



Making a positive difference  
for energy consumers

National Grid Electricity System  
Operator Limited, National Gas  
Transmission Plc

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Dear Company Secretaries,

## March 2024 SIF Funding Direction

The Strategic Innovation Fund (SIF) is a funding mechanism for the Electricity System Operator, Electricity Transmission, Gas Transmission and Gas Distribution sectors, within the RIIO-2 network price control.<sup>1</sup>

For each round of the SIF, new Innovation Challenges are launched focusing on strategic issues currently facing gas and electricity networks. Round 1 of the SIF, launched in July 2021 and round 2 of the SIF, launched in May 2022, both focused on four Innovation Challenges. Round 3 of the SIF, launched in May 2023, also focuses on four new Innovation Challenges: Enabling Power to Gas to Provide System Optimisation, Novel Approaches to Deliver a Secure Power System, Unlocking System Flexibility to Electricity Heat, and Whole System Planning for Faster Asset Rollout<sup>2</sup>.

Within each round of the SIF, a multi-phase approach is taken to help mitigate the risk associated with innovation: the Discovery Phase, the Alpha Phase and the Beta Phase. At the start of each Project Phase we<sup>3</sup> issue a Funding Direction to direct National Grid Electricity System Operator (ESO) and National Gas Transmission (NGT) to distribute SIF Funding to the Projects we have decided to award funding to and, where appropriate, to reconcile any

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<sup>1</sup> Fuller details regarding the SIF can be found here: <https://www.ofgem.gov.uk/energy-policy-and-regulation/policy-and-regulatory-programmes/network-price-controls-2021-2028-riio-2/network-price-controls-2021-2028-riio-2-riio-2-network-innovation-funding/strategic-innovation-fund-sif>

<sup>2</sup> For more information on round 3 of the SIF, including the Innovation Challenges, please see:

<https://www.ofgem.gov.uk/publications/strategic-innovation-fund-round-three-innovation-challenges>

<sup>3</sup> The terms the "Authority", "Ofgem", "we", "our" 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.

unspent SIF Funding from a previous Project Phase. The Funding Direction may also include allocation of funding via network charges for UK Research and Innovation's (UKRI) role in delivering the SIF<sup>4</sup>.

The purpose of this SIF Funding Direction is to:

- I. confirm the amount of SIF Funding that must be distributed to the round 3 Discovery Phase SIF Projects that we have decided to award funding for network licensees covered by Special Condition 5.7 of the Gas Transport Licence<sup>5</sup>, Special Condition 9.13 of the Gas Transporter Licence<sup>6</sup>, Special Condition 9.19 of the Electricity Transmission Licence<sup>7</sup>, Special Condition 3.4 of the Electricity Transmission Licence<sup>8</sup> and Special Condition 9.9 of the Electricity Distribution Licence<sup>9</sup>
- II. cover UKRI's costs of operating the SIF in 2024/25, and
- III. reconcile unspent SIF Funding by UKRI from operating the SIF in 2022/23

Accordingly, this direction sets out the amount that National Grid Electricity System Operator Limited (ESO) and National Gas Transmission Plc (NGT) will ultimately recover from its customers in relation to the SIF. It also specifies the net amounts to be transferred between ESO, UKRI and other electricity network licensees; and NGT, UKRI and other gas network licensees in relation to their SIF projects.

ESO will transfer funds as set out in Schedule 1 below, and NGT will transfer funds as set out in Schedule 2 below. ESO and NGT will transfer funds to the nominated bank account as notified by network licensees as per the requirements in the SIF Project Directions. The recipient must adhere to requirements regarding project banking arrangements as specified in Chapter 8 of the SIF Governance Document. If recipient network licensees anticipate any problems fulfilling these requirements, they should notify Ofgem as soon as possible.

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<sup>4</sup> As confirmed in our decision on the operational arrangements for the SIF on 25 August 2021, we have appointed UK Research and Innovation (UKRI) as our delivery partner on the SIF. SIF governance decision here: <https://www.ofgem.gov.uk/sites/default/files/2023-02/SIF%20Governance%20Document%20v2.1%20final%20clean.pdf>. While further detail on UKRI's role can be found here: <https://www.ofgem.gov.uk/publications/appointment-innovate-uk-uk-research-innovation-sif-delivery-partner>

<sup>5</sup> Held by National Gas Transmission Plc.

<sup>6</sup> Held by Cadent Gas Limited, Northern Gas Networks Limited, Scotland Gas Networks Plc, Southern Gas Networks Plc, and Wales and West Utilities Limited.

<sup>7</sup> Held by National Grid Electricity Transmission Plc, SP Transmission Plc, and Scottish Hydro Electric Transmission Plc.

<sup>8</sup> Held by National Grid Electricity System Operator Limited.

<sup>9</sup> Held by Electricity North West Limited, Northern Powergrid (Northeast) Plc, Northern Powergrid (Yorkshire) Plc, National Grid Electricity Distribution: West Midlands Plc, National Grid Electricity Distribution: East Midlands Plc, National Grid Electricity Distribution: South Wales Plc, National Grid Electricity Distribution: South West Plc, UK Power Networks: London Power Networks Plc, UK Power Networks: South Eastern Networks Plc, UK Power Networks: Eastern Power Networks Plc, SP Energy Networks: Distribution Ltd, SP Energy Networks: Manweb Plc, Scottish and Southern Energy Power Distribution: Scottish Hydro Electric Power Distribution Plc, Scottish and Southern Energy Power Distribution: Southern Electric Power Distribution Plc.

## Background

As per chapter 7 of SIF Governance Document and pursuant to the following licence conditions detailed in Table 1 below, Ofgem calculates and, by direction, specifies the net amount of SIF Funding (less any SIF Funding Return) that is to be paid to Funding Parties and UKRI by ESO and NGT. Ofgem also specifies the manner in which and the times at which ESO and NGT is required to transfer that SIF Funding.

**Table 1 – Network licence conditions**

<b>Network Licensee</b>	<b>Licence Condition</b>
National Grid Electricity Transmission Plc (NGET)	Special Condition 9.19
SP Transmission Limited (SPT)	Special Condition 9.19
Scottish Hydro Electric Transmission Plc (SHE)	Special Condition 9.19
National Grid Electricity System Operator Limited (ESO)	Special Condition 3.4
National Gas Transmission Plc (NGT)	Special Condition 5.7
Cadent Gas Limited (Cadent)	Special Condition 9.13
Northern Gas Networks Limited (NGN)	Special Condition 9.13
Scotland Gas Networks plc (SGN)	Special Condition 9.13
Southern Gas Networks plc (SGN)	Special Condition 9.13
Wales & West Utilities Limited (WWU)	Special Condition 9.13
Electricity North West Limited (ENWL)	Special Condition 9.9
Northern Powergrid (Northeast) Plc (NPgN)	Special Condition 9.9
Northern Powergrid (Yorkshire) Plc (NPgY)	Special Condition 9.9
National Grid Electricity Distribution: West Midlands Plc (WMID)	Special Condition 9.9
National Grid Electricity Distribution: East Midlands Plc (EMID)	Special Condition 9.9
National Grid Electricity Distribution: South Wales Plc (SWALES)	Special Condition 9.9
National Grid Electricity Distribution: South West Plc (SWEST)	Special Condition 9.9
UK Power Networks: London Power Networks Plc (LPN)	Special Condition 9.9
UK Power Networks: South Eastern Power Networks Plc (SPN)	Special Condition 9.9
UK Power Networks: Eastern Power Networks Plc (EPN)	Special Condition 9.9
SP Energy Networks: Distribution Ltd (SPD)	Special Condition 9.9
SP Energy Networks: Manweb Plc (SPMW)	Special Condition 9.9
Scottish and Southern Energy Power Distribution: Scottish Hydro Electric Power Distribution Plc (SHEPD)	Special Condition 9.9
Scottish and Southern Energy Power Distribution: Southern Electric Power Distribution Plc (SSEPD)	Special Condition 9.9

We below specify values under two headings, which in turn feed into the calculation of the SIF Funding (SIF) term within ESO's and NGT's licence.

1. The amount of SIF Funding to be distributed to Funding Parties (i.e. network licensees) who are leading Projects which we have decided to fund, and to UKRI for their services administering the SIF.
2. The unspent SIF Funding which is being applied against the SIF Funding being distributed. As such, no SIF Funding is to be returned to consumers through the SIF Funding Return Mechanism.

To minimise cashflow risk, ESO and NGT have both forecast the value of the SIF term in advance of this direction. In time, ESO and NGT must reconcile their forecast values of the SIF term against the actual values specified in this direction to ensure the amount of funding ultimately recovered from consumers is accurate.

### SIF Funding awarded

As per our SIF Funding Decision published on 08 March 2024<sup>10</sup>, we awarded SIF Funding to 44 of the 53 Projects submitted for the round 3 Discovery Phase of the SIF. The projects we decided to fund are listed in Table 2 below.

**Table 2 – SIF Funding due to network licensees for Projects for round 3 Discovery Phase Projects**

SIF round	Project Phase	Sector	Project name	Network licensee	Instalment 1 (March 2024)
Round 3	Discovery	Gas	ALCHEM (Advanced Low Carbon Hydrogen and Energy Management)	WWU	£ 87,436.00
Round 3	Discovery	Gas	B-Linepack+	NGT	£ 150,000.00
Round 3	Discovery	Gas	Exploring Geological Hydrogen Storage Opportunities for the East Midlands (EMStor)	CADENT	£ 138,382.00
Round 3	Discovery	Gas	PATCH – Production And long-Term Containment of Hydrides	NGN	£ 147,528.00
Round 3	Discovery	Gas	Realistic modelling of power-to-gas operability	NGT	£ 128,475.00

<sup>10</sup> For more information on the round 2 Discovery Phase Projects awarded SIF Funding please see: <https://www.ofgem.gov.uk/publications/strategic-innovation-fund-round-3-discovery-projects-approved-funding>

Round 3	Discovery	Electricity	Balancer	SPN	£ 149,557.00
Round 3	Discovery	Electricity	CarbonFlex	LPN	£ 129,727.00
Round 3	Discovery	Electricity	Equiflex	SPD	£ 133,704.00
Round 3	Discovery	Electricity	Flex Direct	LPN	£ 139,662.00
Round 3	Discovery	Electricity	Fuel Cell Renewable Energy Equity (FREE)	NPgN	£ 112,827.00
Round 3	Discovery	Gas	Gas Volume for Embedded Electrical Generation Modelling	SGN	£ 123,830.00
Round 3	Discovery	Electricity	GridLink	NPgN	£ 131,925.00
Round 3	Discovery	Gas	Hydrogen Storage in Aquifers	WWU	£ 111,580.00
Round 3	Discovery	Electricity	LDES NODE	ENWL	£ 145,953.00
Round 3	Discovery	Gas	Look NorthH2	NGT	£ 118,329.00
Round 3	Discovery	Electricity	LV Optimiser - LVOE	SPMW	£ 142,136.00
Round 3	Discovery	Electricity	Network Security in a Quantum Future	NGESO	£ 149,621.00
Round 3	Discovery	Electricity	REVISE - Revisiting and Evaluating Environmental Inputs on Line Ratings	SHE	£ 149,854.00
Round 3	Discovery	Electricity	SizeWise	EPN	£ 145,937.00
Round 3	Discovery	Electricity	SYSMET - System Strength Measurement and Evaluation	SHE	£ 99,733.00
Round 3	Discovery	Electricity	CoolDown	ENWL	£ 149,996.00
Round 3	Discovery	Electricity	OptiHeat	SPN	£ 113,324.00
Round 3	Discovery	Electricity	WASH (Wastewater Sourced Heat)	EPN	£ 125,264.00
Round 3	Discovery	Electricity	BluePrint - Building Industry Collaboration and Methodologies for Developing Offshore Wind Behind Constraint	SHE	£ 147,090.00
Round 3	Discovery	Gas	Carbon and Hydrogen transportation to SAF production facilities	NGT	£ 118,707.00

Round 3	Discovery	Electricity	CLIP: Community Led Integrated Planning	SPN	£ 122,833.00
Round 3	Discovery	Electricity	Cross Vector Energy Hub	NPgN	£ 117,305.00
Round 3	Discovery	Electricity	Data Mate	SPN	£ 114,547.00
Round 3	Discovery	Electricity	Electric Thames	LPN	£ 130,050.00
Round 3	Discovery	Electricity	Fractal Flow	NPgN	£ 141,649.00
Round 3	Discovery	Electricity	HeatNet	SPN	£ 145,516.00
Round 3	Discovery	Electricity	HIRE – Hybrid-Network Improvement & Reliability Enhancement	NGET	£ 135,082.00
Round 3	Discovery	Gas	HyNTS Maritime	NGT	£ 150,000.00
Round 3	Discovery	Electricity	KnowMyFlex	EPN	£ 146,266.00
Round 3	Discovery	Electricity	MaxFlex	SSEPD	£ 137,102.00
Round 3	Discovery	Electricity	Nature4Networks (N4N)	SSEPD	£ 148,247.00
Round 3	Discovery	Electricity	Probabilistic Pathways for Energy System Planning	NGESO	£ 149,544.00
Round 3	Discovery	Gas	Regional Energy Strategic Modelling (RESM)	NGN	£ 110,526.00
Round 3	Discovery	Electricity	Road to Power	SWEST	£ 141,229.00
Round 3	Discovery	Electricity	Rural Energy And Community Heat (REACH)	SWEST	£ 116,995.00
Round 3	Discovery	Electricity	SANND (Scenario Analysis for Non-Domestic Network Decarbonisation)	NPgN	£ 144,831.00
Round 3	Discovery	Electricity	SeaChange	SHEPD	£ 149,431.00
Round 3	Discovery	Electricity	UN:LOCK - Unlocking Networks: Local Optimisation, Consumers and Knowledge	SSEPD	£ 101,373.00
Round 3	Discovery	Electricity	Wayl-ease	EPN	£ 110,637.00

**Total of SIF Funding for Projects due to network licensees come to £5,803,740.00**

Additionally, as part of our contractual relationship with UKRI, we recently approved UKRI’s forecast costs for delivering the SIF in 2024/25. We also approved an underspend of £205,105 plus VAT for operating the SIF in 2022/23. As detailed in chapter 7 of the SIF Governance Document, UKRI’s costs will be apportioned between electricity and gas network charges, according to the relative split of electricity and gas Projects. UKRI’s costs included within this Funding Direction are split taking into consideration all 44 of the Projects we have decided to award SIF Funding to for the round 3 Discovery Phase. For the underspend being reconciled for the period 2022/23, the apportionment between ESO and NG will be matched to the apportionment used at the time UKRI’s costs were raised from ESO and NG.

**Table 3 – SIF Funding due to UKRI for delivering the SIF**

	<b>Instalment 1 (to be paid March 2024)</b>
Total to be distributed by National Grid ESO to UKRI	£ 2,960,975
Total to be distributed by National Gas Transmission to UKRI	£ 834,357
<b>Total of SIF Funding due to UKRI for delivering the SIF (inclusive of VAT)</b>	<b>£ 3,795,332.00</b>

### The SIF Funding Return

The SIF Funding Return Mechanism is used to return any SIF Funding Return from Funding Parties to National Grid Plc and ESO, and ultimately back to consumers. As detailed in chapter 7 of the SIF Governance Document, this will include unspent SIF Funding, SIF Disallowed Expenditure, SIF Halted Project Revenues, SIF Returned Project Revenues and SIF Returned Royalty Income.

Distribution of discovery round 3 awards will be made prior to the completion of Alpha Round 2. Therefore, no elements of this Funding Direction are affected by the SIFF return mechanism.

**Table 4 – SIF Funding Returns due from round 2 Alpha Phase Projects**

SIF round	Project Phase	Sector	Project name	Network licensee	Total SIF Requested - round 2 Alpha Phase	Total SIF Funding used during the round 2 Alpha Phase	Total SIF Funding remaining following round 2 Alpha Phase	Reason for return (e.g. unspent SIF Funding, SIF Disallowed Expenditure, SIF Halted Project Revenues, SIF Returned Project Revenues and SIF Returned Royalty Income)
								Unspent SIF Funding
								Unspent SIF Funding
								Unspent SIF Funding
								Unspent SIF Funding
								Unspent SIF Funding
								Unspent SIF Funding
								Unspent SIF Funding
								Unspent SIF Funding



## Implementation

As the learning from the SIF projects provides benefits to all network licensees and GB consumers as a whole, SIF Funding is raised across all GB customers through NTS Transportation Owner Charges (in gas) and Transmission Network Use of System Charges (in electricity).

SIF Funding is distributed by NGT and ESO to individual network licensees. This means that NGT and ESO make a net payment to each licensee per instalment as per Table 6 and Table 9, which is the sum of SIF Funding awarded to the licensee across multiple Projects, minus any SIF Funding Return. The network licensees are responsible for administering the SIF Funding they receive for Projects as per requirements in chapter 8 of the SIF Governance Document.

In accordance with Special Conditions 3.1 and 3.4 of ESO's Electricity Transmission Licence, Special Conditions 5.1 and 5.7 of NGT's Gas Transporter Licence, and the SIF Governance Document, the Authority hereby requires ESO and NGT to comply with the conditions in Schedules 1 or 2 to this SIF Funding Direction, as appropriate. Schedules 1 and 2 set out the net amounts that are to be transferred by ESO and NGT to recipients of funding, together with the manner and timescale over which these amounts will be transferred – see Tables 6 and 9 in the Schedules appended to this letter.

This SIF Funding Direction constitutes notice pursuant to section 38A (Reasons for decisions) of the Gas Act 1986 and section 49A (Reasons for decisions) of the Electricity Act 1989.

If you have further questions or want to discuss, please contact Luke Ames Blackaby on [luke.blackaby@ofgem.gov.uk](mailto:luke.blackaby@ofgem.gov.uk).

Yours faithfully,

**Marzia Zafar**

**Deputy Director, Decentralisation & Digitalisation**

Signed for and on behalf of the Authority

## Schedule 1: Funds to be transferred by ESO

### The net amounts of SIF Funding that must be transferred by ESO to recipients

Table 5 contains the net amounts that must be transferred by ESO to UKRI and network licensees, as appropriate, in the Regulatory Year 2023/2024 commencing 1 April 2023 for the round 3 Discovery Phase of the SIF. For the avoidance of doubt, no adjustments for inflation should be made to these numbers. It also sets out the manner and timescale for making payments.

**Table 5 – Net amounts to be distributed by ESO to recipients**

Recipient	Instalment (to be paid March 2024)
UKRI	£ 2,960,975.00
Electricity North West Limited (ENWL)	£ 295,949.00
National Grid Electricity Distribution (WMID): West Midlands Plc	£ -
National Grid Electricity Distribution (EMID): East Midlands Plc	£ -
National Grid Electricity Distribution (SWALES): South Wales Plc	£ -
National Grid Electricity Distribution (SWEEST): South West Plc	£ 258,224.00
National Grid Electricity Transmission Plc (NGET)	£ 135,082.00
Northern Powergrid (Northeast) Plc (NPgN)	£ 648,537.00
Northern Powergrid (Yorkshire) Plc (NPgY)	£ -
Scottish and Southern Energy Power Distribution (SHEPD): Scottish Hydro Electric Power Distribution Plc	£ 149,431.00
Scottish and Southern Energy Power Distribution (SSEPD), Southern Electric Power Distribution Plc	£ 386,722.00
Scottish Hydro Electric (SHE) Transmission Plc	£ 396,677.00
SP Energy Networks: Distribution Ltd (SPD)	£ 133,704.00
SP Energy Networks: Manweb Plc (SPMW)	£ 142,136.00
SP Transmission (SPT)	£ -
UK Power Networks: London Power Networks Plc (LPN)	£ 399,439.00
UK Power Networks: South Eastern Power Networks Plc (SPN)	£ 645,777.00
UK Power Networks: Eastern Power Networks Plc (EPN)	£ 528,104.00

<b>Total net amount of SIF Funding to be transferred by ESO to recipients</b>	<b>£ 7,080,757.00</b>
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### **The net amount that ESO must retain for its own SIF Projects**

Table 6 contains the net amount that ESO must retain for its own SIF Projects in the Regulatory Year 2023/2024 commencing 1 April 2023 for the round 3 Discovery Phase of the SIF. For the avoidance of doubt, no adjustments for inflation should be made to these numbers.

**Table 6 – Net amount to be retained by ESO for its own SIF projects**

<b>Recipient</b>	<b>Instalment (to be paid March 2024)</b>
National Grid Electricity System Operator Limited	£ 299,165.00

### **The net amount that ESO must return from its own SIF Projects**

Table 7 contains the net amount that ESO must return from its own SIF projects in the Regulatory Year 2023/2024 commencing 1 April 2023 for the round 3 Discovery Phase of the SIF. For the avoidance of doubt, no adjustments for inflation should be made to these numbers.

**Table 7 – Net amount that ESO must return from its own SIF Projects**

<b>Recipient</b>	<b>Instalment (March 2024)</b>
National Grid Electricity System Operator Limited	0

## Schedule 2: Funds to be transferred by NGT

### **The net amounts that must be distributed by NGT to recipients**

Table 8 contains the net amounts that must be transferred by NGT to UKRI and network licensees, as appropriate, in the Regulatory Year 2023/2024 commencing 1 April 2023 for the round 3 Discovery Phase of the SIF. For the avoidance of doubt, no adjustments for inflation should be made to these numbers. It also sets out the manner and timescale for making payments.

**Table 8 – Net amounts to be distributed by NGT to recipients**

<b>Recipient</b>	<b>Instalment (to be paid March 2024)</b>
UKRI	£ 834,357.00
Cadent Gas Limited	£ 138,382.00
Northern Gas Networks Limited	£ 258,054.00
Scotland Gas Networks plc	£ -
Southern Gas Networks plc	£ 123,830.00
Wales & West Utilities Limited	£ 199,016.00
<b>Total net amount of SIF Funding to be transferred by NGGT to recipients</b>	<b>£ 1,553,639.00</b>

### **The net amount that NGT must retain for its own SIF projects**

Table 9 contains the net amount that NGT must retain for its own SIF projects in the Regulatory Year 2023/2024 commencing 1 April 2023 for the round 3 Discovery Phase of the SIF. For the avoidance of doubt, no adjustments for inflation should be made to these numbers.

**Table 9 – Net amount to be retained by the NGT for its own SIF projects**

<b>Recipient</b>	<b>Instalment (to be paid March 2024)</b>
National Gas Transmission Plc	£ 665,511

### **The net amount that NGT must return from its own SIF Projects**

Table 10 contains the net amount that NGT must return from its own SIF projects in the Regulatory Year 2023/2024 commencing 1 April 2023 for the round 3 Discovery Phase of the

SIF. For the avoidance of doubt, no adjustments for inflation should be made to these numbers.

**Table 10 – Net amount that NGT must return from its own SIF Projects**

<b>Recipient</b>	<b>Instalment (March 2024)</b>
National Gas Transmission Plc	0