HEAT PUMP READY | Department for Energy Security & Net Zero

Part of the Net Zero Innovation Portfolio

Guru Smart Heat Pumps

Developing tools for social housing landlords to enable heat pump installation at scale across the UK

CARBON TRUST

Project Lead: Guru Systems Ltd

Funding:

£445,943

guru

The problem: How to manage ongoing heat pump performance

For larger landlords, such as housing associations and local authorities, who manage buildings or sites that contain multiple homes, the decision to install heat pumps can be complex, as the physical and operational requirements differ between properties. In addition, once installed it can be difficult to monitor their ongoing effectiveness and benefit. Engaging large landlords is essential if we are to reach the target of 600,000 heat pump installations a year by 2028 - owner occupiers alone will not be enough.

The solution:

The Guru Smart Heat Pumps project is focused on finding solutions for large landlords who manage buildings or sites that contain multiple homes, such as housing associations and local authorities, by providing a holistic solution that understands the context of the heating system prior to the installation of heat pumps.

Through continuously monitoring and analysing ongoing performance, the objective is to ultimately provide operators the ability to remotely adjust the settings as required.

> “Heat Pump Ready is supporting us to create a solution to help large landlords in the social housing sector as they transition from gas boilers to heat pumps across their portfolios.”

Nic Mason
Chief Product Officer, Guru Systems Ltd

Increasing performance of domestic heat pumps

What are we going to do?

Firstly, our Guru Smart Heat Pump device will be installed alongside existing boilers to monitor performance in advance of a heat pump retrofit. This will allow us to provide feedback to clients to enable them to correctly size the incoming system.

Secondly, as the Guru Smart Heat Pump product is heating system agnostic, it will remain in place to monitor the performance of the new heating system. To do this we will redesign our award-winning Guru Pinpoint analytics platform to provide clients the capability to actively manage system performance remotely.

Finally, we will complete an integration with heat pumps that allows remote recommissioning of the heat pump by landlords or contractors.

Why is this an improvement on current solutions?

This product solves two common themes that determine whether a heating system is optimised: if the overall system is not designed correctly, it will never reach the promised efficiencies; and, if a system is not monitored and actively managed while in operation, its performance will degrade over time.

What would success look like?

The overall outcomes of the project will be reduced initial capex spend, and improved heat pump performance in operation, resulting in fewer maintenance callouts, lower carbon emissions, and most importantly, more comfortable residents with reduced heating costs.

How will this project help towards the target of installing 600,000 heat pumps per year by 2028?

To meet the target, it is vital to engage with large landlords who manage buildings or sites that contain multiple homes, such as housing associations and local authorities.

Guru has created a solution for this sector; our product is designed specifically to assist landlords with large property portfolios keep track of the performance and maintenance of their fleet of heat pumps.

The Optimised solutions development stream of the Heat Pump Ready programme supports the development of innovative tools, technologies and processes to overcome specific barriers to heat pump deployment in the UK. This stream supports solutions aiming to reduce the life time cost and increase the performance of domestic heat pumps, minimise home disruption whilst providing high quality installations, develop and trial financial models to support heat pump deployment, improve the heat pump consumer journey and provide a smart and flexible home energy system.

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