**Description:**

***Technological focus of the Competition***

There is an established market for energy management services using smart (primarily advanced) meter data, however this primarily serves large or very large organisations which have greater organisational capacity and higher potential for savings. For smaller non-domestic users including micro-businesses, SMEs and small public-sector bodies, there is no requirement for suppliers to provide equivalents of the mandatory domestic in-home displays (IHDs), and suppliers are primarily offering passive, self-serve online platforms.

In 2015, SMIP published a Forward Look by the Carbon Trust into smart meter-enabled innovation for non-domestic customers , which identified five key innovation areas that could be enabled before 2020 by the smart meter roll out for non-domestic customers, including automated building performance evaluation, analytics and pattern recognition, and device disaggregation.

In early 2017, we assessed the development and uptake of smart energy management solutions in the non-domestic market (in particular SME and micro-businesses) in more detail. Most of the companies we spoke to saw significant value in detailed consumption data combined with price information, but almost all did more than just provide this information back to the consumer in an easily comprehensible format – this was just step one.

We have concluded from this work that there is the technical and market potential for innovative products and services using smart meter data, which could be ‘pushed’ to smaller organisations without placing great time demands on them. For example, products or services might automatically benchmark site and equipment consumption within portfolios of outlets or against comparable businesses, or identify unexpected spikes in demand or equipment failure.

However, there is currently a market failure, in terms of both third party and energy utility market offerings, for products and services based on data analytics to provide such actionable information for SMEs (single and multi-site organisations). The Competition addresses this market failure. However as described in section 1.3, innovative solutions for larger organisations occupying sites covered by the smart metering mandate are also potentially eligible.

We are seeking diverse ideas on how smart meter data could be used, within organisations, to achieve energy savings. The examples given above are simply examples, and there may be entirely new ways of using data, either within existing or new platforms.

Phase 1 of the Competition focuses on development of smart meter data based software tools (energy analytics). Our research has shown that energy analytics and visualisation also require complementary interventions in the form of targeted information and advice, to help customers improve energy management practices. Phases 2 and 3 of the Competition is focused on development of such complementary interventions alongside software tools to form a package of solutions, which can be rolled out and tested with customers.

The types of complementary interventions which are likely to be effective may vary considerably across target segments, but are likely to include tailored information and advice linked to outputs from the software tools including:

* Information to engage customers (e.g. estimations of financial costs/savings)
* Information and advice on actions which can reduce energy demand and costs (e.g. heating controls, lighting, energy using products advice etc.), alongside information on pathways to take action
* Tailored messages designed to encourage uptake of advice and sustained behaviours.

A toolkit of information and advice has been developed for the domestic sector, which may give some ideas as to the types of interventions which were deemed applicable for that sector . Similar approaches might be suitable for certain types of independent businesses (e.g. retail).

***The Competition***

The aim of the Competition will be to develop the market for, and maximise the overall uptake and impact of, energy management products and services based on data analytics for smaller non-domestic sites in order to help secure energy demand reduction within target sectors of the non-domestic sector.

The objectives of the Competition will be to:

1. Develop innovative and easy-to-use data tools which are tailored for the requirements of the target sectors (see below) to add value to smart meter data and facilitate user engagement, use and understanding;
2. Develop packages of supporting complementary interventions (e.g. advisory and training materials, case studies, methods for peer-to-peer learning) tailored for the requirements of the target segments which drive the uptake and effective use of data tools;
3. Secure earlier and greater levels of energy management activity within the five non-domestic segments to be targeted (schools, hospitality and retail chains , independent hospitality and retail businesses) leading to reduced energy costs and carbon emissions (contributing to the Clean Growth Plan and Industrial Strategy) and greater investment in energy efficiency and flexibility, whilst also maximising the benefits of transferable learning to other segments;
4. Develop and strengthen the market for energy management products and services for smaller non-domestic consumers by reducing the barriers to, and stimulating the market for, companies developing products; and
5. Support the implementation of energy management within the target segments through enabling increased and more effective activity by partner organisations (e.g. Smart Energy GB, energy suppliers, devolved administrations and others).

The Competition will cover both gas and electricity meters in non-domestic premises within the scope of the Smart Metering Implementation Programme (SMIP).

The Competition will target five segments of the population covered by the smart meter mandate, across three broader non-domestic ‘strands’, detailed below.

Strand 1 – Chains

1. Chains of restaurants/pubs (hospitality sector)
2. Chains of shops (retail sector)

Strand 2 – Independents

1. Independent restaurants/pubs (hospitality sector)
2. Independent shops (retail sector)

Strand 3 Small public sector

1. Schools

These segments have been chosen as they represent a significant proportion of the numbers of sites and energy consumption of the total non-domestic rollout; also taking account of ease of engagement. Significant cost-effective energy efficiency potential exists within these segments, but there are significant barriers to energy efficiency especially amongst SMEs, with take up lagging behind larger organisations and the residential sector .

As already described, as well as microbusinesses, SMEs and small public and third sector organisations, the non-domestic roll-out also covers a minority of large, multi-site energy consumers. While the primary market failure we have identified is for products and services for SMEs (single and multi-site organisations) operating at sites with meters covered by the smart metering mandate, innovative proposals which benefit larger, multi-site organisations occupying a portfolio of such sites are also eligible and will be assessed on an equivalent basis.

***Structure of the Competition***

The Competition will be managed by BEIS, who will establish an internal project board to oversee it and approve decisions. BEIS also intends to establish an external advisory board including sectoral stakeholder representatives and technical experts to provide strategic input/ advice.

The two main components of the Competition will be:

1. Competition projects. Up to nine innovation projects will be funded through the Competition (two to four projects across each of the target strands ). The Competition will be phased, initially developing smart meter software/data tools (Phase 1), followed by initial testing with customer organisations (Phase 2) and roll out/further testing of the tools, with supporting energy management advice and engagement approaches (Phase 3). Further details on the activities and timescales of the phases are provided below.

Successful Competition applicants will also be encouraged to include their own research as part of the Competition to inform the efficacy of their interventions, and to inform routes to market – working closely with BEIS’s research co-ordinator (see below). The rationale for a phased approach is to facilitate the innovation process, allowing time for partnerships to develop, providing the range of skills necessary to deliver successful projects, which have greater chance of commercial success after the Competition ends. BEIS will facilitate this process (e.g. by holding ‘match-making’ events) during the Competition.

1. Research and Evaluation Contractor (REC) – as described above, a research and evaluation contractor will be procured alongside the Competition to work with and support Competition participants through provision of research and feedback, as well as to evaluate the Competition.

Sectoral focus: Evidence shows that the presentation of data insights and behavioural prompts need to be tailored to individual non-domestic segments: one size does not fit all. For these reasons, Competition applications must focus on the target non-domestic strands and segments noted above.

As there is little evidence available on the precise type(s) of data tools and supporting information and advice which will be effective for each segment, BEIS envisages funding multiple projects per strand (two to four per strand up to a maximum of nine projects in total). Strands 1 and 2 (chains and independents) are anticipated to be more diverse in terms of energy end-use, organisational structures, cultures and attitudes. This may mean that higher numbers of projects will be funded in these strands, to allow for corresponding diversity in data tools.

However, it is also possible for applications to cover more than one of the segments within and/or across strands. For example, restaurants in strands 1 and 2 will operate similar types of energy using equipment and processes, so some analytical tools could serve both.

***Eligibility Criteria***

BEIS expects to deliver the proposed Competition as an SBRI competition: a form of pre-commercial procurement which is aimed at organisations working on research and development (R&D) of an innovative process, material, device, product or service prior to commercialisation. Funding is available for pre-commercial R&D activities only. Projects requesting funding for commercialisation activities are not eligible.

SBRI competitions are open to all organisations that can demonstrate a route to market for their solution.

The sharing of risks and benefits is an important aspect to the SBRI approach. Projects receive financial support and retain any intellectual property generated, with certain rights of use retained by BEIS. Project outputs are expected to be shared publicly. Applicants should clearly state where cost savings are being provided compared to exclusive development contracts .

Proposals will be assessed for eligibility prior to proceeding to full evaluation. Eligible proposals must:

1. Be at a pre-commercial stage of development (see section 6, call scope);
2. Address the call scope (see section 6);
3. Describe all phases of the project (see ‘Competition Process’, section 2 and ‘Activities and Timescales, section 2);
4. Clearly indicate the cost savings provided to BEIS in line with SBRI requirements (see financial information section 10.1);
5. Be led by a single organisation with evidence of strong collaboration across consortia (if a consortium bid is proposed)