



Making a positive difference
for energy consumers

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Dear National Grid ESO,

Strategic Innovation Fund – Approval of the Material Change request for National Grid ESO / Virtual Energy System

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.¹

On March 1, 2022, National Grid ESO was awarded SIF Funding for Virtual Energy System (the Project).² The purpose of the Project is to develop a common framework to enable interoperability of a wide range of digital twins using open data. Further to this decision, on March 1, 2022 Ofgem³ issued a SIF Project Direction.⁴

On March 8, 2022, National Grid ESO submitted a Material Change request for the Project to the Authority. The Material Change request was submitted due to:

¹ <https://www.ofgem.gov.uk/publications/sif-governance-document>

² <https://www.ofgem.gov.uk/sites/default/files/2022-02/SIF%20Funding%20Decision%20PUBLISHED%20REDACTED%20COPY.pdf>

³ The terms the "Authority", "Ofgem", "we" and "us" are used interchangeably in this document. The Authority refers to the Gas and Electricity Markets Authority. Ofgem is the Office of the Gas and Electricity Markets Authority.

⁴ <https://www.ofgem.gov.uk/publications/strategic-innovation-fund-discovery-projects-approved-funding>

- Scottish and Southern Electricity Network Distribution (SSEN Distribution), Scottish Hydro Electric Transmission (SEEN Transmission) and Northern Gas Networks changing their roles in the Project from Project Partners to Project Supporters.

The Material Change request proposed the following changes to the schedule of the SIF Project Direction issued on March 1 2022:

- Amended total SIF Approved Amount for SIF Funding in paragraph 1 from £149,921 to £149,919
- Amend Table 1 to remove three Project Partners transitioning to Project Supporters
- Amend the SIF Approved Amount in paragraph 5 from £149,921 to £149,919
- Amend the SIF Funding Request in Table 3 from £149,921 to £149,919
- Amend the SIF Project Direction costs in Annex 1, including the Cost Category and Total SIF Funding required amounts.
- Amend the Project finances table in Annex 1 to remove the rows for the three Project Partners transitioning to Project Supporters and amend total project costs and total SIF Funding requested.

In the Funding Party's original Application and in the Project Direction issued on March 1, 2022, the three Project Partners (Scottish and Southern Electricity Network Distribution, Scottish Hydro Electric Transmission, and Northern Gas Networks) were each requesting £1 in SIF Funding. The changes in the SIF Approved Amount and SIF Funding Request outlined above and below in Schedule 1 reflect that these three Project Partners are no longer Project Partners, and to reflect this, the amount of SIF Funding requested is reduced.

UKRI's review and recommendation

As per chapter 1 of the SIF Governance Document, the role of UK Research & Innovation (UKRI) is to deliver the SIF in line with the SIF Governance Document - administering the funding programme, monitoring the delivery of Projects, collating data from Projects on benefits, making recommendations to Ofgem on operational matters, supporting third-party innovators and, where possible, supporting successful Projects to become 'business as usual' activities. As per paragraph 6.21, Ofgem also engages with project monitoring officers to support the assessment of Material Change requests.

UKRI, with support of monitoring officers, reviewed the Material Change request and recommend that:

- They believe that the change request should be approved as the Project is still able to fulfil the eligibility criteria in Chapter 2 of the Governance Document. There would still be six Project Partners involved in the Project, and the former Project Partners

were requesting an immaterial amount of SIF Funding (£1 each), resulting in an immaterial impact to the value for money from the Project.

- They believe that the change request should be approved as the Project still fulfils the criteria outlined in the Innovation Challenge Documentation. The remaining six Project Partners fulfil the criteria around partnering with another energy network licensee, working with researchers or private sector organisations with technical capabilities in data and digital technologies, working with relevant data owners and processors, and working with at least one other organisation as your subcontractor.
- The Expert Assessors did not specifically mention anything in their review about the three Project Partners requesting to change roles and their roles and deliverables in the Project Application. UKRI also believes that the Funding Party and remaining Project Partners will be able to deliver the Project.

As such, UKRI recommended approval of the Material Change request to Ofgem.

Decision

Having considered recommendations from UKRI, Ofgem approves the Material Change request. This is because Ofgem agrees with UKRI's assessment and recommendation that amended Project continues to satisfy the Eligibility Criteria in chapter 2 of the SIF Governance Document.

In accordance with Section 17 of the Project Direction issued on March 1, 2022 and paragraph 6.22 of the SIF Governance Document, the amended SIF Project Direction for National Grid ESO / Virtual Energy System 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 March 1, 2022. 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. Alternatively, you can contact UKRI via SIF_Ofgem@innovateuk.ukri.org.

Yours sincerely,

Jourdan Edwards

Interim Deputy Director, Onshore Networks

For and on behalf of the Authority

Schedule: Amended SIF Project Direction

1. PROJECT DETAILS

SIF Project Direction reference:

NGESO/Virtual_Energy_System/SIFDataDigitalisation/Rd1_Disc

Application number: 10026595

Project title: Virtual Energy System

Innovation Challenge/Project Phase: Data and Digitalisation/ Discovery round 1

Project start date: March 1, 2022

Project end date: April 30, 2022

SIF Approved Amount for SIF Funding: £~~149,921~~ 149,919

2. PREAMBLE

This SIF Project Direction is issued by the Gas and Electricity Markets Authority (the "Authority") to National Grid Electricity System Operator (the "Funding Party") pursuant to the SIF Governance Document issued pursuant to Special Condition 3.4 of the Electricity Transmission Licence (the "Licence").

It sets out the conditions to be complied with in relation to Virtual Energy System (the "Project") as a condition of it being funded under the SIF Funding Mechanism.⁵

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

National Grid Electricity Systems Operator Limited

⁵ The SIF Funding Return Mechanism is defined in the SIF Governance Document

Arup Limited
National Grid Gas Plc
Western Power Distribution Plc
Scottish Power Energy Networks Holdings Limited
National Grid Electricity Transmission Plc
~~Scottish and Southern Energy Power Distribution Limited~~
~~Scottish Hydro Electric Transmission Plc~~
~~Northern Gas Networks Limited~~

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 within the Project costs template.

Condition 3

As part of its end of Project Phase report, the Funding Party must demonstrate how the Project's activities differentiate from other digital twin activities with cost-allocations under the price control mechanism, and how the SIF Funding is being used for higher risk, innovative components of development.

Condition 4

As part of its end of Project Phase report, the Funding Party must outline how intellectual property and licensing arrangements will be managed throughout the Project delivery to ensure participation opportunities are maintained for all interested parties, and the risk of creating a technical monopoly over the virtual energy system is mitigated.

4. COMPLIANCE

The Funding Party must comply with Special Condition 3.4 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 ~~£149,919~~ ~~149,921~~ (as detailed under Section 1: Project details of this SIF 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.

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 Discovery Phase. Within this report, the Funding Party must submit information related to questions on Project delivery as detailed in chapter 6, table 4 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)⁶ and DPA (Data Protection Act) 2018⁷. 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.

⁶ https://ec.europa.eu/info/law/law-topic/data-protection/data-protection-eu_en

⁷ <https://www.legislation.gov.uk/ukpga/2018/12/contents/enacted>

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 milestone⁸

Reference	Project milestone	Deadline	Evidence	SIF Funding Request (100%) ⁹
Milestone 1	Approval of Final Report by NGESO	April 30, 2022	Completion of the five steps outlined in Question 7 of the Funding Party's Project Application: (1) framing; (2) stakeholder, user and data research; (3) synthesis; (4) strategy; (5) document.	£149,921 <u>£149,919</u> (100%)

14. USE OF LOGO

The Funding Party and the Project Partners, External Funders and Project Supporters or subcontractors¹⁰ 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.

⁸ As outlined in Question 7 of the Application.

⁹ Where Project Applications were not explicit on milestone(s) as a percentage of total SIF Funding Request, milestone(s) as a percentage of total project costs were applied to the SIF Funding Request.

¹⁰ As detailed in the Application

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 3.4 of the Electricity Transmission Licence (the "Licence") (National Grid Electricity System Operator Ltd).

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, 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 3.4 of the Electricity Transmission Licence (the "Licence") (National Grid Electricity System Operator Ltd) 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

SIF Project Direction costs	
Cost Category	SIF Funding required
Labour	£149,919 149,920.89
Materials	£0.00
Subcontracting	£0.00
Travel and subsistence	£0.00
Other costs	£0.00
Total SIF Funding required	£149,919149,920.89

Project finances				
Project Partner	Total projects costs (£)	Project contribution (%)	Project contribution (£)	Total SIF Funding required (£)
National Grid ESO	£25,225.98	0%	£0.00	£25,225.98
Arup	£119,960.00	0%	£0.00	£119,960.00
National Grid Gas Transmission	£839.11	100%	£839.11	£0.00
Western Power Distribution	£5,456.00	50%	£2,728.00	£2,728.00
Scottish Power Energy Networks	£9,692.32	100%	£9,692.32	£0.00
National Grid Electricity Transmission	£2,004.91	0%	£0.00	£2,004.91
SEN Distribution	£1.00	0%	£0.00	£1.00
SEN Transmission	£1.00	0%	£0.00	£1.00
Northern Gas Networks	£1.00	0%	£0.00	£1.00
Total	£163,17881.32		£13,259.43	£149,91921.89

ANNEX 2 TO SCHEDULE: TEMPLATE OF BANK ACCOUNT DETAILS TO BE PROVIDED TO NG ESO VIA EMAIL TO: ELENA.GESHTANSKAYA@NATIONALGRID.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)