



Cabinet Office



Department for  
Business, Energy  
& Industrial Strategy

**CATAPULT**  
Energy Systems



# Modern Energy Partners

## Background

To help the UK achieve a cost-effective energy system transformation, capitalise on a potential<sup>1</sup> £100bn annual global opportunity and deliver savings for consumers, it is fundamental that we grow expertise and stimulate the market for integrated energy efficiency solutions that combine low carbon distributed generation with energy demand management.

While there has been some success in deploying simpler energy efficiency measures in the UK (e.g. insulation, LED lighting & Combined Heat and Power), the supply chain's focus on single technology solutions, can have unintended negative consequences on the wider energy system.

A recent Innovate UK funded feasibility study identified limited UK expertise in designing, installing and operating energy efficiency solutions that reduce costs for sites; integrate demand management with the wider energy system; minimise need for Distribution Networks Operator (DNO) investment; and provide carbon savings.

Add to this ambitious carbon emissions targets, including a desired 50% further reduction across the public sector estate by 2032, and there is critical need to address the barriers preventing the acceleration of the market for integrated energy efficiency at scale.

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<sup>1</sup> The Energy Transitions Commission report 'Better Energy, Greater Prosperity' (April 2017) and supporting data pack on request

## The Project

Modern Energy Partners (MEP) is a pilot project run by Energy Systems Catapult (ESC) and Cabinet Office in partnership with Crown Commercial Services, Department for Business, Energy and Industrial Strategy (BEIS) and the public sector estate.

Working with the private sector supply chain, MEP will develop integrated energy efficiency solutions on campus-scale public sector sites (e.g. hospitals, military sites).

Campus-scale sites are ideal for cost-optimised energy system transformation because consumption is big enough for energy efficiency and demand management solutions to have material economic impact, but not so big and complex as to be unmanageable.

MEP will work with up to four private sector companies/consortia, relevant DNOs and energy managers at six public sector sites, to develop integrated energy solutions that combine multiple technologies such as self-generation, storage and energy demand management, to optimise outcomes for the benefit of the site and the wider energy system.





## Objectives

MEP is aligned with the ambitions of both the government’s Clean Growth and Industrial Strategies, while helping fulfil Green Investment Task Force recommendations. It will ultimately be able to support the public sector in:

- efforts to achieve the government’s fifth Carbon Budget;
- optimising energy use and energy assets – both at target sites and with neighbouring sites;
- minimising public sector risk by preparing facilities to efficiently accommodate emerging energy trends, such as rapid EV take-up and provision of energy services; and
- exploring how the public sector estate can support the wider energy system transformation by using flexible assets and system supportive design.

In parallel with creating solutions for the six sites, MEP will work with consortia to develop a generic methodology to support the roll-out of scalable integrated energy efficiency solutions across the public sector estate from 2019 and across the private sector from 2020, including:

- 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, aggregated manner in real time to support DNOs and/or drive cost efficiencies via new trading and sustainable investment opportunities;
- helping the supply chain build a competitive network of experts able to specify and deliver optimised and integrated energy efficiency solutions suitable for use in site design/build/commission tender activities;
- ensuring solutions are robust with regards to regulatory frameworks now being consulted on by Ofgem and BEIS;
- acting as reference examples of successful deployments to build confidence and capability and stimulate supply chain activity to develop scalable modular solutions.

## The Process

The MEP pilot project will run until the end of March 2019, with a challenge involving up to four suitably qualified and experienced suppliers, or consortia of suppliers, to develop future energy systems designs for up to six public sector campus-scale sites (as pathfinder projects).

It will also support a wider team, including ESC, to develop a generic methodology that might be suitable to support the roll-out of smart, integrated energy systems across the public sector estate.

