Innovation Supporting Policy

10th anniversary Cleanpower Smart Grids Conference 2019 www.cir-strategy.com/events

Sally Fenton, Head of Smart Energy Innovation, BEIS



Energy Innovation Support LandscapePolicy Drivers









Energy Innovation Support LandscapePolicy Drivers

Press release

PM Theresa May: we will end UK contribution to climate change by 2050

Legislation laid today puts the UK on the path to become the first major economy to set net zero emissions target in law.

Published 12 June 2019 — see all updates
From: Prime Minister's Office, 10 Downing Street, The Rt Hon Greg Clark MP, and
The Rt Hon Theresa May MP





Britain has become the first G7 economy to put its 2050 net zero emissions target into law

Energy Innovation Support Landscape – Policy Drivers: Clean Growth Challenge



We will maximise the advantages for UK industry from the global shift to clean growth – through leading the world in the development, manufacture and use of low carbon technologies, systems and services that cost less than high carbon alternatives

We will take action to establish and extend UK leadership in the following early priority areas:

- develop smart systems for cheap and clean energy across power, heating and transport....
- develop UK leadership in low carbon transport across road, rail, aviation and maritime

We will:

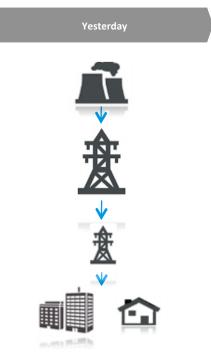
- increase our support for <u>innovation</u> so that the costs of clean technologies, systems and services are reduced across all sectors,
- align our policies, regulations, taxes and investments to grow the markets for these new innovations so that they are successfully commercialised in the UK.

Our long-term goals are to make clean technologies cost less than high carbon alternatives, and for UK businesses to take the lead in supplying them to global markets.

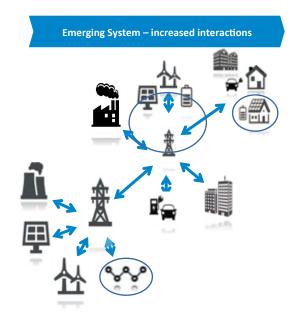


Energy Innovation Support Landscape – Policy Drivers:

Our energy system is undergoing fundamental change: decentralisation, decarbonisation and digitalisation (DDDs)



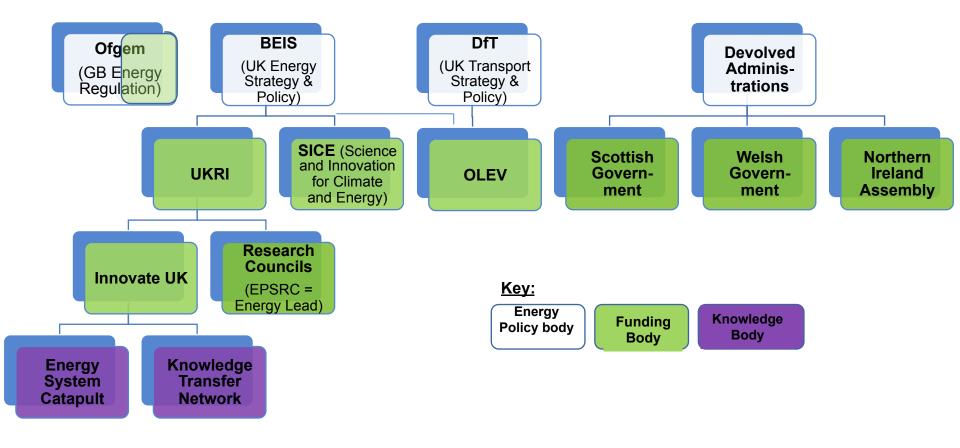
- Carbon intensive
- · Centralised generation
- Predictable supplies



- Low carbon
- Interconnectors
- More distributed
- Storage

- · Demand side response
- Electric vehicles/heat
- · Big data & Al
- Smart grids

Energy Innovation Support Landscape - Organisation Overview



BEIS Energy Innovation Programme

The overall aim of the £505m BEIS Energy Innovation Programme is to accelerate the commercialisation of innovative cheap, clean, and reliable energy technologies by the mid 2020s and 2030s.

Within each theme the budget is allocated to a mix of development and demonstration projects focused on specific objectives, underpinned by a programme of open, cross-cutting support

£180m Nuclear

Driving down costs and building new UK supply chains and skills

£15m Renewables

Driving down the cost of low carbon electricity at scale

£100m Industry

Low carbon options for industry, lowering energy costs

£90m Built Environment

More cost
effective
energy
efficiency and
low carbon
heating

£70m Smart Systems

Cost
effective
flexibility,
including
new storage
options

£50m Cross Cutting Supporting disruptive innovations (particularly for SMEs), including using innovative finance.



BEIS Smart Energy Innovation Programme

Smart Energy Innovation Programme: (up to £70m budget)

www.gov.uk/guidance/funding-for-innovative-smart-energy-systems

Energy Storage Competitions (up to £30m)

Focused on cost reduction of larger scale technologies (SatS winners, autumn 2019)

Demand Side Response & Reduction Competitions (up to £20m)

Engaging domestic & commercial consumers with innovative DSR and demand reduction applications (winners announced June 2018)

Vehicle-to-Grid Competition (up to £18m + £12m OLEV)

Innovative technology and business approaches to harness vehicle-to-grid (winners announced January 2018)

Flexibility Markets Competitions (up to £4.6m)

Innovative approaches to value and trade flexibility at local levels (winner to be announced summer 2019)

Smart Meter Application Competitions (up to £8m)

Smart Meter Load Control and Smart Energy Savings Programmes (winners to be announced summer 2019)

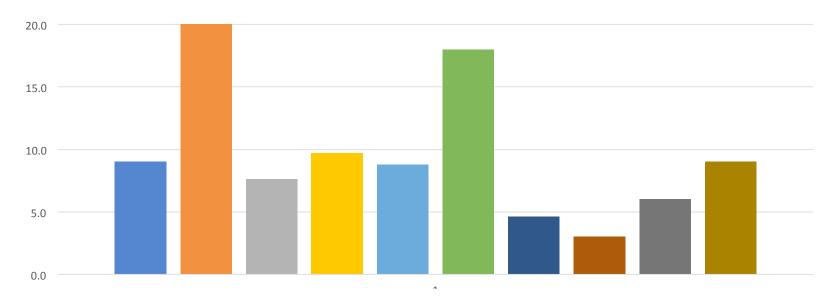
International Collaboration Competitions (up to £9m)

UK-South Korea - £3m (+£3m South Korea) (winners announced 2018); UK-Canada - £6m (+\$10m Canada, winners announced June 2019)



BEIS Smart Energy Innovation Programme

- Energy Storage Cost Reduction (7 projects underway)
- Storage at Scale (winners to be announced autumn 2019)
- Non-Domestic DSR (4 feasibility studies completed; 2 demonstration projects underway)
- Domestic DSR (20 feasibility studies completed; 13 demonstration projects underway)
- Non-Domestic Smart Energy Management (NDSEMIC) (7 demonstration projects underway)
- Vehicle-to-Grid (BEIS funding) (20 projects underway)
- Flexibility Markets (4 feasibility studies completed; demonstration projects to be announced by autumn 2019)
- Smart Meter Load Control (2 demonstration projects underway)
- ^{25.0} Smart Energy Savings (projects to be announced by autumn 2019)
 - International Collaborations (BEIS funding) (3 UK-South Korea projects; 7 UK-Canada projects)





Thank you!

Contact:

smart.innovation@beis.gov.uk

https://www.gov.uk/guidance/energy-innovation

