Project

Project Name:	**Heat the Street**
Project Reference:	**201026**

Click on the arrows to navigate around the model. Tables can be edited directly in the model. To edit free text, click Edit under each title

Context

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- In June 2019, parliament passed legislation requiring the government to reduce the UK's net emissions of greenhouse gases by 100% relative to 1990 levels by 2050. Doing so would make the UK a 'net zero' emitter. Prior to this, the UK was committed to reducing net greenhouse gas emissions by at least 80% of their 1990 levels, also by 2050.
- Heating is seen as the biggest challenge to be overcome in the journey towards decarbonisation of our housing (Energy Systems Catapult, CCC).
- The Energy Technologies Institute estimates that 20,000 households per week would need to be switched from the gas grid to low carbon heating between 2025 and 2050 to meet our current decarbonisation commitments
- GSHP offer 325% efficient, low carbon heating and use electricity. The condition and capacity of the grid is considered to be a barrier to the electrification of heat
- District heat networks are considered to be a low carbon solution. Currently supply only 2% of UK heat demand, predominantly gas powered central plant, high heat loss, low consumer acceptance and trust

Market Failure Assessment

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- low price of natural gas and gas boilers driving expectations on cost of future heat solutions
- little change to traditional methods of delivering heat with district heating
- market manipulation by RHI introducing false economy of biomass and not overcoming barrier of high capital cost of GSHP
- HNIP expectations of commercialisation of installation based on traditional gas systems
- lack of understanding of GSHP and ground arrays, particularly in relation to heating and cooling networks
- slow modernisation of domestic electricity tariff failing to incentivise load-shifting

Project Objectives

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- reduce carbon emissions related to domestic heating
- demonstrate low lifetime cost of installation
- build supply chain to reduce costs
- demonstrate alternative funding model for GSHP
- increase awareness of technology
- attract investors for future projects
- develop evidence base for negotiations with Government regarding future renewable heating funding streams

Rationale

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- demonstrate working solution at scale across various property types and tenures
- show lowest carbon and best pratise for comparison with other solutions (HNIP projects)
- demonstrate value for money in relation to Outputs (sign-up rate, carbon savings etc.) from additional investment compared to HNIP, RHI

Inputs

What	Value
ERDF	£6 million
Kensa Utilities	£2.4 million

Activities

What
promotional campaign
installation of heat distribution network
installation of GSHP
creation of SPV for managing customer accounts

Outputs

What	Value
C30 renewable heat	3.5MW
C31 households with improved energy consumption	500
C34 reduction in green house gas equivalent	872 tonnes

Outcomes

ID	Intended Outcome	How is it Measured?	Level	Baseline	Actual
1	more households with improved energy efficiency	MCS applications	Project	0	500
2	improved supply chain	reduced cost of installation	Business		
3	new sales orders for heat networks	orders	Business		
4	increased number permanent positions for staff	PAYE	Business		
5					

Intended Impacts

What
improved public funding opportunities for low carbon heating
increased public awareness of GSHP as a flexible solution to electrification of heating and cooling
improved supply chain, reduced cost
improved accessibility of low carbon solutions for householders
reduced emissions relating to domestic heating, delivery of Net Zero target