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Date: 26 November 2025

Dear NATIONAL GRID ELECTRICITY TRANSMISSION PLC,  
**Strategic Innovation Fund – Approval of the Material Change request for NGET  
/ SF6 Whole Life Strategy**

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 6 September 2024, NGET was awarded SIF Funding for SF6 Whole Life Strategy (the Project). The purpose of the Project is further develop selected aspects of SF6 management. Following this decision, Ofgem issued a SIF Project Direction on the same date.

On 23 September 2025 NGET submitted a Material Change request for the Project to the Authority. The Material Change request was submitted due to:

- Time Extension

The Material Change request proposed the following changes to the schedule of the SIF Project Direction issued on 6 September 2025:

- Extend the Project End Date from 1 December 2028 to 1 September 2029

## 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 NGET and has engaged with the monitoring officer on the Project. Ofgem has reviewed the reasoning for the Material Change submitted by the NGET 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 request to Ofgem.

## Decision

As a result of the reasons outlined above, Ofgem approves of this Material Change request.

In accordance with Section 17 of the Project Direction issued on 6 September 2024 and paragraph 6.22 of the SIF Governance Document, the amended SIF Project Direction for National Grid Electricity Transmission plc / SF6 Whole Life Strategy 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 6 September 2024. 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, Decentralisation & Digitalisation**

**For and on behalf of the Authority**

## Schedule: Amended SIF Project Direction

### 1. PROJECT DETAILS

SIF Project Direction reference: NGET/SF6 WHOLE LIFE STRATEGY/SIFIESRR/RD2\_Beta

Application number: 10117736

Project title: SF6 WHOLE LIFE STRATEGY

Innovation Challenge/Project Phase: Improving Energy System Resilience and Robustness / Beta Phase round 2

Project start date: 01 December 2024

Project end date: 01 September 2029

SIF Approved Amount for SIF Funding: £8,500,724

### 2. PREAMBLE

This SIF Project Direction is issued by the Gas and Electricity Markets Authority (the "Authority") to NATIONAL GRID ELECTRICITY TRANSMISSION PLC (the "Funding Party") pursuant to the SIF Governance Document issued pursuant to Special Condition 9.19 of the Electricity Transmission Licence (the "Licence"). It sets out the conditions to be complied with in relation to SF6 WHOLE LIFE STRATEGY (the "Project") as a condition of it being funded under the SIF Funding Mechanism. The SIF Funding Return Mechanism is defined in the SIF Governance Document.

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

THE UNIVERSITY OF MANCHESTER
SP TRANSMISSION PLC
SCOTTISH HYDRO ELECTRIC TRANSMISSION PLC
DNV SERVICES UK LIMITED
DILO ARMATUREN UND ANLAGEN GMBH
WIKA INSTRUMENTS LIMITED

### Condition 2 – financial contribution

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 within the Project costs template.

### Condition 3 – Meeting arrangements

The Funding Party must participate in all meetings related to the Project that they are invited to by Ofgem, UKRI and DESNZ during the Beta Phase.

### Condition 4 – Stage gate scoping

The Funding Party must, with support from Innovate UK/UKRI and, where applicable Ofgem, scope the requirements and success criteria for each stage gate, as set out in the project management plan within a Project at the quarterly reporting meetings ahead of any stage gate. These will be used to determine what criteria a Project must meet in order to pass a stage gate, and whether any additional information, such as a report, must be produced as part of the stage gate.

### Condition 5 – Impact monitoring

As part of the end of Project Phase report, the Funding Party must produce a Project Impact Monitoring and Evaluation Plan. This plan must outline how the Project plans to monitor and evaluate the delivery of benefits outlined in the Beta Phase Application following the end of the Beta Phase. The plan must also include the methodology that will be utilised for quantifying and qualifying benefits realisation and how the Funding Party plans to report this to Ofgem 1, 3, 5 & 10 years post-Beta Phase completion.

Further details on how to approach the development of this plan may be provided by Ofgem or IUK.

### **Condition 6 – SIF Community Forums**

The Funding Party and all Project Partners must make reasonable attempts to attend, participate and/or contribute at SIF Community Forum events occurring during the Project delivery. We anticipate there being approximately one event per year.

### **Condition 7 – Policy, regulatory and standards barriers**

The Funding Party must provide verbal updates at each quarterly meeting on any regulatory, policy and standards barriers and any change requirements which may impact delivery of the Beta Phase activities. The Funding Party must also include as an attachment to each of its annual progress report an update on any regulatory, policy and standards barriers which may require derogations and articulation of any proposed regulatory, policy and standards changes which would be necessary in deployment. The Funding Party must also provide an as an attachment to its end of Project Phase report a summary of the Project's findings on regulatory, policy and standards barriers, including any considerations for future work, and where applicable, where specific regulatory, policy and standards changes would be required for deployment.

### **Condition 8 – Updated 60-second videos**

The Funding Party must provide within the first three months of signing contracts with its Project Partners an updated 60-second video. If the Project is greater than two years (longer than 24 months) in length, an updated video must also be provided at the Project's mid-point meeting. All Projects must also provide an updated 60-second video as part of their end of Project phase report. Innovate UK can share its guidance for 60-second videos with the Funding Party, if necessary.

### **Condition 9 – Post-Beta Phase roadmap**

The Funding Party must provide to the monitoring officer within six months of it signing contracts its Project Partners a roadmap for activities post-Beta Phase. This can build on the Project's Application question (question 11) and must focus on how and when the

proposed solution will become business as usual within your network and across the other GB gas or electricity networks.

As part of this, the Funding Party must include consideration for:

- I. any steps the Project will take to ensure its innovation has suitable business as usual adoption;
- II. the Funding Party's strategy for adoption of the innovation or proposed solution, giving consideration to potential investment, ongoing costs and third-party involvement and;
- III. any early indication of interest from other networks in adopting the innovation.

The Funding Party must provide an update on all the above at every two quarterly monitoring meetings (i.e. every six months) and must include a final update of this roadmap as attachment to its end of Project Phase report.

### **Condition 10 – Commercialisation strategy**

The Funding Party must provide at every second quarterly monitoring meeting (i.e. every six months) an update on its commercialisation strategy. This can build on the Project's Application question (question 12) and must focus on what considerations have the Project consortium made for the commercialisation of the proposed solution or innovation, and how the Project provides support for non-network partners to move towards commercialisation. As part of this, the Funding Party may wish to include consideration for:

- I. who the primary customer segment is beyond the Funding Party; the customer value proposition;
- II. if identified, the outline of the route to market and potential new partnerships;
- III. any additional Project Partner capital requirements in order to commercialize the innovation and;
- IV. how this product, process or service could be scaled across the GB network and taken to new markets.

The Funding Party must also include a final update of its strategy as an attachment to its end of Project Phase report. Ofgem and/or Innovate UK may issue a template for the final update as part of the end of Project Phase report.

### **Condition 11 - Data Best Practice and Digital Strategy and Action Plan Guidance alignment**

The Funding Party must provide at its second monitoring meeting (i.e. quarter one) a summary of how it intends to comply with Ofgem's Data Best Practice Guidance, and Digitalisation Strategy and Action Plan Guidance. Additionally, a part of its year 1 annual progress report, the Funding Party must provide a written update to the monitoring officer on its incorporation and application of data best practices to date in the Project, including its presumed open data policies, and data triaging methodology.

## **Condition 12**

As part of stage gate 1 (set out as Stage Gate 1 in the Project plan), the Project must provide explanation of increased costs for University of Manchester and associated activities costs

## **4. COMPLIANCE**

The Funding Party must comply with Special Condition 9.19 of the Electricity Transmission Licence (the "Licence"), the SIF Governance Document and with this SIF Project Direction.

## **5. SIF APPROVED AMOUNT**

The SIF Approved amount of £8,500,724 (as detailed under Section 1: Project details of this Project Direction) will be recovered by National Grid Electricity System Operator from GB customers and transferred to the Funding Party. The Funding Party is responsible for notifying National Grid Electricity 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 Grid Electricity System Operator, the reverse applies. The Funding Party must provide bank account details to National Grid Electricity 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) undertake the Project in accordance with its Application,
- (ii) complete the Project on or before the Project completion date as detailed under section 1 of the schedule of this SIF Project Direction, and
- (iii) 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.

## **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 regards 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 submit its end of Project Phase report to its monitoring officer that verifies the Project milestones have been achieved or explains why they have not.

Project milestones are outlined below in Table 3, based upon details contained within Question 7 and Appendix Question 9 in the Funding Party's.

Table 3. Project milestone<sup>1</sup>

Reference	Project milestone	Deadline	Overall objectives and key tasks	SIF Funding Request
Milestone 1	Work Package 1: Site Handling of Non-SF6 Gas Mixtures	01/09/2029	<ol style="list-style-type: none"> <li>1. Identify suitable sites - 5 sites NGET, 3 sites SSEN and 2 sites SPEN</li> <li>2. WIKA to purchase additional sampling set</li> <li>3. Sampling to be done twice two years apart (i.e. total 20 sample sets to be analysed by everyone)</li> <li>4. DILO to prepare reference gas</li> <li>5. Analysis by UoM, DILO and WIKA</li> <li>6. Summary of Outcomes and Dissemination of Findings</li> </ol>	£1,140,025
Milestone 2	Work Package 2: Retrofill Solutions	01/09/2029	<ol style="list-style-type: none"> <li>1. Selection of GIS type</li> <li>2. Desktop Assessment of Impact of Retrofilling</li> <li>3. Cost benefit analysis to feed into stagegate review</li> <li>4. Update/Redesign Activities</li> <li>5. Lab and type testing</li> <li>6. Produce summary report</li> </ol>	£5,230,579.33

<sup>1</sup> As outlined in in the Application or Project Plan appendix.

Reference	Project milestone	Deadline	Overall objectives and key tasks	SIF Funding Request
Milestone 3	Work Package 3: Lifecycle Management of SF6 and Alternatives	01/09/2029	<ol style="list-style-type: none"> <li>1. Develop a 1 kg laboratory-scale demonstration to breaking down SF6 using innovative method</li> <li>2. Comparison of performance including the energy calculation for novel approach and the existing</li> <li>3. Produce summary report and findings for industry</li> </ol>	£934,363.33
Milestone 4	Work Package 4: Visibility of SF6 Leakage	01/09/2029	<ol style="list-style-type: none"> <li>1. Selection of 3 NGET substation, SSEN (1)</li> <li>2. Develop a process for connecting the gas density sensors to platform (6-12 months)</li> <li>3. Installation of new gas sensors on one bay (WIKA to provide costs)</li> <li>4. Take outputs from SIF Alpha phase, AGILE project and NGET data team</li> <li>5. UoM to develop model to predict leakage and offer as open source software</li> </ol>	£1,652,036.83
Milestone 5	Work Package 5: Project Management and Governance of	01/09/2029	<ol style="list-style-type: none"> <li>1. Address Project funding conditions</li> <li>2. Quarterly technical workshops</li> <li>3. Monthly progress meetings</li> <li>4. Yearly progress reporting</li> </ol>	£537,974

Reference	Project milestone	Deadline	Overall objectives and key tasks	SIF Funding Request
	Reporting and Dissemination		5. Conference presentations of interim findings 6. Close down reporting and end of project webinar	
Milestone 6	Work Package 6: Technical Advisory Board	01/09/2029	1. Assemble technical advisory board group 2. Bi-annual meetings to review progress and ensure project is meeting core objectives	£295,970.50

## **14. USE OF LOGO**

The Funding Party and the Project Partners, External Funders and Project Supporters or subcontractors, as detailed in the Application, 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 contained within Chapter 3 of the SIF Governance Document, we require the Funding Party to work collaboratively to maintain the ENA Smarter Networks Portal so that all reporting and dissemination of learnings on Projects (as required by chapter 6 of the SIF Governance Document) is available via the ENA Smarter Networks Portal.

## **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.

The Funding Party must collaborate with other parties and with UKRI to organise an annual conference in a format appropriate to enabling the building of consortiums and disseminating learning widely. The conference may be a single event for gas and electricity, or more than one event, as appropriate.

## **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 9.19 of the Electricity Transmission Licence (the "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 to 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 9.19 of the Electricity Transmission Licence (the "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 1989.

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**

<b>Cost Category</b>	<b>Total Project costs (£)</b>
Labour	£ 4,349,883
Materials	£ 665,695
Subcontracting	£ 4,311,079
Travel and subsistence	£ 219,252
Other costs	£ 245,040
<b>Total</b>	<b>£ 9,790,949</b>

<b>Project Partner</b>	<b>Total project costs (£)</b>	<b>Project contribution (£)</b>	<b>Total SIF Funding requested (£)</b>	<b>Project contribution (%)</b>
National Grid Electricity Transmission PLC	£5,120,270	£512,170	£4,608,100	
DILO Armaturen und Anlagen GmbH	£126,381	£12,637	£113,744	
DNV SERVICES UK LIMITED	£737,974	£73,797	£664,177	
SCOTTISH HYDRO ELECTRIC TRANSMISSION PLC	£100,320	£10,032	£90,288	
SP TRANSMISSION PLC	£99,465	£9,947	£89,518	
The University of Manchester	£2,683,219	£268,322	£2,414,897	
WIKA INSTRUMENTS LIMITED	£923,320	£403,320	£520,000	
<b>Total</b>	<b>£9,790,949</b>	<b>£1,290,225</b>	<b>£8,500,724</b>	<b>15%</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.com](mailto:revenue.invoice@neso.com))**

**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)