

THE 10-MILE HEAT HALO

A National Social Covenant for Energy-Host Communities

THE POLICY STATEMENT

"Any residential or community building located within a **10-mile (16km) radius** of a Carbon Free Future (CFF) Mega-Site perimeter is entitled to a **Permanent Zero-Cost Connection** to the District Heat Network. This includes **100% free space heating and domestic hot water** for the life of the facility."

Household Dividend

Average annual saving of £2,000+ per home. Over a 25-year period, this represents a £50,000 tax-free grant to every local family in the form of avoided costs.

Property Value Protection

Homes within the 'Halo' become the most energy-secure in the UK. 'Zero-Bill' status acts as a permanent floor for local property prices, neutralising NIMBY concerns.

The 'Warm Home' Guarantee

Total elimination of local fuel poverty. Elderly and vulnerable residents are guaranteed a 21°C home environment regardless of global gas prices or personal income.

Industrial Magnetism

Local schools, hospitals, and small businesses within the 10-mile zone receive free thermal energy, drastically reducing public sector overheads and attracting jobs.

Why 10 Miles? (The Engineering & Social Logic)

- **Thermal Integrity:** Vacuum-insulated mains lose <math><0.5^{\circ}\text{C}</math> per km. At 10 miles, water arrives at - **The Visual Zone:** 10 miles covers the entire 'Impact Zone' where the site is visible or audible, ensuring those most affected are most rewarded.
- **The Enclave Effect:** Creates a high-demand 'Energy Gold Zone' that turns local opposition into local advocacy.

// CFF SITE THERMAL BUDGET (PER SITE)

TOTAL WASTE HEAT AVAILABLE	5,870 Mwth
10-MILE RADIUS AVG. HOUSING DENSITY	85,000 HOMES
PEAK HEAT DEMAND PER HOME	8 kwth
TOTAL HALO DEMAND	680 Mwth
SURPLUS HEAT REMAINING (For Industry/Agriculture)	5,190 Mwth

National Scale: With 28 CFF Mega-Sites across 6 Energy Zones, the Heat Halo programme covers an estimated **2.38 million homes** nationwide ($85,000 \times 28$), saving those households a combined **£4.76 billion per year** in heating costs. This represents one of the largest social wealth transfers in UK history — funded entirely by waste heat that would otherwise be discarded.