EnergyNetworks Innovation Process

NIA Project Registration and PEA Document V2

The voice of the networks

Date of Submission: 16/07/2026

NIA Project Registration and PEA Document

Notes on Completion: Please refer to the NIA Governance Document to assist in the completion of this form. Please use the default font (Calibri font size 10) in your submission. Please ensure all content is contained within the boundaries of the text areas. The full-completed submission should not exceed 12 pages in total.

1. Project Registration

Project Title (*This cannot be changed once registered*)	Project Reference
STRIKE - Standardised Testing for Residual Integrity and Knowledge Enhancement	NIA_SSEN_0086
Lead Funding Licensee	**Additional Funding Licensee(s)**
Scottish and Southern Electricity Networks Distribution	Northern Powergrid
Nominated Project Contact(s)	**Project Start Date**
Brian Wann, Innovation Delivery Manager	July 2026
Contact Email Address	**Project End Date**
fnp.pmo@sse.com	January 2028
Add preceding Projects	**Project Budget**
	£859,623
Add Third Party Collaborator (non-network)	**Collaborating Networks**
Energy Innovation Centre Limited	Northern Powergrid

Strategy theme

Data and digitalisation	X	Flexibility and market evolution	
Net zero and the energy system transition		Optimised assets and practices	X
Supporting consumers in vulnerable situations		whole energy system	

Project Summary (125 words limit)

The project aims to address the absence of a consistent, industry-wide methodology for interpreting non-invasive digital wood pole condition data. While previous innovation has demonstrated that digital primary testing can produce repeatable and objective measurements, there is currently no standardised approach for linking outputs to residual strength values or applying results consistently across GB DNOs. STRIKE will develop and validate a technology-agnostic scoring methodology aligned to residual strength, supported by large-scale field trials and statistical validation. The project will improve the quality and consistency of asset condition information, including inputs to CNAIM, enabling safer decision-making, optimised maintenance and replacement strategies, and reduced reliance on subjective assessment. Outputs will be governed collaboratively and produced in a form suitable for industry wide adoption and future ENA integration.

2. Project Details

2.1. Problem(s)

This should outline the Problem(s) which is/are being addressed by the Project. This cannot be changed once registered.

Current approaches to wood pole assessment rely heavily on subjective inspection methods that vary between organisations and operators. Innovation work has shown that non-invasive digital testing can produce more repeatable and objective condition data, but there remains no common, industry wide approach for interpreting this data or consistently linking results to remaining structural strength. As a result, asset decisions remain inconsistent and the benefits of improved measurement are not fully realised.

Current ENA guidance for wood pole testing EREC L9 – A1 (Issue 4), mandates that poles must be tested prior to climbing in compliance with ENA Model Distribution Safety Rules, and Work at Height Regulations. The document emphasises that no pole impaired by decay or damage should be accessed until supported by approved means. However, while these requirements ensure safety, they do not prescribe a standardised, quantitative scoring methodology for assessing pole condition across Distribution Network Operators.

ENA TS 43-88 specifies requirements for the selection, manufacture and preservative treatment of wood poles and associated timber used on overhead lines, providing consistency in initial asset quality at the point of supply. However, TS 43-88 does not define how poles should be assessed once in service, nor does it provide a standardised method to interpret non-invasive digital primary test outputs or link them to residual strength values.

SP Energy Networks Enhanced Asset Visibility & Assessment for Overhead Line Poles (EAVA-OHL) NIA funded project focused on improving wood pole condition assessment to meet CNAIM v2.1 requirements. The project demonstrates that traditional hammer/prod testing is too subjective to generate the measured condition values needed for regulatory reporting. It evaluates alternative technologies, including in field residual strength testing and pole mounted condition sensors, to provide more objective data. EAVA OHL informs SPEN's future inspection and assessment approach but does not define an industry wide standardised scoring methodology.

Previous technologies, demonstrated that non-invasive digital primary testing can provide more repeatable and objective wood pole condition data than traditional hammer/prod testing. These technologies proved the technical feasibility of digitally measuring pole condition and correlating outputs to indicators of residual strength. However, they did not deliver an industry wide, standardised methodology for interpreting digital test outputs, defining confidence thresholds, or linking results consistently to residual strength values in a way that could be applied uniformly across GB DNOs. As a result, adoption remains fragmented and the full safety, asset management, and procurement benefits of digital primary testing cannot yet be realised.

2.2. Project Benefit

The project will deliver significant benefits by enabling consistent and objective assessment of wood pole condition across GB DNOs. This will improve safety for field staff, reduce the risk of pole failure, and support more accurate, evidence-based asset management decisions.

By improving confidence in condition assessment and residual strength, the project enables more targeted maintenance and replacement strategies, reducing unnecessary or premature interventions. This will deliver cost efficiencies, improve delivery planning, and enhance overall network resilience.

The project also provides clear procurement and supply chain benefits. The UK electricity sector faces constrained availability of certain wood pole types due to limited specialist manufacturers and increasing demand. Improved condition assessment supports safe life extension where appropriate, reducing demand pressure on constrained assets and improving delivery confidence.

Standardised methodologies, shared data, and best practice guidance will reduce duplication across DNOs, support ENA policy integration, and enable consistent application of digital testing outputs within CNAIM and wider asset management processes

2.3. Method(s)

This section should set out the Method or Methods that will be used in order to provide a Solution to the Problem. The type of Method should be identified where possible, eg technical or commercial.

For RIIO-2 projects, apart from projects involving specific novel commercial arrangement(s), this section should also include a Measurement Quality Statement and Data Quality Statement.

The project will use a collaborative, multi-phase technical and commercial approach.

Technical Method

- Develop a unified scoring methodology aligned to residual strength values through engagement with DNOs and academic partners
- Conduct large-scale field trials on wood poles across participating Network Licensees
- Collect data using non-invasive digital primary testing devices alongside baseline inspection approaches
- Perform statistical analysis to correlate digital test outputs with destructive and/or invasive test results, targeting a minimum 95% confidence level
- Engage independent third-party support for data collection and validation

Commercial Method

- Establish collaborative delivery and cost sharing across participating Network Licensees
- Facilitate knowledge sharing through ENA working groups
- Develop outputs suitable for ENA guidance and policy adoption

Data Quality Statement (DQS): -

The project will be delivered under the NIA framework in line with Ofgem, ENA and SSEN internal policies. Data produced as part of this project will be subject to quality assurance to ensure that the information produced with each deliverable is accurate to the best of our knowledge and sources of information are appropriately documented. All deliverables and project outputs will be stored in our internal systems with appropriate backup and version management. Relevant project documentation and reports will also be made available on the ENA Smarter Networks Portal and dissemination material will be shared with the relevant stakeholders.

Measurement Quality Statement (MQS): -

The methodology used in this project will be subject to supplier quality assurance regimes and the source of data, measurement process and equipment as well as data processing will be clearly documented and verifiable. The measurements, designs and assessments will also be clearly documented in the relevant deliverables and final project report made available for review.

2.4. Scope

The scope and objectives of the Project should be clearly defined including the net benefits for consumers (eg financial, environmental, etc). This section should also detail the financial benefits which would directly accrue to the GB Gas Transportation System and/or electricity transmission or distribution.

The project will develop and validate a standardised methodology for interpreting digital wood pole condition data and aligning outputs to residual strength.

Scope includes:

- Development of a technology agnostic scoring framework
- Large-scale data collection and validation across multiple DNO environments
- Independent technical analysis and academic support
- Development of best practice guidance and ENA-ready outputs

The project will produce a methodology suitable for application across GB, supporting consistent integration into asset management processes and CNAIM.

2.5. Objectives

This cannot be changed once registered.

The project aims to deliver a consistent, industry-wide approach to wood pole condition assessment, enabling improved decision-making across GB DNOs.

The objectives are to:

- Develop a standardised methodology for interpreting digital wood pole condition data
- Enable consistent linkage between digital outputs and residual strength values
- Define confidence and decision thresholds suitable for application within asset management processes, including CNAIM
- Ensure outputs are repeatable, scalable, and applicable across all DNOs

Provide evidence and guidance to support ENA adoption and industry-wide implementation

2.6. Consumer Vulnerability Impact Assessment (RIIO-2 projects only)

Details of the expected effects of the Method(s) and Solution(s) upon consumers in vulnerable situations. This must include an assessment of distributional impacts (technical, financial and wellbeing-related). For RIIO-1 projects please add "Not Applicable"

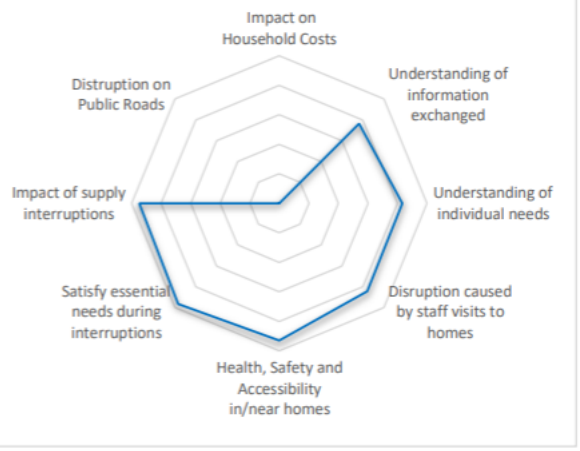
Project Impact Score

Overall Project Score:	10.0 /10
Relative Impact Score:	8.9 /10
Positive Impact Score:	7.8 /10
Negative Impact Score:	0.0 /10

Customer Impact Calculator

Pensionable age

Overall Impact Score:	LOW POSITIVE



Negative Impacts and Mitigations

Driver of Negative Impact	High-Level Mitigation
Unavailable	There is no need to take mitigation measures.

2.7. Success Criteria

Details of how the Funding Licensee will evaluate whether the Project has been successful. This cannot be changed once registered.

The project will be evaluated as successful if the following criteria are met:

- A unified digital primary testing tool scoring methodology, aligned to residual strength values, is developed and agreed by all participating DNOs.
- Field trials are completed on a large-scale, representative population of wood poles, with robust data collected and validated.
- Statistical analysis demonstrates a minimum 95% correlation between digital primary test output scores and destructive test results.
- A policy recommendation and best-practice guidelines are submitted to the ENA for adoption.
- Evidence of improved consistency in pole condition assessment and decision-making across DNOs.
- Demonstrable cost savings and/or avoided pole replacements are identified through project analysis.
- Knowledge dissemination activities are completed, including publication of findings and engagement with industry stakeholders.

These criteria will ensure the project delivers measurable technical, financial, and operational benefits to the GB electricity distribution network.

2.8. Project Partners and External Funding

Details of actual or potential Project Partners and external funding support as appropriate.

Project Partners:

- GB Distribution Network Operators (DNOs)
- ENA Overhead Line Working Group
- University of Strathclyde (UoS) – technical validation and analysis
- Energy Innovation Centre (EIC)

External Funding:

- The project budget is £859,623, which is being shared between Scottish and Southern Electricity Networks Distribution and Northern Powergrid

No additional external funding sources are currently identified; however, opportunities for further collaboration or co-funding with academic or innovation bodies will be explored as the project develops.

2.9. Potential for New Learning

Details of what the parties expect to learn and how the learning will be disseminated.

The project will generate significant new learning for the electricity distribution sector by:

- Developing and validating a unified, quantitative methodology for digital primary testing tool scoring, directly aligned to residual strength values.
- Providing robust, comparative data on the performance of digital primary testing tool versus traditional testing methods across diverse environments and pole populations
- Enhancing understanding of the relationship between non-destructive test results and actual pole condition, supporting more accurate asset management decisions.
- Demonstrating effective approaches for cross-DNO collaboration and data sharing.

Learning Dissemination:

Findings will be shared through ENA Overhead Line DNO Working Groups, which have already been engaged as part of project development, ensuring early industry input and alignment. Additional dissemination will be delivered through technical reports, industry webinars, and peer-reviewed publications.

Best-practice guidelines and policy recommendations will be made available to all UK DNOs and relevant stakeholders, supporting rapid adoption and providing a clear pathway for ENA guidance development and updates (including EREC L9).

2.10. Scale of Project

The Funding Licensee should justify the scale of the Project – including the scale of the investment relative to the potential benefits. In particular, it should explain why there would be less potential for new learning if the Project were of a smaller scale.

A smaller-scale project would risk insufficient data, limited stakeholder engagement, and reduced confidence in the methodology, thereby diminishing the potential for new learning and industry-wide impact.

The scale of this project is justified by the need for robust, statistically significant results and industry-wide adoption. Testing across a large-scale population of wood poles across multiple DNO regions ensures that a unified digital primary testing methodology is validated under diverse operational, environmental, and asset conditions. This approach enables identification of regional variations and edge cases, ensuring the methodology is fit for national rollout.

The investment is proportionate to the potential benefits. Even a modest reduction in unnecessary pole replacements or emergency repairs could yield multi-million-pound savings for the GB electricity distribution system over the asset lifecycle. In addition, improved condition assessment and targeted interventions are expected to reduce Interruptions to Supply (IIS) by lowering the likelihood of unplanned pole failures, improving network reliability for customers.

This large-scale approach also supports comprehensive data collection, cross-DNO collaboration, and rapid integration into industry policy, maximising learning and accelerating benefits. A smaller-scale project would risk insufficient data, limited stakeholder engagement, and reduced confidence in the methodology, thereby diminishing the potential for new learning and industry-wide impact.

Development steps

Technology Readiness Level (TRL) at Start	**5**	TRL at Completion	**8**

Lead Sector

Electricity Distribution	**X**	Electricity Transmission	

Other Sectors

Electricity Distribution		Electricity Transmission	

2.11. Geographical Area

Details of where the Project will take place. If the Project is a collaboration, the Funding Licensee area(s) in which the Project will take place should be identified.

The project will take place across the operational areas of all participating UK Distribution Network Operators (DNOs). Field trials and data collection will be conducted on wood poles located in a range of urban, rural, and remote environments to ensure the methodology is validated under diverse conditions. The University of Strathclyde will provide technical support and analysis from its facilities in Scotland. The collaborative approach ensures that findings and benefits are applicable across the GB electricity distribution network.

2.12. Revenue allowed for in the current RIIO settlement

An indication of the funding provided to the network licensee within the current RIIO settlement that is likely to be surplus to requirements as a result of the Project.

No revenue has been provided in the RIIO-ED2 allowance for this work.

2.13. Indicative Total NIA Project Expenditure

An indication of the total Allowable NIA Expenditure that the Funding Licensee expects to reclaim for the whole of the Project (RIIO1).

An indication of the Total NIA Expenditure that the Funding Licensee expects to reclaim for the whole of the Project (RIIO2).

The total project expenditure is expected to be £859,623

3. Project Eligibility Assessment

There are slightly differing requirements for RIIO-1 and RIIO-2 NIA projects. This is noted in each case, with the requirement numbers listed for both where they differ (shown as RIIO-2 / RIIO-1).

3.1. Requirement 1 - facilitate the energy system transition and/or benefit consumers in vulnerable situations (Please complete sections 3.1.1 and 3.1.2 for RIIO-2 projects only)

Please answer **at least one** of the following:

3.1.1. How the Project has the potential to facilitate the energy system transition:

Project STRIKE supports the energy system transition by improving the accuracy, consistency, and efficiency of asset condition assessment across the electricity distribution network. By enabling standardised, data-driven interpretation of wood pole condition, the project allows Network Licensees to make more informed decisions on maintenance, replacement, and life extension of existing assets.

This improved asset management capability supports the transition to a more resilient and flexible network by ensuring infrastructure is utilised more effectively, reducing unnecessary reinforcement and enabling targeted investment where it is most needed. In addition, optimising the use of existing assets reduces demand for new materials and associated carbon emissions, supporting net zero objectives.

Standardisation across GB DNOs also enables consistent planning and investment strategies, supporting the delivery of a reliable network capable of accommodating increasing electrification and distributed energy resources.

3.1.2. How the Project has potential to benefit consumer in vulnerable situations:

Project STRIKE has the potential to deliver direct and indirect benefits to consumers in vulnerable situations by improving the safety and reliability of the electricity distribution network. By enabling more accurate and consistent assessment of wood pole condition, the project reduces the risk of unexpected pole failures and associated unplanned outages, which can disproportionately impact vulnerable consumers who rely on electricity for heating, medical equipment, and communication.

Improved asset decision making also supports more proactive and targeted maintenance, reducing the likelihood and duration of supply interruptions in areas with higher concentrations of vulnerable customers.

In addition, by avoiding unnecessary asset replacement and optimising investment, the project contributes to more efficient network spending. This supports cost control over the long term, helping to minimise pressure on customer bills, which is particularly important for consumers in fuel poverty.

3.2. Requirement 2 / 2b - has the potential to deliver net benefits to consumers

Project must have the potential to deliver a Solution that delivers a net benefit to consumers of the Gas Transporter and/or Electricity Transmission or Electricity Distribution licensee, as the context requires. This could include delivering a Solution at a lower cost than the most efficient Method currently in use on the GB Gas Transportation System, the Gas Transporter's and/or Electricity Transmission or Electricity Distribution licensee's network, or wider benefits, such as social or environmental.

3.2.1. Please provide an estimate of the saving if the Problem is solved (RIIO-1 projects only)

Not applicable

3.2.2. Please provide a calculation of the expected benefits the Solution

This is for Development or Demonstration Projects, not required for Research Projects. It should be (Base Cost – Method Cost, Against Agreed Baseline) and include a description of the recipients of the benefits.

Agreed baseline (Base Cost):

Under the baseline scenario, it is assumed that Network Licensees adopt non-invasive digital primary testing as the standard method for wood pole condition assessment, replacing traditional subjective inspection methods. However, in the absence of a standardised, industry-wide methodology, interpretation of digital test outputs remains inconsistent across DNOs.

As a result, asset decisions vary between organisations, with no consistent linkage between digital test outputs and residual strength values. This limits the effective use of digital data within asset management processes, including CNAIM, and results in continued inefficiencies such as conservative replacement approaches, inconsistent intervention decisions, and ongoing pressure on constrained pole supply chains.

Proposed method (Method Cost):

The STRIKE project will develop and validate a technology-agnostic, standardised scoring methodology that translates digital primary test outputs into residual strength-aligned condition values. This will enable consistent, evidence-based decision-making across all Network Licensees and support integration into asset management processes, including CNAIM.

Expected benefits of the Solution:

The Cost Benefit Analysis (CBA) for the preferred option indicates:

- Total forecast expenditure: c. £1.71m
- 10-year Net Present Value (NPV): c. £70.8m
- Whole-life NPV: c. £138.1m
- Payback period: <1 year

In addition, the CBA identifies:

- Lifetime net financial benefits: c. £20.0m
- Lifetime societal benefits: c. £118.1m

These benefits are primarily driven by:

- Improved consistency in asset condition assessment and decision-making
- Reduction in unnecessary or premature pole replacement
- More effective targeting of maintenance and intervention activity
- Improved utilisation of existing assets through safe life extension

The project is expected to deliver benefits for consumers, network licensees, and the supply chain. Consumers will benefit from reduced long-term network costs, improved network reliability, and fewer unplanned outages. For network licensees, the project will support lower capital and operational expenditure, greater confidence and consistency in asset planning, and improved alignment with CNAIM and regulatory expectations. The supply chain will benefit from reduced demand pressure on constrained wood pole categories, helping to improve delivery certainty for network investment programmes.

Assumptions and limitations:

The benefit values presented are based on the current preferred-option CBA and should be considered indicative at this stage. Further validation will be undertaken through detailed sensitivity analysis, refinement of input assumptions, and confirmation of deployment scale and adoption pathways across participating Network Licensees.

3.2.3. Please provide an estimate of how replicable the Method is across GB

This must be in terms of the number of sites, the sort of site the Method could be applied to, or the percentage of the Network Licensees system where it could be rolled-out.

The STRIKE methodology is highly replicable across GB, as it is:

- Technology-agnostic, applicable to any non-invasive digital primary pole testing tool producing comparable outputs
- Applicable to all wooden distribution poles, regardless of geography, voltage level, or operating environment
- Independent of local inspection practices or DNO-specific systems

The method can be applied across:

- 100% of GB DNO licence areas
- Urban, rural, and remote networks
- Both refurbishment and replacement decision points

As wooden pole construction types and degradation mechanisms are broadly consistent across GB, the methodology is suitable for nationwide rollout without adaptation to local asset classes.

3.2.4. Please provide an outline of the costs of rolling out the Method across GB.

Following completion of STRIKE, rollout costs are expected to be low relative to the benefits, as the primary output is a standardised methodology rather than a mandated technology solution. However, implementation does assume that DNOs currently relying on subjective manual pole testing will need to transition towards digital data capture from non-invasive primary testing, in order to apply the methodology consistently.

Indicative total per DNO: £150k–£350k
Indicative GB total (6 DNO groups): £0.9m–£2.1m

Indicative rollout costs per DNO (Used in CBA)

- Process and policy updates: £75k (one-off)
- Systems configuration/licencing and digital data mapping: £100k
- Training and change management (including transition from manual to digital workflows): £75k
- Ongoing annual costs:
    - Annual training costs £7.5k
    - Annual policy update costs £7.5k

No additional hardware procurement is required as part of STRIKE. DNOs may apply the methodology using existing or future digital primary testing approaches, selecting tools that best meet their operational needs while producing the required digital data outputs.

3.3. Requirement 3 / 1 – involve Research, Development or Demonstration

3.3.1. RIIO-1 Projects

A RIIO-1 NIA Project **must have the potential to have a Direct Impact on a Network Licensee's network** or the operations of the System Operator and involve the Research, Development, or Demonstration of at least one of the following (please tick which applies):

A specific piece of new (i.e. unproven in GB, or where a Method has been trialled outside GB the Network Licensee must justify repeating it as part of a Project) equipment (including control and communications systems and software)	☐
A specific novel arrangement or application of existing licensee equipment (including control and/or communications systems and/or software)	☐
A specific novel operational practice directly related to the operation of the GB electricity transmission or distribution systems	☐
A specific novel commercial arrangement	☐

3.3.2. RIIO-2 Projects

A RIIO-2 Project must involve the Research, Development or Demonstration of at least one of the following:

A specific piece of new equipment (including monitoring, control and communications systems and software)	☐
A specific piece of new technology (including analysis and modelling systems or software), in relation to which the Method is unproven	X

A new methodology (including the identification of specific new procedures or techniques used to identify, select, process, and analyse information)	X
A specific novel arrangement or application of existing gas transportation, electricity transmission or electricity distribution equipment, technology or methodology	
A specific novel operational practice directly related to the operation of the GB Gas Transportation System, electricity transmission or electricity distribution	
A specific novel commercial arrangement	

3.4. Requirement 4 / 2a – develop new learning

A Project must develop new learning that can be applied by Gas Transporter and/or Electricity Transmission or Electricity Distribution licensees. For RIIO-1 Network Licensees may wish to address challenges specific to their network.

Please answer one of the following:

3.4.1. Please explain how the learning that will be generated could be used by relevant Network Licenses

The learning generated from STRIKE will enable Network Licensees to apply a consistent, evidence-based approach to interpreting digital wood pole condition data within their asset management processes.

Specifically, the outputs will allow DNOs to:

- Integrate standardised condition scoring into inspection, maintenance, and replacement decision-making
- Improve the quality and consistency of inputs into CNAIM, supporting more accurate assessment of asset health and risk
- Deploy digital primary testing approaches in a repeatable and scalable manner, independent of specific devices or suppliers
- Reduce reliance on subjective assessment practices and align operational processes across networks

The methodology, supporting evidence, and guidance will be disseminated through ENA working groups, the Smarter Networks Portal, and industry engagement, enabling all GB Network Licensees to adopt the learning within their own systems and practices.

3.4.2. Or, please describe what specific challenge identified in the Network Licensee's innovation strategy is being addressed by the Project (RIIO-1 only)

Not Applicable

3.4.3. Is the default intellectual Property Rights (IPR) position being applied?

This cannot be changed once registered.

Yes	X	No	

If "no", the following questions must be answered:

3.4.4. Demonstrate how the learning from the Project can be successfully disseminated to Network Licensees and other interested parties:

Not Applicable

3.4.5. Describe how any potential constraints or costs caused, or resulting from, the imposed IPR arrangements:

Not Applicable

3.4.6. Justify why the proposed IPR arrangements provide value for money for customers:

Not Applicable

3.5. Requirement 6 / 2d – not lead to unnecessary duplication

A Project must not lead to unnecessary duplication of any other Project, including but not limited to IFI, LCNF, NIA, NIC or SIF projects already registered, being carried out or completed.

3.5.1. Please demonstrate below that no unnecessary duplication will occur as a result of the Project.

This project does not duplicate any existing IFI, LCNF, NIA, NIC, or SIF projects. While the NIA_SSEN_0044 digital primary testing tool project successfully demonstrated the technical viability of non-invasive digital primary testing technology, it focused on device development and initial trials within a single licensee.

This project is unique in its aim to establish a standardised scoring methodology across all UK DNOs, addressing a gap that has not previously been tackled. Through cross-DNO collaboration and integration with ENA policy, it promotes industry-wide consistency and alignment. Unlike projects focused on hardware development, its primary focus is on harmonising methodologies and assessing associated policy implications.

3.5.2. If applicable, justify why you are undertaking a Project similar to those being carried out by any other Network Licensees.

Previous innovation projects, including SSEN's Smart Hammer NIA and SPEN's THOR Hammer NIA, successfully demonstrated the technical feasibility of non-invasive digital primary testing for assessing wood pole condition. These projects were primarily focused on the development and validation of hardware solutions capable of generating digital condition data. However, they did not deliver an industry-wide, standardised methodology for interpreting this data, defining confidence thresholds, or consistently linking outputs to residual strength values in a way that can be applied uniformly across GB DNOs. As a result, adoption of digital primary testing remains fragmented, with differing approaches between DNOs limiting the realisation of full safety, asset management, and procurement benefits. The proposed STRIKE project builds directly on this prior learning by addressing the next critical step: developing a technology-agnostic, standardised scoring methodology, aligned to residual strength and suitable for cross-DNO application and ENA policy adoption. This work cannot be delivered through individual DNO activities or prior hardware-focused projects alone, as it requires coordinated industry collaboration, shared data, and agreement on common interpretation frameworks. STRIKE therefore complements rather than duplicates earlier innovation and is necessary to enable consistent, GB-wide adoption.

3.6. Requirement 5 / 2c – be innovative

A Project must be innovative (ie not a business as usual activity) and have an unproven business case entailing a degree of risk warranting a limited Research, Development or Demonstration Project to demonstrate its effectiveness. This could include Projects which are untested at scale, or in relation to which there are risks, which might prevent the widespread deployment of the equipment, technology or methodology.

3.6.1. Why is the project innovative?

RIIO-1 projects must include description of why they have not been tried before.

The project introduces a standardised, data-driven methodology for interpreting non-invasive digital primary test outputs aligned to residual strength values. While digital testing tools have been trialled by DNOs, there is currently no industry-wide scoring standard or ENA policy framework. This project creates a quantitative, validated approach that can be adopted across UK DNOs and has not been delivered previously at GB scale through cross-DNO collaboration.

3.6.2. Why is the Network Licensee not funding the Project as part of its business as usual activities?

The Project is not suitable for business-as-usual funding as it goes beyond the scope of individual DNO operational activities and requires the development of a new, industry-wide methodology rather than incremental improvement of existing practices.

While individual DNOs have trialled digital primary testing technologies, there is currently no agreed standard for interpreting outputs or linking results to residual strength values. Establishing such a framework requires cross-DNO collaboration, shared datasets, and industry alignment, which cannot be delivered effectively through a single licensee's BAU activities.

In addition, the outcomes of STRIKE are intended to inform ENA guidance and industry-wide adoption, rather than provide a solution specific to SSEN's network. As such, the scale, coordination, and non-proprietary nature of the work fall outside normal BAU investment criteria.

3.6.3. Why can the Project can only be undertaken with the support of NIA?

This must include a description of the specific *risks (e.g. commercial, technical, operational or regulatory) associated with the Project.*

Specific Risks

- Technical Risk:
  The correlation between digital primary test output scores and residual strength values must be validated across diverse environments and pole conditions. Without extensive trials, the methodology may not achieve the required accuracy or reliability.
- Commercial Risk:
  Developing a unified scoring system and conducting large-scale trials require significant upfront investment. Individual DNOs cannot justify this cost alone without shared funding and risk mitigation.
- Operational Risk:
  Introducing a new methodology without robust evidence could lead to incorrect asset decisions, impacting safety and reliability. Controlled trials under an innovation framework reduce this risk.
- Regulatory Risk:
  ENA policy alignment requires industry consensus and formal engagement. Without a collaborative, innovation-funded approach, achieving regulatory acceptance would be slow and fragmented.

Why NIA is Essential

NIA funding enables:

- Shared investment and risk mitigation across multiple DNOs.
- Accelerated learning through collaborative trials and data sharing.
- Structured research and demonstration to validate the methodology before widespread deployment.
- Regulatory engagement to ensure ENA policy integration.

Without NIA support, the project would likely be fragmented, underfunded, and unable to deliver the scale of learning required for industry-wide adoption.

3.7. Relevant Foreground IPR

Details of expected Relevant Foreground IPR which will be generated in the Project. If applicable, this must also explain if Background IPR will be required to use the Relevant Foreground IPR.

The project is expected to generate the following Relevant Foreground IPR:

- **Unified Scoring Methodology:**
  A standardised, technology-agnostic algorithm and framework for interpreting non-invasive digital primary test outputs and linking them to residual strength values. This methodology will be applicable across multiple testing technologies and DNO environments.
- **Data Correlation Models:**
  Statistical models, validation techniques, and analytical approaches that link digital primary test outputs to destructive and/or invasive test results, including confidence thresholds suitable for asset management and CNAIM application.
- **Best-Practice Guidelines:**
  Documentation defining the consistent application of the methodology across UK DNOs, including recommended workflows, interpretation approaches, and integration into asset management processes.

All Foreground IPR will be developed on a non-proprietary basis, ensuring that outputs are transferable, replicable, and accessible to all Network Licensees in accordance with NIA governance requirements.

Background IPR Requirements:

The methodology will remain fully technology-agnostic; however, implementation may require access to vendor-specific device interfaces, data formats, or proprietary analytics tools. Any such Background IPR will be managed through existing commercial agreements and will not restrict the ability of DNOs to apply the STRIKE methodology using alternative or equivalent digital primary testing solutions.

All outputs will be shared in accordance with NIA governance rules, ensuring availability to other Network Licensees while respecting any third-party intellectual property constraints.

3.8. Data Access Details

A description of how any data (de-sensitised where necessary) that are expected to be gathered in the course of the project can be requested by interested parties, and, if applicable, reasons why such data cannot be released to interested parties. This requirement may be met by including a link to the publicly available data sharing policy, which is required by virtue of paragraphs 2.13-2.16 of the RIIO-2 NIA Governance Document.

For information on how to request data gathered in the course of this project, see SSEN Distribution's Network Innovation Competition (NIC) and Network Innovation Allowance (NIA) Data Sharing Procedure at https://ssen-innovation.co.uk/innovation-strategy/

4. PEA approval

The senior person (RIIO-1) or senior network manager (RIIO-2) responsible for implementing RIIO-2 NIA Projects must approve the PEA. It must then be published on the Project Registration page of the Smarter Networks Portal.

Please confirm this project has been approved by a senior member of staff	X