BEIS Thermal Efficiency Innovation Fund – Summary Project Details

- o 12 projects;
- o Total value of grants offered: £7.50m

Lead Company	Partners	Project Title	Brief Project Description	Grant Award
Q-Bot	Saint-Gobain Weber; Glas-Craft (U.K.) Ltd	Spray Applied Wall System (SAWS)	Development of an innovative Solid Wall Insulation process that has the potential to improve the energy efficiency of existing buildings by as much as 40% while reducing installation costs and, most importantly, using a material that maintains the moisture transfer qualities of existing walls allowing them to dry out naturally to the outside of the dwelling	£872,060
Igloo Energy Supply Ltd	University of Southampton; Foresight Metering Management Limited	Seamless & ENgaging home SErvices: Making Efficiency Desirable (SENSE)	Igloo Energy is developing a new business model that breaks the link between profit and volumes of energy sold and instead focuses on the provision of energy services to our customers that reduces the cost and hassle of running a home. Igloo energy will focus on integrating existing technology in order to prototype an end to end software solution for identifying and recommending energy saving measures. Southampton University will focus on customer engagement. Foresight will investigate innovative funding approaches. The project will culminate with a case study deployment of the technology where a sample of customers are presented with a real energy efficiency package offer.	£910,039
Sustainable Traditional Buildings Alliance	Melin Homes	Whole House Retrofit	This project will pilot the Whole-House approach to retrofit, pioneered by the STBA and endorsed by the Government's Each Home Counts report. Based on 30-40 properties, STBA will commence with detailed surveys of each house, including context and condition, before generating a bespoke suite of measures with detailed designs, addressing health and heritage as well as energy use. Surveyor training will be developed alongside survey templates and training for installers. Following further testing, the process & supporting methodology will be released as a toolkit for industry use across the UK.	£300,000

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Free Running Buildings Ltd	University of Sheffield	Passive Ventilation with Heat Recovery for Air-Tight Facades	Free Running Buildings and the Building Energy Group at the University of Sheffield will undertake development activities to finalise FREEHEAT, a zero-energy passive ventilation system with active heat recovery technology. FREEHEAT will increase the temperature of incoming air by 3–5°C with no power requirements, lowering the demand placed on building heating systems and saving consumers' money, whilst providing a supply of fresh, clean, warm air to remove potentially harmful indoor, airborne pollutants. The collaborative team will finalise the design for manufacture of FREEHEAT, reducing shipping and installation costs and developing modular construction methods for retrofit to existing ventilation terminals.	£430,225
Switchee Ltd	n/a	Developing SMART Thermostat for Social Landlords	This project aims to improve the energy saving performance of Switchee's preliminary device that has already demonstrated proof of concept and some commercial traction and to develop a cost-reduced commercially viable product suitable for sale at volume with the necessary server architecture, algorithmic intelligence and customer led validation.	£544,309
TerOpta Limited	Costain Ltd; University of the West of England	IoT-Enabled Real-Time Energy Analytics Platform (i-REAP) for Commercial Buildings	i-REAP will develop a one-step solution to measure, predict and optimise energy consumption in commercial buildings utilising the latest in Artificial Intelligence (AI) and Internet-of-Things (IoT) based hardware, to develop a complete "whole building approach" to driving down costs of improving thermal efficiency in existing buildings. It will develop an affordable solution that will provide a personalised and optimal energy consumption regime. It will contribute to fast-forwarding the adoption of AI and IoT for energy savings and help the Building Sector to move from 'reactive' approaches to 'predictive' ones developing guidelines for ideal retrofitting actions and low carbon heating.	£1,290,000
The Design Buro	Beattie Passive Retrofit Limited; Oxford Brookes University	Holistic Cost-Efficient Cladding System with Integrated Mechanical Ventilation (T-COSY)	The project aims to produce a fast, efficient and cost-effective solution to deep retrofit. The innovative cladding system creates a void between the building and the new external elements. A new mechanical ventilation system that provides fresh air and removes stale, damp air is to be installed in this void, around which, a fire-resistant insulation is to be pumped. The cladding system will eliminate unintended consequences by reducing cold spots, improving ventilation and reducing draughts.	£1,152,550

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Smart-Ventilation Ltd	WiSAR Lab, Letterkenny Institute of Technology	Smart-Vent Intelligent Residential Ventilation	Smart-Ventilation Ltd is developing a low-energy residential ventilation system that provides an intelligent means to control indoor air quality and reduce CO_2 emissions compared to existing technologies. Driven by energy and CO_2 reduction legislation homes are becoming more airtight, reducing indoor airflow causing poor indoor air quality that impacts on occupant health, and creates condensation and moisture problems that damages a home and its contents. Smart-Vent is an IoT enabled residential ventilation system that provides whole-house balanced airflow. The BEIS funded project will enable an Alpha product to be developed and demonstrated to stakeholders in a working environment.	£229,185
CoControl Ltd	Pilio Ltd	A Step-Change in the Effectiveness of Improving the Thermal Efficiency of the UK's Social Housing Stock through CoControl Connecting Hundreds of Homes in a Connected Homes Platform	CoControl is a "Connected homes platform" for SHLs comprising of: 1. An "in-home heating control device" specifically designed for social housing tenants with a simple interface requiring them only to indicate whether they feel too hot or cold. This is combined with sensor data from the property and inputs such as web-based weather data to optimise comfort levels while minimising tenants' energy costs. 2. A cloud-based "Investment Optimisation Dashboard (IOD) which will be developed to monitor the health of the SHL housing stock and predict & schedule maintenance, thereby reducing operating costs. The operational savings enable the SHL to fund the installation of in-home devices.	£285,626
Vestemi Ltd	University of Salford; Parity Projects Limited; Bays Consulting Limited	ROWR – Retrofit Optimisation with Radbot	The project aims to research and trial a method of monitoring and testing a variety of energy saving measures using data collected by Radbot, a low cost, smart Thermostatic Radiator Valve (TRV). Tests will be carried out in a laboratory in the University of Salford and in a field trial. Data produced by the trial will be analysed, aiming to develop a process to highlight the most effective energy saving measures that are applicable to a given building or estate.	£767,239
Ventive Ltd	S & P Coil Products Limited	Naturally Intelligent Ventilation	This project will test, validate, demonstrate the initial prototype and develop, demonstrate and certify a commercial version of the fully integrated ventilation, comfort & water heating technology designed &	£364,800

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			developed by Ventive, enabling effective commercialisation within a year from project completion.	
Build Test Solutions Ltd	University of Salford	Scaling In-Situ Building Performance Measurement: Smart Meter Based Measurement of Fabric Heat Losses	Build Test Solutions (BTS) are working alongside the University of Salford to develop an innovative 'whole house heat loss smart box' that uses an existing primary heating system and a consumer's smart meter to determine the total space heating energy losses of a building, commonly referred to as a whole building heat transfer coefficient (HTC). To further aid diagnostics, the proposed smart box will interface with a series of wireless sensors and help quantify the specific proportion of losses via critical elements such as floors, walls, windows and roofs.	£361,949