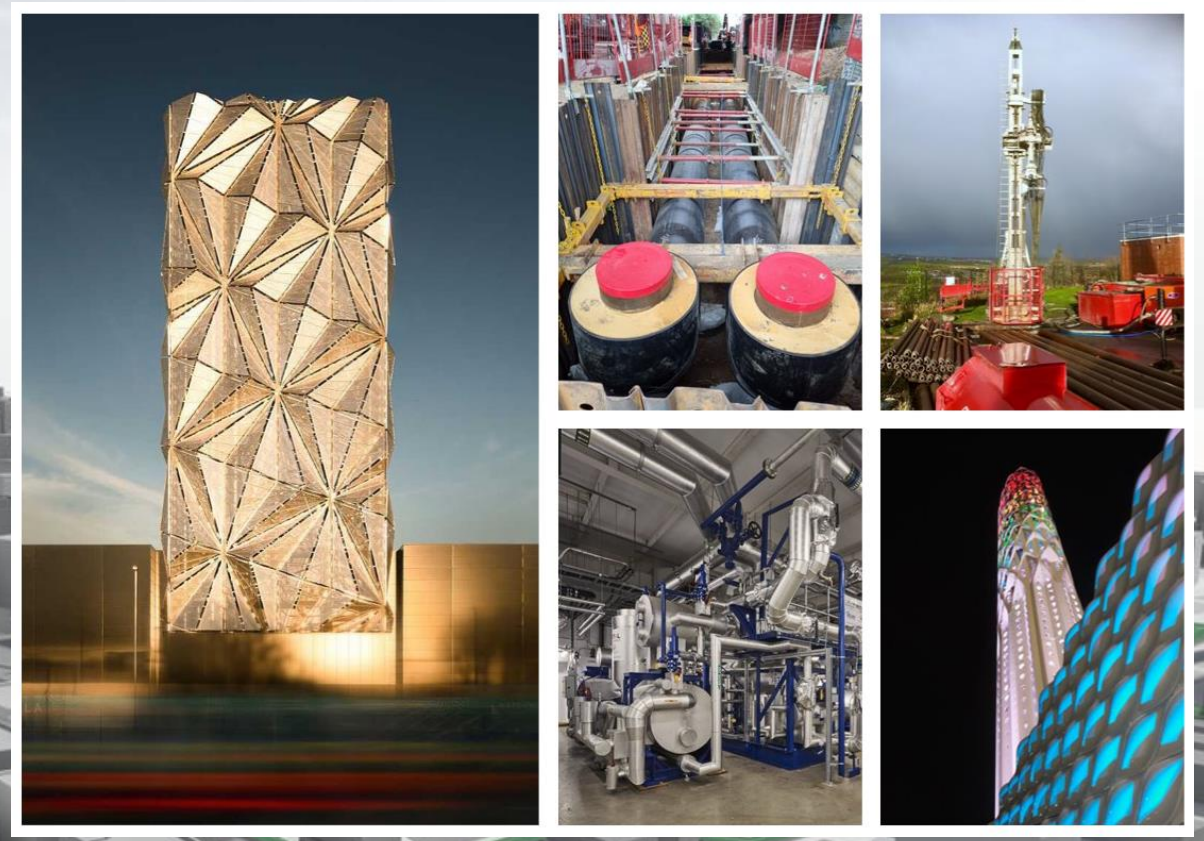
Green Heat Network Fund (GHNF)

Workshop 4 – Sleeving of Low-Carbon Heat

5th April 2022



Department for Business, Energy & Industrial Strategy

Introduction



Tim Ward – Stakeholder Engagement Manager

Green Heat Network Fund

Department for Business, Energy & Industrial Strategy

Agenda

11.00 **Welcome**

11.05 **Sleeving of Low-Carbon Heat**

11.20 **Questions and Answers Session**

11.58 **Closing Remarks**

12.00 **Event Close**

Meeting Rules

PLEASE NOTE THAT THIS SESSION WILL BE RECORDED

- Please **switch off** your camera and **mute** your microphone
- **Questions** – please post any questions that you may have in the chat window.
  We'll endeavour to answer them at the end of the session.
  All questions and answers will be compiled into a document that will be shared after the event

Recording Starting

THIS SESSION IS NOW BEING RECORDED



Sleeving of Low-Carbon Heat / Coolth



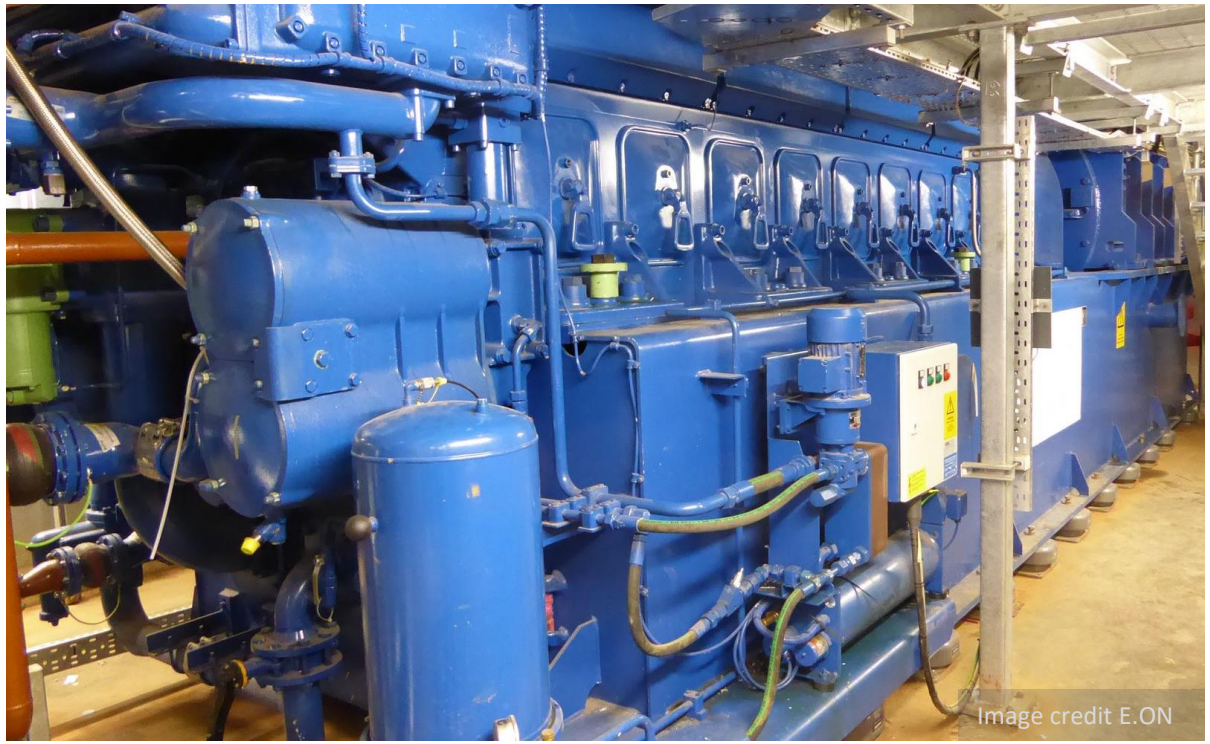
Tim Ward – Stakeholder Engagement Manager
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Existing Heat Networks

GHNF Carbon Intensity
100gCO2e/kWh thermal energy delivered (to consumers)

- Fossil-fuel generation assets are in place
- Not financially/contractually viable to decarbonise
- Future carbon regulation / life cycle replacement


Image credit E.ON

Sleeving Low-Carbon Heat

Existing Fossil-Fuel Based Heat Network

Typically based on gas CHP and/or boilers



Sleeving Low-Carbon Heat

Sleeved LZC
Heat Network Expansion

New LZC Capacity Added



Sleeving Low-Carbon Heat

Sleeved LZC
Heat Network Expansion

New LZC Capacity Added



New Consumers Connected

Minimum Additional Demand **2GWh/year (*)**

(*) 100 dwellings if rural, off gas grid

Sleeving Low-Carbon Heat

Sleeved LZC
Heat Network Expansion

New LZC Capacity Added



New Consumers Connected

GHNF permits **more than** the required 2GWh/year to be added

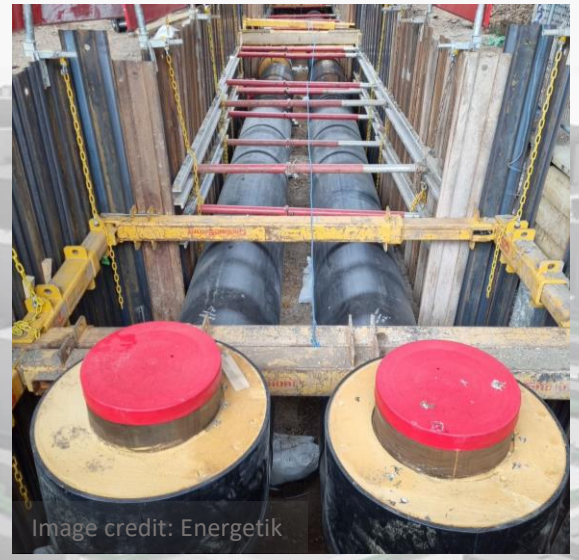
(*) 100 dwellings if rural, off gas grid

Minimum Additional Demand **2GWh/year (*)**

Minimum Annual Thermal Demand

Minimum Thermal Demand
2GWh/year (100 dwellings if off-gas-grid rural)

Existing Heat Networks
If this requirement is not met,
FULL DECARBONISATION
of the network must be achieved


Image credit: Energetik

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Scope of Support

Accessing Heat Sources	Low-Carbon Generation	Primary HN Distribution	Secondary Distribution	Tertiary Distribution
✓	✓	✓	✓/✗	✗



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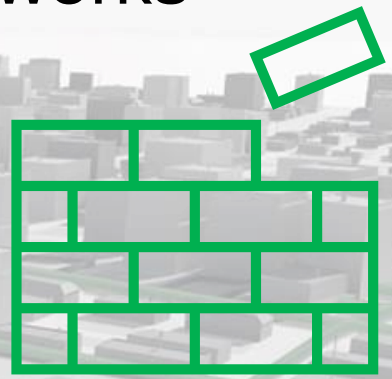
Sleeving Heat

- Fossil-based peaking plant is permitted (subject to compliance with GHNF rules)
- Additional CAPEX and OPEX related to the new LZC plant, network and consumer connections can be included in the application
- No sunk costs can be included


Image credit SSE

Building Regulations Considerations

- **Existing Buildings** - can connect to sleeved heat networks
- **New Buildings** – sleeving is not currently recognised in Part L of the Building Regulations
- If a project relies on new-build connections for the 2GWh, calculations must be provided that:
  - Demonstrate Part L compliance across the whole network
  - Other measures can be included such as solar PV, to impact the overall carbon position
  - Such non-heat-related measures must have a positive/zero NPV



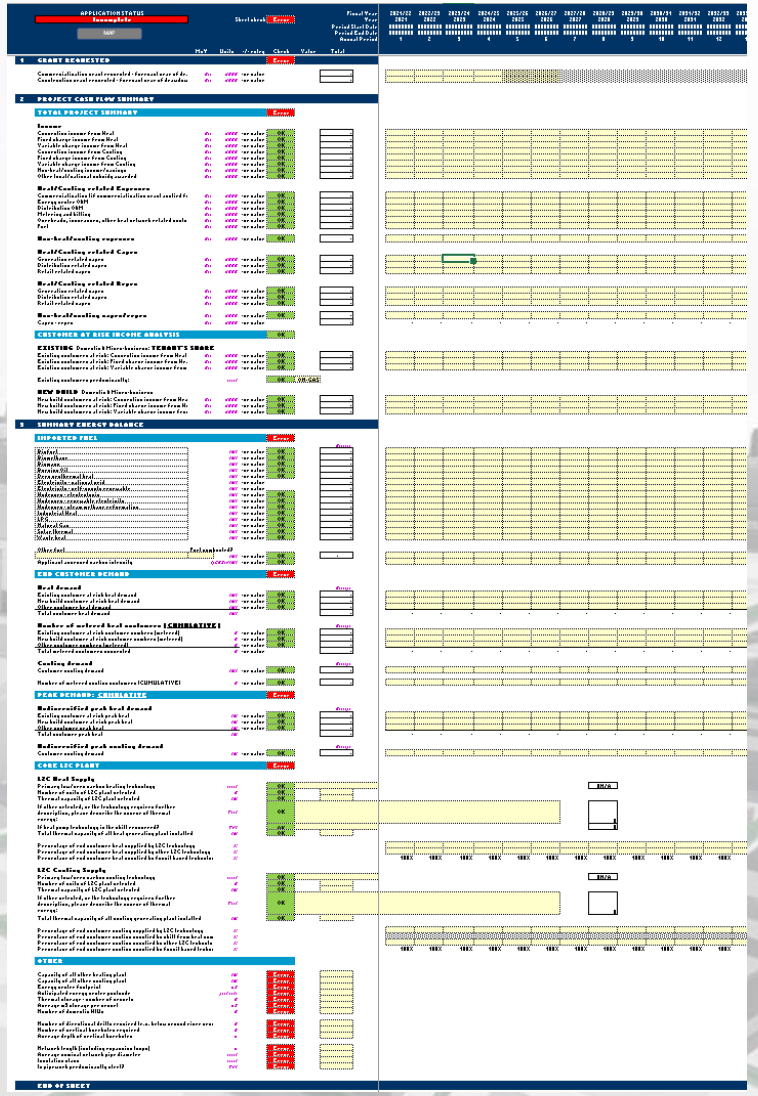
The Application Form

Main Application Tab

- Marginal CAPEX for sleeving-related costs
- Energy balance – with any surplus into existing consumers
- Imported energy – requirement for sleeving-related plus parasitics, peaking, etc.

Future expansion document

Detail opportunities to expand the system



Existing Heat Networks

System Performance
GHNF does not support the cost of addressing any pre-existing performance issues.

- Applicants must provide a performance report, with:
  - Design and actual performance
  - Proposals for practical interventions to improve performance
  - Costs of implementing such proposals and predicted impact(s)
- Written statement confirming measures will be completed
- Seek support from wider BEIS scheme, such as HNES (where available)

Core Metrics

- Applicants are able to self-assess their project against **four** initial pass/fail gated metrics
- Simplified and more transparent application process



Carbon Intensity
100gCO2e/kWh thermal energy delivered



Customer Detriment
Protecting domestic and micro-business end users

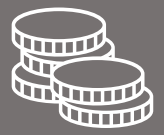


Social IRR
3.5% or greater over 40-year period



Minimum Thermal Demand
2GWh/year (100 dwellings if off-gas-grid rural)

Funding Limits



Capped Award
4.5 pence/kWh of grant per kWh delivered over 15 years*

%

Maximum Award
Up to, but not including, 50% of CAPEX + Commercialisation costs

*Subject to review

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Q&A Session

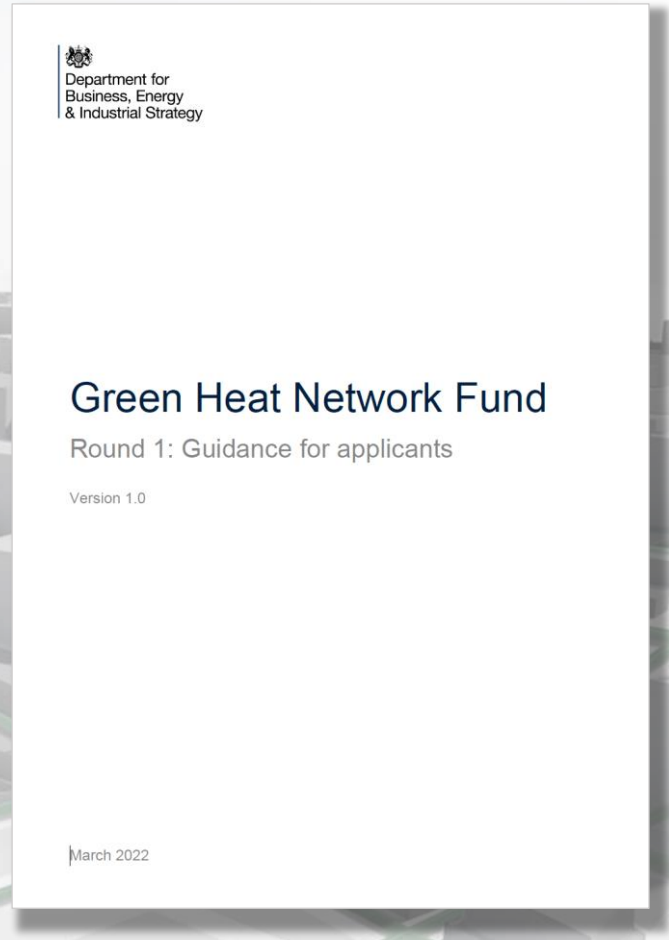
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Guidance for Applicants

Available on GOV.UK website

Your feedback is very welcome



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Next Workshop

Final Workshop for Round One:

- **12th April 2022 – Shared Ground Loops and Aggregation**

- Each workshop has a different 15-minute presentation and 45 minutes for Q&A

- Join our mailing list: ghnfcorrespondence@beis.gov.uk

Find Out More



Visit the .GOV website and search ‘GHNF’



Contact us: ghnfcorrespondence@beis.gov.uk

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Thank you!

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