

Ofgem Strategic Innovation Fund: Round 2 Alpha Phase: innovation projects approved for funding.

Energy networks with projects approved

Network type	Lead project partner network licensee	No of approved projects
Electricity transmission	Scottish Hydro Electric Transmission (SSEN: SHET)	3
	SP Energy Networks (SPT)	1
	National Grid Electricity Transmission (NGET)	2
Electricity distribution	Electricity North West Limited (ENWL)	2
	National Grid Electricity Distribution (NGED): East Midlands (EMID)	1
	Northern Powergrid (Northeast) (NPgN)	3
	Southern Electricity Power Distribution (SSEN: SSEPD)	1
	Scottish Hydro Electric Power Distribution (SSEN: SHEPD)	1
	SP Energy Networks: Manweb (SPMW)	1
	UK Power Networks (UKPN): Eastern Power Networks (EPN)	4
	UK Power Networks (UKPN): London Power Networks (LPN)	5
	UK Power Networks (UKPN): South Eastern Power Networks (SPN)	4
	Electricity system operator	National Grid Electricity System Operator (NGESO)
Gas transmission	National Gas Transmission (NGT)	2
Gas distribution	Southern Gas Networks (SGN)	1
	Northern Gas Networks (NGN)	1
	Cadent Gas (Cadent)	1
	Wales & West Utilities (WWU)	1

Summary of projects approved

Network type	Project number, title and description	Lead applicant	Initial net funding required
Challenge area: Supporting a just energy transition			
Electricity distribution	Net Zero Terrace <i>Showing how to decarbonise an entire terraced street using a smart local energy system that is affordable to consumers and easily replicable elsewhere.</i>	ENWL	494,502
	Guidelight <i>Developing ways to help ensure vulnerable households benefit from low-carbon heating technologies supplied by local authority landlords.</i>	UKPN (LPN)	487,322
	SHIELD (Smart Heat and Intelligent Energy in Low-income Districts) <i>New approaches and business models to make the decarbonisation of heat and energy affordable and therefore accessible to vulnerable consumers.</i>	UKPN (EPN)	475,123
	VIVID (Vulnerability Identification Via Informative Data) <i>Using smart meter and public data to identify which consumers would most benefit from support by local authorities, charities and energy companies.</i>	SSEN: SHEPD	448,525
Gas distribution	Hy-Fair <i>Meeting vulnerable customers' needs for tailored support, to help make the hydrogen transition work for everyone.</i>	SGN	463,201

Challenge area: Preparing for a net zero power system			
Electricity distribution	Artificial Forecasting <i>Harnessing machine learning and data to develop the dynamic load forecasts and predictive modelling needed for an active low-carbon electricity distribution network.</i>	NPgN	467,838
	Flexible Queue Management <i>Developing a data-driven approach to managing electricity network capacity, helping speed up integration of renewable energy and storage.</i>	NPgN	245,416

Electricity system operator	Powering Wales Renewably <i>Network companies and local government collaborating to accelerate low-carbon energy in Wales, taking a whole electricity system approach.</i>	NGESO	499,176
Electricity transmission	INSIGHT <i>Seeking to understand, predict and manage new forms of instability that may occur on a future net zero electricity network.</i>	SSEN: SHET	227,093
Gas transmission	HyNTS - Waste heat recovery for electrolysis Electrolyser Improvements Driven by Waste Heat Recovery <i>Looking at more efficient ways to generate hydrogen to run gas compressors, using waste heat.</i>	NGT	386,732
	HyNTS Hybrid Storage The Hybrid Storage System will enable safe and efficient storage of hydrogen on operational sites using an optimised approach to hydrogen's physical state against production and demand profiles.	NGT	375,369

Challenge area: Improving energy system resilience and robustness			
Electricity distribution	D-suite <i>Exploring how power electronics devices can help monitor and manage low-voltage distribution networks, in the face of growing demand for electricity.</i>	SPMW	495,010
	CRDo+ (Climate Resilience Demonstrator - extension to new climate risks) <i>Developing tools to help predict likely risks to energy networks from extreme weather events.</i>	UKPN (EPN)	497,856
	CommsConnect <i>Aims to provide reliable, resilient and more cost-effective communications for power grid operation, by combining public and private communication networks.</i>	UKPN (SPN)	403,382
	Connectrolyser <i>Researching new types of electricity connections to power the electrolysers needed to make green hydrogen.</i>	UKPN (EPN)	498,483

	<p>Trinity <i>Developing advanced energy network control room simulators, to help staff dealing with increasing complexity driven by the net zero transition.</i></p>	UKPN (SPN)	499,545
Electricity system operator	<p>Scenarios for Extreme Events <i>Creating a strategic planning methodology for events which are unlikely but could have severe repercussions on energy networks.</i></p>	NGESO	457,899
Electricity transmission	<p>SIF Blade Black Start Demonstrator from Offshore Wind <i>Investigating how new technology can enable wind farms to restore the grid following a blackout, instead of fossil fuel generators.</i></p>	SPT	499,920
	<p>REACT (Rapid Evaluation Areal Connection Tool) <i>Creating a geographical planning tool to help in connecting low-carbon energy technologies to the grid in the right places, while maintaining resilience.</i></p>	SSEN: SHET	496,625
	<p>SF6 whole life strategy <i>Exploring ways to end the use of sulphur hexafluoride, a potent greenhouse gas, in electrical systems.</i></p>	NGET	403,311
	<p>NIMBUS (Network Innovation and Meteorology to Build for Sustainability) <i>will make meteorological data e.g., rainfall, wind speeds and temperature, available and usable by energy networks to improve the ability to model and predict the impacts of weather and climate change.</i></p>	SSEN: SHET	499,873
	<p>WELLNESS (Whole Energy System Resilience Vulnerability Assessment) <i>Developing a standardised approach to embed resilience into decision-making across the whole energy network, as it becomes more complex and varied.</i></p>	NGET	471,725
Gas distribution	<p>HyCoRe (Hydrogen Cost Reduction) <i>Studying the best and most cost-effective locations for producing hydrogen using power from offshore wind, to develop a software planning tool.</i></p>	NGN	499,787

	NextGen Electrolysis – Wastewater to Green Hydrogen <i>Aiming to reduce the cost of producing hydrogen, by using wastewater rather than high-purity water for the electrolysis process.</i>	WWU	295,824
	Digital Inspector <i>Developing advanced systems for monitoring and managing welded joints in gas pipes.</i>	Cadent	309,790

Challenge area: Accelerating decarbonisation of major energy demands			
Electricity distribution	RetroMeter <i>Demonstrating a ‘metered energy savings approach’ to financing insulation and energy efficiency in homes, based on a live retrofit scheme in Manchester.</i>	ENWL	483,934
	LEO-N (Local Energy Oxfordshire-Neighbourhoods) <i>Exploring coordination of a new approach to decarbonising homes and businesses, combined with local energy planning, to accelerate net zero.</i>	SSEN: SSEPD	481,159
	PRIDE (Planning Regional Infrastructure in a Digital Environment) <i>Using a ‘digital twin’ to model changes to electricity, heat, gas, transport, digital and water infrastructure, informing decisions on investing in decarbonisation.</i>	NGED (EMID)	499,874
	Inform <i>Developing an automated energy use and connections estimator, to accelerate the decarbonisation of larger sites and non-domestic buildings.</i>	NPgN	388,491
	Park & Flex <i>Exploring how large car parks full of electric vehicles could in effect be used as large-scale batteries, giving power back to the grid.</i>	UKPN (SPN)	467,470
	Indus <i>Developing a network-led business model for decarbonising heat and power in mid-sized industrial parks.</i>	UKPN (EPN)	496,757
	Heatropolis	UKPN (LPN)	483,374

	<p><i>A study in King's Cross using data to maximise the use of electricity network capacity, so that heat networks can be decarbonised faster.</i></p>		
	<p>Full Circle <i>A framework to recover waste heat from energy network transformers, to make low-carbon heating more affordable for vulnerable and hard-to-reach customers.</i></p>	<p>UKPN (LPN)</p>	<p>416,811</p>
	<p>Lightspeed <i>Designing two-way electric vehicle charging points mounted on lampposts, that can increase charging availability and provide flexibility to the grid.</i></p>	<p>UKPN (SPN)</p>	<p>497,928</p>
	<p>Watt Heat <i>Investigating the potential of thermal storage such as heat batteries or water tanks to make home heating with heat pumps more flexible and economical.</i></p>	<p>UKPN (LPN)</p>	<p>486,444</p>
	<p>Heat Risers <i>Developing ways to accelerate the often complex decarbonisation of heating in multi-occupancy buildings.</i></p>	<p>UKPN (LPN)</p>	<p>489,735</p>