News story: Energy systems of the future: local communities to benefit sooner

A new research consortium and funding for business-led innovation projects will speed up the uptake of smart energy systems by local communities to start benefiting from cleaner, cheaper and more consumer-friendly energy.

Funding is by UK Research and Innovation through the Industrial Strategy Challenge Fund for clean energy – a £102.5 million investment in UK industry and research to develop systems that support the global move to renewables.

Rolled out by 2020s

Twelve projects from all across the UK will share £1.5 million to design ground-breaking, local, smart energy systems that are ready for roll out in the 2020s.

They will quickly bring forward energy systems with improved efficiency and productivity, at lower costs, in order to reduce energy bills for consumers and create better user experiences.

Ultimately this should help improve air quality in line with the government's fifth carbon budget, at the same time as building the UK's energy supply chain, creating high value jobs and export opportunities.

Projects include:

- creating an energy marketplace and local trading platform between the predominantly commercial premises in London South Bank and Waterloo, using IoT sensors, predictive algorithms and storage systems
- maximising existing and planned renewable generation assets in Bridgend, including solar farms and a nearby energy park, to develop a local electricity flexibility market, an electric vehicle charging network and improved service offerings for transport and heat
- making use of an established energy innovation district group and new digital technologies, such as sensing and control devices, data analytics and artificial intelligence, the Cheshire Energy Hub will better manage energy use by industrial users, decarbonise and lower costs

Developing novel research concepts

To bring forward novel research in local energy systems and accelerate uptake, value and impact, £8 million will go to setting up EnergyREV, an energy revolution research consortium.

The consortium will be led by the University of Strathclyde and include 29

investigators across 22 universities, working to ensure that UK academic expertise delivers impact and a competitive advantage.

It will work closely with the Energy Systems Catapult to provide analysis, evaluation and assessment of the projects funded under the prospering from the energy revolution challenge.

Additionally, EnergyREV will deliver its own strategic research projects that address some of the industrial challenges in developing local, investable, consumer-centred energy approaches.

Improving uptake, value and impact

Professor Stephen McArthur, Deputy Associate Principal for Research, Knowledge Exchange and Innovation, at the University of Strathclyde said:

> EnergyREV is excited about its role in supporting innovation in the prospering from the energy revolution programme.
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> The world-class knowledge, research teams and interdisciplinary expertise available through our university partnership will improve the uptake, value and impact of smart local energy systems.
>
> We are focused on using our novel research to accelerate and help deliver the Industrial Strategy goals and enhance UK competitiveness.

Rob Saunders, Deputy Challenge Director, Prospering from the Energy Revolution, UK Research and Innovation said:

> This is an exciting time for energy innovations.
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> We all rely on energy and we all need it to be cleaner and more cheaper, both as consumers and as a nation. New technologies point towards a new energy future, one of lower carbon and more efficient energy supply, distribution and storage, giving consumers more control.
>
> This energy revolution – a crucial part of the Industrial Strategy – has the potential to unlock investment and create high-quality jobs and grow companies capable of exporting.