

Heat Opportunities in Scotland

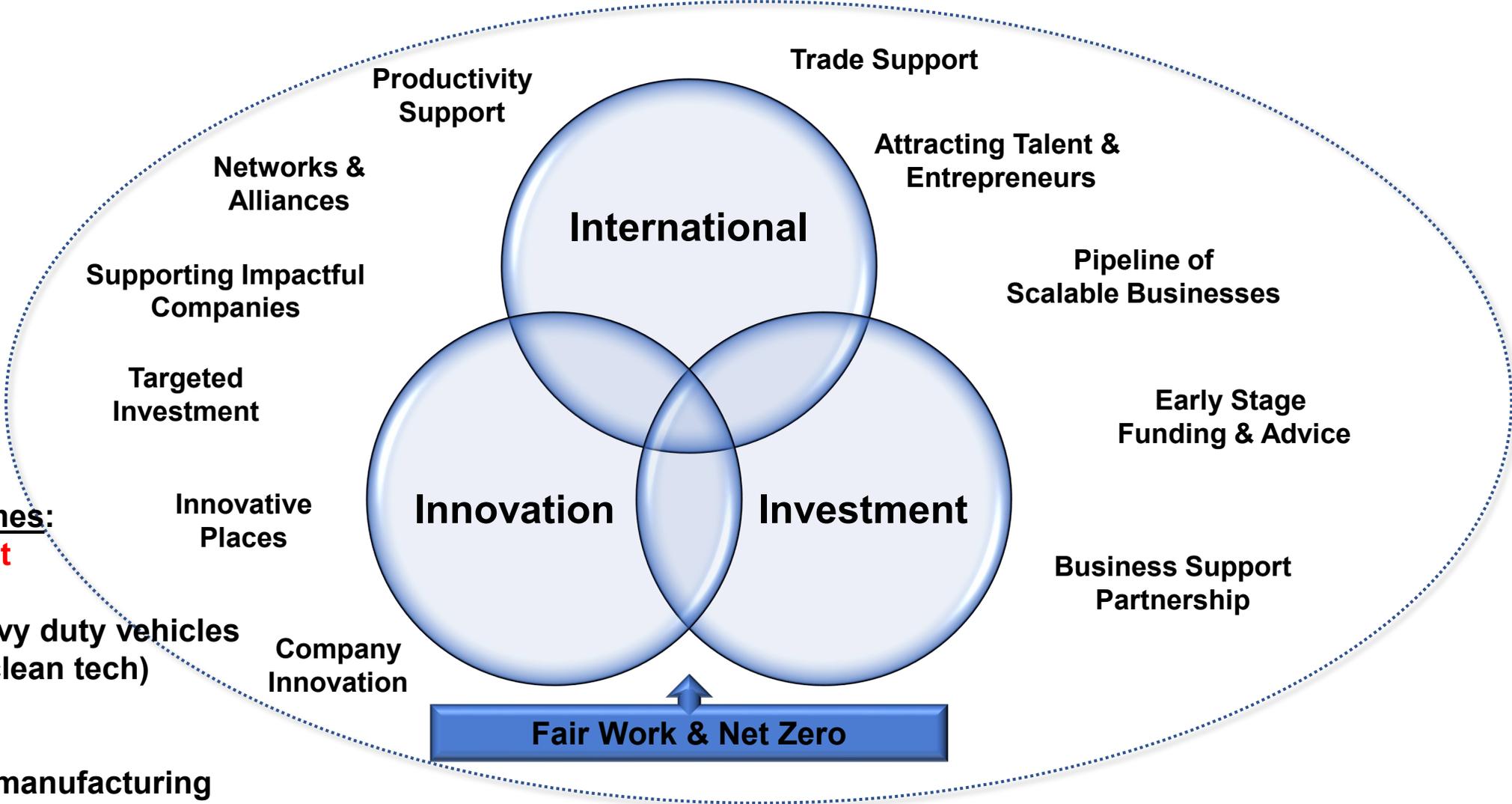
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Questions I will answer today

- **Who are Scottish Enterprise?**
- **Why is heat a ‘transformational opportunity’?**
- **What is SE doing to support the heat sector?**
- **How do we maximise Scottish content?**
- **How can we use innovation to drive growth?**
- **How do I find our more?**

Delivering our Ambitions – SE’s Focus



7 National Programmes:

- **Decarbonising heat**
- Hydrogen
- Zero emission heavy duty vehicles
- Digital (including clean tech)
- Scotland in Space
- Health for wealth
- Future healthcare manufacturing

What SE can offer companies

- **Access to specialists** - if you plan to develop your business
- **Investments** and investment advice
- **Market Research** and advice
- **Account Management** – access to a dedicated relationship manager for the fastest growing companies
- **Funding database** – information on 100's of grants/ loans/innovation calls from organisations across the world

[start-ups – contact Business Gateway first]

“contact us” on our website or call 0300 013 3385



Innovation and patents
Sustainability & low carbon
Digital
Manufacturing
Business Strategy/ marketing
Workforce development



Sustainability specialists can support your company to decarbonise its heat



- Grow internationally (export)
- Inward investment
- Global account management

Change Driven by Policy- Timeline to zero carbon heat

2023

- Every Local Authority to have a Local Heat and Energy Efficiency plan

2024

- All new homes to use zero emissions heat and be highly energy efficient
- All non-domestic buildings to use zero emissions heat when a building warrant is applied for

2025

- Legislation introduced for heat and energy efficiency in existing buildings
- Zero emissions heating to account for >50% of replacement installations
- Phase out new fossil fuel boilers in off gas grid areas

2028

- All private rented properties to be Energy Performance Certificate, Band C

2030

- Over a million homes and 50,000 non-domestic properties to use zero emissions heat
- Heating systems in vast majority of off-gas grid properties are zero emissions
- Phase out any new gas boilers

2033

- All homes to reach Energy Performance Certificate, Band C where feasible and cost effective

2038

- All public buildings to have low carbon heat

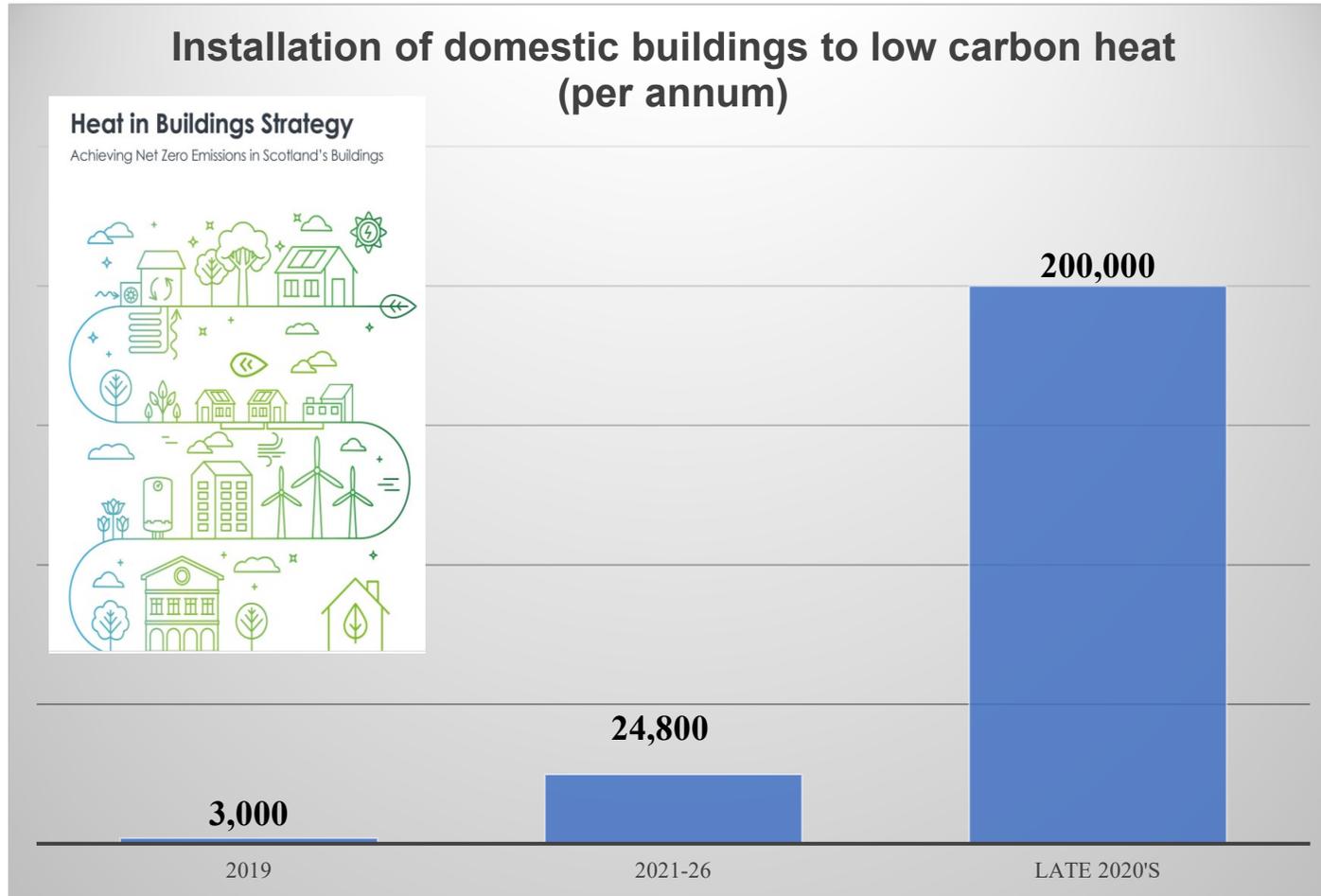
2040

- No household in Scotland is in fuel poverty

2045

- Emissions from heating homes and buildings “all but disappeared”
- Existing heat networks supplied by low carbon sources

Heat in Buildings Strategy



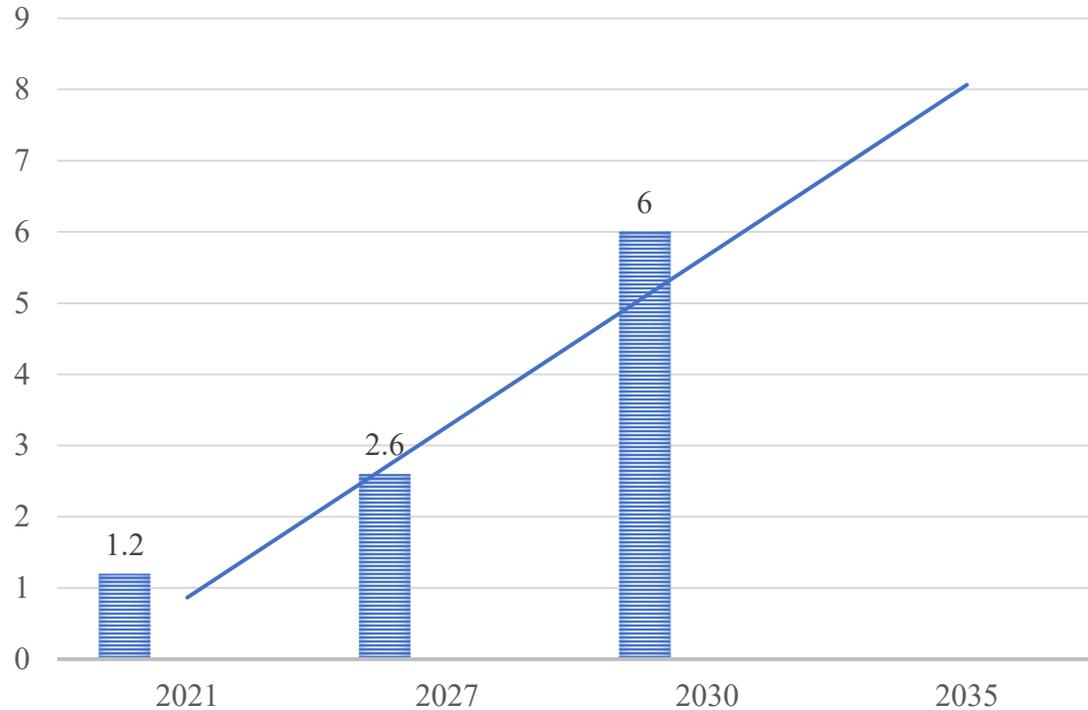
Zero emission heat (2030)

- 170,000 off gas homes
- 1 million on-gas homes
- 50,000 non-domestic buildings
- blending green gas to 20%
- *28,000 jobs (16,400 additional)*

-
- EPC C by 2033
 - *£33 billion to 2045*

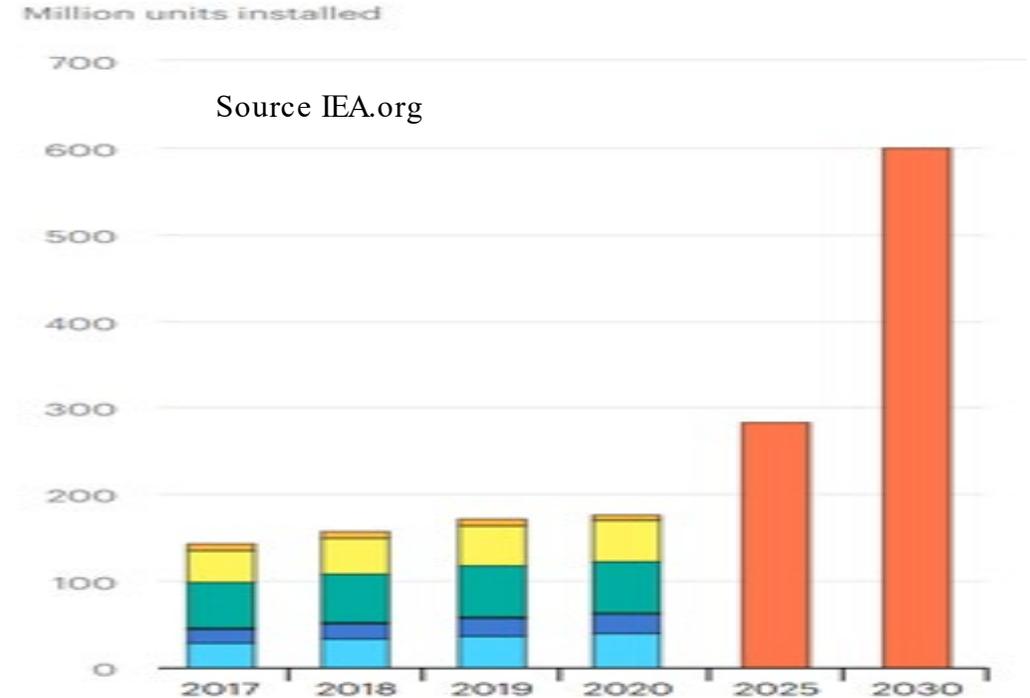
Market Opportunity

Heat Network Target for Scotland (TWh)



Source: Scottish Government Heat Network strategy

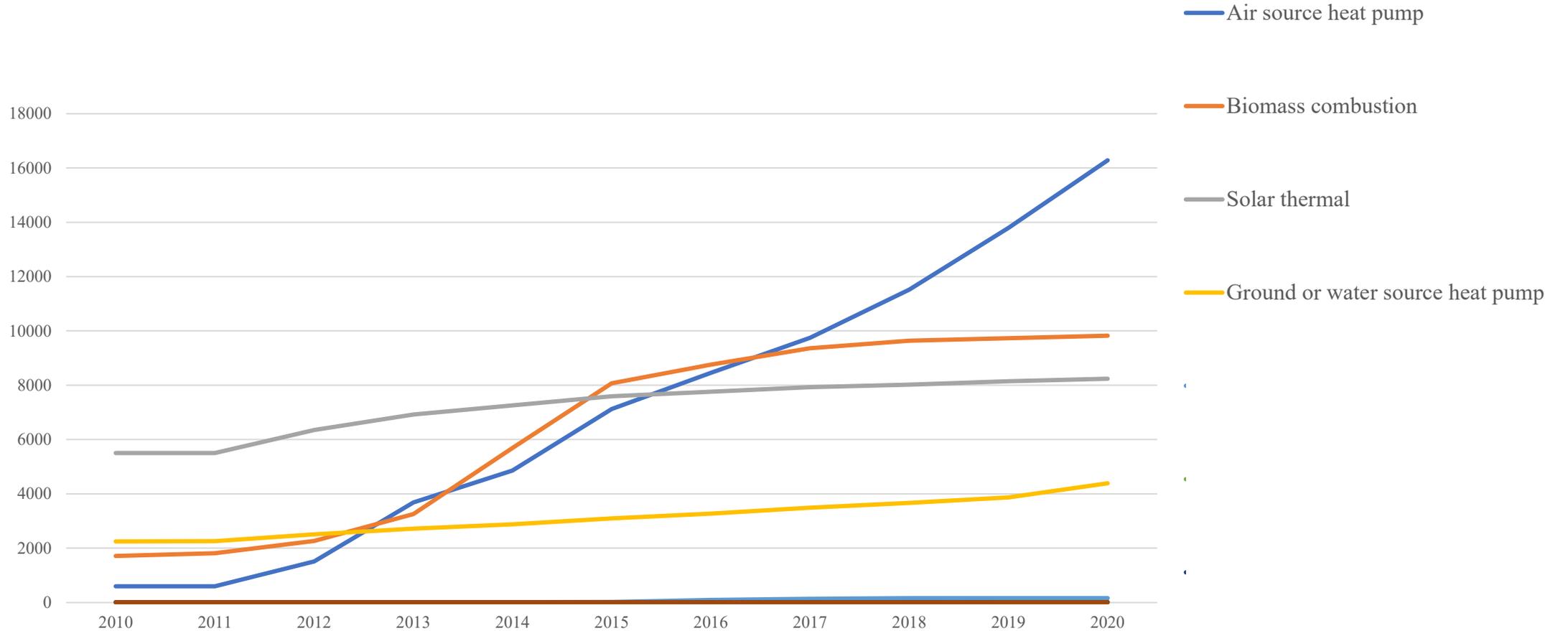
Global Heat Pumps



180 million Heat Pumps in 2020, increasing 10% per year over the past 5 years.

EU commission wants 30m heat pumps by 2030.

Renewable Heat Installations Scotland



Market Opportunity in Scotland

Heat Networks

- 6 TWh by 2030
- £5.2bn cumulative expenditure (2022-2030)
 - insulated pipes £1.2bn (22%)
 - controls systems £0.7bn (13%)

SE's main focus is to maximise the economic benefits - manufacturing, inward investment, jobs

Heat Pumps

- 64,000 deployed each year by 2026
- £3.3bn cumulative expenditure (2022-2030)
 - compressors £560m (17%)
 - control systems £360m (11%)
- Market growing fast across the UK (and Europe) but fastest in Scotland

Source Ramboll (unpublished)

UK plans to install 600,000 per year by 2028

Need for further frameworks?

Heat pumps - £3.3bn cumulative to 2030

Heat Networks - £5.2bn cumulative to 2030

Energy efficiency contractors' framework - £800m over 4 years

Total expenditure to reach near zero heat - £33 billion by 2045



Scope for a Scotland Excel contract on heat networks/ district heating.
Complicated contractual and technical requirements but why reinvent the
wheel?

External Funding for Heat projects (£1.8 billion committed)

Heat Network Fund (Scottish Government)

- £300m to support shovel ready capital projects
- Grant, maximum 50% of total eligible capital costs
- Open to public and private sector
- Projects must be large scale and be based in Scotland

Business cases for projects (Scottish Government)

- £1m development support for projects with existing viable feasibility studies
- Up to £50k for each project
- Deadline is 31st May 2022

Heat Network support unit (coming soon)



Decarbonising Heat National Programme

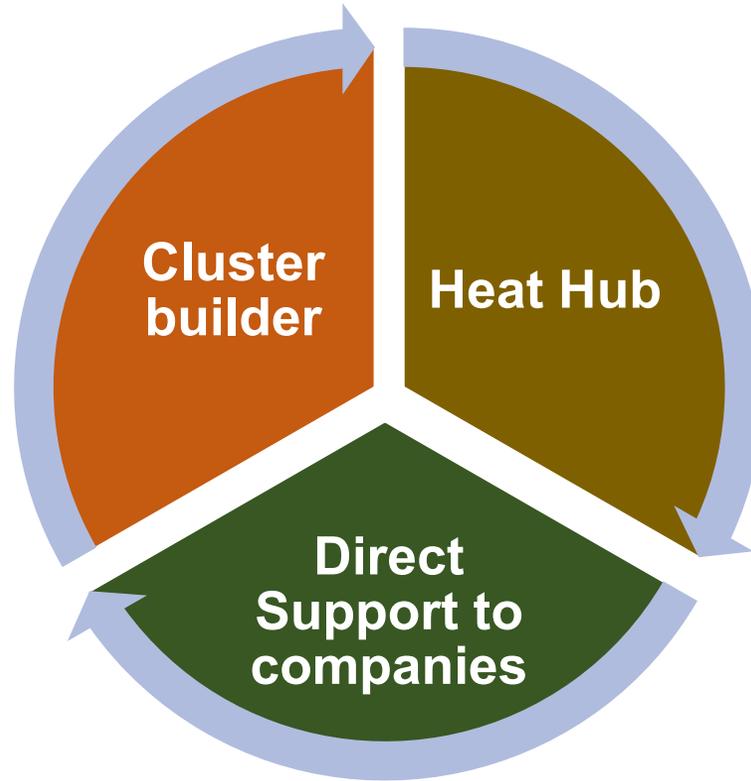
To maximise the economic benefit to Scotland from the low carbon heat transformation

HeatSource (cluster builder)

To raise awareness of the market opportunity.

Connect companies, academics, public sector and investors. A focal point.

Contract awarded to Built Environment – Smarter Transformation



Heat Hub (proposal)

To position Scotland as the lead UK location for low carbon heat manufacturing.

Pull together industry leadership, collaboration, inward investment, demonstration projects, support the supply chain.

Business Support and Advice, Investment, Export advice, Inward Investment

HeatSource – Scotland's Low Carbon Heat Network

- **BE-ST Built Environment Smarter Transformation** (*previously Construction Scotland Innovation Centre CSIC*) have won the contract to deliver a decarbonisation of heat cluster in Scotland.
- Delivering activity on behalf of SE, HIE and SoSE to support the low carbon heat industry and supply chain.
- Launched at All Energy.

HeatSource – Scotland's Low Carbon Heat Network

WHAT? heatsource.org

- Provide a **voice** for the sector
- **Signpost** – support, training, funding
- **Events** and webinars
- **Matchmaking** platform
- **Case Studies/ Best practice**
- **Company follow up** – 121's or clinics
- Identify **collaborative project opportunities**.

FOR WHO?

- Heat Pump and Heat Network Industry and more
- Other zero emissions heat tech companies
 - e.g. solar thermal, biomass
- Technology companies:
 - Demand management/ energy balancing
 - Energy systems controls
 - Energy efficiency measures

HeatSource

- Visit HeatSource.org to sign up to monthly newsletter.
- Email HeatSource@be-st.build with any queries.
- Follow us on social media
 - Twitter @_HeatSource
 - LinkedIn Heatsourcescotland
- Sign up to the launch webinar, 14 June, 11am



The [Scottish Industry Directory](#) is an online gateway to connect buyers and sellers and demonstrate Scotland's capability in low carbon heat.

367 companies:

- Installers and service
- Specialist contractors
- Energy efficiency installation
- Technical, professional services
- Low carbon fuel supply
- Manufacture



Research Reports

Analysis of potential for Scotland to be a leader in 5th Generation Heating and Cooling Networks

A study by Ramboll on the opportunities for 4G and 5G district heating.

Low Carbon Heat - Innovation Needs Assessment

Research by BRC to identify the innovation needs of low carbon heat technologies.

Google search for “evaluations online”, then “heat”

Coming soon – for heat

Scottish Enterprise / under development:

- **Low Carbon Heat Innovation Programme** – preparing a programme of support for capital investment and heat innovation calls
(CAN-do challenge may be of interest to local authorities/RSL)
- **Low Carbon Heat Accelerator** – intensive programme for start ups and SMEs with strong growth ambition
- **Access to European Funding** - European funded call (Clean Energy Transition Partnership) and Horizon Europe calls
- **Supply chain** – developing further support to companies to maximise Scottish content



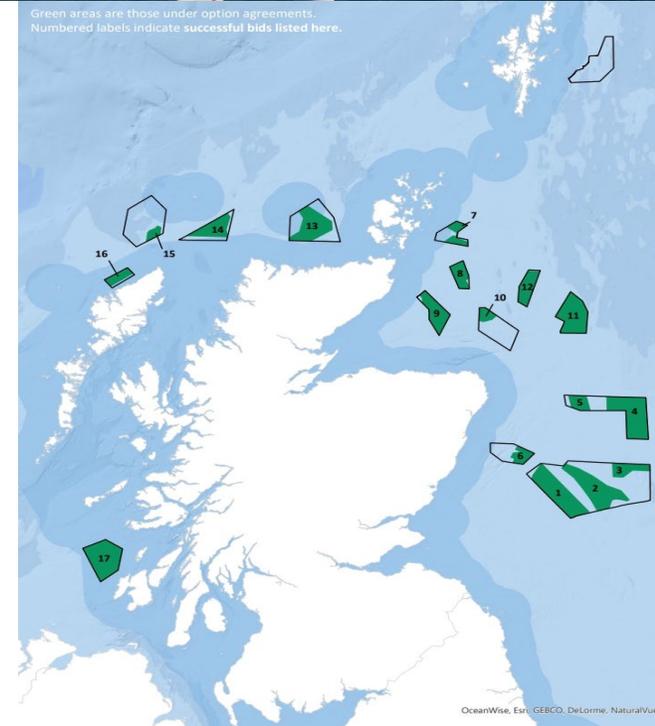
Challenge based innovation

- SE ran a CAN Do innovation challenge call
- Renfrewshire put out a challenge on how to improve property maintenance in their Council properties
- iOpt secured £1m contract from Renfrewshire, with £150k R&D grant funding
- Installed monitors for humidity with alerts for ventilation and dampness issues
- Improved comfort, health and lower maintenance costs
- We are working up a new retrofit innovation challenge
- If interested, contact terry.hogg@scotent.co.uk



Maximising Scottish content – food for thought!

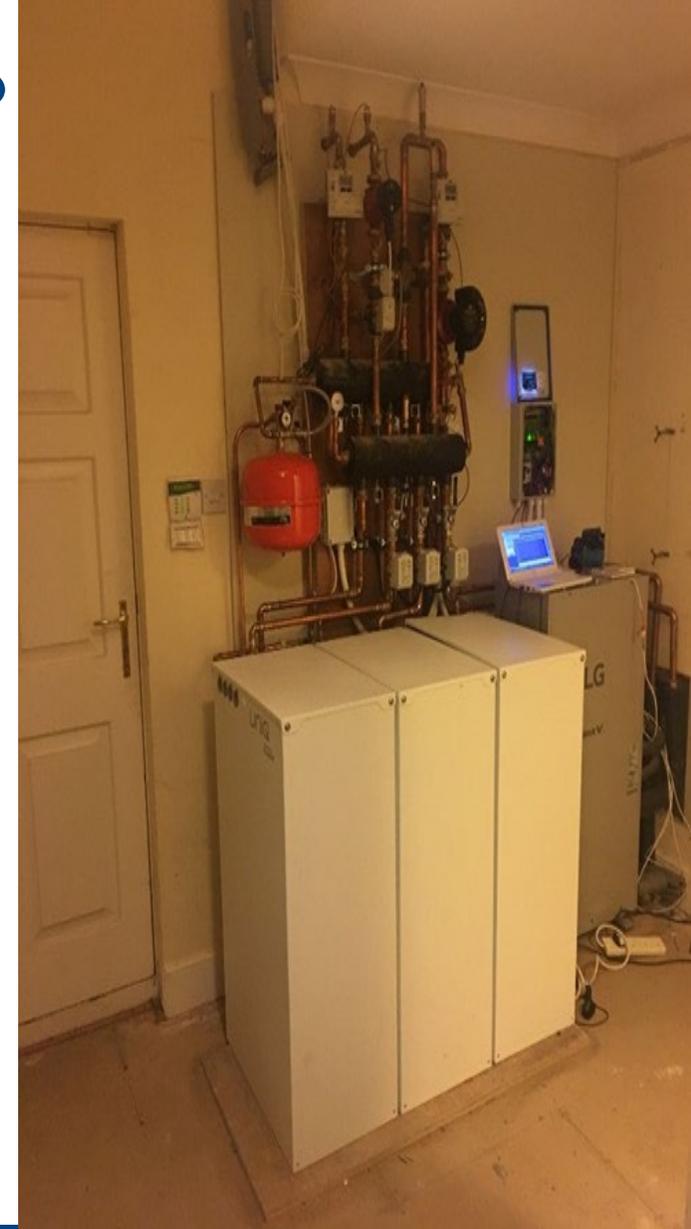
- **Scotwind leasing round**
- 17 projects, 25GW potential, up to £70 billion!
- Developers had to provide “**supply chain development statements**”
- These were not part of bid scoring (but encouraged early engagement)
- £25 billion committed to Scotland, further £10 billion under ‘ambition’ targets
- Some bids mention partnerships with colleges/ skills
- Team Scotland to work with developers to ensure they achieve their commitments
- Penalties in place – up to £250k fine if achieve less than 50% of commitments
- Can (in theory) also revoke leasing rights (if <25%)



How do we maximise Scottish content?

- Most components for heat networks, heat pumps and even insulation is manufactured outwith Scotland.
- Companies need a clear project pipeline to invest in new manufacturing, and to invest in recruiting and training staff.
- Scotland Excel Energy Efficiency Contractors' Framework is great.
- Early engagement is key.

- £300m Heat Network Fund – bidding criteria includes “the potential to have a positive and significant impact on skills and supply chain in Scotland”.
- But, not scored. The start of a journey



Maximising Scottish content

- How can you maximise local and Scottish content in the work that you commission? Maximise training and apprenticeship opportunities? Do the best for the communities that you serve.
- Can we work with you (the buyer/ client/ specifier)
- We can promote contracts through HeatSource and our heat industry newsletter.
- HeatSource offers an on-line matchmaking service
- Meet the buyer joint events?

Flagship Low Carbon Heat Projects



What next?

- Sign up to our Low Carbon Heat Newsletter – email me for a link – neil.kitching@scotent.co.uk
- Check your company is on the Scottish Industry Directory www.directories.scot
- Visit our website – search “Low Carbon Heat Scottish Enterprise”
- Visit and sign up to www.heatsource.org