

## **Boosting Access for SMEs to Energy Efficiency – Phase 2 Projects**

The Boosting Access for SMEs to Energy Efficiency (BASEE) innovation competition offers up to £6 million of funding for innovative solutions that reduce transaction costs and encourage the take up of energy efficiency by SMEs. This competition will help address some of the key market failures faced by SMEs such as lack of economies of scale, high upfront capital costs, high transaction costs, and difficulty accessing finance. 14 projects were selected to receive Phase 1 funding to develop feasibility studies for their solutions. We have now awarded eight contracts for Phase 2 funding. Below is a Q&A with each successful company outlining the key elements of their projects.

### **arbnco - Digital Energy Efficiency Platform (DEEP)**

#### **What are the objectives of your project/solution?**

The main objective of the project is to develop and pilot a digital platform to empower SMEs with a sound business case for implementing energy efficiency interventions. The Digital Energy Efficiency Platform (DEEP), is designed to address many of the barriers preventing SMEs from engaging with energy efficiency measures including a lack of time, resources and expertise as well as poor economies of scale.

The platform will utilise a range of data sources such as energy consumption and building energy performance, retrieved automatically or supplied by the SME, to generate a bespoke list of physical and behavioural energy efficiency recommendations together with costs, trusted suppliers and finance options. Further, the platform will allow potential aggregators to build portfolios of energy efficiency improvement measures across local regions, sectors or improvement type.

Led by arbnco, an innovative building optimisation company, the project brings together expertise from multinational energy and services company Centrica, Energy Systems Catapult, Aston Business School, Durham County Council and sustainable finance company, Cyan Finance.

A prototype of the platform will be piloted with SMEs and local stakeholders in three regions of the UK. Pilot areas include the central belt of Scotland, the West Midlands and Bridgend in Wales.

#### **What key functionality will your solution offer to end users?**

The solution will provide SMEs with critical insight into their energy use and potential energy efficiency retrofit recommendations based on an assessment of the energy performance of their building and patterns in their energy consumption.

Energy consumption data will be analysed using techniques such as energy profiling, benchmarking, load-shape analysis and disaggregation to build a comprehensive picture of a business's energy usage. The analysis will identify potential options for improving energy efficiency including eliminating waste and behavioural changes. Coupled with knowledge of the performance of a business's premises, the platform will offer the end user fully costed building retrofit options and behavioural insights to improve energy efficiency. A database of trusted installers will facilitate rapid access to quotations and scheduling of work while potential routes to traditional and innovative finance options will further stimulate the market and incentivise business to implement the recommendations.

### **What key benefits will your solution bring to end users?**

The key benefits of the solution include:

1. Enhanced awareness and control over energy consumption
2. Energy benchmarking against peers or similar businesses and buildings
3. Recommendations to improve energy efficiency through behavioural insights and the elimination of wasted energy
4. Fully costed building retrofit recommendations and access to a database of trusted installers and finance options
5. Improved energy efficiency, lower costs and reduced carbon emissions through the implementation of energy efficiency measures and behavioural changes

### **How and when will the solution be made available / promoted to potential users (route to market)?**

During the project, the platform will be piloted with SMEs in three regions in the UK, namely, the Central Belt of Scotland, the West Midlands and Bridgend in Wales. In collaboration with project partners, the consortium will run a workshop in each area to engage, demonstrate and promote the platform to local businesses and end-users. Following the piloting phase and completion of the phase 2 project, the product will be launched nationally backed by a blended direct and indirect go-to-market strategy targeting 2% of the UK market over the first 5 years.

For further details on the product or information on the pilots please email Andrew Stewart, [astewart@arbnco.com](mailto:astewart@arbnco.com).

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## **BRE - REZEE – A tool for energy efficiency in the residential care homes sector.**

### **What are the objectives of your project/solution?**

There are currently over 11,300 care homes in the UK with over 410,000 residents. This market is projected to grow by 1.4%-2.9% per year between 2015 and 2025.

Many of these care homes are run by Small to Medium Sized enterprises (SMEs) and the homes are often able to benefit from energy efficiency improvements, providing cost savings to the care home managers, improved thermal comfort to the residents and environmental benefits.

BRE will be developing an innovative online tool to assist SME residential care home providers to improve the energy efficiency of their buildings. The web tool is designed to stimulate and enable energy efficiency improvements.

### **What key functionality(ies) will your solution offer to end users?**

The tool will be developed following a period of market research but is likely to:

- Enable care home providers to identify the most efficient and effective ways to improve the energy efficiency of their buildings
- Identify and facilitate the provision of finance for these upgrades
- Provide best practice guidance and support throughout the procurement process, to ensure that upgrades are undertaken to the highest quality and avoid unintended consequences.
- Facilitate the bundling of projects together to enhance the feasibility of energy efficiency upgrades.

Based on information about the buildings provided by the user, the tool may be able to provide an estimate of current energy consumption and provide tailored recommendations regarding the most efficient and effective upgrade they could make and give an estimate of the likely financial savings.

### **What key benefits will your solution bring to end users?**

The tool will provide a complete and trustworthy source of information to help care home providers to efficiently and effectively improve the energy efficiency of their buildings.

It will enable care home providers to better understand;

- What energy efficiency upgrade would be most effective for their buildings
- How much energy and money they could potentially save
- Where to look for funding
- How to ensure the work is conducted to the highest possible standards and who might be best placed to do the work
- The minimum energy efficiency standards currently required and any forthcoming changes

As part of an initial feasibility study, already undertaken, over 100 care home providers were consulted. The findings clearly demonstrated that SME providers are in need of a service which will; 'Help identify access to funding', 'Identify which improvements would be most appropriate for my particular care home' and 'Identify how much money I could save on my energy bills'.

As well as saving energy and carbon, these upgrades and improvements will also enable operators to provide high quality, warm and affordable accommodation to vulnerable residents for whom they have a duty of care.

### **How and when will the solution be made available / promoted to potential users (route to market)?**

Initial plans are to launch the tool at a local level, followed by a regional roll out before being made available at a national level. The initial stage of product launch will be to identify geographical areas where the REZEE tool is likely to have the most appeal and be most successful when launched. In this way BRE hope to develop and maintain a sustainable product at the local level prior to a wider, rollout across other regions (and ultimately nationally) over a 3-5 year period. Local level launch is planned for April 2021.

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### **Considerate Hoteliers - Considerate's EE Investment Cycle for SME**

#### **What are the objectives of your project/solution?**

The objectives of fluttr are as follows:

- Increase the uptake of energy efficiency investment within SME hospitality groups by increasing awareness of their business specific energy usage and encouraging suitable upgrades
- Deliver a new approach to financing small energy efficiency retrofits

- Increase investment from lenders to hospitality SMEs for energy efficiency (EE) activities
- Develop a hospitality focused energy efficiency supply chain through improved coordination between suppliers

### **What key functionality(ies) will your solution offer to end users?**

Considerate has already developed and piloted an energy management app for SMEs in the hospitality sector. This app, flutter, is currently targeted at organisational and behavioural change. It is designed to increase awareness of energy usage and provide appropriate tips and suggestions as to how individual changes in behaviour across an organisation can lead to increased energy efficiency, and thereby drive significant cost savings and a meaningful reduction in carbon footprint across the sector. In its current form, flutter does not provide support for improvements that require capital investment, such as equipment replacement or building improvement.

At a high level, Considerate's intention is to establish a commercially viable marketplace within flutter. The aim is to link SMEs in the hospitality sector looking to invest in small scale EE projects, with the funding to complete these projects, together with an approved range of contractors and suppliers able to implement projects reliably and cost-effectively.

### **What key benefits will your solution bring to end users?**

Flutter will provide users who are looking to improve their energy efficiency with an easily accessible marketplace that will seamlessly link them to suppliers and funding options. In addition to this, flutter will monitor energy usage to the site both before and after the EE project in order to provide baseline analysis and measure the benefits and cost savings from project implementation. This data would be helpful to SMEs to confirm actual energy and cost savings, as well as confirming the payback period to encourage SMEs to invest in further projects. It may also be helpful to lenders, to assess the hypothesis that SMEs who invest in EE projects represent an improved credit risk, and therefore deserve better financing terms than an average SME. And finally, it will provide quantitative feedback to contractors to enable them to assess the effectiveness of the installation, allowing them to better quantify the benefits for future work.

### **How and when will the solution be made available / promoted to potential users (route to market)?**

During the 15-month BASEE project (Q1 2020-Q1 2021) Considerate will build the core app functionality as well as cementing partnerships with key lenders and suppliers. The aim is for flutter to be ready for commercial launch in Q2 2021.

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## **Element Energy - Online tool using smart meter data to promote energy efficiency investments for SMEs.**

### **What are the objectives of your project/solution?**

Our online platform aims to engage SMEs in their energy usage and support them in investing in energy efficiency. By building on the smart meter rollout, it aims to provide a scalable solution which can address the large variation in SME characteristics and the lack of economies of scale in SME energy efficiency. It aims to equip SMEs with the information they need to understand their energy usage levels, how they can be reduced through investments in energy efficiency (or other measures), and the business case for doing so. It also aims to address wider barriers to energy efficiency for SMEs such as a lack of coordination in the supply chain and a lack of access to capital, by providing information on technology and finance providers. Furthermore, it aims to be easy to use (with the ability for more engaged SMEs to conduct more detailed analysis as appropriate), tackling barriers around a lack of interest, capacity, or time to engage with energy usage for many SMEs.

### **What key functionality(ies) will your solution offer to end users?**

Our solution uses SMEs' smart meter data and business characteristics to assess and provide tailored recommendations and supporting information on energy efficiency investments (along with the associated savings and timeframes involved) that are appropriate to the SME's specific context. Specifically, it is a website (that is mobile-friendly), to which SME users log in, allowing them to view their electricity and gas usage along with a detailed comparison to similar businesses. This comparison is based on detailed archetypes which are tailored based on business characteristics information inputted by the SME within our platform. A core aspect of our platform's functionality includes the provision of business case tools, allowing SMEs to calculate the expected savings and payback times associated with a range of energy efficiency investments, tailored to their specific business characteristics. The tool also includes links to suitable technology providers, a wide range of information and links around financing options, a library of energy efficiency actions, and many other engagement and analytics features.

### **What key benefits will your solution bring to end users?**

In line with the aims listed above, the key benefits of our solution to end users are as follows. It provides a simple and easy to use platform for SMEs to learn about their energy usage and provides valuable contextual information by comparing to similar businesses. It also helps them to understand the business case for investing in energy

efficiency, allowing them to make evidence-based investment decisions, reducing their energy usage and saving them money. By providing this information, along with a range of other analysis and advice, within one integrated platform, our solution will make it easier for SMEs to engage in energy efficiency and make it simpler for them to invest.

### **How and when will the solution be made available / promoted to potential users (route to market)?**

Our preferred route to market is to make our solution available to end users through energy suppliers, utilising their existing access to large pools of customers and simplifying the smart meter data access process. We plan to roll out our solution with customers following the end of the BASEE competition in 2021.

For any questions please contact [jonathan.stokeld@element-energy.co.uk](mailto:jonathan.stokeld@element-energy.co.uk)

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## **EnergyPro - ESCO-in-a-box**

### **Key objectives**

ESCO-in-a-box<sup>®</sup> is a new approach aimed at unlocking the wide range of financial, environmental and social benefits provided by energy efficiency upgrades for SMEs that lack the time, resources or motivation to implement projects. The aim of our BASEE Phase 2 project is to demonstrate that a local, trusted organisation can successfully deliver energy efficiency services to SMEs provided they are equipped with the right toolkit: standardised project development processes, vetted technology partners and contractors, guaranteed savings and suitable finance. During Phase 2 we will:

- Establish 'EPConnect', a new venture from EnergyPro, to develop and license ESCO-in-a-box;
- Establish a 'Community Energy Services Company' (CESCO) at Low Carbon Hub in Oxfordshire as the first ESCO-in-a-box licensee;
- Establish a framework of trusted contractors for Oxfordshire;
- Establish a community fund for energy efficiency projects in Oxfordshire;
- Deliver at least 12 energy efficiency projects with Oxfordshire-based SMEs;
- Develop a market-ready version of ESCO-in-a-box;
- Secure firm commitment from at least one further ESCO-in-a-box licensee.

## **Key functionality of the solution**

ESCO-in-a-box is an 'operating system' for energy services, incorporating all the systems, processes and contracts needed to deliver efficiency projects to SMEs, based on internationally established good practice. The system will be targeted at organisations operating on a regional or market-segmented basis that enjoy trusted reputations among populations of SMEs and can work with them to systematically address barriers to uptake of energy efficiency solutions, and then deliver projects in a standardised manner using ESCO-in-a-box. These projects will be investment grade and accessible to financiers, making the customer proposition high quality, low risk and available at no up-front cost to the SME. 'Franchising' the ESCO-in-a-box system provides scalability, and over time will create a national network of energy services companies (ESCOs) serving SMEs.

## **Key benefits of the solution for end users**

Most SMEs are strongly rooted in their local area, which provides their customers, staff, maintenance contractors and other service providers. SMEs frequently contribute to local charitable causes and carefully nurture their local reputation. These clients need an energy efficiency proposition that has been developed specifically for them, articulated in a local voice that understands their needs and priorities, so they can trust the proposal and proceed with confidence. Specifically:

- The benefits of energy efficiency are explained
- They can have confidence in the contractor and technologies involved
- They receive a warranty and meaningful savings guarantee, arranged and enforced on their behalf
- They have a single, nearby 'one stop shop'
- Their success in making a positive environmental contribution is celebrated and disseminated.

ESCO-in-a-box provides the operational back-end for this SME-tailored energy efficiency proposition, allowing local licensees to concentrate on winning SME clients and delivering projects.

## **When the solution will be available**

The Oxfordshire CESCO will be launched during Q2/3 2020 and aims to begin serving local SMEs immediately. A pipeline of SME projects has already been developed based on the long-running OxFutures programme. In parallel, EPConnect – a new company being launched by EnergyPro – will develop the ESCO-in-a-box system ready to begin securing further licensees from Q4 2020.

## How to get involved

The ESCO-in-a-box project team would like to hear from SMEs based in Oxfordshire, or with operations in the region, particularly those with ideas for energy efficiency projects. The team would also like to hear from contractors, energy saving solution providers and any businesses who would like to make energy efficiency part of their offer, provided they are able to serve clients in Oxfordshire.

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## Hoare Lea - Bundled Technologies for the Online Market Place

### Objectives

More and more businesses are keen to play their part in addressing the climate emergency. At the same time, they also want to manage their costs, particularly in the face of rising or volatile energy prices.

The Hoare Lea project aims to address the barriers faced by SMEs and landlords in securing energy efficiency investment to help increase energy efficiency in the non-domestic sector. We will do this through standardise contracts, specifications and processes to minimise 'friction' within the energy efficiency marketplace.

The project will create:

- Clear pathways to net zero for a range of office and warehouse types
- Compelling product bundles for both landlords and tenants
- Product and process standardisation to streamline procurement and investment
- Capital investment and carbon reduction pathways
- Systems to quantify reductions in energy use pre and post intervention

### Key user benefits

**Streamlined processes will reduce the costs and risks of energy efficiency for SMEs and commercial landlords.** Building owners and users will be provided with more transparency of how their buildings are performing in practice, giving greater confidence in the outcome of their investments.

**Investors** will benefit from simplified processes, reduced risk and greater visibility, building market confidence and capacity to increase investment in energy efficiency products.

**Manufacturers** will be able to plan for larger contracts through aggregation of demand. The project will encourage manufacturers to modify their products towards standard specifications to enable economies of scale that are mutually beneficial to manufactures and end users.

### **Route to market**

Our project will have a regional focus to enable scalable recruitment and aggregation within geographic areas. Initial Phase 2 pilot sites have been identified in Exeter and Bristol.

The project will then use trusted intermediaries to scale the solution to multiple SMEs and landlords. This will involve collaborative working with partners such as:

1. Non-domestic energy suppliers and intermediaries
2. Supply chain partners including consultants, designers and manufacturers
3. Local business networks and support services, including those run by local authorities
4. Landlords and property management companies

### **Outcomes:**

Overall, the offer will:

1. Strengthen the narrative around the journey to zero carbon as a condition of being a good business
  2. Make it easier for businesses to understand the potential routes to zero carbon
  3. Make it easy for non-experts to participate in and feel confident in the marketplace for energy efficiency
  4. Streamline access to investment for energy efficiency products
  5. Be flexible to different models of building ownership, management and operation
  6. Provide a scalable solution to energy efficiency investment to improve access for SMEs.
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## **Qbots - Q-Energy, Smart Energy Service Platform for SME customers**

### **What are the objectives of your project/solution?**

- Develop and test an automated data-driven approach for promoting energy efficiency by piloting with 40 customer sites with a mix of retail, hospitality and office buildings.
- Integrate with a financial technology provider to offer a straightforward financial assessment and workflow functionality for energy efficiency investments.
- Create a viable product for energy management services that can be commercialised for the SME market.

### **What key functionalities will your solution offer to end-users?**

QEnergy™ platform will capture energy data and operational data of the business and build an energy model of their premises to provide bespoke recommendations with the help of a consumer access device (CAD), IoT gateway (Smartbox) and QEnergy™ dashboard. SMEs will be provided with a dashboard which unifies all the core elements of the energy, i.e. energy contract, efficiency recommendations and financing options for efficiency products.

QEnergy™ will offer various packages for the businesses according to their scale and requirements. These packages are all about providing automated energy efficiency recommendations by taking key steps (Recommend -> Investigate -> Automate -> Accept -> Finance -> Save). The QEnergy™ platform also has functionality for customers to input additional details about their site and their equipment /devices.

### **The energy efficiency measures that will be focused on includes:**

- Smart efficient HVAC and lighting controls
- Converting motors & pumps to variable speed drives
- Basic insulation measures (roof, wall)
- Refrigeration display equipment
- Installation of heat pumps or potentially micro-CHP

Demand management service, battery storage and renewable generation will be offered together wherever it improves the business case.

### **What key benefits will your solution bring to end-users?**

- Up to 15% savings from witching and 30% more savings from efficiency interventions on the energy bill
- Real-time management of energy usage from various appliances through the QEnergy™ dashboard.

- Quantified savings from various energy efficiency interventions including quick wins.
- Simplifying access to finance for efficiency products.

### **How and when will the solution be made available / promoted to potential users (route to market)?**

We will be testing two approaches for how to promote the platform:

- 1) Market directly as QEnergy – we will access customers through online channels (website marketing, emails, social media engagements) and through affiliate partners including Federation of Small Businesses (FSB)
- 2) Market through Bryt Energy – to offer the service to new customers, or customers looking to renew, as an added incentive to having a smart meter fitted

For the purposes of the trial, the marketing and contractual terms may be simulated rather than a full commercial offer.

### **Date when service available**

The QEnergy™ platform will go live by May 2020 and pilot SME sites will be engaged from the beginning of June 2020.

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### **VRM Technology - Smarter Choices for SMEs**

The Smarter Choices service will radically simplify and secure access to quality assured building energy efficiency solutions for SME businesses. VRM Technology are working with Joule Assets, Future Climate and Oxford Innovation. Together, we will offer a holistic, quality guaranteed, end-to-end energy efficiency service: from assessment through to financing, installation and in-use performance monitoring.

The Smarter Choices package will be available at a scale for a wide range of SME companies with a £50,000 minimum investment for energy conservation measures – this represents a significantly lower threshold than is currently available from existing energy service contract providers.

The Smarter Choices solution will provide, via a new single integrated digital platform:

- Investment grade audits and a handholding service



- Approved, quality-assured, installers for defined energy conservation measures (at full delivery stage)
- Off- balance sheet finance package with due diligence and risk assessments for Energy Performance Contracting
- Performance assurance and monitoring using gold standard measurement and verification protocols
- Access to Energy Efficiency Performance Insurance
- Energy and building performance monitoring using novel Internet of Things (IoT) technology

### **What key benefits will your solution bring to end users?**

The Smarter Choices solution will make it easy for companies to choose building energy efficiency improvements, with easy access to financing to pay for all or some of the measure's costs. Most importantly, business owners (and financiers investing in measures through Smarter Choices) will be able to trust that the installed measures are performing as planned. Our offer that will be aligned with emerging best practice and new national standards in the retrofit industry for assessment, management and installation.

### **How and when will the solution be made available / promoted to potential users (route to market)?**

The Smarter Choices solution will be piloted with real life SME customers from June 2020 with the expectation of being launched commercially by May 2021. The package will be promoted to SME clients through two primary routes: through our core partners Oxford Innovation who provide business development support to 5000 SME's in the manufacturing sector and via the Smarter Choices multipliers: SME support programme providers, ESCO's, energy broker and building energy assessors.