

Strategic Innovation Fund (SIF)

Cycle 6 Project Applications – Alpha Phase

Funding Decision and Summary of Recommendations from Expert Assessors

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Contents

Introduction	3
1 Assessment Process.....	5
1.1 Meeting the SIF Eligibility Criteria	6
2 Summary of Alpha Projects submitted in Cycle 6	8
3 Innovation Challenge: Consumer-centric grid expansion.....	10
3.1 Overview of Projects	10
3.2 Expert Assessors' recommendations on Projects	11
3.2.1 Project 10206130 – CREOS-OUT.....	11
3.2.2 Project 10207821 – Grounds for Change	19
4 Innovation Challenge: Green Gas	24
4.1 Overview of Projects	24
4.1.1 Project 10205470 – Renewable Energy Harvest	25
4.1.2 Project 10206082 – Project CLEAN GREEN	30
4.1.3 Project 10206520 – Green Gas Access	35
5 Innovation Challenge: Whole system optimisation	41
5.1 Overview of Projects	41
5.1.1 Project 10205506 – Quantum optimisation for future gas Network design	42
6 Innovation Challenge: Faster build and maintenance	47
6.1 Overview of Projects	47
6.1.1 Project 10205353 – RAPID - Routing and Planning through Interoperable Data	48

Introduction

Innovation is key to deliver a low-carbon energy system that is reliable, affordable, and efficient, at a pace in line with our Net Zero targets. Energy Networks must find new ways of developing and operating to facilitate the whole system energy transition.

The Strategic Innovation Fund (SIF) supports ambitious, collaborative innovation Projects that have the potential to deliver measurable consumer, environmental and system-wide benefits. Under RIIO-3, the SIF continues to provide competitive funding across the Discovery, Alpha, and Beta Phases, and now offers a new Phase called Deployment.

The Discovery Phase focuses on feasibility, the Alpha Phase on experimental development, the Beta Phase on build, operation and demonstration and Deployment Phase on rollout.

As set out in the [SIF Governance Document](#), the SIF is open to the National Energy System Operator (NESO), electricity transmission and distribution, gas transmission and gas distribution Licensees.

Outcome-focussed strategic Innovation Challenges are set via the Energy Networks Innovation Taskforce and Programmatic Approach. Energy Networks are expected to propose Projects that will address the Innovation Challenges via Innovation Delivery Groups (IDGs). These IDGs will develop an Innovator Charter which sets out the delivery strategy for addressing the innovation needs of the relevant Innovation Challenge. The Innovation Charter will also set out any scope, Project Partner or Compulsory Contribution requirements.

In addition to the Innovation Charters, there are several Innovation Challenges open within this Cycle, these are detailed in section 2. Innovation Challenges previously published under the SIF RIIO-2, including those issued in [Round 5](#), will remain open for a set period.

This report consolidates the Applications assessed by the Expert Assessors and sets out their recommendations to Ofgem on which Projects should be considered for SIF Funding, as well as a summary of Ofgem's Funding Decision.

Applications submitted by the deadline, and which meet the Innovation Challenge requirements, are assessed by independent Expert Assessors.

The Expert Assessors have relevant expertise and knowledge across policy, regulatory, commercial, financial and technical areas. Consistent with the SIF Governance Document, the Expert Assessors assessed each Application:

- (a) against the Eligibility Criteria in Chapter 3 of the SIF Governance Document; and
- (b) taking into consideration any additional relevant information available to them.

Eligibility Criteria are scored 1-5, with a minimum score of three for an Eligibility Criterion to be considered met. Expert Assessors may provide suggestion of a Project-specific condition to accompany the score awarded for each Eligibility Criterion. Projects can only be recommended for funding by the Expert Assessors if all Eligibility Criteria are met.

Ofgem, taking into account the Expert Assessors' recommendations, and where necessary the National Energy System Operator (NESO)'s input, will balance considerations to decide whether a Project has met each SIF Eligibility Criterion, the suitability of the Project for SIF Funding and Project-specific conditions recommended. Ofgem is the sole decision-maker for the SIF.

1. Assessment Process

For the Alpha Phase there are a maximum of 5 stages in assessing eligible submitted Applications:

- Initial sift - completed by Innovate UK to confirm whether an Application complies with the Innovation Challenge-specific requirements.
- Expert Assessor evaluation – Expert Assessors review each Application and its appendices against the questions set out in the SIF Governance Document, which correspond to the Eligibility Criteria in Chapter 3.
- Expert Assessors' overall recommendations – Each Expert Assessor provides a score for each Eligibility Criterion and an overall recommendation on whether the Project should be considered for SIF Funding. A Project will be recommended where it meets the required Eligibility Criteria threshold and no material risks have been identified that would prevent progression.
- NESO review (where applicable) - Where relevant, Applications are reviewed to determine the need for NESO involvement, including consideration of whole-system impacts, system planning and operational implications, cross-vector coordination, and interaction with NESO's statutory responsibilities.

The outcome of this review is presented in a dedicated NESO Review section for each relevant Project.

- Interview stage – Selected Alpha Phase Applications are subject to an interview as part of the assessment process.

The interview enabled the Funding Party and Project Partners to clarify aspects of the Application, respond to questions from the Expert Assessors, and elaborate on technical validation, scalability considerations and commercialisation feasibility.

Following the interview, the Expert Assessors review the evidence presented and, where appropriate, revised scores to reflect the additional information provided. Final scores and overall recommendations are agreed after consideration of both the written Application and the interview.

- Recommended Project-specific conditions – Where areas of risk or uncertainty are identified, Project-specific conditions may be recommended. These are considered by Ofgem and, where appropriate, included in the Project Direction.
- Final decision – The consolidated Recommendations Report is provided to Ofgem. Having considered the Expert Assessors' recommendations and NESO's input, Ofgem decides which Projects will receive SIF Funding and provides brief commentary on each decision.

1.2 Meeting the SIF Eligibility Criteria

Projects submitted must meet all the Eligibility Criteria outlined in Chapter 3 of the SIF Governance Document in order to be considered for SIF Funding. There are twelve Eligibility Criteria which must be evidenced within an Application. The following table outlines how the scored question categories tie with the Eligibility Criteria outlined in the SIF Governance Document.

Application question category	Eligibility Criteria (Chapter 3 of the SIF Governance Document)
Lead Network (not scored)	None
Animal testing (not scored)	None
International collaboration (not scored)	None
Export licence (not scored)	None
Trusted Research and Innovation (not scored)	None
Problem statement	Eligibility Criterion 1: Projects must address the Innovation Challenges set by Ofgem. Eligibility Criterion 10: Projects must consider the needs of the end customers and outline how these stakeholders have been, or will be, meaningfully engaged in the development and adoption of the innovation.
Portfolio Integration and Strategic Alignment	Eligibility Criterion 1: Projects must address the Innovation Challenges set by Ofgem. Eligibility Criterion 9: Projects must clearly demonstrate how they

	build upon existing or previous innovation initiatives and articulate how they provide additional value or advancement.
Innovation justification	Eligibility Criterion 3: Projects must involve Network innovation. Eligibility Criterion 4: Projects must support or, at a minimum, be consistent with the development and growth of competitive markets. Eligibility Criterion 5: Projects must be innovative, novel and/or risky. Eligibility Criterion 10: Projects must consider the needs of the end customers and outline how these stakeholders have been, or will be, meaningfully engaged in the development and adoption of the innovation.
Impacts and benefits	Eligibility Criterion 2: Projects must have clearly identified potential to deliver a net benefit to consumers (whomever is paying for the innovation).
Team and resources	Eligibility Criterion 6: Projects must include participation from a range of stakeholders. Eligibility Criterion 10: Projects must consider the needs of the end customers and outline how these stakeholders have been, or will be, meaningfully engaged in the development and adoption of the innovation.
National Energy System Operator Involvement (Not Scored)	Eligibility Criterion 6: Projects must include participation from a range of stakeholders.
National Energy System Operator Involvement Justification (Not Scored)	Eligibility Criterion 6: Projects must include participation from a range of stakeholders.
Project management and delivery	Eligibility Criterion 8: Projects must be well thought through and have a robust methodology so that they are capable of progressing in a timely manner.
Key outputs and dissemination	Eligibility Criterion 11: Projects must demonstrate a clear approach to open data, knowledge sharing, and dissemination of learnings.
Intellectual Property Rights (IPR) procurement, and contracting (not scored)	None
Commercialisation, route to market and business as usual	Eligibility Criterion 4: Projects must support or, at a minimum, be consistent with the development and growth of competitive markets. Eligibility Criterion 12: Projects must provide a clear, scalable

	pathway for deployment demonstrating how the innovation will achieve sustained impact.
Policy, standards and regulations (not scored)	None
Value for money	Eligibility Criterion 7: Projects must provide value for money and be costed competitively.

2. Summary of Alpha Projects submitted in Cycle 6

Projects submitted to the SIF must follow the SIF Governance Document. All Phases of Application are expected to meet the Innovation Challenge focus areas and, where applicable, any specific scope or Project Partner requirements set out in the Innovation Charter(s).

For the Alpha Phase in Cycle 6:

- Applications had to be received by 24th June 2026.
- Projects can last up to 8 months and can request SIF Funding up to a maximum of £650,000.
- Projects were required to demonstrate the required level of Compulsory Contribution applicable to the Phase.

Funding Parties have multiple opportunities throughout the year to apply to each Phase (Discovery, Alpha, Beta, and Deployment). Therefore, we anticipate times when some Phases and Innovation Challenges will not receive any Applications.

In Cycle 6, the following Alpha Phase Project Applications were submitted:

Innovation Challenge	No. of Applications received
Round 5 Advance energy transmission and Networks	None
Round 5 Dynamic modelling	None
Round 5 High-energy demand point integration	None
Round 5 Consumer-centric grid expansion	2

Round 5 Enhanced system visibility and control	None
Round 5 Green gas	3
Round 5 Whole system optimisation	1
Taskforce Innovation Challenge 1 Industrial and business connection acceleration	None
Taskforce Innovation Challenge 2 Faster build and maintenance	1
Taskforce Innovation Challenge 3 Instant use domestic energy devices	None
Taskforce Innovation Challenge 4 Eliminating energy outages	None
Taskforce Innovation Challenge 5 Decentralised system balancing	None

3. Innovation Challenge: Consumer-centric grid expansion

3.1 Overview of Projects

This sub-section covers the assessment of Alpha Phase Applications received into the 'Consumer-centric grid expansion' Innovation Challenge in Cycle 6.

Project reference number	Project name	Funding licensee	Total Project costs (£)	Total Project contribution (£)	Total SIF Funding requested (£)	Recommended by Expert Assessors for funding (Yes/No)	Input from NESO (Yes/No/NA)	Decision by Ofgem for funding (Yes/No)
10206130	CREOS-OUT	Scottish Hydro Electric Power Distribution Plc	518,153	51,816	466,337	Yes	Yes	No
10207821	Grounds for Change	Scottish Hydro Electric Power Distribution Plc	691,879	69,188	622,691	Yes	Yes	Yes

3.2 Expert Assessors' recommendations on Projects

3.2.1 Project 10206130 – CREOS-OUT

Submitted Project description

Creosote is a tar-based wood preservative used to protect utility poles, but also an environmental contaminant that can leach into soil and water, posing serious health and ecological risks. The GB energy Network relies on >5 million creosote-treated poles, with no current alternative offering similar benefits.

CREOS-OUT's bioremediation approach explores natural enzymatic capabilities of certain microbes to break down creosote, offering an eco-friendly alternative to costly incineration, enabling safer reuse of infrastructure while reducing public and environmental risks. The project aims to test selected protein candidates through laboratory assessments to evaluate their bioremediation effectiveness, and formulation potential into practical applications.

Eligibility Criteria	Expert Assessor Average Score
1. Projects must address the Innovation Challenge set by Ofgem.	4
2. Projects must have clearly identified potential to deliver a net benefit to gas or electricity consumers (whomever is paying for the innovation) and/or a whole system benefits.	4
3. Projects must involve Network innovation.	5
4. Projects must support, at a minimum, be consistent with the development and growth of competitive markets.	4
5. Projects must be innovative, novel and/or risky.	5
6. Projects must include participation from a range of stakeholders.	4

7. Projects must provide value for money and be costed competitively.	3
8. Projects must be well thought through and have a robust methodology so that they are capable of progressing in a timely manner.	4
9. Projects must clearly demonstrate how they build upon existing or previous innovative work and articulate how they provide additional value or advancement.	4
10. Projects must consider the needs of the end customers and outline how these stakeholders have been, or will be, meaningfully engaged in the development and adoption of the innovation.	4
11. Projects must demonstrate a clear approach to open data, knowledge sharing, and dissemination of learnings.	4
12. Projects must provide a clear scalable pathway for deployment demonstrating how the innovation will achieve sustained impact.	3

Recommendation to the Office of Gas and Electricity Markets (Ofgem): Fund

The Expert Assessors agree that this Project has met the Eligibility Criteria and recommend this Application for funding.

The Project addresses the Innovation Challenge by tackling the financial, environmental and operational consequences of managing creosote-treated poles as Networks expand. The Project could reduce hazardous waste, disposal costs and carbon emissions while supporting safer and more publicly acceptable Network reinforcement. Although the innovation principally addresses end-of-life pole management rather than replacing creosote, the Expert Assessors considered its contribution to cleaner and more sustainable grid expansion sufficient to agree Eligibility Criterion 1 is met.

The Project has identified potential to deliver a net benefit to electricity consumers including reduced hazardous-waste disposal and transportation costs, lower carbon emissions, safer handling, reduced environmental liabilities and more sustainable management of Network assets. The Cost-Benefit Analysis presented a reasonable account of the principal assumptions, sources and sensitivities for an Alpha Project, while recognising that treatment costs and some wider benefits will require further validation. The Expert Assessors agree Eligibility Criterion 2 is met.

The Project is considered to involve Network innovation because it applies a novel bioremediation approach to a material asset-management and waste-disposal responsibility of electricity Network operators. During the interview, the Project clarified how the proposed formulation differs from existing treatment and disposal routes and how Alpha will test its suitability for Network use. The structured progression from enzyme identification in Discovery to formulation and laboratory validation in Alpha was considered genuine Network innovation rather than business-as-usual activity. The Expert Assessors agree Eligibility Criterion 3 is met.

The Project is considered to support the development of competitive markets as the proposed model is intended to avoid a DNO-owned monopoly by using third-party manufacturing, appropriate licensing arrangements and standard competitive procurement by Network operators and other users. Potential manufacturers would be able to participate subject to relevant technical, safety, quality and certification requirements. The Expert Assessors did not identify a material risk that the Project would distort electricity or related commercial markets and agree Eligibility Criterion 4 is met.

The Project is considered innovative, novel and/or risky as it proposes a first-of-its-kind enzyme-based formulation intended to degrade polycyclic aromatic hydrocarbons in creosote-treated poles and contaminated soils while investigating the safety of intermediate and final degradation products. During the interview, the Project satisfactorily clarified the proposed treatment approach, contamination considerations, relevant alternative solutions and the technical risks to be tested during Alpha. The remaining uncertainties were

considered appropriate subjects for research and development at this Phase. The Expert Assessors agree Eligibility Criterion 5 is met.

The Project is considered to include participation from a sufficient range of stakeholders as the Expert Assessors considered the consortium and proposed stakeholder involvement sufficient for the Project's Alpha objectives. SSEN Distribution provides Network and operational knowledge, the University of Strathclyde provides enzyme and formulation expertise, and James Hutton Limited provides analytical, environmental, regulatory and commercial capability. The planned steering group and engagement programme include other Network operators, environmental regulators, the Wood Recyclers' Association, waste-management organisations, manufacturers and potential users. The interview provided sufficient assurance that these stakeholders would inform the technical development, regulatory pathway and route to adoption. The Expert Assessors agree Eligibility Criterion 6 is met.

The Project is considered to represent value for money and be costed competitively because the overall Project cost is proportionate to the proposed Alpha activities and within the applicable funding limit. The consortium will use existing specialist laboratory facilities and has provided cost allocations across Project Partners and work packages, alongside the required Project Partner contribution. During the interview, the Project clarified that the work package 5 budget covers business-as-usual integration, regulatory and stakeholder engagement, and commercialisation activity rather than stakeholder meetings alone. The clarifications provided sufficient confidence that the Project provides the value for money for Alpha. The Expert Assessors agree Eligibility Criterion 7 is met.

The Project is considered to have a robust methodology capable of progressing in a timely manner as the Project's six-work-package structure, named leads, milestones, deliverables and risk register provide a sufficiently robust methodology for Alpha. During the interview, the Project clarified the proposed arrangements for sample collection, handling, laboratory testing, post-treatment analysis and the respective responsibilities of the University of Strathclyde and James Hutton Limited. This addressed the principal concerns about the practical

testing process and provided reasonable confidence that the Project can progress in a timely manner. The Expert Assessors agree Eligibility Criterion 8 is met.

The Project is considered to have clearly demonstrated how it builds on previous or existing innovative work by building credibly on its Discovery Phase and on learning from related pole-lifecycle projects, including Project ACE, APPEAL and Pollywood. During the interview, the Project clarified that its proposed additional value lies in biologically degrading contamination rather than extracting it or addressing only future pole materials and preservatives. Its potential application to both redundant poles and contaminated soils provides a distinct area of advancement. The comparison and explanation provided were considered sufficient for Alpha, with further quantification expected as evidence develops. The Expert Assessors agree Eligibility Criterion 9 is met.

The Project is considered to have considered the needs of the end consumer as it has identified the needs of its principal end users, including Network operators, waste-management organisations and parties responsible for accepting treated material. These needs include lower disposal costs, compatibility with existing waste-management processes, safe handling and regulator-ready evidence. During the interview, the Project also clarified how improved management of creosote contamination could support public and local government confidence in Network expansion and how relevant stakeholders would be engaged during Alpha. The Expert Assessors agree Eligibility Criterion 10 is met.

The Project is considered to have demonstrated a clear approach to open data, knowledge sharing, and dissemination of learnings. Proposed routes include UKRI, Innovate UK and Ofgem channels, industry events, SSEN workshops, relevant conferences, seminars, websites and social media. The Project also identified work-package outputs and responsible owners, providing a credible basis for sharing technical results, regulatory learning and commercialisation insights with Network operators and wider stakeholders. The Expert Assessors agree Eligibility Criterion 11 is met.

The Project is considered to have provided a clear, scalable pathway for deployment. The proposed route includes third-party manufacture, competitive procurement, Work Package 5-led business-as-usual transition, and development of the regulatory evidence needed for wider adoption. Intellectual-property

ownership, licensing and the detailed commercial model are not yet fully established, but the interview provided sufficient assurance that these matters can be developed as the technology progresses. The current level of definition was therefore considered proportionate to Alpha, and the Expert Assessors agree Eligibility Criterion 12 is met.

Review from National Energy System Operator (NESO)

NESO was not asked to Project Partner but reviewed the Application to determine whether partnering would be appropriate and decided against partnering.

Decision from the Office of Gas and Electricity Markets (Ofgem): No Fund

Ofgem disagrees with the Expert Assessors, considering the Project to not sufficiently address the Innovation Challenge, as it is not considered a transformative approach to enabling the delivery of new network infrastructure. The primary focus of the Project is the treatment and end-of-life management of the currently used wooden pole assets, rather than overcoming a material barrier to the deployment, siting, construction or operation of future network infrastructure.

While the Project proposes an innovative approach to the bioremediation of creosote-treated poles, Ofgem is not satisfied that the Project Team has adequately demonstrated a clear and significant link between this proposed solution and the stated Innovation Challenge objective of improving customer and stakeholder acceptance of network expansion. In particular, the Project Team has not provided sufficient evidence that the management or disposal of creosote-treated poles is currently a material driver of public concern, opposition to network development, or a barrier to the delivery of new infrastructure. Nor has the Project Team sufficiently justified why addressing creosote contamination at the end of an asset's life would result in a meaningful improvement in public acceptance of network expansion activities. Ofgem therefore considers that the Project's anticipated benefits are primarily associated with asset management and environmental stewardship of existing asset types, rather than the development of a transformative solution that

directly addresses the Innovation Challenge. As a result, the Project does not meet Eligibility Criterion 1.

Decision from the Office of Gas and Electricity Markets (Ofgem): No Fund

Ofgem disagrees with the Expert Assessors, considering the Project to not sufficiently address the Innovation Challenge, as it is not considered a transformative approach to enabling the delivery of new network infrastructure. The primary focus of the Project is the treatment and end-of-life management of the currently used wooden pole assets, rather than overcoming a material barrier to the deployment, siting, construction or operation of future network infrastructure.

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Ofgem therefore considers that the Project's anticipated benefits are primarily associated with asset management and environmental stewardship of existing asset types, rather than the development of a transformative solution that directly addresses the Innovation Challenge. As a result, the Project does not meet Eligibility Criterion 1

Recommended Project-specific conditions

N/A

Decision from the Office of Gas and Electricity Markets (Ofgem): No Fund

Ofgem disagrees with the Expert Assessors, considering the Project to not sufficiently address the Innovation Challenge, as it is not considered a transformative approach to enabling the delivery of new network infrastructure. The primary focus of the Project is the treatment and end-of-life management of the currently used wooden pole assets, rather than overcoming a material barrier to the deployment, siting, construction or operation of future network infrastructure.

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Recommended Project-specific conditions

N/A

3.2.2 Project 10207821 – Grounds for Change

Submitted Project description

Grounds for Change addresses the critical challenge of scaling low voltage (LV) service replacement upgrades to meet GB decarbonisation targets without causing widespread consumer disruption. Responding to the SIF Consumer-Centric Grid Expansion challenge, the project shifts away from traditional, high-impact open-cut trenching towards a flexible less disruptive low-impact "Toolbox" deployment model featuring precision narrow-slot cutting, compact lateral trenchless drilling, route-reuse, and onsite spoil conditioning. The Alpha Phase will validate these low-impact methods to compress multi-day connection windows into same-day or half-day interventions, aiming to create an open, scalable operational blueprint for cleaner, faster grid reinforcement.

Eligibility Criteria	Expert Assessor Average Score
1. Projects must address the Innovation Challenge set by Ofgem.	5
2. Projects must have clearly identified potential to deliver a net benefit to gas or electricity consumers (whomever is paying for the innovation) and/or a whole system benefits.	4
3. Projects must involve Network innovation.	5
4. Projects must support, at a minimum, be consistent with the development and growth of competitive markets.	3
5. Projects must be innovative, novel and/or risky.	4
6. Projects must include participation from a range of stakeholders.	5
7. Projects must provide value for money and be costed competitively.	3

8. Projects must be well thought through and have a robust methodology so that they are capable of progressing in a timely manner.	3
9. Projects must clearly demonstrate how they build upon existing or previous innovative work and articulate how they provide additional value or advancement.	4
10. Projects must consider the needs of the end customers and outline how these stakeholders have been, or will be, meaningfully engaged in the development and adoption of the innovation.	5
11. Projects must demonstrate a clear approach to open data, knowledge sharing, and dissemination of learnings.	4
12. Projects must provide a clear scalable pathway for deployment demonstrating how the innovation will achieve sustained impact.	4

Recommendation to the Office of Gas and Electricity Markets (Ofgem): Fund

The Expert Assessors agree that this Project has met the Eligibility Criteria and recommend this Application for funding.

The Project addresses the Innovation Challenge by investigating the different technologies and practices to reduce disruption for service replacement and de-looping and thus developing solutions that improve public support and reduce opposition to new infrastructure. The Expert Assessors agree Eligibility Criterion 1 is met.

The Project has identified potential to deliver a net benefit to electricity consumers through reducing disruption to consumers whilst expanding Network capacity at lower cost. The Expert Assessors noted the Application provides a strong and compelling articulation of potential benefits and agree that Eligibility Criterion 2 is met.

The Project is considered to involve Network innovation as it involves transforming methods for excavations during Network connections or upgrades, reducing multi-day excavations to a single day. The Expert Assessors noted the Application provided a clear, well evidenced explanation for the assumptions that will be tested for each technology and the unique benefits each could bring and therefore agree that Eligibility Criterion 3 is met.

The Project is considered to support the development of competitive markets as it includes several suppliers of tools and equipment, providing a package of different solutions that could be deployed. The Expert Assessors highlighted that the benefit to subcontractors involved in the Project would need to be managed to avoid it resulting in a competitive advantage over other technologies but, on balance, they agreed that Eligibility Criterion 4 has been met.

The Project is considered innovative, novel and/or risky as it involves technical, operational and commercial uncertainties and the Application describes how each innovation in the project will be tested and how its maturity will be advanced. The Expert Assessors agree that Eligibility Criterion 5 is met.

The Project is considered to include participation from a sufficient range of stakeholders as it involves a range of highly relevant Project Partners with appropriate roles and ways of working. There is confidence in the Project Partners being able to work well together based on the progress in the previous Discovery Phase. The Expert Assessors agree Eligibility Criterion 6 is met.

The Project is considered to represent value for money and be costed competitively as the Project budget represents value for money against the outputs it aims to produce. The Expert Assessors highlighted that a large portion of the budget was for subcontractors and that it would have strengthened the Application to have these contractors involved as full Project Partners but, on balance, they agree that Eligibility Criterion 7 has been met.

The Project is considered to have a robust methodology capable of progressing in a timely manner as the methodology is well thought through and shows a clear path to achieving Project objectives. One Expert Assessor noted that a

greater level of granularity in the Project plan would have strengthened the Application but, overall, the Expert Assessors agree Eligibility Criterion 8 is met. The Project is considered to have clearly demonstrated how it builds on previous or existing innovative work by providing a clear description of how it fits into the wider innovation portfolio and how it builds upon the previous Discovery Phase, as well as building upon earlier innovation in technologies such as soil stabilization concepts, lateral drilling and micro-slotting architectures. The Expert Assessors agree Eligibility Criterion 9 is met.

The Project is considered to have considered the needs of the end consumer by including a local authority as a representative of residents and by having a Work Package dedicated to stakeholder feedback. The Expert Assessors agree Eligibility Criterion 10 is met.

The Project is considered to have demonstrated a clear approach to open data, knowledge sharing, and dissemination of learnings by planning a range of dissemination activities to ensure the Project outcomes are widely available. The Expert Assessors agree Eligibility Criterion 11 is met.

The Project is considered to have provided a clear, scalable pathway for deployment as the Application provides a clear explanation that the Project will help technologies still at proof-of-concept stage to move towards field ready demonstration and ultimately commercialisation. The Expert Assessors agree Eligibility Criterion 12 is met.

[Review from National Energy System Operator \(NESO\)](#)

NESO was not asked to Project Partner, but reviewed the Application to determine whether partnering would be appropriate and decided against partnering.

[Decision from the Office of Gas and Electricity Markets \(Ofgem\): Fund](#)

Ofgem agrees with the Expert Assessors and approves this Project for funding

Recommended Project-specific conditions

By Project Week 6, the Project Team must establish an engagement group, or utilise an existing suitable industry working group, to facilitate ongoing engagement with other electricity distribution network operators. The group must provide opportunities for networks to contribute to, shape and learn from the Project, and ensure the effective dissemination of Project progress, insights and learning throughout the Project.

The Project must hold an additional Ofgem Stage Gate prior to the £100k spend threshold being reached. The purpose of this Ofgem Stage Gate is to:

- a) provide further detail and justification of the forecast cost reductions presented within the Cost Benefit Analysis (CBA), including a clear explanation of how the proposed innovative technologies and solutions interact to deliver these benefits;
- b) present and obtain feedback on the proposed trial design, including the details of the proof of concept(s) to be tested

This Ofgem Stage Gate must be successfully completed before commencement of the trial activities. The Ofgem Stage Gate criteria will be defined and agreed as part of the kick off meeting.

4. Innovation Challenge: Green Gas

4.1 Overview of Projects

This sub-section covers the assessment of Alpha Phase Applications received into the 'Green gas' Innovation Challenge in Cycle 6.

Project reference number	Project name	Funding licensee	Total Project costs (£)	Total Project contribution (£)	Total SIF Funding requested (£)	Recommended by Expert Assessors for funding (Yes/No)	Input from NESO (Yes/No/NA)	Decision by Ofgem for funding (Yes/No)
10205470	Renewable Energy Harvest	Northern Gas Networks Ltd	544,036	56,482	487,544	No	Yes	No
10206082	Project CLEAN GREEN	Cadent Gas Ltd	436,124	43,612	392,512	No	Yes	No
10206520	Green Gas Access	Southern Gas Networks Plc	776,078	181,216	594,862	Yes	Yes	Yes

4.2 Expert Assessors' Recommendations on Projects

4.2.1 Project 10205470 – Renewable Energy Harvest

Submitted Project description

Renewable Energy Harvest (REH) unlocks the untapped energy potential of Britain's countryside by maximising production of biogases (biogas and biomethane) from currently under-utilised farm, food, and forestry residues. The reasons for currently low utilisation of some feedstocks are complex, including low energy potential, high cost of transport, lack of policy support and complex regulations.

The project will focus on developing a new specialist role, the local 'Energy Harvester', to drive forward rural biogas production. Alongside feedstock supply hubs, the harvester will navigate the technical, regulatory and commercial challenges in the sector. The project will develop a framework and toolkit to ensure the role is adaptable to the needs of different stakeholders, including local farmers and communities in different parts of GB.

This will involve determining how increased gas supply can best serve the local economy through rural-specific use cases, such as a low-carbon fuel for heat, including developing a commercialisation plan. Additionally, the project will use advanced mapping and forecasting tools to identify where rural biomethane sites can best inject into the gas grid as an off-taker of last resort. This innovation supports a fair, low-carbon transition - cutting emissions, reducing costs, and keeping energy value in local communities.

Eligibility Criteria	Expert Assessor Average Score
1. Projects must address the Innovation Challenge set by Ofgem.	4
2. Projects must have clearly identified potential to deliver a net benefit to gas or electricity consumers	3

(whomever is paying for the innovation) and/or a whole system benefits.	
3. Projects must involve Network innovation.	3
4. Projects must support, at a minimum, be consistent with the development and growth of competitive markets.	4
5. Projects must be innovative, novel and/or risky.	2
6. Projects must include participation from a range of stakeholders.	4
7. Projects must provide value for money and be costed competitively.	4
8. Projects must be well thought through and have a robust methodology so that they are capable of progressing in a timely manner.	4
9. Projects must clearly demonstrate how they build upon existing or previous innovative work and articulate how they provide additional value or advancement.	4
10. Projects must consider the needs of the end customers and outline how these stakeholders have been, or will be, meaningfully engaged in the development and adoption of the innovation.	3
11. Projects must demonstrate a clear approach to open data, knowledge sharing, and dissemination of learnings.	4
12. Projects must provide a clear scalable pathway for deployment demonstrating how the innovation will achieve sustained impact.	4

Recommendation to the Office of Gas and Electricity Markets (Ofgem): No Fund

The Expert Assessors agree that this Project has not met the Eligibility Criteria and do not recommend this Application for funding.

The Project addresses the Innovation Challenge because it identifies a technical, economic and regulatory gap between creating and using biomethane on a farm using agricultural waste and centralised exporting to the Gas Distribution Networks. This is aligned with the aims of the Innovation Challenge because it proposes transferring rural, off-gas grid households that use oil or LPG onto locally produced biomethane in a microgrid with the Network as off-taker of last resort. The Expert Assessors agree Eligibility Criterion 1 is met.

The Project has identified potential to deliver a net benefit to gas consumers because it enables a path to decarbonisation for rural communities that does not rely on electrification and associated reinforcement costs. The biomethane could represent a significant cost-of-energy saving compared to oil or LPG based heating for the target consumers. There could be wider societal benefits such as strengthening the rural economy and reducing reliance on fertilisers. The Expert Assessors agree Eligibility Criterion 2 is met.

The Project is considered to involve Network innovation as it proposes a cost-effective route to decarbonising rural communities that involves lower direct demand on the Networks, by creating local solutions using green gas and agricultural waste products. By bringing the components of the Renewable Energy Harvester together into a system of a gas micro-grid, there are future Network planning advantages, such as improved visibility of biomethane injection points. The Expert Assessors agree Eligibility Criterion 3 is met.

The Project is considered to support the development of competitive markets as it clearly articulates that it does not favour one technology or organisation and there is a low risk that it will create market distortion. It was not considered by the Expert Assessors to be undermining the development of competitive markets because a local energy market based around a biomethane microgrid would

work alongside the wider gas market and not reduce competition. The Expert Assessors agree Eligibility Criterion 4 is met.

The Project is not considered innovative, novel and/or risky because it was not clearly articulated where and who the risk in the Project sits with. Whilst the approach of bringing together components of the Renewable Energy Harvester is considered innovative and novel, the idea around decarbonising rural communities suggest that all the risk sits with domestic consumers on changing their approach for heating decarbonisation of their households or businesses. The Project did not consider the electrification angle to a sufficient degree for rural communities and solely focused on oil or LPG to biomethane as the main assumption. The Expert Assessors agree Eligibility Criterion 5 is not met.

The Project is considered to include participation from a sufficient range of stakeholders as the consortium is well matched to the Project scope with relevant experience and well-defined roles across the Project Partners. Letters of support from the wider Networks demonstrates the level of engagement from the key stakeholders. The Expert Assessors agree Eligibility Criterion 6 is met. The Project is considered to represent value for money and be costed competitively as the costs are reasonable for the Project's scale and ambition, the cost spread amongst Project Partners is justified, and the day rates appear in line with benchmarks for the Project Partners' industries. The Expert Assessors agree Eligibility Criterion 7 is met.

The Project is considered to have a robust methodology capable of progressing in a timely manner because the Project has been sub-divided into clearly defined work packages that are interlinked, with a defined Project management methodology and comprehensive risk register. The approach to develop six rural archetypes is pragmatic and practical, with the horizon scanning activity ensuring that the Project builds on wider innovations in the sector. The Expert Assessors agree Eligibility Criterion 8 is met.

The Project is considered to have clearly demonstrated how it builds on previous or existing innovative work because the Application references how it builds on Discovery Phase work. The Application also references where the Project sits

amongst related initiatives such as the Eden Energy Project and relevant policy areas such as the Green Gas Support Scheme. The Expert Assessors agree Eligibility Criterion 9 is met.

The Project is considered to have considered the needs of the end consumer because the Application recognises the need to engage end customers such as farmers and other rural residents. It has identified membership organisations representing these groups, as well as the local authority, and has a letter of support from a community interest company operating in the area. Although the Project had not considered electrification and the associated consumers, on balance the Expert Assessors agree Eligibility Criterion 10 is met.

The Project is considered to have demonstrated a clear approach to open data, knowledge sharing, and dissemination of learnings because it makes a clear commitment to open data and the active dissemination of results via events and publication to stakeholders and industry. However, the Expert Assessors felt there was insufficient description of the plans to disseminate to wider groups such as regulators or investors. On balance, the Expert Assessors consider Eligibility Criterion 11 to be met.

The Project is considered to have provided a clear, scalable pathway for deployment as it proposes designing a commercial model with underpinning evidence for the value proposition, with a corresponding increase in commercial readiness levels. Policy implications for scaling to other Licensees are also considered. The Expert Assessors agree Eligibility Criterion 12 is met.

[Review from National Energy System Operator \(NESO\)](#)

NESO was not asked to Project Partner, but reviewed the Application to determine whether partnering would be appropriate and decided against partnering.

Decision from the Office of Gas and Electricity Markets (Ofgem): No Fund

Ofgem agrees with the Expert Assessors and does not approve this Project for funding as it does not meet Eligibility Criterion 5. It is not considered innovative, novel and/or risky as most of the risk sits with domestic consumers needing to change their heating approach to decarbonise.

Recommended Project-specific conditions

N/A

4.2.2 Project 10206082 – Project CLEAN GREEN

Submitted Project description

Biomethane is key to decarbonising the UK's gas Network. However, in comparison to Natural Gas, it has a lower energy density and requires enrichment before injection into the gas Network. Currently Propane is used, a fossil fuel, undermining the environmental credentials of biomethane, increasing production cost and introducing bituminous elements causing down-time in biomethane plants. Project CLEAN GREEN will identify alternative green enrichment gases to fossil Propane and consider how improved measurement technology can inform Network intelligence to optimise Biomethane injection. This will lead to improvements in cost, carbon efficiency and injection volumes of Biomethane into the distribution Networks.

Eligibility Criteria	Expert Assessor Average Score
1. Projects must address the Innovation Challenge set by Ofgem.	4
2. Projects must have clearly identified potential to deliver a net benefit to gas or electricity consumers (whomever is paying for the innovation) and/or a whole system benefits.	3
3. Projects must involve Network innovation.	4

4. Projects must support, at a minimum, be consistent with the development and growth of competitive markets.	3
5. Projects must be innovative, novel and/or risky.	2
6. Projects must include participation from a range of stakeholders.	2
7. Projects must provide value for money and be costed competitively.	2
8. Projects must be well thought through and have a robust methodology so that they are capable of progressing in a timely manner.	4
9. Projects must clearly demonstrate how they build upon existing or previous innovative work and articulate how they provide additional value or advancement.	3
10. Projects must consider the needs of the end customers and outline how these stakeholders have been, or will be, meaningfully engaged in the development and adoption of the innovation.	3
11. Projects must demonstrate a clear approach to open data, knowledge sharing, and dissemination of learnings.	3
12. Projects must provide a clear scalable pathway for deployment demonstrating how the innovation will achieve sustained impact.	2

Recommendation to the Office of Gas and Electricity Markets (Ofgem): No Fund

The Expert Assessors agree that this Project has not met the Eligibility Criteria and do not recommend this Application for funding.

The Project addresses the Innovation Challenge because it focusses on developing cost-effective solutions for injecting biomethane and Bio-SNG into

existing gas Networks while maintaining system stability and reliability. This is aligned with one of the aims of the Innovation Challenge because it deals with the issue of upgrading biomethane with non-fossil fuel additives to meet the calorific value requirements of biogas for gas Networks. The Expert Assessors agree Eligibility Criterion 1 is met.

The Project has identified potential to deliver a net benefit to gas consumers through carbon reduction from displacing fossil propane as well as lower system costs from the reduction in propane usage. The Expert Assessors agree Eligibility Criterion 2 is met.

The Project is considered to involve Network innovation as it aims to further develop a supply chain to produce bio-propane, technology for its injection into the gas Networks, and a system for the overall management and optimisation of the process. This is to help grow the injection of biomethane into the Network. The Expert Assessors agree Eligibility Criterion 3 is met.

The Project is considered to support the development of competitive markets as it looks at a range of propane alternatives, articulating a supply-side market development thesis based on scaling bio-propane supply, engaging at least two credible suppliers for each gas type, and building supplier logistics and resilience assessment. However, the Expert Assessors noted the Application makes claims around supply chain maturity without clearly evidencing these. On balance, the Expert Assessors agree Eligibility Criterion 4 is met.

The Project is not considered innovative, novel and/or risky as it did not explain why an innovation Project is needed as opposed to the activities being performed as part of supplier due diligence in business-as-usual, such as robust validation of product certification within the supply chain. The Expert Assessors did not consider replacement of fossil-fuel propane with bio-propane to be novel or risky as propane is a bulk traded, non-speciality, commodity. During the interview, the Project was unable to explain why 100% bio-propane injection could not already be performed. The Expert Assessors agree Eligibility Criterion 5 is not met.

The Project is not considered to include participation from a sufficient range of stakeholders as the consortium involves only three Project Partners without representation from a second Gas Distribution Network, biomethane producer or operator, LPG or bio-propane supplier, academic or industry standards Project Partner. Therefore, the Project has a skills gap related to understanding the renewable propane production supply chain and dynamics of the commodity markets and associated pricing. The Expert Assessors agree Eligibility Criterion 6 is not met.

The Project is not considered to represent value for money and be costed competitively as the Expert Assessors noted inconsistencies in the finance information submitted, as well as a lack of day rates, or justification of labour rates for Bohr Consulting. The Expert Assessors also noted that it was unclear why so much of the SIF requested funding is allocated to programme and delivery management. The Expert Assessors agree Eligibility Criterion 7 is not met.

The Project is considered to have a robust methodology capable of progressing in a timely manner as it has a well-structured Project management methodology with a clear Project plan and approach to governance. The Expert Assessors highlighted that the risk register was high-level, with risks related to the commodity markets and price volatility not understood enough to be properly mitigated but, overall, they agree Eligibility Criterion 8 is met.

The Project is considered to have clearly demonstrated how it builds on previous or existing innovative work as the Application situates the Project within the context of other initiatives. The Applicants provided clarification on the Discovery Phase work at interview which explained how this Project builds upon that work and its learnings, which was not immediately clear within the Application. The Expert Assessors agree Eligibility Criterion 9 is met.

The Project is considered to have considered the needs of the end consumer by providing evidence that feedback from biomethane stakeholders was taken into account during the Discovery Phase. The Expert Assessors agree Eligibility Criterion 10 is met.

The Project is considered to have demonstrated a clear approach to open data, knowledge sharing, and dissemination of learnings as it commits to publishing results through the Future Energy Networks Portal and through SIF show and tell events, presenting findings to peers, regulators, and industry. One Expert Assessor noted there was no framework for deciding which data would be open or restricted but, on balance, the Expert Assessors consider Eligibility Criterion 11 to be met.

The Project is not considered to have provided a clear, scalable pathway for deployment as the Expert Assessors felt the toolkit proposed by the Project does not explore the main obstacle to scaling within the sector, which is a lack of knowledge at anaerobic digestion plants on how to inject propane. The Project consortium is also very small and lacks industry-wide momentum, and the commercialisation strategy does not articulate how other Gas Distribution Networks would adopt the outputs. The Expert Assessors agree Eligibility Criterion 12 is not met.

[Review from National Energy System Operator \(NESO\)](#)

NESO was not asked to Project Partner but reviewed the Application to determine whether partnering would be appropriate and decided against partnering.

[Decision from the Office of Gas and Electricity Markets \(Ofgem\): No Fund](#)

Ofgem agrees with the Expert Assessors and does not approve this Project for funding as it does not meet Eligibility Criteria 5, 6, 7 and 12.

The Project does not meet Eligibility Criterion 5 as is not considered innovative, novel or risky as bio propane is not chemically distinct from fossil-fuel propane and is already being injected into the network in blending form.

The Project does not meet Eligibility Criterion 6 as there is a technical knowledge gap within the consortium as it does not include bio propane producers and therefore the Project does not include participation from a range of stakeholders.

The Project does not meet Eligibility Criterion 7 as the Application contained inconsistencies in the finance information submitted, as well as a lack of justification for labour rates, and it was unclear why so much of the costs are allocated to programme management, therefore the Project does not provide value for money.

The Project does not meet Eligibility Criterion 12 as it does not explore the main barrier to scaling in the sector nor demonstrate how outputs would be adopted across Networks, and so does not provide a clear, scalable pathway to deployment.

Recommended Project-specific conditions

N/A

4.2.3 Project 10206520 – Green Gas Access

Submitted Project description

Green Gas Access (GGA) aims to unlock more low-carbon biomethane for use in Great Britain's gas Networks by improving how Networks understand, plan for, and manage green gas supplies. Biomethane is a renewable gas made from organic waste and can play an important role in reducing emissions from heating and industry. However, as more biomethane sites connect to the Network, existing processes for managing gas flows, gas quality, and Network capacity are becoming harder to scale and often rely on manual, conservative approaches.

The project will explore how better data, improved forecasting, and smarter operational planning can allow more biomethane to be injected into the Network safely and efficiently. It will assess how to utilise spare capacity in the Network, identify practical options to reduce constraints, and develop the foundations for more automated and data-driven decision-making. Working with the biomethane producer, Grissan, and other stakeholders like Cadent to ensure the solutions reflect real-world needs and can be adopted more widely across the sector.

Overall, GGA aims to help accelerate the growth of green gas, make better use of existing infrastructure, reduce costs for consumers, and support the transition to a more flexible, low-carbon use and energy system.

Eligibility Criteria	Expert Assessor Average Score
1. Projects must address the Innovation Challenge set by Ofgem.	5
2. Projects must have clearly identified potential to deliver a net benefit to gas or electricity consumers (whomever is paying for the innovation) and/or a whole system benefits.	3
3. Projects must involve Network innovation.	4
4. Projects must support, at a minimum, be consistent with the development and growth of competitive markets.	4
5. Projects must be innovative, novel and/or risky.	4
6. Projects must include participation from a range of stakeholders.	4
7. Projects must provide value for money and be costed competitively.	3
8. Projects must be well thought through and have a robust methodology so that they are capable of progressing in a timely manner.	3
9. Projects must clearly demonstrate how they build upon existing or previous innovative work and articulate how they provide additional value or advancement.	4
10. Projects must consider the needs of the end customers and outline how these stakeholders have	3

been, or will be, meaningfully engaged in the development and adoption of the innovation.	
11. Projects must demonstrate a clear approach to open data, knowledge sharing, and dissemination of learnings.	4
12. Projects must provide a clear scalable pathway for deployment demonstrating how the innovation will achieve sustained impact.	4

Recommendation to the Office of Gas and Electricity Markets (Ofgem): Fund

The Expert Assessors agree that this Project has met the Eligibility Criteria and recommend this Application for funding.

The Project addresses the Innovation Challenge because the scope is centred around innovation to green gas demand forecasting by increasing biomethane supply and connections through resolving constraints around operational scalability, forecasting and data exchange. The Expert Assessors agree Eligibility Criterion 1 is met.

The Project has identified potential to deliver a net benefit to gas consumers through three benefit pathways; reduced operational expenditure and long-term system reinforcement costs through more efficient Network use, operational savings via Calorific Value/Injection automation, and environmental benefits from the reduction in CO₂. The Expert Assessors agree Eligibility Criterion 2 is met.

The Project is considered to involve Network innovation because the Application focuses on gas Network control room workflow standardisation, injection forecasting and Calorific Value automation utilising methodologies novel to Network operations, such as Bayesian forecasting. The Expert Assessors agree Eligibility Criterion 3 is met.

The Project is considered to support the development of competitive markets as it commits to vendor neutrality, open documentation, and to not using a

proprietary platform. The Project will also use open-source Python code workbooks that can be shared across Gas Distribution Networks. The Expert Assessors agree Eligibility Criterion 4 is met.

The Project is considered innovative, novel and/or risky because the Application makes a strong case that probabilistic forecasting, Bayesian modelling of biomethane supply, linear programming optimisation, and the UK's first regional Reliability Availability and Maintainability-based biomethane resilience model, are all genuinely novel to Great British gas operations. The Expert Assessors agree Eligibility Criterion 5 is met.

The Project is considered to include participation from a sufficient range of stakeholders as it is a well-composed team of two Network operators, a biomethane producer, a specialist technical Project Partner and is recommended by the Expert Assessors to engage with NESO via a Project-specific condition. Ways of working and exploitation were well defined. The Expert Assessors agree Eligibility Criterion 6 is met.

The Project is considered to represent value for money and be costed competitively because it focuses on high value and decision critical activities that directly address barriers to biomethane integration. Despite DNV day rates being questioned by the Expert Assessors, on balance the Expert Assessors agree Eligibility Criterion 7 is met.

The Project is considered to have a robust methodology capable of progressing in a timely manner as it is clearly well thought out, with seven distinct work packages and DNV's quality assurance principle outlined, and dependencies visible. Project planning, cost breakdown and risk management are evidenced to a fair standard, although the Expert Assessors noted the risk register will require a refresh, as it appears to be recycled from Discovery Phase with no new risks becoming apparent. The Expert Assessors agree Eligibility Criterion 8 is met.

The Project is considered to have clearly demonstrated how it builds on previous or existing innovative work as the Application explicitly notes other innovation

initiatives and explains the limitations of each, namely, analysis without operational translation. The Expert Assessors agree Eligibility Criterion 9 is met.

The Project is considered to meet the needs of the end consumer because it identifies a value proposition for each of three primary user groups: control room operators, Network planners and biomethane producers. It proposes stakeholder engagement activities, such as workshops and regular meetings, to actively involve groups outside of the primary users in the development, validation and adoption of the proposed innovation. The Expert Assessors agree Eligibility Criterion 10 is met.

The Project is considered to have demonstrated a clear approach to open data, knowledge sharing, and dissemination of learnings as the Application sets out a dissemination plan including monthly update calls with NGN and Cadent, bi-monthly cross-industry stakeholder groups, webinars, LinkedIn updates, and sharing through established industry channels. It also explicitly commits to open, vendor-neutral documentation with no proprietary platform preference, which directly supports open data. The Expert Assessors agree Eligibility Criterion 11 is met.

The Project is considered to have provided a clear, scalable pathway for deployment where the plan covers embedding the solution into SGN's business as usual operations, with cross-Network transfer via forums and third-party commercialisation of digital tools. Standardisation is the principal scalability lever. The Expert Assessors agree Eligibility Criterion 12 is met.

[Review from National Energy System Operator \(NESO\)](#)

NESO was not asked to Project Partner but reviewed the Application to determine whether partnering would be appropriate and decided against partnering.

[Decision from the Office of Gas and Electricity Markets \(Ofgem\): Fund](#)

Ofgem agrees with the Expert Assessors and approves this Project for funding.

Recommended Project-specific conditions

Prior to the End of Phase meeting, the Project must provide the Monitoring Officer with evidence of regular catchups with NESO in the form of meeting minutes with actions that inform NESO on Project progress and outputs.

Prior to the kick-off meeting, the Project must provide the Monitoring Officer with a revised risk register.

Prior to the kick-off meeting, the Project must identify an appropriate consumer representative group and include them within their stakeholder engagement plan for the Project to gather learnings and disseminate findings.

By the End of Phase meeting, the Project must provide evidence of engagement of an appropriate consumer representative group, such as meeting minutes, to the Monitoring Officer.

5. Innovation Challenge: Whole system optimisation

5.1 Overview of Projects

This sub-section covers the assessment of Alpha Phase Applications received into the 'Whole system optimisation' Innovation Challenge in Cycle 6.

Project reference number	Project name	Funding licensee	Total Project costs (£)	Total Project contribution (£)	Total SIF Funding requested (£)	Recommended by Expert Assessors for funding (Yes/No)	Input from NESO (Yes/No/NA)	Decision by Ofgem for funding (Yes/No)
10205506	Quantum optimisation for future gas Network design	National Gas Transmission Plc	685,151	68,593	616,558	Yes	Yes	Yes

5.2 Expert Assessors' Recommendations on Projects

5.2.1 Project 10205506 – Quantum optimisation for future gas Network design

Submitted Project description

This Project develops a quantum-inspired optimisation approach to improve outage planning in gas transmission Networks. It addresses current limitations in exploring complex planning scenarios by enabling systematic evaluation of a much larger number of options. The Project will design and test a prototype using real data, allowing planners to make faster, more informed and robust decisions. The solution has potential to be applied across both gas and electricity Networks, supporting whole-system planning, improving efficiency, and reducing Network and customer risk.

Eligibility Criteria	Expert Assessor Average Score
1. Projects must address the Innovation Challenge set by Ofgem.	5
2. Projects must have clearly identified potential to deliver a net benefit to gas or electricity consumers (whomever is paying for the innovation) and/or a whole system benefits.	5
3. Projects must involve Network innovation.	5
4. Projects must support, at a minimum, be consistent with the development and growth of competitive markets.	4
5. Projects must be innovative, novel and/or risky.	4
6. Projects must include participation from a range of stakeholders.	5
7. Projects must provide value for money and be costed competitively.	4

8. Projects must be well thought through and have a robust methodology so that they are capable of progressing in a timely manner.	5
9. Projects must clearly demonstrate how they build upon existing or previous innovative work and articulate how they provide additional value or advancement.	5
10. Projects must consider the needs of the end customers and outline how these stakeholders have been, or will be, meaningfully engaged in the development and adoption of the innovation.	4
11. Projects must demonstrate a clear approach to open data, knowledge sharing, and dissemination of learnings.	4
12. Projects must provide a clear scalable pathway for deployment demonstrating how the innovation will achieve sustained impact.	5

Recommendation to the Office of Gas and Electricity Markets (Ofgem): Fund

The Expert Assessors agree that this Project has met the Eligibility Criteria and recommend this Application for funding.

The Project addresses the Innovation Challenge by addressing the increasing complexity of outage planning across interconnected energy Networks. It proposes a first-of-a-kind quantum-inspired optimisation solution to improve gas transmission modelling and enable more effective whole system outage planning. Expert Assessors noted a clear and well-defined problem statement, strong alignment with the Innovation Challenge objectives, and evidence that current planning methods struggle to manage growing interdependencies and uncertainty.

The Project has identified potential to deliver a net benefit to gas consumers as the Application clearly describes how quantum-inspired optimisation can

materially improve outage planning, reduce operational costs, avoid reinforcement, lower balancing costs and deliver measurable carbon reductions, evidenced through a strong and quantified benefits case. The Expert Assessors agree Eligibility Criterion 2 is met.

The Project is considered to involve Network innovation as the proposed use of quantum-inspired annealing optimisation introduces a novel approach to outage planning that moves beyond the current manual and iterative processes, enabling the assessment and optimisation of a far greater range of planning scenarios. The Expert Assessors viewed the Project as a first-of-a-kind application within Network and whole system outage planning, offering a fundamentally different method for addressing increasing Network complexity. The planned Alpha Phase validation against current business as usual practices was considered appropriate for demonstrating value and applicability.

The Expert Assessors also highlighted the solution's scalability and potential applicability across both gas and electricity Networks. While one Expert Assessor noted some uncertainty regarding the extent of new algorithm development, all Expert Assessors agreed that the application is innovative and has significant potential for wider adoption. The Expert Assessors agree Eligibility Criterion 3 is met.

The Project is considered to support the development of competitive markets as it proposes to make outputs publicly available and to develop a portable optimisation framework capable of integration with existing systems, supporting interoperability and enabling potential adoption across a range of platforms and users. The Expert Assessors noted the response could benefit from more explicit detail on how intellectual property arrangements will support wider sector adoption, how licensing terms will ensure consumer value, and how potential conflicts or dependencies between Project Partners will be managed. On balance, the Expert Assessors agree Eligibility Criterion 4 is met.

The Project is considered innovative, novel and/or risky as it proposes new approaches to digital and automated processes for Network optioneering and planning. The application of quantum computing in this area is novel. The

Project was also viewed as capable of generating new knowledge and learning for gas transmission outage planning, with potential benefits extending to electricity transmission and whole system planning. The Expert Assessors agree Eligibility Criterion 5 is met.

The Project is considered to include participation from a sufficient range of stakeholders as it includes a broad range of Partners from across gas and electricity transmission, distribution, and whole system planning. Roles and responsibilities, along with ways of working, are well-defined. The Expert Assessors agree Eligibility Criterion 6 is met.

The Project is considered to represent value for money and be costed competitively as the costs reflect the scale of the challenge and represent good value for money based on the benefits case. Roles and responsibilities across Project Partners are proportionate to the work required. The Expert Assessors agree Eligibility Criterion 7 is met.

The Project is considered to have a robust methodology capable of progressing in a timely manner as the plan contains clear roles, structured collaboration, and defined delivery steps. The Application also presents good evidence of risk and cost management. The Expert Assessors agree Eligibility Criterion 8 is met.

The Project is considered to have clearly demonstrated how it builds on previous or existing innovative work as it builds upon a previous Discovery Phase and utilises innovations developed independently via PA Consulting. There is clear articulation of the value added by the Project, as well as broader initiatives that the Project relates to. The Expert Assessors agree Eligibility Criterion 9 is met.

The Project is considered to have considered the needs of the end consumer as several end customers for the solution are directly involved and an electricity Network is included to explore future alignment of the toolkit between gas and electricity Networks. The Project also contains a strong element of user experience testing. The Expert Assessors agree Eligibility Criterion 10 is met.

The Project is considered to have demonstrated a clear approach to open data, knowledge sharing, and dissemination of learnings as there is a comprehensive plan for sector-wide engagement through open publication, cross-Network workshops, and availability of well-structured outputs. The Expert Assessors agree Eligibility Criterion 11 is met.

The Project is considered to have provided a clear, scalable pathway for deployment, with activities designed to deliver a validated prototype, inform a Beta Phase Project, and ultimately support business-as-usual adoption. The Expert Assessors highlighted the dedicated focus on scaling the innovation through the development of a Beta business case and rollout blueprint, providing a structured route from concept to implementation, and agree Eligibility Criterion 12 is met.

Review from National Energy System Operator (NESO)

NESO declines the request to become a Project Partner as they do not feel their involvement would add value.

Decision from the Office of Gas and Electricity Markets (Ofgem): Fund

Ofgem agrees with the Expert Assessors and approves this Project for funding.

Recommended Project-specific conditions

At the kick-off meeting, the Project Partners must present the agreed ownership of IPR and clarify any licensing terms and commercial exploitation rights.

The Project should clarify the quantitative benefits of applying quantum optimisation methodologies across gas and electric networks including more precise estimates of the current costs of gas and electricity network operators cancelling or rescheduling planned maintenance outages and estimates of how much of these costs can be avoided by applying quantum optimisation methodologies. This should be presented at the End of Phase meeting.

At the Alpha kick-off meeting, the Project team should indicate how they aim to develop planning for incorporating a whole systems approach into a Beta Application and present outline plans at the End of Phase meeting.

6. Innovation Challenge: Faster build and maintenance

6.1 Overview of Projects

This sub-section covers the assessment of Alpha Phase Applications received into the 'Faster build and maintenance' Innovation Challenge in Cycle 6.

Project reference number	Project name	Funding licensee	Total Project costs (£)	Total Project contribution (£)	Total SIF Funding requested (£)	Recommended by Expert Assessors for funding (Yes/No)	Input from NESO (Yes/No/NA)	Decision by Ofgem for funding (Yes/No)
10205353	RAPID - Routing and Planning through Interoperable Data	Scottish Hydro Electric Transmission Plc	505,422	51,434	453,988	Yes	N/A	Yes

6.2 Expert Assessors' Recommendations on Projects

6.2.1 Project 10205353 – RAPID - Routing and Planning through Interoperable Data

Submitted Project description

RAPID will demonstrate how interoperable data and semantic knowledge can accelerate the planning, consenting and delivery of new electricity transmission infrastructure. The project brings together the three Great Britain Transmission Owners, NESO, Arup, VoltQuant, AENi and Ordnance Survey to develop a common data interoperability framework, underpinned by a shared ontology, linking engineering, environmental, land and consenting information. Alpha Phase will develop this framework and validate its benefit through a proof-of-concept demonstrator. RAPID will lay the foundations for digital and AI-enabled automation, reducing delivery times and costs while supporting the UK's Clean Power 2030 ambitions.

Eligibility Criteria	Expert Assessor Average Score
1. Projects must address the Innovation Challenge set by Ofgem.	5
2. Projects must have clearly identified potential to deliver a net benefit to gas or electricity consumers (whomever is paying for the innovation) and/or a whole system benefits.	4
3. Projects must involve Network innovation.	4
4. Projects must support, at a minimum, be consistent with the development and growth of competitive markets.	4
5. Projects must be innovative, novel and/or risky.	3
6. Projects must include participation from a range of stakeholders.	4

7. Projects must provide value for money and be costed competitively.	3
8. Projects must be well thought through and have a robust methodology so that they are capable of progressing in a timely manner.	4
9. Projects must clearly demonstrate how they build upon existing or previous innovative work and articulate how they provide additional value or advancement.	4
10. Projects must consider the needs of the end customers and outline how these stakeholders have been, or will be, meaningfully engaged in the development and adoption of the innovation.	3
11. Projects must demonstrate a clear approach to open data, knowledge sharing, and dissemination of learnings.	4
12. Projects must provide a clear scalable pathway for deployment demonstrating how the innovation will achieve sustained impact.	4

Recommendation to the Office of Gas and Electricity Markets (Ofgem): Fund

The Expert Assessors agree that this Project has met the Eligibility Criteria and recommend this Application for funding.

The Project addresses the Innovation Challenge by addressing data fragmentation across planning, consenting and engineering to achieve the aims of faster build and maintenance. The Expert Assessors noted the Application also has strong thematic alignment to Clean Power 2030, the Winsor Review and the Transmission Acceleration Action Plan, and agree that Eligibility Criterion 1 is met.

The Project has identified potential to deliver a net benefit to electricity consumers through lower Network development and constraint costs and faster

renewable infrastructure connections. The Application has a clear and structured benefits case with well-evidenced examples. The Expert Assessors agree Eligibility Criterion 2 is met.

The Project is considered to involve Network innovation as it focuses on improvement to the Network-wide functions of planning, consenting and engineering and has the potential to reduce consenting delays. The Expert Assessors agree Eligibility Criterion 3 is met.

The Project is considered to support the development of competitive markets by committing to open publication of the ontology schema, rather than a proprietary platform, therefore lowering barriers to entry for vendors to build interoperable products. The Expert Assessors agree Eligibility Criterion 4 is met. The Project is considered innovative, novel and/or risky as there is risk in proving cross-domain interoperability, with complex underlying processes and multiple stakeholders, as well as novelty in creating transmission specific semantic interoperability across domains. It is innovative in its approach to resolving constraints in Network planning and engineering. The Expert Assessors agree Eligibility Criterion 5 is met.

The Project is considered to include participation from a sufficient range of stakeholders as it involves all Transmission Operators as well as a range of businesses who provide the necessary expertise in software engineering, geospatial interoperability, and routing automation. Ways of working are well-defined. The Expert Assessors agree Eligibility Criterion 6 is met.

The Project is considered to represent value for money and be costed competitively as costs are proportionate to the Project's scope and potential outputs. However, the Expert Assessors highlighted there was limited justification for subcontractor day rates within the Application. On balance, the Expert Assessors agree Eligibility Criterion 7 is met.

The Project is considered to have a robust methodology capable of progressing in a timely manner as the Project plan contains a detailed breakdown of work

packages, tasks and milestones, accompanied by a robust risk register. The Expert Assessors agree Eligibility Criterion 8 is met.

The Project is considered to have clearly demonstrated how it builds on previous or existing innovative work by clearly explaining how it builds on the Discovery Phase work and articulating added value, along with mapping existing initiatives in the wider innovation landscape against the Project's scope. The Expert Assessors agree Eligibility Criterion 9 is met.

The Project is considered to have considered the needs of the end consumer by representing consumers through transmission operators' and NESO's statutory responsibilities. However, the Expert Assessors highlighted the Project could have provided more evidence of how domestic, industrial or commercial customer needs and perspectives would be reflected in the Project. On balance, the Expert Assessors consider Eligibility Criterion 10 to be met.

The Project is considered to have demonstrated a clear approach to open data, knowledge sharing, and dissemination of learnings as it commits to openly publishing ontology structures, schemas, methodologies, user centred findings and the benefits assessment across multiple channels. The Expert Assessors agree Eligibility Criterion 11 is met.

The Project is considered to have provided a clear, scalable pathway for deployment by presenting a clear value proposition for deployment with credible near-term commercial readiness. The Expert Assessors noted that some mechanisms necessary for ensuring long-term impact, such as a governance model, were deferred, whereas addressing these would have strengthened the Application. On balance, the Expert Assessors agree Eligibility Criterion 12 is met.

[Review from National Energy System Operator \(NESO\)](#)

N/A

Decision from the Office of Gas and Electricity Markets (Ofgem): Fund

Ofgem agrees with the Expert Assessors and approves this Project for funding.

Recommended Project-specific conditions

At the End of Phase, using a realistic transmission use case, the Project should report on how the ontology and interoperability framework can potentially reduce manual effort, improve traceability and support more consistent decision-making.

At the mid-point and End of Phase meeting, the Project must report on the challenges associated with rollout and the Project's approach to addressing these (including governance, stewardship, data sharing, alignment with existing standards, planning authority engagement, AI assurance and long-term adoption mechanisms).

At the mid-point meeting, the Project must present an update to the Monitoring Officer on how they have considered the views of domestic, industrial or commercial customers.