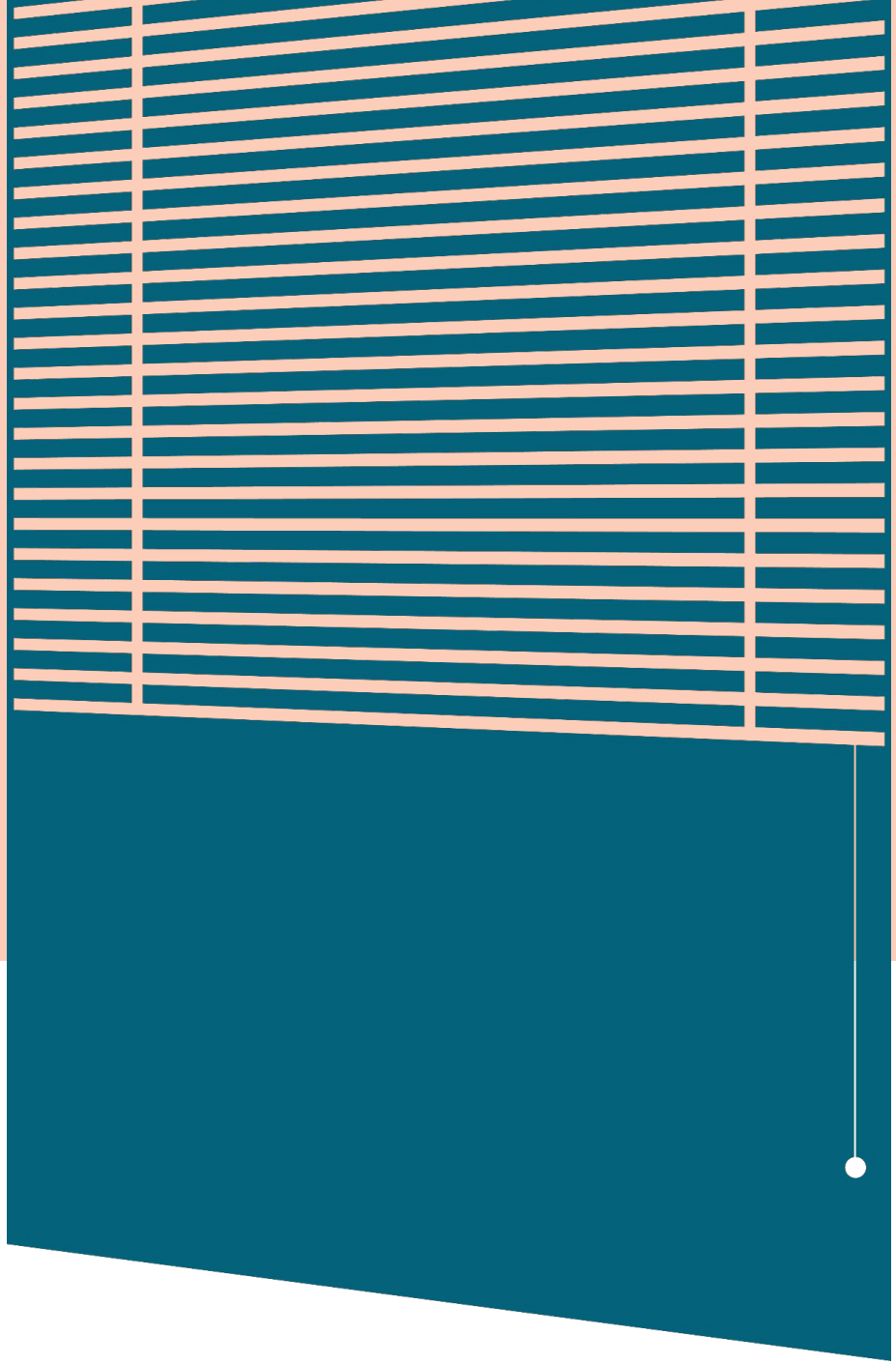
Making Innovation Count

A Transparency Review of NIA and SIF Projects

August 2025

Content table



Executive Summary

Achieving net zero is a generational challenge that requires new ideas, solutions, and technologies. Energy networks play a critical role by distributing low-carbon energy, enabling the decarbonisation of transport and heating, and integrating new technologies to reduce carbon emissions. To support the energy sector during Ofgem's RIIO-2 price control period (2021–2028), the Network Innovation Allowance (NIA) and Strategic Innovation Fund (SIF) were established to provide financial support to network companies.[1] These two funds are designed to help drive innovation to facilitate the energy transition, address consumer vulnerability, and tackle the most pressing challenges facing energy networks.

This report examines the transparency of innovation projects launched during the RIIO-2 period. This covers electricity distribution (ED), electricity transmission (ET), gas transmission (GT), gas distribution (GD), and National Energy System Operator (NESO, also previously known as ESO - the Electricity System Operator). Transparency is essential, as consumers are the primary investors, funding the NIA and SIF through their energy bills. They have the right to know how their money is spent, including which projects receive funding and how they are progressing. Network companies must ensure transparency, allowing stakeholders such as Ofgem, Innovate UK and consumer groups to easily access this information and hold companies accountable for how they spend energy bill payers' money.

A total of 75 projects listed in the ENA Smarter Networks Portal were reviewed for this assessment, including two SIF projects and three NIA projects selected from each network company. The review covered both live and completed projects. Specifically, the report examined 16 SIF projects marked as “complete” and 14 as “live,” alongside 23 completed NIA projects and 22 live ones.

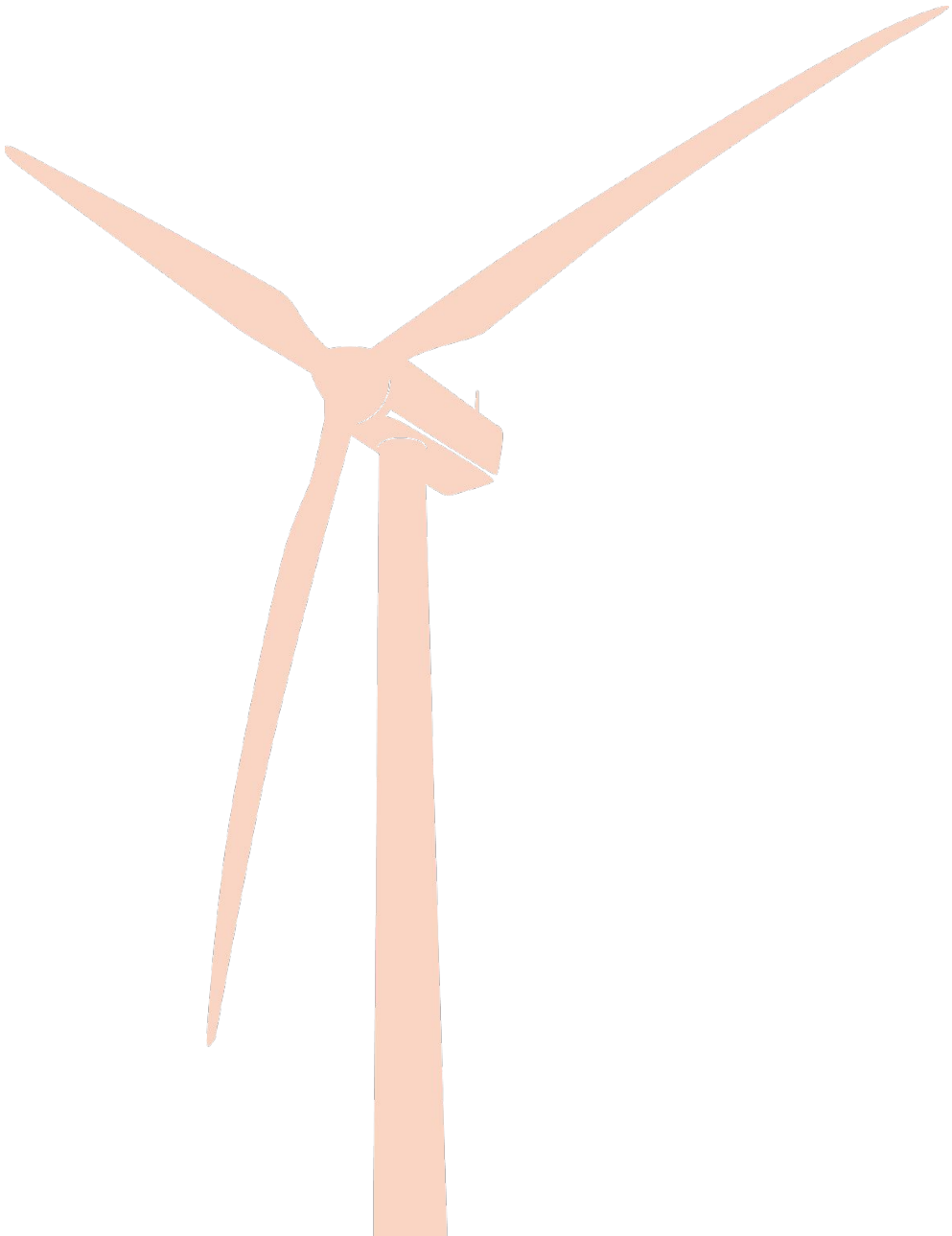
We found significant transparency issues—particularly with NIA projects, where most of the completed projects we reviewed lacked key information. Transparency is assessed by how clearly, completely, and accessibly network companies communicate key project information—such as objectives, benefits, outcomes, and next steps—throughout the project lifecycle. The higher transparency in SIF projects is largely due to their open, competitive funding process and the greater scrutiny they receive from Ofgem. In contrast, NIA projects are selected internally by network licensees, which can result in less external oversight and reduced transparency.

Below are the detailed findings:

Project objectives and outcomes: 95.5% of reviewed NIA projects clearly define their objectives, although three completed projects do not confirm whether those objectives were achieved. While all SIF projects align with their respective Innovation Challenge objectives, only 50% of completed SIF projects confirm meeting them—significantly lower than the 82.6% confirmation rate observed in NIA projects. This gap is largely attributed to the absence of a "Performance Compared to the Original Project Aims, Objectives, and Success Criteria" section in the SIF reporting template.

Project benefits: Over 20% of all reviewed NIA projects fail to clearly articulate their benefits, which limits transparency and makes it difficult to assess their value. All reviewed SIF reporting has improved since August 2022, with recent projects providing clear definitions of benefits using quantifiable metrics.

Next steps and implementation: Over 60% of completed NIA projects provide only brief or non-specific plans for next steps. In contrast, just 12.5% of completed SIF projects lack clear next step information. Additionally, of the 16 completed SIF projects we reviewed, all four that were discontinued provided detailed explanations for why they were closed. This is a positive practice, as it promotes transparency.



Financial reporting: Only 40% of the reviewed NIA projects include a breakdown of costs or funding sources, limiting financial transparency. In contrast, all reviewed SIF projects report total costs and the amount of SIF funding requested, with around two-thirds also providing detailed financial breakdowns.

Dissemination activities: 70% of completed NIA projects do not report any stakeholder engagement activities, and an additional 13% provide only limited detail. In contrast, 25% of completed SIF projects do not clearly document their dissemination efforts—half of which provide no information at all—often omitting key details such as event dates, target audiences, and engagement objectives.

Documentation: Although based on a small sample of six completed NIA projects, only one-third included the required net benefits statement—highlighting a potential emerging concern around compliance with the 2023 governance updates. For SIF projects, documentation is generally more robust; however, there are issues with SIF projects as well, such as confusion between Close-Down and End-of-Phase reports and occasional missing submissions which reduce overall transparency.

Lessons learned: All completed NIA projects include lessons learned, though the quality of these insights varies; 13 projects demonstrate good practice in this area. For SIF projects, only those in the Alpha and Beta phases are required to share lessons learned, and of the three eligible projects, only one demonstrated this to a high standard.

Other Observations: Several projects are still marked as “live” even though their end dates have passed. Additionally, the ENA Smarter Networks Portal is difficult to navigate and does not provide a clear system for tracking project status.

Recommendations

The following are our key recommendations to improve the transparency of innovation projects in the energy sector, based on the analysis conducted.

For Network Companies

Improve reporting consistency and clarity: Network companies should adopt structured reporting formats to enhance transparency and consistency. For NIA projects, close-down reports must clearly state whether the project will be implemented, further developed, or closed, supported by a clear rationale and relevant details such as funding plans and implementation timelines. When reporting dissemination activities, companies should consistently document the type of engagement, date, target audience, objectives, and outcomes to support meaningful knowledge sharing and accountability.

Review assurance over governance requirements: Our findings suggest there may be inconsistencies in how network companies meet the requirement to include net benefits statements in eligible project reports. To promote transparency and regulatory alignment, companies are encouraged to include both qualitative and quantitative assessments of project outcomes, and to ensure appropriate assurance processes are in place.

Ensure Timely Submission of Final Reports: Network companies should submit close-down or end-of-phase reports immediately upon project completion, without unnecessary delay. Prompt reporting will improve oversight and maintain project momentum into implementation

For Ofgem

Introduce Robust Oversight Mechanisms: To improve accountability and report quality, Ofgem should implement more rigorous review processes. These mechanisms should assess the clarity, accuracy, and completeness of critical reporting elements to prevent vague or unsupported claims and ensure compliance with the 2023 governance updates.

Issue Clear Reporting Guidance and Provide Best Practices: Ofgem should issue clear reporting guidance, supported by examples of high-quality reporting, to improve the consistency and reduce ambiguity in project reporting. For dissemination activities, all projects should be required to report key details—such as the date, type of engagement (e.g., webinar, workshop, publication), target audience, objectives, and outcomes—to enhance transparency and enable effective knowledge sharing across the sector. Similarly, guidance on reporting lessons learned should emphasise the need for insights that are specific, actionable, and transferable. This would promote continuous improvement and facilitate sector-wide learning.

Update the Reporting Template: Ofgem should revise the SIF reporting templates to include a dedicated section that compares each project's performance against its original aims, objectives, and success criteria. Additionally, a standardised financial reporting template should be developed for both SIF and NIA projects, requiring a full breakdown of costs. This should clearly separate funding contributions from the innovation fund, network companies, and third-party partners, and include work package-level cost information to improve transparency on how funding is allocated and spent across project activities.

Mandate Timely Report Submission: Ofgem should require network companies to submit close-down or end-of-phase reports immediately upon project completion, regardless of whether a subsequent phase is planned. This will help improve the timeliness of reporting, strengthen oversight, and support more accurate project tracking.

For ENA

Improve Project Visibility and Portal Usability: The ENA should enhance the Smarter Networks Portal by introducing consistent project status categories (e.g., "In Progress," "Completed," "Discontinued," "Next Phase Pending") to improve transparency and flag overdue reports. A visual project timeline showing key milestones, phase transitions, and funding status would further enhance clarity. Structural improvements are also needed to ensure intuitive navigation and easy access to project documents, financial data, and dissemination records. These changes would support greater transparency and help users better track and understand project progress.

Overview of innovation

Achieving the net zero target by 2050 relies on advancing innovative technologies to transform energy networks. Electricity networks must upgrade infrastructure to integrate renewables, support transport and heating electrification, and deploy energy storage, while gas networks must reduce leaks, decommission or convert systems, and prepare for net zero. At the same time, networks will have more interaction with their customers than ever, and will need to find innovative ways of doing this. Funding programs like the SIF and the NIA support innovation in gas and electricity networks, including high-risk ideas and emerging technologies with significant potential. These programs aim to modernise gas and electricity networks, creating more intelligent, efficient, and flexible systems for a low-carbon future while minimising consumer costs and disruptions.

With over £727 million in funding across the current price control from the NIA and SIF sourced mainly from consumers' energy bills, transparency is crucial to protecting the interests of consumers. As the primary contributors, consumers have a right to understand how funds are allocated and whether projects meet their goals. Transparent governance fosters accountability, ensures funds are used effectively, and delivers meaningful value and benefits to consumers.

The current innovation landscape

Innovation is central to the energy networks' operations, guided by the RIIO-2 price control framework covering 2021 to 2028. RIIO-2 represents the second phase of the RIIO model, setting revenue limits for electricity and gas transmission and distribution companies.[2] The framework links their revenue to the value they can deliver to consumers. Innovation is a key pillar of the RIIO framework, with the second “I” dedicated explicitly to fostering groundbreaking initiatives that go beyond business-as-usual activities, driving progress and transformation in the energy sector.

During the RIIO-2 period, the NIA and the SIF are the key innovation funding sources. Under these funding arrangements, energy network companies (and/or project partners) are required to contribute only 10% of the costs for innovation projects, with the remaining 90% funded by consumers through their energy bills. This high financial contribution highlights consumers' direct stake in these innovation projects.

Collaboration is a core requirement under the Strategic Innovation Fund (SIF), with network companies expected to work together and partner with external organisations—such as local authorities, universities, start-ups, and SMEs. In contrast,

the Network Innovation Allowance (NIA) encourages collaboration but does not mandate it. Both mechanisms aim to support the research, development, and trialling of new technologies, operational models, and commercial arrangements that drive innovation, benefit consumers, and help transform Great Britain's energy networks.[3] In addition to network companies, several key players have a role in energy network innovation: Ofgem, Innovate UK, and the Energy Networks Association (ENA).

Ofgem supports network companies by funding the trial or launch of new products, services, methodologies, and business models through mechanisms like NIA and SIF. Ofgem also sets strategic direction for what SIF will fund, decides which projects receive funding, and revises the governance of NIA and SIF to address regulatory gaps.[4]

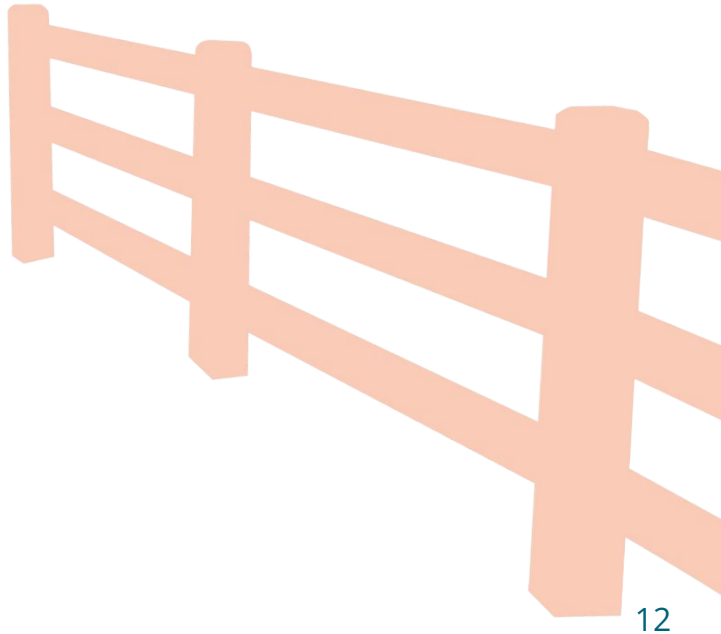
Innovate UK operates the SIF, managing the funding program, monitoring project delivery, making operational recommendations to Ofgem, and supporting third-party innovators. It also helps successful projects transition into business-as-usual activities.[5]

ENA hosts the Smarter Networks Portal, which supports learning and collaboration across the industry. The portal serves as a main hub for information on Ofgem-funded innovation projects, including their outputs, data, findings, and news and current Ofgem-funded innovation projects.[6] ENA publishes the Energy Networks Annual Innovation Report, which highlights key case studies, trends, and progress and an innovation strategy that guides how network operators can innovate to help achieve net zero and address future challenges.[7]

Main innovation funding streams

During the RIIO-2 period, the primary innovation funding sources are the NIA and the SIF. These mechanisms succeed in earlier initiatives like the Innovation Funding Incentive , Low Carbon Networks Fund, and Network Innovation Competition.

Network Innovation Allowance (NIA): The NIA is a ring-fenced fund allocated to each RIIO network licensee as part of their price control settlement to support innovation. It funds the research, development, and demonstration of initiatives that provide net benefits to consumers, such as environmental improvements or financial savings. Network companies can recover up to 90% of project costs from their Total NIA Expenditure.



In RIIO-2, the NIA focuses on projects that support the energy transition or benefit consumers in vulnerable situations, often addressing challenges beyond routine budgets. Network companies have the flexibility to choose which projects to fund and can recover related expenses through the NIA. They are required to submit annual reports detailing how the funds are utilised.[8]

Strategic Innovation Fund (SIF): Launched in 2021, the SIF provides additional funding to help transform gas and electricity networks for a low-carbon future while delivering net benefits to consumers, under a competitive process. The SIF is designed to fund large-scale, complex projects that align with strategic priorities and go beyond the scope and scale of what the NIA can support.

This funding is available to network licensees to tackle innovation challenges set by Ofgem.[9] Projects must demonstrate clear potential for financial and non-financial benefits, such as lower energy bills, reduced network costs, or carbon reductions.

SIF funding is allocated across three stages: discovery, alpha, and beta, with funding unlocked as projects progress from discovery to alpha and alpha to beta. Unspent funds must be identified in the end-of-phase reports and returned to consumers via the next SIF Funding Direction.[10] In 2024, Ofgem introduced changes to the SIF process, including three annual application windows for all phases, flexible start dates and durations, and faster project timelines.[11]

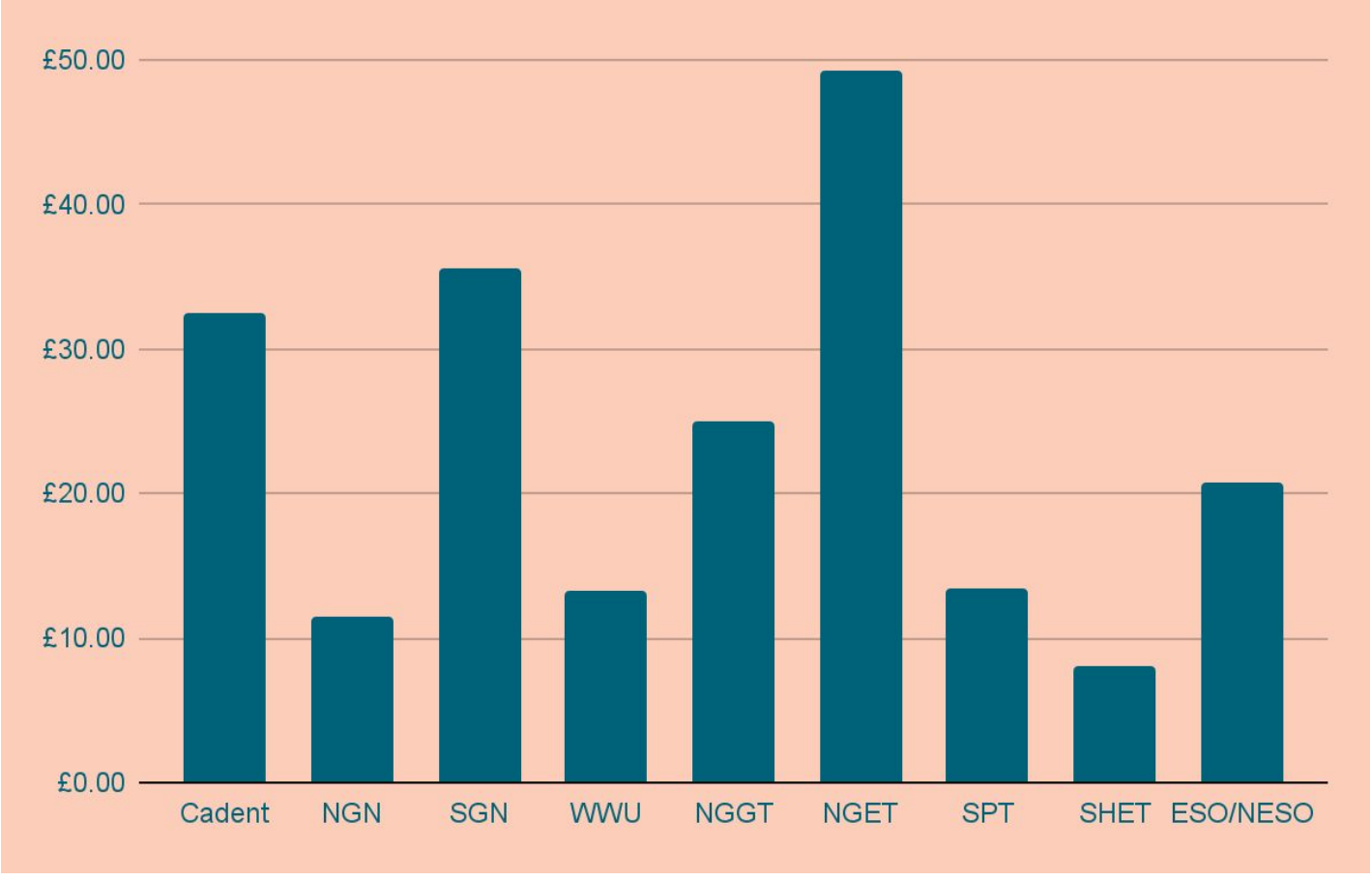
Ofgem has allocated significant NIA funding for innovation during RIIO-2, with a key distinction in funding periods: Distribution Network Operators (DNOs) in electricity receive support only for the first three years of RIIO-ED2, whereas operators in gas transmission, electricity transmission, gas distribution, and the NESO/ESO benefit from funding across the entire RIIO-2 period. All NIA funding is issued on a “use it or lose it” basis. In addition, at least £450 million is available through the Strategic Innovation Fund (SIF) to support system-wide innovation across the energy sector.[12]

NIA Funding Allocation by Sector and Price Control Period

Sector	Price Control Period	NIA Funding Allocated	Funding Duration
Electricity Distribution	RIIO-ED2 (2023/24-27/28)	£68.4 million	First 3 years of 5-year period
Gas Transmission	RIIO-2 (2021/22-25/26)	£92.9 million	Full 5-year period
Electricity Transmission	RIIO-2 (2021/22-25/26)	£25.0 million	Full 5-year period
Gas Distribution	RIIO-2 (2021/22-25/26)	£70.8 million	Full 5-year period
NESO	RIIO-2 (2021/22-25/26)	£20.7 million	Full 5-year period

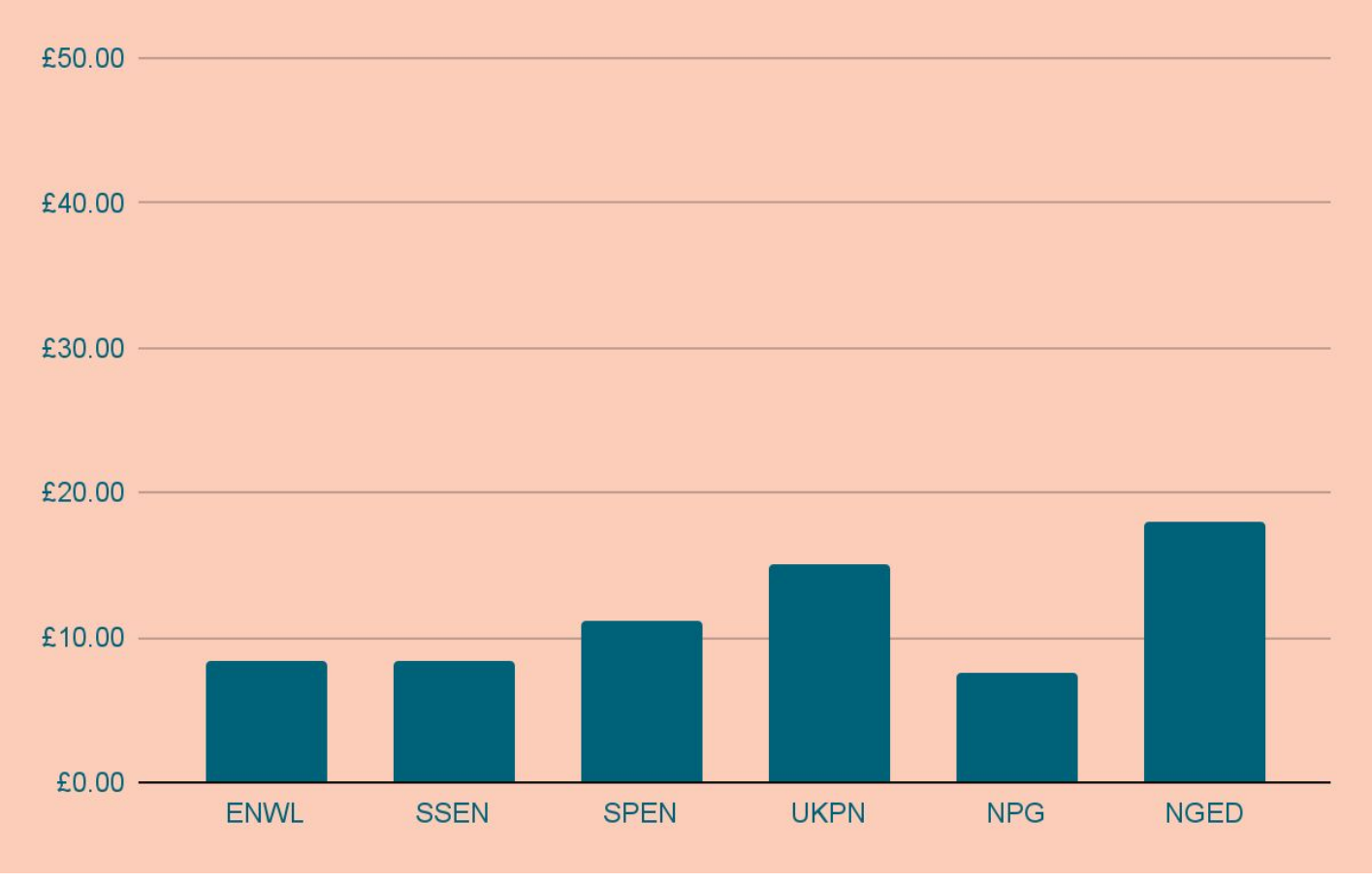
NIA Funding Allocation Breakdown

NIA in RIIO-2 2021/22 -2025/26 (in £ millions)



NIA Funding Allocation Breakdown

NIA in RIIO-ED2 2023/24 - 2025/26 (in £ millions)



Potential risks in innovation

The current framework for innovation presents potential risks in its ability to fully unlock consumer benefits.

Deployment: Deployment is a critical measure of success for innovation funding, as it ensures that funded projects deliver tangible consumer benefits. While funding cannot guarantee deployment, it is anticipated that a proportion of innovation projects will be implemented in practical settings. However, there are no regulatory requirements mandating network companies to deploy any innovations.

Despite its importance, deployment is not well tracked. Information available through the Smarter Networks Portal is limited, and Ofgem lacks sufficient data on post-funding deployment indicating a lack of focus on deployment within the current regulatory framework. In its RIIO-3 Draft Determination, Ofgem acknowledged that the Innovation Measurement Framework (IMF) tables submitted between 2022 and 2024 were incomplete, with several deployed projects missing.[13] These data gaps limit transparency for both Ofgem and consumers and indicate a broader lack of emphasis on deployment within the existing regulatory framework.

Furthermore, current incentives could drive focus on efficiency gains for networks, with insufficient emphasis on encouraging the deployment of innovations that provide direct benefits to consumers and the wider energy system. This is partly because there is no requirement for a set proportion of projects to provide a clear, direct benefit to customers.

High risks for consumers: Under the current framework, consumers bear a disproportionate share of the risk in funding innovation projects, as network companies contribute only 10% of project costs. This level of commitment limits the companies' financial exposure compared to competitive businesses, placing most investment risk on consumers.

Lack of guidance from Ofgem on acceptable risk levels: Without a risk framework for NIA and SIF, network companies may either avoid ambitious, higher-risk innovations to protect success rates or pursue such projects without adequate safeguards. This can lead to missed opportunities for transformative innovation or, conversely, failed projects that provide no return on investment—leaving consumers to bear the cost. To ensure innovation delivers value while managing risk appropriately, a risk framework from Ofgem is needed.

Disproportionate benefits for network companies: Networks can gain several benefits from innovation projects with minimal financial input. By successfully implementing innovations, network companies can reduce operational costs, improve Totex efficiency, and enhance system performance. These improvements help networks meet key performance goals, leading to additional incentive rewards and higher overall returns, further boosting their financial benefits.

Duplication of projects: With nearly 700 projects funded through the NIA and SIF during the RIIO-2 period across 15 companies, along with earlier schemes like Innovation Funding Incentive, Low Carbon Networks Fund, and Network Innovation Competition, there are concerns about potential duplication, particularly among NIA projects. This is due to uncertainties around the level of oversight and monitoring from Ofgem and Innovate UK. Such overlaps lead to inefficient use of funds, diverting resources away from more impactful and unique innovations.

Transparency in innovation projects

In addition to consumers funding 90% of innovation initiatives through their energy bills, transparency in innovation is also a core principle of the Energy Network Innovation Process (ENIP), a framework all energy networks have agreed to follow. ENIP emphasises the need for clear public visibility of innovation activities and requires networks to make information easily accessible to consumers.[14] As a result, innovation projects funded under the NIA and SIF should share accessible information on finances, engagement efforts, progress, and future plans.

Given that consumers are the main investors and network companies have pledged to uphold transparency, information about innovation projects must be clear and accessible to the public. However, transparency in innovation has long been overlooked. Consumers still lack a clear way to understand how their money is used by network companies, which projects receive funding, and how those innovations deliver tangible benefits. As the statutory advocate for energy consumers, Citizens Advice has a responsibility to scrutinise the information provided by network companies. Therefore, this research aims to evaluate the transparency of innovation projects, focusing on how effectively they communicate key details, such as financial allocation, progress, and benefits to consumers.

Methodology

To ensure a fair and balanced evaluation, an equal number of projects were reviewed per company, regardless of the portfolio size. For the SIF, two projects per company were reviewed, while three projects per company were selected for the NIA. This approach prevented disproportionate focus or oversight.

Projects were selected using random sampling to minimise bias and ensure objective assessment. A total of 75 projects were reviewed, including 45 NIA projects and 30 SIF projects, providing a comprehensive evaluation of the transparency and quality of project reports funded by both streams.

The assessment included both live and completed projects: 23 NIA projects were complete and 22 were live, while 16 SIF projects were marked as complete and 14 as live.

The final check of data took place on 20th June. It is acknowledged that network companies may submit additional information to the Smarter Networks Portal after this date, which may not be reflected in this assessment.

Evaluation criteria

Each selected project was assessed against the following criteria, which are required for submission and offer a structured overview of the project:

- Clarity of project objectives and whether objectives have been met.
- Clarity of benefits articulated by network companies.
- Clarity of project next steps and rationale for discontinuation
- Transparency of project funding and financial reporting.
- Clarity of engagement activities.
- Quality and completeness of project documentation.
- Quality and completeness of recorded project learnings.

Scoring methodology

A three-point scale was used to assess the transparency and quality of information provided by network companies for each of the evaluation criteria. This scale enables a structured and consistent assessment of how clearly and comprehensively each project communicates key information throughout its lifecycle. The assessment was benchmarked against examples of good and poor practice to ensure consistency and provide clear standards for evaluation.

The full evaluation criteria and detailed assessment results for each project are documented and available for further review which can be accessed via the provided link below.

Evaluation Criteria and Results - SIF and NIA Funded Projects

Evaluation and research results

Project objectives

Our criteria for assessing the objectives of innovation projects are:

- The clarity of the project's objectives and success criteria.
- How well the network company communicates whether these objectives have been met.

Clear project objectives, along with a clear indication of whether the objectives and success criteria have been achieved, are essential for consumers to understand the goals and outcomes of innovation projects. This clarity also enables network companies to monitor progress more effectively.

For NIA

NIA projects are required to define the scope, objectives and success criteria clearly.[15] Among all 45 NIA projects reviewed, a majority (95.5%) of projects provide detailed explanations of their objectives and success criteria. Only two projects lack clarity as they do not specify the additional data they intend to collect to support progression to the next stage of SIF funding.

Example of an unclear project objective:

Predict4Resilience - Discovery Continuity:

"Maximise the success of discovery by feeding in additional data gathering, formatting, reviewing and validation to inform the SIF outcomes."

Among the 23 completed NIA projects we reviewed, the majority (78.3%) provided a clear and explicit statement on whether the project had achieved its objectives or success criteria.

Example of a clear statement on whether the project met its objectives or success criteria:

Energy Storage Strategy:

"The success criteria were met through the delivery of a DNV final report in three phases, detailing all of the findings, conclusions and recommendations around an energy storage strategy to support decarbonisation."

Of these completed NIA projects we reviewed, 3 projects (i.e. 13%) did not provide sufficient clarity on whether their objectives were achieved. One example is the *Environmental Risk and Assurance (ERA)* project. While the ERA project close-down report provides an overview of project outcomes and progress, the report does not explicitly address whether the project met its stated objectives or success criteria. This highlights a gap in the reporting of key performance information.

Additionally, two projects are marked as “not provided”: the Heat Network Transition Study, which had passed its scheduled end date but had not submitted a close-down report at the time of assessment, and the Data and Digitalisation – Discovery Continuity project, which shows "N/A" in the outcome display due to its discontinuation.

For SIF

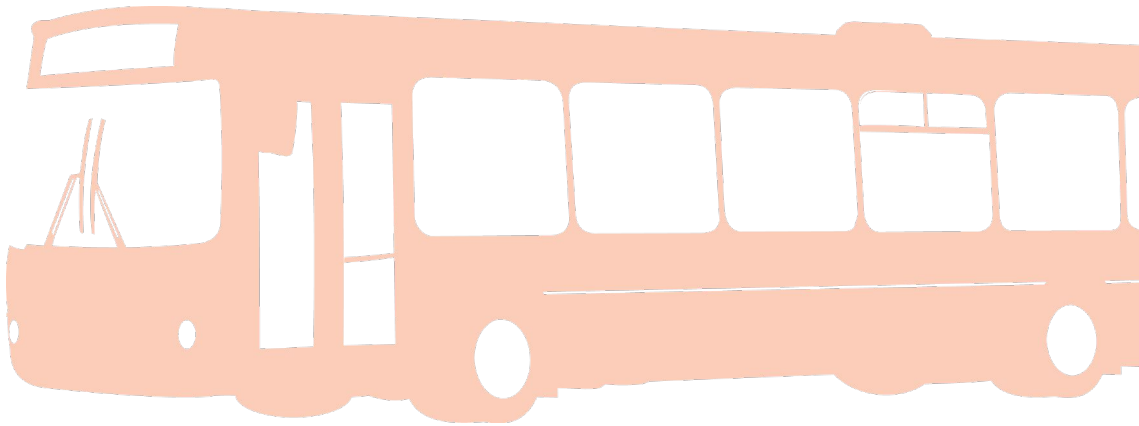
All 30 SIF projects reviewed clearly outlined how they aligned with the Innovation Challenge objectives of their respective funding rounds.[16] For example, the project *A Holistic Hydrogen Approach to Heavy Duty Transport (H2H)* aligns with the Zero Emission Transport challenge from the Strategic Innovation Fund (SIF) Round 1 Discovery Phase.

Among 16 of completed SIF projects we reviewed, 8 projects like *Nuclear Net Zero Opportunities (N-NZO)* are unclear whether their objectives or success criteria have been achieved, because of the absence of explicit statements confirming whether the project objectives or success criteria were met.

Compared to the completed NIA projects we reviewed—where 82.6% included a clear statement on whether project objectives were achieved—only 50% of completed SIF projects we reviewed provided such clarity. This discrepancy may be attributed to differences in reporting requirements: the SIF framework does not currently require network companies to assess project performance against the original aims, objectives, and success criteria.

Recommendation

Drawing on the clearer reporting practices observed in NIA projects, Ofgem should update the SIF reporting template to include a dedicated section that compared the performance to the original project aims, objectives, and success criteria. This section should require network companies to explicitly state whether each objective and success criterion has been achieved, using a clear “Yes/No” format. Each response should be supported by appropriate evidence or justification to ensure transparency and enable consistent assessment across projects.



Project benefits

When assessing project benefits in innovation projects, we focus on:

- Assessing the effectiveness of companies in communicating the expected benefits of their projects.

As consumers fund innovation through their energy bills, clear communication of project benefits is essential. Transparently outlining financial, environmental, and socio-economic impacts helps consumers understand the value of their contributions.

For NIA

NIA projects are required to demonstrate and describe the benefits they aim to deliver.[17] Over 20% of all reviewed NIA projects provided vague or unclear descriptions, often relying on generalised or intangible statements. These projects lacked context or explanation of how the proposed benefits would be achieved. As a result, it is difficult to assess the tangible value or impact these projects are expected to deliver.

Example of a vague and generalised project benefit statement:

Storm Triage:

"This project seeks to reduce the impacts and duration of these incidents. This is beneficial to all customers but especially those who are vulnerable or have the potential to become vulnerable."

This statement is vague because it fails to explain the method or approach by which the project will reduce the impacts and duration of incidents. Without this detail, the claimed benefits are unclear and lack substantiation.

For SIF

SIF governance requires projects to demonstrate net benefits to gas or electricity consumers, often quantified through metrics like 'cost savings per annum on energy bills for consumers' and 'tonnes of CO2 savings per annum.'[18]

Among all the reviewed SIF projects, 9 were found to have provided unclear descriptions of their expected benefits. All of these projects were initiated in early 2022 and lacked detailed information on anticipated outcomes. However, reporting quality has improved since August 2022, likely due to updates to the SIF project registration template, which introduced dedicated sections for identifying and describing project impacts and benefits.

Since the introduction of the new template, all SIF projects clearly define their expected benefits, providing specific metrics and linking them to broader impacts such as cost savings for the energy system and carbon reductions.

Example of a clear and well-defined project benefits statement:

Local Energy Oxfordshire - Neighbourhoods (LEO-N) Alpha R2 project:

"Innovation proposed for development and demonstration in LEO-N is anticipated to deliver net benefit of up to £68.7bn and avoid 4.7GtCO2e between 2025-2050 if scaled up to the GB level. "

This level of detail contrasts with projects funded under the NIA, where the articulation of benefits is often less comprehensive.

Recommendations

All projects should be required to clearly define their anticipated benefits across financial, environmental, and socio-economic dimensions. These benefits should be expressed in measurable terms—such as cost savings, emission reductions, or improvements to community outcomes—to allow for transparent evaluation of project value.

Ofgem should implement strengthened oversight by introducing robust review mechanisms to assess the accuracy, clarity, and completeness of project reports. This would help ensure that benefit claims are well-substantiated and prevent the inclusion of vague or unsupported statements

Project next steps

When assessing the next steps of innovation projects, we consider:

- The effectiveness of the network company in communicating their next steps.
- How well the network company explains the reasons and context for discontinuing a project.

Clear communication about project progress or termination is essential for keeping consumers informed, ensuring transparency, and fostering confidence in energy sector innovation.

For NIA

NIA projects are required to outline how their research outcomes will lead to operational changes, including the steps needed for implementation.[19] Among the 23 completed NIA projects reviewed, 1 project, *Data and Digitalisation - Discovery Continuity*, was discontinued but offered no further details.

In addition, more than 60% of completed NIA projects we reviewed were categorised as "unclear" due to generic statements or ones that did not clearly articulate how their results would be used. These projects lacked clear next steps or defined implementation plans.

Example of a vague statement on next steps:

H21 - Wider Impacts of Hydrogen:
"findings will be utilised to inform future policy decisions"

This statement lacks the clarity because it does not specify which policies may be influenced, or how the findings will be used in the decision-making process.

For SIF

SIF projects generally provide better visibility into their progress. Among 16 completed SIF projects reviewed, only 2 lack clarity on how the project results will be utilised or whether the project moved to the next stage of research. For instance, it was unclear whether Digital Platform for Leakage Analytics – Alpha Round 1 will move the Beta Stage.

A huge majority of completed SIF projects we reviewed (87.5%) offer detailed next-step information in presentations to external stakeholders or in the Close-Down/ End-of-Phase report.

Example of clear next steps for SIF project:

Predictive Safety Interventions:

"The discovery phase provided an incredibly valuable insight into which challenges need to be overcome in order to realise these benefits – namely the flaws with the current data-gathering processes. We will carry these learnings forward into the Alpha phase, where we will develop tools and strategies to overcome these challenges."

Under SIF governance, network companies must disclose any technical, commercial, or regulatory constraints affecting project progression.[20] Among 16 completed SIF projects we reviewed, all 4 discontinued projects like *Net Zero Terrace Alpha* have provided well explained reasons for discontinuation for projects that decide not to advance.

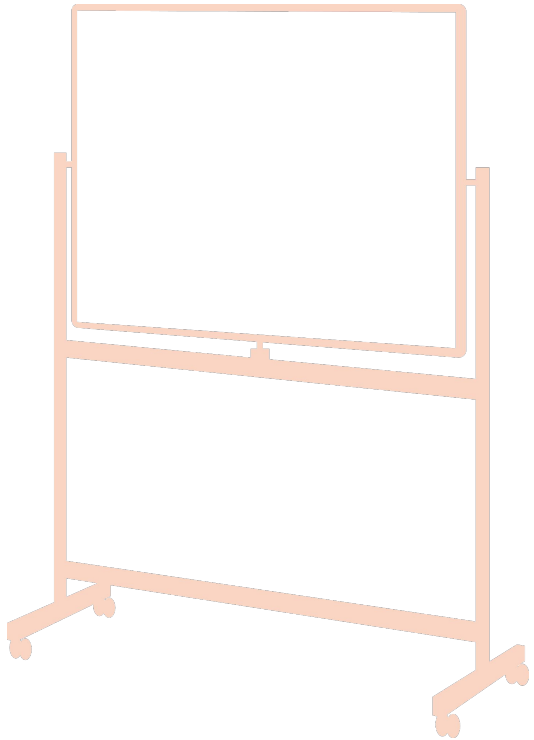
Example of a well-explained reason for discontinuation

ALCHEM (Advanced Low Carbon Hydrogen and Energy Management):

"The primary constraint preventing progression to an Alpha application is the requirement for a "flexibility aggregator" partner. At this stage, such a partnership is premature and misaligned with the project's current focus on validating biomass electrolysis technology."

Recommendation

Ofgem should require all network companies to clearly report how the outcomes of NIA projects will be taken forward. In the "Planned Implementation" section of the close-down report, companies should state whether the project will be progressed, implemented, or closed, and provide a clear rationale for that decision. Where applicable, they should also include details on funding plans, timelines, and next steps. This will improve transparency and help stakeholders better understand the real-world impact of NIA projects.



Finance Reporting

The criteria we use to assess financial reporting in innovation projects are:

- How effectively network companies communicate their use of funding and allowances to the public.

As project funding primarily comes from consumers, financial transparency is essential for ensuring efficient spending, preventing mismanagement, and fostering accountability.

For NIA

The RIIO-2 NIA Governance Document does not require network companies to publish cost breakdowns. As a result, 60% of the reviewed NIA projects are categorised as "unclear", including examples such as *Environmental Risk and Assurance* (*ERA*). These projects typically lack transparent financial information and only provide total expenditure estimates.

Example of unclear financial reporting

Environmental Risk and Assurance (ERA):

Indicative Total NIA Project Expenditure - £409,783

The remaining 40% of reviewed projects are categorised as "clear," as they provide a breakdown of funding sources, specifying the contributions from the NIA, network companies, and project partners. One standout example is the SCADA project, which demonstrates exceptional transparency by offering a detailed cost for each individual work package.

Example of clearly presented indicative expenditure for an NIA project:

SCADA Solutions for Hydrogen Networks (100% & Blends):

Supplier fees
Work package 1 - £50,691
Work package 2 - £42,987
Work package 3 - £41,274
Work package 4 - £13,616
Total - £148,568
Internal fees - £49,522.67
Total cost - £198,090.67

For SIF

SIF projects generally provide more detailed financial information than NIA projects. This is largely due to SIF governance requirements, which mandate disclosure of total requested funding along with specific cost breakdowns for external consultants, staff, and communication materials.[21]

All reviewed SIF projects reported their total project costs and the amount of SIF funding requested. Additionally, two-thirds of the reviewed projects included either a cost breakdown by work package or a breakdown of each partner's funding request based on their specific role or contribution. Notably, the *Whole Energy System Resilience Vulnerability Assessment (WELLNESS)* project provided both types of financial detail, demonstrating good practice in transparent cost reporting.

Example of transparent financial reporting

System Resilience Vulnerability Assessment (WELLNESS) in the discovery phase:

Work Packages (WPs):

"· WP1 -- Project management, led by NGET, weeks 1-2, (£14,000):
· WP2 -- Demand side flexibility, led by ENWL, weeks3-9, (£36,000):
· WP3 -- Identification of requirements, led by UoM, weeks3-9, (£43,000):
· WP4 -- CBA, led by ARUP, weeks3-9, (£50,000)"

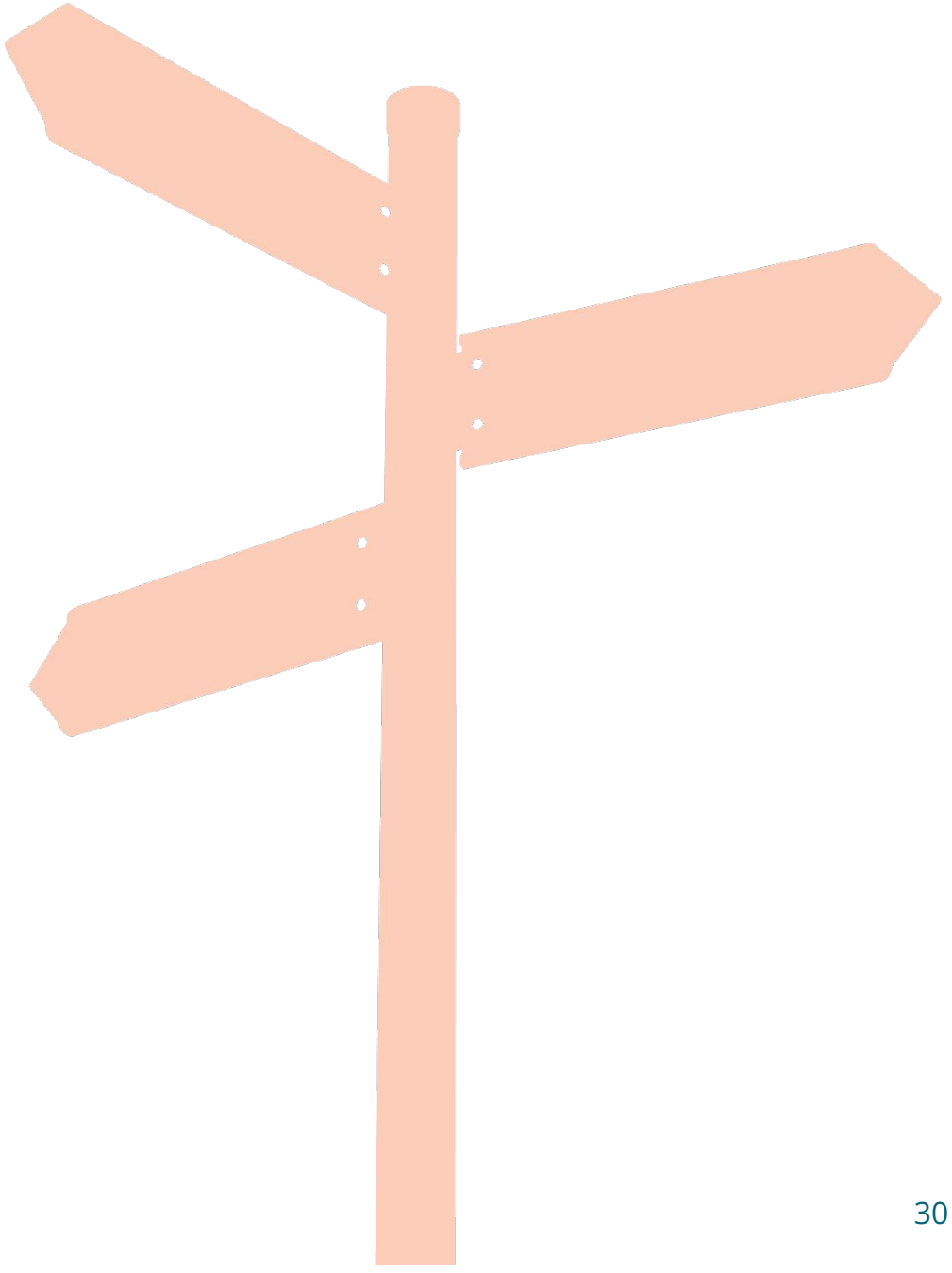
"· NGET will receive £15,726 of the requested funding. The team brings key transmission network expertise and will use their valuable experience to manage the project, set stage-gates and assess success criteria.· ENWL will receive £13,920 of the requested funding. The team will bring essential experience in responding to the design and operational challenges posed on DNOs by extreme events. This will assist the other partners with ensuring that the framework developed is truly applicable to both transmission and distribution networks.
· ICL will receive £23,650 of the requested funding. The ICL team will bring unique expertise related to the assessment of the role of smart multi-energy micro grids in fundamentally enhancing resilience of supply cost effectively.
· UoM will receive £24,543 of the requested funding. The UoM team brings critical network decision-making and resilience assessment expertise which has been developed over the last decade, harnessing the valuable outputs of research projects with a value of over £15m.
· UCYwill receive £22,200 of the requested funding. The UCYteam brings internationally recognized expertise in resilience assessment and enhancement, and innovation know-how on the topic of energy resilience from international research projects with a total value over £1.5million.
· ARUP will receive £42,781 of the requested funding. The ARUP team will bring over 75 years of critical infrastructure resilience design and engineering expertise; and strong modelling capabilities building on ARUP's overall resources as a major multidisciplinary engineering consultancy."

In some cases, such as the *Predict4Resilience* Discovery Phase project, financial breakdowns were included in Excel annexes but were not accessible via the ENA Smarter Networks Portal. Innovate UK states that these financial details are published on Ofgem's website under the SIF Project Directions. However, this appears inconsistent with the SIF governance document, which requires financial information to be submitted through UKRI's secure portal—a platform that is not publicly accessible.[22] This discrepancy creates uncertainty about where financial information is stored and how it can be accessed by the public.

Recommendations

Ofgem should introduce a standardised financial reporting template across both NIA and SIF schemes that requires network companies to publicly disclose cost breakdowns for NIA projects. This should include a clear split of funding contributions from the NIA, network companies, and third-party partners, along with costs per work package where applicable.

Ofgem and Innovate UK should provide clear guidance on where financial information is published and ensure that all relevant financial breakdowns are made publicly accessible through a single, centralised platform with intuitive navigation and download options.



Dissemination Activities

Our criteria for assessing dissemination activities in innovation projects involve:

- Reviewing how effectively network companies communicate and share project outcomes.

Clear and transparent dissemination helps consumers see how knowledge is shared and reduces duplication across the industry. It also benefits network companies by building their reputation, showing value to stakeholders, and encouraging collaboration for more effective innovation.

For NIA

All network companies meet the baseline information dissemination requirements outlined in the NIA Governance Document. These include hosting an annual conference, and producing individual and collective NIA activity summaries.[23]

However, the reporting of stakeholder dissemination activities is inconsistent. Among 23 completed NIA projects we reviewed, nearly 70% do not include any information about their engagement efforts. A further 17% provide only minimal or vague descriptions, often lacking specific details such as dates, stakeholders involved, or the nature of the engagement—such as the case with the *European Hydrogen Distribution Insights* project which simply states that its outputs were shared with gas network licensees, without clarifying when this took place, who specifically was engaged, or how the information was disseminated.

An exemplary exception is the *Stability Market Design* project, which demonstrates strong transparency by publishing webinars and meeting minutes from its engagement activities on NESO's website under the 'Our Projects' section.

For SIF

Facilitating knowledge transfer is a key principle of the SIF framework. To support this, network companies are required to participate in events to share and publicise project results.[24] Of the 16 completed SIF projects under review, all but two have shared information about their outreach efforts, though the level of detail varies significantly between projects.

SIF projects exhibit more robust dissemination practices than NIA projects. Among completed SIF projects we reviewed that reported on their outreach efforts, 75% clearly described their dissemination activities, including date, stakeholders and/ or aims of the specific events. A strong example is the *Net Zero Terrace Alpha* project, which documented a range of stakeholder engagement efforts including collaboration events, stakeholder workshops, and public webinars to communicate its objectives, outcomes, and lessons learned with a broad audience.

Example of well-documented dissemination activities:

WARN (Weather Alerts and Risk analysis for Network operators):

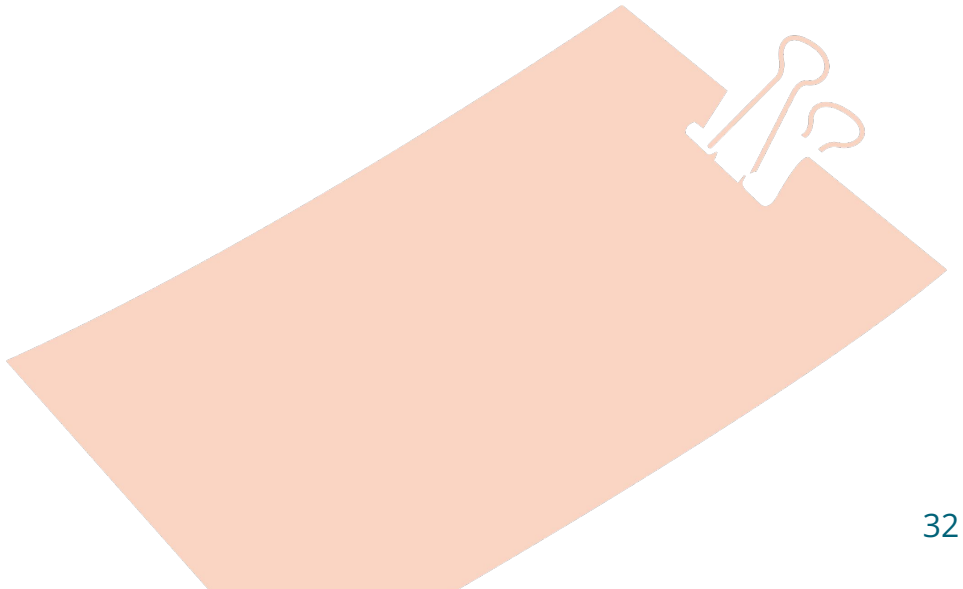
"A 'Show and Tell' of the project aims, objectives, and solution proposition was completed with UKRI and Ofgem. This was recorded and shared on YouTube."

"Dissemination of WARN learnings to avoid duplication and accelerate industry progress:
· Meeting with WELLNESS (20 April 2023) - There are potential commonalities with WELLNESS regarding the assessment of vulnerabilities due to weather extremes and how these might be affected by climate change. However, the overlap is not obvious due to the different goals, timescales of interest and scope.
· Meeting with SEE (28 April 2023) - The SEE project has a wider remit compared to WARN, they are looking into 'swan events', not just extreme weather events, but also looking into some major events such as COVID and the war in Ukraine, for example, which have had a big impact on the energy system.
· Extra meeting – CReDo+ (10 May 2023) - There is potential to share knowledge on climate scenarios and on asset level vulnerabilities. However, the focus, users, approaches are different and could complement each other."

Recommendation

To improve how dissemination activities are documented across both NIA and SIF projects, Ofgem should publish clear guidance requiring all projects to record key details such as the date of the activity, type of engagement (e.g., webinar, workshop, publication), stakeholders involved, and the specific objectives and outcomes. Standardising this information would ensure greater consistency, transparency, and value for future learning.

Ofgem should consider providing a clear and detailed example of what constitutes high-quality reporting. Doing so would help set a consistent standard across the sector, reduce ambiguity, and guide network companies in meeting regulatory expectations. This proactive approach would not only improve the overall quality of reporting but also support more effective monitoring, transparency, and accountability in the use of innovation funding.



Documentation

Our criteria for assessing innovation project documentation focus on: Evaluating how complete and accurate the records are, as maintained by network companies in the Smarter Networks Portal.

High-quality documentation not only builds consumer confidence and fosters trust, but also supports the network company by enabling more effective project management, internal learning, and regulatory compliance. It also facilitates better monitoring, evaluation, and knowledge sharing across the sector.

For NIA

In 2023, Ofgem updated the NIA governance document, requiring network companies to include a net benefits statement in project progress reports. This statement must provide both qualitative and quantitative assessments of a project's actual and expected benefits.[25]

Of the 23 completed NIA projects reviewed, 6 were launched in or after February 2023 and were therefore required to include a net benefits statement in line with the updated NIA governance requirements. However, only two of these projects provided such a statement. For example, the *Satelline* project outlined expected cost savings and operational improvements in vegetation management. The remaining projects either did not submit a close-down report or failed to include the required net benefits statement.

Example of a statement on net benefits:

Network Intelligence through Probabilistic Risk Assessment Methodology (NIPRAM) to improve electricity system restoration:

"The benefits of this project were premised on evaluating the exposure cost calculated from the probability of a total or partial shutdown taken from the National Risk Register and the value of lost load within the LJRP network. A conservative estimate that the effort i.e., migration from a limited subjective to holistic quantitative analysis would reduce LJRP implementation time by approximately 12.5% and overall exposure cost over a regulatory period (5 years) by at least approx. £3.41m was validated. The same baseline PRA results from the project's LJRP use case that prioritised restoration route assets by risk criticality can be used to determine assets replacements or optimise maintenance inspections. The PRA framework thus provides network managers with repeatable probabilistic methods to quantify expected benefits of such asset risk mitigation efforts to influence future LJRP revisions for NGET."

For SIF

All completed SIF projects we reviewed are well-documented, with key materials—such as project registrations, 'Show and Tell' presentations, and End-of-Phase Reports—available on the Smarter Networks Portal.

At the time of assessment, each of the live projects reviewed had already exceeded its planned end date, and 78%—including *Predictive Safety Interventions - Beta* —had not submitted the required reports. In this case, the project provided only its annual report and SIF Beta Project Registration, but no End of Phase or Close Down report, despite its scheduled end date of February 2025.

This gap may stem from a 2023 policy change that removed the obligation to submit an End-of-Phase Report if a project progresses to the next phase. In addition, the lack of a formal requirement to submit a Close-Down or End-of-Phase Report immediately after project completion likely contributes to further delays and inconsistencies.

Inconsistencies were also observed in report submissions. Some projects uploaded a Close-Down Report instead of an End-of-Phase Report, or vice versa. UKRI guidance clarifies that an End-of-Phase Report is not required when applying for the next phase, but if funding is not secured, the report must be completed retrospectively. A Close-Down Report, however, is required for all projects that do not progress further.

Differences between end-of-phase reports and close-down reports template in SIF projects

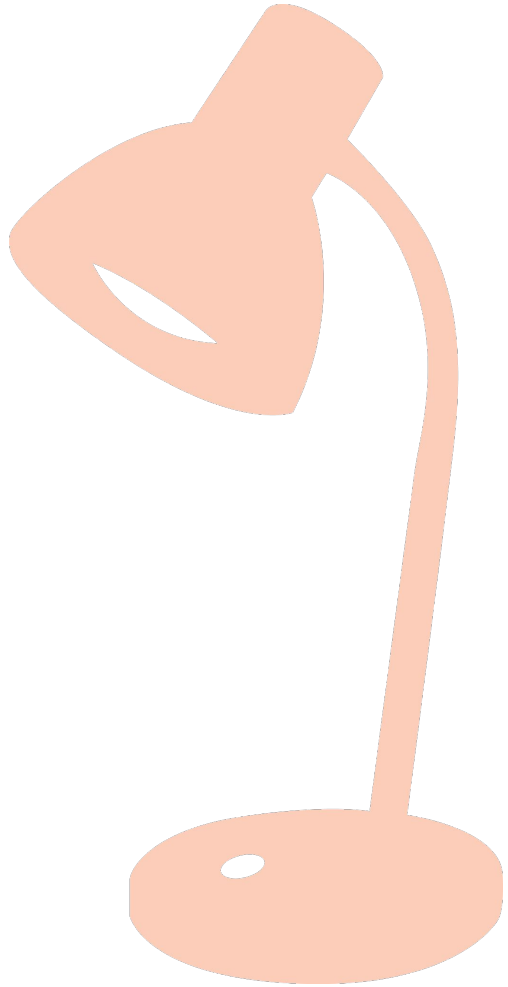
End-of-phase reporting requirements	Close-down reporting requirements
Phase summary	Project summary
User needs	Problem being solved
Impacts and benefits	Summary of key findings
Risks, issues & constraints	User needs
Working in the open	Impact and benefits
Costs and value for money	Risks, issues and constraints
	Working in the open
	Costs and value for money
	Special conditions
	Documents upload where applicable

Recommendations

Ofgem should enforce compliance with the 2023 NIA governance requirement mandating net benefits statements in End-of-Phase/close-down reports. Network companies should be held accountable for providing both qualitative and quantitative assessments of a project's benefits, with Ofgem conducting routine audits to ensure submissions are complete.

A formal requirement to submit the appropriate report immediately upon project completion—regardless of whether a next phase is being pursued—should be introduced to reduce delays and improve oversight.

For SIF projects, reporting requirements should be clarified and standardised. Ofgem and UKRI should jointly review and update guidance to eliminate confusion between End-of-Phase and Close-Down Reports.



Project Learning

Our criteria for assessing project learning in innovation projects focus on:

- The quality and completeness of records that capture the knowledge gained (i.e.practical insights, not research findings) throughout the project lifecycle.

Documenting practical insights enables continuous improvement in project design, resulting in more effective delivery, increased efficiency, and reduced future costs. This not only benefits consumers through potential savings but also strengthens the network company's ability to plan, manage, and deliver innovation projects.

For NIA

Of the 23 completed projects reviewed—excluding two that were discontinued and lacked close-down reports—all included lessons learned, as required by the governance document.[26] However, the quality and depth of these insights varied significantly. 13 projects demonstrated good practice by clearly capturing and sharing valuable insights.

Example of clearly captured project learning:

FI-0002 Hydrogen Village Consumer Research:

"**Inform (Stage 1)**
· Undertake a broad literature review that goes beyond the energy industry to encompass experiences of comparable trials.
· Have a clear understanding of the difference between individual drivers or behaviour and those which are about the community.
· Ensure that the research has a broad focus on low carbon technologies and not just focus on one i.e., hydrogen, in order to provide a rounded assessment.

Qualitative (Stage 2)
· Manage contextual factors appropriately to reduce influence/impact on the research insights, e.g., impact of the energy crisis.
· Maintain balance at appropriate points in the research exploring different types of low carbon technology, not just hydrogen, to enable participants to provide a considered view.
· Insights should be framed throughout in relation to the chosen behavioural framework.

Quantitative (Stage 3)
· Review sampling framework to ensure optimal weighting within the sample size parameters.
· Any stimulus must be user friendly and aimed at the right knowledge level.
· Provide clear articulation as to how the findings relate to the chosen behavioural framework."

Others like *Leakage Management in the Energy System Transition* provided minimal or vague information, limiting their usefulness for industry-wide learning.

Example of vague project learning insights

Leakage Management in the Energy System Transition:

"The learnings from this project have significant potential to lead to further validation work. The data gathered and analysed by the project, including data underpinning the LRMM is underpinned by from the national leakage tests, was challenging to collate and rationalise with SGN's operational and maintenance data. No significant problems were encountered as part of this project."

For SIF

Documentation of practical insights is required only for Alpha and Beta phases.[27] Of the 16 completed SIF projects we reviewed, only 3 were funded under the Alpha or Beta phases. Of those, 2 shared practical learning, with one standing out as an excellent example by clearly contextualising key risks and outlining targeted mitigation strategies.

Example of excellent project lesson capture:

NetZero Terrace Alpha:

"The risks with greatest likelihood/ impact scores and the related mitigations are:
· commodity prices may push up supply costs, to help mitigate this the business model includes sensitivities and economies of scale.
· a lack of interest may affect community buy in; this risk is addressed by the community engagement undertaken.
· customer fatigue is addressed by use of the Fairer Warmth app to keep people interested through regular touch points.
· difficulty in identifying owners of privately owned roads may affect obtaining permission to install boreholes. Early identification of ownership in pilot study areas will reduce this risk."

Recommendation

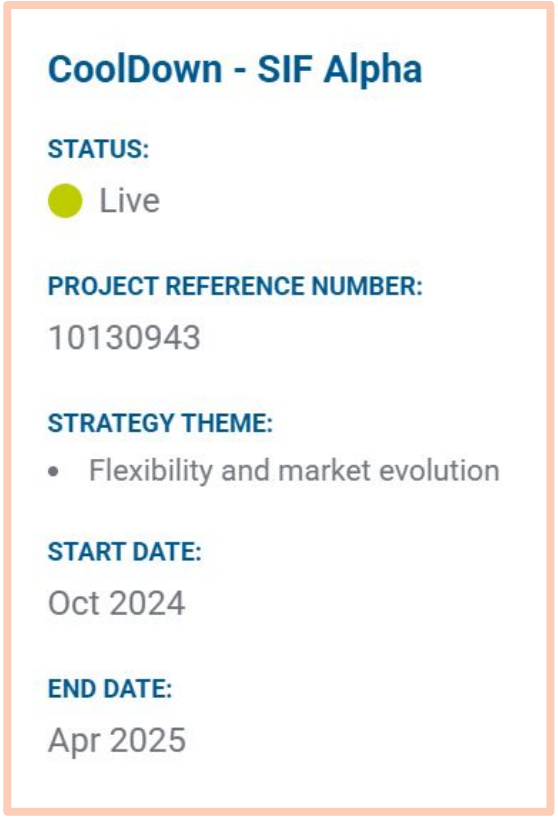
To enhance the quality and usefulness of lessons learned across both SIF and NIA projects, Ofgem should implement periodic audits of project close-down or End-of-Phase reports. These audits should assess whether lessons are documented with sufficient context, relevance, and applicability to future projects.

Clear guidance should also be provided to ensure lessons are specific, actionable, and transferable, supporting sector-wide learning and continuous improvement

Other observations

Several areas for improvement are also noted while evaluating the transparency of SIF and NIA projects.

Some projects, such as the CoolDown – SIF Alpha project (as of 20 June 2025), have exceeded their planned end dates but are still listed as 'live' on the ENA Smarter Networks Portal.



The ENA Smarter Networks Portal is not user-friendly and presents challenges in accessing and tracking project information. It is often difficult to determine whether projects are progressing to the next phase or have been completed.

Recommendations

Ofgem and Innovate UK should improve the project status system by introducing clearer and more consistent status categories (e.g., *"In Progress"*, *"Completed"*, *"Progressing to Next Phase"*, or *"Terminated*). This would provide greater transparency on each project's current stage and clarify whether key reports are expected or overdue.

The Smarter Networks Portal should be enhanced to include a project timeline feature that clearly displays key milestones, phase transitions, and whether the project has applied for or secured funding for the next phase.

Conclusion

Projects funded under the NIA and the SIF are crucial in transforming energy networks to meet net-zero targets. As consumers primarily fund these innovation projects through energy bills, transparency is essential to ensure accountability and demonstrate value. This report identifies the following as key transparency issues in innovation projects and offers recommendations to address them:

Inconsistency in project reporting: There is inconsistency in how network companies document their innovation projects, with varying levels of detail—particularly around project benefits, funding allocations, and dissemination activities. To improve consistency and transparency, Ofgem should introduce clear and standardised reporting guidance, along with examples of high-quality reporting, to ensure consistency and help network companies understand and meet expectations. This would help ensure that all projects are documented in a consistent manner, making it easier to assess outcomes, share learning, and support informed decision-making across the sector.

Ambiguity in project reporting: This report identifies a lack of clarity in how some projects present key information—such as budget allocation, cost contributions, and future plans. Vague or incomplete reporting makes it difficult for stakeholders, including Ofgem and consumers, to understand a project's value and direction.
To address this, Ofgem should review and refine their reporting templates to reduce ambiguity and provide clearer, more consistent information.

Assurance-related observations: Network companies may not be consistently meeting the updated 2023 NIA governance requirements. Of the 6 completed NIA projects started after February 2023, only two included the required net benefits statement. This highlights the need for stronger monitoring. Companies should review assurance processes to ensure they remain up to date. Routine audits should be introduced to ensure all relevant reports include both qualitative and quantitative net benefits assessments.

Usability issues with the ENA smarter networks portal:
The Smarter Networks Portal is difficult to navigate, and unclear labelling makes it hard to see whether projects are still running, completed, or stopped. To improve this, the portal should use clear and consistent project status labels—such as *In Progress*, *Completed*, or *Terminated*. It should also include a visual timeline showing key milestones, phase changes, and funding decisions. These changes would make the portal easier to use and help all users better understand project progress.

References and bibliography

References and bibliography

1. RIIO-2 (2021–2028) consists of two distinct periods: RIIO-ET2, RIIO-GT2, and RIIO-GD2, covering 1 April 2021 to 31 March 2026, and RIIO-ED2, spanning 1 April 2023 to 31 March 2028.
2. RIIO stands for Revenue = Incentives + Innovation + Outputs
3. SIF Governance Document v2 p.17 and RIIO-2 NIA Governance Document: Version 3 p.6
4. Ofgem Innovation Vision 2021 – 2025 p.8
5. SIF Governance Document v2 p.7-8
6. Energy-networks-innovation-process-final.pdf p.8
7. Smarter Networks Portal
8. Network Innovation Allowance (RIIO-2) | Ofgem
9. Strategic Innovation Fund – Round Four Innovation Challenges | Ofgem For Round 4 of innovation Challenges, Ofgem prioritized funding projects focused on “faster network development,” “greater heat flexibility,” “enhancing resilience,” and “accelerating progress toward net zero energy networks.
10. SIF Governance Document v2 Discovery Phase: up to two months and related SIF Funding would be capped at £150k. Alpha Phase: up to six months and associated SIF Funding would be capped at £500k. More SIF Funding could be provided if there is evidence to support any assertion that Alpha Phase work cannot be completed within the period specified in the Innovation Challenge Documentation. • Beta Phase: budgets would start at £500k.
11. Ofgem announce new approach to Strategic Innovation Fund to drive progress to net zero by 2030
12. RIIO-2 Final Determinations - Core Document (REVISED) and Decision – RIIO-ED2 Final Determinations Core Methodology Document
13. RIIO-3 Draft Determinations Overview Document p. 105
14. Energy Networks Innovation Process p.10 and p.19
15. RIIO-2 NIA Governance Document: Version 3 p.24
16. SIF Governance Document v2 p.14
17. RIIO-2 NIA Governance Document: Version 3 p.17
18. SIF Governance Document v2 p.14
19. RIIO-2 NIA Governance Document: Version 3 p.34
20. SIF Governance Document v2 p.45
21. SIF Governance Document v2 p.24, 26 and 28
22. SIF Governance Document v2 p.24, 26 and 28
23. RIIO-2 NIA Governance Document: Version 3
24. SIF Governance Document v2 p.18
25. RIIO-2 NIA Governance Document: Version 3 p.40
26. RIIO-2 NIA Governance Document: Version 3 p.38
27. SIF Governance Document v2 p.43 and 45

Citizens Advice helps people find a way forward.

We provide free, confidential and independent advice to help people overcome their problems. We're a voice for our clients and consumers on the issues that matter to them.

We value diversity, champion equality, and challenge discrimination and harassment.

We're here for everyone.

citizensadvice.org.uk