Department for Business, Energy & Industrial Strategy

CARBON TRUST

Supporting innovation to turn energy data into energy savings

The Clean Growth Plan will see **£2.5 billion** being invested into low carbon innovation by 2021.

Part of this budget will be used to create smart, flexible local energy systems to underpin Great Britain's shift to a thriving low carbon economy.

£2.5 billion

£8.8 million innovation competition to develop exciting, new and intuitive solutions to turn **energy data** into **energy saving actions** to help sectors that traditionally do not have dedicated on-site staff with responsibility for energy management.

Funding will support:

Prototyping
Innovative ways to visualise energy data to help people working in different sectors to take action.

Testing
Feasibility and behavioural change

Piloting and evaluation
In real businesses and schools so solutions can be tailored to the unique needs of the sectors.

Typically these organisations are local schools, restaurants, pubs, hotels, cafes and shops which have an important place in communities across Great Britain.

Helping them to **manage** their energy costs will help drive **future prosperity**.

This presents **challenges** for the private sector to provide the right **solutions at scale**.

Money **saved on energy** goes straight to the bottom line which makes businesses **more competitive.** In schools spending less money on energy bills means more money to be **spent on education**.

But they are all **very diverse**. One solution that works for a school may not be perfect for a busy restaurant.

GOV.UK

The **UK Government** is supporting this effort to deliver the right solutions to help these sectors act on their energy data. It's part of a wider programme to offer every small business in Great Britain a smart meter.

Schools

30,943 schools in Great Britain

Source: Department for Education, Education and Training Statistics for the United Kingdom 2017, Data table 11

Hospitality

PUBS 59,000

RESTAURANTS 56,000

HOTELS 50,000-60,000

Retail

542,000

Retail businesses in Great Britain employ 4.6 million people

How much electricity and gas do these sectors use?

Annual energy consumption by sector

Source: BEIS Energy Consumption in the UK 2017 update, Data table 5.05a: Conversion of ktoe to GWh using IEA unit converter. As household gas and electricity consumption, temperate corrected 2016 - Data table 3.03.

Schools

3,826 GWh

11,375 GWh

TOTAL 15,201 GWh

Equivalent to **0.9 million** households

Retail

27,981 GWh

9,223 GWh

TOTAL 37,204 GWh

Equivalent to **2.1 million** households

Hospitality

11,304 GWh

9,606 GWh

TOTAL 20,910 GWh

Equivalent to **1.2 million** households

Energy saving potential through investment in energy saving measures and better practices.

Source: BEIS, Building Energy Efficiency Survey 2014–15 England and Wales.

Schools

4,810 GWh

Retail

9,420 GWh

Hospitality

4,300 GWh

> **"Smart meters are a key enabler to achieving these benefits and have the potential to entirely change the way we interact with our energy system."**
>
> The Rt Hon Claire Perry MP,
> Minister of State for Energy and Clean Growth.

What types of solutions will be developed?

Next generation, easy-to-use data tools will be an important stepping stone to delivering local, smart energy systems.

But what kinds of features and benefits will help people to take control of their energy use?

Notifications
Real time text message alerts on energy spikes or broken equipment.

Gamification
Comparative league tables, reward schemes for the best performer, using energy management as an educational tool.

Ability to control
smart control mechanisms for electricity and gas – lighting, heating, cooling and refrigeration

Budget control
tracking against a set target. Real time view on progress

Dashboard
Centralised monitoring to see full picture, help to schedule work patterns, trading hours, maintenance

Load-shifting
demand-side response engagement facility

To find out more about the **Non-Domestic Smart Energy Management Innovation Competition** visit https://www.gov.uk/government/publications/non-domestic-smart-energy-management-innovation-competition

The competition is also funding a programme of research and evaluation delivered by Ipsos MORI and the Carbon Trust. This will support and disseminate competition outputs, as well as learn wider lessons about how to effectively engage non-domestic sites with smart meter data and energy efficiency.