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Date: 28 May 2026

Dear Southern Electric Power Distribution

**Strategic Innovation Fund – Approval of the Material Change request for Southern Electric Power Distribution/Powering Ohms**

The Strategic Innovation Fund (SIF) supports network innovation that contributes to the achievement of Net Zero, while delivering net benefits to energy consumers. It facilitates collaboration with other public funders of innovation so that activities appropriately funded by network consumers are coordinated with activities funded by Government, and funding gaps are avoided. The SIF Governance Document sets out the governance and administration of the SIF, available on Ofgem's website.

On 27 April 2026, Southern Electric Power Distribution was awarded SIF Funding for Powering Ohms (the Project). Following this decision, Ofgem issued a SIF Project Direction on the same date.

On 22 May 2026, Southern Electric Power Distribution submitted a Material Change request for the Project to the Authority. The Material Change request was submitted due to:

- Change in Project Partners.

**Ofgem's review**

As set out in chapter 1 of the SIF Governance Document, Ofgem is the decision-maker in the SIF. Furthermore, as set out in chapter 6, Ofgem will consider Material Changes in

circumstances and requests to change SIF Project Directions on a case by case, and will engage with monitoring officers on Projects to support the assessment of Material Change requests.

Ofgem has reviewed this Material Change requested submitted by Southern Electric Power Distribution and has engaged with the monitoring officer on the Project. Ofgem has reviewed the reasoning for the Material Change submitted by Southern Electric Power Distribution and considers it to satisfy the Eligibility Criteria in chapter 2 of the SIF Governance because:

- That the requested change to the Project Direction should be approved as the requested change does not violate any of the Eligibility Criteria outlined in Chapter 2 of the SIF Governance Document.
- That the requested change to the Project Direction should be approved as the requested change also does not violate the eligibility outlined in the Innovation Challenge Documentation.

As such, UKRI recommended approval of the Material Change.

## **Decision**

In accordance with Section 17 of the Project Direction issued on 27 April 2026 and paragraph 6.22 of the SIF Governance Document, the amended SIF Project Direction for SHEPD / PATHWAYS TO 2050 is published in the Schedule 1 of this letter. The amended SIF Project Direction is effective as of the date of this letter and, unless stated otherwise, supersedes the SIF Project Direction issued on 27 April 2026. The letter constitutes notice pursuant to section 49A (Reasons for decisions) of the Electricity Act 1989 and 38A (Reasons for decisions) of the Gas Act 1986.

If you would like to discuss any of the issues, you can contact Ofgem via [networks.innovation@ofgem.gov.uk](mailto:networks.innovation@ofgem.gov.uk). Alternatively, you can contact UKRI via [SIF\\_Ofgem@innovateuk.ukri.org](mailto:SIF_Ofgem@innovateuk.ukri.org).

Yours sincerely,

**Marzia Zafar**

**SRO for the Strategic Innovation Fund**

**Deputy Director, Strategy Energy Systems Management & Security**  
**For and on behalf of the Authority**

## Schedule: Amended SIF Project Direction

### 1. PROJECT DETAILS

Application number: 10192918

Project title: Powering Ohms

Innovation Challenge/Project Phase: Consumer-centric grid expansion/Discovery Phase  
Round 5

Project start date: 1st May 2026

Project end date: 30th September 2026

SIF Approved Amount for SIF Funding: £133,526

### 2. PREAMBLE

This SIF Project Direction is issued by the Gas and Electricity Markets Authority (the "Authority") to SOUTHERN ELECTRIC POWER DISTRIBUTION PLC (the "Funding Party") pursuant to the SIF Governance Document issued pursuant to Special Condition 9.9 of the Electricity Distribution Licence. It sets out the conditions to be complied with in relation to Powering Ohms (the "Project") as a condition of it being funded under the SIF Funding Mechanism.

Unless otherwise specified, defined terms in this SIF Project Direction have the meaning given to them in the Licence or Appendix 1 of the SIF Governance Document.

References to specific sections of the Funding Party's Application in this SIF Project Direction are, for ease of reference, made by referring to the section number in the Funding Party's Application.

### 3. PROJECT-SPECIFIC CONDITIONS

In accepting funding for the Project, the Funding Party is subject to the following Project-specific condition(s):

#### ***Condition 1***

The Funding Party must not spend any SIF Funding until contracts are signed with the Project Partners named in Table 1 for the purpose of completing the Project.

## Table 1. Project Partners

PUREWAVE FORM LTD
ENERGY INNOVATION CENTRE LIMITED
Newcastle University
PNDC Strathclyde University

### **Condition 2**

The Funding Party must report on the financial contributions made to the Project as set out in its Application. Any financial contributions made over and above that stated in its Application should also be reported and included on the Innovation Funding Service (IFS).

### **Condition 3**

The Funding Party must make reasonable endeavours to participate in all meetings related to the Project that they are invited to by Ofgem, UKRI and the Department for Energy Security and Net Zero during the Discovery Phase.

### **Condition 4**

The Discovery phase will last for a period of up to five months from the date the Project Direction is issued; the Project will be allowed a flexible start date within the five-month period. The Project must provide the monitoring officer with the start date of the Project and must be completed before the end of the five-month period.

### **Condition 5**

Prior to the End of Phase meeting, the Funding Party must provide a summary of how the Project has engaged with the 'COLLABORATE' Project (led by Cadent Gas). This summary should set out any opportunities for alignment, any shared insights, and how any relevant learnings have informed the development of the Project's approach.

## **4. COMPLIANCE**

The Funding Party must comply with Special Condition 9.9 of the Electricity Distribution Licence, the SIF Governance Document and with this SIF Project Direction.

## **5. SIF APPROVED AMOUNT**

The SIF Approved amount of £133,526 (as detailed under Section 1: Project details of this Project Direction) will be recovered by National Energy System Operator from GB

customers and transferred to the Funding Party. The Funding Party is responsible for notifying National Energy System Operator of the bank account details to which transfers must be made, in addition to completing Annex 2 of this SIF Project Direction. If a Funding Party is required to return funding to National Energy System Operator, the reverse applies. The Funding Party must provide bank account details to National Energy System Operator within two weeks of accepting this SIF Project Direction.

## **6. PROJECT BUDGET**

The Project Budget is set out in Annex 1 of this SIF Project Direction.

The Funding Party must report on expenditure against each line under the category total in the Project Budget and explain any projected variance against each line as part of its detailed report which will be provided, in accordance with Chapter 7 of the SIF Governance Document. The Funding Party must report variations in the Project budget as outlined in Chapter 6 of the SIF Governance Document.

## **7. PROJECT IMPLEMENTATION**

The Funding Party must undertake the Project in accordance with the commitments it has made in the Application and with the conditions of this SIF Project Direction. These include (but are not limited to) the following:

- (i) complete the Project on or before the Project completion date as detailed under Section 1 of the Schedule of this SIF Project Direction, and
- (ii) disseminate the learning from the Project at least to the level described in Chapter 3 of the SIF Governance Document. Dissemination of learning must be carried out whether the Project was concluded successfully or otherwise.

## **8. REPORTING**

Ofgem and UKRI may issue guidance (and amend it from time to time) about the structure and content of the Project reporting required by Chapter 6 of the SIF Governance Document. The Funding Party must follow this guidance in preparing the reports.

The Funding Party must submit an end of Project Phase report to UKRI monitoring officers for the Beta Phase. Within this report, the Funding Party must submit information related to questions on Project delivery as detailed in Chapter 6, table 6 of

the SIF Governance Document. An End of Phase template is available and can be requested from UKRI.

## **9. MONITORING**

The Funding Party must comply with any reasonable request for information by its monitoring officer at UKRI and related deadlines. Ofgem, with the support of UKRI, will together monitor Project delivery, impacts and benefits. Throughout the term of the Project, progress is monitored by UKRI through a monitoring officer. The monitoring officer is the first point of contact for official notifications, queries and correspondence with UKRI and the Authority, unless otherwise required by this SIF Project Direction.

As detailed in Chapter 6 of the SIF Governance Document, meetings with the monitoring officer will take place at regular intervals, as advised by Ofgem or the monitoring officer during the delivery of the Project, and at the end of each Project Phase.

## **10. EVALUATION**

The Funding Party has acknowledged when it submitted its Application for this Project, that reporting information and data gathered during the Project's timescales (as detailed in Section 1 of this SIF Project Direction) will be used to evaluate Project performance. In addition, the Funding Party may be required to provide requested information outside of the Project timescales and, in particular, for the period from the Project end date to the end of the SIF Programme. Further data and reporting information may be requested (frequency and method based on requirement) outside of standard monitoring and reporting requirements as deemed necessary. Further data and information requirements must be complied with by the Funding Party and Project Partners.

## **11. DATA SHARING**

As set out in Chapter 3 of the SIF Governance Document, the Funding Party must follow Data Best Practice Guidance with regard to all data gathered or created in the course of a Project. We expect the Funding Party to document any reasons, such as commercial sensitivities, for desensitising data. As defined by, and in accordance with, Data Best Practice Guidance, Funding Parties must have a data triage process. Where multiple Project Partners are collaborating on a Project, the consortium must adopt a consistent Open Triage Process for the data related to the Project. Ofgem may require that Project information and data is also shared with other specified parties, such as parties working on complementary innovation funding programmes (subject to redaction of sensitive data).

## **12. CYBER SECURITY**

It is the responsibility of the Funding Party and all Project Partners to implement and maintain appropriate security measures to protect personal data in accordance with The [GDPR \(General Data Protection Regulation\)](#) and [DPA \(Data Protection Act\) 2018](#). Protection of computer systems from unauthorised access or being otherwise damaged or made inaccessible must be in place alongside effective working practices. These must be maintained in line with the Funding Party's IT Management Strategies and policies.

## **13. PROJECT MILESTONES**

The Funding Party must provide an outline in its end of Project Phase meeting with its UKRI monitoring officer that verifies the Project milestones have been achieved or explains why they have not.

Project milestones are outlined below in Table 2, based upon details contained within Question 7 in the Funding Party's Application.

Table 2. Project milestones

Reference	Project milestone	Deadline	Overall objectives and key tasks	SIF Funding Request
Milestone 1	Project Management	21/08/2026	<p><b>Overall Work Package Objectives</b> Ensure effective management and oversight of the project through structured planning, communication, risk management, and progress tracking. This work package includes initiating the project, facilitating regular meetings, documenting project processes, managing risks, and reviewing project progress at key milestones.</p> <p><b>High level tasks to achieve the work package objectives are:</b></p> <ol style="list-style-type: none"> <li>1. Ongoing coordination: Project kick-off, weekly team coordination meetings and face to face meetings.</li> <li>2. Project management book: Maintain comprehensive project management handbook outlining processes, tools, templates, and guidelines</li> </ol>	£12,002

			<p>to be used throughout the project.</p> <p>3. Risk register: Identify potential project risks, document them in a risk register, and develop mitigation strategies. Regularly update the register as the project progresses.</p> <p>3. UKRI Reviews, Show and Tell and communication: Maintain communication with UKRI and provide information on the project including formal reviews, which will be conducted to assess progress against objectives, evaluate outcomes, and identify lessons learned. There will also be a Show and Tell to disseminate the project.</p> <p>4. Alpha application: Oversight of the delivery of the Alpha Application in line with UKRI guidelines.</p>	
Milestone 2	Cross-DNO Engagement, Consumer Voice & Best-Practice Assessment	30/06/2026	<p><b>Overall Work Package Objectives</b></p> <p>To understand current DNO best practices, perceived technical and regulatory barriers, and readiness to adopt the proposed Powering Ohms technologies. This work package will also integrate consumer voice into the evidence gathering by ensuring insights on customer impact, acceptability, safety concerns, disruption, and inclusivity are explicitly captured during interviews and assessments.</p> <p><b>High-Level Tasks:</b></p>	£19,144

			<p>T2.1: Conduct structured interviews with GB DNOs</p> <p>T2.2: Integrate consumer-focused question set into interviews</p> <p>T2.3: Identify consumer risks and acceptability barriers and provide critical-friend review</p> <p>T2.4: Assess DNO-perceived barriers to compact substations, pole mounted transformers and enhanced-LV operation, compact unit for voltage regulation at the consumer connection point</p> <p>T2.5: Extract best-practice examples from relevant trials and literature</p> <p>T2.6: Consolidate DNO + consumer insights into a unified barriers/opportunities framework</p> <p>T2.7: Produce recommendations for WP5 &amp; 6</p>	
Milestone 3	Compact Voltage Transformation Approaches	14/07/2026	<p><b>Overall Work Package Objectives</b></p> <p>Define and assess compact voltage transformation approaches that reduce the apparent scale of LV reinforcement required in ED3 by increasing power</p>	£34,847

	<p>(Pavement, on consumer premises pre-meter &amp; Pole-Mounted)</p>		<p>density and flexibility at the secondary substation level. This work package will establish the technical envelope and develop initial concept designs for compact pavement substations and pole-mounted transformer solutions, validating feasibility through electrical and thermal simulation.</p> <p><b>High-Level Tasks</b></p> <p>T3.1: Define mechanical envelope and installation constraints for compact pavement substations and pole-mounted transformer solutions, including weight, footprint, access, and civil requirements</p> <p>T3.2: Establish electrical specifications, including voltage levels, fault ratings, protection requirements, and isolation arrangements</p> <p>T3.3: Define thermal limits and cooling strategies appropriate to compact and pole-mounted environments</p> <p>T3.4: Review relevant standards, compliance requirements, and network design constraints applicable to compact voltage transformation assets</p>	
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			<p>T3.5: Develop functional architectures and identify candidate PEC-enabled transformer and conversion topologies</p> <p>T3.6: Conduct electrical simulations to assess performance, efficiency, and fault behaviour</p> <p>T3.7: Conduct thermal simulations to validate cooling performance and achievable power density</p> <p>T3.8: Develop mechanical layouts and cabinet/internal arrangements for compact solutions</p> <p>T3.9: Integrate specifications, simulations, and layouts into a consolidated concept design package</p>	
Milestone 4	Devices at the Customer Point of Connection for Voltage Control	10/08/2026	<p><b>Overall Work Package Objectives</b></p> <p>Assess the feasibility of compact power electronic devices located at the customer point of connection to improve voltage control, unlock latent LV capacity, and minimise network reinforcement and consumer disruption. This work package will define technical requirements and develop initial concept designs suitable for deployment close to or within customer premises.</p>	£22,526

		<p><b>High level tasks to achieve the work package objectives.</b></p> <p>T4.1: Define mechanical and installation constraints for customer-side devices, including footprint, mounting options, access, and safety considerations</p> <p>T4.2: Establish electrical specifications, including operating voltage range, fault response, protection coordination, and power quality requirements</p> <p>T4.3: Define thermal limits and cooling approaches appropriate for consumer-facing environments</p> <p>T4.4: Review applicable standards, consumer safety requirements, and EMC compliance obligations</p> <p>T4.5: Identify candidate PEC topologies for customer-side voltage regulation and control</p> <p>T4.6: Conduct electrical simulations to assess voltage regulation capability, efficiency, and losses</p> <p>T4.7: Conduct thermal simulations to validate operation within compact enclosures</p> <p>T4.8: Develop high-level mechanical layouts and</p>	
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			<p>installation concepts</p> <p>T4.9: Integrate specifications and simulations into a concept design package suitable for consumer engagement and deployment assessment</p>	
Milestone 5	Cost-Benefit Analysis	21/08/2026	<p><b>Overall Work Package Objectives</b> Assess the feasibility of compact power electronic devices located at the customer point of connection to improve voltage control, unlock latent LV capacity, and minimise network reinforcement and consumer disruption. This work package will define technical requirements and develop initial concept designs suitable for deployment close to or within customer premises.</p> <p><b>High level tasks to achieve the work package objectives.</b> T5.1: Estimate CAPEX/OPEX and capacity-gain comparisons</p> <p>T5.2: Collect representative load and usage patterns</p> <p>T5.3: Develop converter efficiency and thermal loss models</p>	£22,925

			<p>T5.4: Integrate modelling into a structured cost-benefit framework</p> <p>T5.5: Conduct sensitivity analyses</p>	
Milestone 6	Deployment Model	21/08/2026	<p><b>Overall Work Package Objectives</b> Define a potential roadmap for pilot deployment of the proposed technologies, including engineering workflow, certification requirements, manufacturability, and long-term scalability.</p> <p><b>High level tasks to achieve the work package objectives.</b></p> <p>T6.1: Define design-procurement-installation workflow</p> <p>T6.2: Develop indicative pilot-deployment timeline</p> <p>T6.3: Identify certification requirements and trial-site considerations</p> <p>T6.4: Assess manufacturability and supply-chain needs</p> <p>T6.5: Evaluate long-term scalability and market readiness</p>	£22,082

## **14. USE OF LOGO**

The Funding Party and the Project Partners, External Funders and Project Supporters or subcontractors must not use the Innovate UK/UKRI and/or Ofgem logo for purposes associated with the Project in any circumstances.

As an alternative for use of both Ofgem and UKRI logos, all external Project communications must include the following standard form of wording:

- (i) "this project is funded by network users and consumers under the Strategic Innovation Fund, an Ofgem programme managed in partnership with UKRI."

For additional guidance, refer to the communications and media guidelines for competition winners, detailed as part of your delivery pack. These guidelines are designed to help with some suggestions and encourage you to take a proactive approach to communicating about your Project.

## **15. SHARING OF LESSONS LEARNED**

The Funding Party is required to ensure that the sharing of lessons learned and the facilitation of knowledge transfer is conducted as effectively as possible, to ensure that all parties, and therefore all consumers including future consumers, can benefit from Projects.

As outlined in Chapters 3 and 6 of the SIF Governance Document, we require the Funding Party to work collaboratively with other Networks and third-party innovators to disseminate the learnings and data from Projects and ensure that these are publicly available. This includes taking part in annual events.

## **16. COLLABORATION**

The Funding Party must collaborate with third-party innovators as Project Partners, as well as work closely with other parties in the energy supply chain, as set out in Chapter 3 of the SIF Governance Document.

## **17. AMENDMENT OR REVOCATION**

As set out in Chapter 7 of the SIF Governance Document, this SIF Project Direction may be amended or revoked under the following circumstances:

- (i) if the Funding Party considers that there has been a material change in circumstance that requires a change to the SIF Project Direction, and the Authority agrees; or
- (ii) to reflect amendments made to the Licence.

## **18. HALTING OF PROJECTS**

This SIF Project Direction is subject to the provisions contained in Chapter 7 of the SIF Governance Document relating to the halting of Projects. By extension, this SIF Project Direction is subject to any decision by the Authority to halt the Project to which this SIF Project Direction relates and to any subsequent relevant SIF Funding Direction issued by the Authority pursuant to Special Condition 9.9 of the Electricity Distribution Licence.

Further to the requirements in Chapter 7 of the SIF Governance Document, in the event the Authority decides to halt the Project, to which this SIF Project Direction relates, the Authority may issue a statement to the Funding Party clarifying the effect of that halting decision as regards the status and legal force of the conditions contained in this SIF Project Direction.

### **NOW THEREFORE:**

In accordance with the SIF Governance Document issued pursuant to Special Condition 9.9 of the Electricity Distribution Licence of the Licence the Authority hereby issues this SIF Project Direction to the Funding Party in relation to the Project.

This constitutes notice of reasons for the Authority's decision pursuant to section 49A (Reasons for decisions) of the Electricity Act 1991.

Failure to comply with the conditions of this SIF Project Direction means that Ofgem may treat all or part of the SIF Approved Amount received by the Funding Party as SIF Disallowed Expenditure.

## ANNEX 1: PROJECT BUDGET

SIF Project Direction costs	
Cost Category	Total Project costs (£)
Labour	£83,633
Materials	£-
Subcontracting	£54,882
Travel and subsistence	£5,205
Other costs	£7,641
<b>Total</b>	<b>£151,361</b>

Project Partner	Total project costs (£)	Project contribution (£)	Total SIF Funding requested (£)	Project contribution (%)
SOUTHERN ELECTRIC POWER DISTRIBUTION PLC	33,478.00	3,348.00	30,130.00	
ENERGY INNOVATION CENTRE LIMITED	72,775.00	7,277.00	65,498.00	
PNDC Strathclyde University	3,000.00	2,999.00	1.00	
Newcastle University	32,858.00	3,286.00	29,572.00	
PUREWAVE FORM LTD	9,250.00	925.00	8,325.00	
<b>Total</b>	<b>£151,361.00</b>	<b>£17,835.00</b>	<b>£133,526.00</b>	<b>13%</b>

**ANNEX 2 TO SCHEDULE: TEMPLATE OF BANK ACCOUNT DETAILS  
TO BE PROVIDED TO EITHER NGGT  
([BOX.GSOSETTLEMENTS@NATIONALGRID.COM](mailto:BOX.GSOSETTLEMENTS@NATIONALGRID.COM)) OR NESO  
([revenue.invoice@neso.energy](mailto:revenue.invoice@neso.energy))**

**Company name:**

**Primary Contact Details (only one contact permitted)**

First Name:

Last Name:

Email address:

Mobile phone number:

Work phone number:

**Address details**

Address name:

Street address:

City:

State / region:

Post code:

PO box: (if applicable)

PO box post code: (if applicable)

**Banking details**

These should be evidenced in non-editable format. The evidence provided must show company name and bank details and it should be dated within the last 6 months.

Any of the below documents will suffice:

- Bank statement (scanned document)
- Void cheque
- Paying in slip
- Screenshot of online banking (showing a logged in account with bank account and sort code, with browser visible)