

National Grid awarded top innovation prize

Pioneering work on overhead line conductors see National Grid win at IET Innovation Awards.

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- **National Grid wins award for its trials on advanced overhead line conductors**
- **The IET Innovation Awards celebrate the very best innovations in science, engineering and technology**

National Grid has been recognised as a leader in innovation, after claiming top prize at a recent awards ceremony, for its pioneering work on overhead line conductors.

In partnership with the University of Manchester and 3M, National Grid was honoured at the Institution of Engineering & Technology (IET) Innovation Awards in London on Wednesday 18th November, for their investigations into Aluminium Conductor Composite Reinforced (ACCR) conductors and their ability to transfer greater power between different overhead lines.

These high-temperature, low-sag overhead line conductors will allow National Grid to use its existing high-voltage transmission infrastructure more efficiently in the future.

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From left to right; Gordon Attenborough, IET, Professor Ian Cotton, University of Manchester, Richard Morris, National Grid, Mike Fairhurst, National Grid, Steve Adams, 3M and host Ortis Deley.

Winning the award in the 'Built Environment' category, National Grid was also shortlisted twice in the same category, for its trials into heat recovery and work on locating leakages on underground transmission cables.

David Wright, director of electricity transmission asset management at National Grid, said: "Being recognised by industry experts as a leader in innovation is a great achievement for the project team and National Grid as a whole.

"Through their thorough assessment of the ACCR conductor, they have demonstrated that this device is able to transfer greater power more efficiently, whilst successfully addressing electrical discharge and noise challenges too."

David added: "We were also delighted to be shortlisted for two other projects in the same category, demonstrating the breadth and depth of innovative investigations undertaken by National Grid, and the successful outcomes they have yielded."

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Notes for editors

Winner: Audible noise assessment of high-temperature low-sag ACCR conductor

High-temperature low-sag (HTLS) overhead line conductors enable higher power transfer from existing overhead line routes, allowing National Grid to utilise existing high voltage transmission infrastructure more efficiently. The Aluminium Conductor Composite Reinforced (ACCR) conductor achieves this whilst addressing electrical discharge and audible noise challenges associated with some types of HTLS conductor.

Shortlisted: Transformer heat recovery and thermal efficiency trials

National Grid has installed innovative heat recovery systems in three substations, utilising waste heat, a by-product from electricity transformers, to provide heat and hot water to adjacent buildings. This non-invasive, sustainable method of harnessing energy reduces substation demand for Low Voltage electricity supplies, supporting local communities and the environment.

Shortlisted: PFT – non-intrusive oil filled cable leak location

Employing Perfluorocarbon Tracing for leak location on underground transmission cables has enabled National Grid and electricity utilities to substantially reduce fluid volumes lost to the environment, the road works associated with cable leaks and the resulting impact on road users. It has also reduced circuit outage times and repair costs.

Notes to Editors:

National Grid is pivotal to the energy systems in the UK and the north eastern United States. We aim to serve customers well and efficiently, supporting the communities in which we operate and making possible the energy systems of the future.

National Grid in the UK:

- We own and operate the electricity transmission network in England and Wales, with day-to-day responsibility for balancing supply and demand. We also operate, but do not own, the Scottish networks. Our networks comprise approximately 7,200 kilometres (4,474 miles) of overhead line, 1,500 kilometres (932 miles) of underground cable and 342 substations.
- We own and operate the gas National Transmission System in Great Britain, with day-to-day responsibility for balancing supply and demand. Our network comprises approximately 7,660 kilometres (4,760 miles) of high-pressure pipe and 618 above-ground installations.
- As Great Britain's System Operator (SO) we make sure gas and electricity is transported safely and efficiently from where it is produced to where it is consumed. From April 2019, Electricity System Operator (ESO) is a new standalone business within National Grid, legally separate from all other parts of the National Grid Group. This will provide the right environment to deliver a balanced and impartial ESO that can realise real benefits for consumers as we transition to a more decentralised, decarbonised electricity system.
- Other UK activities mainly relate to businesses operating in competitive markets outside of our core regulated businesses; including interconnectors, gas metering activities and a liquefied natural gas (LNG) importation terminal – all of which are now part of National Grid Ventures. National Grid Property is responsible for the management, clean-up and disposal of surplus sites in the UK. Most of these are former gas works.

Find out more about the energy challenge and how National Grid is helping find solutions to some of the challenges we face at <https://www.nationalgrid.com/group/news>

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