Heat Pump Ready Programme: Supporting innovation in the heat pump sector

Dr Nicola Lazenby
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Heat Pump Ready Programme

• The Heat Pump Ready programme (HPR) forms part of the UK Government’s £1bn Net Zero Innovation Portfolio (NZIP) under the Built Innovation theme.

• Heat Pump Ready provides up to £60m of funding to projects supporting the aims of:

  - Reduce lifetime costs
  - Develop approaches to engage with homeowners and other key players
  - Inform future heat pump policy and regulation
  - Stimulate solutions to mitigate the impact of domestic heat pumps on the electricity system
  - Strengthen partnerships within the UK’s heat pump sector
  - Improve the consumer experience
Objectives of Heat Pump Ready

1) Develop innovative coordinated methodologies to achieve high-density heat pump deployment

2) Support innovative tools and technologies which overcome barriers to heat pump deployment

3) Foster collaboration and learning across the Heat Pump Ready programme and wide heat pump and associated sectors
Innovative coordinated methodologies to achieve high-density heat pump deployment

The Solutions for High-Density Heat Pump Deployment Projects (Stream 1) aim to support the design and trial of innovative, optimised solutions which deliver more cost-effective and high-density domestic heat pump roll out.

This stream focuses on:

• **Developing and trialling solutions** which take a ‘joined up’ approach to heat pump deployment, working across the heat pump landscape.

• **Developing an enhanced ‘consumer journey’** as part of the solution – i.e. using the cluster projects to develop effective consumer engagement for all stages of roll out.

• **Understanding the network impacts of high-density heat pump deployment**: through the engagement with Distribution Network Operators (DNOs) in parallel to the high-density deployment provides the opportunity to understand the role of flexibility with multiple heat pump installations in their project location.
Innovative coordinated methodologies to achieve high-density heat pump deployment

Phase 1: Feasibility Study Locations

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<th>Urban</th>
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<td>Newcastle</td>
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Projects led by:

- Carnegie Local Energy
- Leeds City Council
- EDF
- City Science
- Buro Happold
- Utilita
- Samsung
- Element Energy
Innovative coordinated methodologies to achieve high-density heat pump deployment

Phase 2: Feasibility Study Locations

- **Urban**
  - Oxford
  - Bristol

- **Rural**
  - Fenland

- **Urban with Rural**
  - Cherwell

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SAMSUNG

Bristol City Council

CITY SCIENCE

endless possibilities
Learning #1: collaboration

- Management entity: Distribution Network Operator (DNO)
- Place based entity: Contracted services
- Engagement coordinator: Technology provider, Financial partner
- Local energy/community group: Energy supplier
- Housing stock modeller: Installation services
Learning #2: the role of data

Consumer journey

- Housing stock model
- Energy data
- Occupant data
- Network data

Location for deployment
- Remote location survey
- Streamlined in home survey
- Occupant surveys

Consumer offer
- Consumer accepts

Phase 2 activity
- Installer
- DNO
- Finance provider
Support innovative tools and technologies which overcome barriers to heat pump deployment

24 funded projects in Stream 2 to date, across the following 5 challenge areas:

1. Reduce lifetime cost and increasing performance of domestic heat pumps

2. Minimise home disruption whilst providing high quality installation

3. Financial models to support heat pump deployment

4. Improving the customer journey

5. Smart and flexible home energy system
Support innovative tools and technologies which overcome barriers to heat pump deployment

- 24 projects were successful in receiving funding through Heat Pump Ready.
- Projects are of varying duration, with all projects due to complete by March 2025
The Consumer Journey of Projects

1. Finding an installer & obtaining quotes
2. Heat pump system design
3. Financing the heat pump system
4. Heat pump operation and controls
5. Maintenance of the heat pump system

Manufacturing
- ventive
- ICAX
- VIA

Increased Suitability
- R.J. Barwick
- TCS
OPEN FOR APPLICATIONS: £10m innovation funding

- Up to £10m of grant funding is available through a new Heat Pump Ready Programme Competition: Stream 2 – Wave 2
- To be allocated across four Challenge Categories:
  1. Improve the ease of heat pump deployment in homes that are ‘complex to decarbonise’ by addressing physical, material, locational, technological, regulatory, or social challenges.
  2. Develop innovative solutions to enable heat pumps to be deployed in ‘distress purchase’ situations when a new home heating system is required urgently.
  3. Improve performance and/or reduce costs of domestic heat pumps with low-GWP refrigerants.
  4. Reduce the lifetime costs or improve the overall lifetime performance of domestic heat pumps or improving the domestic consumer experience of using and living with a heat pump.
- We welcome applications for technology, tools, business models, and process innovation.
- Projects up to 12 months in duration from March 2024, with a grant value of £200k to £1.5m eligible
- All project work must be carried out within the UK.
- Deadline for applications 8th January 2024

Further details:
Find out more about Heat Pump Ready:

Website: www.heatpumpready.org.uk

Email: heatinnovation@beis.gov.uk