

Supporting Heat Networks in the Greater South East

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John Taylor, Greater South East Net Zero Hub

Greater South East Net Zero Hub

11 LEPs

141 Local Authorities

1 of 5 Regional Hubs in England





Figure 1: Budget shapes around net-zero



Source: BloombergNEF

Net Zero is not a long term challenge, it is a short term one.



Carbon footprint of heating an average house (15,000 kWh)





T CO2

Electrifying Heat



GSE Net Zero Hub Technical Consultancy

- Energy Project Manager time: e.g. Uni of Sussex
- Technical consultancy budget: e.g. Worthing.
- Complement and guide through HNDU, HNIP and GHNF.
- Emerged from the South to East Energy Strategy.
- Support local net zero delivery plans.





<u>Greater South East Net Zero Hub - Accelerating clean local energy projects</u> (gsenetzerohub.org.uk)

South to East Energy Strategy

- Project model number 1: District Heat Networks
- Modelling by Siemens
- Aim: 9% of tri-LEPs heat load by 2032.
- 144 District Heat networks delivering 20GWh heat demand.
- £1.4 billion investment
- 80% by 2050, not net zero.

2032 ENERGY DEMAND - CLEAN ENERGY GAP BY SECTOR AS MET BY The five priority themes of the action plan



Project	Brighton and Hove DHN
Project Lifetime	25 years
Scale-up Opportunity	BEIS target of 18% of Heat from DHNs by 2050 – achieve 9% by 2032= 144 x 20GWh DHNs
By when?	2032
Investment Required	£ 1,440 Million
Potential scale up cost saving %	15-20%
Job Creation	2,016
CO2 reduction	120 kt CO2e pa (@20% efficiency gain on NG) *



Energy South2East - The South East Local Enterprise Partnership (southeastlep.com)

- Drawing together partners DNOs, gas networks, local authorities, LEPs.
- UK Power Networks Heat
 Street cost optimal modelling
- Brighton needs to connect 34,000 homes to heat networks by 2030, and 90,000 by 2050.





UK Power Networks Innovation - Heat Street: local system planning









Rural Community Energy Fund

Stage 1 Feasibility Grant – up to £40,000

• For projects where some work has been done but are still at an early stage, grant covers consultancy and professional costs to produce a feasibility study to a standard format.

Stage 2 Development Grant – up to £100,000

- For projects that demonstrate a good chance of securing planning permission and being implemented, grant funds can cover:
 - development costs
 - planning applications
 - Development of a robust business case so projects are investment ready.

www.energyhub.org.uk/rural-community-energy-fund







Swaffham Prior Renewable Heat Network

- Ground Source Heat Pump Energy Centre
- Solar Farm
- High temperature Heat Network supplying 300 homes
- Homes buy heat as a service from the network instead of burning oil.





Shared Loop Ground Source Heat Pumps

- Shared loop ground source heat pumps
- Several shared loops in a village.
- Each home has a small heat pump that connects to the shared loop.
- Heat supply contract with home.
- Can split ownership between the group loop and the heat pumps.
- Can be aggregated to meet Green Heat Network Fund criteria (min 100 homes.





"We have not the slightest intention of making profit... We shall get our profit indirectly in the comfort of the town and the health of the inhabitants."

Joseph Chamberlain, Mayor of Birmingham, 1873





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