Part O compliance

Low-Risk

Fully Maintained for Life

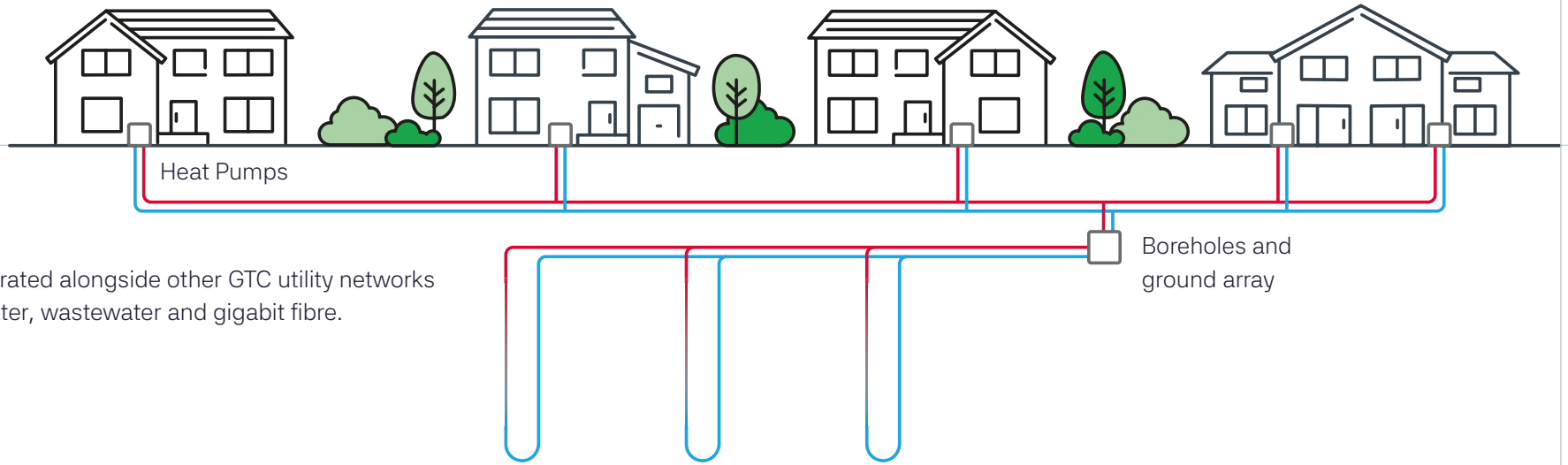
- GTC funds, installs, owns and operates the system
- No maintenance, replacement or performance risk for the housebuilder
- Borehole lifespan up to 100 years
- Ofgem-regulated consumer protection

*Compared to an average 3-bed semi-detached home heated with gas.

HOW IT WORKS

Built like a utility network – because it is.

GTC's networked ground source system mirrors traditional gas and water infrastructure making it familiar to site teams and easy to integrate into build programmes.



Seamlessly integrated alongside other GTC utility networks for electricity, water, wastewater and gigabit fibre.

Ground Array (Boreholes)

- Installed early, before main construction
- Vertical boreholes (up to 200m deep) access stable ground temperatures
- Shared via underground manifolds for efficient energy distribution

Ambient Loop

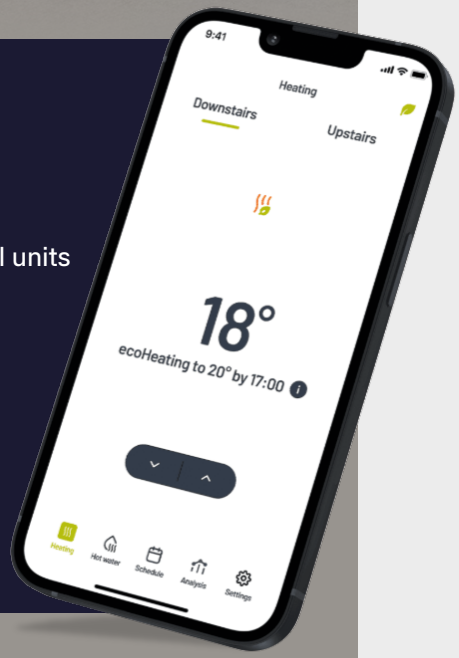
- Low-grade heat circulates through uninsulated PE pipes
- Installed like gas or water infrastructure using standard civils
- Smart chambers reduce disruption and speed up installation

In-Home Heat Pumps

- UK-made Kensa units (most commonly 3-5kW) – reliable commissioning and optimised heat
- Quiet and compact – fits inside a cupboard with no external units
- Works with radiators, cylinders, or underfloor heating

Smart Controls

- Smart Thermostat improves SCOP by up to 17%
- Integrates with solar PV, TOU tariffs, and battery storage
- Enables demand-side flexibility for further bill reductions



TECHNICAL PERFORMANCE

Performance

SCOP up to 4.2 – drawing heat from stable ground temperatures

Efficiency

4-5:1 efficiency – 4-5kWh of heat per 1kWh electricity

Electrical Demand

No grid reinforcement required – same load as gas. Half the demand of individual ASHP installations

Resilience

Ground array lifespan up to 100 years

Indoor heat pump lifespan up to 25 years

Cooling

Optional passive cooling to support Part O compliance

Solar Integration

Built-in solar optimiser delivers up to 280% efficient hot water generation

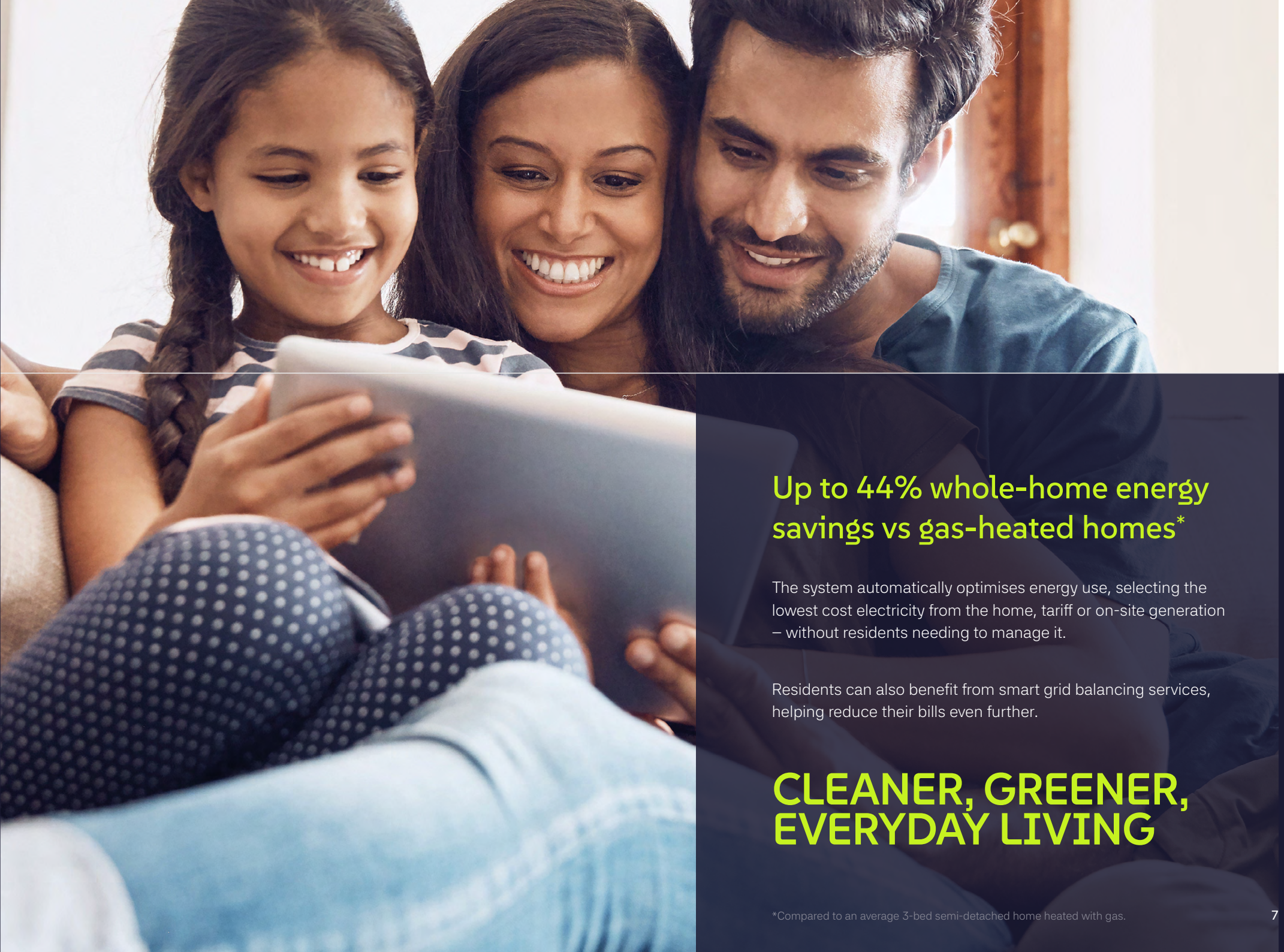
BENEFITS FOR RESIDENTS

Lower Bills. Greater Comfort. Greener Living.

Residents enjoy a dependable, comfortable home with predictable, fair costs – and none of the maintenance worries associated with traditional heating.

Key Benefits:

- **Up to 44% whole-home energy savings** vs gas-heated homes*
- **No maintenance heating** – all covered for life
- **Consistent warmth year-round**, even in extreme cold
- **Optional passive cooling** for summer comfort
- **Simple smart app control** of heating & hot water
- Freedom to **choose any electricity supplier**
- **Regulated by Ofgem** for consumer peace of mind



Up to 44% whole-home energy savings vs gas-heated homes*

The system automatically optimises energy use, selecting the lowest cost electricity from the home, tariff or on-site generation – without residents needing to manage it.

Residents can also benefit from smart grid balancing services, helping reduce their bills even further.

CLEANER, GREENER, EVERYDAY LIVING

*Compared to an average 3-bed semi-detached home heated with gas.

BENEFITS FOR HOUSEBUILDERS

Lower Cost. Lower Risk. Lower Carbon.

The Easy Route to FHS Compliance and Net Zero Communities.

GTC's fully managed NGSHP solution removes complexity and de-risks the transition from gas to low-carbon heating.

Designed for the grid you already have.

Our system has the same electrical load as gas heated homes – and half the load of individual air source heat pumps.

This means:

- **No costly off site grid reinforcement**
- **Fewer on site substations**
- **Faster route to powered homes**
- **Less programme delay and risk**

Lower Upfront Cost

- Lower plot and infrastructure costs
- No external ASHP units – all underground/n-home
- No grid reinforcement – same load as gas

More Buyer Appeal

- Lower home energy bills – up to 44%*
- Future-proof, low-carbon living
- Reliable, familiar, easy heat
- Fully maintained and serviced for life

Simple Compliance

- Fully aligned with Part L, Part O and Future Homes Standard
- Passive cooling option supports overheating mitigation

See how it works

Networked ground source heat pump solutions explained.

FROM DESIGN TO OPERATION

One Provider. One Process. One Expert Team.

We provide a funded, fully managed heat solution, from early design through to long-term operation.

01 Design
A bespoke ground array and heat network tailored to your development.

02 Construct
Shared boreholes installed early, with minimal site disruption.

03 Install
Compact UK-made heat pumps free-issued to for M&E teams to install.

04 Operate
We monitor and manage the entire system for consistent performance and reliable heat.

05 Own
GTC owns the infrastructure for life – reducing risk and responsibility from housebuilders.

06 Maintain & Support
All servicing, maintenance, replacements, billing & customer care handled by us.

No Hassle. No Hidden Costs. No Long-term Responsibility.

New build homes that are ready for the future

With 30 years' experience delivering multi-utility infrastructure, GTC provides a proven, scalable solution for new housing – from 10 plots to 4,000+ plots.

Our Smart Networked Ground Source Heat Pumps make it simpler, cheaper and more reliable to deliver:

- Future Homes Standard compliance
- Market-leading efficiency
- Lower energy bills for residents
- Net-zero-ready homes
- High appeal and buyer satisfaction

Smarter for housebuilders. Smarter for residents. The future of home heating.

LET'S TALK ABOUT FUTURE-READY HEAT

A proven, scalable, low-carbon heat solution – delivered by the UK's leading independent multi-utility provider.

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