

Prior Information Notice (PIN)

Background

A recent Innovate UK funded feasibility study identified that the Energy Systems Catapult (ESC) working together with the Cabinet Office (CO), and other central government organisations might be uniquely positioned to accelerate energy system transformation measures at scale across the public sector estate. We now wish to further explore this opportunity.

We wish to conduct a 3.5 month challenge-based phase of work, to further develop transformation methodologies and business cases that build on the feasibility project work. We intend to Tender to select up to 4 suitably qualified and experienced suppliers, or consortia of suppliers, to undertake the challenge that seeks to: 1. develop future energy systems designs for up to 6 public sector campus-scale sites (as pathfinder projects) and also to support a wider team, including the Energy Systems Catapult, develop a generic methodology that might be suitable to support the roll-out of more complex energy systems across the public sector estate.

It is expected that the methodology will ultimately be able to support the public sector as it seeks to:

- deliver government decarbonisation commitments in support of the 5th Carbon Budget;
- optimise energy use and energy assets – both at site level and in conjunction with neighbouring sites;
- minimise public sector risk by preparing facilities to efficiently accommodate emerging energy trends, such as EV take-up and provision of customer-supplied services;
- explore how the public estate can support the wider energy system transformation through the use of flexible assets and system supportive design.

Whereas there has been some success in deploying simpler energy efficiency measures on public sector estate sites (including insulation, LED lighting & Combined Heat and Power), this challenge will target integrated energy solutions that seek to combine technologies such as self-generation, storage and those that enable the integration of power, heat and transport or energy demand management e.g. digitalisation, monitoring and control systems that between them can dynamically control energy use on a site, for the benefit of the site and the wider energy system. The challenge will also encompass commercial arrangements and 'least regret' implementation options in the face of a rapidly evolving UK energy systems.

Challenge Objectives

In parallel with studying the transformation of up to 6 campus-scale sites (the scope of this challenge), the ESC will be working with a larger team (the larger team will include the competition winners) to overcome factors we have identified as barriers to the take up of more complex solutions, including but not limited to;

- Creating the missing business case for individual campus-scale consumers to implement sophisticated solutions;
- Ensuring there is a suitable simple, flexible and legal procurement process available for such transformations;
- Addressing issues of access to private sector capital;
- Ensuring the longer-term benefits obtainable from using site energy systems in a coordinated, 'Energy System Supportive' manner are considered in business case evaluations;

- Helping the entire supply chain develop expertise in specifying and delivering optimised solution designs suitable for use in site design/build/commission tender activities;
- Acting as reference examples of successful deployments to build confidence and capability and stimulate supply chain activity to develop scalable modular solutions.

Request for Expert Input

We are seeking views and expert opinion from potential challenge entrants and the wider supply chain regarding the structure and content of the challenge design and the relevant work packages.

We are particularly keen to receive input in the following areas:

- from integrators who have experience or interest in designing, specifying and integrating energy solutions incorporating multiple technology types, e.g. generation, storage, EV charging, energy efficiency measures; and optimising those solutions to against commercial considerations and energy market arrangements
- from companies and individuals with experience related to virtual power plants.

We are seeking input on the design of this challenge through two pre-challenge workshops:

- 10am to 1pm on the 2nd August 2018 – Energy Systems Catapult Office in Birmingham
- 10am to 1pm on the 14th August 2018 – Future Cities Catapult Office in London.

These half day workshops will provide an opportunity to receive information and influence a potentially key project in shaping the future UK energy landscape.

Please note there is a limit on the numbers attending each workshop. Each supplier who wishes to attend may send a maximum of 2 people, however, we may have to reduce this to 1 person depending on how many requests to attend are received.

To register your expression of interest in attending one of the workshops. Please state which location you prefer, please note we cannot guarantee to offer you, your preferred location as places are limited.

If you are unable to attend either of the workshops, you may still register your expression of interest to take part in the Tender.

To register for either workshop and or to be invited to take part in the tender please email your expression of interest to : procurement@es.catapult.org.uk