

Annexe

Strategic Innovation Fund: Round 1 Beta Phase: innovation projects approved for funding.

1) Energy networks with projects approved

Network type	Lead project partner	No of approved projects
Electricity	Scottish Hydro Electric Transmission Plc	2
	SP Energy Networks	1
	National Grid Electricity System Operator	1
Gas	National Gas Transmission	2
	Scotland Gas Networks and Southern Gas Networks	3
	Cadent Gas Limited	1

2) Summary of projects approved

Network type	Project number, title and description	Initial net funding required
Challenge area: Whole system integration		
<i>Electricity</i>	<i>Incentive</i> <i>This project looks at technologies for managing offshore wind generation. It will investigate innovative control and energy storage for ancillary services in offshore wind, Coupling storage with offshore wind farms to provide grid stability services (including inertia i.e. when turbines are not generating).</i>	£922,333

<p><i>Project partners:</i></p> <p><i>Scottish Hydro Electric Transmission Plc (lead)</i></p> <p><i>University of Strathclyde</i></p> <p><i>National Grid ESO Ltd</i></p> <p><i>The Carbon Trust</i></p>	
<p>Network-DC</p> <p><i>Investigating the connection of offshore wind to DC (direct current) networks in coastal communities. The project will look at the use of DC breakers to allow many wind farms to connect to a DC network, and thereby reduce number of coastal converter stations, achieving both economic and environmental benefits.</i></p> <p><i>Project partners:</i></p> <p><i>Scottish Hydro Electric Transmission Plc (Lead)</i></p> <p><i>University of Edinburgh</i></p> <p><i>Carbon Trust Advisory Ltd</i></p> <p><i>National Grid ESO Ltd</i></p> <p><i>SuperGrid Institute</i></p>	<p>£5,486,794</p>
<p>Crowdflex</p> <p><i>This project will investigate large scale consumer participation in energy network flexibility services</i></p> <p><i>Project partners:</i></p> <p><i>National Grid ESO Ltd (lead)</i></p> <p><i>Element Energy Ltd</i></p> <p><i>National Grid Electricity Distribution Plc</i></p> <p><i>Octopus Energy Ltd</i></p> <p><i>OVO Energy Ltd</i></p> <p><i>Southern Electric Power Distribution Plc</i></p> <p><i>Centre for Net Zero Ltd</i></p>	<p>£18,610,355</p>

	<p><i>OHME Operations UK Ltd</i></p> <p><i>Amazon Web Services</i></p> <p><i>Centre for Sustainable Energy</i></p> <p><i>Smith Institute</i></p>	
<i>Gas</i>	<p><i>HyNTS Compression</i></p> <p><i>Compression of hydrogen for use in energy networks. This project will test repurposing of existing compression equipment to determine if it could be used for 100% hydrogen transmission.</i></p> <p><i>Project partners:</i></p> <p><i>National Gas Transmission (Lead)</i></p> <p><i>Cardiff University</i></p> <p><i>Siemens Industrial Turbomachinery Ltd</i></p> <p><i>Northern Gas Networks Ltd</i></p> <p><i>Southern Gas Networks Plc</i></p> <p><i>DNV Services UK Ltd</i></p> <p><i>Premtech Ltd</i></p> <p><i>Cullum Detuners Ltd</i></p>	<i>£33,303,556</i>

<i>Challenge area: data and digitalisation</i>		
<i>Electricity</i>	<p><i>Predict4Resilience</i></p> <p><i>This project will investigate using data from historical faults, land cover (the physical material on the surface of the earth), weather and surveys to improve the forecasting of network faults and risks.</i></p> <p><i>Project partners:</i></p> <p><i>SP Transmission Plc (lead)</i></p> <p><i>University of Glasgow</i></p> <p><i>SP Distribution Plc</i></p> <p><i>SIA Partners UK Plc</i></p>	<i>£4,518,604</i>

	<i>Scottish Hydro Electric Power Distribution Plc</i>	
<i>Gas</i>	<p><i>Predictive Safety Interventions</i></p> <p><i>Using data and AI to prevent safety incidents</i></p> <p><i>Project partners:</i></p> <p><i>Southern Gas Networks Plc (lead)</i></p> <p><i>Cadent Gas Ltd</i></p> <p><i>Northern Gas Networks Ltd</i></p> <p><i>National Grid Gas Plc</i></p> <p><i>FYLD Ltd</i></p>	<i>£1,078,726</i>
	<p><i>Intelligent Gas Grid</i></p> <p><i>This project will investigate the use of weather data and artificial intelligence (AI) to monitor and control gas networks in including the optimisation of pressure management, detection of faults and assisting the injection of green gas into the network.</i></p> <p><i>Project partners:</i></p> <p><i>Southern Gas Networks Plc (Lead)</i></p> <p><i>Cadent Gas Ltd</i></p> <p><i>Northern Gas Networks Ltd</i></p> <p><i>Wales & West Utilities Ltd</i></p> <p><i>National Grid Gas Plc</i></p> <p><i>Utonomy Ltd</i></p> <p><i>DNV Services UK Ltd</i></p>	<i>£6,072,524</i>
	<p><i>Digital Platform for Leakage Analytics</i></p> <p><i>This project will investigate reducing gas network leaks through the development and use of a digital platform.</i></p> <p><i>Project partners:</i></p> <p><i>Cadent Gas Ltd (lead)</i></p>	<i>£9,496,476</i>

	<p><i>Northern Gas Networks Ltd</i></p> <p><i>Wales & West Utilities Ltd</i></p> <p><i>National Gas Transmission Plc</i></p> <p><i>Southern Gas Networks Plc</i></p> <p><i>Guidehouse Europe Ltd</i></p>	
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Challenge area: heat

<i>Gas</i>	<p><i>Velocity Design with Hydrogen</i></p> <p><i>This project will investigate the use of hydrogen in gas distribution networks.</i></p> <p><i>Project partners:</i></p> <p><i>Southern Gas Networks Plc (lead)</i></p> <p><i>Cadent Gas Ltd</i></p> <p><i>Northern Gas Networks Ltd</i></p> <p><i>Wales & West Utilities Ltd</i></p> <p><i>National Grid Gas Plc</i></p> <p><i>Institution of Gas Engineers and Managers</i></p> <p><i>DNV Services UK Ltd</i></p>	<i>£5,912,144</i>
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Challenge area: zero emission transport

<i>Gas</i>	<p><i>HyNTS Deblending for Transport Applications</i></p> <p><i>This project will investigate the blending of hydrogen for heavy transport refuelling stations into the gas network.</i></p> <p><i>Project partners:</i></p> <p><i>National Grid Gas Plc (lead)</i></p> <p><i>Element Energy Ltd</i></p> <p><i>Cadent Gas Ltd</i></p> <p><i>Northern Gas Networks Ltd</i></p> <p><i>Wales & West Utilities Ltd</i></p>	<i>£9,921,257</i>
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	<i>HyET Hydrogen B.V.</i>	
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