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

Feb 2026

Project Reference Number

NPG_NIA_060

Project Registration

Project Title

Flex Select

Project Reference Number

NPG_NIA_060

Project Licensee(s)

Northern Powergrid

Project Start

March 2026

Project Duration

0 years and 7 months

Nominated Project Contact(s)

James.Ford@northernpowergrid.com

Project Budget

£130,000.00

Summary

The project will review the existing methodologies used by DSOs to award and allocate flexibility tender bids. It will create a new methodology for ongoing bid decisioning and provide a computational decisioning model to correctly apply the methodology for all future tenders. This will ensure bids are being correctly awarded, provide an auditable accept/reject reasoning for FSPs and provide a significant time saving for DSOs. These benefits will allow Northern Powergrid and other DSOs to onboard more FSPs and work towards more complex and shorter-term tendering.

Third Party Collaborators

Strathclyde Business School

LCP Delta

Nominated Contact Email Address(es)

yourpowergrid@northernpowergrid.com

Problem Being Solved

Northern Powergrid have successfully tendered flexibility services. We issue clear guidance to bidders and manually select the successful FSP's by following a set of published success criteria. This process has been sufficient to date because tenders have been undersubscribed, and decisions have been relatively straight forward to make.

With the increasing demand for flexibility across the network, NPg are actively onboarding new FSP's and are tendering for more complex requirements. Northern Powergrid have also stated their ambition to move towards day ahead procurement but this isn't realistic unless they can automate the award process. NPg now need to review the bid decisioning methodology and develop a scalable bid review solution to support the next stage of flexibility tendering.

Without improvements in bid decisioning, NPg may struggle to decision bids quickly enough and are exposed to incorrect bid awards and loss of faith in the DSO flexibility market. A DSO led review of decisioning is required to determine the optimal bid decisioning criteria and a fully automated, objective tool is required to manage this process in the long term.

Method(s)

The project will be completed across 3 work packages, reviewing the existing methodologies, designing the new logic, creating a computational model and the final optional phase, to create a full piece of software. These packages will be developed over 6 months.

Scope

NPg's partners will review DSO tender documentation and interview key stakeholders within the flexibility market. A new methodology will then be developed alongside a computational model which will apply the new methodology to historic data sets, testing its accuracy and replicability. Its adoption into BAU will be subject to the specified success criteria.

Objective(s)

1. Obtain a comprehensive breakdown of existing market bid decisioning factors and devise a strategy on which to consider in their future bid scenarios.

2. NPg will receive a tested and validated computational decisioning model to analyse future bid scenarios.

3. Understand how the computational tool operates, which factors are included and how they are weighted.

4. Receive an auditable bid decision with clear bid acceptance or rejection reasoning.

5. Determine whether the computational model can return a better outcome than a human.

Consumer Vulnerability Impact Assessment

A social impact assessment has been carried out using the Sirio Impact Assessment Tool. The project scored positively overall (10/10) and no mitigation is required.

Success Criteria

Delivery of a tested and validated computational decisioning model to analyse future bid scenarios: to award bids in the most economic way, maximizing the transparency of decision-making and enabling NPg to tender for more complicated requirements, all while reducing the manual workload.

Project Partners and External Funding

N/A

Potential for New Learning

New insights into how DSOs can optimally and economically award flexibility bids. Learnings will cover FSP understanding of the decision criteria, the parameters considered in the existing processes, a logic flow and mathematical optimization of the optimal process, a new computer model and recommendation of the optimal parameter settings.

Scale of Project

The 6-month project includes 1 month of initial research and 5 months of methodology and computer model development. The latter section will consist of FSP and DSO feedback sessions where feedback will be incorporated into the new methodology and model.

Technology Readiness at Start

TRL6 Large Scale

Technology Readiness at End

TRL8 Active Commissioning

Geographical Area

This is a desktop exercise which will impact the whole Northern Powergrid region once developed.

Revenue Allowed for the RIIO Settlement

None

Indicative Total NIA Project Expenditure

£130,000

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 project supports the energy system transition by enabling DSOs to procure more frequent and complicated flexibility, which is essential to balance the grid with the increase in renewable generation.

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

This project allows for more frequent and complicated flexibility to be procured which is essential to stabilise the grid with the increasing energy demands and renewable generation connections.

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

NPV at 10 years £143k assuming national rollout of solution

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

The method is very replicable across GB as all DSOs are tendering for flexibility in a very similar way with many utilising the same flexibility service providers.

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

The cost of national rollout would involve operational training for the Commercial Flexibility teams across DSOs. Estimated at £10k per DSO to include training of commercial and operational colleagues.

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 from Flex Select will be published and disseminated through the ENA and made available to other DNOs. The method will provide a replicable model for assessing flexibility bids with the open-source computational model available to use.

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.

Flex Select has been cross-checked against other ENA-registered projects and confirmed as novel. There is currently no plan within the Market Facilitator delivery plan to develop this area however it is recognised to be a barrier which they would like to address in the future. Elexon have expressed an interest in our high level project scope and would like to be informed of the developments.

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

This project has not been tried before because the flexibility market is still in its infancy and many DSOs are managing to decision bids manually. NPg have identified this to be a methodology and tool which improve the tender process for all FSPs and DSOs so believe it’s vital to the ongoing development and trust in the flexibility market.

Relevant Foreground IPR

N/A

Data Access Details

Any datasets generated will be anonymised and published via appropriate channels such as the ENA’s Innovation Portal and / or Northern Powergrid’s Open Data Portal as appropriate, in line with NIA data transparency requirements.

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

This project seeks to develop a new methodology and computer model which will accelerate the adoption of flexibility within the UK market. Due to operational and technical risk associated with the development of a new decisioning tool, innovation funding is considered appropriate.

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

This research, methodology development and model development involves operational and technical risk, which could not be funded as part of BAU. One of the success criteria is testing whether this model can be delivered and operate faster and more reliable than a human completing the same job. NIA provides the framework to test this risk in a controlled innovation setting.

This project has been approved by a senior member of staff

☑ Yes