Notes on Completion: Please refer to the appropriate NIA Governance Document to assist in the completion of this form. The full completed submission should not exceed 6 pages in total.

NIA Project Registration and PEA Document

Date of Submission

Jun 2025

Project Reference Number

NIA_SPEN_0106

Project Registration

Project Title

ORION - Digital Transformer Platform

Project Reference Number

NIA_SPEN_0106

Project Licensee(s)

SP Energy Networks Distribution

Project Start

August 2025

Project Duration

1 year and 10 months

Nominated Project Contact(s)

Parham Momeni

Project Budget

£776,000.00

Summary

This project will to develop an all-in-one asset management tool for SPEN's transformer fleet. This tool would combine transformer-related asset data with advanced data modelling techniques to allow predictive forecast models to determine overall asset health, maintenance needs and replacement schedules.

The tool will support asset management by automating the analysis of detected anomalies and decision-making to prevent failure. This will allow the user to focus on continuous improvement. Unifying the wealth of asset data from diverse sources; the proposed solution will provide a single view of transformer health, exploiting the combined dataset to deliver new insights, for asset managers and field operatives alike.

Third Party Collaborators

Minsait

Nominated Contact Email Address(es)

innovate@spenergynetworks.co.uk

Problem Being Solved

Currently, the process for testing and analysing information on transformer heath and early warning of impending failures is time intensive, relies on disconnected processes which can lead to inconsistencies. This data is used in critical asset management decisions, with the current process risking delays, inefficiencies, and unnecessary manual work to achieve the required outcome.

SPD & SPM currently lack progressive tools that enable the flexible integration of complimentary datasets and the ability to develop

and evaluate novel methods or algorithms to assess asset health, supported by predictive analytics through machine learning. In contrast to the comprehensive portal to be developed by this initiative, multiple systems are required to holistically evaluate transformer asset health with significant manual intervention and data handling to support decision making and modernisation planning.

SPEN have an ambition to transition from time-based to condition-based operation and maintenance of our assets. This transition will require significant evidence to ensure the safe continued operation of our assets and network and a suitable sandbox environment to test the robustness of new theories, methods and strategies. No such system currently is in operation.

Method(s)

To address this issue, we propose the creation of a new digital platform to provide a centralised system for the management of transformer asset data points. This platform will seamlessly merge all information relating to transformer health, and with the help of AI machine learning will enable improved decision-making, streamlined maintenance activities and enhanced safety through functions such as condition monitoring, analysing asset health and optimising transformer asset failure mitigation measures. This digital tool will use these multiple data streams containing critical transformer asset data to provide a single overview of overall unit health and performance, exploiting the combined dataset to deliver new insights, for asset managers and field operatives alike.

The solution will be designed considering the following requisites:

- **Universal Approach**: Solution can be applied to any other asset (not only transformers) as far as they have suitable data.
- **Flexibility**: Tool will be designed so that new algorithms can be added to complement or replace the ones being used, keeping the solution always up to the state of art.
- **Scalability**: Scale seamlessly as data volumes grow. Adapting to changing business needs.
- **Security & Compliance**: Robust security measures protect sensitive data, ensuring compliance with industry standards and regulations.

Proof of Value (Experimental development)

A POV will be developed to test the use of predictive analytics applied to the main asset data sources available by means of AI/ML algorithms. This POV will address anomaly detection (Early warning of impending failures based on deviation from normal behaviour) and prognosis (Forecast failure progress and estimation of Remaining-Useful-Life), delving into the available data sources to build models that can provide early warning of failures and estimate their progression and the remaining useful life of the asset.

A limited number of assets of one type of transformer will be selected to work with. The selection will be based on criticality, availability, completeness, quality of the historical data to be used as inputs, and availability of registered failures.

This solution will improve transformer maintenance through:

- **Enhanced Reliability**: Enables real-time monitoring and maintenance of transformer parameters which facilitates early detection of anomalies, enabling us to intervene before failures occur and improve overall reliability.
- **Predictive Maintenance**: By analysing historical data and trends, the platform can forecast maintenance requirements, enabling a predictive approach that ensures asset lifetimes are maximised.
- **Efficient Resource Allocation**: Platform helps allocate resources efficiently by prioritising maintenance tasks based on criticality leading to maintenance efforts being focused where they matter most.
- **Compliance with ISO Standards**: This digital solution will be aligned to ISO 18095:2018 which provides guidelines for condition monitoring and diagnostics of power transformers. It covers parameters such as oil condition, oil contamination, dielectric condition, temperature, power and more. The standard emphasises the importance of effective condition monitoring and maintenance to enhance reliability, predict maintenance needs, and allocate resources efficiently.

To ensure the success of our innovation project, we will begin with a nine-month equivalent POV, starting with an assessment of existing data and future data requirements. This will be followed by the iterative design and development of predictive algorithms, ensuring that outputs are valid and verified. We will then prepare these outputs to be easily integrated, aligning them with existing business processes and meeting the minimum requirements for consistency with business systems from both strategic and implementation perspectives.

Scope

This project aims to develop an all-in-one asset management tool for SPEN's transformer fleet. This tool will combine all SPEN's transformer related asset data to provide a single overview of asset health and performance and implement predictive analytics to forecast asset condition and modernisation requirements. This digital solution will be aligned to ISO 18095:2018, ensuring our transformer maintenance programme meets international standards and our asset management practices are sector-leading in this area. The solution will enable us to deepen our data analytics capabilities for asset and embed Machine Learning and Artificial

Intelligence into our maintenance programmes. ISO 18095:2018 provides guidelines for condition monitoring and diagnostics of power transformers. It covers parameters such as oil condition, oil contamination, dielectric condition, temperature, power and more. The standard emphasises the importance of effective condition monitoring and maintenance to enhance reliability, predict maintenance needs, and allocate resources efficiently. This is a digital maintenance and asset data management project with the view to bring all related data sets under one digital platform. This will not be an online data monitoring exercise. This platform will provide a comprehensive system for combining relevant datasets and an environment for implementing and testing novel methods and algorithms for assessing transformer health and operation, prior to rolling this out to our Business-as-Usual processes. The platform has potential to support us to transform the way we operate and maintain our assets and has been demonstrated to this end by industry leaders. The complete proposed program, including all three phases, is attached to this proposal. This request seeks approval for Phase 01. The subsequent phases will be executed upon satisfactory completion and acceptance by the business.

The platform helps allocate resources efficiently, by prioritising maintenance tasks based on criticality. It ensures that maintenance efforts are focused where they matter most. This means resources can be allocated before failures occur leading to less congestion of resources, minimising costs associated with reactive repairs and potential cost saving lowering the consumer bill.

ORION will be able to assess health indexes and performance for various transformer maintenance program types. This phase will explore and establish optimal methods for handling these calculations, with all approaches reviewed by the project partners. The tool will be able to improve and enhance the maintenance program across SPD's asset management network.

The tool will evaluate the use of SPD/SPM asset management transformer fleet historical data and machine learning to provide alternative and potentially more accurate costs and timelines maintenance programs.

Objective(s)

The solution will act as a virtual replica of the transformer assets that can perform functions such as condition monitoring, analysing asset health and optimising transformer asset failure mitigation measures.

1. Develop a platform capable of combining multiple asset data sources related to transformers
2. Develop predictive maintenance capability to forecast maintenance requirements, based on analysis of historical data and trends.
3. Develop prioritisation methodology for maintenance tasks based on criticality to focus resources in the right place.
4. Ensure the platform is compliant with ISO 18095:2018 standard for monitoring and diagnostic techniques to ensure alignment with industry best practice

Expected outcomes:

1. A virtual representation of SPEN transformers based on ISO 18095:2018.
2. A roadmap for next phase of platform development.

Consumer Vulnerability Impact Assessment

An assessment of distributional impacts (technical, financial and wellbeing related) for this project has been carried out using a bespoke assessment tool, which assesses the project as having a positive, negative or neutral effect on consumers in vulnerable situations. To help inform the assessment, this tool considers the categories of consumers identified in the Priority Services Register.

This project has been assessed as having an overall positive impact on consumers in vulnerable situations. The assessment has identified that this project will look, in the long-term, to reduce the occurrence and duration of supply interruptions by enabling improved transformer asset maintenance and management. Other considerations including the projects impact on supply, immediate health and safety in the home have been made in carrying out this assessment.

Success Criteria

1. Anomaly detection with Smart Substations data
   - Successfully implement and validate anomaly detection algorithms using Smart Substations data.
   - Achieve a detection accuracy rate of at least 90%.
2. Oil results added to anomaly detection
   - Integrate oil analysis results into the anomaly detection framework.
   - Demonstrate improved detection accuracy and reliability with the inclusion of oil data.
3. Maintenance data added to anomaly detection
   - Incorporate maintenance records into the anomaly detection system.
   - Show enhanced predictive capabilities and reduced false positives.
4. Prognosis
   - Develop and validate models for predicting future asset conditions based on detected anomalies.

- Achieve a prediction accuracy rate of at least 85%.

5. Final report and Presentation
   - Prepare a comprehensive report detailing the findings, methodologies, and outcomes of the anomaly detection and prognosis models.
6. Input data complete:
   - All the data deemed necessary by the third party to design and create the data model used to build the tool will have been obtained from the relevant Asset management and data teams.
7. Release of Alpha Version:
   - After validation and verification (V&V) of the tool by the relevant engineering departments, an initial version of the tool will be released to limited staff for further V&V.
8. Web Application:
   - V&V from relevant departments will ensure that the various elements of the tool provide accurate information like that typically provided within asset management and data teams. The tool will be useable by limited SPD/SPM staff initially for validation and testing and feedback.
9. Selection of failure modes
   - Identify and prioritize critical failure modes for analysis.
   - Validate the selection process through expert review and historical data analysis.
10. Data-driven diagnosis of impending failures
    - Implement diagnostic algorithms to identify impending failures based on data trends.
    - Achieve a diagnostic accuracy rate of at least 80%.
11. Prescribing actions for impending failures
    - Develop actionable recommendations for mitigating identified impending failures.
    - Ensure recommendations are practical and cost-effective.
12. Final report and Presentation
    - Compile a final report summarizing the entire project, including anomaly detection, prognosis, and failure diagnosis.
    - Present findings and recommendations to stakeholders in a clear and concise manner.
13. Ofgem Documentation and Reporting
    - Finalise all documentation and reporting requirements for Ofgem.
    - Ensure compliance with all regulatory guidelines and deadlines.

Project Partners and External Funding

N/A

Potential for New Learning

Implementing anomaly detection with Smart Substations data, oil results, and maintenance records significantly enhances the accuracy and reliability of asset management. By integrating diverse data sources, the system can identify potential issues more effectively, reducing false positives and improving predictive capabilities. This comprehensive approach allows for timely diagnosis of impending failures, enabling proactive maintenance and minimizing unexpected downtime. Additionally, the development of prognosis models provides valuable insights into future asset conditions, helping to optimize maintenance schedules and extend the lifespan of critical infrastructure.

Furthermore, the selection of failure modes and data-driven diagnosis ensures that the most critical issues are prioritized and addressed. Prescribing actionable recommendations for impending failures not only mitigates risks but also ensures cost-effective solutions. The final report and presentation, along with Ofgem documentation and reporting, guarantee transparency and regulatory compliance. These benefits collectively contribute to a more efficient and resilient asset management system, ultimately enhancing operational performance and reliability for SPEN.

Scale of Project

The scale of this project is designed to facilitate the development and validation of advanced methods and algorithms, showcasing the transformative potential of the transformer asset maintenance platform. By initially focusing on a targeted set of assets, we can rigorously test and refine our approaches, ensuring their effectiveness and reliability. This foundational work will demonstrate the platform's value in enhancing asset management practices, paving the way for its expansion to encompass a broader range of assets and asset classes. Ultimately, this scalable approach will enable us to build a robust and comprehensive maintenance system that can adapt to the evolving needs of SPEN and deliver long-term operational benefits.

Technology Readiness at Start

Technology Readiness at End

TRL3 Proof of Concept

TRL5 Pilot Scale

Geographical Area

SPD/SPM Licence Areas

Revenue Allowed for the RIIO Settlement

N/A

Indicative Total NIA Project Expenditure

£776,000

Project Eligibility Assessment Part 1

Requirement 1

Facilitate the energy system transition and/or benefit consumers in vulnerable situations

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

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

The ORION project aims to develop a tool for transformer maintenance that significantly contributes to the energy system transition and benefits consumers. By leveraging predictive maintenance, enhanced reliability, efficient resource allocation, and compliance with ISO standards, the project seeks to extend the lifespan of assets. Digital tools optimise transformer asset management by focusing on high-risk transformers and implementing preventive maintenance programs, resulting in cost savings that can be passed on to consumers, aiding in the reduction of fuel poverty. Additionally, digital monitoring systems enhance asset reliability and availability through real-time monitoring, early anomaly detection, and descriptive analytics, preventing unexpected failures and ensuring more reliable services for consumers.

Furthermore, the platform prioritises maintenance tasks based on criticality, ensuring efficient resource allocation and minimizing costs associated with reactive repairs. This proactive approach helps lower consumer bills and reduces resource congestion. As digitalization plays a crucial role in the transition to net zero, the reliance on digital tools for assets and supply chains will increase. Consequently, more systems infrastructure will be required to ensure smooth operations, along with enhanced cyber evaluations and implementations to protect against potential threats.

This project addresses inefficiencies in manual data gathering, reduces the time and human error involved in transformer maintenance modelling programs. This speeds up transformer maintenance projects but also lowers operational costs, which can indirectly benefit consumers through more efficient and cost-effective modelling and asset management.

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

Enhancing transformer maintenance and upgrades will directly benefit vulnerable consumers. By ensuring more reliable and efficient operation of transformer fleets, the project aims to reduce outages and improve service quality. This is particularly important for consumers in vulnerable situations who may be more adversely affected by power disruptions. Additionally, improved asset management can lead to cost savings, which can be passed on to consumers, further supporting those in need.

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.

Please provide an estimate of the saving if the Problem is solved

N/A

Please provide a calculation and/or description of the expected benefits of the solution

This project can deliver a net benefit to consumers in several ways:

- **Cost Efficiency:** By utilizing digital tools to predict asset failures, optimize resources, and recommend maintenance schedules, the project aims to extend the lifespan of assets. These improvements lead to significant cost savings, which can be passed on to consumers in the form of lower energy bills. We anticipate that the benefit of this project for SPEN will be a reduction in the time spent by staff across various asset management teams, including engineers, project managers, and contracts managers, on preparing and implementing maintenance programs. This could save a lot of hours per week across these departments. Assuming that all participants in these calls are at a similar job level and on the entry-level salary range for that bracket, we estimate that the tool could generate substantial savings per annum.
This time saving could increase depending on the volume of sites discussed and calls held each week, so we have chosen to be conservative in our estimate. Additionally, the savings will be influenced by the changes implemented.
- **Service Consistency:** The project enhances the reliability of services provided by system operators by detecting faults early and

reducing the likelihood of power outages. This results in fewer logistical delays for skilled workers upgrading infrastructure on brownfield and greenfield sites. Additionally, it lowers the chances of penalties for project delays, freeing up funds that could be used for initiatives supporting consumers in extreme fuel poverty or reducing energy bills.

- **Environmental Sustainability:** By facilitating the transition to net zero with more sustainable energy generation, the project improves environmental sustainability. This not only benefits consumers with cleaner energy and lower bills but also contributes to the broader societal goal of combating climate change.
- **Improved Customer Service**: Digital tools enhance customer service by providing integrated solutions that improve the overall customer experience. This includes faster response times to issues, better communication, and more personalized services, particularly aiding vulnerable consumers.

In summary, the project has the potential to deliver significant benefits to consumers by improving service reliability, reducing costs, supporting environmental sustainability, and enhancing customer service. These benefits can greatly improve the quality of life for all consumers, especially those in vulnerable situations.

The project offers several benefits. Firstly, staff time savings are expected to be recurring annually, amounting to £0.225m per annum from the release of the platform for the 33kV transformer fleet. This is based on the assumption that one full-time equivalent (FTE) at the level will review and process aspects impacting asset health and plan future interventions. Secondly, condition-based maintenance is anticipated to provide recurring annual savings of £0.04m from the platform's release for the 33kV transformer fleet. This is based on the assumption that evidence will reduce inspection, maintenance, and repair costs by 10% annually by prioritizing activities on assets in poor health compared to a frequency-based schedule. Lastly, the avoidance of catastrophic failure is expected to yield recurring annual savings of £0.006m from the platform's release for the 33kV transformer fleet. This is based on the assumption that predictive analytics may lead to the avoidance of at least 1% of catastrophic failures, considering the unit cost of 33kV transformers in SPD and SPM.

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

We believe it could be replicated across all DNO/TO networks. Due to the nature of transformer maintenance programmes and values.

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

Due to the significant reliance on data availability within each network area, we are unable to provide specific advice.

Requirement 3 / 1

Involve Research, Development or Demonstration

Projects 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 system 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 Network Licensees system

☐ A specific novel commercial arrangement

Involve Research, Development or Demonstration - Please select all that apply

☐ 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

☑ A new methodology (including the identification of specific new procedures or techniques used to identify, select, process, and analyse information)

☐ 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

Specific Requirements 4 / 2a

Please explain how the learning that will be generated could be used by the relevant Network Licensees

The learning generated from this project can be highly valuable for relevant Network Licenses in several ways:

Best Practices and Standards: The insights gained can help establish best practices and standards for transformer maintenance and asset management. Network Licenses can adopt these practices to enhance their operational efficiency and reliability.

Training and Development: The knowledge acquired can be used to develop training programmes for engineers, project managers, and other stakeholders. This ensures that the workforce is well-equipped with the latest techniques and methodologies for maintaining and managing network assets.

Policy and Strategy Formulation: The data and findings from the project can inform policy and strategy development for Network Licenses. This can lead to more informed decision-making and better alignment with regulatory requirements and industry standards.

Technology Adoption: The project can highlight the benefits of digital tools and predictive maintenance technologies. Network Licenses can leverage this information to justify investments in new technologies and improve their asset management processes.

Collaboration and Knowledge Sharing: The learning can be shared across different Network Licenses, fostering collaboration and knowledge exchange. This can lead to a more cohesive and efficient approach to network management across the industry.
By utilising the learning generated from this project, Network Licenses can improve their operational performance, reduce costs, and enhance service reliability for consumers.

N/A

Is the default IPR position being applied?

☑ Yes

Project Eligibility Assessment Part 2

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. Networks must explicitly mention similar projects that they have considered and how these differ.

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

We have engaged with other Distribution Network Operators (DNOs) to ensure that a similar project is not being undertaken elsewhere.

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

N/A

Additional Governance And Document Upload

Please identify why the project is innovative and has not been tried before

Implementing a digital platform for transformer maintenance can drive innovation for SPEN in several ways. Advanced analytics can uncover patterns and insights from extensive data sets, leading to the creation of new predictive models and more efficient maintenance strategies. Additionally, integrating Internet of Things (IoT) devices allows SPEN to collect real-time data from transformers, which can be used to develop innovative monitoring techniques and enhance fault detection accuracy.

A digital platform can also improve collaboration between various teams and departments by facilitating the sharing of data and insights across the organization. This can lead to innovative solutions and better maintenance practices. Customizable dashboards and reports provide tailored insights for different stakeholders, helping to identify unique challenges and opportunities, and fostering a culture of continuous improvement and innovation.

Furthermore, digital platforms enable the use of simulation and modelling tools to test various maintenance scenarios and strategies, allowing SPEN to innovate by identifying the most effective approaches without the risks and costs associated with real-world testing.

Innovative digital platforms can enhance customer engagement by offering transparent and real-time updates on maintenance

activities and transformer health. This improves customer satisfaction and builds trust, demonstrating that consumer funds are being invested in network upgrades and innovations for their benefit. By embracing these innovative approaches, SPEN and other operators can stay ahead of the curve and continuously improve their operations.

The ORION project stands out as a groundbreaking and comprehensive solution, offering a level of innovation unmatched by existing market tools. Unlike conventional asset monitoring systems, which rely primarily on risk management through theoretical degradation models based on time and operational parameters, ORION takes a data-driven approach to asset health assessment.

Key Differentiators of ORION:

Advanced Anomaly Detection
ORION shifts from traditional risk-based monitoring to early-stage anomaly detection. By integrating multiple and heterogeneous data sources, it identifies deviations from normal behavior at their inception, enabling proactive intervention before significant deterioration occurs.

Comprehensive Data Integration
The platform consolidates all transformer-related asset data into a single, unified system. This holistic view of asset health and performance eliminates the need for multiple separate tools, enhancing operational efficiency and decision-making.

Predictive and Prescriptive Insights
ORION not only forecasts potential failures but also provides a complete diagnostic of anomalies, estimates time-to-failure, and recommends the most effective corrective actions. This transition from conventional decision-making to a fully data-driven paradigm significantly improves maintenance efficiency and asset reliability.

Alignment with Industry Standards
The project is designed in compliance with ISO 18095:2018, ensuring best practices in condition monitoring and diagnostics. This alignment reinforces SPEN's commitment to operational excellence and regulatory adherence.

Cutting-Edge Methods and Algorithms
ORION serves as an innovation hub for developing, testing, and implementing novel algorithms and methodologies to assess transformer health. Its adaptable framework allows for continuous enhancement, ensuring the platform remains at the forefront of emerging technologies.

Customizable and Scalable Design
Unlike generic asset management tools, ORION is tailored specifically to SPEN's unique requirements. Its scalable architecture ensures adaptability as the organization evolves, making it a future-proof investment.

By integrating these pioneering features, ORION establishes itself as a next-generation asset management solution—far surpassing the capabilities of existing market tools and setting a new industry benchmark for reliability, efficiency, and predictive maintenance.

Relevant Foreground IPR

- Agreed assumptions and model approach for modelling and tools (SPEN)
- Data Dictionary (SPEN)
- Transformers data model (SPEN)
- ORION Application (multiple iterations) (Minsait/SPEN)
- Predictive model development (SPEN)

Data Access Details

The provision of data is subject to anonymisation and/or redaction for reasons of commercial confidentiality or other sensitivity.

Access to this data must be requested by contacting Innovation@spenergynetworks.co.uk. Please provide the following information in your request:

- Affiliation, position and contact details of requesting party
- Relevant project and type of data required
- Reasons for requesting this data and evidence that this data will be used in the interest of the UK network electricity customers
- How data will be shared internally and externally by the requesting party

Any data request deemed unsuitable for sharing will be highlighted to the appropriate requesting party. After receiving the request we will provide the estimated date for completing the data provision based on other requests and our team workload at that time. All requested data remains the property of SP Energy Networks.

https://www.spenergynetworks.co.uk/pages/data_sharing_policy.aspx

Please identify why the Network Licensees will not fund the project as a part of it's business and usual activities

Funding the development of this project through innovative methods mitigates the risk of prolonged development associated with BAU funding and ensures we can effectively support our customers during this transformative period.

This project cannot be fulfilled under BAU as it involves technology that SPD Asset Management does not currently use and will require a iterative approach to its development. Additionally, it utilises different cloud technology, providing an opportunity to experiment with non-standard approaches. The ORION project aims to enhance transformer asset management by leveraging advanced digital tools and methodologies, ensuring efficient and reliable maintenance practices that align with the evolving needs of our network.

Please identify why the project can only be undertaken with the support of the NIA, including reference to the specific risks (e.g. commercial, technical, operational or regulatory) associated with the project

- Funding for Innovative Technologies: The project involves the use of unproven advanced digital tools and cloud technologies that SPEN does not currently use. NIA funding is essential to cover the costs associated with experimenting with these non-standard approaches and technologies, which would not be feasible under Business As Usual (BAU) funding.
- Risk Mitigation: Developing and implementing new technologies often involves trial and error. NIA funding helps mitigate the risks associated with this experimental phase, ensuring that the project can proceed in an agile manner to deliver best value-for-money.

This project has been approved by a senior member of staff

☑ Yes